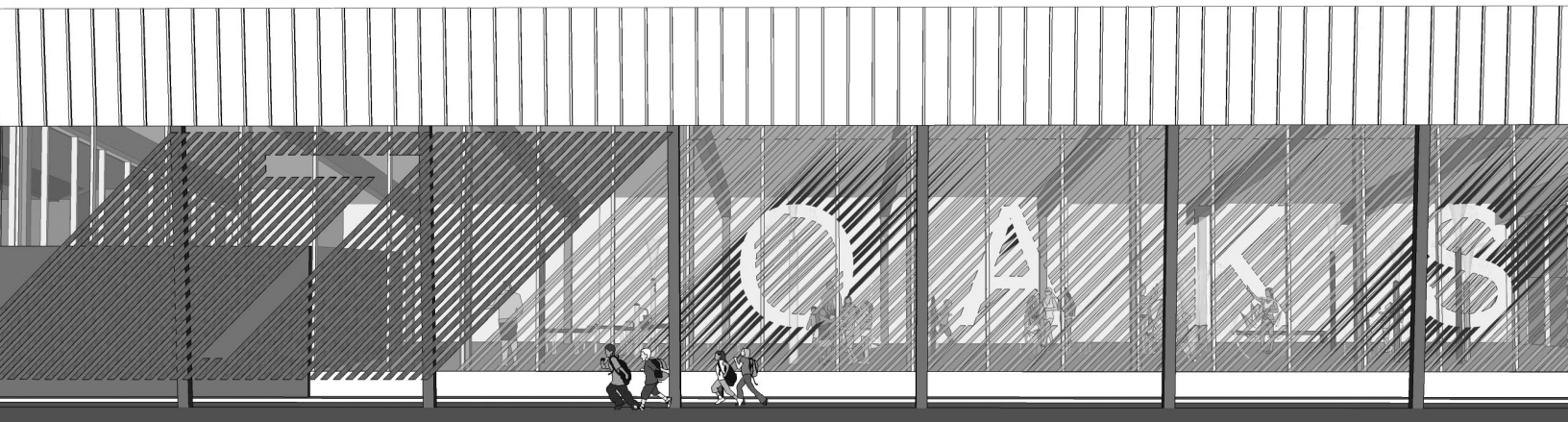
# SEVEN OAKS POOL FEASIBILITY STUDY

SEPTEMBER 19. 2013




| x | architecture inc.

| x | architecture inc.

**travis cooke MAA**
**glen gross MAA**
**jason kun MAA**
**markian yereniuk MAA**

120 Fort Street, Suite 103
Winnipeg MB R3C 1C7
204 318 2010

www.1x1architecture.ca

ACKNOWLEDGMENTS
The Consultants would like to acknowledge the generous help and assistance provided by the City of Winnipeg staff.

Respectfully submitted to the City of Winnipeg, September 19, 2012

Cover Image - Rendered image of facade of Seven Oaks Pool addition

# TABLE OF CONTENTS

Above: Aerial view of the Seven Oaks Pool site
(Image courtesy of Google Maps)

# EXECUTIVE SUMMARY

1x1 architecture inc. was engaged by the City of Winnipeg to provide a schematic design and an associated cost estimate for the renovation and addition to the Seven Oaks Pool. The construction is envisioned as being phased, in which the first phase would include the renovation of the existing lobby and amenity spaces. The goal of the renovation is to provide a better patron experience for the user, including an upgraded lobby space and new family washroom. Phase two includes an addition to the building which houses an indoor spraypad, a year round aquatic experience for children.

The scope of Work includes:

a) An architectural analysis of the current building to ensure it can support the additional space and programs required;

b) A functional review that examines the existing building spaces to determine what additional space is required to meet the functional needs of the City of Winnipeg;

c) Layout and design recommendations for the use of existing spaces in the Seven Oaks Pool and additions as required;

d) Outline specifications from architectural, structural, mechanical and electrical consultants;

e) Cost analysis for the proposed renovations and additions.

The study was undertaken from July 3rd to September 19, 2013.

The consultant team included:

| | |
|---|---|
| Prime Consultant: | 1x1 architecture inc. |
| Structural Consultant: | Lavergne Draward & Associates Inc. |
| Mechanical Consultant: | Epp Siepman Engineering Inc. |
| Electrical Consultant: | Epp Siepman Engineering Inc. |
| Cost Consultant: | GWH Construction Management Services |

The scope of the work is limited to that portion of the building in which the renovation is being proposed. It was immediately acknowledged that the pool area, basement and mezzanine would not be required to be examined for upgrades.

# 1.0 THE PROCESS

The process for meeting with the City of Winnipeg was the following:

### Meeting No. 1 - July 3. 2013
### START UP MEETING + SITE WALKTHROUGH
At the onset of the project, a kick-off meeting was held where the goals and objectives of the project were established. The entire consultant team attended the meeting. The consultant team did a thorough walkthrough of the Seven Oaks Pool.

### Meeting No. 2 - July 19. 2013
### SCHEMATIC DESIGN MEETING
At this meeting, the consultant team met with members of the City of Winnipeg Building Committee. Design schemes for the interior renovation were reviewed and discussed. The consultant team also presented three viable options for the spray pad addition. Positive and negative aspects for each option were discussed. At the end of this meeting, the City of Winnipeg selected one option to develop further.

### Meeting No. 3 - August 14. 2013
### INTERMEDIATE SCHEMATIC DESIGN MEETING
At this meeting, the consultant team presented the refined schematic design option. The City of Winnipeg Building Committee provided feedback on the design to be refined for the final Schematic Design presentation. Three - dimensional models were presented to the City of Winnipeg for feedback.

The structural, mechanical and electrical consultant produced drawings and specifications based on the final schematic design. The cost consultant developed a cost estimate for the construction based on this information.

## Participants of the Meetings:

START UP + SITE WALKTHROUGH

CITY OF WINNIPEG
Kate McKay
Dennis Glowasky
John Atkinson
Jenn Sarna

CONSULTANT TEAM
Travis Cooke
Glen Gross
Julien Lavergne
David Epp
Matthew Penner

SCHEMATIC DESIGN MEETING

CITY OF WINNIPEG
Ken McKim
Kate McKay
Jenn Sarna
Dennis Glowasky

CONSULTANT TEAM
Travis Cooke
Glen Gross

INTERMEDIATE SCHEMATIC DESIGN MEETING

CITY OF WINNIPEG
Ken McKim
Paul Huntington
Jenn Sarna

CONSULTANT TEAM
Travis Cooke
Glen Gross

Left: The interior of the Pool Area. The dramatic roof structure is comprised of glued, laminated beams and solid fir decking

# 2.0 SUGGESTED CAPITAL IMPROVEMENT

The City of Winnipeg provided 1x1 architecture a document suggesting that the Seven Oaks Pool could require some improvements, including:

·a new indoor spraypad - a year round aquatic experience focused on the 1 - 9 year old age group;

·a larger accessible change room complete with a 'universal changeroom';

·a larger family change area;

·upgrades to the Men's and Women's washroom to increase space, improve accessibility amenities, add more dry and wet change areas and improve accommodation to family, senior and cultural needs;

·a reception area that is complimentary to the new entrance project;

· an accessible reception desk;

· upgrades to the multi-purpose room;

· an outdoor spraypad.

The construction of the project was to be phased, taking into consideration funding availability and programmatic requirements.


Right: Partial Plan of the Portage La Prairie Recreational Complex. Newly constructed facilities typically have 'family change rooms' that are often larger than the designated male or female change rooms

# 3.0 ARCHITECTURAL BUILDING ASSESSMENT

## 3.1 PROCESS

The consultant team conducted a visual review of the Seven Oaks Pool on July 3rd, 2013 with input from the City of Winnipeg Building Committee.

The City provided the consultant team with original design drawings of the Seven Oaks Pool to assist in developing this report.

This assessment focuses only on the architectural assessment of those portions of the building that will be renovated.

The building envelope and roof were not part of the assessment process and are assumed to be in good condition.

A hazardous materials survey did not form part of the assessment.

## 3.2 SITE AND ZONING

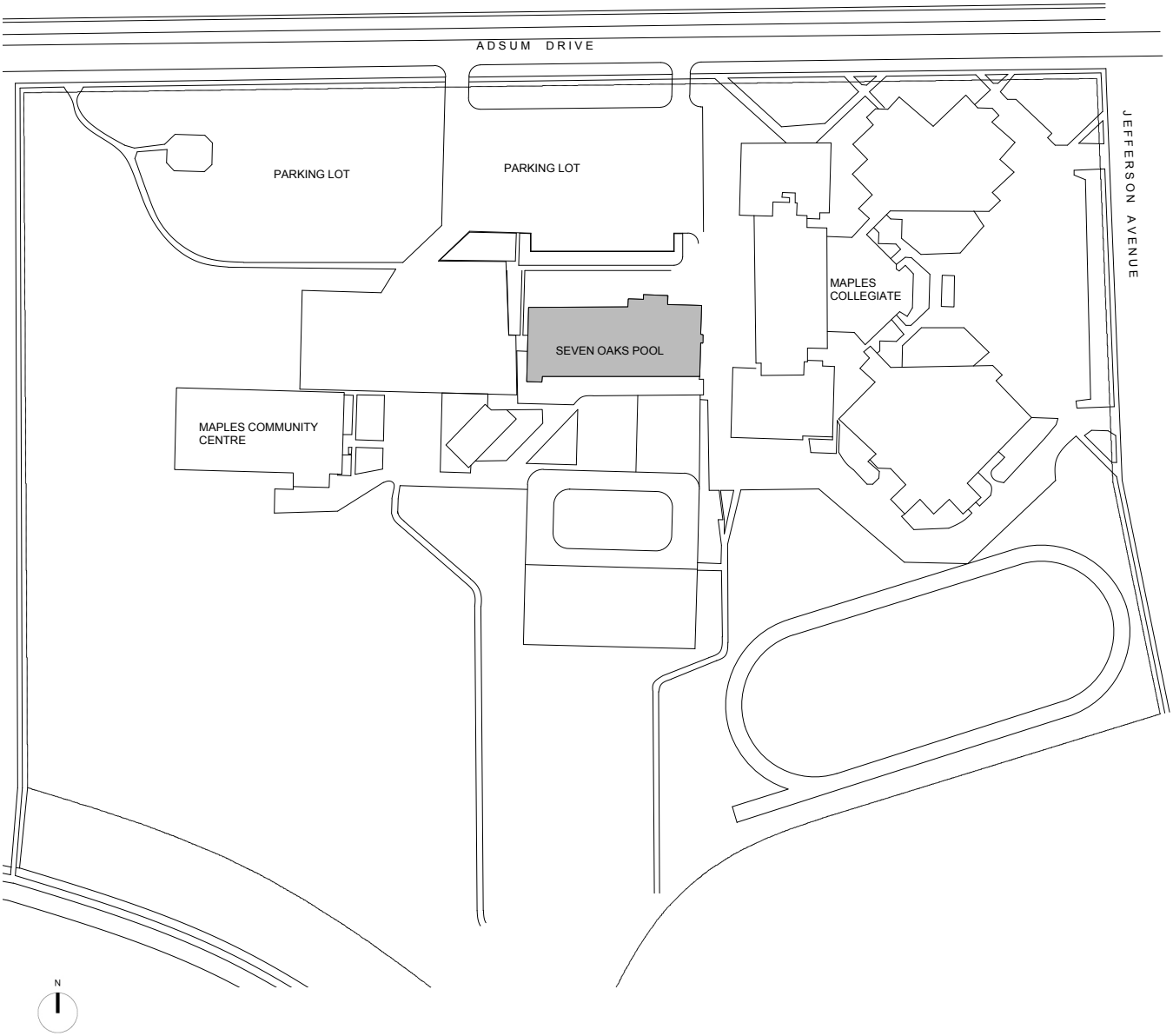
The Seven Oaks Pool is located at 444 Adsum Drive. It is surrounded by Maples Collegiate on the east, Maples Community Centre and Multi-Plex on the south west and designated outdoor activity space on the south. The parking lot on the north side of the building serves the Pool. The parking lot entrance is shared with Maples Collegiate and the Community Centre. Upgrades to the parking lot are currently underway in a separate planning process and construction is scheduled to occur in 2014.

The zoning of 444 Adsum is PR3 - Parks and Recreation.

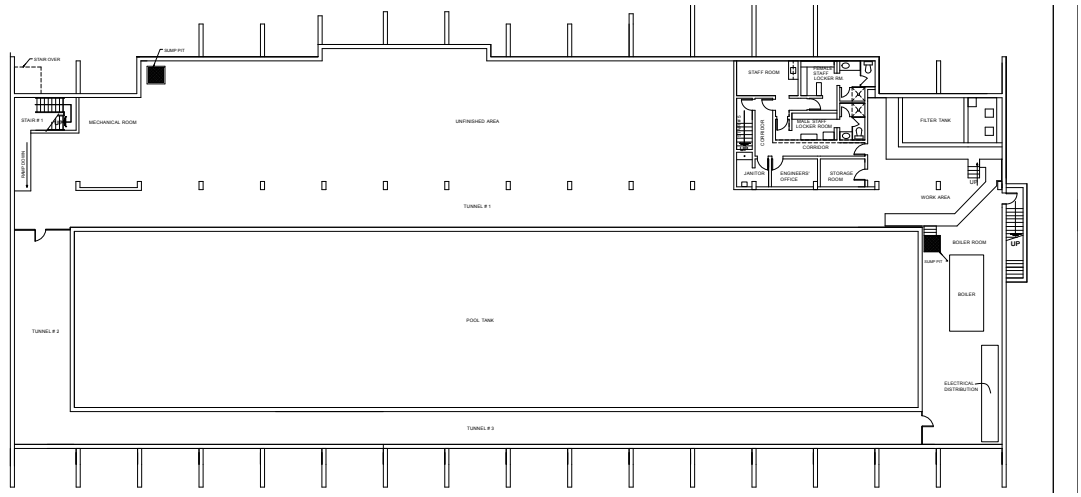
Description of PR3 from the City of Winnipeg website:
This district is intended for sites that include major recreation facilities and parks that are a regional destination. These sites may include major recreational facilities, aquatic leisure centres, regional parks, sport multi-plexes and athletic field developments. Parking facilities ranging from 100 to 300+ stalls may be associated with these uses. These facilities are typically found along major arterials.

The Minimum setbacks according to the *City of Winnipeg Zoning By-law No. 200/2006* are:
Minimum Front Yard (Ft.): 20
Minimum Rear Yard (Ft.): 25
Minimum Side Yard (Ft.): 10

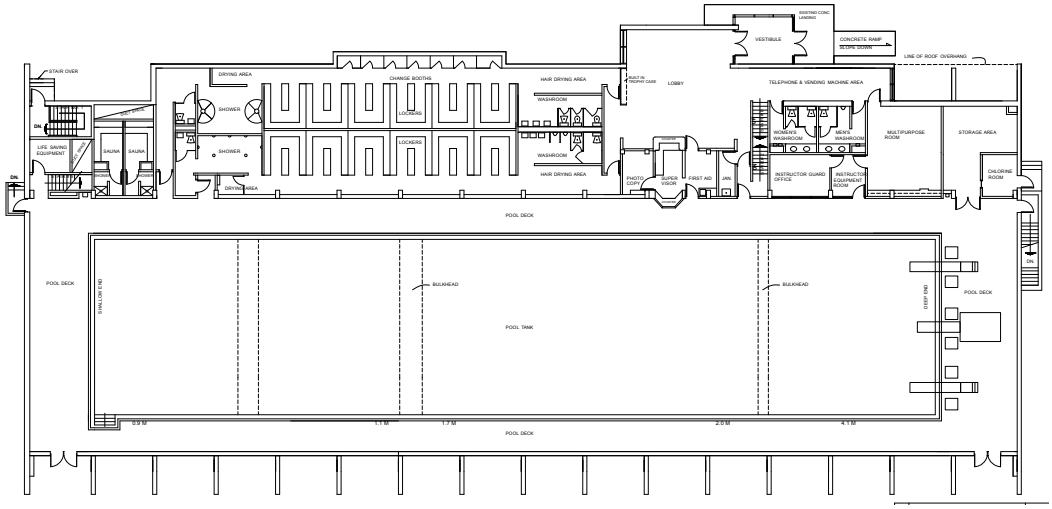
Source: City of Winnipeg website
http://cms00asa1.winnipeg.ca



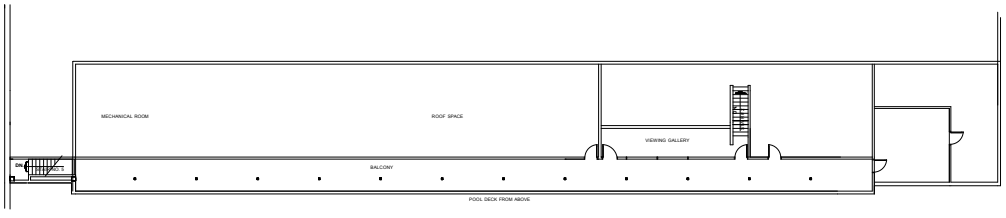

Above: Seven Oaks Pool Site Plan




Basement Floor Plan




Main Floor Plan




Mezzanine Floor Plan

Above: Existing Seven Oaks Pool Building Plans
Drawings provided by City of Winnipeg's Municipal Accommodation Division

## 3.3 THE BUILDING

Built in 1975, the building houses a 9,000 sq. ft pool that serves the Seven Oaks community and surrounding area. All the amenity spaces in the building are associated with the pool, with the exception of the multi-purpose room, which occasionally has gatherings that are unrelated to the pool function.

The building has had very few significant alterations since its construction nearly 40 years ago. A new entry vestibule will be completed in fall 2013 and the parking lot is scheduled to be upgraded in summer 2014. The mechanical and electrical systems have seen some upgrades through the years.

The total building area is approximately 54,000 square feet including a full basement and a mezzanine. There is a crawlspace under the pool itself.

The basement houses the mechanical and electrical equipment for the facility as well as some staff rooms.

The main floor consists of the  pool, sauna, male and female change rooms, reception and lobby, offices, a multi-purpose room and storage.

The mezzanine storey contains small staff offices, a public viewing gallery and mechanical rooms.

The exterior cladding is constructed of masonry and metal panelling.

The building is not equipped with an elevator.

## 3.4  BUILDING CODE AND LIFE SAFETY

The following is based on the National Building Code of Canada (NBC) 2010 including Manitoba Amendments. The building classification is Group A, Division 3.

Originally constructed in 1975, the building has seen minimal intervention besides architectural finishes and some mechanical and electrical upgrades. Although a building code review on the entire facility was not part of the scope of work, some significant Building Code issues should be noted:

### Elevator

The building is a three level building. The majority of programmed space occurs on the main level, however the basement and second floor have some limited programmed space.

The mezzanine, located above the main floor amenity spaces is approximately 7,800 sq. ft. This floor currently houses staff offices, a viewing gallery for the public and mechanical rooms.

The basement is approximately 22,800 sq. ft. (including the crawlspace) and houses mechanical and electrical rooms, as well as staff change areas and staff maintenance offices.

According to the National Building Code (NBC), access to the basement and mezzanine by an elevator would be required.

This feasibility study does not explore the provision of an elevator to access the basement and mezzanine as the proposed addition and renovation do not require the use of these spaces. It is unknown if the Authority Having Jurisdiction would require the introduction of an elevator if the renovation does not involve the basement or the mezzanine.

### Means of Egress

Upon initial review, it appears there are non-conforming issues with respect to egress from the mezzanine.

This feasibility study does not explore options for rectifying the exiting as the proposed addition and renovation do not require the use of the mezzanine. It is unknown if the Authority Having Jurisdiction would require rectifying the non compliant exiting if the renovation does not involve the mezzanine.

### Washroom Count

The City of Winnipeg provided an occupancy count for the existing building of 400 persons. According to the 2010 National Building Code (Table 3.7.2.2.A), the required water closet count is 4 male and 8 female. The existing count is 5 male and 5 female. Thus, it would be recommended that any significant renovation to the washroom facilities should bring the female washroom water closet count up to current National Building Code requirements.

WIth the addition of the spraypad, the occupancy count for the entire building would be increased. It would be recommended to consider this increased occupancy when considering the water closet count in Phase I of the construction.

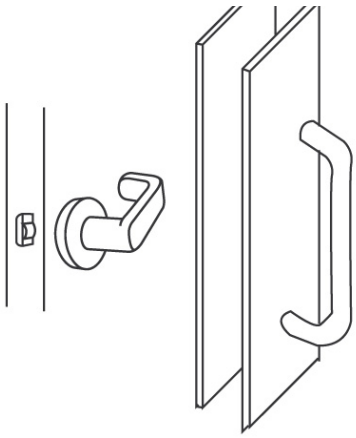
### Sprinklering

It is unknown if the original design of the facility considered the building as a one storey building with a mezzanine or a two storey building. This has a significant impact on whether the building would be required to be sprinklered as per current building code requirements. The lobby space is sprinklered, which does not appear to be original to the building.

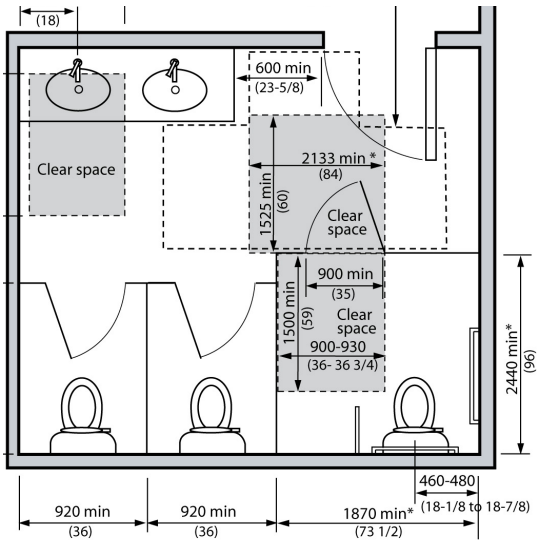
The Authority Having Jurisdiction should be consulted early in the next phase of design regarding whether the renovations in phase one would constitute a significant enough renovation to warrant sprinklering the entire building.

Should the Authority Having Jurisdiction define the building as a two storey building, the addition of the spray pad will likely warrant a large enough increase in building area, that sprinklering the entire facility will be required.

For the purpose of this feasibility study, the construction cost associated with sprinklering the entire facility has been allocated in phase two of construction.



Examples of Accessible Hardware
(*2010 City of Winnipeg Accessibility Design Standard*).




NOTE: In a retrofit situation where it is *technically not feasible* to provide the required clearances, the dimension marked with an * may be reduced to 1525 mm (60 in.).

Required Washroom Dimensions.
(*2010 City of Winnipeg Accessibility Design Standards*)

## 3.5 ACCESSIBLE DESIGN

A preliminary review of the building using the 2010 City of Winnipeg Accessibility Design Standards (CWADS) has revealed numerous shortcomings in achieving a facility that is universally accessible.

### Parking
The parking lot is equipped with accessible parking stalls, which are located within close proximity to the front entrance. The parking lot is currently being re-designed and it is our recommendation that the designers utilise the CWADS in the design of new parking lot.

### Entrance
The main entry to the building on the north facade has an automatic sliding doors, which meets the intent of the CWADS.

The approach to the building has a ramp to the building and would meet the intent of the CWADS. The handrails should be brought up to current CWADS requirements.

### Stairs
The stairs to the basement and second level do not meet the CWADS but are beyond the scope of this feasibility study.

### Door Hardware
The door operating hardware in the majority of the facility, in most cases a doorknob, does not comply with the requirement that such devices “not require fine finger control, tight grasping, pinching or twisting of the wrist to operate”.

### Elevators
As indicated in section 3.4, the facility is not equipped with an elevator for access to the basement and mezzanine.

### Reception Desk
The reception desk in the lobby is not equipped with a lower section of counter as required by the CWADS.

### Washrooms
The multi-stalled washrooms in the entire facility have numerous deficiencies that do not meet the CWADS. CWADS also requires that at least one universal washroom be provided in a public area of all public buildings. Given the large area requirements for accessible washroom facilities and the limited space currently available, it would be difficult to meet the requirements of the CWADS in the existing change room washrooms. At a minimum, it would be recommended to provide power door operators on the doors to the change rooms. A universal washroom could be incorporated into the family washroom development.

## 3.6 INTERIOR - FUNCTION, FINISHES AND FIXTURES

### Vestibule

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Masonry | Good |
| | Curtainwall | Good |
| Ceiling: | Metal | Good |

The existing vestibule is currently under renovation. The new vestibule will be constructed of a curtainwall system, complete with glazed automatic sliding doors, thus allowing an abundant amount of natural light to flow into the lobby space. The glass is rendered with a diagonal frit pattern which mimics the diagonal pattern on the exterior metal cladding and the interior wood cladding of the existing building.

The new doors meet current City of Winnipeg Accessibility Design Standards.

The vestibule space will be more generous than the previous and will be outfitted with a custom built bench allowing users a place to wait. A new metal screen on the outside of the glazing provides some shelter for the entry as well as visual interest at the main entry to the building

Above: The Elmwood Kildonans Pool front entrance vestibule. Seven Oaks Pool front entry will be similar.

### Lobby

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Painted Concrete Block | Good |
| | Masonry | Good |
| | Wood Cladding | Good |
| Ceiling: | Structural Wood Decking | Good |

The two storey lobby space acts as the hub of the building. It houses the reception desk and acts as the transition space from the vestibule to the change rooms, meeting room and mezzanine viewing gallery.

The walls are constructed of concrete block and brick masonry, with the upper portions (above 8'-0") clad in wood. The mezzanine handrail and guardrail are constructed of concrete block and wood cladding.

The lobby space is not very inviting and the wood cladding could be considered outdated. The space does allow visual access to the pool, does not have a considerable amount of natural light, and does not have sufficient seating. The solid guardrail does not allow for a good visual connection from the main floor lobby to the mezzanine viewing gallery, hindering any awareness that it is a place the public is welcome to go.

The existing roof structure consists of glulam beams with wood decking that is exposed to the underside. This construction is typical of the entire pool and appears to be in good condition. This is an attractive feature of the building and could be highlighted in the lobby space with the removal of the wood cladding on the wall.

The reception desk is constructed of concrete block which, perceptually, is heavy and not very welcoming.

Below: View looking at the existing lobby space.

Above: Reception desk from the lobby

The reception desk does not meet current barrier free standards. It would be recommended that any development in the lobby space should consider providing a new reception desk that meets current City of Winnipeg Accessibility Design Standards.

City of Winnipeg staff recommended providing materials that are much more inviting and creating a better patron experience coming in this space.

### Reception Area

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Painted Concrete Block | Good |
| Ceiling: | Wood | Good |

The reception area houses both the receptionist who acts as the face to the public and City of Winnipeg pool supervisors, who have a visual connection to the pool through a glazed wall.

The area is not generous, however is sufficient in size for the existing pool. With an increased demand from the proposed spraypad addition, staffing requirements will be greater and the reception desk size could be increased to accommodate two staff. A supervisior area should be maintained.

The reception area is currently located adjacent to the 'safe room', a room that allows staff to count money in a secure environment out of sight from the public. Any revision to the reception area should allow for this type of space.

It is recommended that staff be consulted in the detailed design of this area for specific user requirements.

Below: First aid room

### First Aid Room

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Painted Concrete Block | Good |
| Ceiling: | Wood | Good |

The existing first aid room is located adjacent to the reception desk. The room has a small sink, first aid supplies and a bench, so someone who is injured or taken ill on the premises can lie down.

There are doors on both the public (lobby) side and the pool side to allow medical personnel easy access to the pool from the lobby space. In any future development, this travel route should be maintained.

Although pool staff did not indicate that the size of the room was inadequate, it appears small in size if there were numerous people attending to an injured person. As well, there is a column in the middle of the millwork which makes the countertop unusable.

### Telephone and Vending Machine Area (Corridor)

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Painted Concrete Block | Good |
| | Masonry | Good |
| Ceiling: | Wood Cladding | Good |

The corridor leading to the public washroom and multi-purpose room currently houses a storage shelf and vending machines. The space is generous for its purpose.

The current renovation has relocated the staff entry at the east end of this corridor. The corridor also acts as a required means of egress in the renovation.

City of Winnipeg staff indicated that the corridor could be eliminated if a new layout is developed in this area, however, the staff entry will be required to be relocated and the recently constructed concrete stairs will be required to be demolished.

Any development of this area would require a new location for vending machines and recycling bins.

Above: Corridor with existing recycling bins and vending machines. (Photo taken prior to renovation.)

### Men and Womens Public Washrooms

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Sheet Flooring | Good |
| Walls: | Painted Concrete Block | Good |
| Ceiling: | Stipple Gypsum Board | Good |

The womens washroom houses 2 water closets and 2 sinks. The male washroom houses 1 water closet, 1 urinal and 2 sinks. See the notes in 3.4 Building Code and Life Safety regarding washroom count.

The washrooms do not meet all the requirements of the current City of Winnipeg Accessibility Design Standards.

The washrooms have seen some finish upgrades in recent years

Original to the 1975 building, these washrooms are to serve the general public who are spectators in the facility. Considering the location of the washrooms in the change room facilities, City of Winnipeg staff indicated that spectators could utilise these washrooms and that the mens and womens public washrooms could be demolished and the space re-purposed.

### Multi-Purpose Room

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Sheet Flooring | Good |
| Walls: | Concrete Block | Good |
| Ceiling: | Acoustic Ceiling Tile | Good |

The multi-purpose room serves both staff and public. The room functions for meetings, public birthday parties, community group meetings etc. The room does not have a strong connection to the pool.

The room houses a refrigerator, microwave and millwork for storage. Tables and chairs are set up when required.

City of Winnipeg staff indicated that the size of the room could be reduced.


Above: Multi-purpose room

### Storage Area and Chlorine Room

The storage and chlorine rooms are required for the basic functions of the pool. These spaces are required and if any modifications are proposed in this area, the space will

Above: View down linear corridor of Mens Change room
Middle: View of the typical U-shaped locker module
Lower: View of the linear corridor of Womens Change room

be required to be replaced with a space of equal size and similar relationship to the pool.

An inventory of finishes in this room was not conducted.

### Change Rooms

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Concrete Block (Glazed) | Good |
| Ceiling: | Gypsum Wall Board | Good |

The change rooms house washroom facilities, hair drying areas, locker and shower stalls. The female change room also has 7 private change booths.

The change rooms are constructed of glazed concrete block wall, tile flooring and gypsum wallboard ceiling. All appear in relatively good condition.

The womens washroom houses 3 water closets and 3 sinks. The male washroom houses 2 water closets, 2 urinals and 3 sinks. See the notes in 3.4 Building Code and Life Safety regarding washroom count.

The design of the locker area is typical of locker room facilities with several U-shaped modules feeding off of a linear corridor. This design offers privacy from module to module, however it lacks proper sight lines for supervision of the space by staff. City of Winnipeg staff indicated that there are significant theft problems in the locker rooms and that a more open floor plan would allow for more supervision of the space.

Any development of the locker area should consider the existing floor drain locations, which is within each u-shaped module. The lockers currently sit on built in raised pedestals that will require modification if significant changes occur.

Some lockers have been upgraded to stainless steel in recent years. Any renovation to this area should consider re-using the existing stainless steel lockers, and replacing the old metal lockers with stainless steel lockers. The locker count should be maintained as close as possible:

Female: Full height: 100
Half Height 80

Male: Full Height 91
Half Height: 100

City of Winnipeg staff also indicated that consideration should be given to provide small “valuables locker” located adjacent to the reception desk in the lobby for a more secure option for small items.

The shower stall is located adjacent to the exit to the pool. It appears that the shower fixtures have been upgraded and are in good condition.

There is a single washroom stall at the pool side of the change rooms which allows users in the pool easy access to a washroom facility. A washroom in this area should be maintained in any future development.

## Sauna

The sauna is fully operational and is in high demand by users of the facility. It is recommended that the sauna be maintained in its entirety.

## Barrier Free Change Area

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Good |
| Walls: | Concrete Block (Glazed) | Good |
| Ceiling: | Gypsum Wall Board | Good |

The room furthest west off of the pool is currently used as a barrier free change room. It was originally designed as a storage room. The room is not easily accessible as users are required to travel through the change room facilities, enter the pool area and then enter the barrier free change room.

The room does meet current City of Winnipeg Accessibility Design Standards. With the development of a family change area, a universal change room should incorporated and this room could be re-purposed.

## Instructor Guard Office

| Finishes: | Type | Condition |
|---|---|---|
| Floor: | Tile | Poor |
| Walls: | Concrete Block | Good |
| Ceiling: | Gypsum Board | Good |

The Instructor guard area serves two staff and houses two desks, computers and paper storage. The space is immediately accessible from the Pool deck area. The current space has windows onto the deck space, but blinds are in the closed position most of the time.

Above: Instructors Guard Office

## Pool Area

Review of the Pool tank and deck areas were not included in the scope of this feasibility study.

## Basement

The basement is under nearly the entire main floor with a crawlspace under the pool tank itself. The basement houses mechanical and electrical equipment as well a few staff amenity spaces such as change facilities and a staff room. Beside mechanical and electrical upgrades, the basement is outside of the scope of this report. A building code review of the basement was not conducted.

Above: Basement
Below: View of pool from mezzanine

## Mezzanine

The mezzanine space is essentially above the amenity spaces on the main floor. There is a wide linear balcony that serves as a viewing gallery for the pool. The remainder of the floor is occupied by mechanical rooms and small staff offices. Although the offices are in need of repair and mechanical upgrades, the mezzanine was deemed outside the scope of this report. A building code review of the mezzanine was not conducted.

# 4.0 FUNCTIONAL REVIEW

The functionality of the existing spaces within the pool were to remain similar to the existing, however some significant revisions were requested. The following is a summary:

### Lobby
- Provide a more inviting space;
- Revisit material palette;
- Provide better patron experience.

### Reception
- Provide space for two receptionists;
- Provide space for two supervisors with visual connection to the pool area;
- Provide reception desk that meets the 2010 City of Winnipeg Accessibility Design Standards;
- Provide valuables locker area;
- Provide door direct to pool deck for staff (but not spectators);
- Provide direct access to a 'safe room'.

### Lockers / Washrooms
- Maintain approximate number of existing lockers;
- Provide more open and secure space.

### Family Change Room
- Provide new family change room c/w accessible washroom/ showers to 2010 City of Winnipeg Accessibility Design Standards;
- Provide enclosed change areas.

### First Aid Room
- Access from the corridor and pool side is required;
- Direct access from pool side is preferred.

Below: Supervisors connection to the pool


### Instructor Guard Office
- Provide space for two personnel;
- Visual access to pool is not required.

### Multi-Purpose Room
- Used for various functions including birthday room, community group rooms, staff meeting area etc.;
- Reduce area from existing.

### SprayPad
The City of Winnipeg has constructed numerous exterior spray pads over that past few years. They are typically open seven days a week during the summer months and are unsupervised.

There are no local examples of interior spray pads that are not integrated into a swimming pool. The consultant team spoke to the following consultants for advice on the design of the indoor spray pad:

| | |
|---|---|
| · Ken Crozier | Crozier Enterprises Ltd Water Odyssey Distributor |
| · Jeff Kuby | Playworks |
| · Markus Reimer | Vortex equipment |

From discussions with these consultants, it was recommended that the minimum area of a spraypad should be between 3,500 - 4,000 square feet. City of Winnipeg indicated that the spray pad should be designed for a 1 - 9

year old age group. Accommodations should be considered for temporary storage cubbies and a staff lookout station.

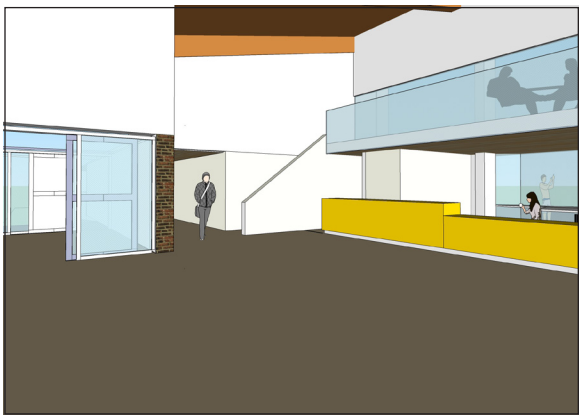
It was also determined, through discussions with city staff, that the spray pad should have its own holding tank separate from the existing pool system, thus if there is a fouling in one location, it would not affect the other. The water would not be heated.

It should be noted that for the purpose of this report, a recently constructed spray pad for the River East Arena was used as a model for the spray pad within the building addition. It would be recommended, that as design proceeds, the consultant work directly with a spray pad consultant to determine layout, fixtures and mechanical requirements for the spray pad itself.

Above: The River East Arena Spray Pad

Below: Plan of the River East Arena Spray Pad completed by Crozier Enterprises

Above: Existing and proposed lobby space looking west. Note the access to the spray pad on the right as part of Phase II construction.



Above: Existing and proposed lobby space looking east.
Right: Plan of the proposed lobby space

# 5.0 DESIGN RECOMMENDATIONS

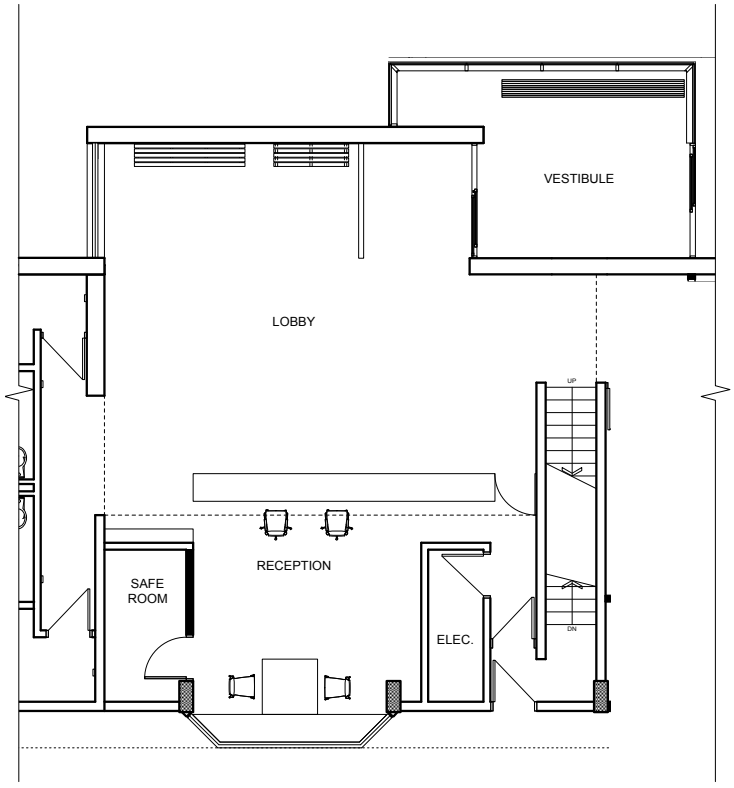
## 5.1 PHASE ONE

Refer to Drawings and Specifications in appendix for all work associated with Phase One.

### Lobby

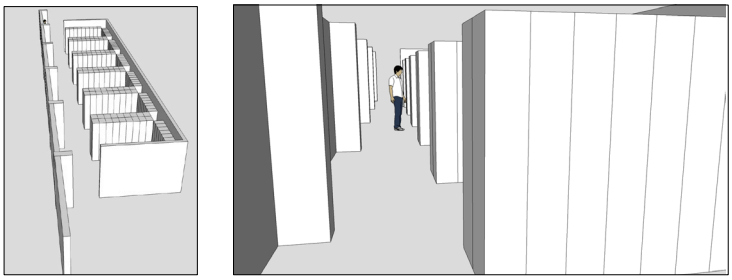
Significant improvements in the lobby space would include:

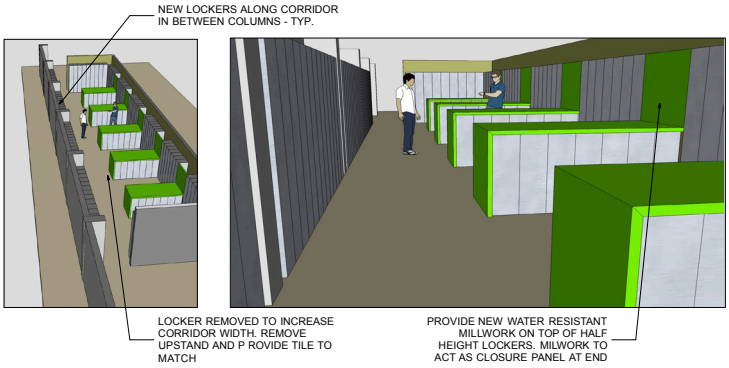
- a new reception desk spanning across the lobby that meets current City of Winnipeg Accessibility Design Standards.;
- a new glass wall separating the lobby and the pool allowing a strong visual connection to the pool;
- new gypsum wallboard to replace the existing diagonal wood cladding providing a much needed aesthetic upgrade, allowing the underside of the roof structure to be the highlighted feature in the space;
- paint existing concrete block;
- a new transparent guardrail at the mezzanine, allowing a better visual connection to the mezzanine space.



## Change Room Facilities

Improvements in the Change Rooms would include:
- upgraded washrooms and increased water closet count to meet National Building Code requirements;
- providing half height lockers between the U-modules allowing for increased supervision of the space;
- the half height lockers would be finished with a solid top so users could utilise as a temporary storage location while changing;
- providing full height lockers on the walls;
- existing stainless steel lockers to be maintained, metal lockers to be replaced with stainless steel;
- new water closets to meet current National Building Code requirements.

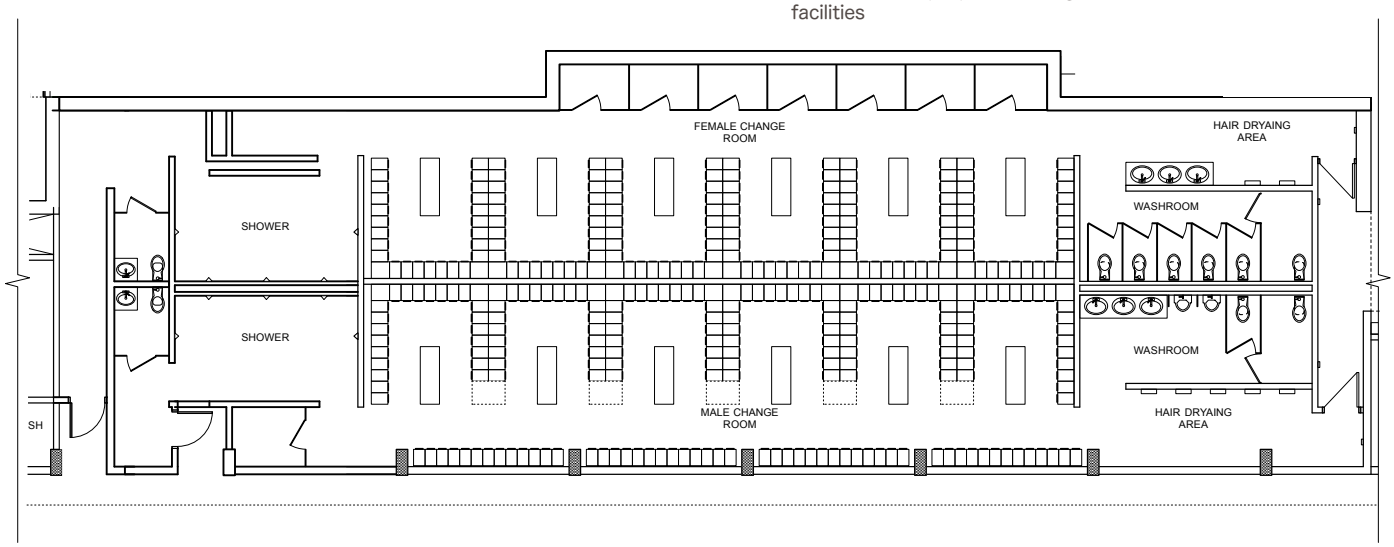





Above: Model of the existing locker configuration

Right: Model of the proposed locker configuration

Below: Plan of proposed change room facilities



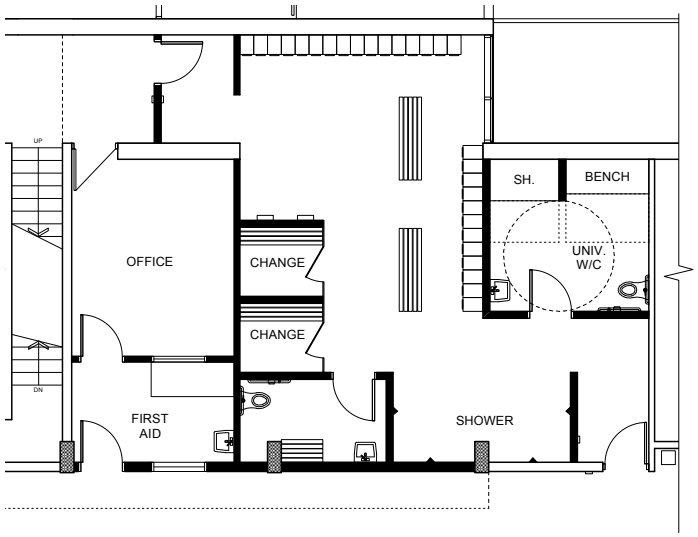
## Family Change Room

The new family change room will include:
- a universal washroom and shower area which meets the City of Winnipeg Accessible Design Standards;
- new stainless steel lockers;
- showers similar to those in the change room facilities;
- two private change area closets;
- hair drying station.

This new room will allow families to change in the same room which provides a level of security for parents.

## Office and First Aid Room

The office and first aid room are located on the east side of the stair to the mezzanine. The first aid room has a visual connection to the pool deck, with the office located directly adjacent.




Above: Plan of the proposed family washrooms, office and first aid room

## 5.2 PHASE TWO

Refer to Drawings and Specifications in appendix for all work associated with Phase Two.

### Spraypad

Phase two includes a 6,600 sq. ft. addition housing the spraypad on the north side of the building. The addition will become the new face for the pool and the full height glazing will allow a strong visual connection from the street to the interior of the facility.

The striking new form will be constructed with steel columns, glulam beams and a solid wood decking roof structure to match the existing building. The roof will overhang the sidewalk to the north providing a protected drop off and bus loading area in the event of inclement weather.

Access to the spray pad is twofold: spectators will enter the area from the lobby space while users will utilise the existing change room facilities and enter the spray pad area from the west. The west end of the change facilities will be modified to create a larger corridor to suit the increased volume of traffic.

There is a large sitting area on the east side of the spray pad for spectators.

The new multi-purpose room is envisioned as being adjacent to the spray pad, allowing for a more diverse use of this space. The space could be rented for children birthday parties, while still functioning as a meeting room for other users.

An exterior deck on the east side allows parents to take a reprieve from the interior of the spray pad and enjoy a covered outdoor patio.

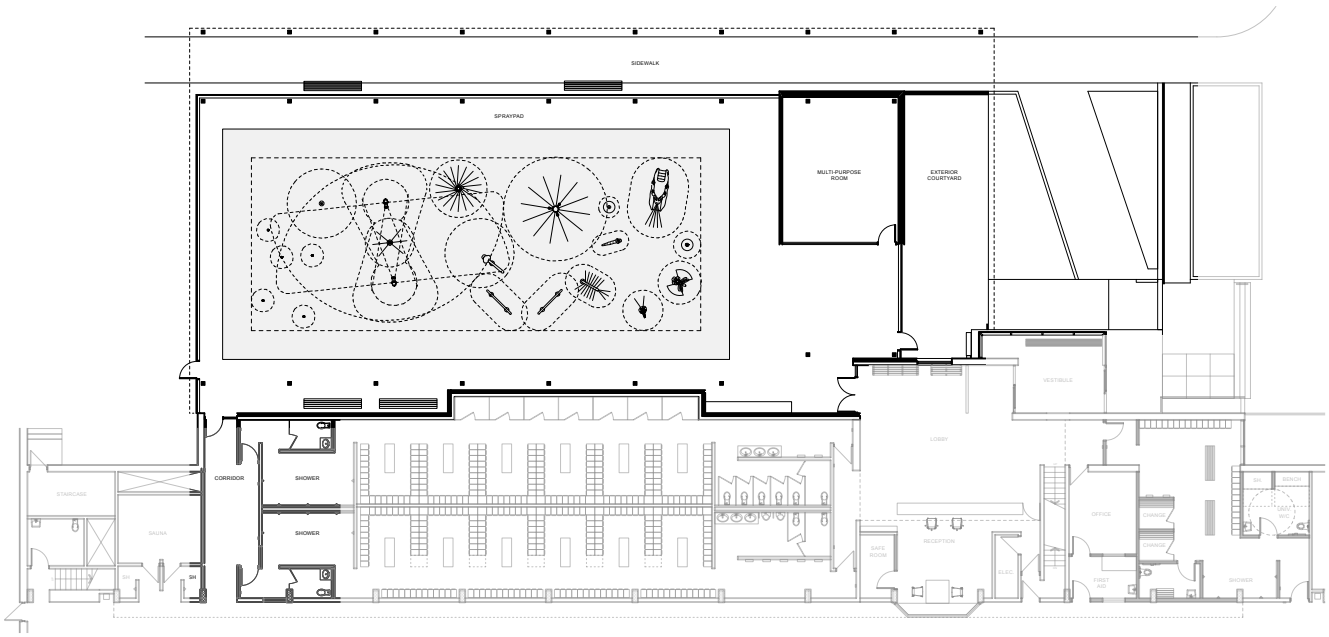
The exterior metal screen and the frit pattern on the front of the glazing mimics the new vestibule renovation. Within the screen and frit pattern, the image of '7 OAKS' appears, which gives a new icon not only to the pool, but for the community at large.

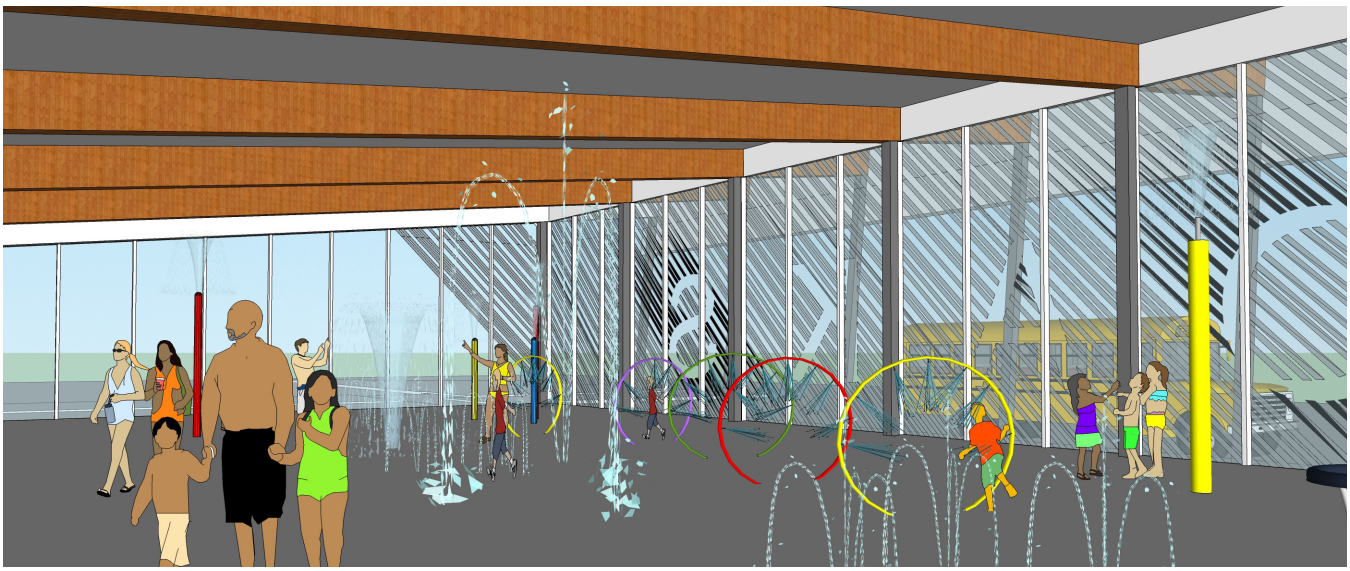
Opposite top: Proposed plan of the new spray pad (Phase One in grey, Phase two in black)

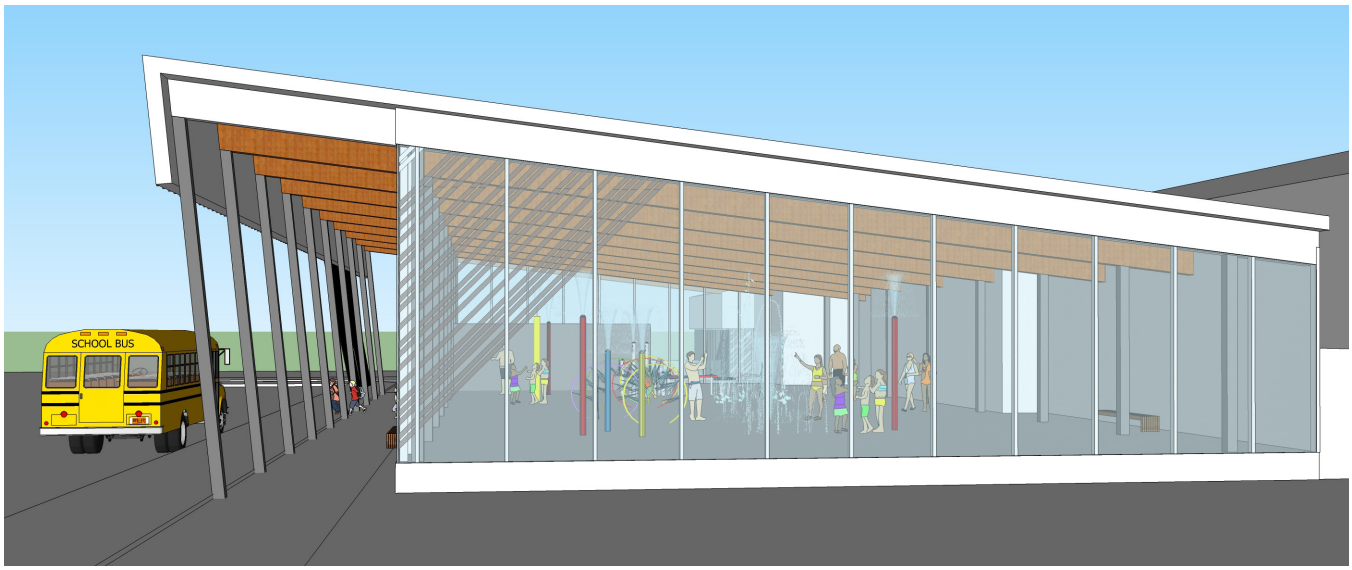
Opposite middle: Preliminary model of interior of spray pad

Opposite bottom: Preliminary model looking east into the spray pad area

Below: Preliminary model looking towards the building addition with the '7 oaks' metal screen and frit pattern


SIDEWALK
SPRAYPAD
MULTI-PURPOSE ROOM
EXTERIOR COURTYARD
VESTIBULE
LOBBY
CORRIDOR
SHOWER
SHOWER
STAIRCASE
SAUNA
SH
OFFICE
CHANGE
CHANGE
RECEPTION
SAFE ROOM
ELEC.
FIRST AID
SHOWER
BENCH




SCHOOL BUS


SEVEN OAKS POOL


OAKS

# 6.0 COST ESTIMATE

Refer to appendix for cost estimate breakdown. The following outlines construction costs:

The Class C construction cost estimate is indicated as $763,525 for Phase I and $3,051,327 for Phase II. The accuracy of this estimate at level 'C' should range between -15% to +15%.

**Cost Breakdown**
The construction cost is broken down into two phases as per the drawings and specifications. Should the projects proceed simultaneously, it would be anticipated that some cost savings in the General Requirements category should be expected.

**Escalation Factor**
Phase I: An escalation factor of 3% for construction to commence in September 2014 was included in the construction cost
Phase II: An escalation factor of 6% for construction to commence in September 2015 was included in the construction cost. Should this work commence earlier, the escalation should be revised to suit.

**Exclusions:**
The following items are not included in the construction cost estimate and should be included in the overall project costs if required:
- Consultant fees including Architectural, Structural, Mechanical and Electrical;
- Costs of asbestos or other hazardous materials removal if required;
- Relocation of existing facilities, including furniture and equipment;
- Cost of new furniture and equipment;
- Special audio, visual, security equipment;
- Window treatments;
- Geotechnical report and survey;
- City of Winnipeg Overhead and Project Administration;
- GST.

**NOTE:**
The cost estimate does not include any significant work to the swimming pool area, basement or mezzanine. If the Authority Having Jurisdiction requires any work related to upgrading these areas to current National Building Code standards, the cost estimate will be above and beyond that shown.

# 7.0 APPENDICES

Architectural and Structural Drawings

| | |
|---|---|
| A1 | Demolition Plan |
| A2 | Demolition Plan (Blow up) |
| A3 | Demolition Plan (Blow up) |
| A4 | Plan |
| A5 | Plan (Blow up) |
| A6 | Plan (Blow up) |
| A7 | Elevation and Section |
| A8 | Elevations |
| A9 | Lobby Elevations |
| S2.1 | Foundation & Main Floor Framing Plan |
| S2.2 | Roof Framing Plan |
| S2.3 | Elevations |

·Architectural and Structural Outline Specification

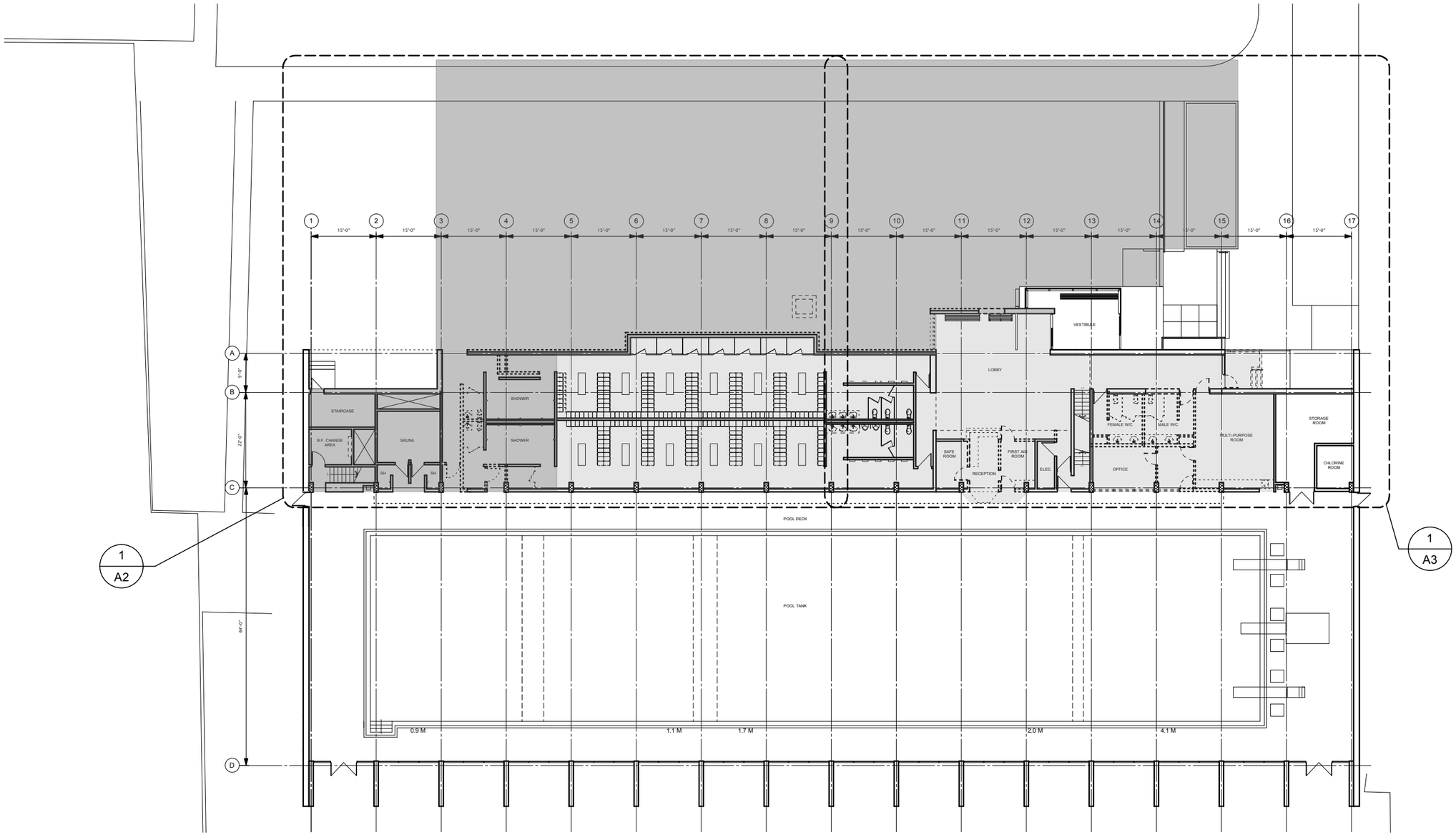
·Mechanical Outline Specification

·Electrical Outline Specification

·River East Arena Splash Pad Drawings

·Cost Estimate Cover Letter

·Cost Estimate Breakdown




1 / A1 DEMOLITION PLAN
Scale 1:300

## LEGEND

PHASE I OF RENOVATION

PHASE II OF RENOVATION

**A1**

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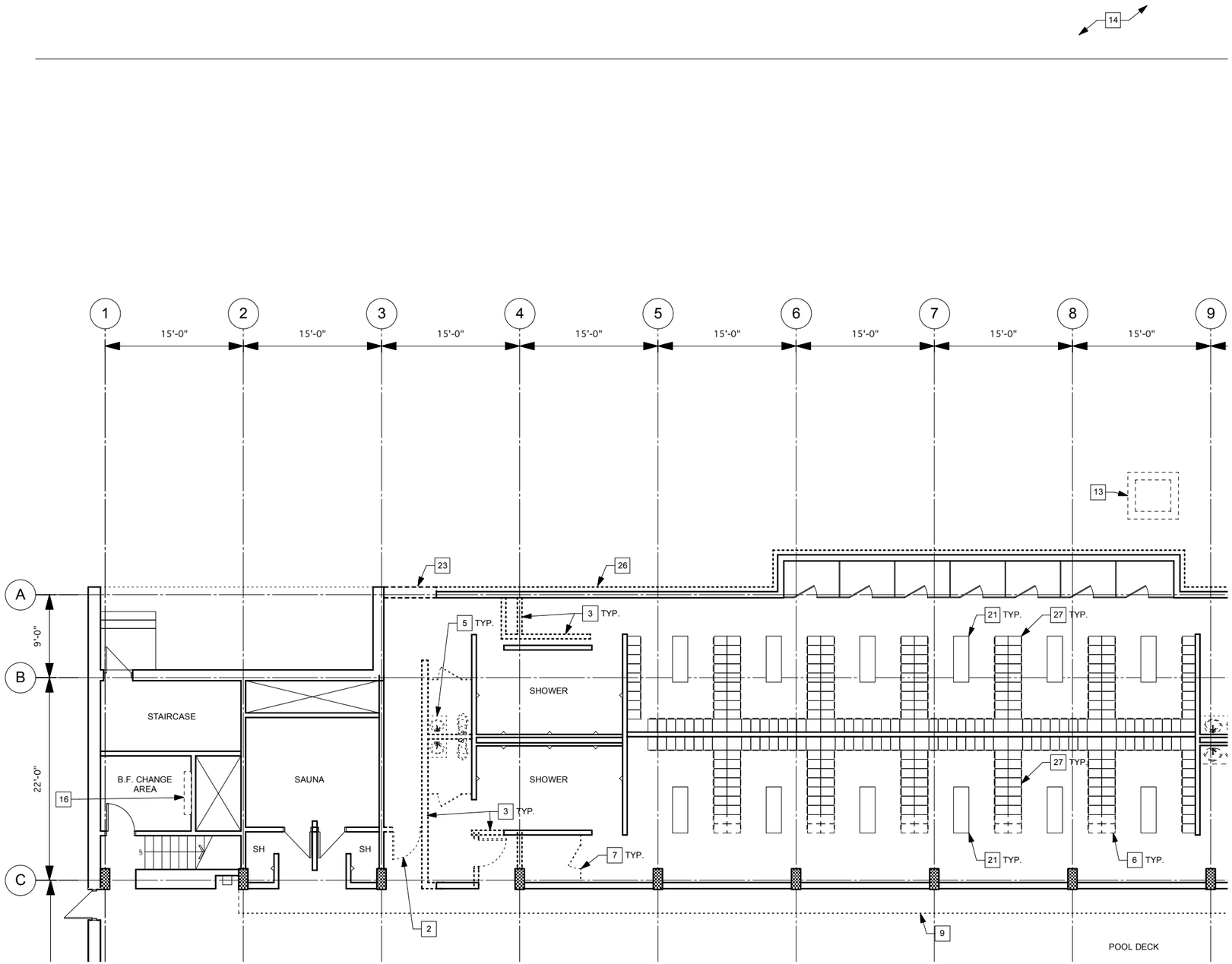


1 / A2 DEMOLITION PLAN
Scale 1:150

## KEYNOTES

1 DEMOLISH EXISTING MILLWORK

2 DEMOLISH EXISTING DOOR AND FRAME

3 DEMOLISH EXISTING CONCRETE BLOCK WALL

4 DEMOLISH EXISTING GLAZING

5 DEMOLISH EXISTING PLUMBING FIXTURES - REFER TO MECH.

6 EXISTING LOCKERS TO BE RELOCATED. DEMOLISH EXISTING BUILT UP FLOOR - REFER TO A12

7 DEMOLISH EXISTING PARTITION SYSTEM

8 DEMOLISH EXISTING DOOR

9 LINE OF MEZZANINE ABOVE

10 DEMOLISH EXISTING WOOD CLADDING ON WALLS ABOVE 8'-0". REFER TO INTERTIOR ELEVATIONS ON A9 AND A10

11 DEMOLISH EXISTING CONCRETE BLOCK HANDRAIL AT MEZZANINE. REFER TO A9 AND A10

12 DEMOLISH EXISTING WINDOW

13 DEMOLISH EXISTING AIR CONDITIONER, CONCRETE PAD AND FENCE. REFER TO ELECT.

14 EXISTING SIDEWALK TO REMAIN

15 EXISTING RAMP TO REMAIN

16 DEMOLISH EXISTING SURFACE MOUNTED LOCKERS

17 EXISTING PLANTING TO REMAIN

18 DEMOLISH EXISTING EXISTING HAND DRYERS

19 EXISTING HAND DRYERS TO REMAIN

20 EXISTING SLIDING DOOR AND CURTAINWALL VESTIBULE TO REMAIN

21 EXISTING BENCH TO REMAIN

22 EXISTING PARTITION SYSTEM TO REMAIN

23 DEMOLISH EXISTING EXTERIOR WALL AND PREPARE FOR NEW DOOR

24 CONCRETE PLATFORM TO REMAIN

25 DEMOLISH EXTERIOR WALL FOR NEW PUNCHED WINDOW

26 DEMOLISH EXISTING EXTERIOR MASONRY VENER, INSULATION AND VAPOUR BARRIER

27 REFER TO A12 FOR LOCKER ROOM SCOPE OF WORK

28 EXISTING STAIR AND CONCRETE PAD TO BE DEMOLISHED

## LEGEND

NEW WALL

EXISTING WALL

EXISTING WALL TO BE DEMOLISHED

NEW DOOR

EXISTING DOOR TO REMAIN

EXISTING DOOR TO BE DEMOLISHED

## GENERAL NOTES

1. REFER TO A/A1 AND 1/A4 FOR PHASING OF PROJECT
2. SPRAYPAD FEATURES ILLUSTRATED ON THIS DRAWING ARE MEANT FOR SCALE PURPOSES ONLY. THE SPRAYPAD TO BE DESIGNED BY WATER SPRAY PAD CONSULTANT.

**A2**

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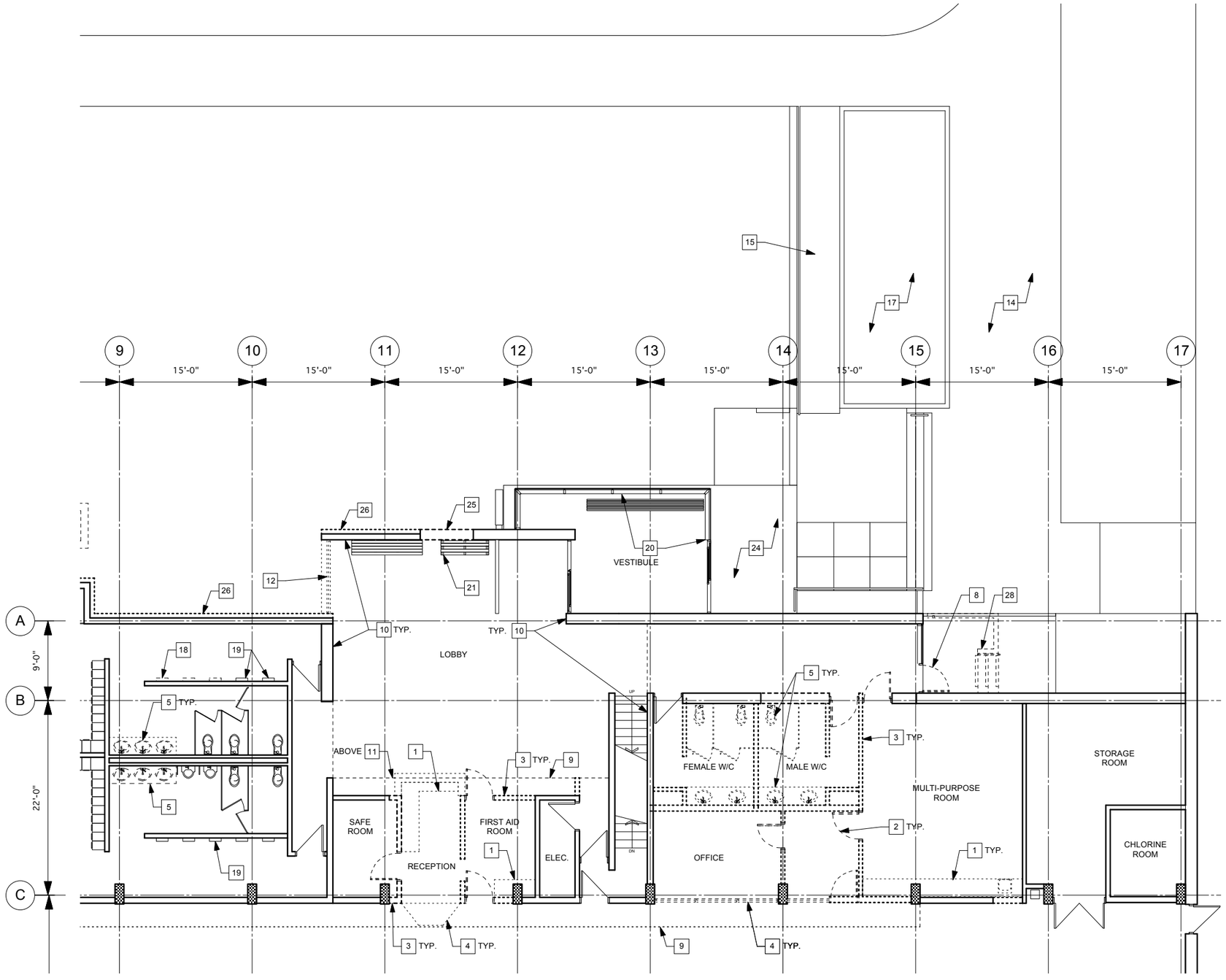


1
A3
DEMOLITION PLAN
Scale 1:150

## KEYNOTES

1 DEMOLISH EXISTING MILLWORK

2 DEMOLISH EXISTING DOOR AND FRAME

3 DEMOLISH EXISTING CONCRETE BLOCK WALL

4 DEMOLISH EXISTING GLAZING

5 DEMOLISH EXISTING PLUMBING FIXTURES - REFER TO MECH.

6 EXISTING LOCKERS TO BE RELOCATED. DEMOLISH EXISTING BUILT UP FLOOR - REFER TO A12

7 DEMOLISH EXISTING PARTITION SYSTEM

8 DEMOLISH EXISTING DOOR

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14 EXISTING SIDEWALK TO REMAIN

15 EXISTING RAMP TO REMAIN

16 DEMOLISH EXISTING SURFACE MOUNTED LOCKERS

17 EXISTING PLANTING TO REMAIN

18 DEMOLISH EXISTING EXISTING HAND DRYERS

19 EXISTING HAND DRYERS TO REMAIN

20 EXISTING SLIDING DOOR AND CURTAINWALL VESTIBULE TO REMAIN

21 EXISTING BENCH TO REMAIN

22 EXISTING PARTITION SYSTEM TO REMAIN

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## LEGEND

NEW WALL

EXISTING WALL

EXISTING WALL TO BE DEMOLISHED

NEW DOOR

EXISTING DOOR TO REMAIN

EXISTING DOOR TO BE DEMOLISHED

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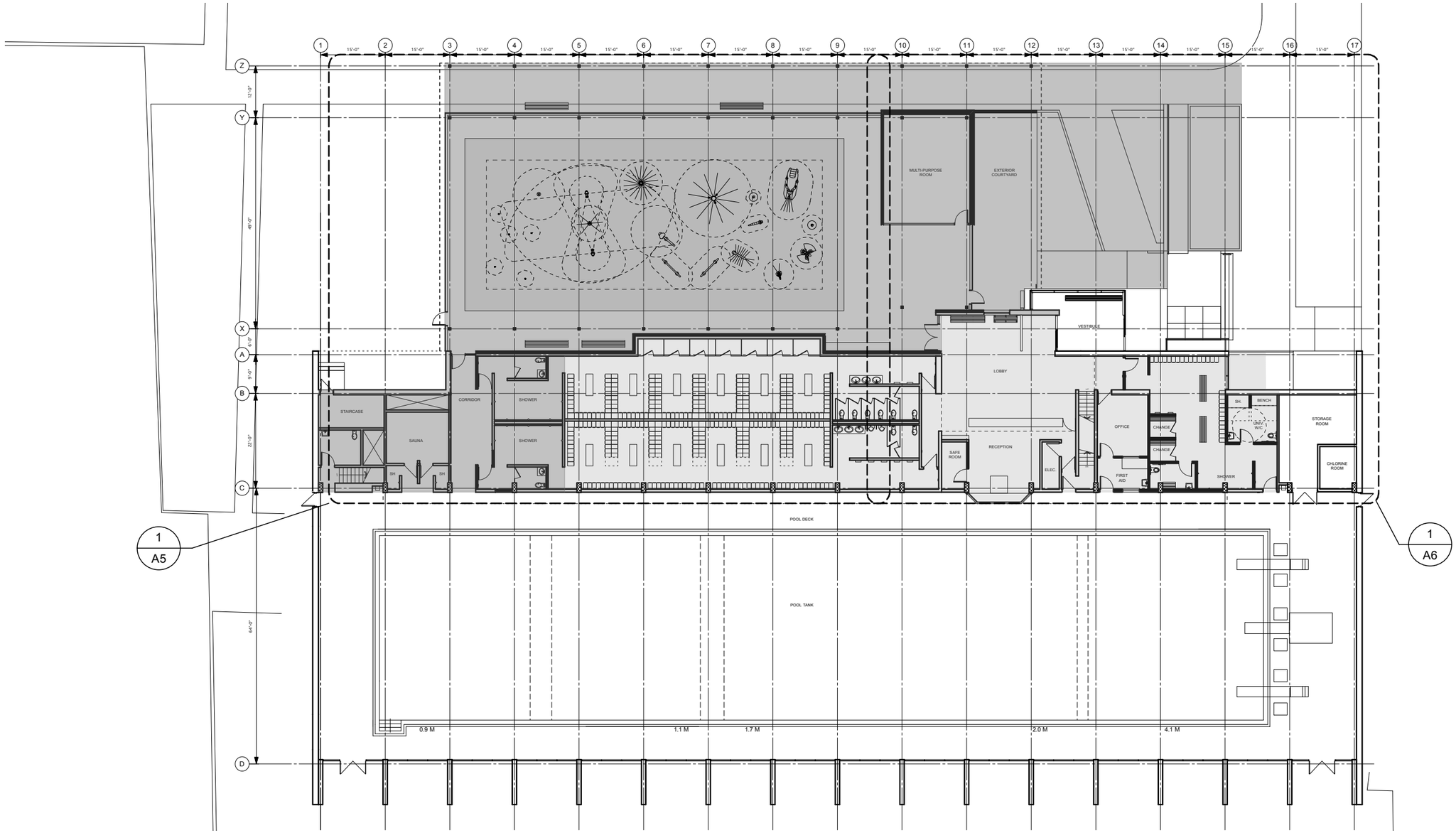


## LEGEND

PHASE I OF RENOVATION

PHASE II OF RENOVATION

# A4

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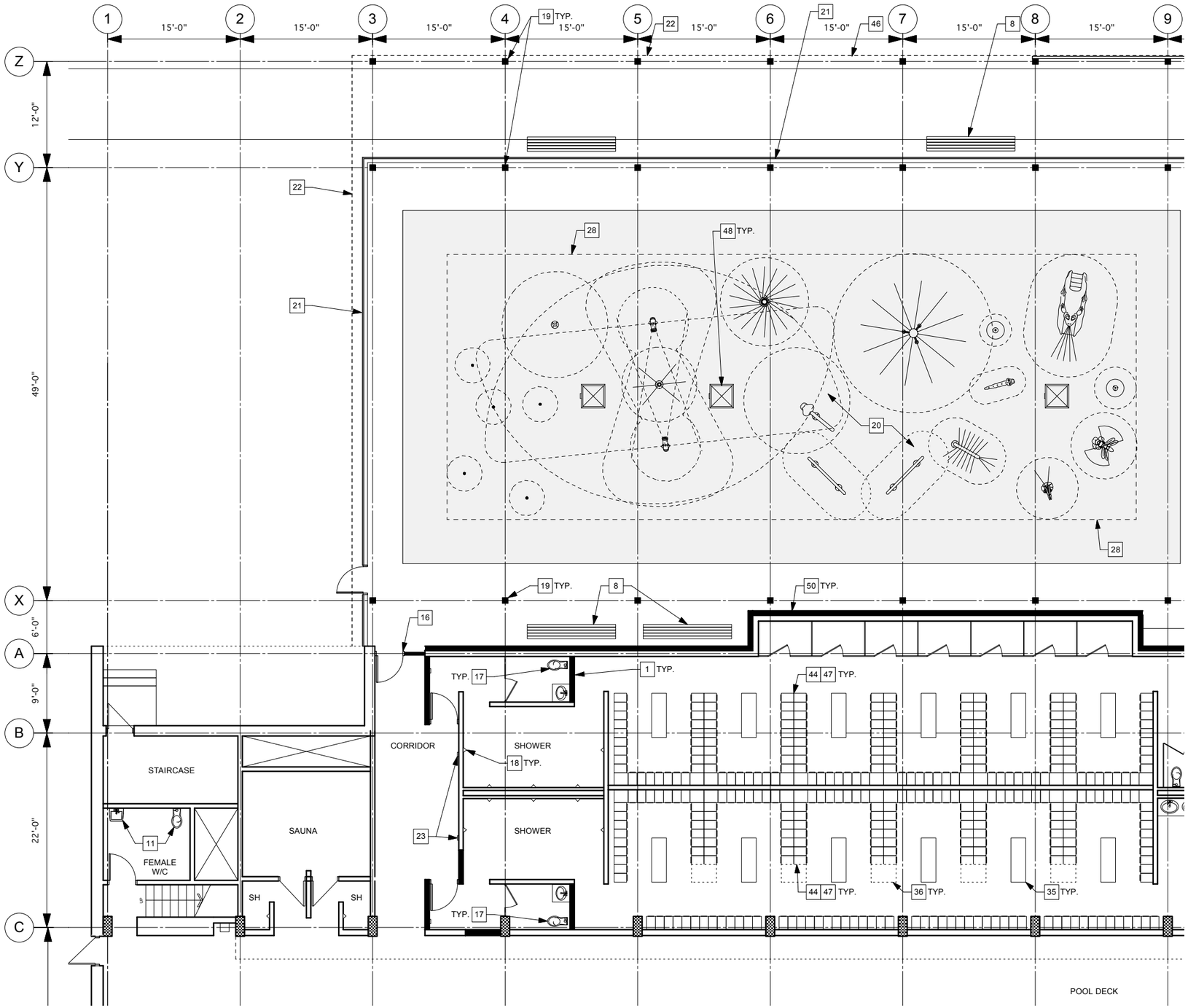


1 / A5 PLAN
Scale 1:150

## KEYNOTES

1. NEW 6" CONCRETE BLOCK WALL - PAINTED
2. NEW 8" CONCRETE BLOCK WALL - PAINTED
3. NEW WINDOWS
4. NEW SHOWER - REFER TO MECH
5. UNIVERSAL WASHROOM TO CITY OF WINNIPEG ACCESSIBILITY DESIGN STANDARDS
6. NEW UNIVERSALLY ACCESSIBLE WOOD BENCH
7. NEW EXTERIOR WINDOW TO MATCH EXISTING
8. NEW WOOD BENCH
9. NEW FULL HEIGHT STAINLESS STEEL LOCKERS
10. NEW HAIR DRYERS
11. NEW PLUMBING FIXTURES - REFER TO MECH
12. NEW PARTITION SYSTEM
13. NEW UNIVERSALLY ACCESSIBLE RECEPTION DESK
14. NEW DESK
15. NEW FULL HEIGHT GLAZING SYSTEM IN ALUMINUM FRAME, SSG VERTICALS
16. NEW ALUMINUM DOOR C/W SIDELITE
17. NEW WASHROOM FIXTURES C/W PARTITION SYSTEM
18. EXISTING SHOWER TO REMAIN
19. NEW GALV. STEEL PAINTED COLUMN - PAINTED. REFER TO STRUCT.
20. NEW FULLY ACCESSIBLE +/- 3,500 SQ. FT. SPRAY PAD C/W DRAINAGE. REFER TO OUTLINE SPEC. AND GENERAL NOTES
21. NEW CURTAINWALL
22. LINE OF ROOF ABOVE
23. NEW POWER DOOR OPERATORS ON BOTH SIDE OF DOOR - REFER TO ELECT.
24. EXISTING SLIDING DOOR AND CURTAINWALL VESTIBULE TO REMAIN
25. NEW CONCRETE RAMP
26. NEW CONCRETE PAD
27. EXISTING CONCRETE PAD TO REMAIN
28. EXTENT OF WATER SPRAY
29. LINE OF EXISTING CEILING ABOVE TO REMAIN
30. 2440 mm TURNING RADIUS
31. EXISTING PLANTER TO REMAIN
32. EXISTING SIDEWALK TO REMAIN
33. EXISTING HAND DRYERS TO REMAIN
34. NEW WOOD STORAGE CUBBIES
35. EXISTING BENCH TO REMAIN
36. NEW TILE TO MATCH EXISTING
37. NEW HANDRAIL ABOVE - REFER TO INTERIOR ELEVATIONS. REFER TO A9 AND A10
38. NEW PLANTING BEDS
39. NEW CONCRETE CURB
40. NEW METAL HANDRAIL
41. NEW CONCRETE HANDRAIL
42. NEW WINDOW
43. NEW GATE
44. REFER TO A12 FOR LOCKER ARRANGEMENT AND SCOPE OF CHANGES
45. NEW CONCRETE PAVERS
46. NEW POWDER COATED GALV. METAL SCREEN. SCREEN TO BE CONSTRUCTED OF 3/8" GALV. METAL C/W 2" X 2" STRUCTURE. REFER TO ELEVATION
47. PROVIDE NEW MILLWORK AT TOP AND SIDES OF HALF HEIGHT LOCKERS - TYP. REFER TO A12
48. FLOOR DRAIN- REFER TO MECH
49. LOCKABLE VALAUBLE STORAGE LOCKERS
50. PROVIDE NEW 6" LIGHTWEIGHT CONCRETE BLOCK ALONG EXISTING WALL OF NEW SPRAYPAD

## LEGEND

- NEW WALL
- EXISTING WALL
- EXISTING WALL TO BE DEMOLISHED
- NEW DOOR
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE DEMOLISHED

## GENERAL NOTES

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2. SPRAYPAD FEATURES ILLUSTRATED ON THIS DRAWING ARE MEANT FOR SCALE PURPOSES ONLY. THE SPRAYPAD TO BE DESIGNED BY WATER SPRAY PAD CONSULTANT.

**A5**

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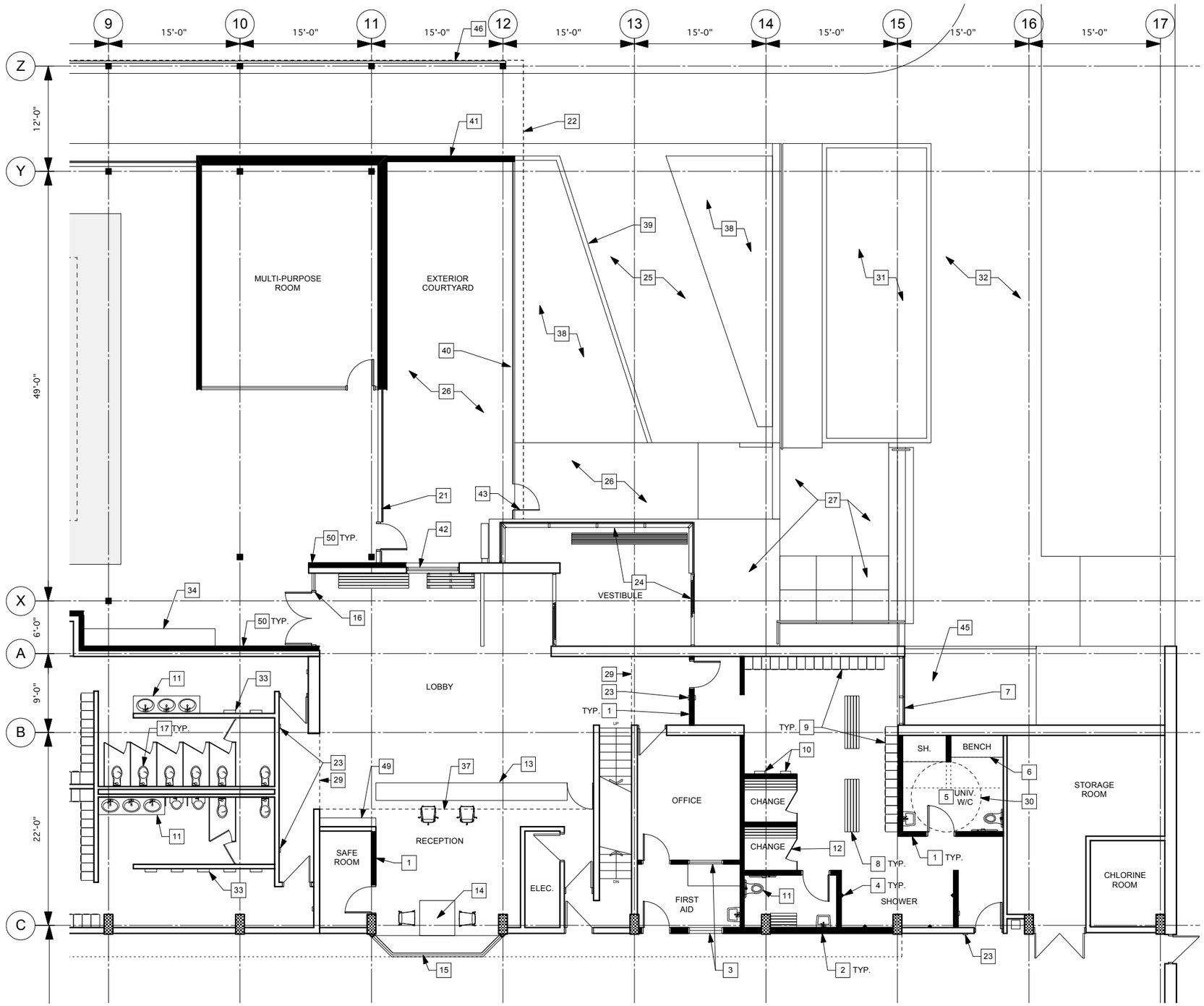


1 PLAN
A6 Scale 1:150

## KEYNOTES

1. NEW 6" CONCRETE BLOCK WALL - PAINTED
2. NEW 8" CONCRETE BLOCK WALL - PAINTED
3. NEW WINDOWS
4. NEW SHOWER - REFER TO MECH
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7. NEW EXTERIOR WINDOW TO MATCH EXISTING
8. NEW WOOD BENCH
9. NEW FULL HEIGHT STAINLESS STEEL LOCKERS
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13. NEW UNIVERSALLY ACCESSIBLE RECEPTION DESK
14. NEW DESK
15. NEW FULL HEIGHT GLAZING SYSTEM IN ALUMINUM FRAME, SSG VERTICALS
16. NEW ALUMINUM DOOR C/W SIDELITE
17. NEW WASHROOM FIXTURES C/W PARTITION SYSTEM
18. EXISTING SHOWER TO REMAIN
19. NEW GALV. STEEL PAINTED COLUMN - PAINTED. REFER TO STRUCT.
20. NEW FULLY ACCESSIBLE +/- 3,500 SQ. FT. SPRAY PAD C/W DRAINAGE. REFER TO OUTLINE SPEC. AND GENERAL NOTES
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23. NEW POWER DOOR OPERATORS ON BOTH SIDE OF DOOR - REFER TO ELECT.
24. EXISTING SLIDING DOOR AND CURTAINWALL VESTIBULE TO REMAIN
25. NEW CONCRETE RAMP
26. NEW CONCRETE PAD
27. EXISTING CONCRETE PAD TO REMAIN
28. EXTENT OF WATER SPRAY
29. LINE OF EXISTING CEILING ABOVE TO REMAIN
30. 2440 mm TURNING RADIUS
31. EXISTING PLANTER TO REMAIN
32. EXISTING SIDEWALK TO REMAIN
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39. NEW CONCRETE CURB
40. NEW METAL HANDRAIL
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47. PROVIDE NEW MILLWORK AT TOP AND SIDES OF HALF HEIGHT LOCKERS - TYP. REFER TO A12
48. FLOOR DRAIN- REFER TO MECH
49. LOCKABLE VALAUBLE STORAGE LOCKERS
50. PROVIDE NEW 6" LIGHTWEIGHT CONCRETE BLOCK ALONG EXISTING WALL OF NEW SPRAYPAD

## LEGEND

- NEW WALL
- EXISTING WALL
- EXISTING WALL TO BE DEMOLISHED
- NEW DOOR
- EXISTING DOOR TO REMAIN
- EXISTING DOOR TO BE DEMOLISHED

## GENERAL NOTES

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2. SPRAYPAD FEATURES ILLUSTRATED ON THIS DRAWING ARE MEANT FOR SCALE PURPOSES ONLY. THE SPRAYPAD TO BE DESIGNED BY WATER SPRAY PAD CONSULTANT.

**A6**

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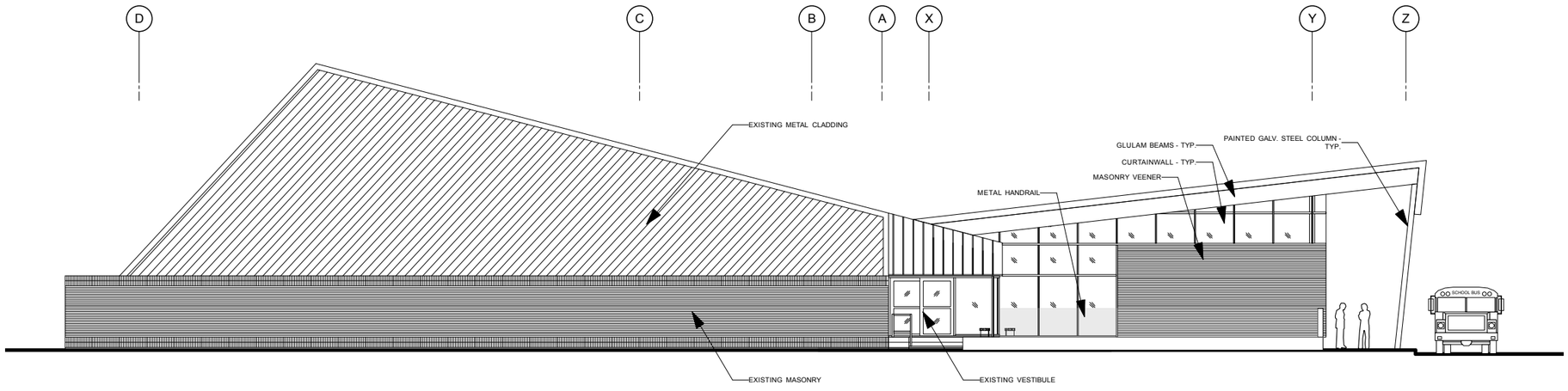
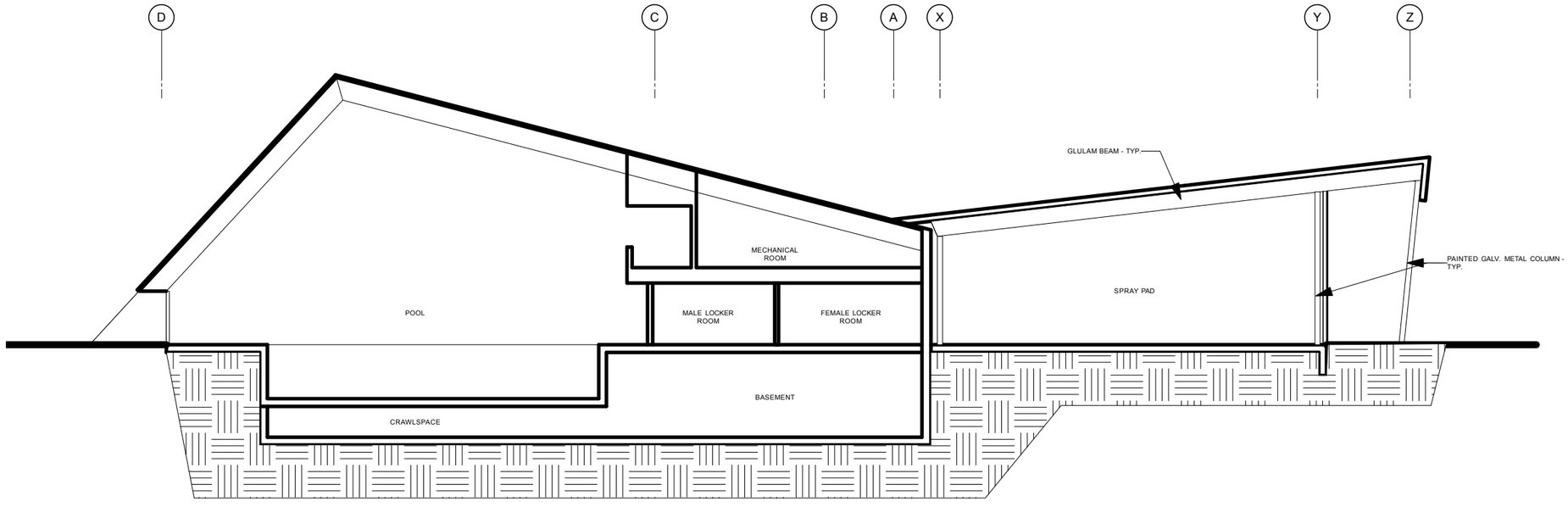



1 / A7 WEST ELEVATION
Scale 1:200




2 / A7 BUILDING SECTION
Scale 1:200

**A7**

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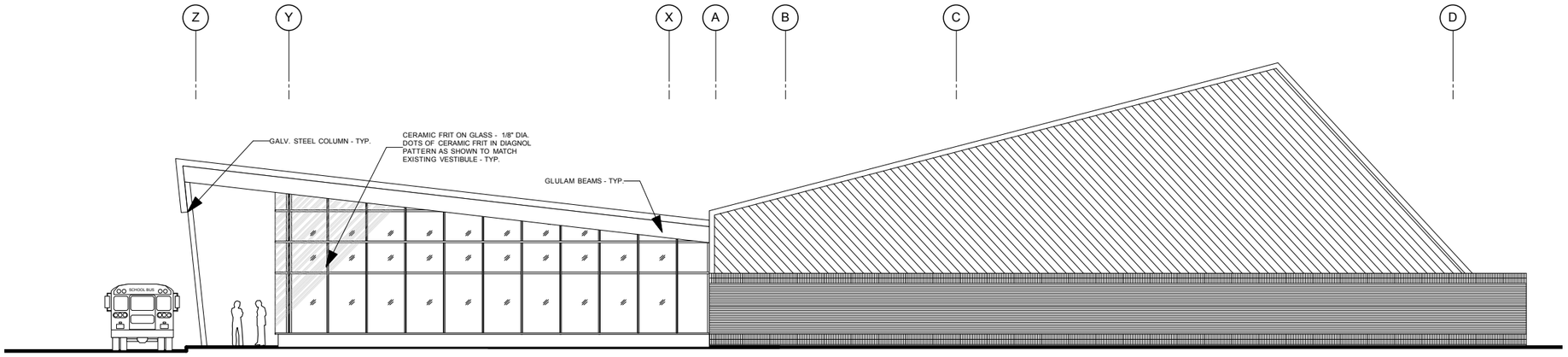
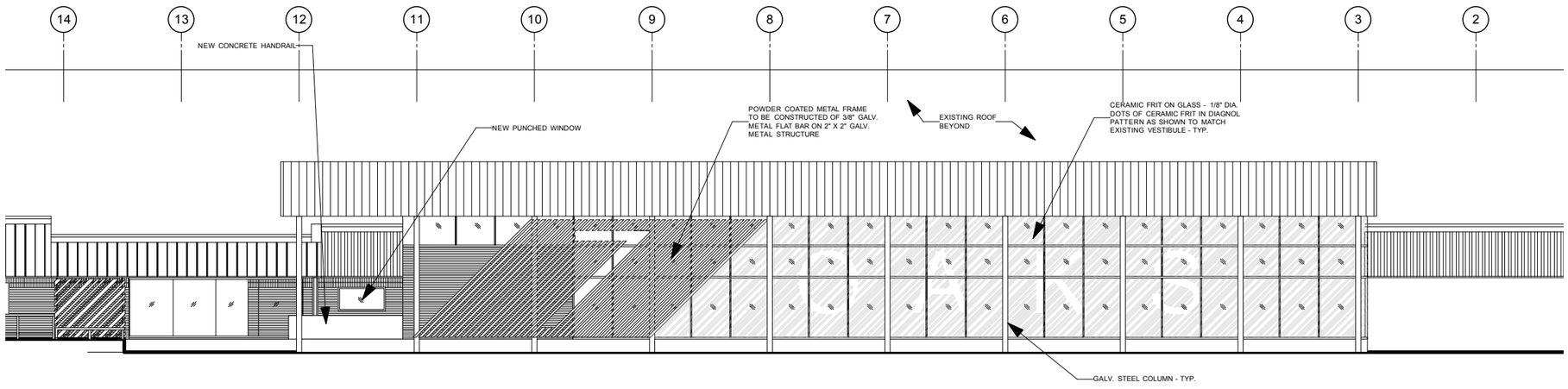



1 / A8 EAST ELEVATION
Scale 1:150




2 / A8 NORTH ELEVATION
Scale 1:150

**A8**

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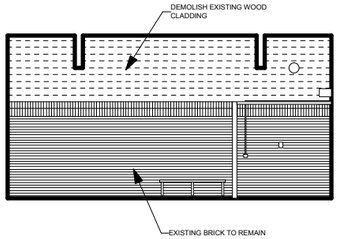
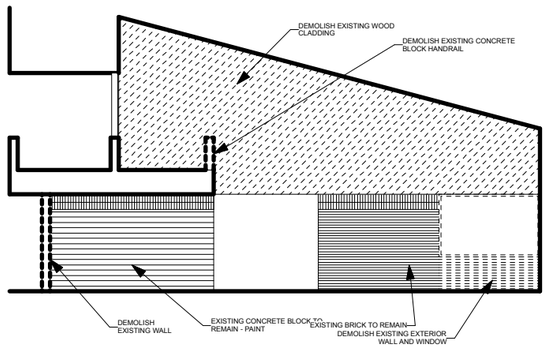
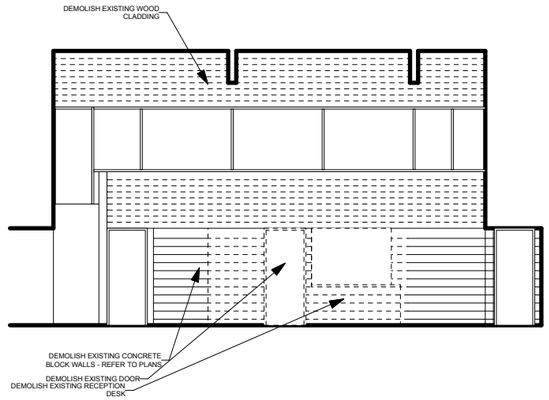


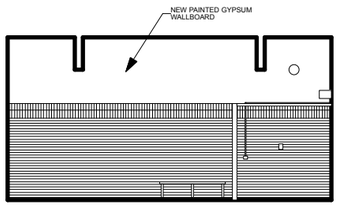

1 / A9 LOBBY ELEVATION - NORTH WALL DEMOLITION
Scale 1:150



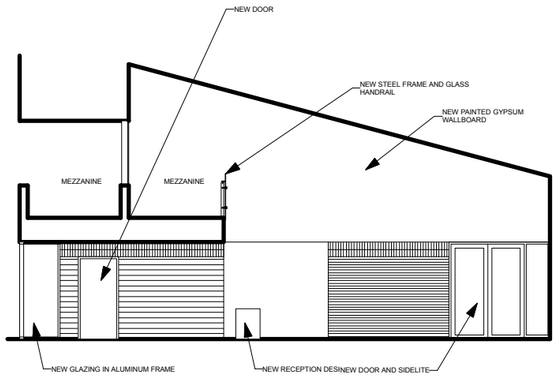

3 / A9 LOBBY ELEVATION - WEST WALL DEMOLITION
Scale 1:150



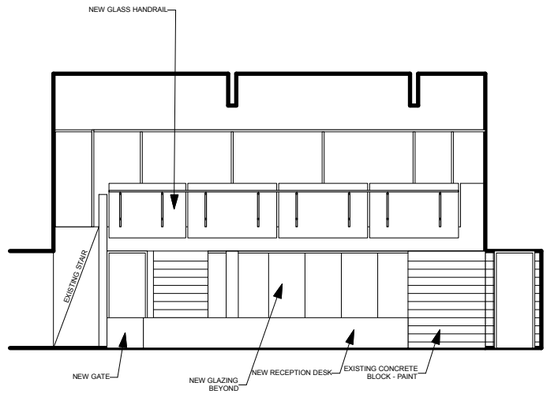

5 / A9 LOBBY ELEVATION - SOUTH WALL DEMOLITION
Scale 1:150



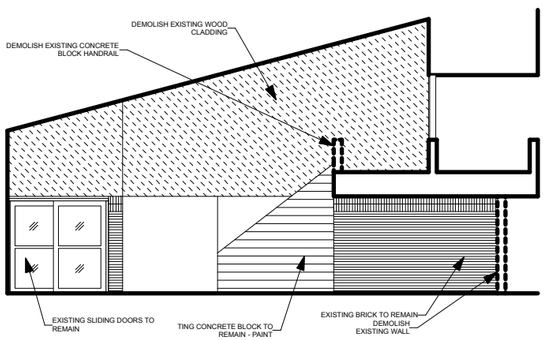

2 / A9 LOBBY ELEVATION - NORTH WALL
Scale 1:150



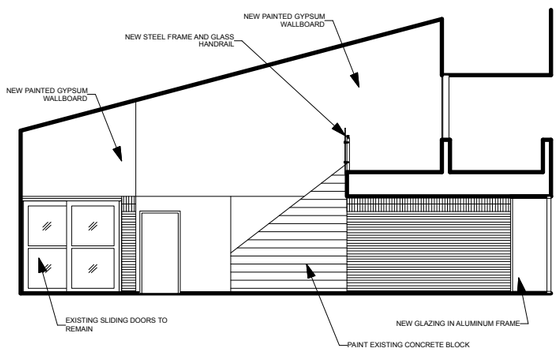

4 / A9 LOBBY ELEVATION - WEST WALL
Scale 1:150




6 / A9 LOBBY ELEVATION - SOUTH WALL
Scale 1:150



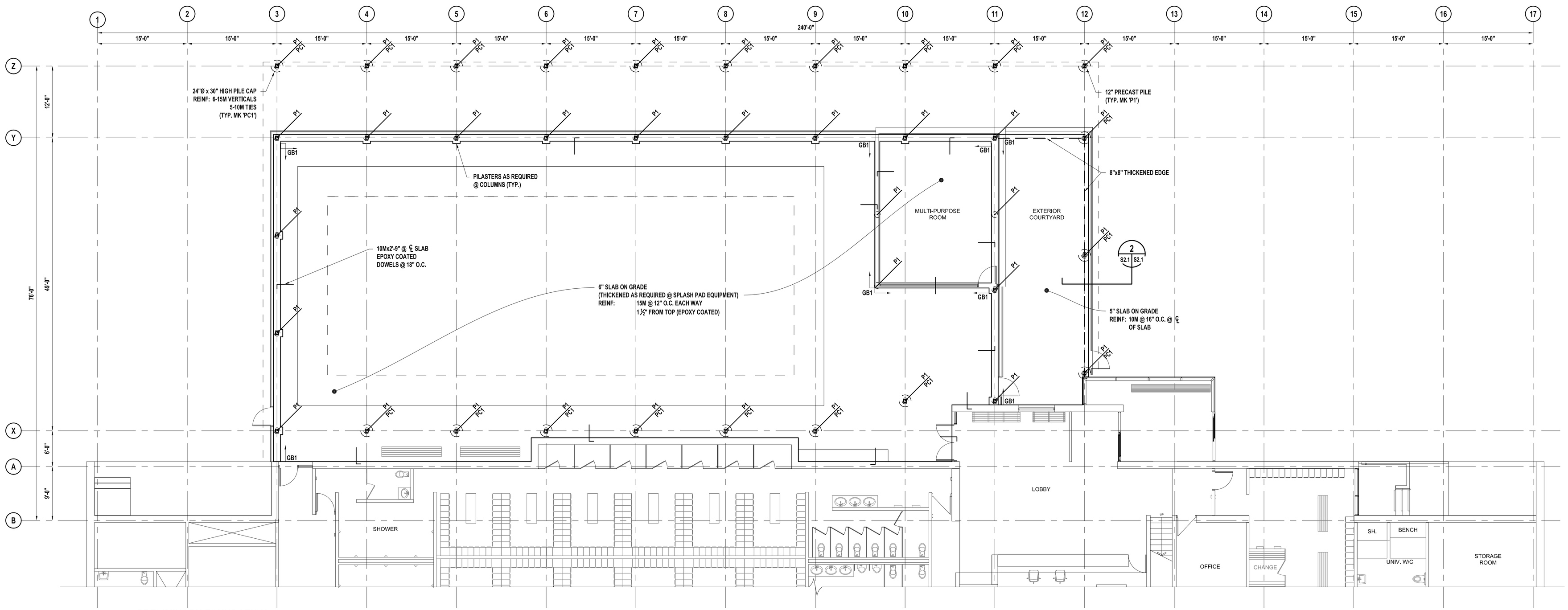

7 / A9 LOBBY ELEVATION - EAST WALL DEMOLITION
Scale 1:150




8 / A9 LOBBY ELEVATION - EAST WALL
Scale 1:150

**A9**
Seven Oak Pool Feasibility Study
SCHEMATIC DESIGN
September 19. 2013

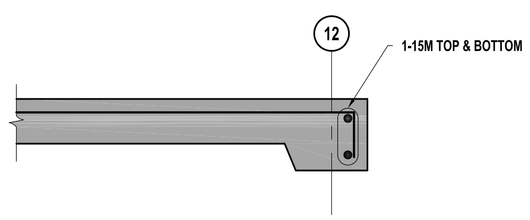
| x | architecture inc.
120 Fort Street, Suite103 Winnipeg, Manitoba R3C 1C7 204 318 2010




## 1 PRELIMINARY FOUNDATION & MAIN FLOOR FRAMING PLAN

1 / S2.1 S2.1

SCALE: 1/8"=1'-0"




## 2 SECTION

2 / S2.1 S2.1

1" = 1'-0"

## GRADE BEAM SCHEDULE

| MARK | DESCRIPTION | DETAILS |
|---|---|---|
| GB1 | 10"x30" GRADE BEAM<br>REINF: 2-25M TOP & BOTTOM<br>2-15M IN TOP CURB<br>10M STIRRUPS @ 14" O.C. | |



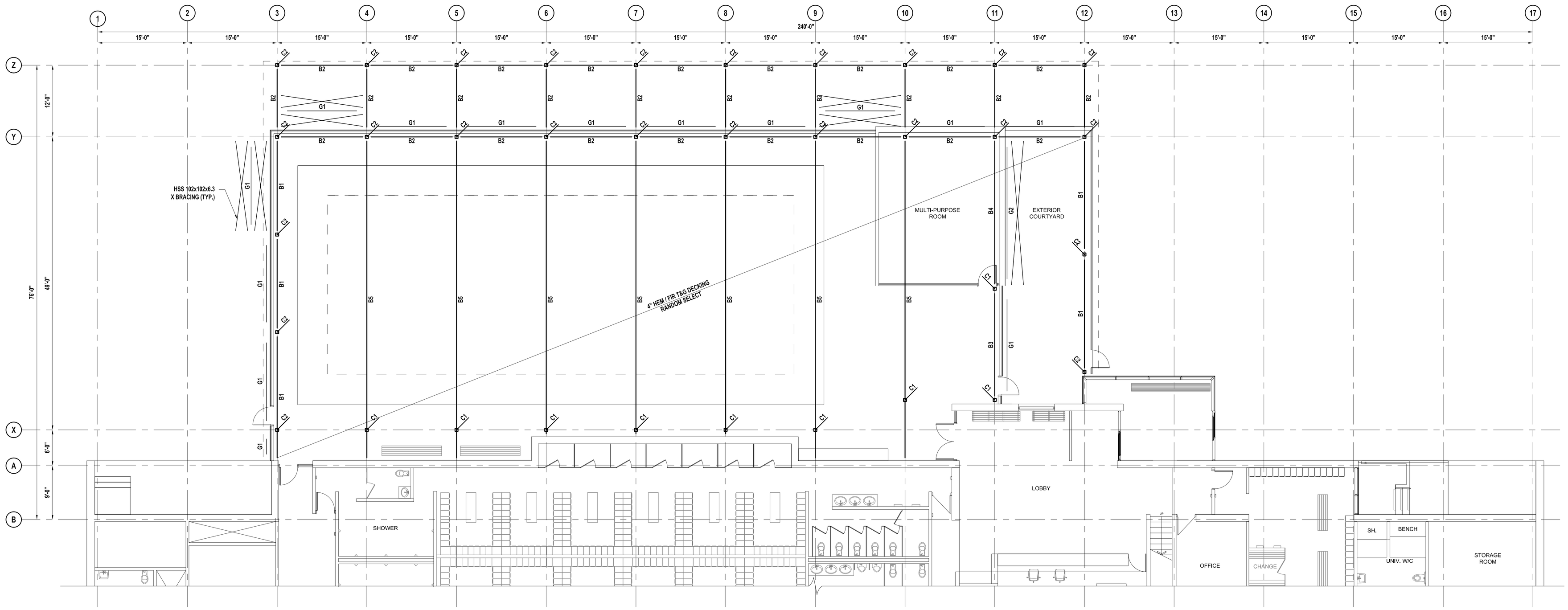
Lavergne Draward
& Associates Inc.
402-138 Portage Avenue East
Winnipeg, Manitoba
R3C 0A1
Tel: 204 947-2222
Fax: 204 947-2522
E mail: general@ldaeng.ca
Web www.ldaeng.ca

STRUCTURAL ENGINEERS

**SEVEN OAKS POOL UPGRADES**

Sheet Title
**PRELIMINARY FOUNDATION & MAIN FLOOR FRAMING PLAN**

Scale: AS NOTED
Date: 8/26/2013
File Number: 13175
Sheet Number: **S2.1**




## 1 PRELIMINARY ROOF FRAMING PLAN

S2.2 | S2.2

SCALE: 1/8"=1'-0"

| GIRT SCHEDULE (GALV.) | |
|---|---|
| MARK | BEAM SIZE |
| G1 | HSS 127x127x8 |
| G2 | HSS 203x152x10 |

| COLUMN SCHEDULE (GALV.) | |
|---|---|
| MARK | COLUMN SIZE |
| C1 | HSS 127x127x8 |
| C2 | HSS 152x152x10 |

| GLULAM DFL 24F | |
|---|---|
| MARK | BEAM SIZE |
| B1 | 130x304 |
| B2 | 130x266 |
| B3 | 175x342 |
| B4 | 175x532 |
| B5 | 265x836 |



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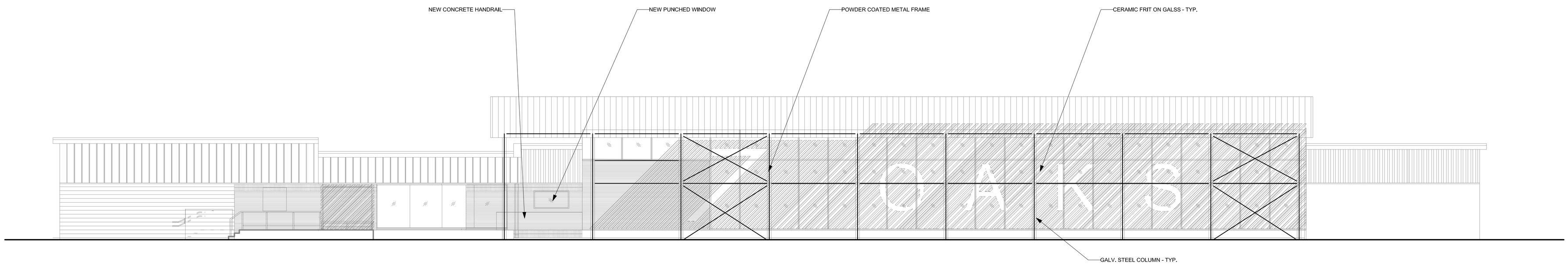
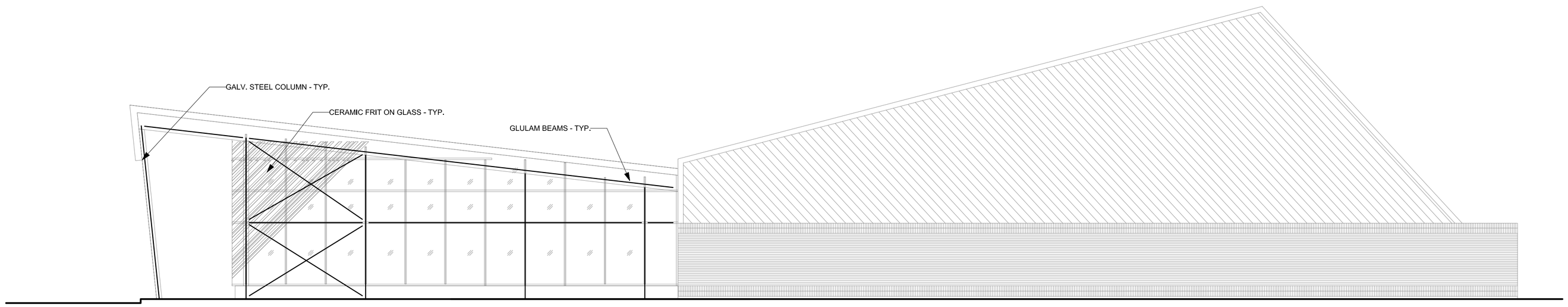
**SEVEN OAKS POOL UPGRADES**

Sheet Title
**PRELIMINARY ROOF FRAMING PLAN**

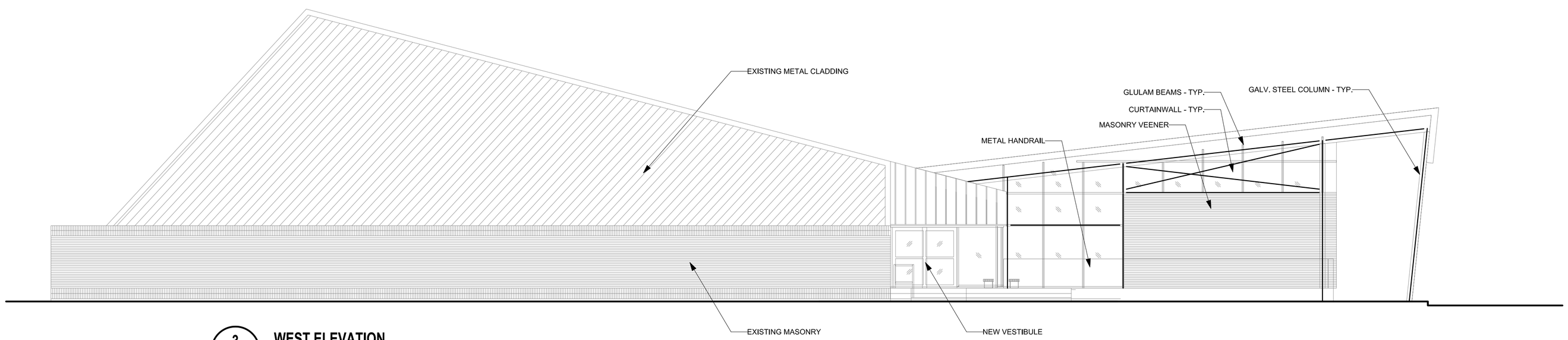
Scale: AS NOTED
Date: 8/26/2013
File Number: 13175
Sheet Number: **S2.2**




1 / S3.1 S3.1 **NORTH ELEVATION**
SCALE: 1/8"=1'-0"




2 / S3.1 S3.1 **EAST ELEVATION**
SCALE: 1/8"=1'-0"




3 / S3.1 S3.1 **WEST ELEVATION**
SCALE: 1/8"=1'-0"



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Winnipeg, Manitoba
R3C 0A1
Tel: 204 947-2222
Fax: 204 947-2522
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**SEVEN OAKS POOL UPGRADES**

Sheet Title
**ELEVATIONS**

Scale: AS NOTED
Date: 8/26/2013
File Number: 13175
Sheet Number: **S2.3**

0 2 4 10 20 m

0 10 20 45 60 feet

NORTH

ARENA PARKING LOT

PROPOSED CONSTRUCTION STAGING AREA

WEST ACCESS POINT AND NEW ASPHALT WALKWAY

EXISTING TREES TYPICAL

75mm THICK ASPHALT PATHWAYS AND REST AREAS ON 225mm A BASE

REST AREA 1 PICNIC TABLES UNDER EXISTING OAKS

SOD REPAIR

ASPHALT

SOUTH ACCESS POINT PEOPLE GATE

TYPICAL 610mm WIDE MULCHED STRIP WITH IVY ALONG FENCE LINE

TYPICAL TIMBER AND CHAIN LINK FENCE

TYPICAL UNIVERSALLY ACCESSIBLE SITTING NODE

WASTE R

PICNIC TABLES

BENCH

EXTENT OF WATER SPRAY

ZONE 1 JUNIOR PLAY AREA

TRANSITION ZONE

ZONE 2 SENIOR PLAY AREA

EXTENT OF WATER SPRAY

ZONE 4 SERVICE AREA

LAWN

EX COBRA APROX

ACCESS LANE

EXISTING HYDRO TRANSFORMER

POSSIBLE MTS UNCONFIRMED

HYDRO

EX 50mm GAS SERVICE

EX 1050mm LAND DRAINAGE SEWER

EX 200mm SANITARY SEWER

EX 200mm WATER MAIN

FULLY ACCESSIBLE FLUSH ENTRY TYPICAL AROUND ENTIRE SPRAY BASIN PERIMETER

INTERNALLY DRAINING 125mm THICK CIP CONCRETE SPRAY BASIN WITH THICKENED EDGE ON 254mm GRANULAR BASE

EXTENT OF 1.8m WIDE OVERSPRAY ZONE

NEW TREES

PROTECT AND MAINTAIN NEW PLAYSRUCTURE DURING CONSTRUCTION

NEW PLAYSTRUCTURE

NEW SWINGS

MATCH EXTENT OF EXISTING ASPHALT SURFACING INSTALLED FOR NEW PLAYGROUND

CONNECT OT EXISTING PLAYGROUND FENCE INSTALLED BY OTHERS

SWITCH BACK ENTRANCE TO SLOW CHILDREN DOWN AS THEY APPROACH ROTHESAY

VEHICULAR GATES

SPRAY SYSTEM MECHANICAL VAULT

NEW TREES

REST AREA 2 LAWN UNDER NEW SHADE TREES FOR BLANKETS AND TOWELS

PUBLIC SIDEWALK

BUS STOP

ROTHESAY


DESIGN BUILD TEAM :

J&D Penner Yard Decor Store & More

Landscape Architecture • Planning

crOzier

FUL-FLO INDUSTRIES LIMITED

JR Cousin Consultants Ltd.

**SRPAY PARK FEATURES LEGEND FOR MORE INFO SEE FIG. 4**

1. JUMPING FROG AQUA-SLIDE
2. TOUCH N' GO WIRELESS ACTIVATOR
3. WATER FLOWER
4. DELILAH DRAGONFLY AQUA SPOUT
5. SPLASH-O-LATOR
6. SLITHERING SNAKE AQUA SPOUT
7. BEATRICE BUTTERFLY AQUA SPOUT
8. WATER WORM
9. WATER RINGS (2)
10. WATER SNAKE
11. WATER WEAVE
12. DADDY LONG LEGS
13. BIG SQWERTS CANNONS (2)
14. MAYPOLE
15. INTERACTIVE AIR STICK POP UPS (7)
16. WATER WHOOPEE
17. TOUCH N' GO WIRELESS ACTIVATOR

* UTILITIES SHOWN ARE APPROXIMATE AND DERIVED FROM SEVERAL SOURCES. EXACT LOCATIONS WILL BE CONFIRMED UPON AWARD OF CONTRACT TO AID IN THE PROCESS OF FINALIZING DESIGN AND CONSTRUCTION DOCUMENTS.

# CONCEPT PLAN

RIVER EAST ARENA SPRAY PARK

December 7, 2010

# River East Splash Pad

W11889-B



4015 SQ FT

Water Odyssey™
by Fountain People, Inc.

crOzier
"YOUR PARTNERS IN PLAY"
1.800.665.3821

1. W004C DADDY LONG LEGS
2. W010 MUSHROOM MAZE
3. W020C(A) WATER WORM
4. W024 WATER WHOOPEE
5. W050 COOL STICK
6. W057 WATER SPROUT
7. W085 SPLASH-O-LATOR
8. W066 (A) WATER SNAKE (HEAD)
9. W071 WATER FLOWER
10. W093 WATER WEAVE
11. W139 WATER MAYPOLE
12. W214 TURN-A-ROUND
13. W228 AIR STICK (5)
14. W238-1 WATER RING (2)
15. F3023 BEATRICE BUTTERFLY
16. F3025 DELILAH DRAGONFLY
17. F3028 SLITHERING SNAKE
18. W009-W TOUCH N' GO WIRELESS (2)
19. WWM-600 MAINTAINENCE MINIMIZER (4)


# River East Splash Pad

W11889-B



4015 SQ FT

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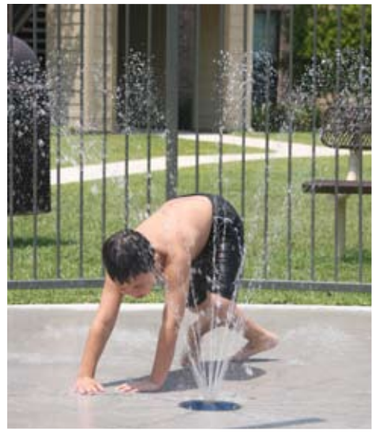
Water Whoopee
W024

Touch & Go
W009-W

Delilah Dragonfly
F3025



Water Sprout
W057

Splash-O-Lator
W085

Water Ring
W238-1

Daddy Long Legs
W004C

Slithering Snake
F3028

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# River East Splash Pad

W11889-B


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4015 SQ FT

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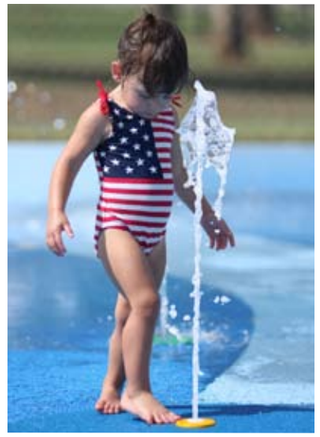
Water Flower
W071

Water Snake
W066(A)



Air Stick
W228

Beatrice Butterfly
F3022

Water Weave
W093

Water Worm
W020C(A)

Mushroom Maze
W010

Cool Stick
W050

Water Maypole
W139

Turn-A-Round
W214

Water Odyssey™
by Fountain People, Inc.

# River East Splash Pad

W11889-B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4015 SQ FT

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# OUTLINE SPECIFICATION

# Seven Oaks Pool
# Feasibility Study

**City of Winnipeg**
**Winnipeg Manitoba**

**CLASS 'C' COST ESTIMATE**
**SUBMISSION**

**1x1 architecture inc.**

Lavergne Draward and Associates Inc.
Epp Siepman Engineering Inc.

August 28, 2013

**ARCHITECTURAL**

## 1.1. GENERAL REQUIREMENTS

1. GENERAL
    1. The existing building has a main floor of ± 2,170 s.m main floor, ± 2,120 s.m. basement which includes the crawlspace under the pool and a ± 700 s.m. mezzanine;
    2. The project is to be priced in two phases:
        1. Phase I: This phase will include the renovation to the existing building east of Gridline 5 and 16, and Gridline A and C. This includes all work associated with the Lobby, Reception area, Family washrooms, locker areas, mezzanine handrails. It will not include any new penetrations for the spraypad addition;
        2. Phase II: This phase will include the renovation to the existing building west of Gridline 5, and Gridline A and C. this includes the renovation to the washrooms at the west end of the locker area, the female washroom in the existing building and the ± 610 s.m. spray pad addition, as well as all exterior work indicated on plans;
        3. Refer to Drawings for clarification on phased construction
    3. The building addition will include a new spraypad. This component is to be priced in phase II construction. Refer to Specialities in this specification for more information.
    4. The building addition will connect the existing building and new building, resulting in a new, single building (for the purposes of code analysis).
    5. The entire building, including basement, crawlspace and mezzanine to be served by a new wet-type sprinkler system. The existing lobby is currently sprinklered. Refer to mechanical for description of system. Provide as a separate line item in the cost summary.
    6. The building would be occupied during construction.
    7. The Occupancy classification is A3;
    8. The total number of occupants is 400 for the existing builing and 100 for the addition. The 100 person in the addition is design number, not calculated by Nation Building Code. This will be required to be posted.
    9. The parking lot will be under renovation in sumeer 2014. There is no work anticipated in the parkin lot
    10. A thorough building code review of the entire facility has not been undertaken. Besides mechanical and electrical work, there is minimal work to be undertaken in the basement and mezzanine areas.
    11. Refer to Mechanical and electrical outline specification.

2. CASH ALLOWANCES
    1. Testing allowances and inspections
        1. Piling and shoring inspections $4000
        2. Concrete and compaction testing $4000
        3. Air barrier and curtainwall envelope testing $3,000
        4. Roofing inspections $2,000
    2. These cash allowance are required for Phase II only

## 1.2. SITE WORK

1. DEMOLITION
    1. Refer to demolition plan for extent of interior and exterior demolition works for phase I and II;
2. EARTHWORK
    1. A geotechnical investigation is not yet available. Refer to structural outline specifications for general assumptions.

2. Demolish existing exterior grass area in preparation for building addition

3. FOUNDATION
    1. The new building will be founded on precast driven piles similar to those shown on the existing structural drawings. Please note that the foundation will have to be substantiated by geotechnical investigation and report. It should also be noted that the grid lines for the new building line up with the grid lines for the existing building. That being said , there are existing concrete buttresses that protrude out from the existing basement wall. These buttresses will interfere with the new foundations that will be needed to support the new steel columns adjacent to the existing building. On that basis, it may be necessary to move the new grid lines to miss these buttresses or to bridge across them with a pile cap and two piles. Alternatively, it may be possible to load directly onto the buttress and use the existing foundation.
    2. Pile sizes are shown on the attached preliminary structural drawings.
4. DRAINAGE
    1. The existing roof is all surface drainage with eavestrough and rain water leaders.
    2. The proposed building addition, along with the roof of the existing building adjoins the addition, the proposed drainage is internal drainage.
5. SITE DEVELOPMENT
    1. Repair all surrounding areas damaged during the course of construction.
    2. Provide new concrete sidewalk at north end of addition.
    3. Provide new ramps/slope walkways and planter beds at front entry, refer to plans.
    4. Provide new concrete exterior deck between GL 11 and 12;
    5. Patch and repair asphalt paving, concrete curbs and sodded areas damaged by construction;
    6. Sidewalks and curbs to be built to City of Winnipeg standards;
    7. Grade and sod site in general viscinity of addition
    8. Establishment of planting beds. New plantings to include local tree and grass species as specified by the Architect.

**1.3. BUILDING STRUCTURE**

1. Main Floor Framing:
    1. The building perimeter structure will supported on a perimeter concrete grade beam.
    2. The beams shall typically be 10" x 30" with 6" deep pockets at column locations. Pilasters will be provided at perimeter column locations..
    3. The beams will be designed and reinforced in accordance to CSA Standard A23.3.
    4. A 6" void will be provided below all grade beams.
    5. The main floor will consist of a cast-in-place slab on grade over compacted A-base over compacted C-base on compacted sub-grade. This will be installed in accordance to the geotechnical investigation report that will be needed..
    6. The slab will be reinforced with 15M epoxy coated bars as shown on the preliminary drawings.
    7. 25 MPa concrete will be used for the grade beams and slab on grade.
2. Wall Framing
    1. The exterior walls will mostly consist of structurally designed curtain wall supported half way up the wall with a structural steel girt. The remainder will consist of 8" concrete block reinforced with 15M vertical bars spaced at 4' on centre
    2. They will not be designed to carry any vertical load.
3. Roof Framing
    1. Roof framing will 3 1/2" Hem/Fir Select random wood decking.
    2. These will in turn be supported by a series of DFL 24F quality grade glu-laminated beams and galvanized steel columns.
    3. Lateral loads will be taken down to the foundation via HSS steel cross-bracing.

4. Existing Structure
    1. The existing concrete block walls that are scheduled for demolish are not structure and can be removed.
    2. The existing roof structure has been checked for the additional built up snow loading in the valley and does not need to be reinforced.
5. Live loads Due to Use, Occupancy, Snow, Ice, Rain and Wind
    1. Roof Design Snow, Ice and Rain Load
        1. The basic ground snow load $S_s$ for Winnipeg is 1.9 kPa
        2. The rain load $S_s$0.2 kPa
        3. The specified design roof snow load $S = Is(S_s (C_bC_wC_sC_a) + S_{r)}$
           Is = 1.0 (building is considered normal)
           $C_b = 0.8$
           $C_w = 1.0$
           $C_s = 1.0$
           $C_a = 1.0$
           S = 1.0(1.9)(0.8 X 1.0 X 1.0 X1.0) + 0.2) = 1.72 kPa
        4. Built up snow loads in the valley will be calculated in accordance with the 2010 National Building Code
    2. Wind Design
        1. The reference velocity pressure having a probability of being exceeded in any one year of 1 in 50 will be used for the design of structural members in general: $q_{50} = 0.45$ kPa
        2. The specified external pressure or suction due to wind on part or all of the surface of the building will be calculated from: $p = Iwq\ C_eC_gC_p$
        3. The specified internal pressure or suction due to wind will be calculated from: $p_i = Iwq\ C_eC_gC_{pi}$
        4. The net specified pressure due to wind on part or all of the surface of the building will be algebraic difference of the external and internal pressures.
    3. Floor Design Live Loads
        1. The main floor will be designed for a live load of 4.8 kPa.

**1.2. EXTERIOR WALLS**

1. Walls below grade: The concrete grade beams will be insulated on the exterior using 50mm polystyrene SM insulation fastened to the concrete, with a cement board cover where exposed.
2. 200mm reinforced concrete block masonry interior walls, commercial grade air/vapour barrier, 125mm rigid insulation and 90mm face brick. Refer to Exterior Elevations.
3. Refer to Door and Windows

**1.3. ROOFING**

1. The typical roof insulation will be rigid, HCFC free polyisocyanurate (IKOTherm) with an aged R value of 30. Backslopes, where required to be HCFC free type 1 expanded polystyrene (Plast-fab or Atlas Falcon Foam), tapered to provide a 1:50 sloped surface for drainage.The roof vapour barrier will be torch-on applied.
2. The typical roof membrane will 2 ply SBS modified bitumen.
3. Miscellaneous rainware and flashings to be prefinished aluminum or steel. Roof drainage will be interior. Refer to Mechanical and Electrical.

**1.4. INTERIOR WALLS**

1. 150mm / 200mm exposed lightweight concrete block masonry, sealed and painted. Refer to Plans

**1.5. METAL, STAIRS, LADDERS, HANDRAILS & GUARDRAILS**

1. Ladders to provide access to roof areas to be galvanized steel, painted to the Manitoba Department of Labour standards.
2. Stainless steel handrails/ guardrails at exterior deck and ramps.
3. Provide new handrails at entry.
4. All columsn to be painted galvinised metal

**1.6. DOORS AND WINDOWS**

1. Aluminum exterior entrance and exit doors and frames to be thermally broken aluminum with anodized finish. Glazing to be high performance H.S.T.G. with superspacer.
2. Exterior curtain wall and punched windows to be Kawneer Isoweb 7525 series (or equivalent) both with warm-edge spacer. Glazing to be 25 mm sealed dual glazed with 6 mm (1/4") clear inner and outer panes, 12.5 mm (1/2") air space between panes, argon fill and Comfort T1-AC 40 coating on #2 surface.
3. New interior doors into spraypad to be aluminium storefront.
4. Typical new Interior door and frames in the renovation portion to be painted welded hollow metal (50 mm profile). Door hardware will be institutional quality with lever handles.
5. Existing Interior doors and frames in the renovated portion of the building to be painted .
6. Provide door operators as indicated on the drawings and as per electrical
7. Provide frit pattern as shown on drawings, frit pattern to be in 3" strips of frit in diagnol along glazing, Frit pattern to be 1/8" dia. Dots. Standard of acceptance: V175 high opacity screen : 40% coverage.

**1.7. FINISHES**

1. **Family Washroom:**
   1. Floors: New Ceramic Tile
   2. Walls: sealed and painted concrete block.
   3. Ceilings: New painted Gypsum WallBoard (suitable for wet areas)
2. **Office / First Aid Room:**
   1. Floors: New Ceramic Tile
   2. Walls: sealed and painted concrete block (New and existing)
   3. Ceilings: New Accoutic Ceiling Tile
3. **Lobby:**
   1. Floors: Existing Tile to remain. Patch and make good.
   2. Walls: Existing Brick to remain; Existing Concrete block below 8'-0" to remain – Paint; New Gypsuam Wallboard above 8'-0" – Paint.
   3. Ceilings: Existing exposed wood deck to remain
4. **Reception:**
   1. Floors: New Ceramic Tile
   2. Walls: Existing Concrete Block wall to remain – Paint. Patch demolished wall locations
   3. Ceilings: New wood slat wall
5. **Safe Room:**
   1. Floors: New Ceramic Tile
   2. Walls: Existing Wall to remain – Paint. Patch demolished wall locations
   3. Ceilings: New Accoutic Ceiling Tile
6. **Locker Rooms:**
   1. Floors: Existing Tile to remain. Patch demolished locker locations
   2. Walls: Existing Wall tile to remain. Patch demolished wall locations
7. **Showers:**
   1. Floors: Existing Tile to remain.
   2. Walls: Existing Wall tile to remain.
   3. Ceilings: Existing to remain – Paint
8. **Corridor:**

1. Floors: Existing Tile to remain. Patch demolished wall locations
2. Walls: Existing Wall tile to remain. Patch demolished wall locations
3. Ceilings: Existing to remain – Paint

**9. Sauna:**

1. No work proposed

**10. Female W/C:**

1. Floors: Existing Tile to remain. Patch demolished locker locations
2. Walls: Existing Wall tile to remain. Patch demolished wall locations
3. Ceilings: Existing to remain – Paint

**11. Spray Pad:**

1. Floors: Sealed Concrete
2. Walls: New 6" lightweight Concrete block – painted.
3. Ceilings: Exposed Wood Deck

**12. Multi-Purpose Room**

1. Floors: Sealed Concrete
2. Walls: Concrete Block walls - paint
3. Ceilings: Gypsum Wall Board

## 1.8. SPECIALTIES / ACCESSORIES

1. Provide new Stainless steel lockers to match existing in Male and Female Locker Rooms. Refer to A 12 for quantities
2. Provide new full height stainless steel lockers in Family Washroom
3. Provide new barrier free wood becnh in Universal Washroom.
4. Provide new wood benches in the Spraypad area.
5. Provide 18" x 18" x 18" open wood cubbies in spraypad area for temporary towel storage. Total length 18' long, 6' high.
6. Provide lockable valuables storage lockers (wallet size lockers etc.) adjacent to reception counter. Refer to drawings.
7. Millwork
    1. All millwork to meet AWMAC standards and barrier free standards.
    2. Provide solid surface / wood reception deck c/w barrier free counter. Provide swinging door. Refer to drawings
    3. All exposed surfaces and edges of upper and lower cabinets will be plastic laminate. Interior surfaces will be melamine. Edges of cabinet doors and drawers will be 3mm PVC edging. Exposed shelving will be plastic laminate on plywood.
    4. Provide new wood benches in family washroom
    5. Provide institutional grade hardware throughout.
8. Washroom and misc. accessories to be Bobrick contoured line commercial grade (or equivalent) and include towel bars, toilet paper holders, paper towel dispensers, liquid soap dispensers, waste receptacles, coat hooks, folding shower seats, sanitary napkin dispensers/receptacles, include toilet grab bars for one accessible toilet per washroom.
9. Provide three 4'x4' bulleton boards

## 1.9. SPECIAL CONSTRUCTION

1. Spray Pad:
    1. The addition will include a new interior spraypad. Refer to attached drawings by Crozier Enterprises for similar fitting to be utilised in this spraypad. This attachment is a design for an exterior spraypad on Rothesay Avenue in Winnipeg and was utilised as a standard of acceptance for the spraypad in the addition. The cost estimate is to include all equipment and fittings for a spraypad (for pricing purposes, allow similar equipments and fittings as attached);
    2. Refer to mechanical outline specification "General; Note 5."

3. A spraypad consultant shall provide price for all equipment, including mechanical, to make spraypad fully operational.
4. The system to be a re-circulated system to a holding tank (system design by spraypad consultant). The system is to be a separate system from the existing pool system.
5. The holding tank to be located in the existing basement.
6. Contact information for Spraypad consultants:
    1. Crozier Enterprises Ltd.
        1. Ken Crozier ken.crozier@crozier.ca (204) 227-6645
    2. Playworks & Waterplay
        1. Jeff Kuby (Playworks) jeff@playworks.ca (204) 899-7474
        2. Ryan McDowell ryan@waterplay.com (250)712-3393 ext205
    3. Vortex Equipment (Questic)
        1. Markus Reimer MarkusR@questic.ca (204) 381-2678
    4. Oasis Leisure Centre
        1. Glenn Storozuk glenn@ilovemyoasis.com (204) 253-7186

2. Metal Screen
    1. Refer to Elevation drawings for extent of Metal screen
    2. Components to be galvined metal, powder coated.
    3. Galvinised 3/8" flat bar (widths to be 1 ½", 3 ½" and 5 ½" – assume equal of each) welded to a 2" x 2" hollow steel sections.

**epp siepman engineering inc.**
mechanical & electrical engineers

303-100 Osborne St. South
Winnipeg MB R3L 1Y5
p: 204.453.1080 f: 204.453.1335
www.eppsiepman.com

**MECHANICAL & ELECTRICAL OUTLINE SPECIFICATION**

**Seven Oaks Pool Feasibility Study**
**Winnipeg, MB**

The following outline specification is based on a schematic design and intended for preliminary cost projections only.

# I. Mechanical

## A. Basis of design:

1. Plan drawings by 1x1 Architecture Inc dated August 14, 2013.
2. Refer to Architectural for a full description of phasing. Phase I construction will consist general of the Lobby, Locker Room & Family Washroom Areas. Phase II will consist of the new Splash pad, MPR, and the new washroom area adjacent to the sauna.

## B. General

1. Unless otherwise noted, the terms “install” or “provide” shall include the complete supply and installation of the items noted including all equipment, materials and commissioning necessary for a fully functional system.
2. Refer to architectural drawings for room layouts, general areas, and quantities for take-offs.
3. Include all air balancing, water balancing, fire damper inspection, piping pressure testing and equipment commissioning.
4. Equipment capacities given are preliminary and subject to final design.
5. The splash pad system shall be designed and installed by others and is not included in the scope of mechanical work described here. The splash pad water treatment and circulation package is assumed to include all pumps, filters, controls, piping, and related devices for a complete stand-alone system. This system will be entirely separate from the existing pool system. The scope of mechanical work described here shall include domestic water make-up supply and drainage piping connections only.

## C. Phase I Plumbing

1. Remove all lavatories, water closets and showers within the demolition areas shown on architectural drawings. Remove all piping from the fixtures back to the nearest main in the basement or crawlspace and cap piping at mains.
2. Piping materials:
    a) Interior Drain and Vent Piping above Ground (PVC): PVC drain, waste and vent pipe and fittings and shall be certified to CSA B181.2. When combustible pipe and fittings are used in buildings required to be of non-combustible construction they shall be listed by

ULC to the Standard CAN/ULC-S102.2 and clearly marked with the certification logo indicating a flame spread rating not exceeding 15. Certified firestopping devices are required whenever the system penetrates a vertical or horizontal separation, and shall be certified to CAN4-S115 and tested with a pressure differential of 50 Pa. Standard of Acceptance: IPEX System 15.

b) Where PVC pipe is used in non-combustible construction and air plenums, piping shall be tested and listed in accordance with CAN/ULC-S102.2 and clearly marked with the certification logo indicating a flame spread rating of 0 and a smoke developed classification not exceeding 35. Certified firestopping devices are required whenever the system penetrates a vertical or horizontal separation, and shall be certified to CAN4-S115 and tested with a pressure differential of 50 Pa. Standard of Acceptance: IPEX System XFR.

c) Interior Drain and Vent Piping Below Ground (PVC): PVC drain, waste and vent pipe and fittings and shall be certified to CSA B181.2. When combustible pipe and fittings are used in buildings required to be of non-combustible construction they shall be listed by ULC to the Standard CAN/ULC-S102.2 and clearly marked with the certification logo indicating a flame spread rating not exceeding 15. Certified firestopping devices are required whenever the system penetrates a vertical or horizontal separation, and shall be certified to CAN4-S115 and tested with a pressure differential of 50 Pa

d) PVC drain, waste and vent pipe and fittings and shall be certified to CSA B181.2. When combustible pipe and fittings are used in buildings required to be of non-combustible construction they shall be listed by ULC to the Standard CAN/ULC-S102.2 and clearly marked with the certification logo indicating a flame spread rating not exceeding 15. Certified firestopping devices are required whenever the system penetrates a vertical or horizontal separation, and shall be certified to CAN4-S115 and tested with a pressure differential of 50 Pa. Standard of Acceptance: IPEX System 15.

3. Interior Domestic Water Piping (Cold, Hot and Recirculating)
   a) Type “L” hard temper copper tube: Up to 50 mm (2") diameter with wrought or cast solder fittings and joints. Over 50 mm (2") diameter with silver braze fittings.

4. Refrigerant Piping
   a) Shall be Type “L”, hard drawn, degreased, scaled-at-the-mill copper tubing, cleaned sealed at the mill. Pre-charged refrigerant lines are not to be used.
   b) Refrigerant Fittings: Shall be wrought copper type equal to Mueller Streamline. Long radius elbows shall be used.

5. Dielectric Couplings: Install dielectric couplings in all locations where dissimilar metals are joined. Couplings are to be compatible with and suit the pressure rating of the system. Isolating unions shall be used on pipes 50 mm (2”) and smaller. Isolating flanges shall be used on pipes 63 mm (2-1/2”) and larger.

6. Piping Insulation: Thermally insulate all domestic hot water and hot water recirculation lines, insulation shall be ½" thick. Thermally insulate all domestic cold water main lines, insulation shall be ½" thick. Insulation shall be Fibreglass 455°C (850°F) pipe insulation, 5 lb. per cubic foot density with factory applied ASJ vapour barrier jacket.
7. Install new plumbing fixtures to suit the new washrooms shown on the architectural plans in the family change rooms and universal washrooms.
    a) Install four 3" floor drains in the change room area.
    b) Install one 3" floor drain in the universal washroom.
    c) Install two commercial-grade shower drains in the shower area.
8. New water closets shall be wall-mounted, vitreous china closet bowl, with elongated rim, open-front seat, siphon-jet, 4.8 lpf, concealed recessed electronic battery-operated diaphragm flush valve with infrared sensor. Install c/w heavy-duty wall carrier. The water closet serving the universal washroom shall be installed at a height to meet barrier-free requirements.
9. New lavatories shall be wall-hung vitreous china c/w heavy-duty wall carriers, barrier-free compliant, with sensor-operated hands-free faucet, all metal construction, battery-operated. Lavatory drains shall be supplied with open-grid strainers.
10. Install a new wall-hung sink in the First Aid room. Sink shall be wall-hung, stainless-steel c/w heavy-duty wall carrier, with sensor-operated hands-free faucet, all metal construction, battery-operated, laminar-flow aerator. Lavatory drains shall be supplied with open-grid strainers.
11. For the two showers in the family change area, shower brass shall be push button electronic shower system complete with slow closing solenoid valve, pressure balance lever temperature control with integral stops, 30° vandal resistant cast wall mount shower head (5.7 L/m), and 24 VAC controller. Controller provided with metal mounting box and face plate complete with vandal resistant SS crews. Controller shall allow for field-adjustable time of shower operation. Shower will flow when button is pushed, and shall be adjustable up to 10 min of operation.
12. For the shower in the universal change room, shower brass shall be Delta 860T157 push button electronic shower system complete with slow closing solenoid valve, pressure balance lever temperature control with integral stops, hand shower head (5.7 L/m) with dual checks c/w 610mm stainless steel bar and ADA slide, and 24 VAC controller. Controller provided with metal mounting box and face plate complete with vandal resistant SS crews. Controller shall allow for field-adjustable time of shower operation. Shower will flow when button is pushed, and shall be adjustable up to 10 min of operation.

## D. Phase I HVAC

1. Relocate the existing exhaust riser and ducting serving the male & female washrooms adjacent to the Office on main floor. Relocate this duct in the basement and install a new riser and exhaust grille to serve the new Universal Washroom.
2. Install a new exhaust fan to serve the new family change area.

a) The fan shall be located in the mezzanine mechanical room above, adjacent to the existing fan.
b) The exhaust duct shall run in the mezzanine and drop to the change room area ceiling, c/w fire damper at the mezzanine floor.
c) At ceiling level, branch the duct to two ceiling grilles in the general change area over the benches, one in the washroom, and two in the shower area. Grilles to be 8" x 8" egg crate, stainless-steel, surface-mount.
d) All branch ducting to be complete with balance dampers.
e) The fan shall be an inline centrifugal duct blower, sized for 400 cfm at 0.5" ESP. Mount on vibration isolation, with flexible duct connections. The fan discharge shall be routed to a new louver adjacent to the existing one connected to fan F-5. The louver style and paint colour shall match the existing one.
f) Thermally insulate the exhaust ducting within 10' of the exterior wall.
g) Control the new fan on the same schedule as F-5.

3. Relocate the ducting and sidewall supply grilles in the Reception, First Aid, and Office areas to match the new room arrangements. Install new sidewall supply grilles of similar size to original, Price Model 520 DD or equal. All branch ducting to have balancing dampers and if necessary access panels. Assume new branch ducting will be required from diffuser location back up to the take-offs from the main supply duct in the mezzanine.

## E. Phase II Plumbing

1. Storm drainage: The roof drainage from the buildings shall be based on a system of internal drainage. Allow for three roof drains in a row at the low point of the new roof. Rainwater leaders shall be PVC DWV material, thermally insulated c/w PVC jacket for all exposed sections of piping. Run RWL down on the interior of the locker room wall and down to the crawlspace. Connect to the existing storm drain in the crawlspace.
2. Piping materials for sanitary and domestic water shall be the same as described above for Phase I.
3. Install new washroom fixtures in the two reconfigured washrooms in the locker rooms (see architectural plans). The washroom fixtures shall be as described above for Phase I.
4. Install a domestic water supply c/w backflow prevention to serve the splash pad system make-up water. Take off from the nearest DCW main in the basement mechanical room.
5. The splash pad drainage piping below the slab serving the splash pad and related floor drains shall be installed by the splash pad supplier and run back to the water treatment system in the basement mechanical room.

## F. Fire Protection – Phase I & II

1. New wet sprinkler system to serve entire building (new and existing) according to NFPA 13 requirements to suit the construction and occupancy. Include basement mechanical rooms and crawlspace areas. Include the upper level mechanical spaces under the roof.

2. Install new tee on the 6” incoming water service in the basement, c/w all required backflow prevention and valves.
3. Install a new fire department connection and test and drain valves. The fire department connection shall be at the front of the building near the entrance.
4. Sprinkler run-out piping serving heads over the existing pool shall run parallel to the roof structure from mains in the mezzanine mechanical space, with upright heads.
5. Sprinkler piping in the locker rooms shall be surface-mounted with upright heads.
6. Sprinkler run-out piping serving heads over the new splash pad and existing lobby area shall run parallel to the roof structure from mains in the mezzanine mechanical space, with upright heads.
7. Portable fire extinguishers by General Contractor or Owner.

## G. Phase II HVAC

1. Relocate the condensing unit CU-1 located at grade. Move the unit to grade level near gridlines 2 & 3. Install on a new concrete pad. Run new suction and liquid lines into the building and through the mezzanine mechanical space back to the air handling unit.
2. Relocate the fresh-air intakes serving the existing air handling unit which currently terminate in the soffit. Install new ducting to rooftop fresh-air intake terminations. Refer to original mechanical drawings for locations and sizes.
3. Install new exhaust pickups to serve the two new washrooms adjacent to the locker area. Exhaust grilles shall be ceiling-mounted, stainless-steel egg-crate, approximately 8” x 8” each. Include balance dampers on branch ducting. Connect back to the main exhaust duct.
4. Install a new air handling unit to serve the splash pad area. This unit shall be a pool dehumidification air handler. Engineered Air PD Series indoor model or equal, c/w 30 ton capacity DX cooling & dehumidification coil and natural gas indirect-fired heating coil. The heating coil shall be stainless-steel, and the DX coils shall be heresite-coated. Supply air capacity 12,000 cfm. Include mix-box section with insulated motorized dampers. Interlock dampers with the spray-pad exhaust fans.
    a) Locate the unit in the mezzanine mechanical area. Run fresh-air intake duct to the rooftop and terminate with a fresh-air intake hood. Insulate all fresh-air ducting back to the unit c/w 3” rigid duct insulation and vapour barrier jacket.
    b) Install two rooftop exhaust fans at the high point of the splash pad area. Fans to be centrifugal dome-type fan, approximately 1,000 cfm each. Fan intake drop through roof to terminate just under the roof deck with a stainless-steel drip pan. Install back-draft damper and insulated motorized damper on the exhaust duct drop. Interlock the damper with the fan. Control fans on time schedule.
    c) Run main supply duct in the mezzanine, then branch to exposed spiral ducts running between the glu-lam beams, terminating near the windows.

d) Intermediate duct-mounted double-deflection supply grilles to be located along the exposed duct. High-capacity double-deflection supply grilles shall be located at the end of each duct run to direct airflow down along the windows. All grilles and diffusers in the splash pad area shall be stainless-steel construction.

e) Install two large return air grilles at high level in the splash pad area, adjacent to the mechanical mezzanine. Duct the returns back to the unit within the mezzanine area.

f) Include fire dampers at all supply and return duct penetrations through the mezzanine mechanical room wall into the splash pad area.

5. Condensing unit to serve the splash pad AHU to be 30 ton, 2 circuit air-cooled condensing unit. Locate on the new roof, c/w built-up curb. Run refrigeration piping to the AHU located in the mezzanine.

6. Install a 3-ton fan split system air handler to serve the MPR. The unit shall be sized for approximately 1200 cfm of supply air. The unit shall have a mix box section for return and outdoor air c/w insulated motorized dampers. The unit shall have a 3 kW electric heating coil and 3 ton DX cooling coil.
   a) Locate the unit in the mezzanine mechanical area. Run fresh-air intake duct to the rooftop and terminate with a fresh-air intake hood. Insulate all fresh-air ducting back to the unit c/w 3” rigid duct insulation and vapour barrier jacket.
   b) Run main supply duct in ceiling level to the MPR c/w fire damper at the mechanical room penetration and branch to six square-cone ceiling diffusers, approximately 200 cfm each. Install balance dampers on each branch duct.
   c) Duct the return from the MPR ceiling back to the air handling unit c/w fire damper.
   d) Include fire dampers at all supply and return duct penetrations through the mezzanine mechanical room wall into the splash pad area.

7. Install a 3 ton condensing unit on the new roof, c/w built-up curb. Run refrigeration piping to the AHU located in the mezzanine.

## H. Separate Price – In-floor Radiant Heating

1. Provide a separate price for an in-floor radiant heating system for the splash pad area.

2. The boiler and related hydronic systems shall be located in the basement mechanical room.

3. Boiler shall be an electric boiler, 20 kW capacity, c/w primary pump (fractional hp inline circulator). Hydronic medium shall be a 30% glycol mix. Include glycol feed tank and pump system, expansion tank, and all valves, strainers, and related components for a complete system.

4. Install secondary loop pumps, fractional hp inline circulators, for each of three main zones. Secondary loops shall be controlled with 3-way modulating control valves to control secondary loop temperatures independently of each other.

5. The in-floor heating controller shall control all aspects of the system including the boiler, circulator pumps, and zone 3-way valves. The boiler primary loop shall be controlled with outdoor reset control.
6. Zone 1 shall be the splash pad area. In-floor loops shall be installed at 12” centres for the floor areas around the splash pad, with one section of 6” c/c at the perimeter near the windows. No loops to be installed in the splash pad itself. Assume 2,400 s.f. of active radiant floor area. Control based on in-floor slab sensor.
7. Zone 2 shall serve the MPR. In-floor loops shall be installed at 12” centres with one section of 6” c/c at the perimeter near the windows. Assume 500 s.f. of active radiant floor area. Control based on in-floor slab sensor.
8. Zone 3 shall be a snow-melt system for the Exterior Courtyard. In-floor loops shall be installed at 12” centres. Control based on in-floor slab sensor.
9. All radiant piping shall be maximum 250’ loop for ½” pipe, and up to 300’ loops for 5/8” pipe.
10. Manifolds for each zone shall be brass manifolds with balance valves for each loop. Locate manifolds in lockable stainless-steel wall cabinets adjacent to the areas served. Exact locations to be determined.

# II. Electrical

## A. Site Services

1. The site is serviced from a CSTE on the rear of the property, feeding both the pool building the tennis court lighting.

## B. Distribution

1. Existing distribution is 347/600V, 3ø, 4W, 1600A. A maximum existing demand load of 868kVA was registered at the facility in October 2007. There is expected to be sufficient electrical capacity in the main distribution to support the addition.
2. An existing sub-distribution SD-2 (347/600V, 3ø, 4W, 1000A resides in the basement on the west end of the building.

## C. Phase I Construction – Lobby, Locker Room & Family Washroom Area

1. Lighting
    a) Provide new lighting in lobby and all renovation areas.
        (1) Lobby & Reception- to be coordinated with architect during detailed design.
        (2) Offices – Recessed direct/indirect T8 or T5HO linear fluorescent
        (3) Change Rooms – T8 linear fluorescent vapour proof surface mount.
    b) The following minimum lighting levels shall be maintained:
        (1) Lobby – 20 foot-candles.
        (2) Change Rooms & Washrooms – 20 foot-candles
    c) All new lighting shall be 120V.
2. Lighting Control
    a) All lighting controls for spray pad area shall be located in locations accessible to authorized personnel only.
    b) All lighting controls for public areas shall be centrally located.
    c) Switching shall be line voltage.
3. Wiring
    a) All wiring in renovation area shall be surface mount in conduit.
4. Devices
    a) Provide stainless steel coverplates for all switching and receptacles devices.
    b) Provide receptacles to suit layout requirements. Relocate existing circuits and provide new from existing panelboards where required.
    c) Wire and connect door operators.
5. Fire Alarm
    a) Wire and connect new FA sprinkler devices

b) Provide verification of system for all new and modified devices.
c) Provide visual notification appliances in all renovated areas.
d) Relocate existing and provide new speakers to suit new layouts.

6. Exit & Emergency Lighting
   a) Relocate existing and provide new emergency battery bank lighting and remote heads in the following areas to suit new layouts. Provide EM lighting in all:
      (1) Change Rooms
      (2) Washrooms
      (3) Lobby
      (4) Corridors & Public Areas
   b) Replace all existing red-letter “Exit” style exit signage with new pictogram style “Running Man”.
   c) Provide new exit signage where required to suit new layout.
7. Communication Systems
   a) Provide new communication outlets complete with two CAT6 cables to existing communication rack located in mezzanine above for new reception and office workstations.
8. Mechanical & Equipment
   a) Wire and connect all mechanical equipment.

## D. Phase II Construction – New Spray Pad Addition

1. Panelboards
   a) All panelboards shall be installed outside the pool environment.
   b) Provide a new 30kVA transformer and 120/208V, 3ø, 4W, 200A panelboard for all 120V loads fed from SD-2.
   c) Provide a new 347/600V, 3ø, 4W, 200A, 60 cct panelboard fed from existing SD-2 for all new splash pad mechanical equipment loads.
   d) Provide a new 347/600V, 3ø, 4W, 200A, 60 cct panelboard fed from existing SD-2 for all new splash pad equipment loads.
   e)
2. Lighting
   a) Provide new lighting throughout.
      (1) Spray Pad – LED highbay.
      (2) Multipurpose Room – T8 linear fluorescent.
      (3) Exterior – LED façade lighting mounted in soffit on north side of building and in courtyard.
   b) The following minimum lighting levels shall be maintained:
      (1) Pool water surface – 30 horizontal foot-candles.
      (2) Splash pad deck – 10 horizontal foot-candles.
      (3) Lobby & Change Rooms– 20 foot-candles.
   c) All lighting shall be MB PowerSmart approved
   d) All lighting in chemical storage and treatment rooms shall be equipped with lens or otherwise be protected against breakage and release of hot materials.

3. Lighting Control
    a) All lighting controls for spray pad area shall be located in locations accessible to authorized personnel only.
    b) All lighting controls for public areas shall be centrally located.
    c) Switching shall be line voltage.
4. Devices
    a) All devices and coverplates installed in splash pad area shall be rated for corrosive environments.
    b) Provide stainless steel coverplates for all switching and receptacles devices not in splash pad area.
    c) Provide receptacles to suit layout requirements.
    d) Wire and connect door operators.
5. Fire Alarm
    a) Provide new addressable loop to new splash pad area to support all new detection devices. Expand panel as required to accommodate new requirements.
    b) Provide new smoke detection in all new public corridors.
    c) Wire and connect new FA sprinkler devices
    d) Provide verification of system for all new and modified devices.
    e) Provide visual notification appliances in all new construction areas.
    f) Provide new speakers in addition area.
6. Exit & Emergency Lighting
    a) Provide emergency lighting through 24VDC battery banks and remote heads in the following areas:
        (1) Spray pad deck
        (2) Multipurpose Room
    b) Provide new pictogram style “Running Man” exit signage in splash pad addition.
7. Mechanical & Equipment
    a) Wire and connect all mechanical equipment.
    b) Wire and connect all splash pad equipment.
8. Intrusion System
    a) Extend intrusion system into new construction area. Provide door contacts on all exterior doors. Provide motion sensors in public corridors.

**- End of Document –**

GWH
Construction Management Services Ltd.
419 Laidlaw Boulevard
Winnipeg, Manitoba
R3P 0K8

Telephone 204-663-2140
Fax 204-663-9180
Cellular 204-296-8916

1 x 1 Architecture
421 Mulvey Avenue East
Winnipeg, Manitoba
R3L 0R6

September 6, 2013

Attention: Mr. Travis Cooke, Architect

Dear Travis;

**Re: Level "C" Construction Estimate Seven Oaks Pools Interior Alterations and Splash Pad Addition, Winnipeg, Manitoba**

Attached please find our divisional breakdown summary with class "C" construction estimate, for the above noted project, based on your drawings dated August 28, 2013.

The overall estimated cost of the entire project is valued at $3,619,897.00 + GST, not including escalation including a 10% design and estimate contingency allowance. This cost is based on 2 separate tender packages, overall project costs could be reduced marginally if projects were tendered as 1 project. With escalation the project cost if phased over 2 years would be $3,814,852.00 + GST

The accuracy of this estimate at level "C" should range between - 15% to +15%, of the tender prices you will be receiving.

The following list of exclusions should be considered by all parties while reviewing the estimate.

Exclusions and Clarifications are as follows:

- Design, Engineering and Project Administration Costs.
- All costs are based on current month costs.
- GST is Extra
- Escalation to 2014 and 2015 as noted
- Market Conditions.
- Cash Allowances are Included.

**Ownership and accuracy of the estimates, provided by GWHCMS Ltd.:**

All estimates, reports, and similar documents prepared by GWHCMS Ltd. Shall remain the property of GWHCMS Ltd. The client will have access to all documents and worksheets related to the project and they shall be made available upon request.

Pricing by GWHCMS Ltd. reflects probable construction costs obtainable in the location of the project as of the date of the report and is a determination of fair market value for the construction of this project and should not be taken as a prediction of low bid.

This pricing assumes competitive bidding for every portion of the construction work including all subcontractors as well as the general contractor, and assumes a minimum of five (5) general bidders. If fewer bids are received, the bid results can be expected to be higher.

It is recognized, however that GWHCMS Ltd. does not have control over the cost of labor, materials or equipment, over a contractor's methods of determining bid prices, or over competitive bidding, market or negotiation conditions.

Accordingly GWHCMS Ltd. cannot and does not warrant or represent that bids or negotiated prices will not vary from this nor any subsequent estimate of construction cost or evaluation prepared by or agreed to by GWHCMS Ltd.

Trusting you will find the attached information helpful, please feel free to contact us at your convenience should you have any questions or concerns.

Respectfully yours,

Gerhard Hoppenheit C.E.T., P.Q.S.,G.S.C.
President
GWH Construction Management Services Ltd.

GH/sh

**GWH** Construction Management Services Ltd. 06-Sep-13

Class "C" Construction Estimate Anticipated Accuracy -15% to +15% Project # 2013-43

Project: Seven Oaks Pool, Interior Alterations and Splash Pad Addition, Winnipeg, Manitoba

Client: 1 x 1 Architecture

Divisional Cost Breakdown: Construction Duration 6 and 12 Months

| Item # | | Activity | Phase 1 Cost | Phase 1 Total Cost | Phase 2 Cost | Phase 2 Total Cost |
|---|---|---|---|---|---|---|
| 1 | | **General Requirements** | | | | |
| | | Cash Allowances | $0 | | $13,000 | |
| | | General and Final Clean-up | $4,884 | | $9,916 | |
| | | Surveying and Layout | $0 | | $4,000 | |
| | | Equipment Rentals, Freight & Cartage | $6,633 | | $12,567 | |
| | | Supervision & Project Management | $83,160 | | $168,840 | |
| | | Temp. Facilities | $9,851 | | $19,999 | |
| | | Temp. Light, Temp. Heat, Temp. Power, Site Fencing | $6,748 | | $13,702 | |
| | | Heat Building During Construction | $0 | | $30,000 | |
| | | Site Signage, Safety Equip., Photographs, Fire Safety, As-Builts & O & M Manuals | $5,709 | | $11,591 | |
| | | | | $116,985 | | $283,615 |
| 2 | | **Site work and Selective Demolition** | | | | |
| | | Selective Interior and Exterior Demolition | $12,775 | | $4,150 | |
| | | Piling | $0 | | $75,000 | |
| | | Sidewalk Repairs, Sod, Landscaping and Pavers Excavation and Backfill | $0 | | $20,160 | |
| | | | | $12,775 | | $99,310 |
| 3 | | **Concrete Work Including;** Slabs, Ramp and Grade beams | | | | |
| | | Installation of Concrete, Reinforcing Steel. | $0 | | $154,565 | |
| | | | | $0 | | $154,565 |
| 4 | | **Masonry** | | | | |
| | | Masonry Work and Repairs | $18,000 | | $50,200 | |
| | | | | $18,000 | | $50,200 |
| 5 | | **Structural Steel & Misc. Metal** | | | | |
| | | Structural Steel | $0 | | $190,000 | |
| | | Miscellaneous Metals | $0 | | $28,600 | |
| | | | | $0 | | $218,600 |
| 6 | | **Rough Carpentry & Finish Carpentry** | | | | |
| | | Roof Framing | $0 | | $139,000 | |
| | | Architectural Wood Work | $35,900 | | $4,500 | |
| | | | | $35,900 | | $143,500 |
| 7 | | **Insulation, Roofing, Flashing** | | | | |
| | | Misc. Insulation | $0 | | $136,055 | |
| | | | | $0 | | $136,055 |
| 8 | | **Doors, Frames & Hardware** | | | | |
| | | Doors, Frames and Hardware | $10,800 | | $20,600 | |
| | | | | $10,800 | | $20,600 |
| 9 | | **Windows** | | | | |
| | | Curtain Wall and Curtain Wall with Frit Glazing | $25,000 | | $304,000 | |
| | | Punch Windows | $8,000 | | | |
| | | | | $33,000 | | $304,000 |
| 10 | | **Ceilings** | | | | |
| | | | $6,600 | | $1,800 | |
| | | | | $6,600 | | $1,800 |
| 11 | | **Tile Flooring and Repairs and Slab Sealer** | | | | |
| | | | $18,000 | | $9,000 | |
| | | | | $18,000 | | $9,000 |
| 12 | | **Painting** | | | | |
| | | | $7,500 | | $14,000 | |
| | | | | $7,500 | | $14,000 |
| 13 | | **Miscellaneous Specialties:** | | | | |
| | | Lockers | $163,500 | | $0 | |
| | | Cubicles | $9,500 | | $1,700 | |
| | | Washroom Accessories | $7,900 | | $0 | |
| | | Benches | $4,050 | | $4,000 | |
| | | | | $184,950 | | $5,700 |
| 14 | | **Spray Pad System** | | | | |
| | | | $0 | | $385,000 | |
| | | | | $0 | | $385,000 |
| 15 | | **Mechanical** | | | | |
| | | Fire Protection | $0 | | $226,380 | |
| | | Plumbing and HVAC | $95,190 | | $291,900 | |
| | | | | $95,190 | | $518,280 |
| 16 | | **Electrical** | | | | |
| | | | $132,840 | | $329,400 | |
| | | | | $132,840 | | $329,400 |
| | | | Subtotal | $672,540 | Subtotal | $2,673,625 |
| 17 | | Bonds, Insurance, Permits | | $33,447 | | $67,909 |
| | | | Subtotal | $705,987 | Subtotal | $2,741,534 |
| 18 | | Overhead and Fee 5% | | $35,299 | | $137,077 |
| 19 | | Estimate Contingency Factor Renovation and Addition 10% | | $74,129 | | $287,861 |
| | | | Subtotal | $741,286 | Subtotal | $2,878,611 |
| 20 | | Phase 1 Escallated to August 2014 at 3% | Total | $763,525 | | |
| 21 | | Phase 2 Escallated to August 2015 at 6% | | | Total | $3,051,327 |
| | Phase 1 | Cost / SF Based on Approximately 3,000 sf $247.10 per sf | | | | |
| | Phase 2 | Cost / SF Based on Approximately 8,000 sf $359.83 per sf | | | | |
| | | Separate Price 1 Infloor Heating Add $90,000.00 including under slab insulation | | | | |
| | | **Note: GST Extra** | | | | |