APPENDIX J

– FEASILBILITY STUDY – ELEVATOR / BARRIER FREE WASHROOM - FORT ROUGE LEISURE CENTRE / ST. JAMES CIVIC CENTRE

– PREPARED BY MCM ARCHITECTS INC. – MAY 27, 2009

THE CITY OF WINNIPEG

ELEVATOR/ BARRIER FREE WASHROOM FEASIBILITY STUDY

FORT ROUGE LEISURE CENTRE

625 Osborne St.

ST. JAMES CIVIC CENTRE

2055 Ness Ave.

MAY 27, 2009

MCM ARCHITECTS INC.

CONTENTS

1.0.1

PART 1:

PART 2: FORT ROUGE LEISURE CENTRE ELEVATOR / BARRIER FREE WASHROOM STUDY

CONTENTS

1.0.2

PART 2 CONTINUED:

CONTENTS

1.0.3

PART 2 CONTINUED:

CONTENTS

1.0.4

PART 2 CONTINUED:

PART 3: ST. JAMES CIVIC CENTRE ELEVATOR / BARRIER FREE WASHROOM STUDY

CONTENTS

1.0.5

PART 3 CONTINUED:

CONTENTS

1.0.6

PART 3 CONTINUED:

CONTENTS

1.0.7

PART 3 CONTINUED:

ABSTRACT

1.08

1. To determine the feasibility of installing a new barrier free elevator and washroom within the existing Fort Rouge Leisure Centre and St. James Civic Centre. Size of elevator and washroom facility programming will follow recommendations from The City of Winnipeg Building Services and Universal Design Policy.

2. Analysis of the resulting impact and modification the new elevators will have on existing floor area, space requirements and circulation demand.

3. Renovation options within each existing building will focus on accommodating an elevator within public circulation areas to provide direct access to the public during hours of operation without constant supervision.

4. Assemble probable costs and projected design/construction timelines for each option to assist The City of Winnipeg in determining whether or not to proceed with the installation or to investigate other options relative to programming of spaces.

MCM Architects was retained by The City of Winnipeg to complete a study defining options for incorporating a barrier free elevator and washroom into the existing Fort Rouge Leisure Centre and St. James Civic Centre. The City of Winnipeg identified that the existing buildings contain numerous variations in floor elevations and that barrier free access is necessary to meet the increased demand from users of the space.

When constructed, the existing recreation centers met the needs of the citizens of Winnipeg, however, the existing buildings were never planned with barrier free access as a functional programmatic component. The current development of user-friendly facilities throughout our province in both the private and public sector has The City of Winnipeg taking action immediately to accommodate this oversight.

In response the Community Services & Planning, Property and Development Departments have taken a proactive approach to explore the validity of incorporating new elevators and barrier-free washrooms in the current buildings. MCM Architects and our team of consultants will investigate and define existing building space, functional programming, and staff usage relative to barrier-free access. The intended goal of the study is to increase barrier free access to most areas of the recreation centres identified. The result; a proper functioning barrier free environment for the public.

This study includes a range of preliminary design options to provide accessible access between floor levels at the existing recreation centres. We also include a preliminary review and design for adding or renovating Barrier Free washroom facilities on all levels of the respective recreation centres. Our structural, mechanical and electrical consultants have provided comments on their respective discipline relative to the Barrier Free Elevator and Washrooms.

To formulate an objective analysis on the concept of integrating a Barrier Free Elevator and Washroom into Fort Rouge Leisure Centre and St. James Civic Centre, MCM Architects has identified the following scope of work:

a) Conduct a site visit to each of the recreation centres with the structural, mechanical and electrical engineers to identify and gather existing background information relevant to the project.

b) Review the existing Manitoba Building Code, the City of Winnipeg's Universal Design Policy and Accessibility Design Standards to confirm applicable building code requirements on the existing properties.

c) Discuss with building managers their concerns and ideas relative to the scope of work.

d) Develop alternative approaches to positioning the proposed elevator within the existing buildings and the spatial relationships that will arise relative to existing spaces and functions. Potential opportunities and issues will be identified for each recreation centre.

e) Communicate the proposed options with schematic plans including possible structural, mechanical and electrical upgrades, and functional relationships to assure existing spaces are not compromised. The schematic plans for each building will identify the boundaries of the renovation work and probable effect on surrounding spaces.

f) Develop the scope of work necessary to construct the new elevators and barrier free washrooms.

g) Prepare probable cost estimates for the various proposed elevator options. Based on their respective scope of work, only one option at each recreation centre will be identified as the recommended renovation.

h) Prepare and submit a Draft Submission outlining the feasibility and probable costs to summarize the research and analysis undertaken.

i) Based on comments received from the Draft Submission we will finalize the document and submit a Final Report to The City of Winnipeg.

The City of Winnipeg Elevator Feasibility Study is formatted into two individual reviews, each devoted solely to either Fort Rouge Leisure Centre or St. James Civic Centre. This permits MCM to refine our analysis, schematic drawings, recommendations and budget estimates specific to each project. The City of Winnipeg will also benefit from this organization by being able to isolate and discuss issues relative to each recreation centre without the extraneous data of another recreation centre being presented on the same page.

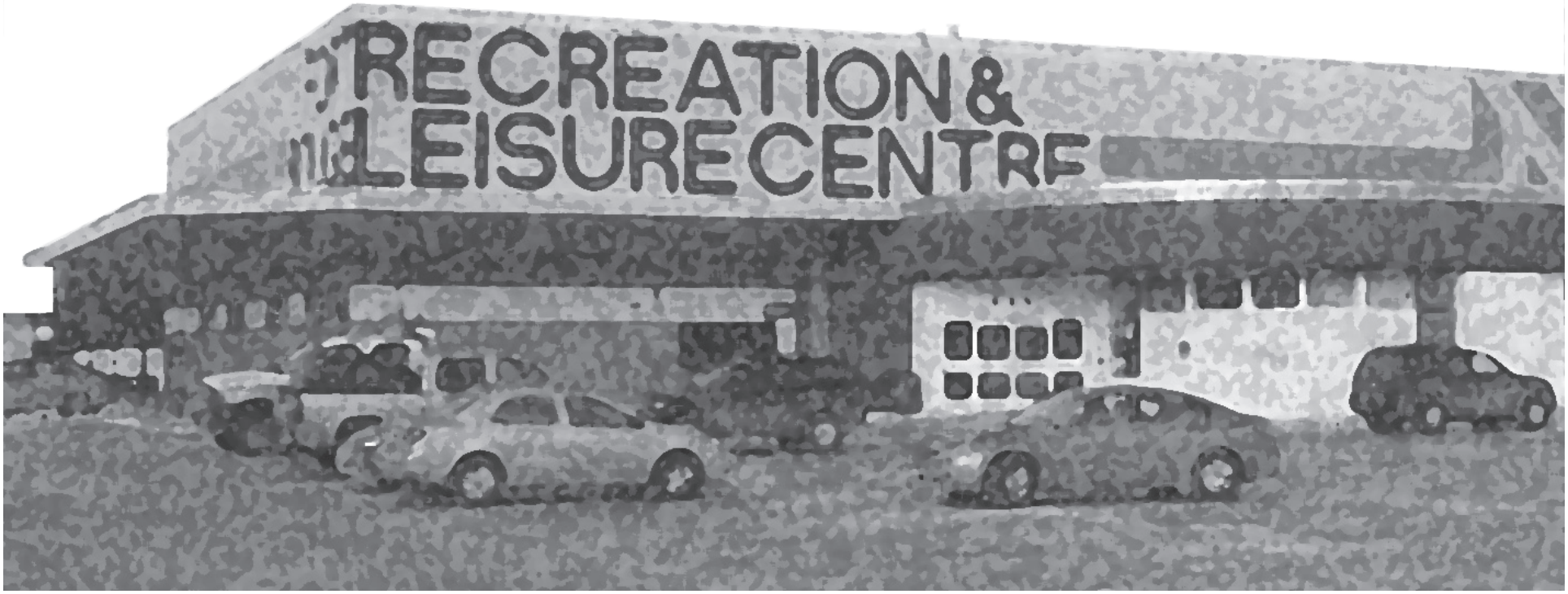
Fort Rouge Leisure Centre is identified as Part 'A' in the report. Analysis will include review of the existing site, building floor plans and specific spatial constraints relative to the proposed elevator and barrier free washrooms. As part of the analysis MCM undertook a site visit and conversed with the building coordinator to provide a brief history and understanding of the existing building. Our structural, mechanical and electrical consultants conducted their own site visit and have provided documentation relative to their specific field of expertise. From this information MCM developed two proposed locations for integrating a barrier free elevator into the existing building circulation pattern. Analysis of each option will identify their potential benefits and liabilities.

This information provides MCM with the data to recommend one option for the elevator and barrier free washroom. Further development of the selected option will focus on compiling a class 'D' cost estimate and defining a scope of work to construct. A conclusion will synthesize the report and the ultimate selection of a particular option including the feasibility of implementation.

Following the Fort Rouge Leisure Centre study, an analysis of the St. James Civic Centre will comprise Part 'B' of the report. A similar approach and analysis for St. James Civic Centre will be undertaken with specific recommendations, costing and implementation strategies relative to the building.

FORT ROUGE LEISURE CENTRE

ELEVATOR / BARRIER - FREE WASHROOM STUDY



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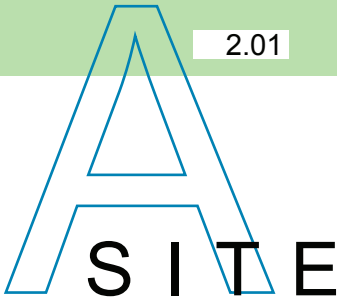
FORT ROUGE LEISURE CENTRE

2.01



Fort Rouge Leisure Centre is located in the south central part of Winnipeg surrounded by an established residential community. The Leisure Centre is a combination of one and two story structures that have received numerous additions and renovations throughout the last number of years. A one-storey component of the Leisure Centre faces east onto Osborne Street, a major public thoroughfare for vehicular and pedestrian traffic to the site. The south side of the site is located along Kylemore Avenue and also shares a back lane with the neighbouring residential community to the west. The remaining exterior of the building, north and west elevations, border onto open green space.

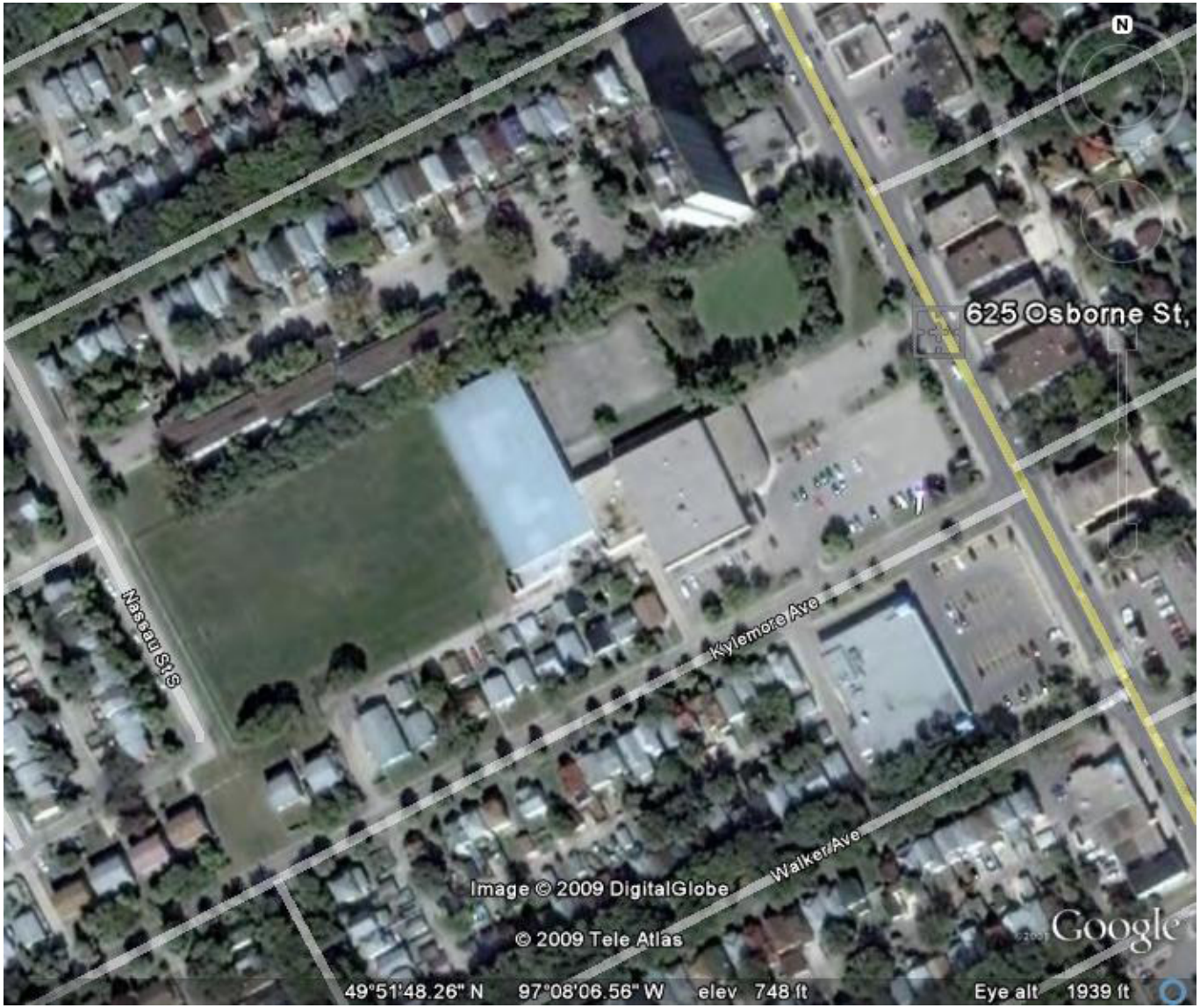
On the Leisure Centre property, between the building and the south and east property line is the public asphalt parking lot. The current parking configuration is compact, however parking is in high demand and all parking spaces are valued by the recreation centre. A barrier free drop off zone for patrons of the facility can be accommodated either on the south or east side of the centre with minimum disruption or re-configuration to the current parking lot. Barrier free parking stalls are identified around the perimeter of the recreation centre.

Currently barrier free actuator buttons are installed only on the east doors along Osborne Street. No actuator is present on the south entrance doors; they provide nighttime entry into the existing hockey rink located at the west end of the site. Entrance doors are at grade level providing barrier free access directly from any of the current parking lots.

FORT ROUGE LEISURE CENTRE

2.02

SITE PLAN



Aerial Site Photograph: N.T.S.

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OVERVIEW

Public functions and activities offered within the existing recreation centre are primarily located on grade level. Thresholds at all entry doors allow unassisted and direct barrier free access. All ground level floors are slab on grade; a crawl space is not present below the entire recreation centre.

Building height varies on the exterior reflecting the function of interior spaces, beginning on the east side of the recreation centre a one story library space is located at grade. Barrier free access is provided from the parking lot directly to the entry doors of the library.

The centre portion of the complex is a double height building that was renovated by the City of Winnipeg into exercise/weight room facilities, meeting rooms, general office/control point and mechanical room. Current facilities utilize only the lower portion of the double height space, the remaining space above the first floor ceiling is open and may be able to accommodate another floor level if the City required additional recreation space.

At the west end of the recreation centre is a single story hockey arena. Directly above the dressing rooms on the east side of the hockey rink is a second floor level designated for aerobics, meeting rooms and washroom facilities. This segment of the building incorporates the only second level in the recreation centre. Barrier free access and washroom upgrade to this level are necessary to meet accessibility standards. By developing barrier free access to the second level, the City of Winnipeg will assure patrons that they have equal access to all spaces and programs offered within the Fort Rouge Leisure Centre.

The building plan is organized around a main east west corridor with functions bisecting the main corridor from the north and south. Vertical accessibility will take advantage of this layout by incorporating the elevator within the existing public corridor system.

FORT ROUGE LEISURE CENTRE

2.04

MAIN FLOOR REVIEW

The main entry to the Fort Rouge Leisure Centre is divided between Osborne Street and Kylemore Avenue, both provide access for vehicular and pedestrian traffic. Within the recreation centre a central public reception area is the main control point for visitors and is internally located at the junction of the east-west/north-south public corridors. Functions on the main floor include offices, workrooms, weight room, hockey rink, change rooms and public seminar rooms. Main floor spaces accessible at grade level encompass an area of approximately 50,100 sq. ft. Most functions require users to pass by the central reception counter allowing patrons to access and use the facilities while remaining within control of the reception counter.

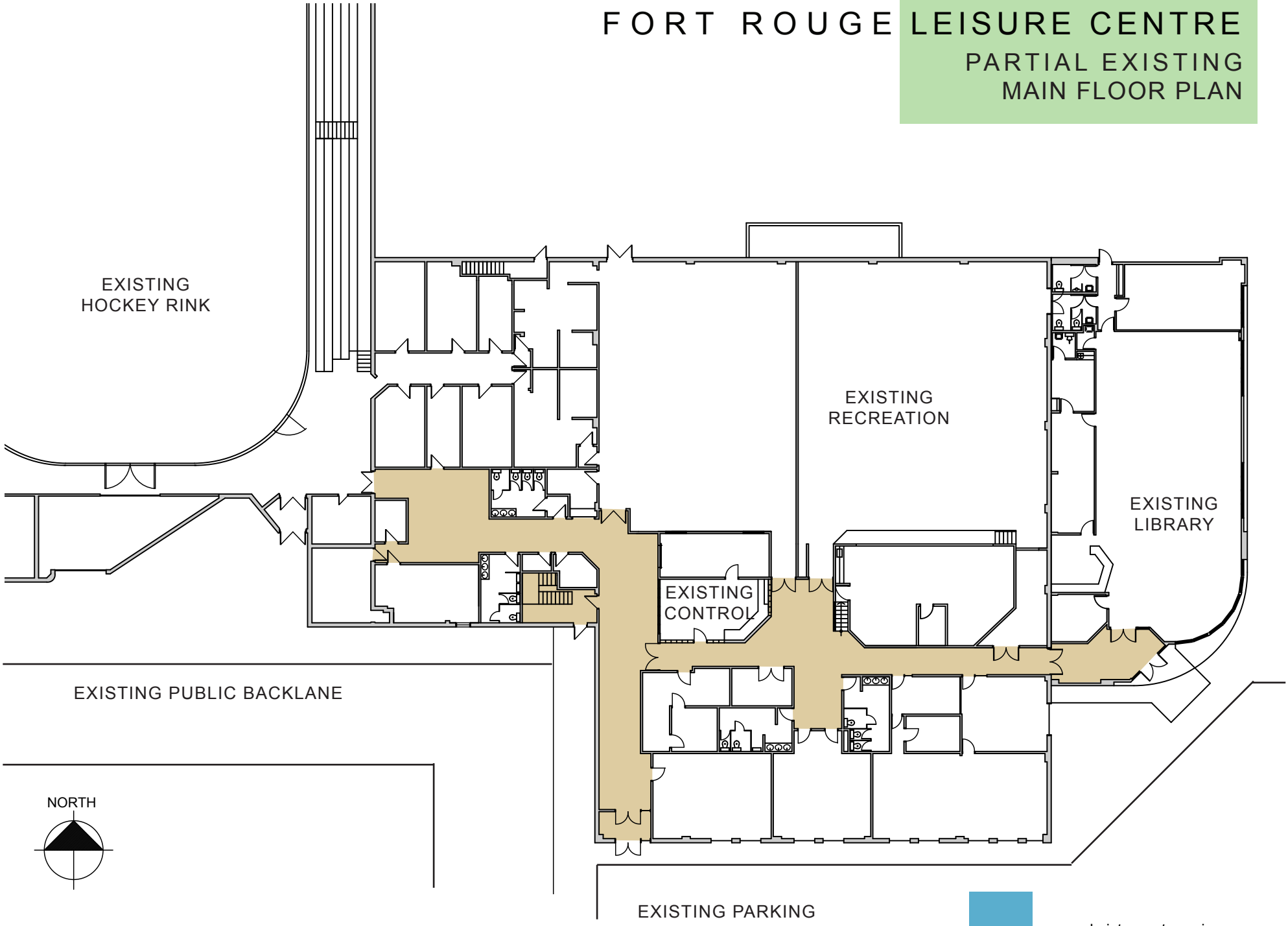
Main floor public washrooms are located west of the main control point within the hockey arena entry vestibule; they have been identified as barrier-free having been renovated recently by the City of Winnipeg. Additional public washrooms are located directly south of the main floor control desk. Barrier-free access is provided into the men's and women's washroom. Central location provides access to the users of the Leisure Centre. There are also semi-private washrooms located off of the weight room and within the library.

Directly west of the main reception counter is a central public stair connecting the main floor with second floor facilities. Location of the existing main reception counter is ideally situated relative to the west stairs to provide passive visual security on patrons who are accessing the stair/second floor. An additional stair is located along the north side of the building in compliance with Building Code requirements for exiting. This stair is not accessed by the public from the main floor level and is used primarily as an exit stair from the second floor. On typical weekdays all stairwells to the second floor remain locked. The west stair is only opened for public use based on bookings of second floor spaces.

A set of cross-corridor doors in the east-west corridor provides a variety of options to sub-divide the building from an operations perspective. Likewise elevator placement in the existing public corridor system must maintain access to second floor functions independent of the operation of the main floor cross-corridor doors. Regardless of daytime or nighttime use of main floor facilities, the elevator that provides access to the second floor must remain open to the public without compromising security.

FORT ROUGE LEISURE CENTRE

PARTIAL EXISTING MAIN FLOOR PLAN



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FORT ROUGE
LEISURE CENTRE

2.06

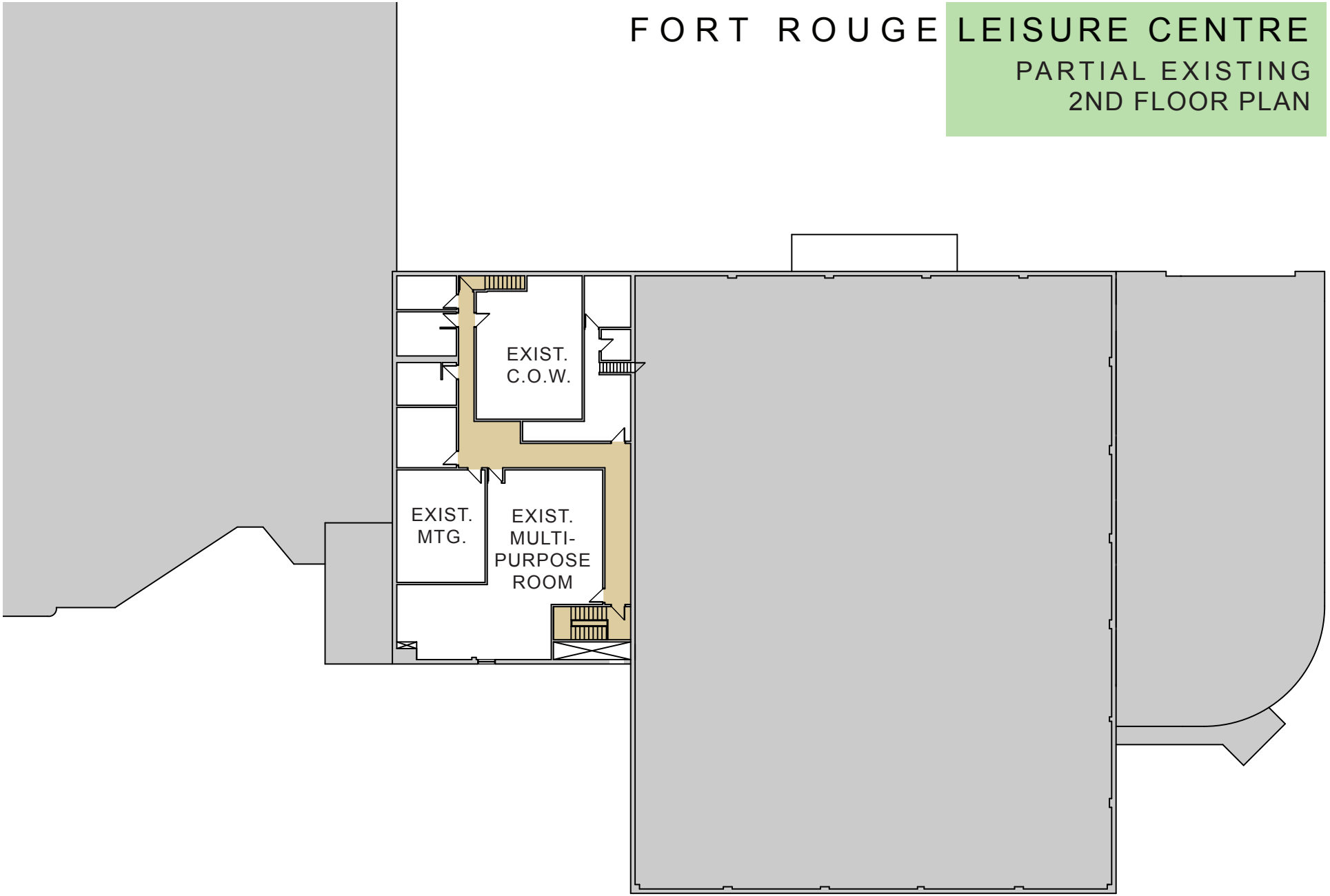
2ND FLOOR REVIEW

The second floor is positioned directly above the hockey change rooms, filling in the space between the double height hockey rink to the west and the double height weight room to the east. This area accommodates functions such as aerobic studios, meeting rooms, community committee offices and washrooms. Overall the second floor plan encompasses an area of approximately 4800 sq.ft. All existing floor area on the second floor is assigned to a specific function, presently no space is available for adjusting or expanding activities within the existing second floor foot print without compromising existing functions.

Access to the second floor is by way of the main public stair located at the west end of the main east west corridor, this stair also doubles as an exit stair. On the second floor, the main public stair empties onto a corridor system that meanders through the second floor level with the odd door opening into one of the many functions on the second floor. This corridor varies in width and direction but ultimately ends at the north egress stair located along the north side of the main floor hockey change rooms. The north stair is strictly an egress stair from the second floor, access from the main floor is not permitted. Location of existing vertical access points (stairs) are critical identifiers that are important to development and locating an elevator for vertical circulation.

FORT ROUGE LEISURE CENTRE

PARTIAL EXISTING 2ND FLOOR PLAN



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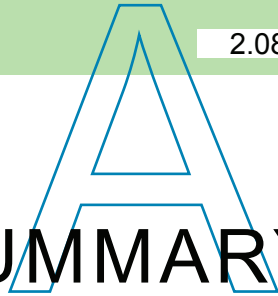

SUMMARY
EXISTING BUILDING

Our analysis of existing building conditions and layout of the current Fort Rouge Leisure Centre provides the starting point for examining options to locate an elevator within the existing building fabric. The current structural system, circulation pattern, and available area all contribute to defining and establishing the feasibility of incorporating an elevator. Information gathered from this general assessment provides the necessary background to move forward with analyzing specific options in further detail.

Our analysis of existing conditions has identified potential restrictions with the existing space and/or functions that will effect elevator location and barrier free washroom options within the existing building floor plan. To determine the affect of these restrictions each proposed option requires a complete in-depth examination. This analysis forms the next phase of review; accommodating the proposed elevator and barrier free washroom into the current building fabric.

FORT ROUGE
LEISURE CENTRE

2.09

PROPOSED ELEVATOR OPTIONS

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LEISURE CENTRE

2.10

ELEVATOR OPTION OVERVIEW

The goal of this report is to respond to a City of Winnipeg inquiry; is it feasible to incorporate a barrier free elevator within the existing building footprint that will provide access to all levels of the Fort Rouge Leisure Centre. The design and location of the elevator shall conform to the City of Winnipeg Accessibility Design Standards and to the Manitoba Building Code.

Through prior discussions with the City of Winnipeg it was determined that two options integrating an elevator into each recreation centre would be developed. In addition to the elevator observations, we are including recommendations for accommodating accessible public washroom facilities on each accessible level of the Fort Rouge Leisure Centre.

Schematic plans are used to define and enlighten the City of Winnipeg concerning each option. Through the use of theses drawings we can evaluate each option by analyzing and defining their respective positive and negative attributes to determine the most optimum solution. Comments will include the feasibility of incorporating the elevator into the recreation centre. This information provides the City of Winnipeg with the background knowledge to decide whether or not to proceed with the elevator installation.

Upon determining the most favorable location for the elevator within the building, an outline defining the scope of work to accommodate the installation will be developed. This information provides the necessary data on the selected option to formulate a probable construction budget 'Class D'. Probable costs include the renovations necessary to provide Barrier Free washroom facilities as required by the Manitoba Building Code and City of Winnipeg Accessibility Design Standards.

PROPOSED LOCATION - OPTION 1

Locate the elevator adjacent to the main stair leading to the second floor - refer to plan.

ARCHITECTURAL ANALYSIS

- Install a 4500 lb elevator to access second floor.
- Elevator and vestibule can be accommodated adjacent to the existing building and the west property line that borders onto the existing back lane.
- Elevator in close proximity to the central control centre allowing for supervision throughout the day.
- Relocation of existing telephones in main corridor required.
- Proposed location allows for the east half of the Leisure Centre to close and be locked off, patrons requiring access to the second floor must utilize the south entry doors.
- Location of the elevator and elevator machine room on the exterior negates the sacrifice of valuable interior floor space.

- Minimal disruption to the existing building, structure, mechanical or electrical system.
- Manitoba Hydro pole in the vicinity of the new elevator is required to be relocated to permit construction. Cost is substantial for the relocation; refer to electrical comments.
- Relocation of gas meter is required.
- Exterior construction limits disruption to the existing building activities throughout the construction process.

ACCESSIBILITY

- Access from the parking lot to the elevator is available from either the east entry (barrier free actuator) or the south entry (no barrier free actuator)
- Located on an accessible main circulation path allowing direct access onto and off elevator.

BUILDING CODE

- A variance is required to locate the elevator shaft on the exterior of the building adjacent to the west property line and existing back lane.

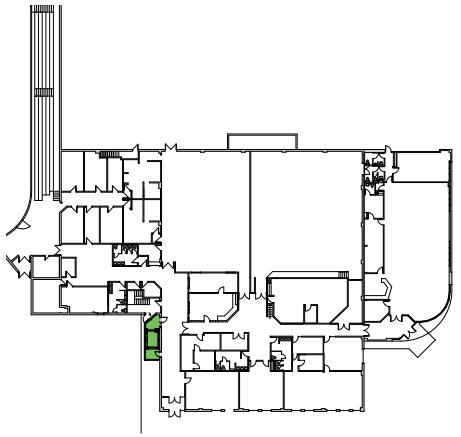
FORT ROUGE
LEISURE CENTRE

2.11

A

ELEVATOR
OPTION 1

MAIN FLOOR



KEY PLAN

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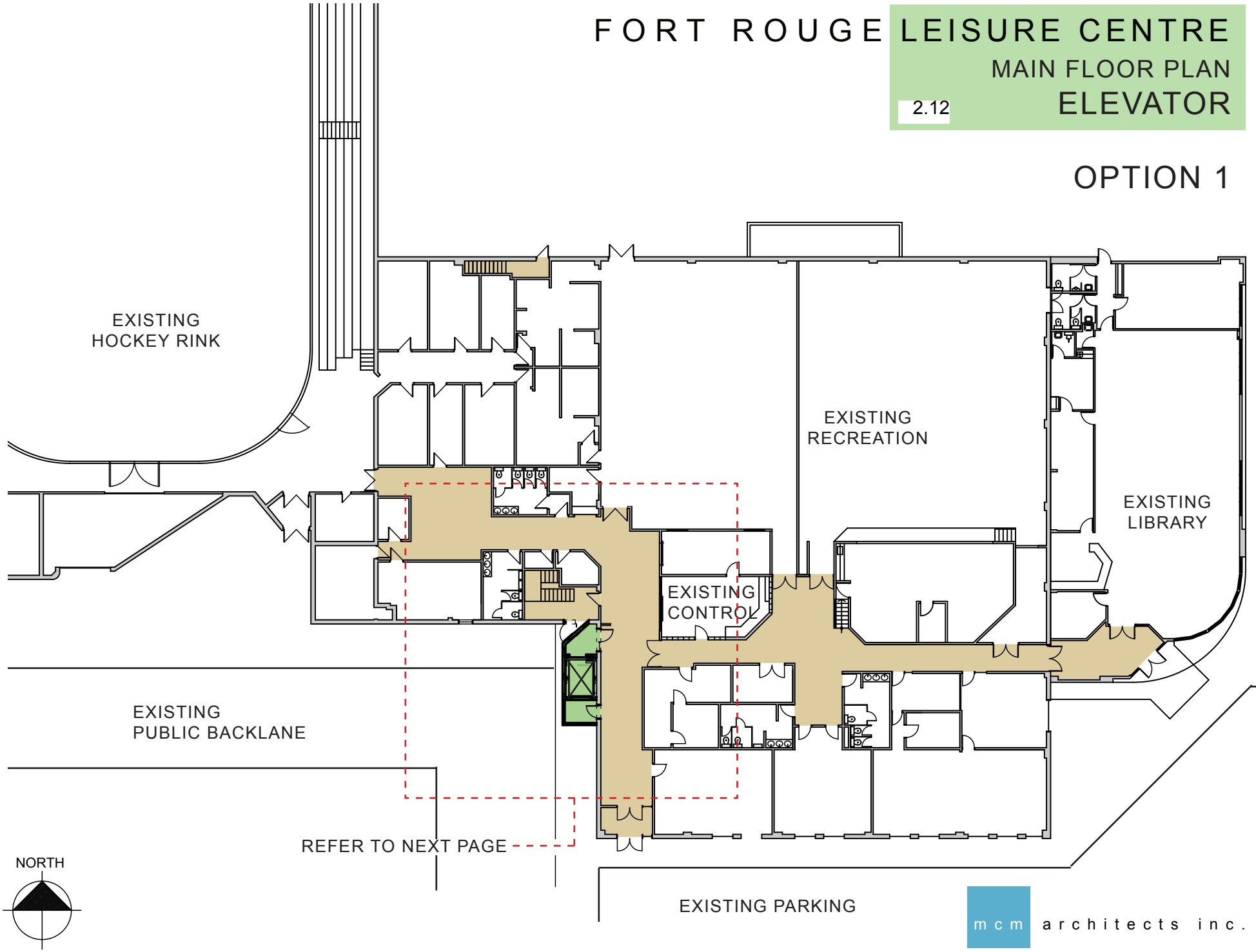
FORT ROUGE LEISURE CENTRE

MAIN FLOOR PLAN

ELEVATOR

2.12

OPTION 1



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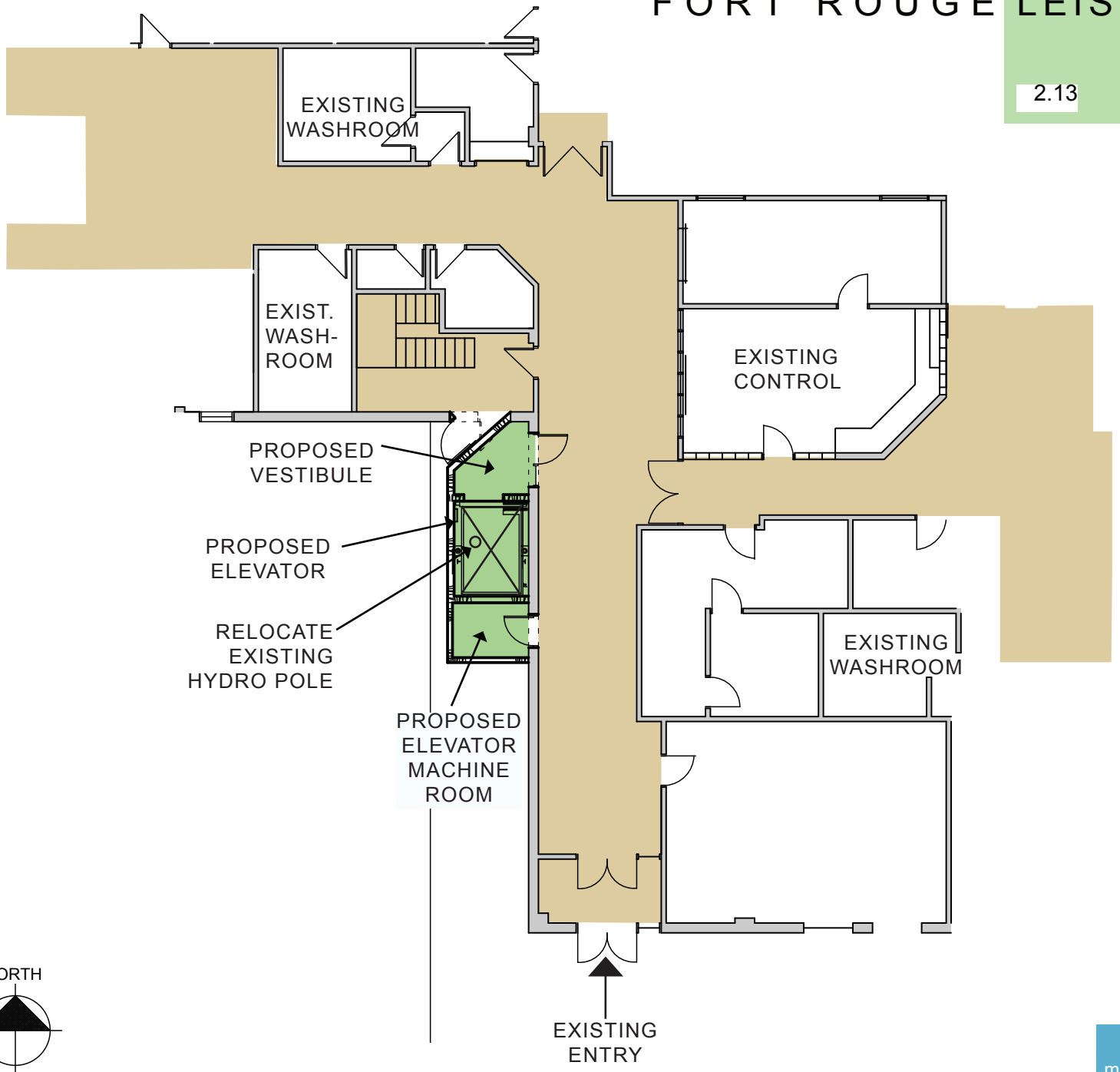
FORT ROUGE LEISURE CENTRE

MAIN FLOOR PLAN
ELEVATOR

2.13

OPTION 1



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FORT ROUGE
LEISURE CENTRE

2.14

ELEVATOR OPTION 1

2ND FLOOR

ARCHITECTURAL ANALYSIS

- Additional renovation work required at existing second floor stair vestibule and multi-purpose room; relocation of doors and construction of new walls to accommodate new elevator.
- Tie-in of new construction to existing walls and roof.
- New opening through existing stair well c/w lintel for connecting fire-rated door.

ACCESSIBILITY

- Elevator requires use of existing second floor stair landing to access and exit from the vestibule. Existing landing meets accessibility for width as a corridor, however existing door into lobby will not meet accessibility and requires installation of barrier free actuators to meet guidelines.
- Located on an accessible main circulation path that allows direct access onto and off elevator.
- Circulation through most second floor corridors meets accessibility standards, the exception being the corridor leading to the public washrooms; this corridor is below acceptable standards.
- Recommend upgrading of second floor doors to barrier free lever hardware; in particular doors requiring public access.
- Upgrade of existing door hardware to lever handles for doors in and out of elevator vestibule.

BUILDING CODE

- Area of refuge on second level.
- Fire ratings of new walls around vestibule required.
- One hour fire separation at elevator vestibule, new fire rated doors are required.

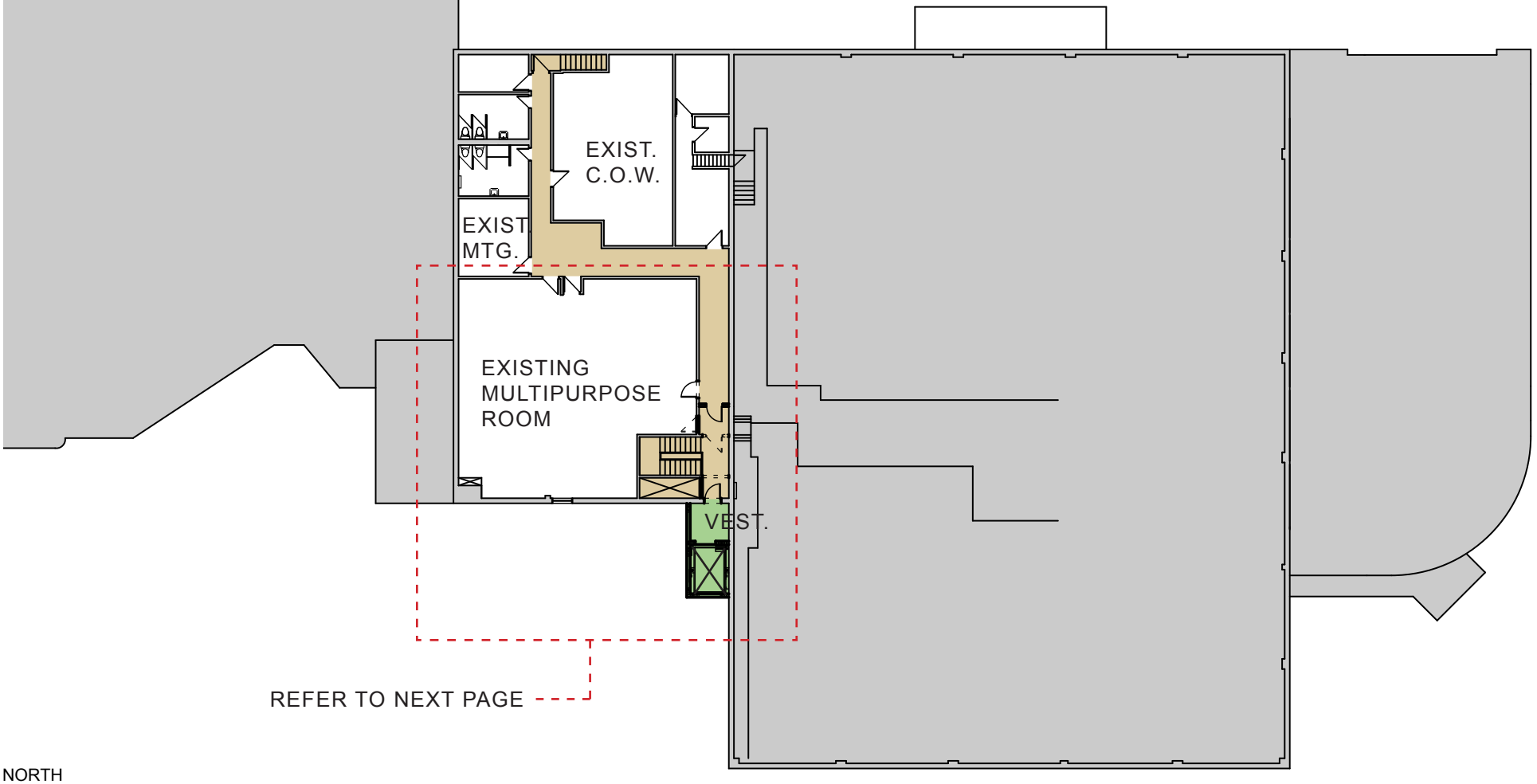
FORT ROUGE LEISURE CENTRE

2ND FLOOR PLAN

ELEVATOR

2.15

OPTION 1



NORTH

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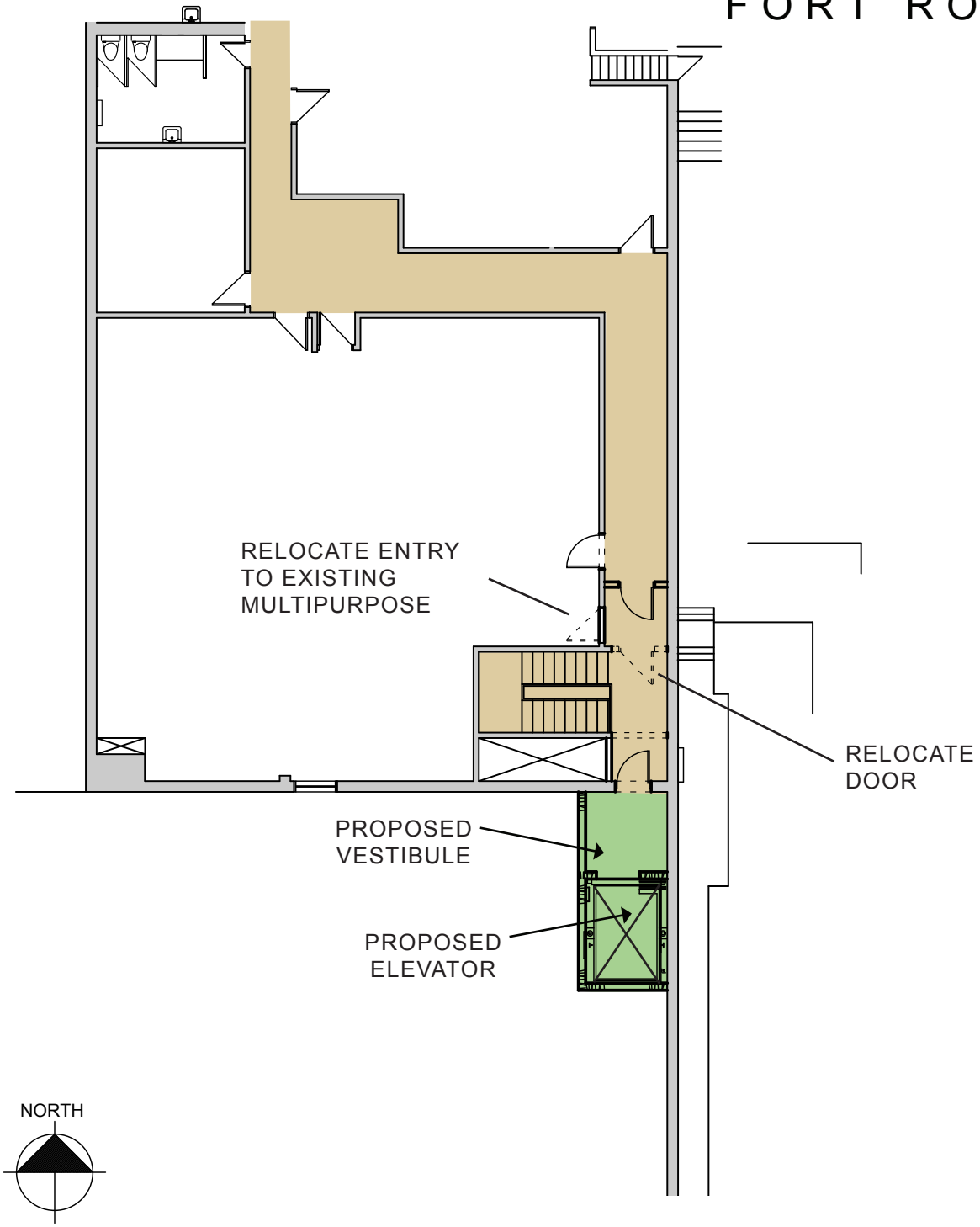
FORT ROUGE LEISURE CENTRE

2ND FLOOR PLAN
ELEVATOR

2.16

OPTION 1



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FORT ROUGE
LEISURE CENTRE

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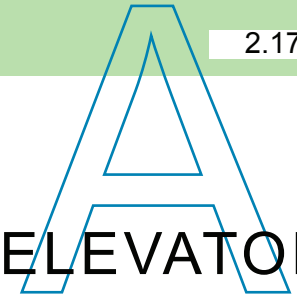

ELEVATOR OPTION 2

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PROPOSED LOCATION - OPTION 2

Locate elevator at the intersection of fitness centre, general office and hockey arena entrance.

ARCHITECTURAL ANALYSIS

- Install a 4500 lb elevator to access second floor
- Elevator is in close proximity to the central control centre permitting supervision.
- Proposed location allows for the east half of the Leisure Centre to close and be locked off, patrons requiring access to the second floor can utilize the south entry doors.
- Elevator and elevator machine room located within the existing building will require sacrificing valuable interior space on the main floor.
- Elevator requires space from the fitness facility, displacing the existing treadmills and cycle machines. Existing south exit doors require relocation to the north to accommodate new shaft.
- Interior location limits possible working hours during construction depending on extent of disruption patrons can accept. Interior location will create a disruption to the fitness program with hoarding and slab removal extending into the space to allow workers to complete the elevator shaft.
- Probable costs to construct elevator will be lower then the Option of an exterior application.

ACCESSIBILITY

- Access from the parking lot to the elevator is available from either the east entry (barrier free actuator) or the south entry (no barrier free actuator)
- Located on an accessible main circulation path allows direct access on and off elevator.
- Accessibility to and around proposed elevator meets all standards.
- Recommend upgrading of second floor doors to barrier free lever hardware; in particular doors requiring public access.

BUILDING CODE

- Fire rating of elevator shaft and vestibule above existing ceiling of weight room.
- Fire rating of double doors from weight room to north-south public corridor.

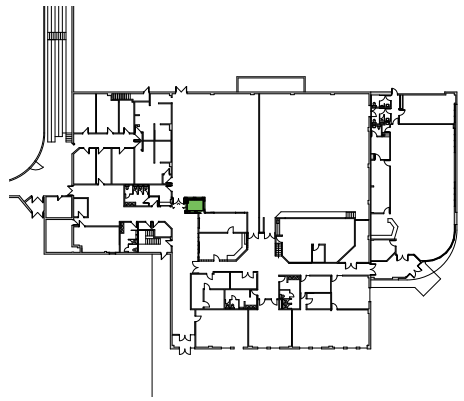
FORT ROUGE
LEISURE CENTRE

2.18

A

ELEVATOR
OPTION 2

MAIN FLOOR



KEY PLAN

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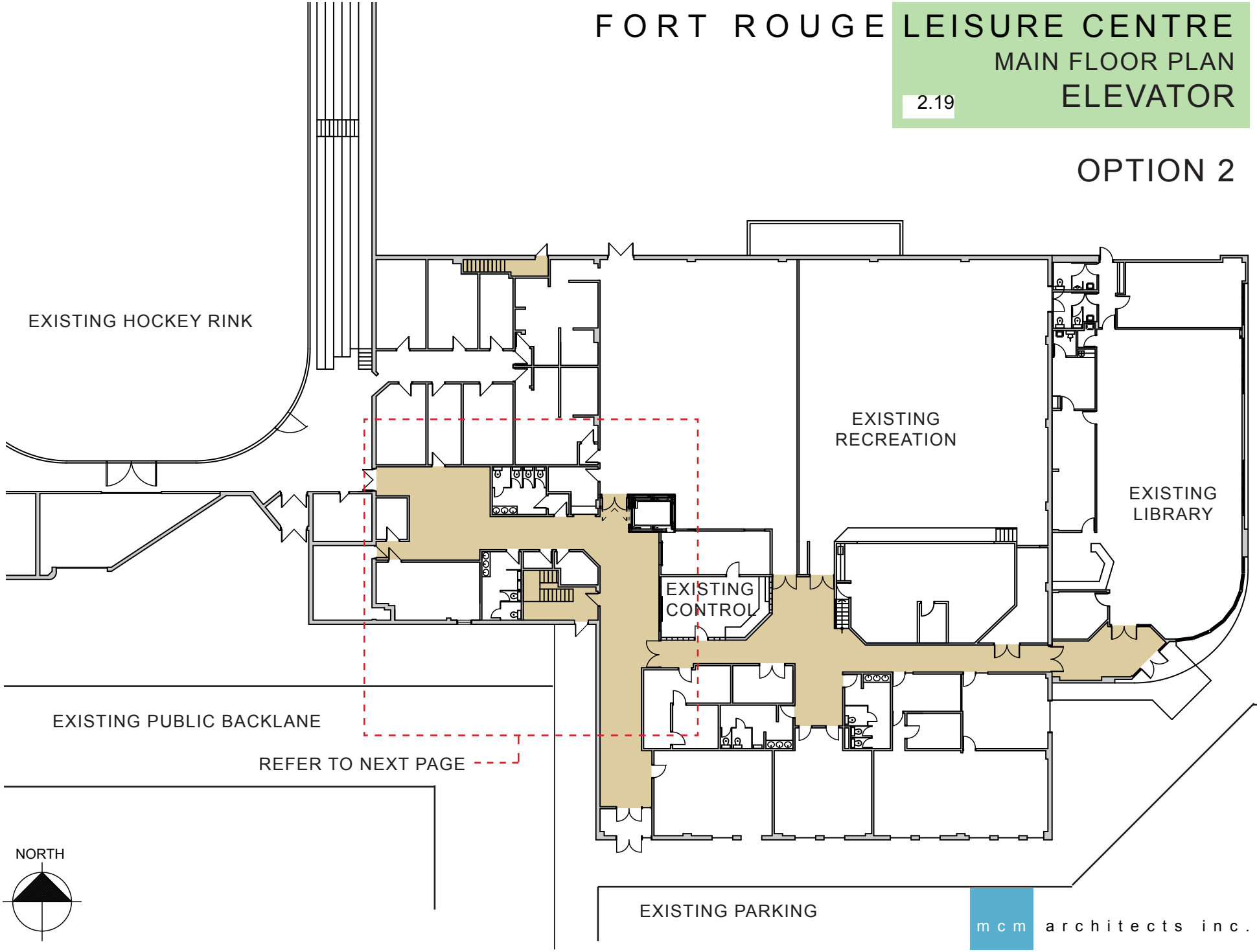
FORT ROUGE LEISURE CENTRE

MAIN FLOOR PLAN

ELEVATOR

2.19

OPTION 2



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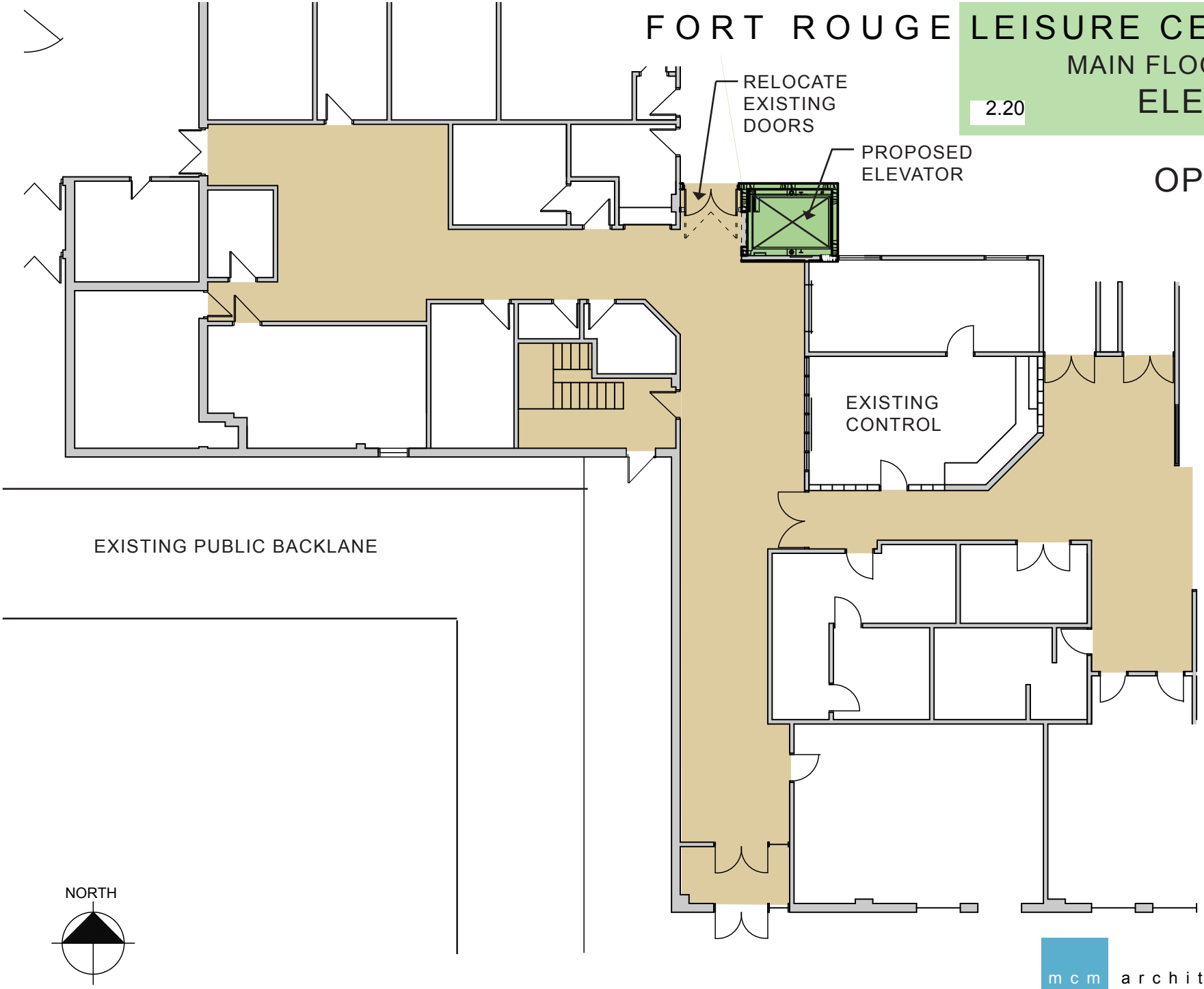
FORT ROUGE LEISURE CENTRE

MAIN FLOOR PLAN

ELEVATOR

2.20

OPTION 2



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FORT ROUGE
LEISURE CENTRE

2.21

ELEVATOR OPTION 2

2ND FLOOR

ARCHITECTURAL ANALYSIS

- Elevator rises into the existing void space above the current fitness facility.
- Space within void will accommodate the elevator shaft and machine penthouse. No roof openings are required, reducing the cost to construct an interior elevator shaft.
- No roof opening is required, this reduces the cost to construct an interior elevator shaft.
- Additional renovation work required at second floor corridor to accommodate new door into elevator vestibule, existing corridor width provides ample room for barrier-free access.
- Construction of new vestibule walls and concrete floor from elevator shaft to existing second floor corridor for accessibility.
- Relocation and reconstruction of existing service catwalk is necessary to accommodate the new elevator within the interstitial space located above the existing weight room.

ACCESSIBILITY

- Circulation through most second floor corridors meets accessibility standards, the exception being the corridor leading to the public washrooms; this corridor is below acceptable standards.
- Located on an accessible main circulation path allows direct access on and off elevator.
- Accessibility to and around proposed elevator meets all standards.

BUILDING CODE

- Area of refuge on second level.
- Fire ratings of new walls around vestibule to corridor required.

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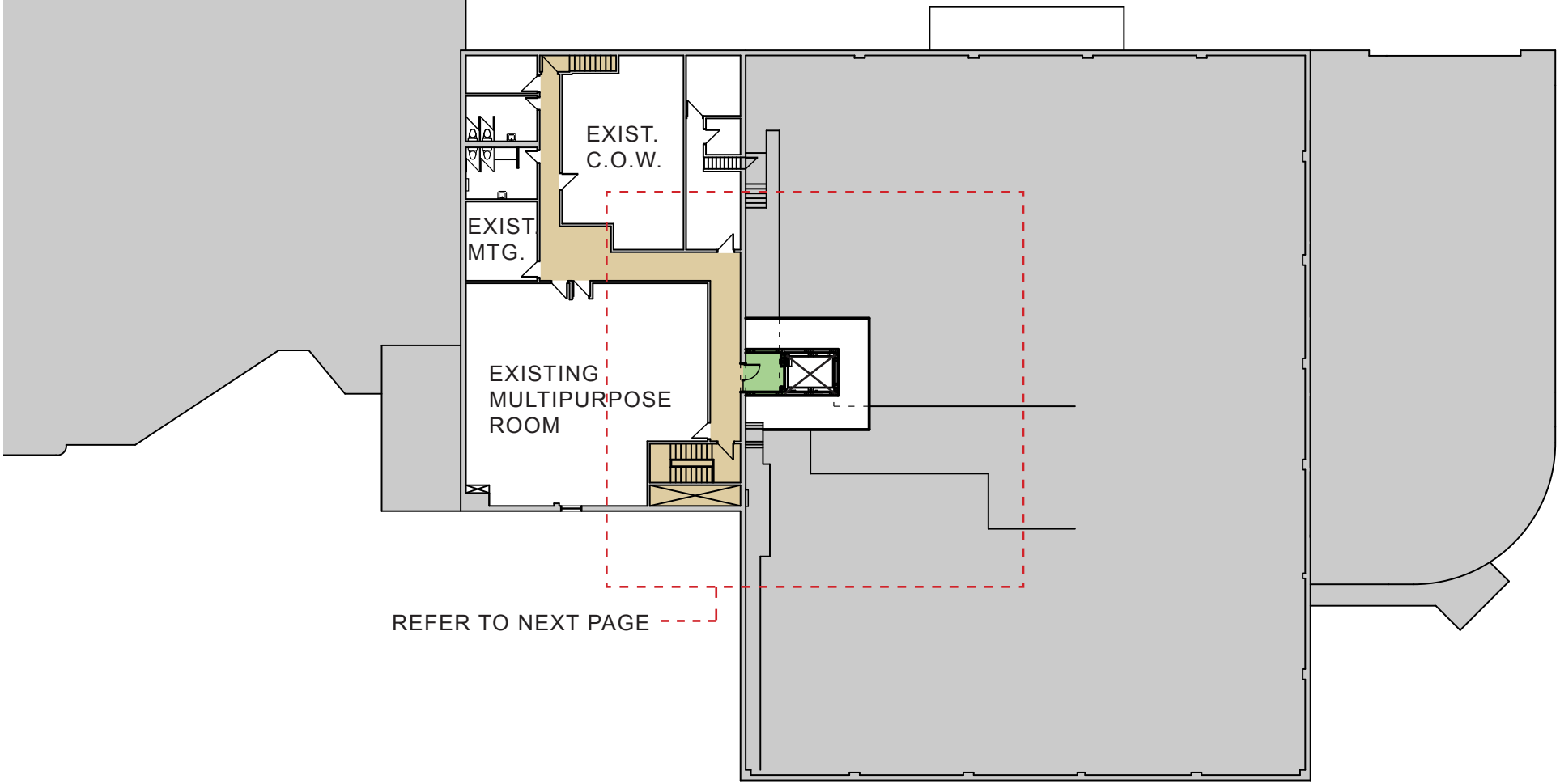
FORT ROUGE LEISURE CENTRE

2ND FLOOR PLAN

ELEVATOR

2.22

OPTION 2



NORTH

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FORT ROUGE LEISURE CENTRE

2ND FLOOR PLAN
ELEVATOR

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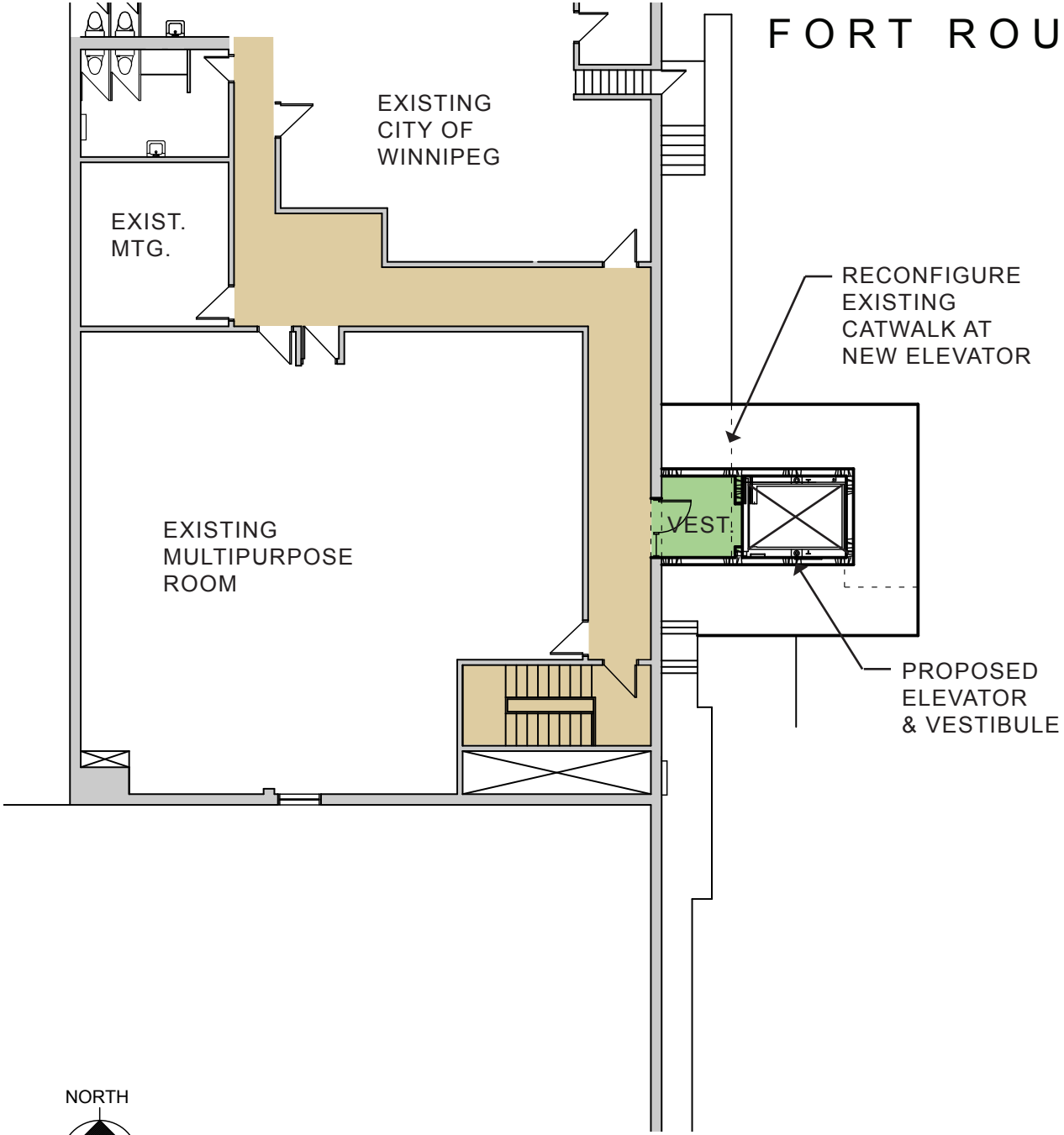
OPTION 2



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FORT ROUGE LEISURE CENTRE

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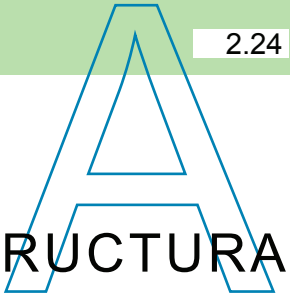


STRUCTURAL OPTION 2

Kowalchuk Consulting Engineers was retained by MCM Architects to complete a structural feasibility study for the installation of an elevator at Fort Rouge Leisure Centre. The structural feasibility study forms a portion of an overall architectural and engineering study commissioned by the City of Winnipeg.

PROPOSED LOCATION

The proposed location is adjacent to the existing weight room and fitness facility. The elevator shaft will be positioned between the existing steel angle frame trusses, and will require a short link structure to obtain access to the adjacent second floor space.

BACKGROUND INFORMATION

Drawings documenting the construction of the existing facility were not available. A site visit was completed on February 9, 2009 to visibly ascertain the type of construction used for the building.

ORIGINAL CONSTRUCTION

The original building was constructed with cast in place concrete slabs on the main floor, concrete block walls, and a steel angle roof trusses truss with a wood roof deck in the existing weight room and fitness facility. It is assumed that the main floor concrete slab in the weight room and fitness facility is a slab on grade floor.

DISCUSSION/RECOMMENDATIONS

The proposed location is able to work satisfactorily within the existing structural system. The cast in place concrete main floor can be locally removed as required to facilitate the construction of the new foundations and the elevator pit, and then replaced by the installation of compacted granular fill and a new concrete slab tied into the existing floor system. The new foundations would be friction piles to support the new loads of the elevator shaft construction. Structural work within the existing roof structure would require modification to one existing bottom chord bridging member. We would expect that the cost of the required structural work which would include the installation of the piles, construction of the elevator pit, the replacement of the main floor slab on grade, and the installation of the second floor link structure to be approximately $20,000.00.

FORT ROUGE LEISURE CENTRE

15.1 Plumbing / Sanitary Piping

The existing plumbing lines and sanitary piping appeared to be in reasonable condition. The existing piping and sanitary lines are useable but must be modified to suit new fixture location.

The plumbing fixtures are showing signs of fatigue and require upgrading at new locations to suit handicap access.

15.2 Elevator Sump Pit

A sump pit complete with sump pump will be required for the new elevator and will be required to tie into existing sanitary lines.

15.3 Ventilation

The existing duct and heating coil in the basement will require relocation. The equipment appears in good condition and can be relocated.

A thermostatically controlled exhaust fan will be required for the elevator machine room.

An exhaust fan and associated ductwork in the space required for the elevator shaft will require relocation.

15.4 Insulation / Miscellaneous

Hot water pipes should be insulated to minimize heat loss, and cold water insulated to piping should be protected against condensation.

Existing refrigerant suction pipes will require relocation and reinsulation. The existing lines appear in good condition.

15.5 Sprinkler System

Existing sprinkler system piping is located in area of new elevator opening. The sprinkler piping appears to be in good condition and can be rerouted to clear the elevator shaft.

FORT ROUGE LEISURE CENTRE

16.1 Distribution

The Federal Pioneer breaker 600 volt 3 phase distribution has capacity and space for a new breaker. The equipment is in good condition.

16.2 Existing Space for Elevator

Existing conduit and BX cables are located in the proposed areas of the elevator and will need relocation. The cabling in some cases will require complete relocation while others will require junction boxes for relocation.

16.3 Existing Lighting Washroom

Existing lighting within the washroom is of the older variety and requires replacement and relocation to suit new washroom fixture layout.

16.4 Fire Alarm System

The existing fire alarm system is in good condition with space to expand into another zone. A new fixed thermal detector will be provided at the top of the elevator shaft as required by Code.

16.5 Elevator Cabling / Voice Communications

A two-hour fire rated pyrotenax cable is required by Code for handicap access (UGL). A telephone hand-set cable connection in the telephone backboard is required for communications in the elevator.

FORT ROUGE
LEISURE CENTRE

2.27

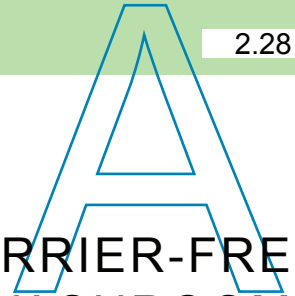
SUMMARY
ELEVATOR OPTIONS

Feasibility of adding an elevator to the existing Fort Rouge Leisure Centre is possible as indicated in the two proposed options reviewed. Each Option is acceptable for a variety of reasons, however there are specific construction and location issues that distinguishes one Option over the other.

Option 1 is totally constructed on the exterior of the current Fort Rouge Leisure Centre, resulting in a substantial increase in probable construction costs. Option 2 takes advantage of second level space that is not part of the current Leisure Centre functional space. Each option is acceptable and will provide convenient access from the main floor to the second floor. The difference between the two options is the probable increased construction costs to build Option 1 compared to Option 2. A renovation project located entirely within the centre of the building, Option 2, eliminates penetrating the exterior building envelope; air barriers, insulation, tie-in of old and new construction and finishing exterior walls becoming a costly undertaking. Therefore a reduction in costs can be anticipated if Option 2 is selected over Option 1.

FORT ROUGE
LEISURE CENTRE

2.28



BARRIER-FREE WASHROOMS

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FORT ROUGE
LEISURE CENTRE

2.29

BARRIER FREE
WASHROOMS
MAIN FLOOR

PROPOSED LOCATION - BARRIER-FREE WASHROOMS

Determine barrier free compliance of main floor washrooms.

ARCHITECTURAL ANALYSIS

Currently, the existing main floor functions have access to public washrooms located within the corridor to the hockey rink. However, continuous availability of the washrooms for public use is questionable. The washrooms are only open to the public when the hockey rink is open, this schedule varies and they are usually not accessible during the day when use of the hockey rink is low. Additional public washrooms are located directly south of the major control counter. The washrooms are barrier-free compliant and are accessible during hours of operation.

ACCESSIBILITY

- Barrier free washroom facilities are required for public access on the main level within the public corridor system.
- Both public washrooms are designed to meet the Manitoba Building Code and the City of Winnipeg Universal Design Policy.

BUILDING CODE

- Issues are defined under accessibility.

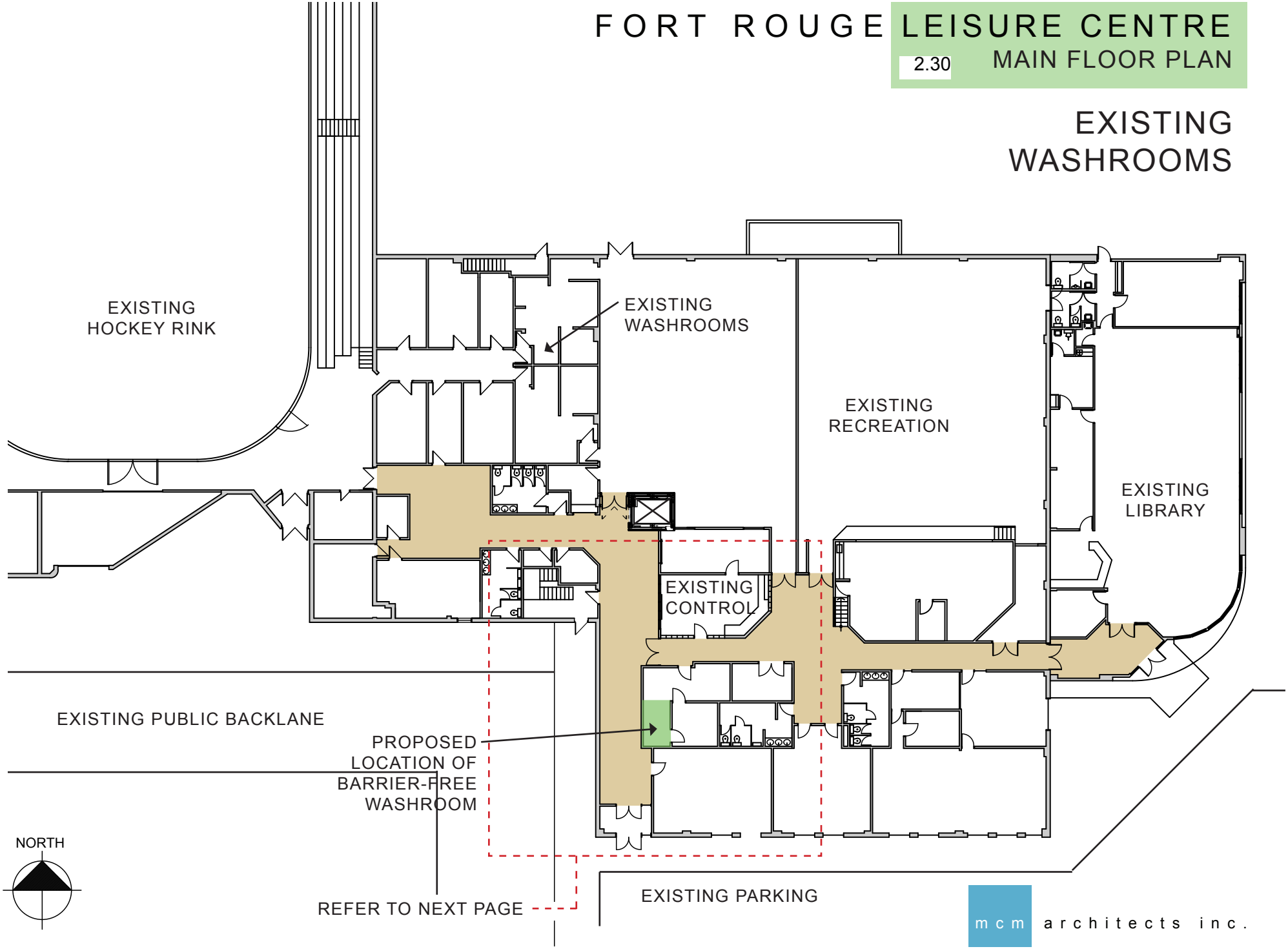
ARCHITECTURAL PROPOSAL

Existing washroom facilities meet the requirements for barrier-free accessibility. Their location off a main corridor system provides easy access for users of the Leisure Centre. No additional work is required on the main floor.

FORT ROUGE LEISURE CENTRE

2.30 MAIN FLOOR PLAN

EXISTING WASHROOMS



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FORT ROUGE
LEISURE CENTRE

2.31

A

BARRIER FREE
WASHROOMS
SECOND FLOOR

2ND FLOOR - BARRIER-FREE WASHROOMS PROPOSED LOCATION

Determine barrier free compliance of second floor washrooms.

ARCHITECTURAL ANALYSIS

- Retrofit of existing washrooms to barrier free will eliminate a number of fixtures thereby reducing occupant load on the second floor.
- Renovation of existing washrooms requires significant renovation work, relocating fixtures, removing and installing new walls, and expansion of existing space.

ACCESSIBILITY

- Existing men's and women's washrooms are not barrier free compliant.
- Accessible toilet stall is not provided; minimum width required 1830mm x 1830mm however in retrofit projects 1525mm x 1525mm is acceptable.
- Sinks and facets are not barrier free; distances from wall and between sinks are below acceptable standards.
- Turning radius within washrooms is restrictive and in front of existing washroom stalls, not attainable.
- Width of existing door in washrooms is below barrier free standards
- Men's floor mounted urinal is located on a 100mm concrete pad, both are not barrier free compliant.
- Entry floor from corridor to washroom contains a transition lip that must be traversed to gain access; this lip is greater than the 13mm permitted by code.
- Tilt mirrors are not provided in each washroom.
- Door hardware does not meet barrier free access standards.

BUILDING CODE

- Issues are defined under accessibility.

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FORT ROUGE
LEISURE CENTRE

2.32

A

BARRIER FREE
WASHROOMS
SECOND FLOOR

Architectural Proposal Second Floor Washrooms;

Accommodating Barrier free washrooms within the existing second floor washroom space has been identified as an extensive undertaking. Renovations are necessary and extend to all aspects of the existing space including corridor doors leading into the washrooms. Renovations do not end with the boundaries of the existing space, expansion of the existing washroom floor area is required to achieve a minimum barrier free clearance and the space needed to retain the current fixture count. Second floor space is not the only area affected by the renovation work, access to plumbing lines within the existing drywall ceiling of two dressing rooms on the main floor will require removal and replacement of the existing ceiling.

A proposed alternative to renovating the existing second floor washrooms is the construction of a unisex barrier free washroom for second floor occupants. This option is less expensive to construct, implementation is less disruptive to main and second floor functions. Washroom location can be accommodated anywhere on the second floor depending on available space and relationship to existing functions.

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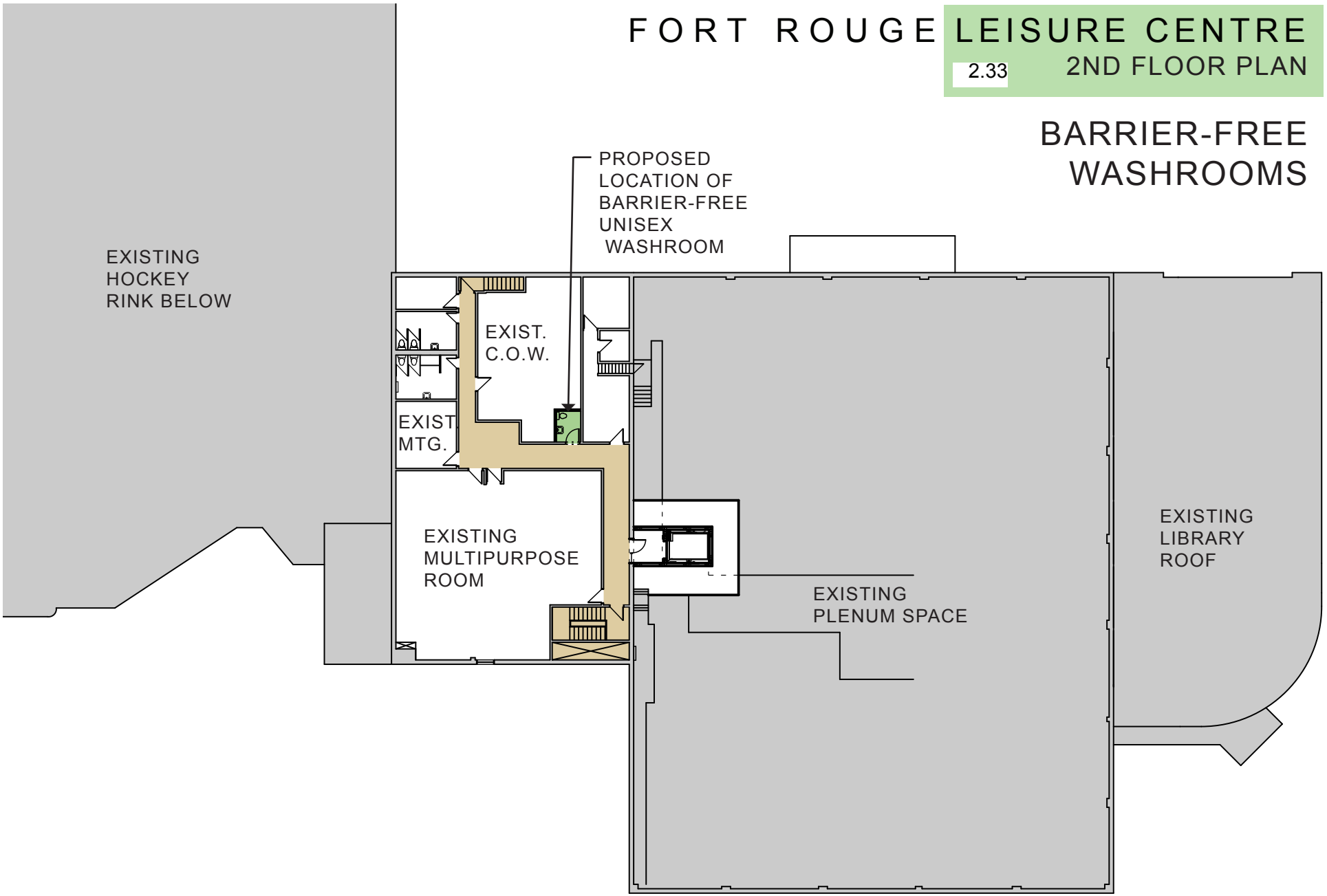
FORT ROUGE LEISURE CENTRE

2.33 2ND FLOOR PLAN

BARRIER-FREE WASHROOMS



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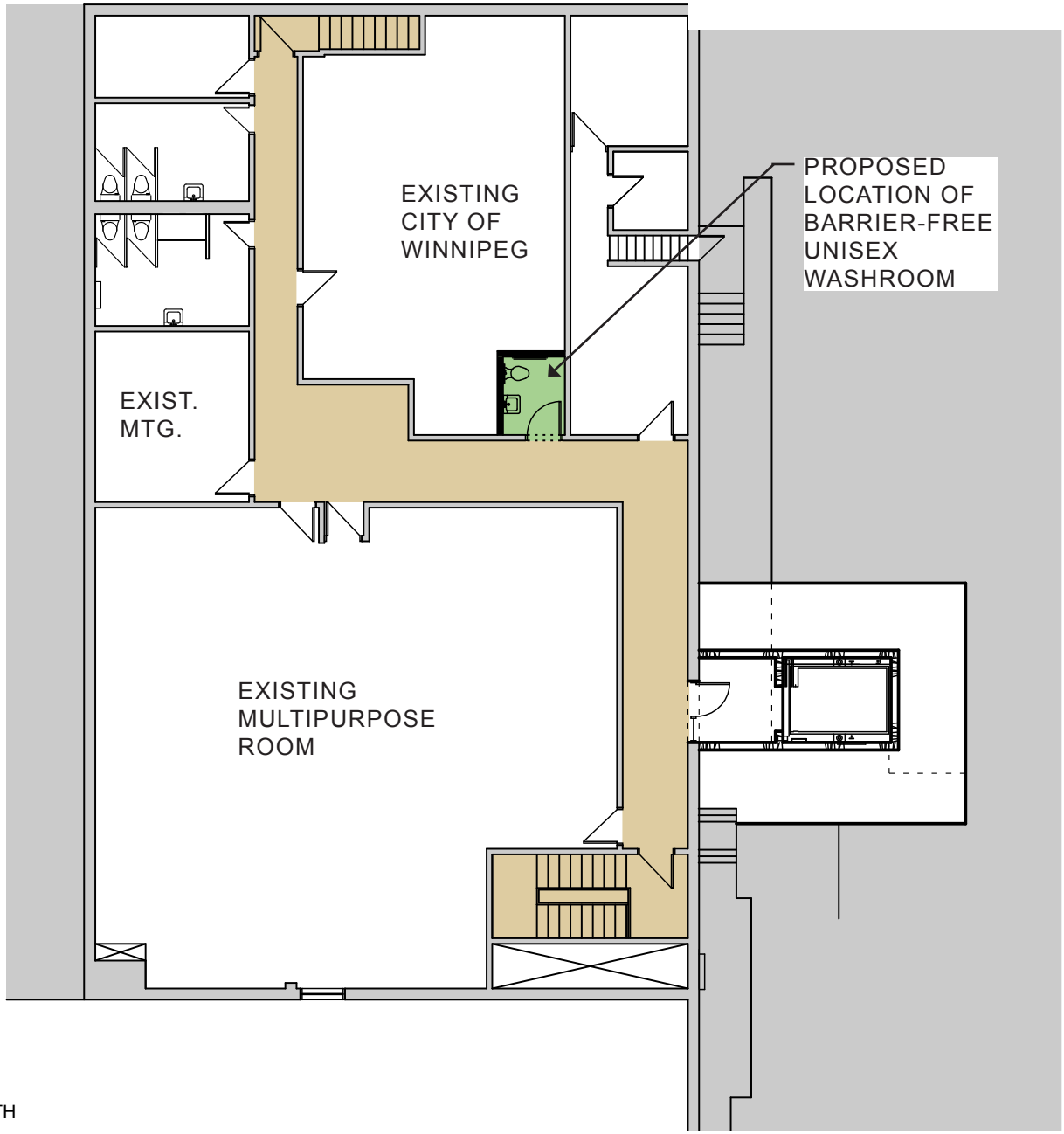
FORT ROUGE LEISURE CENTRE

2.34 2ND FLOOR PLAN

BARRIER-FREE WASHROOMS



NORTH

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FORT ROUGE
LEISURE CENTRE

2.35

SUMMARY
BARRIER FREE WASHROOMS

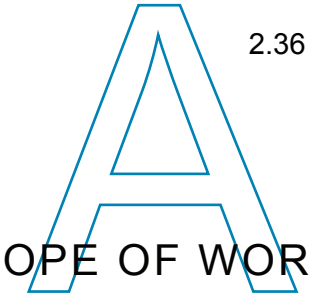
We reviewed and evaluated existing public washrooms located on the main and second floor for barrier free compliance including availability, access, fixture locations, and recommended clearances. From our analysis the main floor washrooms meet accessibility needs, second floor washrooms are deficient and do not meet accessibility guidelines.

On the second floor the current washroom layouts are not barrier free compliant. Significant deficiencies exist that require extensive renovation work to meet today's standard. The existing floor area will not accommodate barrier free washrooms with the same amount of fixtures present today. An increased footprint is inevitable to meet accessibility needs. Upgrade is not confined to the washrooms, a restrictive access corridor and entry doors that do not meet standards also require renovation upgrading. As well, access to plumbing lines requires removal and replacement of a considerable amount of drywall ceilings from within the existing hockey change rooms located below the washrooms. Overall the approach of renovating existing washrooms to accessible washrooms on the second level is a costly proposition.

Installing a unisex accessible washroom is a reasonable alternative to renovating and upgrading the current washroom facilities. The space required to accommodate a unisex washroom is available along any corridor on the second floor level without overburdening existing functions.

Our recommendation for barrier free compliant washroom facilities on the second floor is to construct unisex a washroom. The minimum space required for the washroom, the flexibility of location and the construction cost would be significantly less then renovating the existing washroom making this an attractive solution.

FORT ROUGE
LEISURE CENTRE



SCOPE OF WORK
COSTING

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ARCHITECTURAL/ STRUCTURAL

Main Floor
- Remove existing doors and partial wall to weight room
- Remove ceiling and floor tile as required
- Remove concrete floor slab and excavate for elevator and sump/interceptor pit
- Provide hoarding around construction site.
- Demolish area for new elevator machine room

Second Floor
- Remove existing catwalk as required to accommodate new elevator shaft
- Provide new door opening in existing wall to allow for access from new elevator.
- Provide scaffolding necessary for new construction

MECHANICAL

Main Floor
- Relocate sprinkler heads
- Provide ventilation for elevator machine room

Second Floor
- Relocate sprinkler heads and main branch
- Relocate copper water pipe
- Raise existing fan in ceiling space

ELECTRICAL

Main Floor
- Revise fire alarm zones
- Revise lighting to suit new elevator
- Relocate lights in weight room/general office.

Second Floor
- Revise lighting in new corridor
- Raise existing fan in ceiling space
- Relocate attic equipment panels, conduits, main feeder and system cable

FORT ROUGE
LEISURE CENTRE

2.37

A

SCOPE OF WORK

ELEVATOR DEMOLITION OPTION 2

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FORT ROUGE
LEISURE CENTRE

2.38

A

SCOPE OF WORK

ELEVATOR
CONSTRUCTION
OPTION 2

ARCHITECTURAL/ STRUCTURAL

Main Floor
- Install new fire rated doors and rebuild concrete block wall at weight room
- Install new ceiling (fire rated as required) and floor tile as required
- Install new friction piles to support elevator shaft
- Pour new concrete slab on compacted fill tie into existing concrete slab
- Repair floor in weight room
- Paint all new walls and existing walls affected by new construction
- Provide new fire rated door and ceilings in new elevator machine room

Second Floor
- Construct new concrete block elevator shaft and vestibule
- Pour new concrete floor at second floor elevator vestibule
- Install new fire rated door to second floor corridor
- Modify bottom chord of one existing truss to allow for elevator shaft
- Install new ceiling (fire rated as required) and flooring in elevator vestibule and existing corridor as required
- Rebuild catwalk around new elevator shaft.
- Install actuator button from existing corridor to new vestibule

MECHANICAL

Main Floor
- Add new sprinkler heads as required due to new construction
- Provide working mechanical system for elevator sump/interceptor pit
- Revise ventilation as required.
- Ventilate new elevator machine room

Second Floor
- Provide hvac in new elevator vestibule
- Install new sprinklers as required in elevator vestibule

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ELECTRICAL

Main Floor
- Add new lights as required around new elevator shaft
- New light in elevator pit
- New breaker in panel sub distribution and feeder to elevator
- New power outlets and switches as required.
- Provide power/data in new elevator machine room

Second Floor
- Provide new lighting in elevator vestibule
- Provide power for actuator
- Adjust lighting in attic space to suit new elevator

FORT ROUGE
LEISURE CENTRE

2.39

A

SCOPE OF WORK

ELEVATOR
CONSTRUCTION
OPTION 2

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FORT ROUGE
LEISURE CENTRE

2.40

PROBABLE COST

ELEVATOR / BARRIER FREE WASHROOMS

ELEVATOR: 2 STOP, 4,500 LBS

Architectural		$265,250	
Structural		20,000	
Mechanical		25,000	
Electrical		55,000	
		$365,250	
	GC	36,525	$401,775

WASHROOM – UNISEX (SECOND LEVEL ONLY)

Architectural		$ 38,900	
Structural		5,000	
Mechanical		20,000	
Electrical		12,000	
		$ 75,900	
	GC	7,590	83,490

Sub-Total	$485,265
GST	24,263
	$509,528
Consultant Fees	50,953

PROBABLE BUDGET COSTS **$560,481**

(+/-20% not including disbursements)

ESCALATION = .5% PER MONTH

ELECTRICAL

The existing 400 ampere, 600 volt, 3 phase, 4 wire service at Fort Rouge Leisure centre may have adequate capacity.

To confirm, our electrical consultant requires billings for the last 3 years to calculate site demand. Based on demand review, if distribution upgrade is required add $50,000 to $65,000 to probable electrical budget.

MCW / AGE

16.0 MECHANICAL

Fort Rouge Leisure Centre Elevator / Barrier Free Washroom

Option 2:

Item	**Budget**
Second floor (in ceiling space):	
Relocate sprinkler main and branch	$ 6,000
Relocate copper water pipe	$ 2,000
Raise fan	$ 2,000
	$ 10,000
First floor (exercise machines):	
Relocate sprinkler heads, and perhaps add for coverage	$ 3,000
Elevator sump pit	$ 4,500
Ventilate elevator machine room	$ 3,500
	$ 11,000
Subtotal:	**$ 21,000**
RST:	**$ 1,470**
Total:	**$ 22,470**

Allow budget of $25,000

MCW / AGE

116.0 ELECTRICAL

Fort Rouge Leisure Centre Elevator / Barrier Free Washroom

Option 2:

Item		**Budget**
Breaker in Federal Pioneer subdistribution and feeder to elevator room		$ 12,000
Elevator (power/data) room requirements		$ 5,000
Lighting revisions		$ 3,000
Fire alarm zone		$ 2,000
Relocation equipment in attic space:		$ 23,000
Panel 4 relocated	($ 8,000)	
10 conduits relocated	($10,000)	
Major feeder relocated	($ 2,000)	
System cable relocation	($ 3,000)	
Relocation in fitness area		$ 3,000
Subtotal:		**$ 48,000**
RST:		**$ 3,360**
Total:		**$ 51,360**

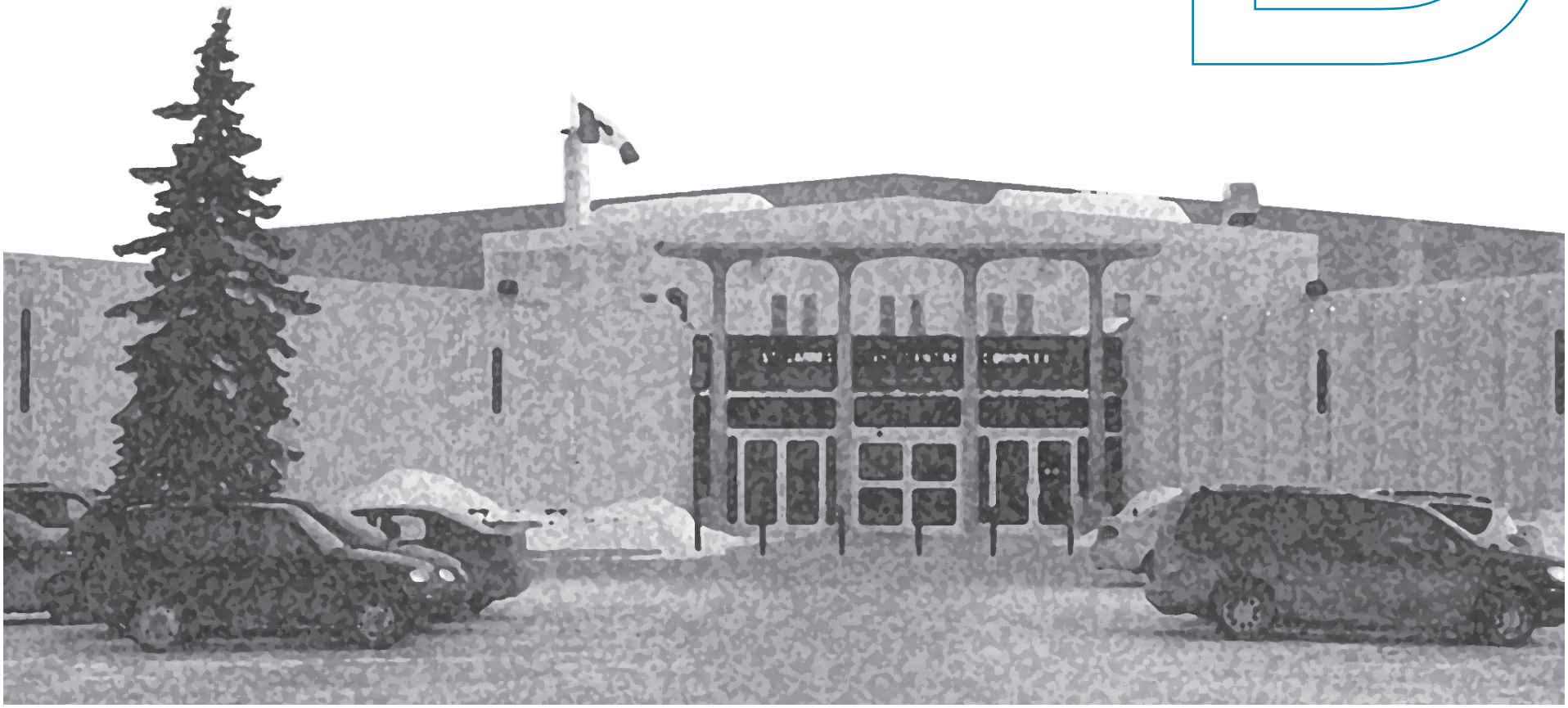
Allow budget of $55,000.00

The existing 400 ampre, 600 volt, 3 phase, 4 wire service at Fort Rouge Leisure Centre may have adequate capacity.

To confirm, our electrical consultant requires billings for the last three years to calculate site demand. Based on demand review, if distribution upgrade is required add $50,000 to $65,000 to probable electrical budget.

ST. JAMES CIVIC CENTRE

ELEVATOR / BARRIER - FREE WASHROOM STUDY



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B SITE

Located on the northern edge of the St. James community is the St. James Civic Centre. The existing building is a combination of one and two storey structures that have under gone minor additions and renovations through recent years. A single storey component of the Civic Centre faces south onto Ness Avenue, a major vehicular thoroughfare that travels east-west.

The west and north boundaries of the site border onto the Assiniboine Golf Course; along the west property line is a service road that provides access to the Civic Centre at each building module backing onto this side of the property. The north property line defines an overflow parking lot/service area in the northeast corner of the site, with the Assiniboine Golf Course located directly north. Woodlawn Street bordering the east side of the property provides access to the north end of the site as well as access for service vehicles to the private curling club across the street. The current position of the recreation centre relative to the surrounding property lines and neighbors has become land locked.

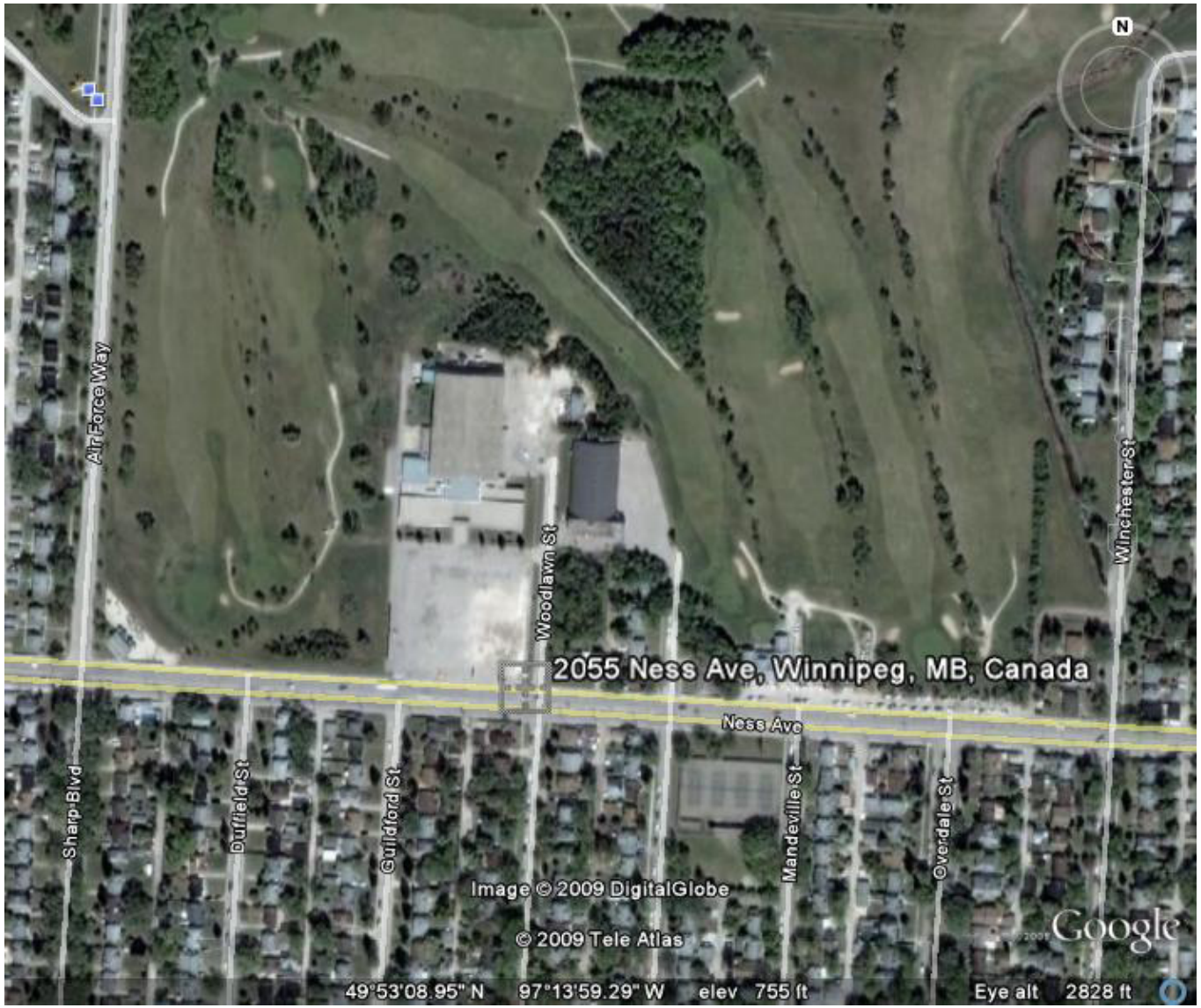
Public parking for the Civic Centre is located south of the building to Ness Avenue and extends to the east and west property lines. Overflow parking exists north of the building along the east property line and extends to the north property line.

Entry from Ness Avenue provides the main vehicular access and exit from the site. On the south side of the Civic Centre, a barrier free drop off zone for patrons exists. Currently the main south entry doors accessed from Ness Avenue are equipped with barrier-free actuator buttons.

ST. JAMES CIVIC CENTRE

3.02

B SITE PLAN



Aerial Site Photograph: N.T.S.

B OVERVIEW

St. James Civic Centre is organized around a central reception/canteen on the main floor that is surrounded by the main public foyer extending to the north and south. Secondary corridors branch from the main foyer to the east and west providing access to public functions along these corridors. Functions on the main floor include a swimming pool/weight room to the west and a gymnasium/ public meeting rooms to the east. North of the central canteen is the hockey rink.

On the main level the entry and central public core are located at grade level and are accessible by way of a barrier free path of travel from the south parking lot into the main foyer. Other functions on the main level at grade include the swimming pool/weight room and gymnasium/public meeting rooms. The hockey rink to the north is located approximately 3'-6" below grade level. Access to the ice level is difficult, patrons must navigate an existing pedestrian ramp that does not meet building codes. Patrons are able to view the ice surface from the main floor without accessing the hockey rink level. Main public washrooms for the main level are located at the hockey rink level or 3'-6" below the main entry level. Washroom facilities are not barrier free compliant.

The second floor level encompasses only a small central portion of the existing building footprint. Extending from the south side of the hockey rink the second floor footprint extends to the main entry vestibule doors. The east and west boundaries are defined by two vertical stairs east and west of the central public core located in the middle of the main level. The second floor has no elevator access. Functions on the second floor include a pre-school/multi-purpose room, offices, seminar rooms and washroom facilities. Washroom facilities are not barrier free compliant.

All main level functions, with the exception of the hockey rink, are located over a full height basement. Located immediately below the main reception hall the footprint of the basement services as storage rooms and mechanical spaces. Access is similar to the second floor; patrons utilize the east and west main stairs. The basement level has no elevator access or barrier free washroom facilities.

The second floor and basement level are the two areas in question that require barrier free access, in particular an elevator and washroom upgrade. By developing barrier free access to the second floor and basement levels, the City of Winnipeg assures patrons that they have equal access to all spaces and programs within the St. James Civic Centre.

B MAIN FLOOR REVIEW

Pedestrian and vehicular traffic enter the site and building directly from the south via Ness Avenue. A central main reception area greets patrons and visitors to the recreation centre, and also functions as a control point for staff. Internally located at the heart of the complex, the main reception counter is ideally suited for providing passive visual security on patrons who are entering or exiting the Civic Centre. To access any function one must pass this central point before proceeding to their desired activity area. Functions on the main floor include reception, offices, swimming pool, weight room, gymnasium, canteen, hockey rink and change rooms. A limited number of main floor functions are accessible from grade and are approximately 24,460 sq. ft. in area not including the area of the hockey rink.

Directly east and west of the main reception counter are two central public stairwells connecting the main, second and basement levels. Stairwells provide a means of egress from the basement and second level, although they do not meet today's Manitoba Building Code they were building code compliant at the time they were built.

North of the main reception counter is a hockey rink and set of public washrooms that serves both the rink and main floor of the Civic Centre. Access to both functions require users to traverse a flight of stairs or make use of a non-compliant access ramp. Upon reaching the main public washrooms, patrons soon find that the internal layout does not meet barrier free access standards.

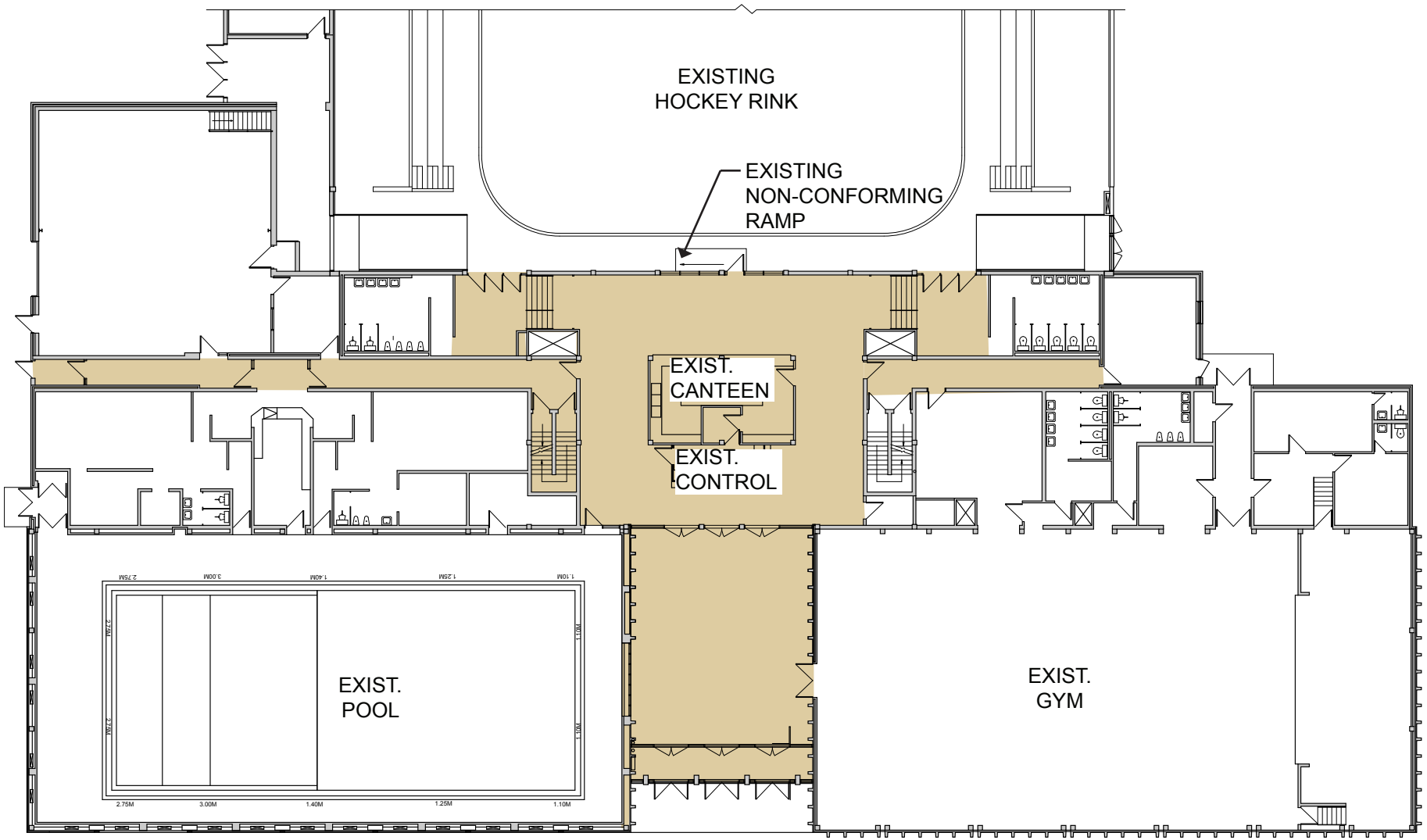
Barrier free access to the remaining functions on the main floor, gymnasium, swimming pool, and weight room are beyond the scope of work for this report.

Analyzing the functional layout of the existing main floor indicates the proposed elevator should be directly within, or in close proximity to the main reception area. Placement at this location will provide direct access to the elevator from the main circulation area, passive supervision from the main reception, and direct visibility of the elevator to patrons of the Civic Centre.

ST. JAMES CIVIC CENTRE

EXISTING

3.05 MAIN FLOOR PLAN



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ST. JAMES
CIVIC CENTRE

3.06

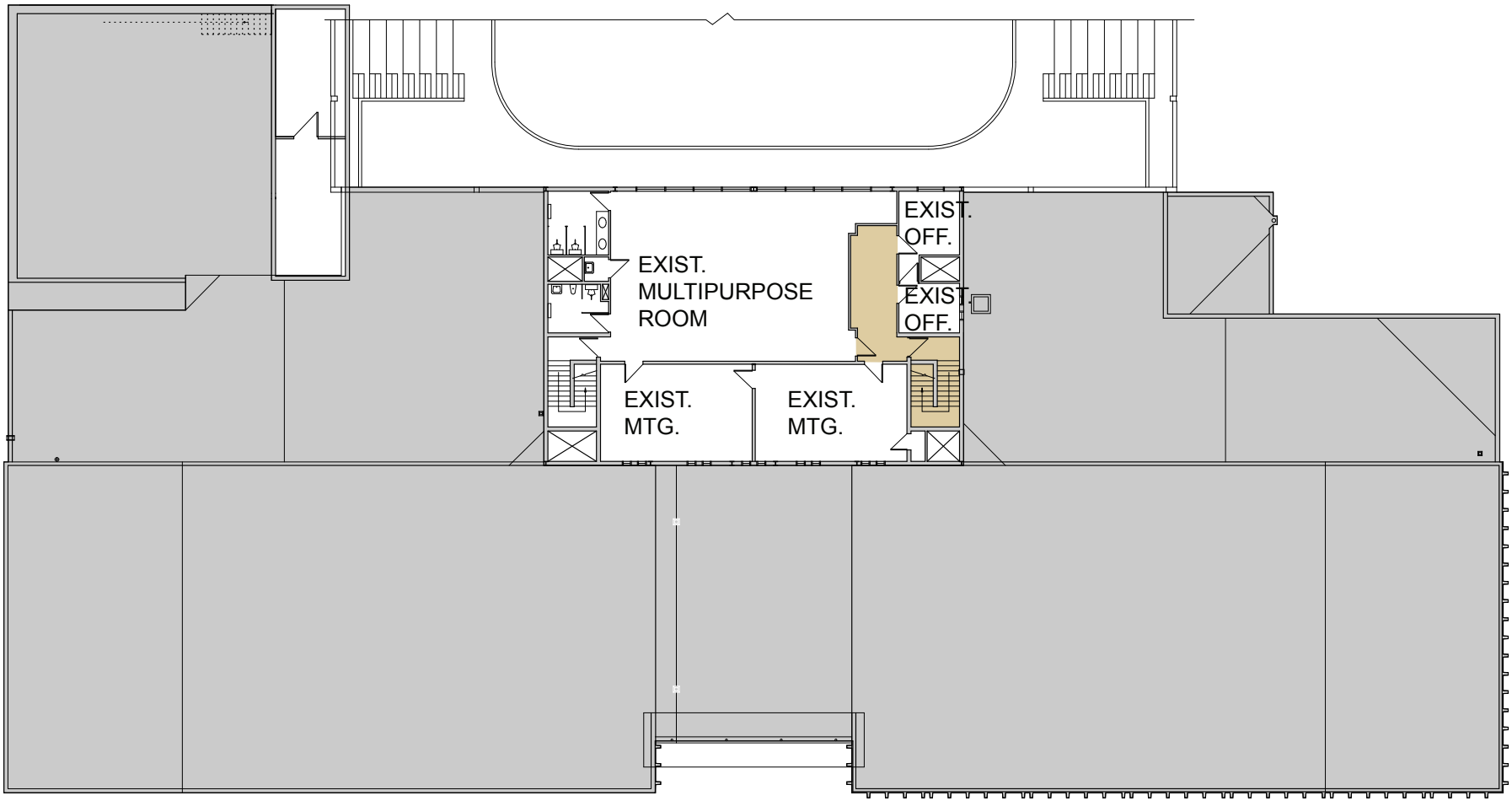
B

2ND FLOOR REVIEW

The second floor plan is +/- 3170 sq. ft. in area and is located in the heart of the building situated directly above the main reception area. Functions include a pre-school/multi-purpose room, offices, seminar rooms and washroom facilities. All existing floor area on the second floor is assigned to specific functions, there is no space available for adjusting or expanding functions within the existing foot print without compromising functional layouts.

Access to the second floor is by two main stairwells located at the west and east side of the second floor. Exiting the main stairwells on the second floor leads to a confined corridor system that provides access to public functions. This corridor is wide enough for barrier free access but the layout of the existing corridor system is a Manitoba Building Code violation. Occupants of a second storey require access to two separate means of egress from an occupied space. Current floor plan provides for only one means of egress from the offices and meeting rooms. To reach a second means of egress, occupants must travel through another occupied room; the Manitoba Building Code does not permit occupants exiting from one occupied space to travel through an adjacent occupied space before accessing an exit enclosure. Location of existing vertical access points and the resulting corridor system are important to any future development that includes additional vertical circulation.

ST. JAMES CIVIC CENTRE
EXISTING
3.07 2ND FLOOR PLAN



NORTH

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ST. JAMES
CIVIC CENTRE

3.08

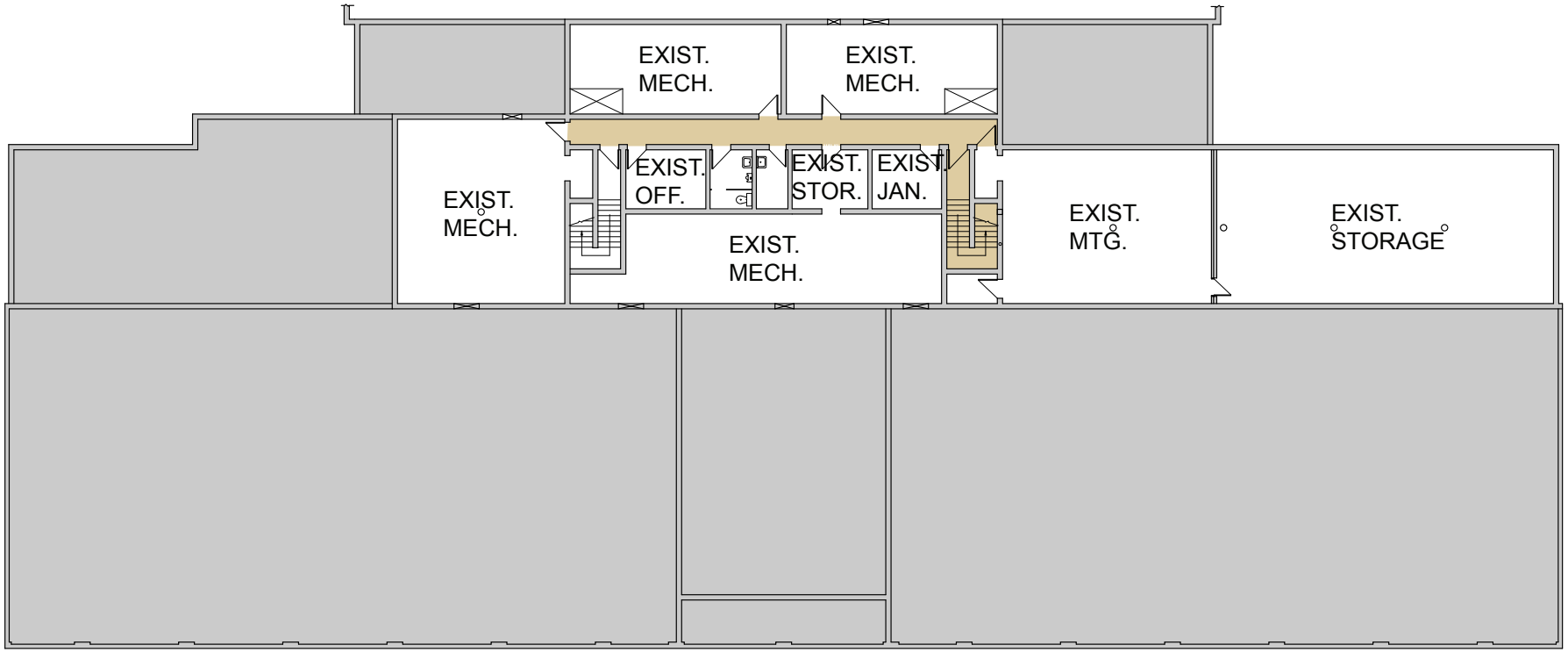
BASEMENT REVIEW

Existing building service spaces occupy a majority of the basement; mechanical rooms, pool equipment and storage spaces. The only exception to this was the rifle range on the east half of the building. Today the basement remains predominantly service space; exceptions are the rifle range recently converted to a meeting room/storage space, and the swim club occupying a storage room. Functions located in the basement are accessed by a corridor system that travels between the east and west stairwells. The width of the corridor is below acceptable access standards.

ST. JAMES CIVIC CENTRE

EXISTING

3.09 BASEMENT PLAN



NORTH

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ST. JAMES
CIVIC CENTRE

3.10

B

BUILDING REVIEW SUMMARY
EXISTING BUILDING

Our analysis of existing building conditions and layout of the current St. James Civic Centre provides the starting point for examining options to locate an elevator within the existing building fabric. The current structural system, basic interior circulation patterns, and available area all contribute to defining and establishing the feasibility of incorporating an elevator. Information gathered from this general assessment provides the necessary background to move forward with analyzing specific options in further detail.

Our analysis established that due to existing conditions potential restrictions have emerged that could effect elevator options depending on their location. To determine the consequences each option requires an individual and complete in-depth examination. The next phase of the review will focus on how a proposed elevator can fit into the existing St. James Civic Centre building fabric.

ST. JAMES
CIVIC CENTRE

3.11

B

PROPOSED ELEVATOR OPTIONS

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ST. JAMES
CIVIC CENTRE

3.12

B

ELEVATOR OPTION OVERVIEW

The goal of this report is to respond to a City of Winnipeg inquiry; is it feasible to incorporate a barrier free elevator within the existing building footprint that will provide access to all levels of the St. James Civic Centre. The design and location of the elevator shall conform to the City of Winnipeg Accessibility Design Standards and the Manitoba Building Code. In association with the elevator is the need for providing barrier free washroom facilities on all accessible levels.

Through prior discussions with the City of Winnipeg it was determined that two options integrating an elevator into each recreation centre would be reviewed. In addition to the elevator observations, we are including recommendations for accommodating accessible public washroom facilities on each level of the St. James Civic Centre.

Schematic plans are used to define and enlighten the City of Winnipeg concerning each option. Through the use of these drawings we can evaluate each option by analyzing and defining the respective positive and negative attributes to determine the optimum solution. Comments will include the feasibility of incorporating the elevator into the recreation centre. This information provides the City of Winnipeg with the background knowledge to decide whether or not to proceed with the elevator installation.

Upon determining the most favorable location for the elevator within the building, an outline defining the scope of work to accommodate the installation will be developed. This information provides the necessary data on the selected option to formulate a probable construction budget ‘Class D’. Probable costs include the renovations necessary to provide Barrier Free washroom facilities as required by the building code.

ST. JAMES
CIVIC CENTRE

3.13

B

ELEVATOR
OPTION 1

MAIN FLOOR

PROPOSED LOCATION - OPTION 1

Locate the elevator adjacent to the main reception area and canteen.

ARCHITECTURAL ANALYSIS

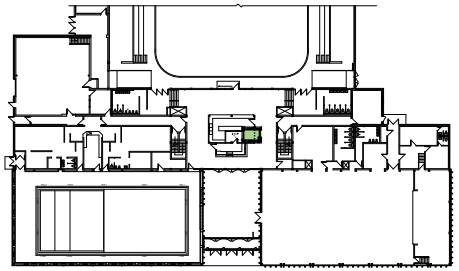
- Install a 4500 lb elevator to access second floor and basement level.
- Locate directly adjacent to the central control centre allowing for supervision throughout the day.
- Existing canteen storage space will be reduced, space will be utilized to accommodate the new elevator.
- Central location allows for use of the elevator at all times when the Civic Centre is open. Controlled access to basement and second floor are managed by keying off floor areas where / when access is restricted.
- Interior location of elevator will reduce circulation space within the main hall.
- Located on a main circulation path allows direct access onto and off elevator.
- Interior location limits possible working hours for contractor depending on extent of disruption patrons can accept. Interior location will create a disruption to the main entry hall with hoarding extending further into the space to allow workers to complete the elevator shaft.

ACCESSIBILITY

- Access from parking lot to the elevator is available from the south entry (barrier free actuator)
- Accessibility to and around proposed elevator meets all standards.
- Located on an accessible main circulation path allows direct access onto and off elevator.

BUILDING CODE

- No issues at this time.



KEY PLAN

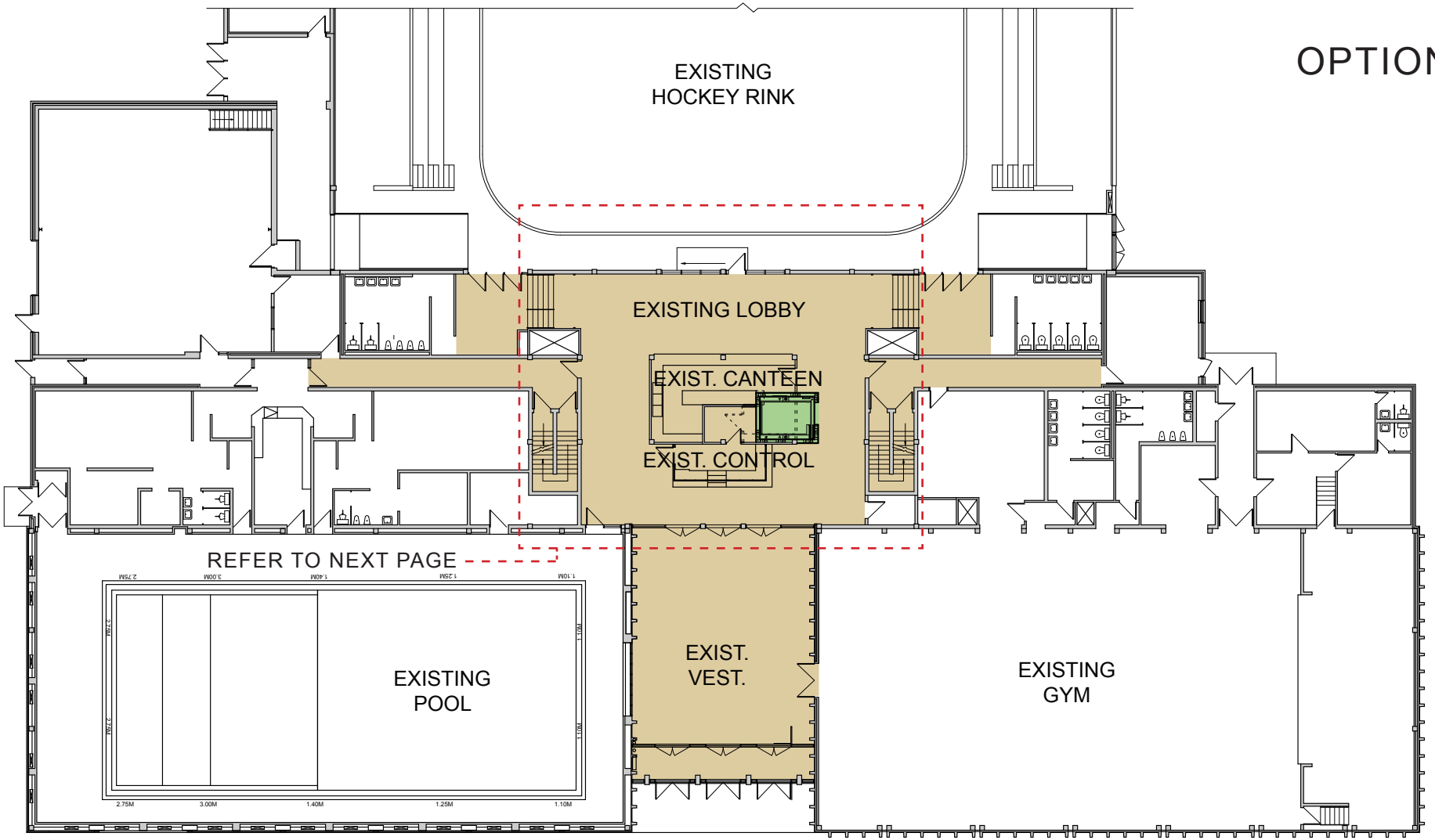
mcm architects inc.

ST. JAMES CIVIC CENTRE

MAIN FLOOR PLAN ELEVATOR

3.14

OPTION 1



NORTH

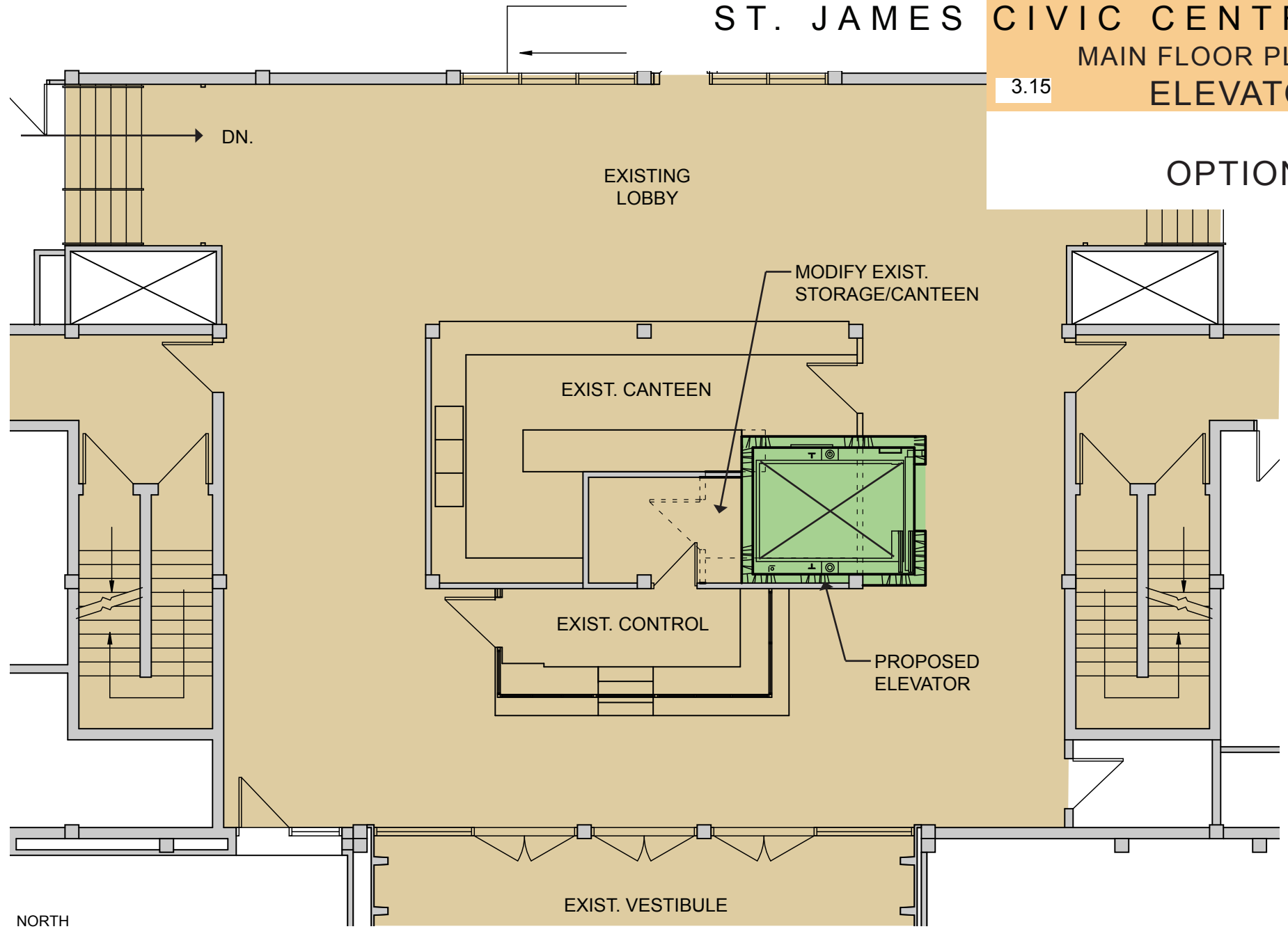
mcm architects inc.

ST. JAMES CIVIC CENTRE

MAIN FLOOR PLAN ELEVATOR

3.15

OPTION 1



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B

ELEVATOR OPTION 1

2ND FLOOR

2ND FLOOR - OPTION 1
ARCHITECTURAL ANALYSIS

- Accommodation of new elevator shaft will require a reduction the existing seminar room and pre-school / multi-purpose space floor area.
- Elevator opens onto the second floor corridor providing direct access to all required spaces on the second floor.

- Majority of construction scope is interior work, with the exception of the elevator over-run and the elevator machine penthouse.
- Availability of second floor washrooms for use by the general public is difficult; patrons on the second floor are required to walk through the pre-school area to use the washrooms. This arrangement is not recommended. Pre-school or any other function in the multipurpose room should not have to allow for a public corridor for people using the washrooms.

ACCESSIBILITY

- Second floor corridor is of sufficient width and meets accessibility standards including proper turning radii.
- Accessibility to and around proposed elevator meets all standards.
- Located on an accessible main circulation path that allows direct access onto and off elevator.
- Recommend upgrading of door hardware to barrier free lever handles; in particular doors in public spaces depending on frequency of use.

BUILDING CODE

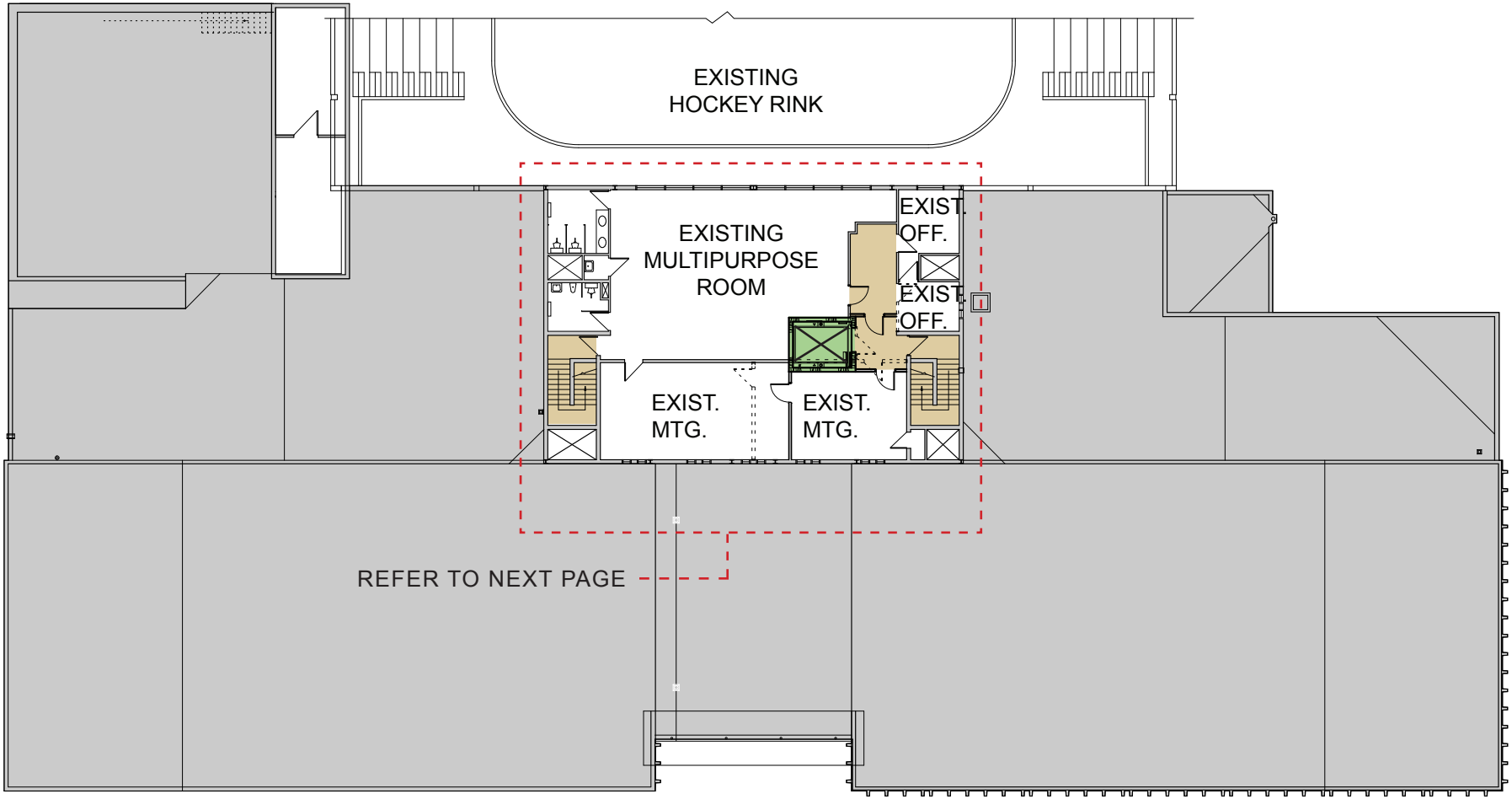
- Building code issues may need attention prior to building the elevator, ie., from any occupied space on an upper level two means of egress are required. Occupants cannot travel from one occupied space through an adjacent occupied space before accessing an exit enclosure. City of Winnipeg Plan Exam will have to review and comment.

ST. JAMES CIVIC CENTRE

2ND FLOOR PLAN

3.17 ELEVATOR

OPTION 1



NORTH

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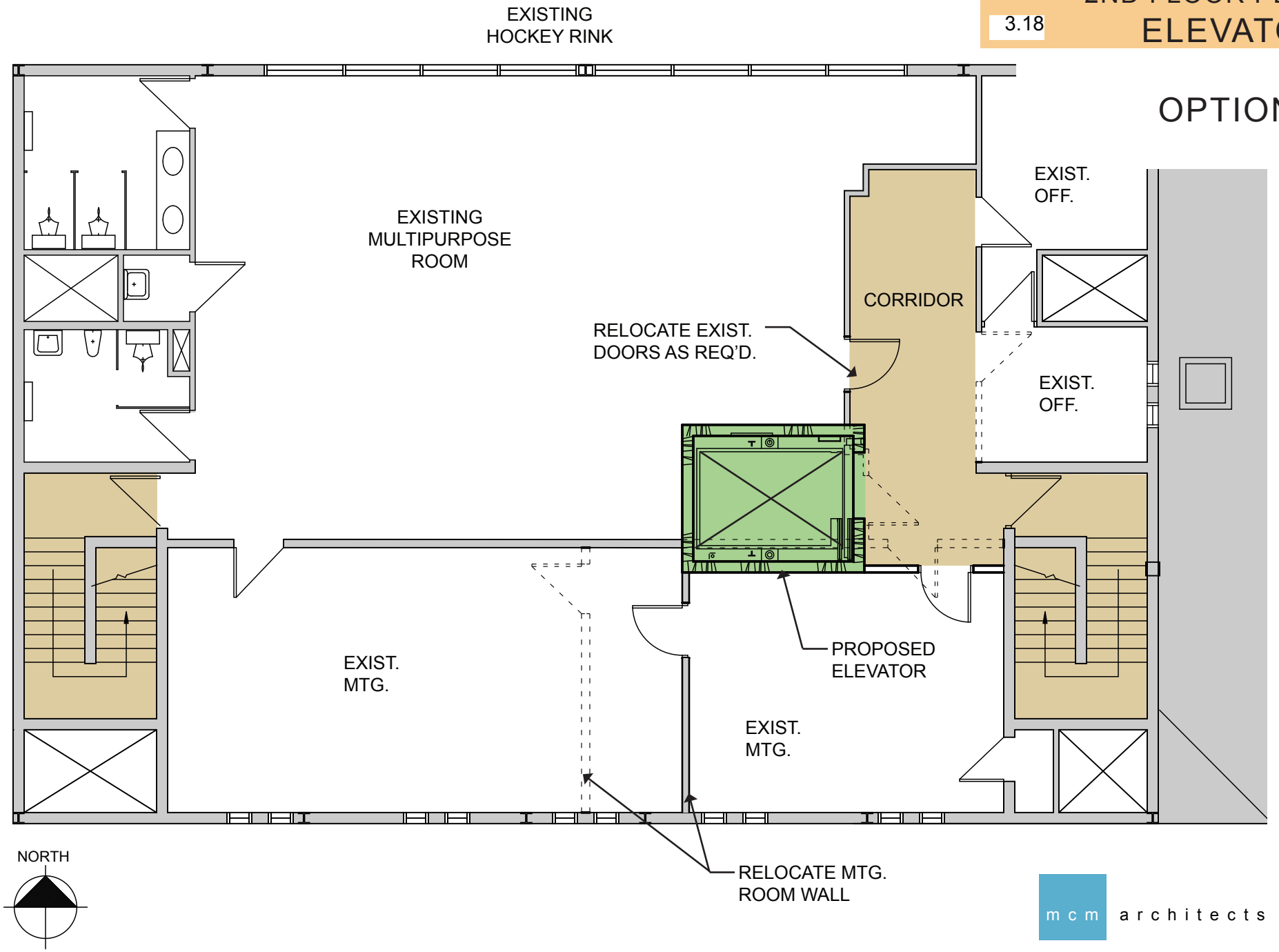
ST. JAMES CIVIC CENTRE

2ND FLOOR PLAN ELEVATOR

3.18

OPTION 1



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ST. JAMES
CIVIC CENTRE

3.19

B

ELEVATOR OPTION 1

BASEMENT

BASEMENT - OPTION 1
ARCHITECTURAL ANALYSIS

- Utilize existing storage room to accommodate the elevator and vestibule in the basement.
- Position of elevator allows direct access to all public spaces along the corridor system.
- Majority of construction scope is interior work, with the exception of the elevator machine room and penthouse.

ACCESSIBILITY

- Existing corridor system is tight and turning radius for wheelchairs is difficult but attainable with maneuvering.

- Accessibility to and around proposed elevator meets all standards.
- Located on an accessible main circulation path that allows direct access onto and off elevator.
- Recommend upgrading of door hardware to barrier free lever handles; in particular doors in public spaces depending on frequency of use.

BUILDING CODE

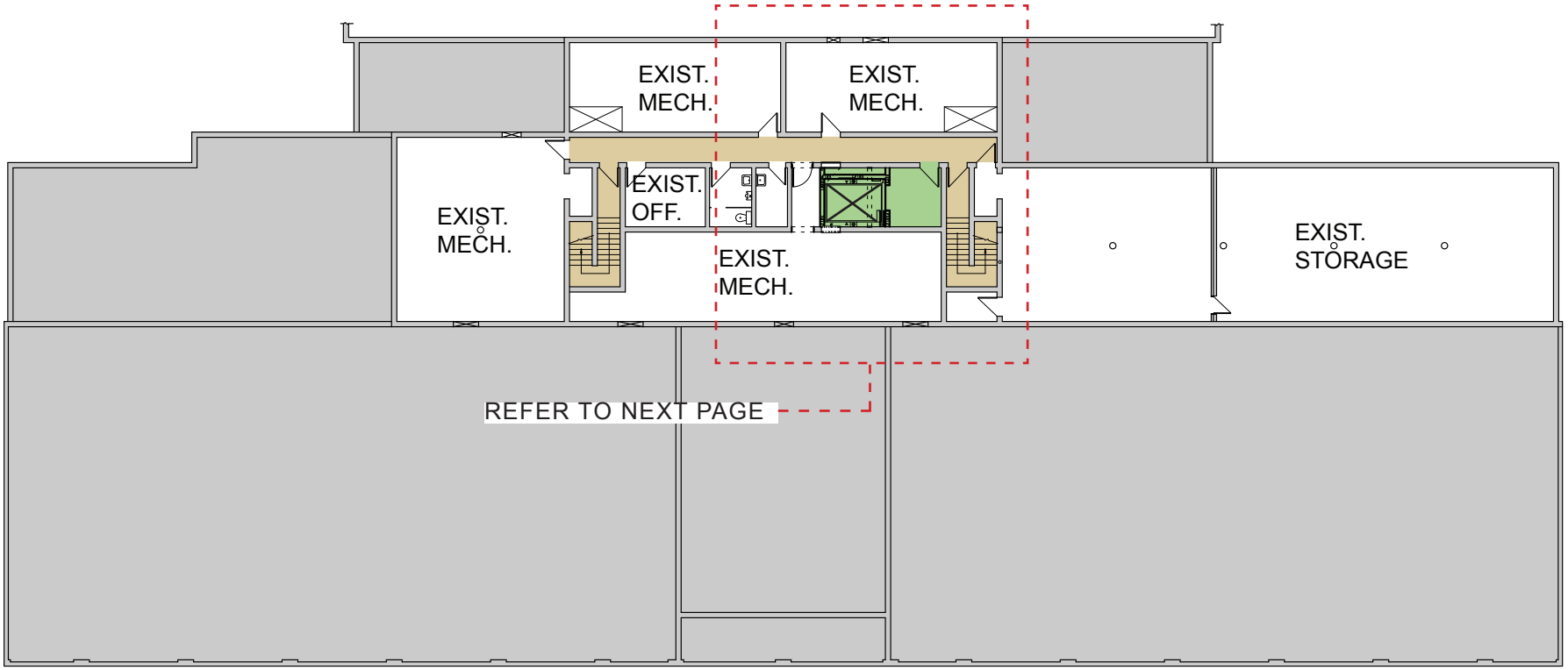
- Area of refuge is a factor in the basement and requires discussion to identify location and area requirements.

ST. JAMES CIVIC CENTRE

BASEMENT PLAN ELEVATOR

3.20

OPTION 1



NORTH

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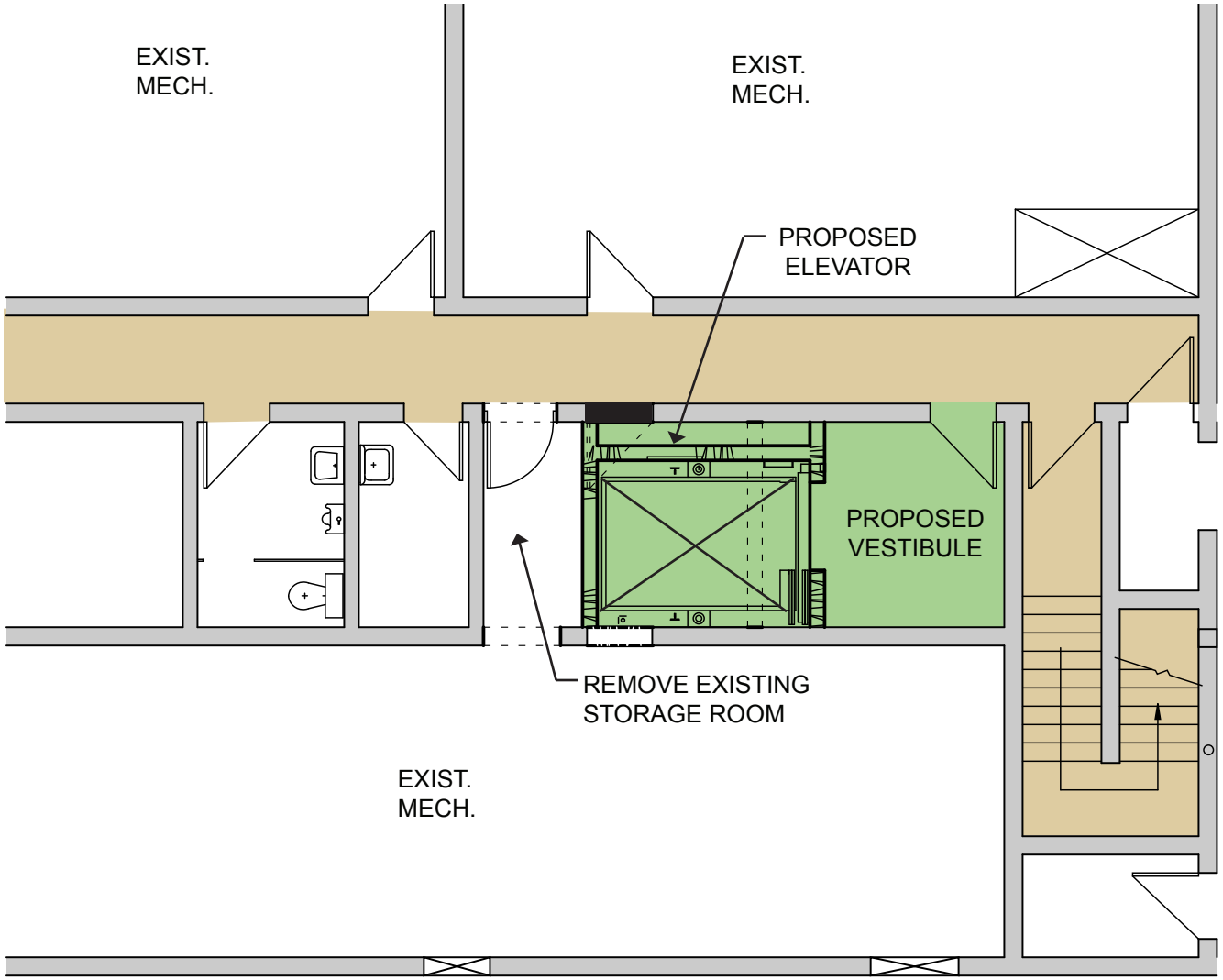
ST. JAMES CIVIC CENTRE

BASEMENT PLAN

3.21 ELEVATOR

OPTION 1



NORTH

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ST. JAMES
CIVIC CENTRE

3.22

B

ELEVATOR OPTION 2

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ST. JAMES
CIVIC CENTRE

3.23

B

ELEVATOR
OPTION 2

MAIN FLOOR

PROPOSED LOCATION - OPTION 2

Locate the elevator east of the main public hall and staircase.

ARCHITECTURAL ANALYSIS

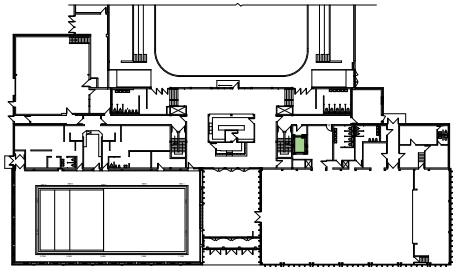
- Install a 4500 lb elevator to access second floor and basement level.
- Location of elevator in relation to central control and main public hall compromises passive supervision. The elevator is hidden within a separate room; a former gymnasium change room that has been converted into an exercise/multi-purpose room.
- Central location allows for use of the elevator at all times when the Civic Centre is open. Controlled access to basement and second floor are managed by keying off floor areas where / when access is restricted.
- Elevator location within the existing building will require sacrificing valuable interior space on the main level in the exercise/multi-purpose room.
- Located on a secondary corridor off the main public circulation space, visibility to patrons is greatly reduced, therefore public awareness of an elevator is also diminished.
- Interior location limits possible working hours for contractor depending on extent of disruption patrons can accept. Interior location creates a disruption to the secondary corridor and exercise/multi-purpose room, with hoarding from construction required for workers to complete the elevator shaft.

ACCESSIBILITY

- Access from parking lot to the elevator is available from the south entry (barrier free actuator)
- Door hardware does not meet barrier free access standards.
- Accessibility to and around proposed elevator meets all standards.

BUILDING CODE

- No issues at this time.



KEY PLAN

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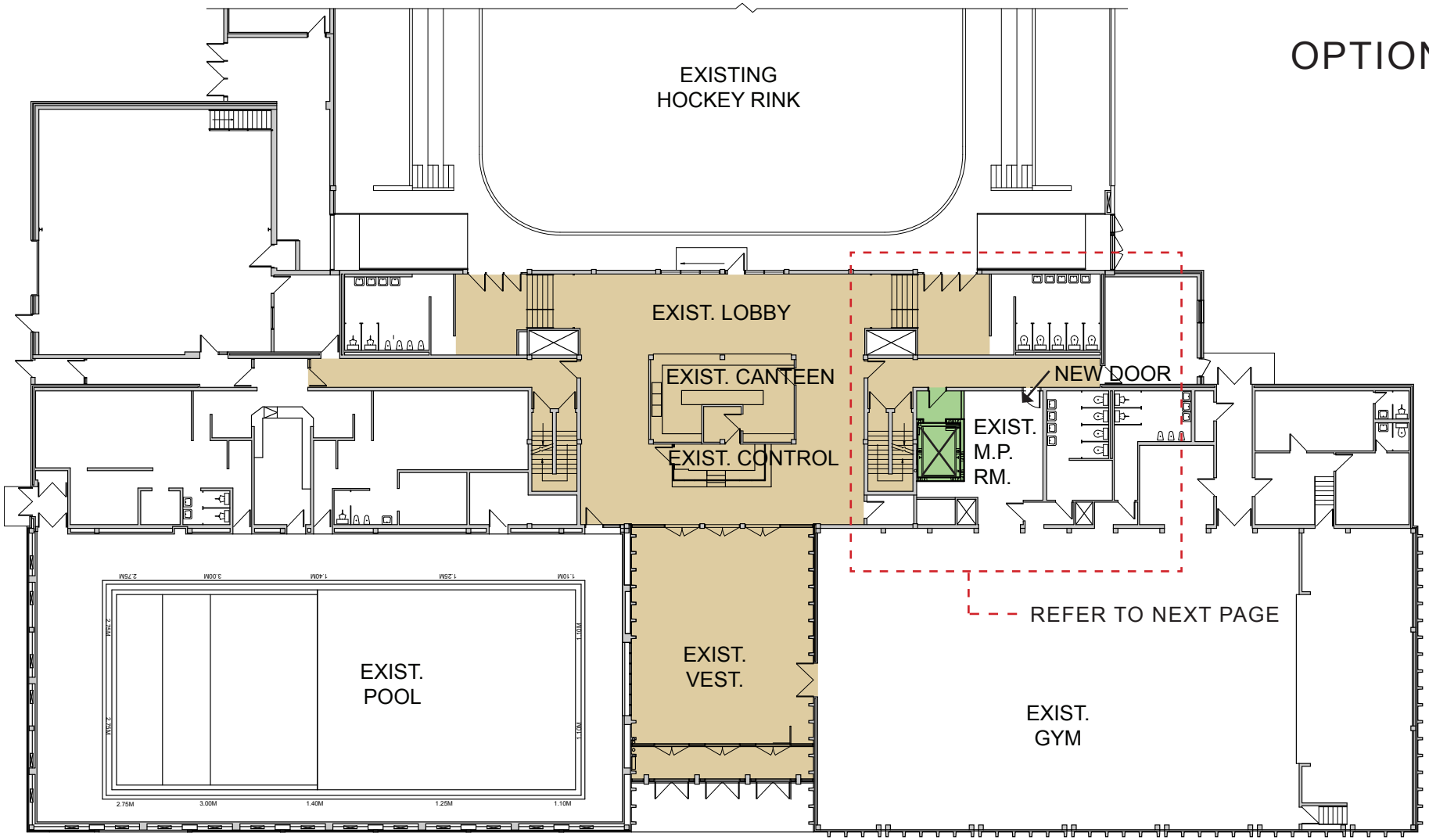
ST. JAMES CIVIC CENTRE

MAIN FLOOR PLAN ELEVATOR

3.24

OPTION 2



NORTH

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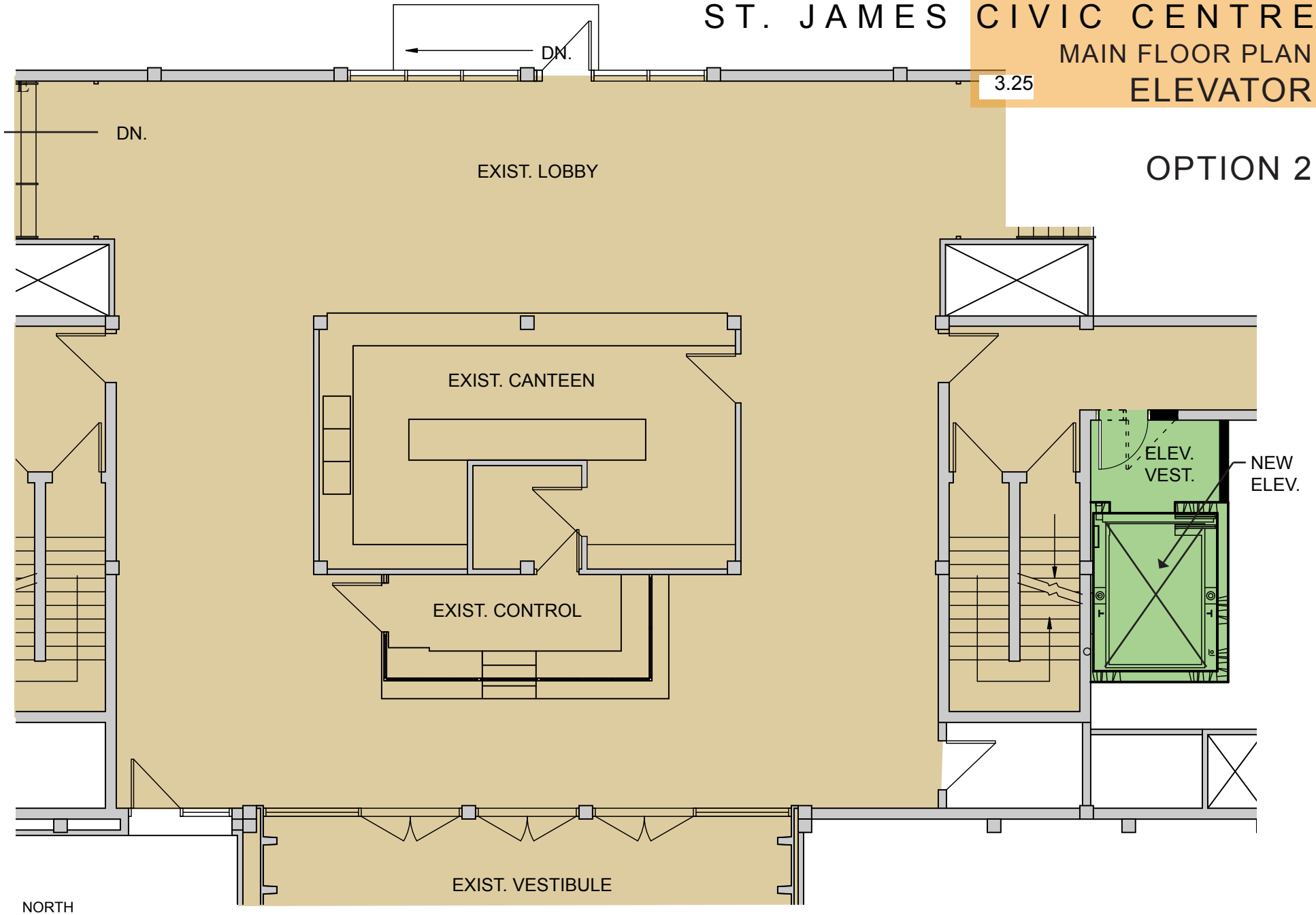
ST. JAMES CIVIC CENTRE

MAIN FLOOR PLAN

ELEVATOR

OPTION 2



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ST. JAMES
CIVIC CENTRE

3.26

B

ELEVATOR OPTION 2

2ND FLOOR

SECOND FLOOR - OPTION 2
ARCHITECTURAL ANALYSIS

- Elevator shaft is located on the exterior face of the second level, due to the configuration of main and second floor plans.
- Main floor roof is required to be partially demolished to allow the new elevator shaft to extend through the roof to create access to the second floor.
- New opening through existing exterior wall is required to access the elevator from the second level.
- Elevator shaft is exposed to the elements, creating additional costs to insulate, install an air vapour barrier and provide finished exterior surface material.
- Functional floor space is lost accommodating the new elevator. Existing office space located on the second level will have the east wall removed and a new corridor constructed connecting the elevator with second level public corridor.
- Access directly into the second floor corridor space provides access to all functions on the second level with the exception of the public washrooms. Access to the current public washrooms is through the preschool/multi-purpose space; this is disruptive to staff, students, programs and users.

ACCESSIBILITY

- Recommend upgrading of door hardware to barrier free lever handles; in particular doors in public spaces depending on frequency of use.
- Accessibility to and around proposed elevator meets all standards.

BUILDING CODE

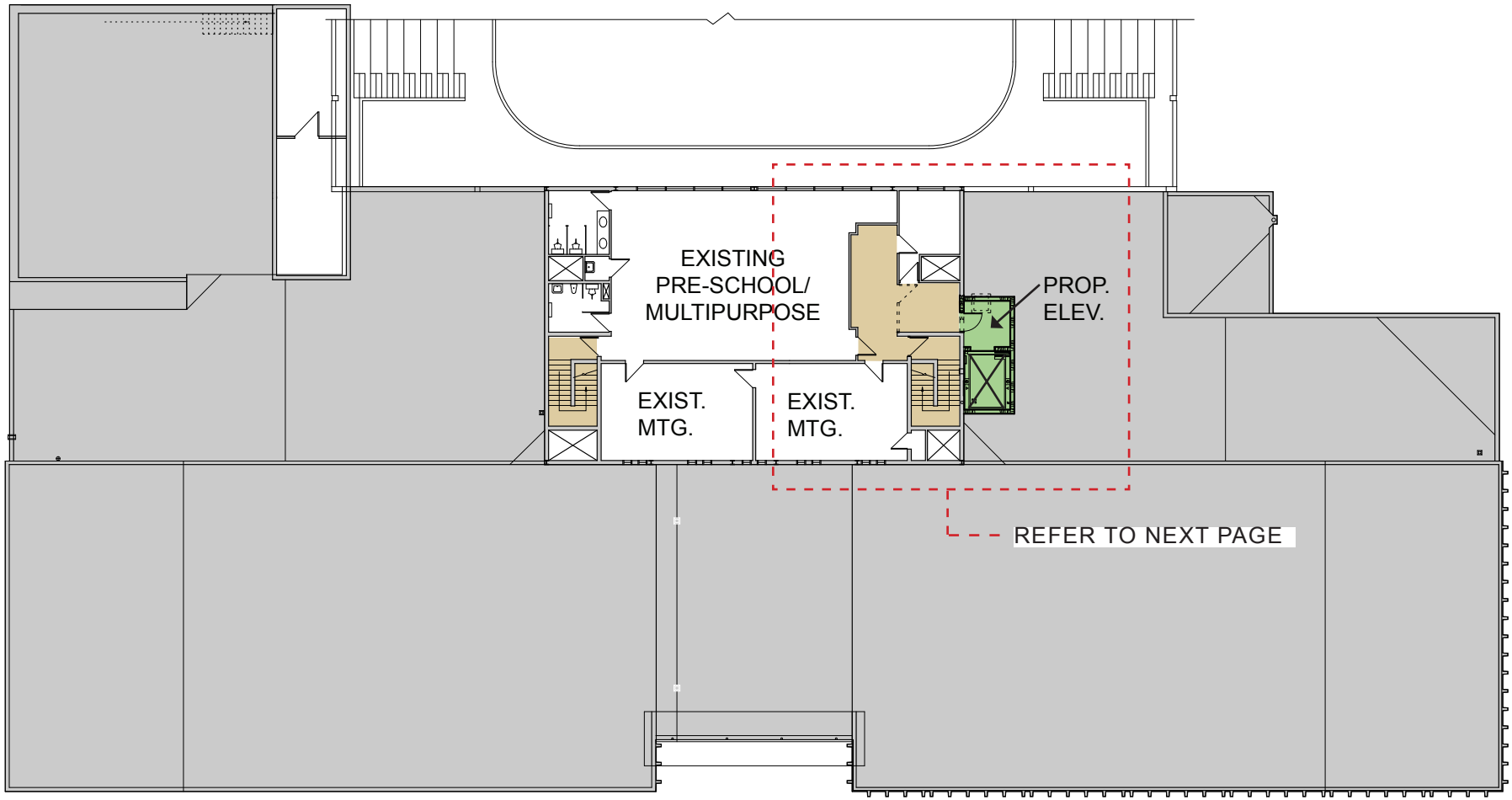
- Building code issues may need attention prior to building the elevator, for example, from any occupied space on an upper level two means of egress are required. Occupants cannot travel from one occupied space through an adjacent occupied space before accessing an exit enclosure. City of Winnipeg Plan Exam to review and comment.

ST. JAMES CIVIC CENTRE

2ND FLOOR PLAN ELEVATOR

3.27

OPTION 2



NORTH

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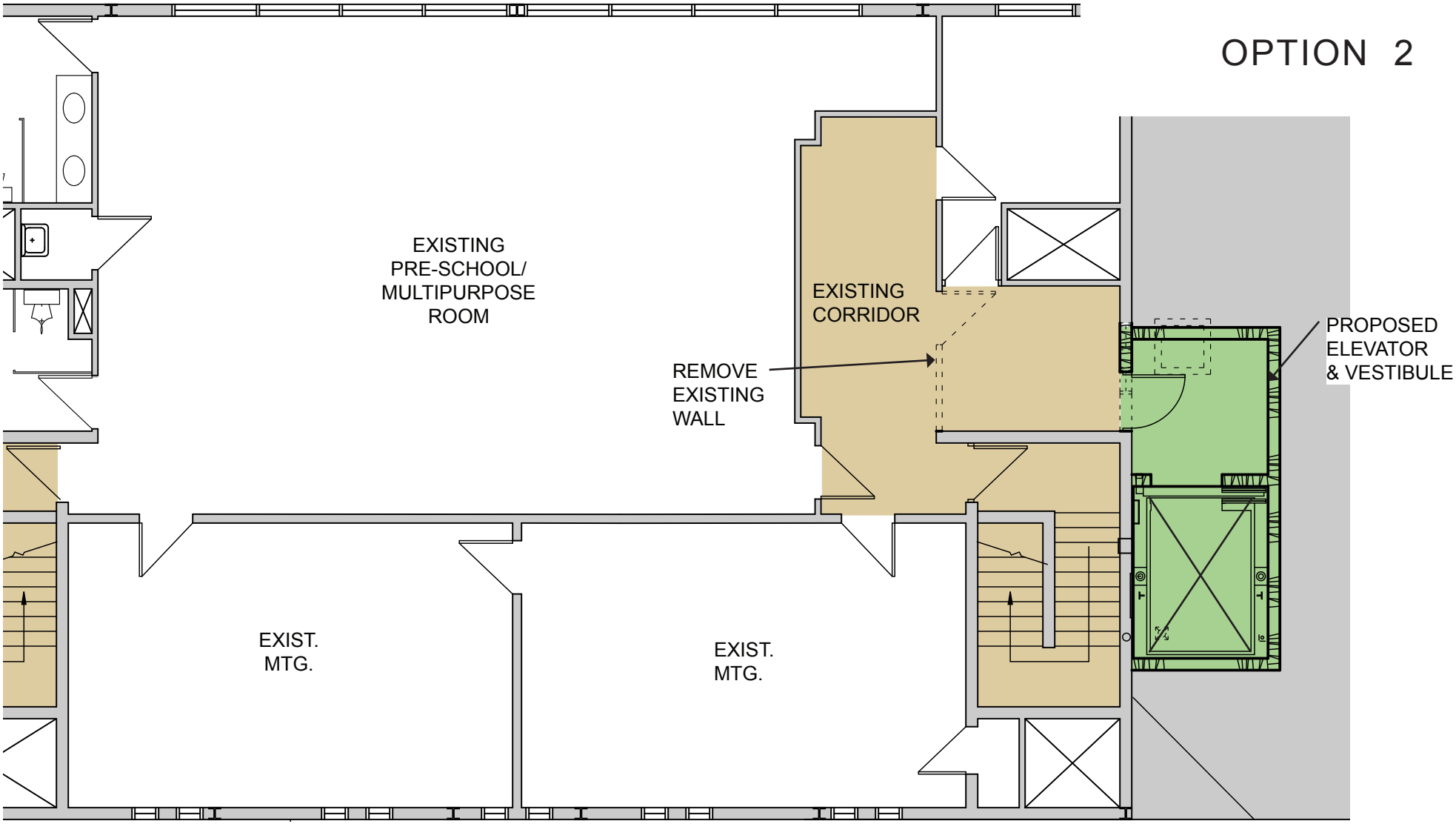
ST. JAMES CIVIC CENTRE

2ND FLOOR PLAN ELEVATOR

3.28

OPTION 2



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B

ELEVATOR OPTION 2

BASEMENT

BASEMENT - OPTION 2
ARCHITECTURAL ANALYSIS

- Elevator will occupy space in a former rifle range recently converted into a meeting/exercise room.
- Area of the meeting/exercise room will experience a reduction in available area due to the elevator and machine room.
- Reduction of existing storage room through relocation of east wall will allow for increase in area of meeting / exercise room if required.

ACCESSIBILITY

- Existing corridor system is tight and turning radius for wheelchairs is difficult but attainable with some maneuverability.
- Accessibility to and around proposed elevator meets all standards.
- Elevator is not on the main public corridor system and would require maneuvering around an existing stairwell to gain access.

BUILDING CODE

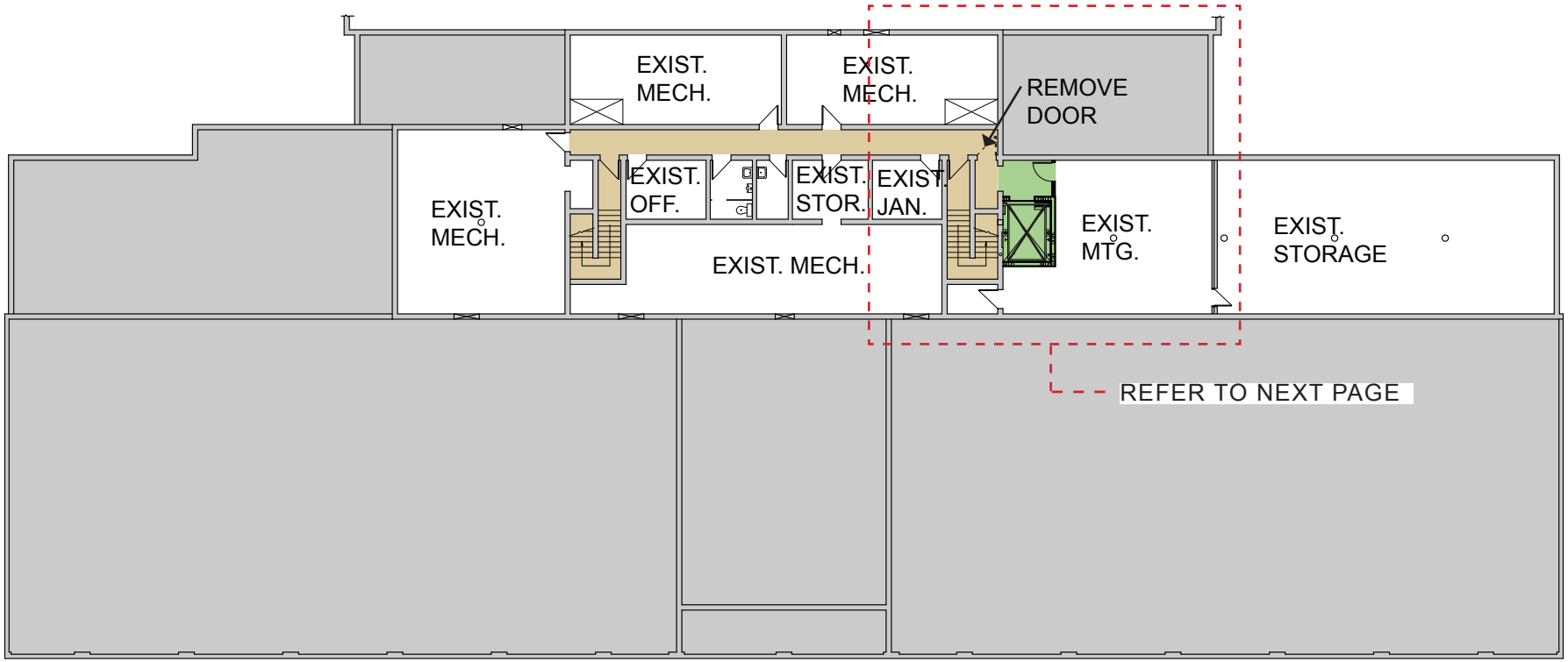
- Area of refuge is a factor on the basement level and requires discussion to identify location and area requirements.

ST. JAMES CIVIC CENTRE

BASEMENT PLAN ELEVATOR

3.30

OPTION 2



NORTH

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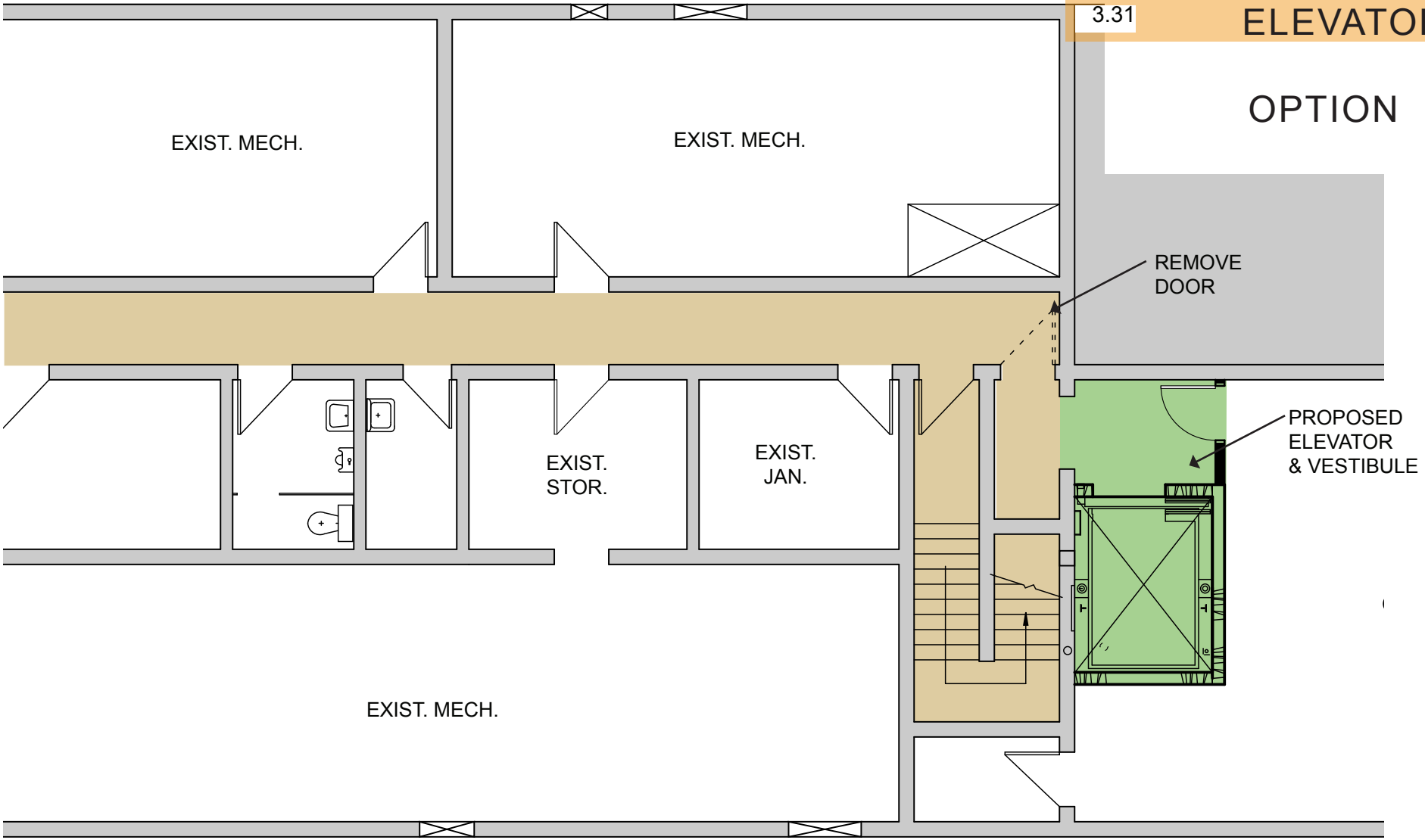
ST. JAMES CIVIC CENTRE

BASEMENT PLAN
ELEVATOR

3.31

OPTION 2



NORTH

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Kowalchuk Consulting Engineers was retained by MCM Architects to complete a structural feasibility study for the installation of an elevator at St. James Civic Centre. The structural feasibility study forms a portion of an overall architectural and engineering study commissioned by the City of Winnipeg.

BACKGROUND INFORMATION

To assist us in the review, the following drawings were provided:

Structural Drawings for the construction of the St. James Civic Centre completed by Crozier Kilgour Partners numbered S-1 thru S-6.

Architectural floor plans dated June 65/93 numbered 2055ns0b, 2055ns02, 2055n1b, 2055ns1a, 2055ns01

Building Envelope Retrofit Drawings completed by Gaboury Associates Architects Inc numbered A-1 thru A-8.

Building Envelope Retrofit Drawings completed by Crozier Kilgour & Partners Limited dated May 1997 and numbered S-1 and S-2.

Addition to St. James Civic Centre Addition Drawings completed by the City of Winnipeg Civic Building Department dated November 1993 and numbered A-1, A-2, A-3, S-1 (dated October 1993), M-1 (dated November 1993).

ORIGINAL CONSTRUCTION

The original building was constructed on a spread bore pile foundations, and with cast in place foundation walls. Floor construction is a combination of cast in place concrete slabs, with areas of precast floor systems.

PROPOSED LOCATION

The proposed elevator location is in the reception area, adjacent to the main entry of the facility. This location has 6 inch structural slabs for the basement, main and second floors. The main and second floors are supported on cast in place concrete columns spaced at 12 to 15 feet o/c.

DISCUSSION/RECOMMENDATIONS

The proposed location can work satisfactorily within the existing structural system. The cast in place concrete main and second floors can be locally removed at the location of the new elevator shaft, and supported from the new 200 mm concrete block shaft walls. The basement floor can also be removed as required to facilitate the construction of the new foundations and the elevator pit, and then replaced by re-supporting the floor from the new elevator pit. The new foundations would be spread bore piles to match the existing construction and minimize the potential for differential foundation movements. We would expect that the cost of the required structural work inclusive of the installation of the piles, construction of the elevator pit, and the replacement and re-support of the basement, main and second floors to be approximately $35,000.00.

15.0 MECHANICAL

ST. JAMES CIVIC CENTRE

15.1 Plumbing / Sanitary Piping

The existing plumbing lines and sanitary piping appeared to be in reasonable condition. The existing piping and sanitary lines are usable but must be modified to suit new fixture location.

The plumbing fixtures are showing signs of fatigue and require upgrading at new locations to suit handicap access.

15.2 Elevator Sump Pit

A sump pit complete with sump pump will be required for the new elevator and will be required to tie into the existing sanitary lines.

15.3 Ventilation

The existing duct and heating coil in the basement will require relocation. The equipment appears in good condition and can be relocated.

A thermostatically controlled exhaust fan will be required for the elevator machine room.

15.4 Insulation / Miscellaneous

Hot water pipes should be insulated to minimize heat loss, and cold water insulated to piping should be protected against condensation.

Existing refrigerant suction pipes will require relocation and reinsulation. The existing lines appear in good condition.

16.0 ELECTRICAL

ST. JAMES CIVIC CENTRE

16.1 Distribution

The Amalgamated Electric fusible 600 volt 3 phase distribution is located in the southeast corner of the arena seating area behind a locked cage. The distribution has no space for any additional fusible switch units. A separate bus connection is required to feed a new remote switch unit. The original equipment is in good condition and is useable with the modification.

16.2 Existing Space for Elevator

Existing conduit and BX cables located in the proposed areas of the elevator will require relocation. The cabling in some cases will require complete relocation while others will require junction boxes for relocation.

16.3 Existing Lighting Washroom

Existing lighting within the washroom is of the older variety and requires replacement and relocation to suit new washroom fixture layout.

16.4 Fire Alarm System

The existing fire alarm system is in good condition with space to expand into another zone. A new fixed thermal detector will be provided at the top of the elevator shaft as required by Code.

16.5 Elevator Cabling / Voice Communications

A two-hour fire rated pyrotenax cable is required by Code for handicap access. A telephone handset cable connection in the telephone backboard is required for communications in the elevator.

B

SUMMARY
ELEVATOR OPTIONS

Feasibility of adding an elevator to the existing St. James Civic Centre is possible as indicated through the two options reviewed. One option was located on the main thoroughfare while the other was located on a secondary corridor; this difference allowed analyzing direct or indirect public access. Each option was found acceptable in providing barrier free access to the main, second and basement levels.

The difference between Options is the probable costs to construct Option 1 over Option 2.

Option 1 locates the elevator within the centre of the building; the elevator would have limited affect on existing functional spaces on all three levels, and the entire elevator shaft would be constructed within the interior of the existing building. In comparison, the elevator in Option 2 would occupy an existing exercise/meeting room on the main level, a meeting room on the basement level, and would require an elevator shaft to be constructed on the exterior of the building at the second level. Adjustments with air barriers, insulation, tie-in of old and new construction are all possible weak points for problems with an external elevator compared to an internal elevator shaft.

In summary the minimal exterior construction associated with Option 1 compared to Option 2 will produce a substantial cost savings. Combined with the direct and straightforward access for users from all main circulation paths on all levels, and minimal disruption to existing functions, Option 1 is the preferred solution. It is a viable working solution that respects the building and provides a clear and simple response to accessibility. The proposed location of the elevator is efficient and can produce a spatial environment that would be a successful synthesis of program, and barrier free performance.

ST. JAMES
CIVIC CENTRE

BARRIER FREE WASHROOMS

OPTIONS

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PROPOSED LOCATION - BARRIER FREE WASHROOMS

• Review Barrier-Free compliance of existing public washroom.

ARCHITECTURAL ANALYSIS

• Renovation of existing washrooms require significant upgrades; relocating fixtures, removing and installing new walls and potential new ramp or stair lift to convert to Barrier-Free facilities.

ACCESSIBILITY

• Public washrooms are located at ice level adjacent to the existing hockey rink about 3’-6” below the main public corridor, consequently accessibility is not available.
• Construction of a compliant ramp to gain access to rink level and the public washrooms would extend beyond the floor area available, height 3’-6” at a slope of 1 in 12 equals a ramp length of 42’-6”.
• Installation of a stair lift allows individuals needing to traverse the stairs simple and direct access.
• Attaining access to the lower level only resolves half of the accessibility issues. Public washrooms on this level are not barrier free. Substantial renovation work to fixtures, walls and sinks are necessary for facilities to meet current standards.
• Turning radius within washrooms is restrictive; in front of existing stalls turning radius not attainable.
• Width of existing doors into washrooms is below barrier free standards.
• Retrofit of existing washrooms will eliminate some fixtures thereby reducing occupant load on the second floor.
• Tilt mirrors are not provided in each washroom.
• Recommend upgrading of door hardware to barrier-free lever handles, in particular doors in public spaces, depending on frequency of use.

BUILDING CODE

• An existing ramp provides access to ice level of the rink, and is located at the midpoint of the main public space and hockey rink. This ramp does not meet accessibility standards.

ST. JAMES
CIVIC CENTRE

3.38

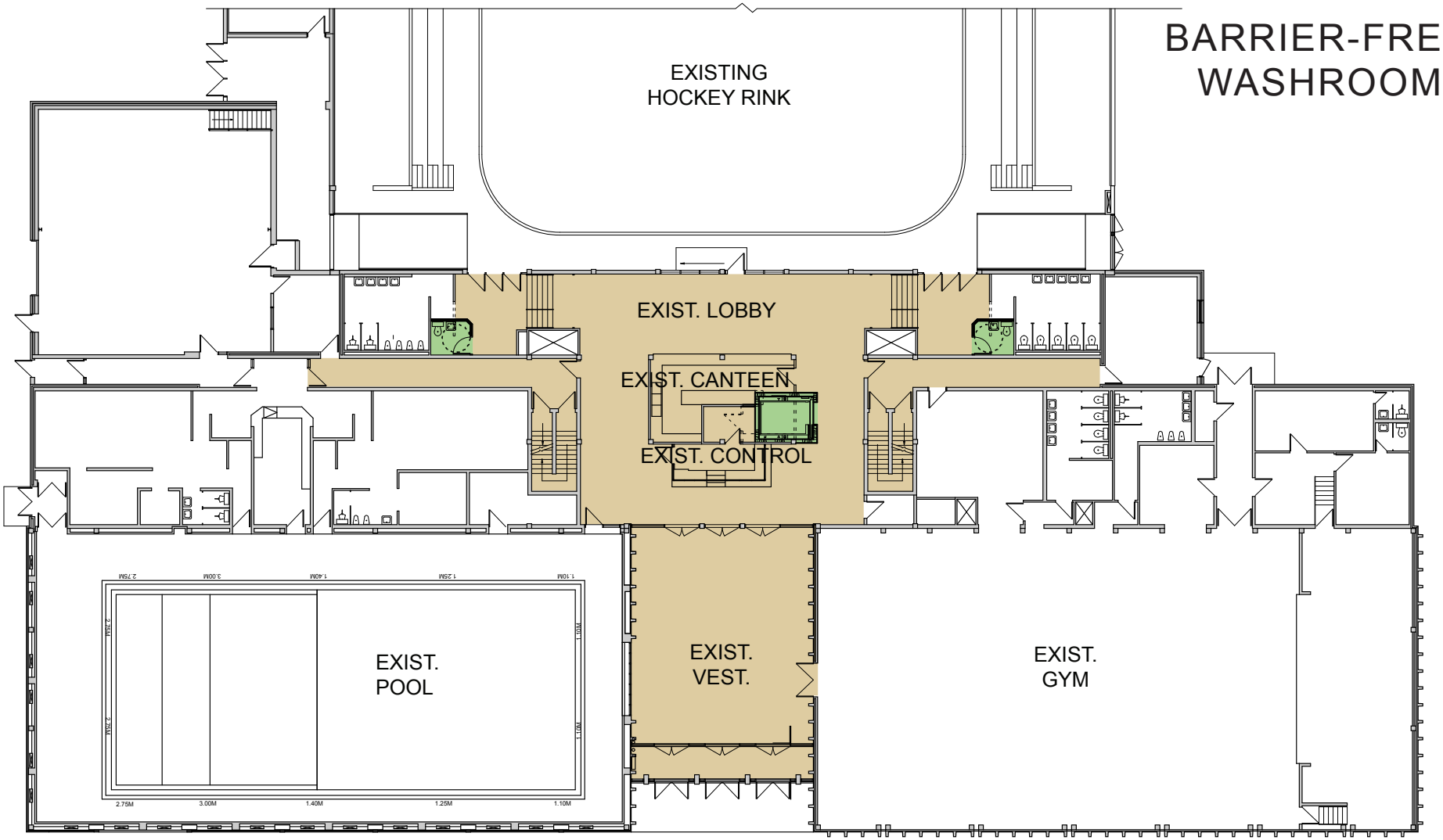
B

BARRIER FREE
WASHROOMS

MAIN FLOOR

ST. JAMES CIVIC CENTRE

3.39 MAIN FLOOR PLAN



NORTH

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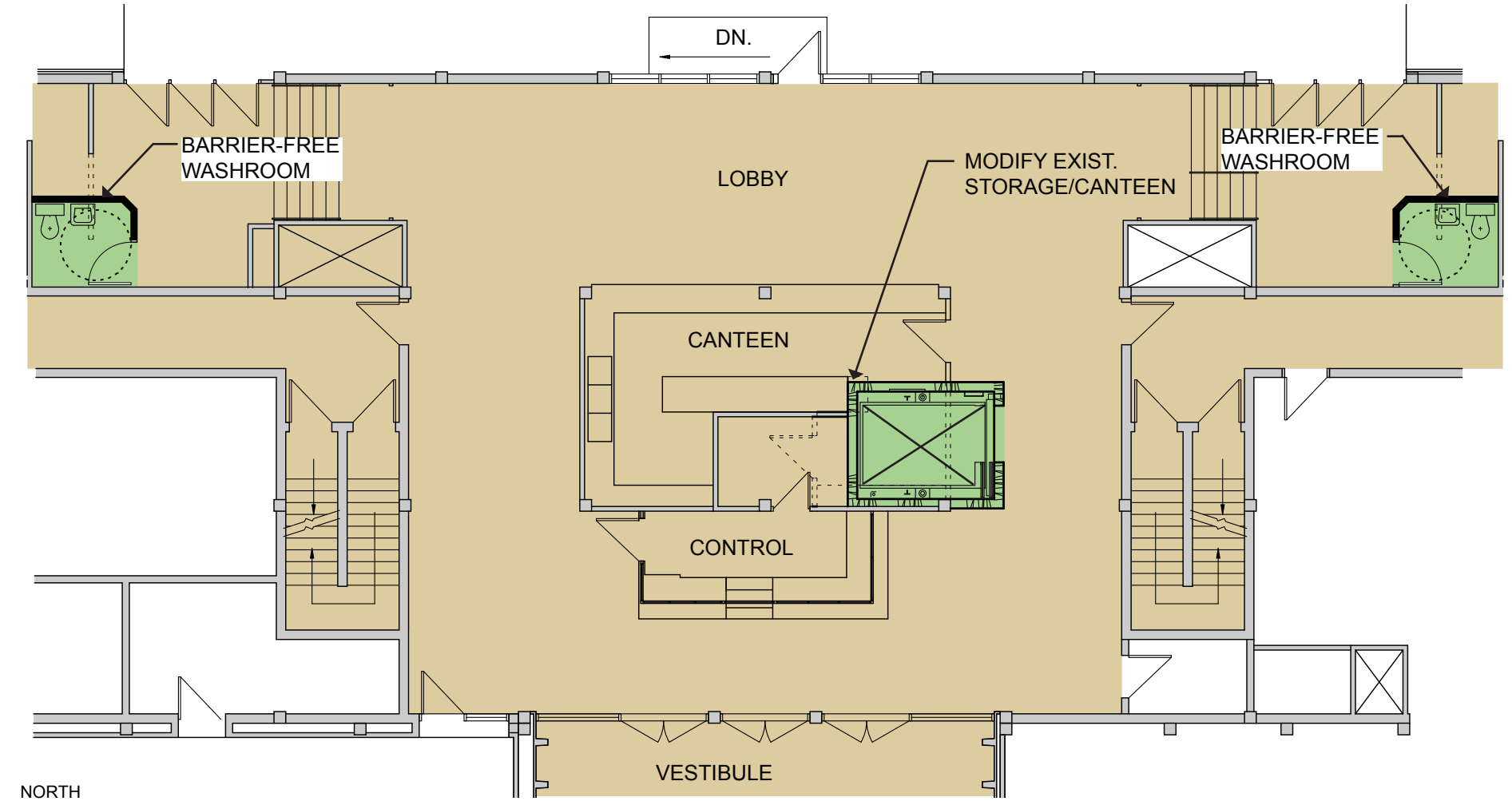
ST. JAMES CIVIC CENTRE

3.40 MAIN FLOOR PLAN

BARRIER-FREE WASHROOMS



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ST. JAMES
CIVIC CENTRE

3.41

B

BARRIER FREE WASHROOMS

SECOND FLOOR

SECOND FLOOR - BARRIER-FREE WASHROOMS

PROPOSED LOCATION

Confirm barrier free compliance of second floor washrooms

ARCHITECTURAL ANALYSIS

- Renovation of existing washrooms require significant upgrades; relocating fixtures, removing and installing new walls, potential new ramp or stair lift to conform to barrier-free standards.

ACCESSIBILITY

- Existing men's and women's washrooms are not barrier free compliant.
- Accessible toilet stall is not provided; minimum width required 1830mm x 1830mm however in retrofit projects 1525mm x 1525mm is acceptable.
- Development of barrier free washroom facilities requires complete removal and repositioning of all fixtures and doors to meet standards.
- Turning radius within washrooms is restrictive. In front of existing stalls turning radius is not attainable.
- Width of existing door in washrooms is below barrier free standards
- Retrofit of existing washrooms will eliminate some fixtures thereby reducing occupant load on the second floor.
- Tilt mirrors are not provided in each washroom.
- Recommend upgrading of door hardware to barrier-free lever handles, in particular doors in public spaces, depending on frequency of use.

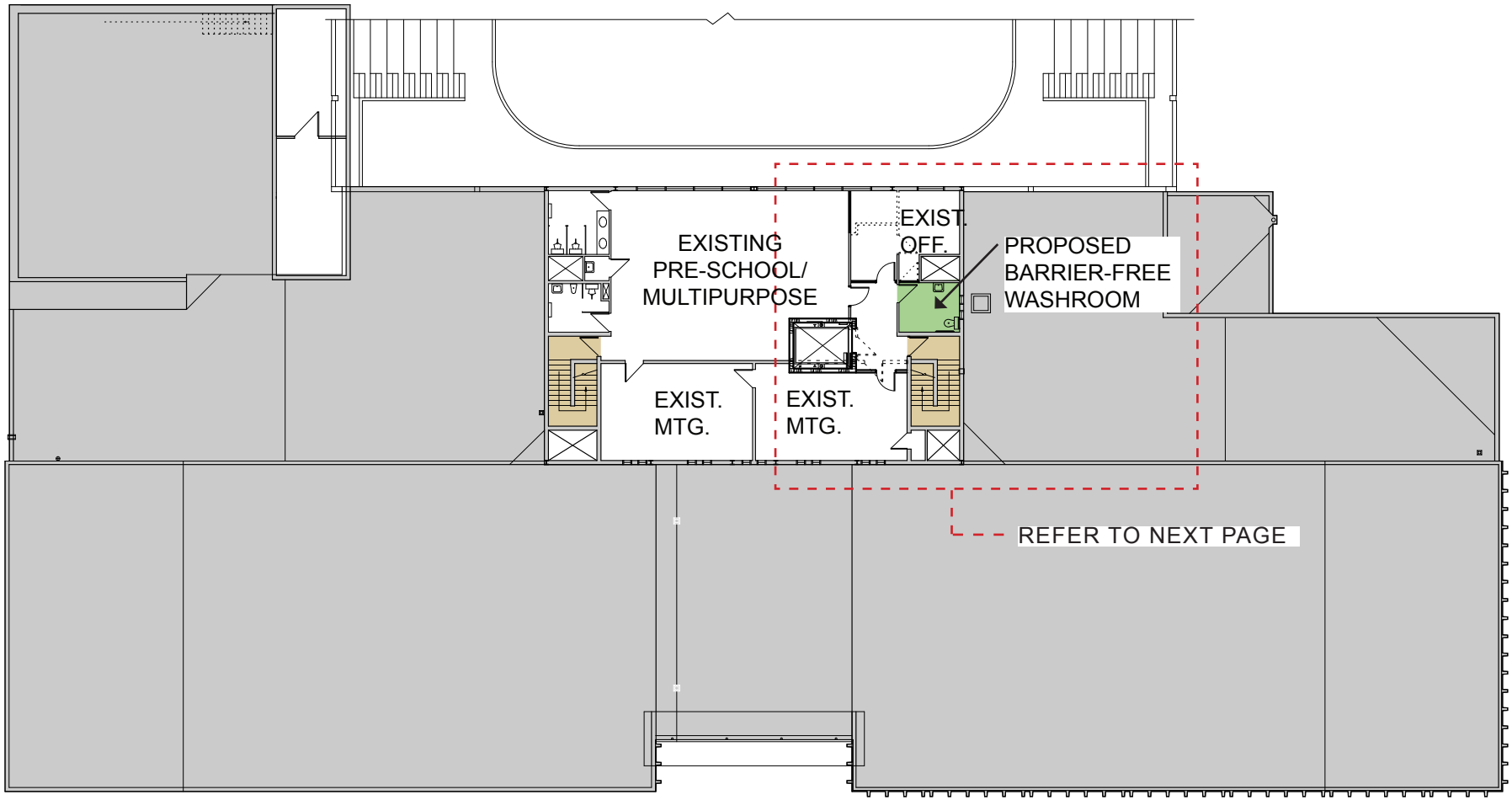
BUILDING CODE

- No issues at this time.

ST. JAMES CIVIC CENTRE

3.42 2ND FLOOR PLAN

BARRIER-FREE WASHROOMS



NORTH

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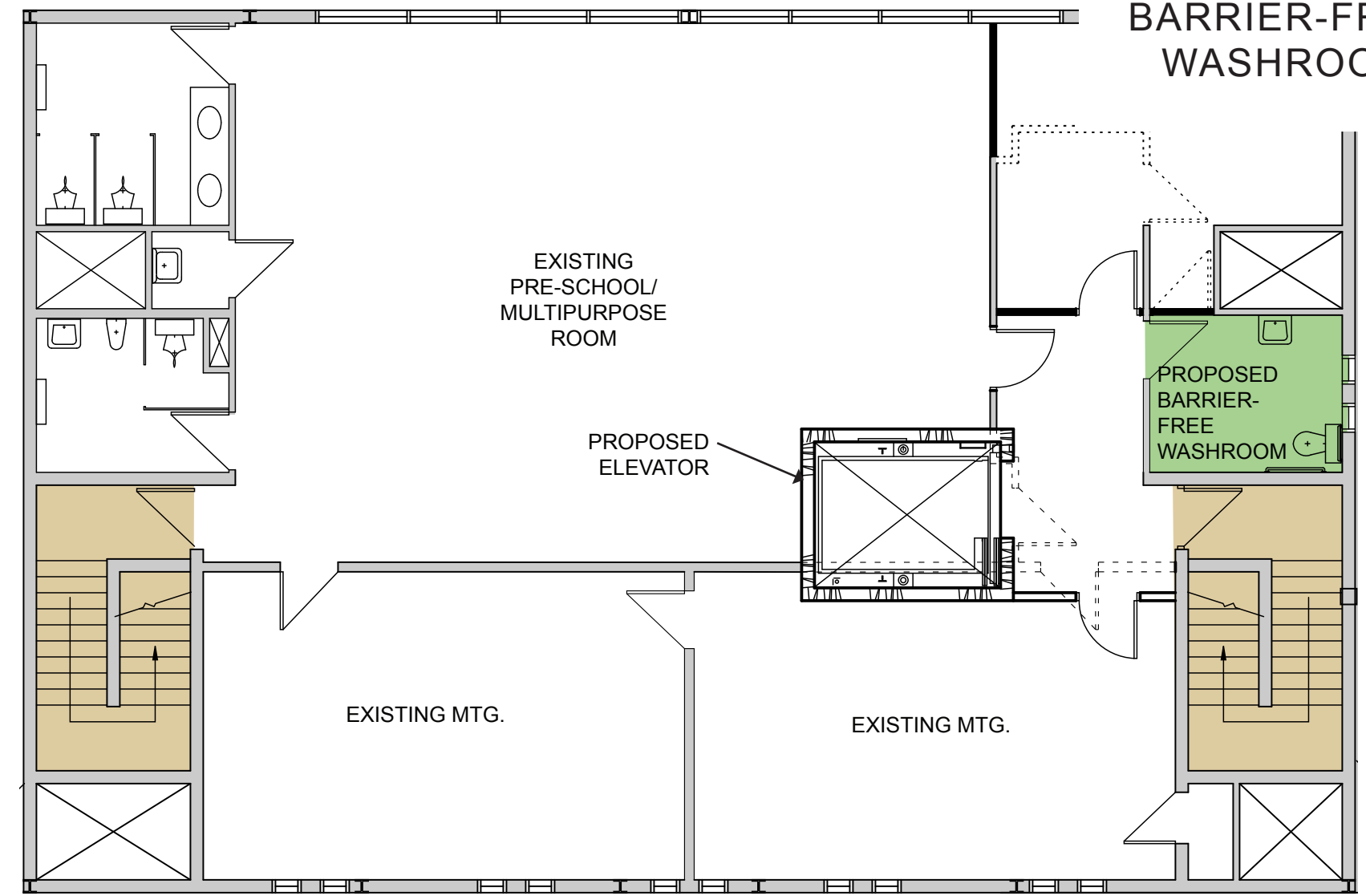
ST. JAMES CIVIC CENTRE

3.43 2ND FLOOR PLAN

BARRIER-FREE WASHROOMS



NORTH

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ST. JAMES
CIVIC CENTRE

3.44

B

BARRIER FREE
WASHROOMS

BASEMENT

BASEMENT - BARRIER-FREE WASHROOMS PROPOSED LOCATION

Determine barrier free compliance of basement washrooms.

ARCHITECTURAL ANALYSIS

- Retrofit of existing unisex washroom to barrier free facility will eliminate urinal.
- Renovation of existing washrooms requires minimal renovation work.

ACCESSIBILITY

- Existing unisex washroom is not barrier free compliant.
- Accessible toilet stall is not provided; existing urinal interferes with turning radius.
- Sink and facet is not barrier free.
- Turning radius within washrooms is achievable by eliminating existing urinal.
- Tilt mirrors are not provided in washroom.
- Door hardware does not meet barrier free access standards.

BUILDING CODE

- Issues are defined under accessibility.

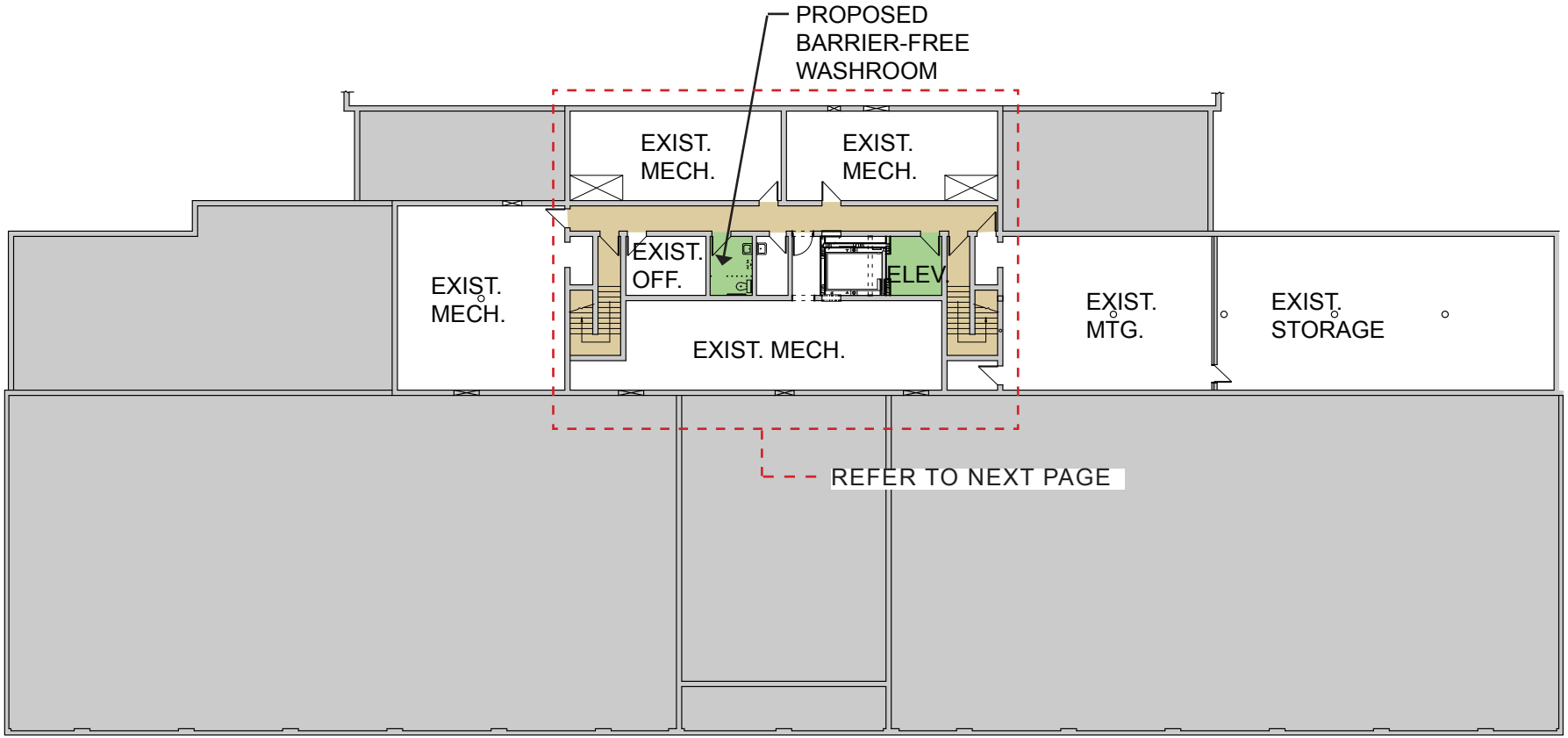
ARCHITECTURAL PROPOSAL BASEMENT WASHROOMS

Accommodating a barrier free washroom within the existing basement washroom is a simple and effective option. Our proposal is to renovate the existing washroom into a unisex barrier free washroom for basement occupants. Renovations are necessary, however they require minimal adjustment to the current washroom.

ST. JAMES CIVIC CENTRE

3.45 BASEMENT PLAN

BARRIER-FREE WASHROOMS



NORTH

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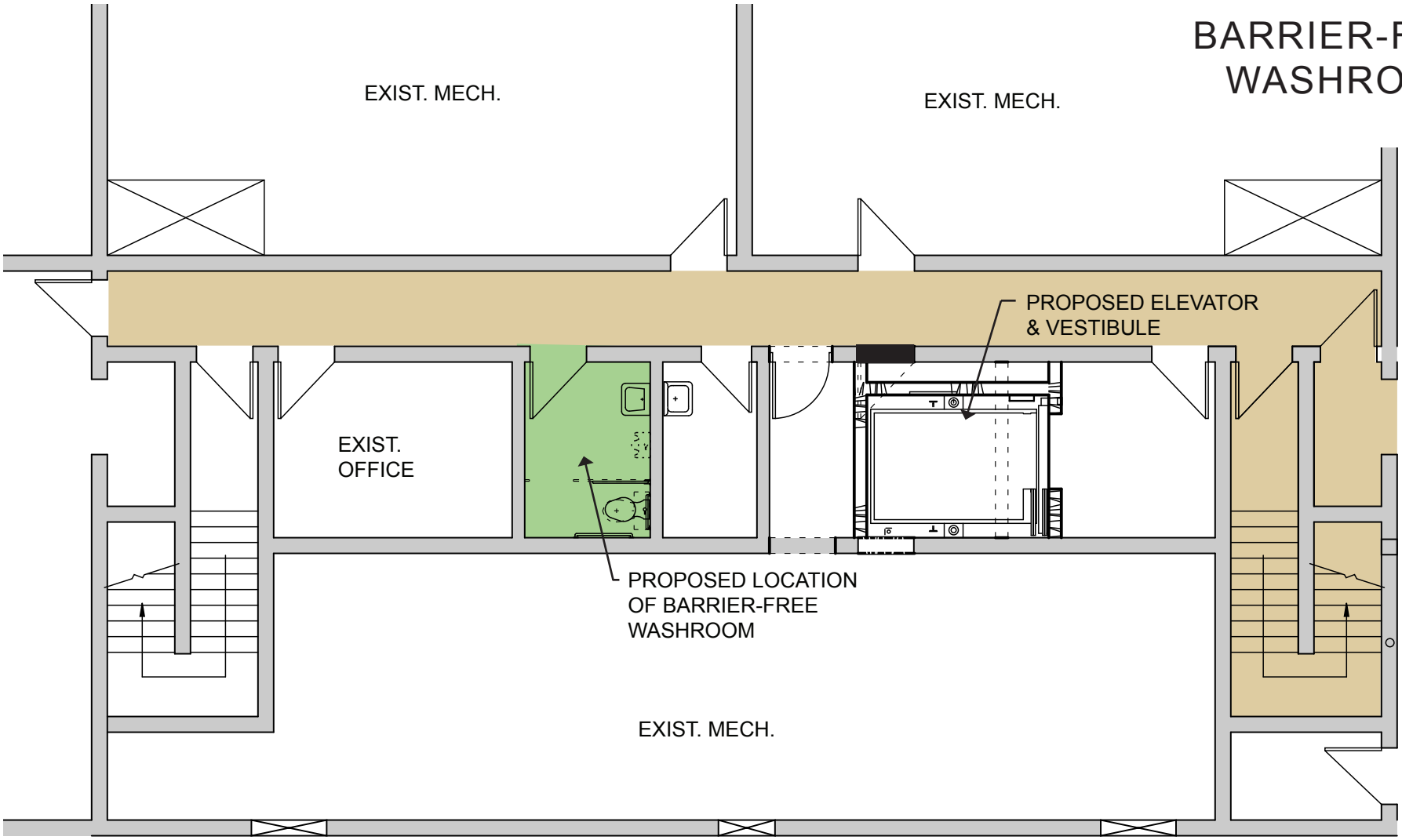
ST. JAMES CIVIC CENTRE

3.46 BASEMENT PLAN

BARRIER-FREE WASHROOMS



NORTH

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BARRIER FREE WASHROOMS

SUMMARY

We evaluated the existing public washrooms located on the main, second and basement floors for barrier free compliance including availability, access, fixtures and clearances. From our review no washrooms in the Civic Centre comply as a barrier free facility, the main deficiency is area to accommodate the required turning radius.

Main floor barrier free washrooms for use by the public are not only 3'-6" below the entry level of the buildings, but they do not have the interior space or proper layout of fixtures for barrier free access. Beyond these washrooms, no other accessible washrooms are available from a public corridor system for use by the general public. Incorporating barrier free design standards to the washrooms involves a reduction in fixture count that may affect occupant load for the hockey rink and main floor of the Civic Centre. The need for a barrier free washroom has been identified as part of this study; a specific location on the existing main-floor is identified to include a new unisex washroom.

Existing second floor washroom layouts are not barrier free compliant. Significant deficiencies exist that require extensive renovation work to upgrade present washroom facilities. The current floor area when renovated to barrier free washrooms will not accept a similar amount of fixtures, additional area is necessary to allow for barrier free compliance. When combined with restrictive access through an existing space and entry doors that do not meet standards, the upgrading of the washroom facilities is substantial. This includes the potential loss of space from the current preschool/multipurpose room to accommodate increased washroom areas.

In the basement the current washroom is a unisex facility that is not barrier free compliant. With minimal renovation, the development of a barrier free compliant unisex washroom in the existing space appears as a reasonable and cost effective solution.

ST. JAMES
CIVIC CENTRE

3.48

SCOPE OF WORK
COSTING

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ST. JAMES
CIVIC CENTRE

3.49

B

SCOPE OF WORK

ELEVATOR DEMOLITION OPTION 1

ARCHITECTURAL/ STRUCTURAL

Main Floor
- Remove existing walls around canteen
- Remove ceiling and floor tile as required
- Remove concrete floor slab
- Provide hoarding around construction site.
- Demolish area for new elevator machine room
- Remove portion of existing circulation counter
- Provide new opening through existing ceiling to second floor

Second Floor
- Remove existing roof deck, joists and roofing to accommodate new elevator shaft
- Remove existing walls of seminar room, corridor and preschool/multipurpose to accommodate new elevator
- Remove ceiling and floor tile as required

Basement
- Remove existing corridor door and walls to accommodate new elevator
- Remove existing concrete floor slab and excavate for elevator and sump/interceptor pit

MECHANICAL

Main Floor
• Relocate water pipe
• Relocate water in canteen

Second Floor
• Not applicable

Basement
• Relocate duct and piping to heating coil
• Provide ventilation for elevator machine room

ELECTRICAL

Main Floor
• Revise fire alarm zones
• Revise lighting to suit new elevator
• Relocate lights and power in canteen

Second Floor
• Revise lighting in new corridor
• Revise lighting in preschool multipurpose room

Basement
• Remove existing lighting
• Provide ventilation for elevator machine room

ST. JAMES
CIVIC CENTRE

3.50

B

SCOPE OF WORK

ELEVATOR DEMOLITION OPTION 1

ST. JAMES
CIVIC CENTRE

3.51

B

SCOPE OF WORK

ELEVATOR CONSTRUCTION OPTION 1

ARCHITECTURAL/ STRUCTURAL

Main Floor
- Construct new concrete block elevator shaft
- Install new ceiling (fire rated as required) and floor tile as required
- Patch and paint all walls in existing canteen
- Paint all new walls and existing walls affected by new construction
- Provide new fire rated door and ceilings in new elevator machine room
- Repair front reception counter

Second Floor
- Construct new concrete block elevator shaft
- Install new fire rated doors to second floor corridor, seminar room and preschool/multipurpose room
- Modify existing roof system to accommodate new elevator shaft
- Install new ceiling (fire rated as required) and flooring in second floor corridor, seminar room and preschool/multipurpose room as required
- Patch existing roof with modified bitumen roofing
- Finish exterior of elevator shaft with metal panel
- Build new walls around elevator shaft as required to separate existing functions.

Basement
- Pour new concrete slab on compacted fill tie into existing concrete slab
- Install new spread bore piles to support elevator shaft
- Rebuild and patch concrete block walls around new elevator shaft
- Paint all new walls and existing walls affected by new construction
- Provide new fire rated door and ceilings in new elevator machine room

MECHANICAL

Main Floor
- Revise ventilation as required.
- Ventilate new elevator machine room

Second Floor
- Adjust hvac in second floor corridor, seminar room and preschool/multipurpose room as required

Basement
- Provide working mechanical system for elevator sump/interceptor pit

ELECTRICAL

Main Floor
- New lights in main corridor as required
- New lights in canteen as required
- New power outlets and switches as required.
- Provide power/data in new elevator machine room
- New fire alarm zone

Second Floor
- Provide new lighting in second floor corridor, seminar room and preschool/multipurpose room as required
- Provide new power and switches in second floor corridor, seminar room and preschool/multipurpose room as required

Basement
- Distribution is full install new buss extension and exterior fusible switch.
- Install pyro feeder for switch to elevator machine room
- Provide power/data in new elevator machine room
- Provide new lights in corridor at new elevator

ST. JAMES
CIVIC CENTRE

3.52

B

SCOPE OF WORK

ELEVATOR
CONSTRUCTION
OPTION 1

ELEVATOR / BARRIER FREE WASHROOMS

ELEVATOR: 3 STOP, 4,500 LBS

Architectural		$360,100	
Structural		35,000	
Mechanical		30,000	
Electrical		50,000	
		$475,100	
	GC	47,510	$522,610

WASHROOM – UNISEX

Architectural		$ 30,900	(second floor only)
Structural		5,000	
Mechanical		15,000	
Electrical		10,000	
		$ 60,900	
	GC	6,090	66,990

Sub-Total	$589,600
GST	29,480
	$619,080
Consultant Fees	61,908
PROBABLE BUDGET COSTS	**$680,988**

(+/-20% not including disbursements)

ESCALATION = .5% PER MONTH

ELECTRICAL

The existing 600 ampere, 600 volt, 3 phase, 4 wire service at St. James Civic Centre may have adequate capacity.

To confirm, our electrical consultant requires billings for the last 3 years to calculate site demand. Based on demand review, if distribution upgrade is required add $50,000 to $65,000 to probable electrical budget.

MCW / AGE

16.0 MECHANICAL

St. James Civic Centre Elevator / Barrier Free Washroom

Option 1:

Item	Budget
Relocate water piping	$ 2,000
Relocate duct and piping to heating coil in basement	$ 6,000
Sump in elevator pit	$ 4,500
Ventilate machine room	$ 3,500
Insulation / miscellaneous	$ 2,000
Relocate water in canteen	$ 8,000
Subtotal:	**$ 26,000**
RST:	**$ 1,820**
Total:	**$ 27,820**

Allow budget of $30,000

MCW / AGE

116.0 ELECTRICAL

St. James Civic Centre Elevator / Barrier Free Washroom

Option 1:

Item		**Budget**
Distribution:		$ 16,000
Amalgamated fusible distribution 600 ampere, 600 volt is completely full and will require a buss extension and exterior fusible switch		
Feeder:		
Pyro feeder for switch to machine room		$ 6,000
Elevator:		$ 5,000
Power/data	($2,500)	
Room requirements	($2,500)	
Lighting revisions		$ 3,000
Renovations		$ 10,000
Fire alarm zone		$ 2,000
Subtotal:		**$ 42,000**
RST:		**$ 2,940**
Total:		**$ 44,940**

Allow budget of $50,000.00

The existing 400 ampre, 600 volt, 3 phase, 4 wire service at St. James Civic Centre may have adequate capacity.

To confirm, our electrical consultant requires billings for the last three years to calculate site demand. Based on demand review, if distribution upgrade is required add $50,000 to $65,000 to probable electrical budget.

Accessibility was the stimulus for the City of Winnipeg to request a feasibility report from MCM Architects to review barrier free access to the second level at two Community Centres; Fort Rouge Leisure Centre and St. James Civic Centre. In addition to reviewing various elevator options, we analyzed barrier free access to washroom facilities at each floor level to determine if they met Building Code requirements and City of Winnipeg Accessibility Guidelines. At each recreation centre two proposed locations for elevators were developed and analyzed, including generating a construction budget for the most advantageous solution. Likewise, options to locate washroom facilities looked at enhancement of existing washrooms or the construction of new unisex accessible washrooms. Recommendations, as a product of the report, are documented below.

FORT ROUGE LEISURE CENTRE

OVERVIEW

Today, barrier free accessibility to all public areas of the Fort Rouge Leisure Centre is limited. From our feasibility report, main floor activities such as hockey, library, weight room, and meeting rooms are accessible, though there are questions relative to meeting proper door clearances or a complete uninhibited turning radius between existing equipment and shelving. Should the City of Winnipeg decide to renovate these existing spaces to meet current Building Code and City of Winnipeg Accessibility Guidelines, a significant amount of upgrading is essential. This does not automatically mean a costly undertaking. It is a simple matter of reorganizing shelving, equipment, or relocating tables and lowering counter heights. Through these simple adjustments, most areas can be made accessible.

Washrooms

The feasibility report concluded that overall accessibility on the main floor is achievable with simple upgrades.

FORT ROUGE LEISURE CENTRE CONTINUED

Second floor barrier free access necessitates the need for accessible public washrooms for patrons as defined in the Building Code. The feasibility report reviewed current washroom facilities on the second floor and concluded that they do not meet current Building Codes or City of Winnipeg Accessibility Guidelines. To meet accessibility standards today the existing washrooms require extensive upgrading as a result of the additional area necessary for accessibility. The increased floor area to accommodate the existing fixtures and turning radii far exceeds the current area within the washrooms, and combined with a restrictive access corridor and non-compliant entry doors, we concluded that upgrading of existing washroom facilities is a substantial renovation project when compared to other options explored in the report.

In conclusion expanding the current second floor washroom at Fort Rouge Leisure Centre will reduce activity space for patrons. In addition to losing public space the incurred renovation costs is anticipated as a costly project. The possibility of creating a unisex washroom on the second floor as the barrier free compliant facility appears as a reasonable alternative to the extensive renovations of existing washrooms. The northeast corner of the main second floor corridor system was defined as a reasonable location for a unisex barrier free washroom (refer to sketches in report). Cost, access, minimal loss of prime space are all positive indicators as to why we would recommend this direction be followed for washroom facilities.

Elevator

The feasibility report also analyzed barrier free access to second level functions at Fort Rouge Leisure Centre through the introduction of an elevator. Two options defining possible locations of an elevator and the resulting impact on main and second floor space including circulation were discussed and evaluated.

Option 1: located the elevator shaft south of the main public stair to the second floor. The elevator cab being located on the exterior of the building results in minimal disruption to the current building footprint. Minor adjustments would be required at the existing second floor stair landing and the doors into the stair hall and multi-purpose room. The main negative feature is that the elevator shaft penetrates the exterior envelope of the building; air barriers, insulation, tie-in of old and new construction and relocation of major Hydro lines and poles to accommodate the new elevator is the consequence.

FORT ROUGE LEISURE CENTRE CONTINUED

Option 2: although similar to Option 1 in the type of elevator and vertical rise, has none of the negative factors associated with Option 1, as it does not penetrate the exterior envelope. Located in the centre of the building, disturbance to existing space is limited to the main floor weight room; a portion of the weight room will be dedicated to accommodate the elevator shaft. On the second floor no functions or circulation corridors are affected. Direct access is available to the elevator at both levels and the second floor shaft takes advantage of the open space located above the weight room. This space is currently an open plenum and is utilized for building services and is off limits to the public.

Consequently Option 1 is constructed totally on the exterior the Leisure Centre, the result, a substantial increase in probable construction costs. Option 2 located within the centre of the building requires no compromise of exterior walls and utilizes a second level space that is not being occupied by the Leisure Centre. From the information identified in the feasibility report we conclude that Option 2 is a viable working solution that respects the building and provides a clear and simple solution to Barrier free accessibility. The solution is compact and can produce a spatial environment that would be a successful synthesis of program, form and potentially environmental performance.

During the writing of this report preliminary discussions with the City of Winnipeg identified their preferred location for the elevator at Fort Rouge Leisure Centre as Option 1. Although this option is more expensive and involves a greater scope of work then Option 2, there are other potential advantages that the City of Winnipeg would like to examine in detail prior to committing to a final selection. For example, disruptions to users of the building, and alterations to existing space are minimal for Option 1 when compared against Option 2. We recommend additional meetings between all affected parties to discuss and agree on the elevator location prior to confirming a final location within the Fort Rouge Leisure Centre.

ST. JAMES CIVIC CENTRE

Overview

Barrier free accessibility to all public areas at St. James Civic Centre is restrictive; multiple floor levels on the main level (hockey rink) combined with a basement and second level, presents a challenge for accessibility. Although providing access at the main entry doors has been addressed, other areas remain inaccessible due to lack of proper space to navigate corridors, proper clearance at doors, no accessible washroom facilities and floor level changes. The nature of these spaces would necessitate extensive renovation to properly provide barrier free accessibility to meet the Building Code and City of Winnipeg Accessibility Guidelines.

Washrooms

Main floor public washroom access is directly related to the installation of a barrier free lift or ramp, the washrooms are located 4 feet below the main level (barrier free entry level) and currently no barrier free access is in place. Access to the various floor levels is discussed under the heading of elevator outlined below. Focusing on accommodating barrier free access to the main floor washroom space our report identified removal of existing walls and fixtures to obtain proper clearances to meet Building Code standards. Reconfiguration may result in a reduction of washroom fixtures due to a lack of area. Floor area in the current washrooms for barrier free fixtures and access is inadequate. In recognition of this extensive renovation work our feasibility report reviewed a second option; construction of two individual barrier free washrooms located at the main floor entry level. Floor area from existing functions on the main level is required to accommodate the accessible washroom facilities. Ultimately we determined this option as the most cost effective for compliant barrier free washrooms on the main level.

Barrier free access to the second floor and basement justifies the need for accessible washrooms for patrons. Currently washroom facilities on the second floor do not meet Building Code or City of Winnipeg Accessibility Guidelines. Our report analyzed the option of renovating the existing washroom. However, the existing floor area will not allow a similar number of fixtures to be installed when renovated to a barrier free washroom. Additional area and wheelchair turning radius reduces the space for fixtures, this requires expanding the current washrooms into the existing multi-purpose room. The existing washrooms are located off the multi-purpose room and not off a public corridor, this is an inconvenience to users when the multi-purpose room is occupied and other user groups from different areas require access to washroom facilities.

To address both concerns we recommend constructing a unisex washroom at the east end of the second floor in the current office space. The office can relocate to an area directly north of its current location. The unisex washroom solves the issue of accessibility, as well as public access, and eliminates the renovation work to the second floor washrooms. Construction of the unisex washroom is considerably less than renovating and upgrading the existing washrooms to be barrier free compliant and appears as a reasonable alternative to the extensive renovations of the existing washrooms.

Barrier free washrooms on the basement level were a unique situation; there is limited space to dedicate to washrooms due to mechanical, storage rooms and an extensive crawlspace. Reviewing the existing washroom confirmed that the room has ample area to accommodate a unisex washroom if the urinal is removed. The lack of available space in the basement for a barrier free washroom, combined with a minimum population in the basement, the option to convert the existing washroom into a barrier free washroom is the recommended way to proceed.

Elevator

Along with the need for barrier free washrooms throughout the complex the most pressing issue at St. James Civic Centre is barrier free access to the second level, basement and main floor level. To begin, the height difference between the main floor entry level and the Public Washrooms located at the hockey rink level, is an elevation difference of about 4 feet, which will require the installation of a lift or ramp to navigate the level difference. The current ramp into the rink does not meet the Building Code or City of Winnipeg Accessibility Guidelines. A new ramp results in an overall length of over 48 feet plus landings and turn around area. This amount of space is difficult to locate and justify in an existing building. Plainly said, there are too many compromises to install a ramp. As discussed in the report a barrier free lift is the economical solution that utilizes less area than a ramp and if located at a central point relative to the ice level, a lift provides access to both washrooms and the hockey rink.

The remaining floor levels were analyzed in the report to determine the optimum location for an elevator to access all levels. Two options defining possible locations of an elevator and the resulting impact on main/second floor functions and circulation were identified, discussed and evaluated;

ST. JAMES CIVIC CENTRE CONTINUED

Option 1: The elevator is located in the centre of the building; on the main floor it's east of the existing canteen and control centre. This location provides direct visibility to users upon entering the building; access is from the main circulation space and does not compromise the flow of users through the space. Limited renovation work to the existing canteen and control desk is necessary to accommodate the elevator.

In the basement the elevator is located in an existing storage room, with the floor area to create a vestibule off of the main corridor. Renovation work to the existing space is minimal; loss of a storage room is inevitable.

The second floor elevator location opens directly onto the public corridor system; existing walls require minor adjustment to accommodate the elevator. The existing multi-purpose room will lose approximately 100 sq. ft. of space to the elevator shaft. Overall this option is simple, direct, and less intrusive then Option 2.

Option 2: The elevator location on the main floor is to the east of the main entry and main circulation corridor in an existing multi-purpose room. Area required for the new elevator downsizes the multi-purpose room to a meeting room. The elevator in this location is located in a secluded area where supervision is a factor. In comparison to Option 1 the amount of renovation work on the main floor is similar.

In the basement a multi-purpose room requires downsizing similar to the main floor elevator location. The basement corridor to the proposed elevator location is narrow and difficult for people in wheelchairs to navigate.

On the second floor the elevator location is on the exterior of the building and requires the removal of an office to obtain access to the elevator. This creates an abundance of corridor space on the second floor. As well a major negative aspect of Option 2 is that it penetrates the exterior envelope; air barriers, insulation, and the need for extensive tie-in of old and new construction materials. Overall the interior and exterior renovation work involved to accommodate Option 2 is a costly undertaking compared to Option 1 an interior elevator. When combined with the direct access and ease of integration for installing the elevator as per Option 1, we recommend Option 1 as the preferred solution to achieving accessibility within St. James Civic Centre.

B CONCLUSION

SUMMARY

In the end the economics of costs must be compared against functional efficiency to ensure that the proposed elevator and washroom facilities provide the appropriate service to the end users. With the completion of this report and the solutions recommended by MCM Architects to accommodate barrier free access at Fort Rouge Leisure Centre and St. James Civic Centre, the City of Winnipeg can now move forward with discussing their future, and implementing the accessibility modifications in the near future.