



Feasibility Study for the expansion of the Lund Community Centre



MacDonald Hagarty Architects Ltd.



Feasibility Study

December 2019

Introduction

Who We Are

MacDonald Hagarty Architects [MHA] is a small firm in Comox BC serving Northern Vancouver Island and the South and Central Coast. We provide full architectural services for many small communities including Tofino, Bella Coola, and Port Alberni.

We would like to thank qathet Regional District for the opportunity to design in their region, a progressive, sustainable and culturally important expansion of the Lund Community Centre that will serve them for years to come.

What Is The Project

In September 2019 the qathet Regional District retained MHA to provide a Feasibility Study for the expansion of the Lund Community Centre. While the current facility serves the community well it could serve it better. Through several public consultation events the Community has identified key program spaces that are missing and would benefit the rural community.

Originally the Regional District was exploring three options:

- Continue to utilize the existing building in its current form and build an addition to it to provide additional services to the community.
- Demolish the existing building and build a new structure on the current site.
- Build a new building on a new site, 9840 Finn Bay Road.

This study only explores the first option.

MHA has retained RDH to do a facility assessment of the existing building.

Where We Started

In early November MHA and RDH visited the site to assess the existing building and determine the relationship between the existing building and future expansion on the site

The qRD provided the key program spaces that the community has identified for the expansion. Core program for the expansion includes:

- 1/2 court basketball gym
- Hall for 200 people
- Stage for theatrical productions
- Commercial grade kitchen
- Wheel Chair Accessibility
- New washrooms

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The Site

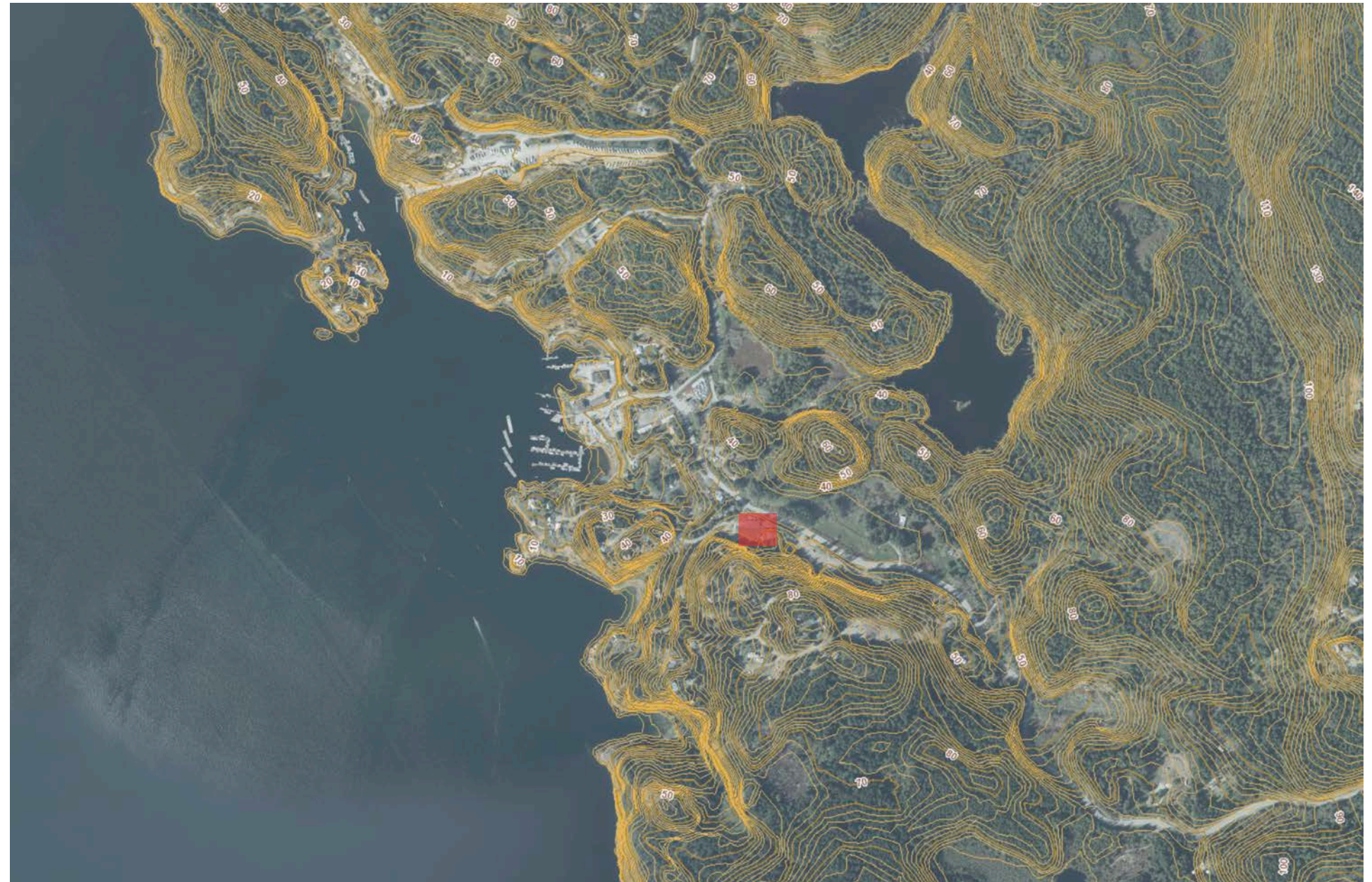
The 1.85 acre parcel is irregular in shape and generally flat with a treed slope rising up towards the south. Highway 101 runs along the north property line. Larson Road runs along the west property line. The site has road access off of Larson Road. The site is located approximately 500 meters from Lund's village core.

The existing building is oriented with its long axis east to west and it's front facade facing south making good use of the solar exposure to the site. The site has a small undefined gravel parking lot, a small play field, and kids play equipment on a small mound to the east.

Further Assessment

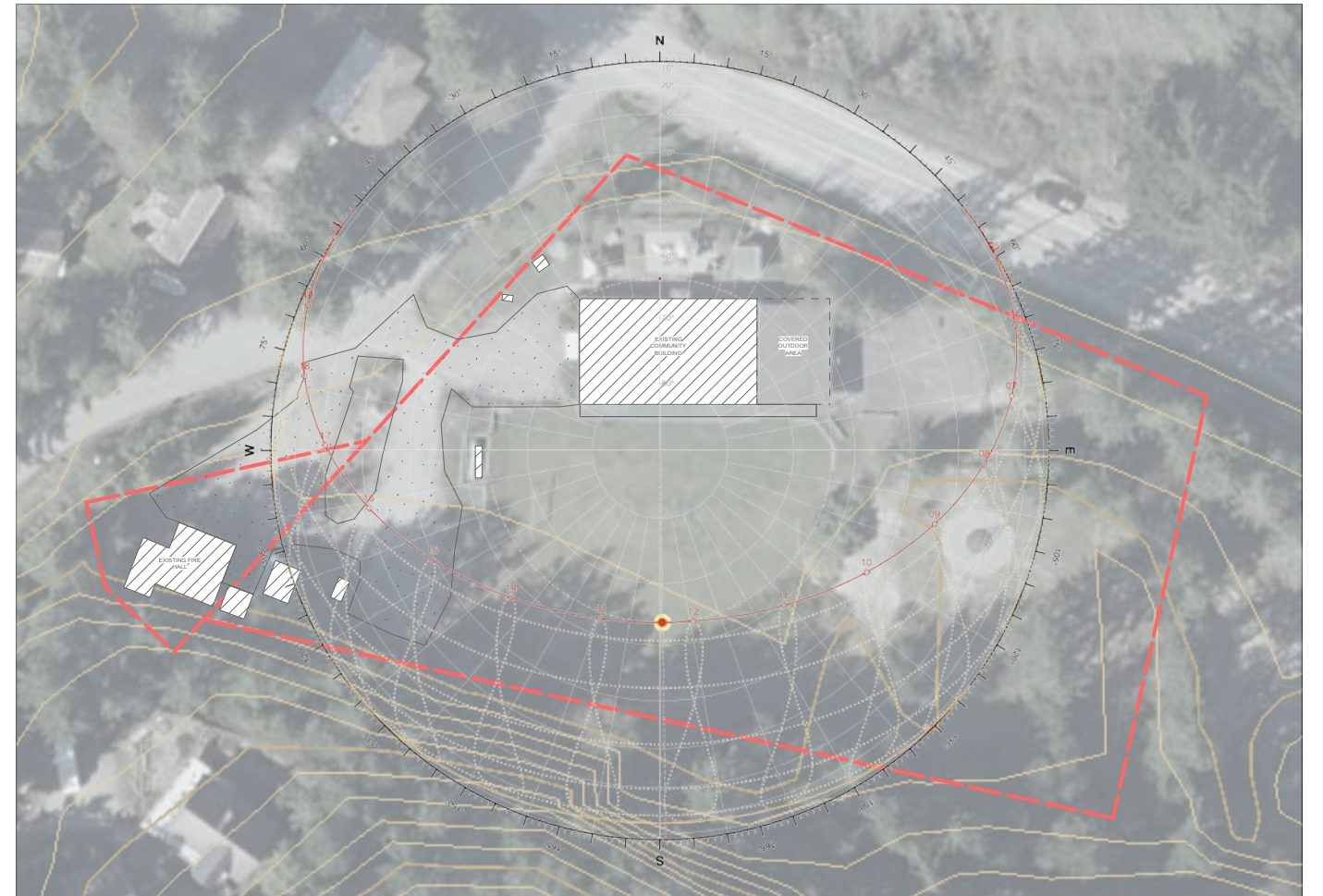
No geotechnical report has been prepared for the property and adequate bearing capacity for construction has not been confirmed. The Regional District will need to commission a report prior to further design taking place.

Adequate services for the site, including power, sewage, stormwater management and potable water has not yet been determined and further analysis would need to be done prior to further design development.

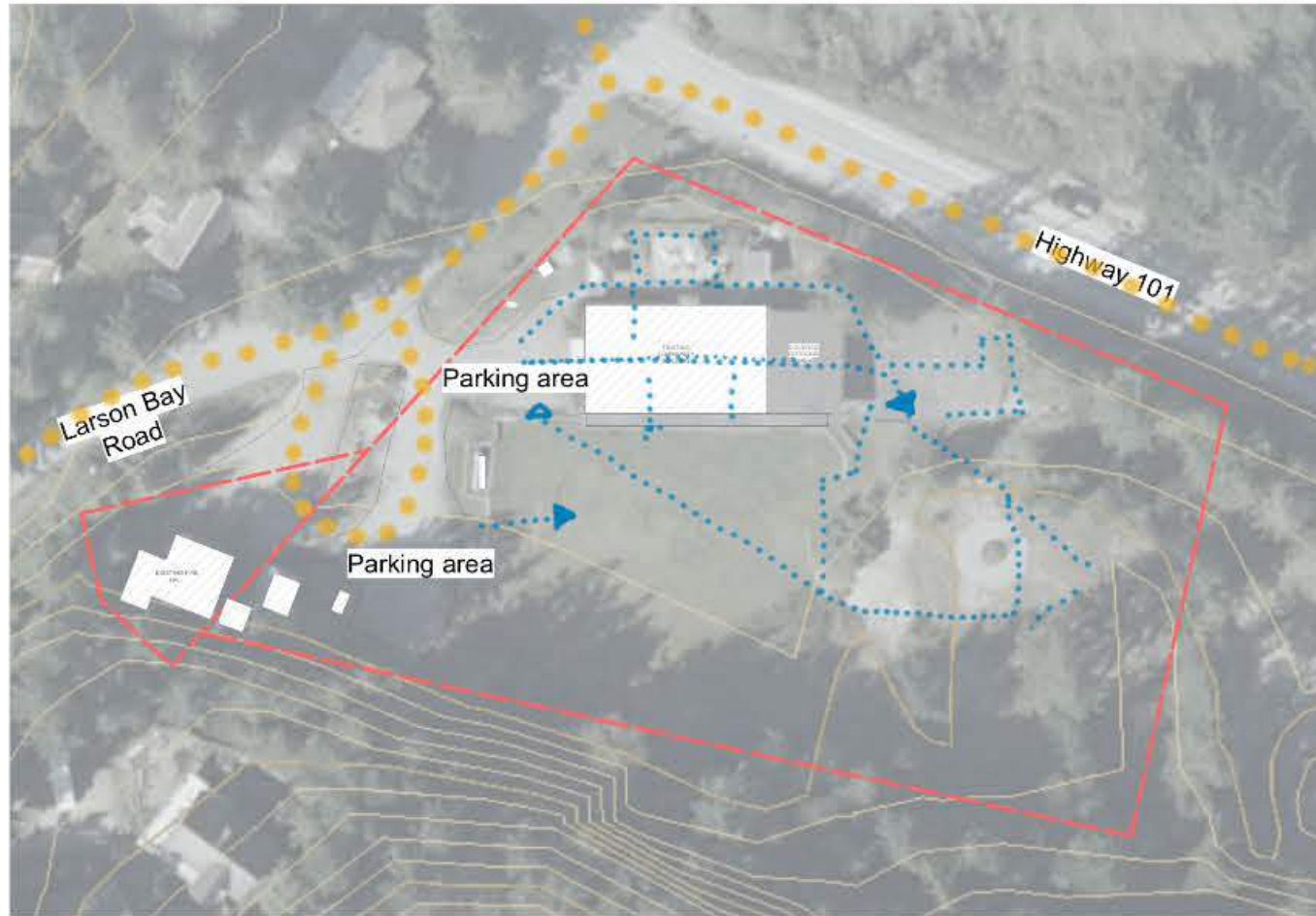




1 Existing Site plan
Scale: 1:1000



2 Solar and environmental conditions
Scale: 1:1000



3 Zones of the site Circulation
Scale: 1:1000



4 Zones of the site activity
Scale: 1:1000

Expansion Areas

Three areas were identified during our initial site visit.

Expansion Area 1

PROS:

- Compliments existing massing
- Creates an opportunity to create a strong sense of entrance
- Does not adversely affect current parking
- strong connection to the play field

CONS:

- Reduces the play field size
- Cant expand the parking lot
- May require existing decommissioned septic system to be removed.

Expansion Area 2

PROS:

- Area appears to be underutilized
- Play field can remain as is
- Parking area could expand

CONS:

- Area posses constraints for 1/2 Court gym
- Eliminates exterior covered play space

Expansion Area 3

PROS:

- Area appears to be underutilized
- Play field can remain as is
- Parking area could expand

CONS:

- Massing would dominate the site given the increased elevation
- Play area would need to be relocated
- Might pose geotechnical challenges given the abrupt grade change to the adjacent property.
- Distant from Parking
- Required new access



1 **Buildable areas for Expansion**
Scale: 1:1000



Expansion Area 1

It was determined that Expansion Area 1 was the most logical location to explore expansion.

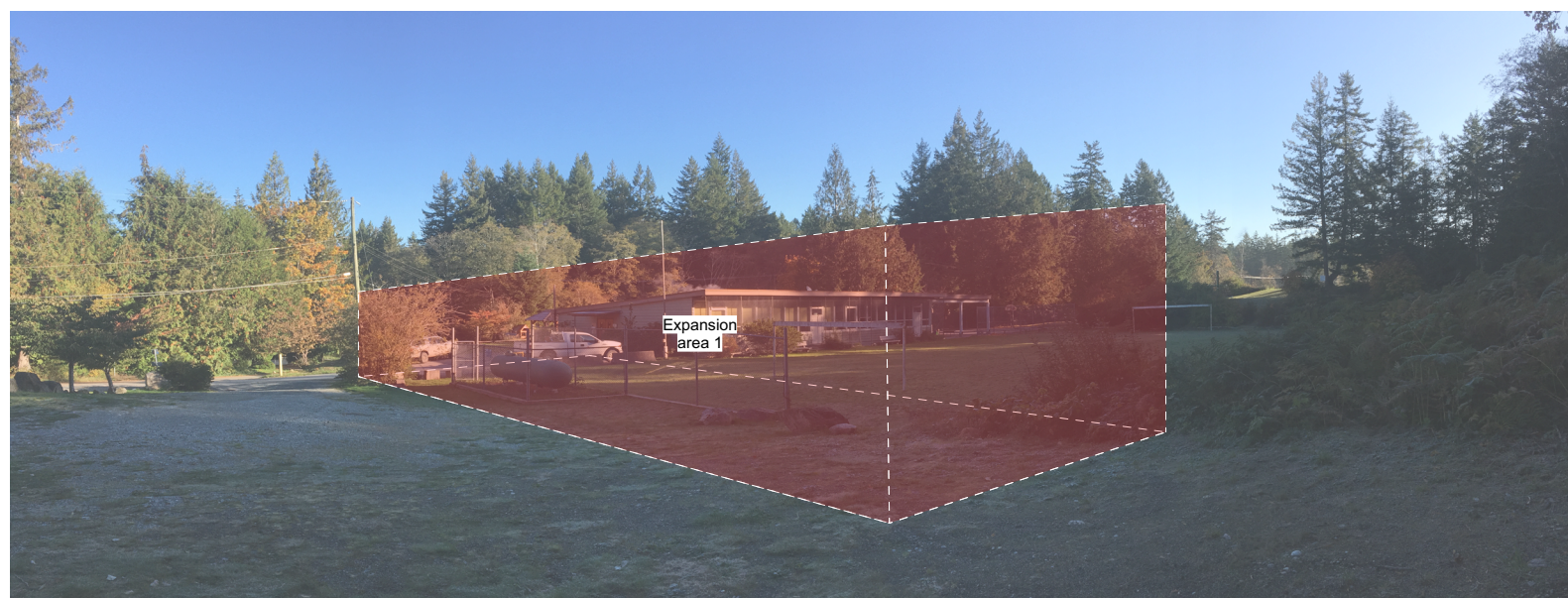
Expansion Area 1 creates the opportunity for a hub between the existing building and the new building. The hub can facilitate the ancillary program that is shared by the two and helps to create a strong sense of entrance for the facility.

The L shape that the two buildings would form creates a courtyard with the existing field as a center piece.

Although connected through exterior circulation the expansion would be constructed as a separate stand alone structure allowing it to act independently in a seismic event.



2 Buildable areas for Expansion
Scale: 1:1000



BUILDING DESIGN

Expansion Design

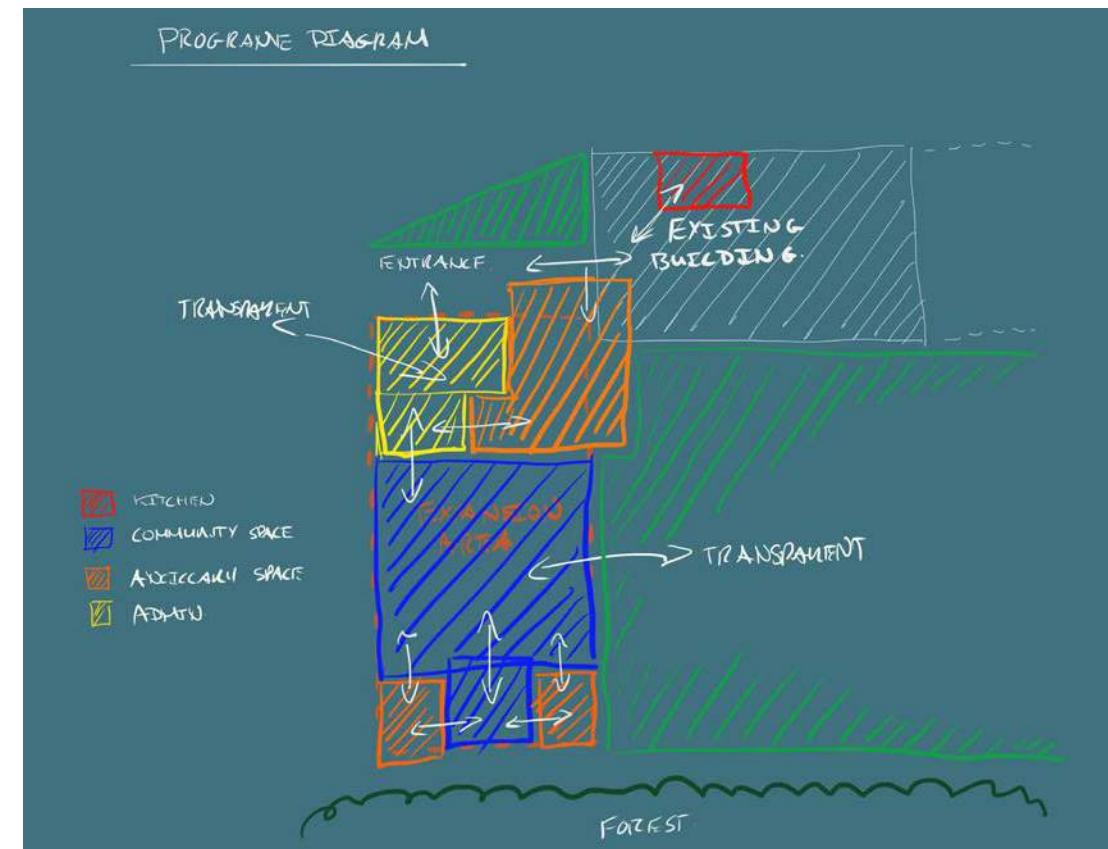
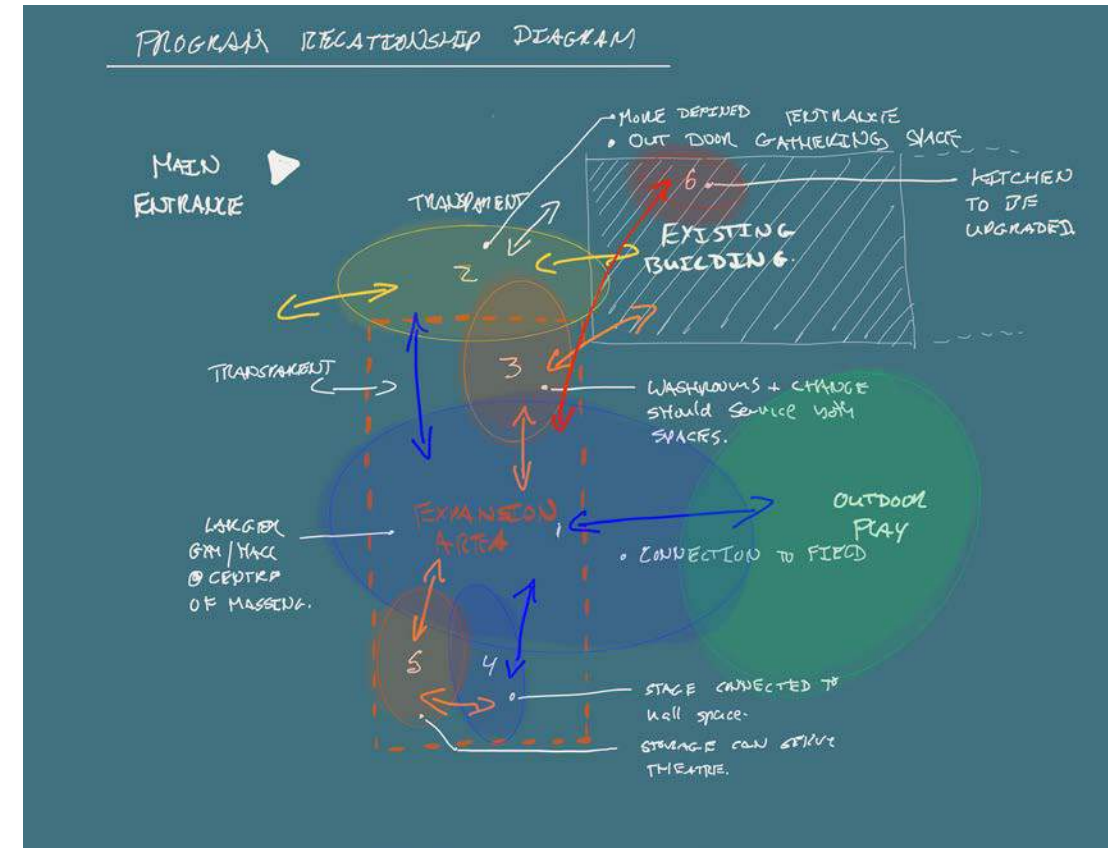
The qRD provided the key program spaces that the community has identified for the expansion. Core program for the expansion includes:

- 1/2 court basketball gym
- Hall for 200 people
- Stage for theatrical productions
- Commercial grade kitchen
- Wheel chair accessibility
- New washrooms

MHA used this information to prepare a Design Aid Sheet for the project which identified the approximate size of each space in the building.

MHA then identified and colour coded the three major blocks of program: administration [Yellow], community and public space [Blue], and Ancillary Space [Orange]. The following diagrams incorporate the four major blocks of program, and illustrate our process.

Next MHA identified the spacial relationships of each block and looked at how the design of the expansion would compliment the existing program and the mid-century architectural style of the existing building.



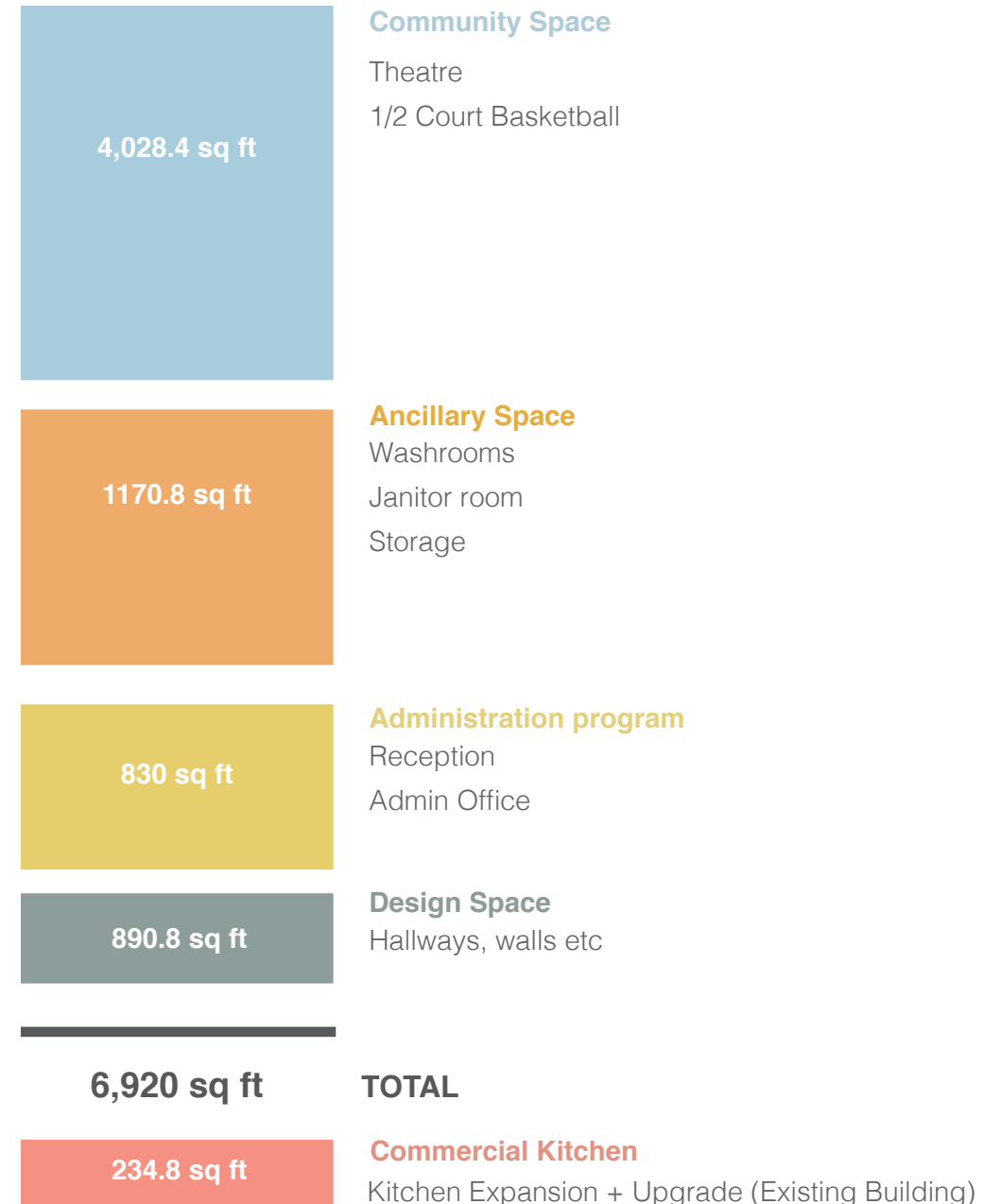
Building program

Following the design charrette, MHA synthesized the program list to help form the basis for the building layout. There are three main components to the expansion; community space, administration space, and additional program.

Many of the spaces have been designed to accommodate a variety of activities.

Preliminary Design Program (Expansion)

Expansion Program		Net Area Sq/Ft	
Recreation / Gathering	1/2 Court Gym/ Community Hall Theatre	3,476.0	4028.4
		552.4	
Administration	Reception Admin Office Lobby	198.1	830.0
		132.4	
		499.5	
Additional Program	Mens Washroom Womans Washroom Mens Change Room Womans Change Room Janitors room Storage	201.9	1170.8
		201.9	
		171.4	
		171.4	
		27.0	
		397.2	
(hallways/walls/etc..)		6,029.20	890.80
Subtotal Design Space			
Total Net Floor Area (Expansion)		6,920.00	
Existing Program		Net Area Sq/Ft	
Recreation / Gathering	Community Room Library	940.8	1285.0
		344.2	
Administration	Admin Office	132.3	132.3
Daycare	Daycare	785.8	785.8
Kitchen	Kitchen	234.8	234.8
Additional Program	Mens Washroom Womans Washroom Mechanical Janitors room	201.9	661.5
		201.9	
		192.7	
		65.0	
(hallways/walls/etc..)		3,099.40	865.60
Subtotal Design Space			
Total Net Floor Area (Existing)		3,965.00	
Total Net Floor Area (with Expansion)		10,885.00	



Expansion Program

1/2 Court Basketball + Community Hall

The new 1/2 court basketball court can host a multitude of community events. As a meeting hall it can easily fit 200 people. A stage at the south opens onto the main space. Large windows along the east elevation connect the space back to the existing field and the landscape as a whole. This could be easily opened up to facilitate larger community events

Ancillary Program

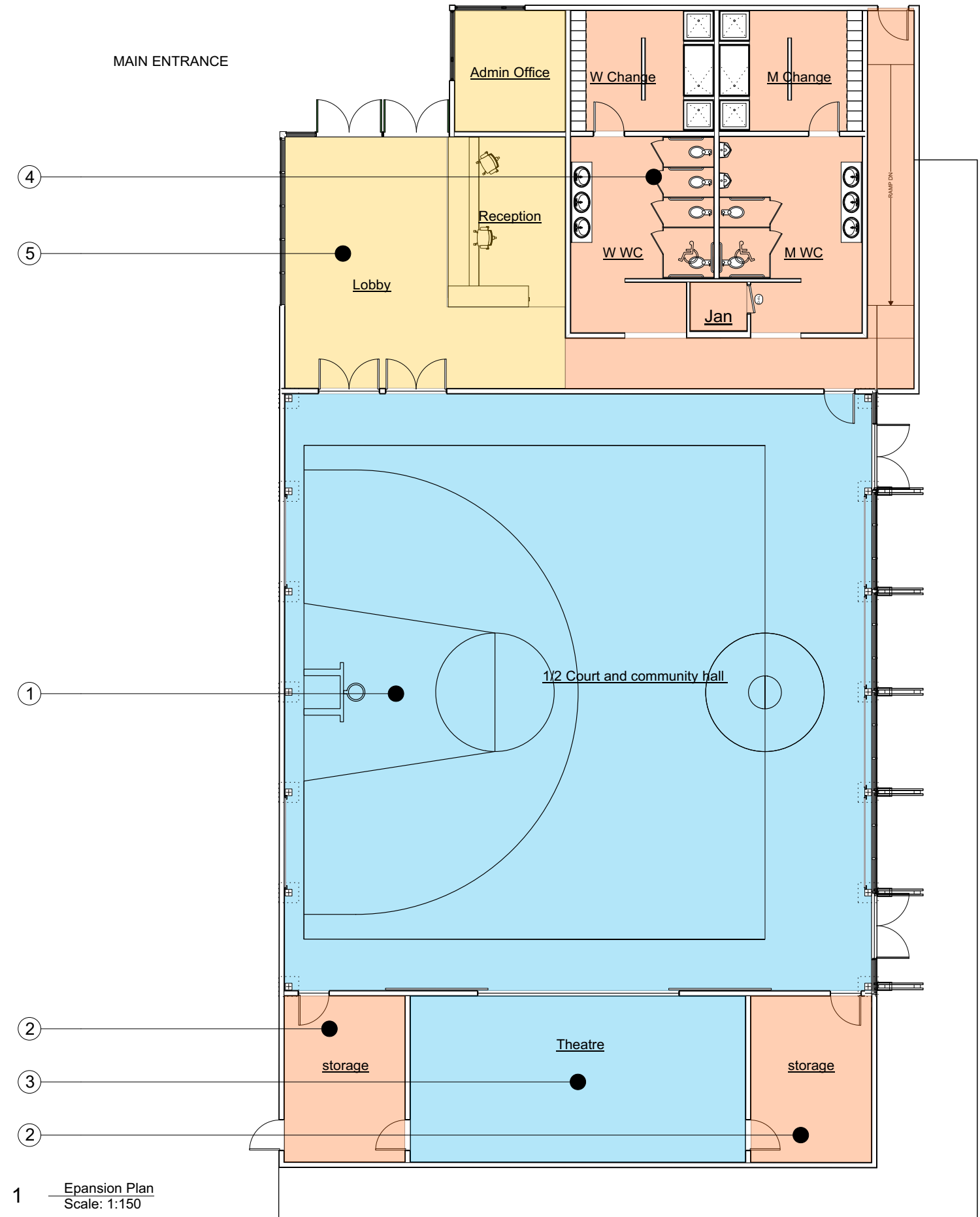
Change rooms, washrooms and storage space are incorporated on either end of the gym. The washrooms are located off the reception allowing them to be used by individuals in the existing building. A corridor connects the existing building to the new addition, so the existing kitchen can be used to cater events in the expansion. The existing kitchen would be upgraded and possibly expanded into the library room.

Administration

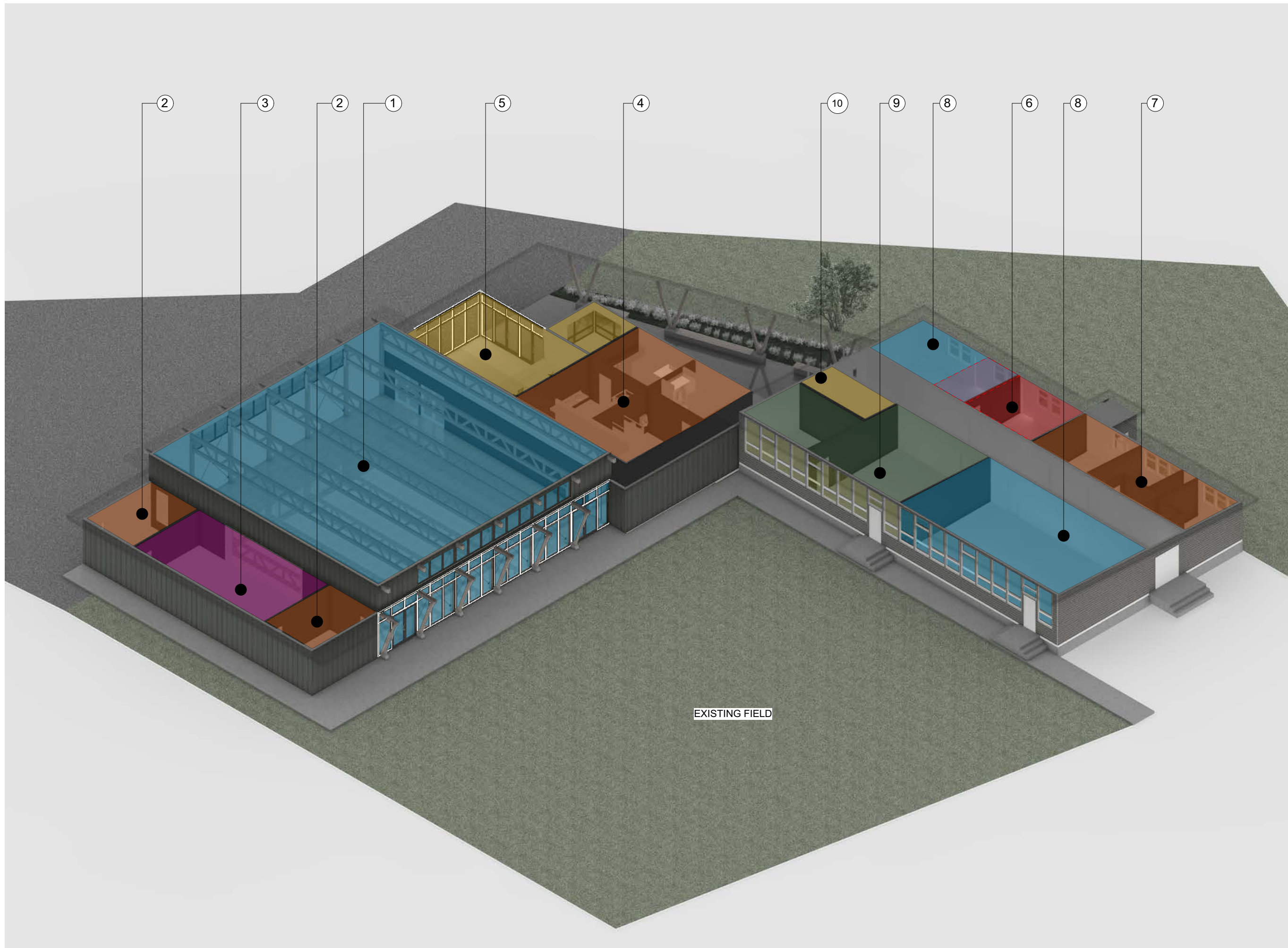
The main entrance to the building is also a gathering space connected to the new half court basketball and community hall and could also host a variety of community events and cultural activities.

Expansion Program

- | | |
|---------------------------------------|---|
| ① NEW HALF COURT GYM + COMMUNITY HALL | ⑥ KITCHEN TO BE UPGRADED TO COMMERCIAL STANDARDS. POSSIBLE EXPANSION INTO ADJACENT ROOM |
| ② NEW STORAGE | ⑦ EXISTING WASHROOMS. (NO CHANGE) |
| ③ NEW STAGE AND PERFORMANCE SPACE | ⑧ EXISTING COMMUNITY ROOM |
| ④ NEW WASHROOMS + CHANGING ROOMS | ⑨ EXISTING DAYCARE SPACE |
| ⑤ NEW RECEPTION + OFFICE | ⑩ EXISTING OFFICE |



1 Expansion Plan
Scale: 1:150



LUND COMMUNITY CENTRE EXPANSION
BUILDING ELEVATIONS



1 West Elevation
Scale: 1:150



2 East Elevation
Scale: 1:150



3 North Elevation
Scale: 1:150



4 South Elevation
Scale: 1:150

BUILDING SECTION

BASKETBALL COURT/ COMMUNITY HALL + THEATRE

The primary function of this space is a 1/2 court basketball facility but it can also host a variety of community events, from a small dance presentation, a film premiere, or a community concert. The storage room flanking each side of the stage can double as a back of house for the theatre space, expanding its ability to function as a larger theatrical space. Washrooms and change rooms are located off the main reception.



WOOD TRUSS - POLLMEIER WOOD PRODUCTS



5 Long section

RECEPTION, MULTIPURPOSE FOYER

The generous multipurpose foyer is an inviting space for the community with a strong connection to the facility as a whole. The Reception is centralized in the space allowing it to manage the comings and goings of the facility.

The foyer, space can be adapted for a variety of community activities and performances.

Large exterior overhangs will be provided at the entrance to connect the existing building to the new expansion

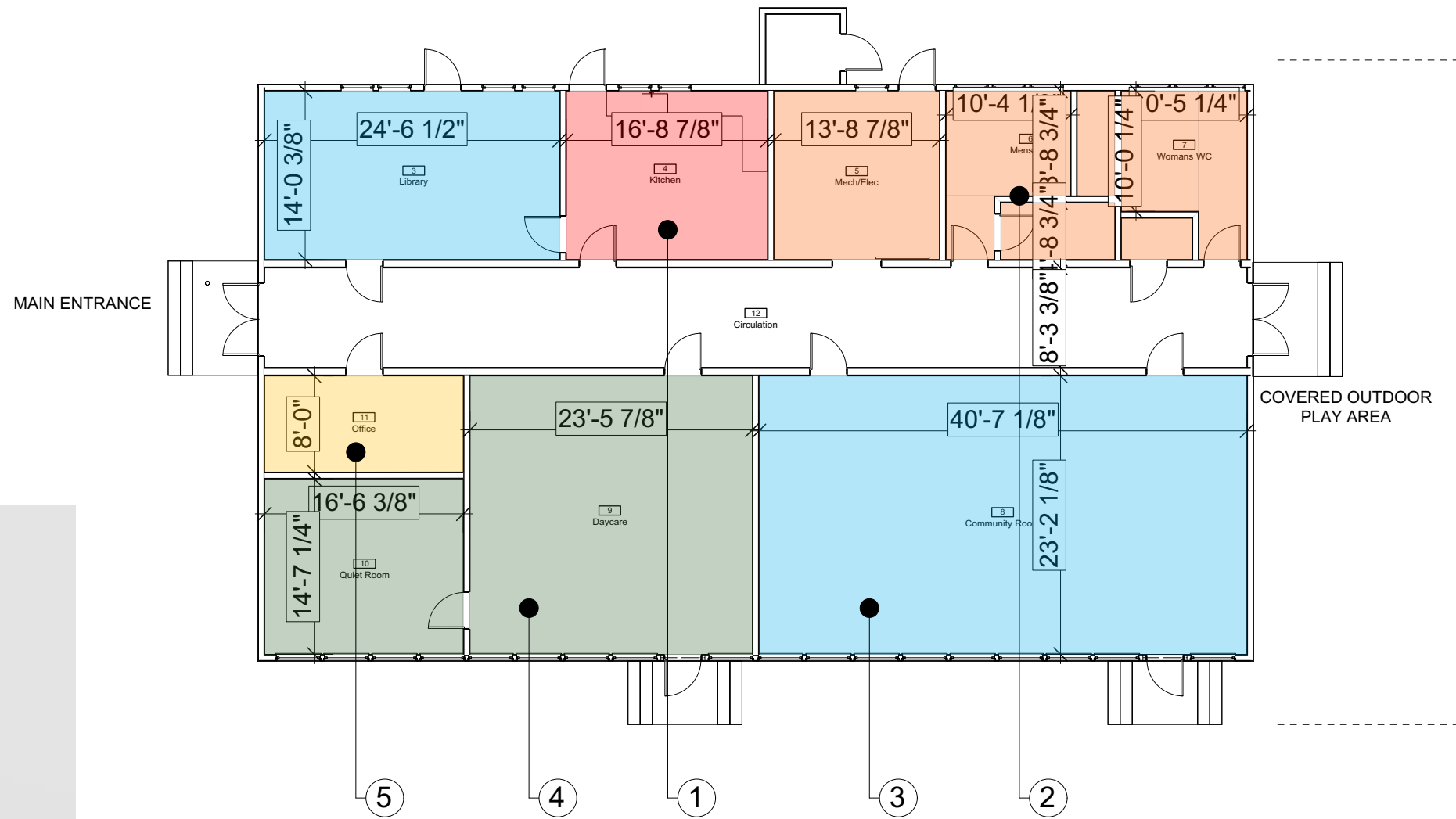
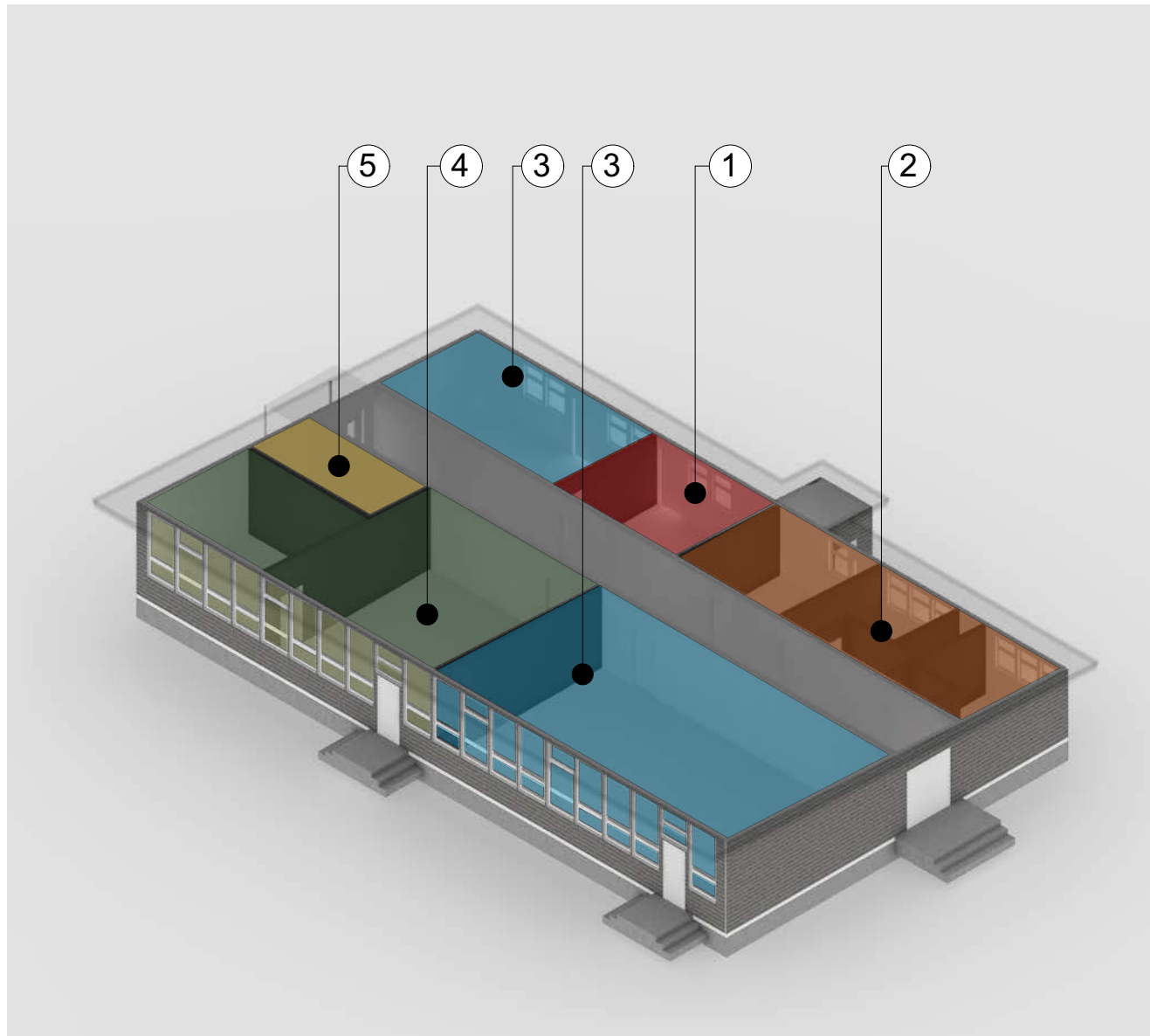


SOUTH SURREY REC, TAYLER KURZT ARCHITECTURE + DESIGN

Existing Facility

BACKGROUND

The existing building was constructed in 1949 and served as a school for the community for many years. Currently it is owned and operated by the qathet Regional District as a Community Centre for Lund. As an appendix to this report RDH has provided a detailed facility assessment of the existing asset.

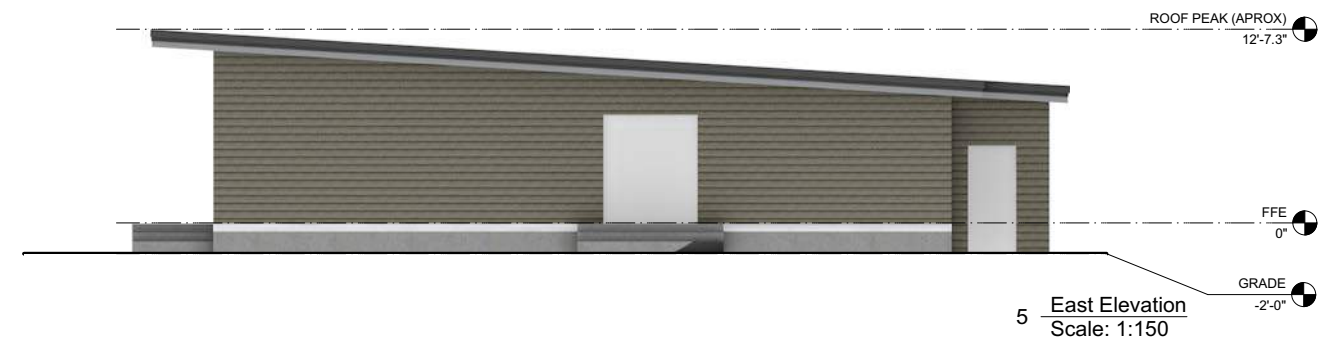
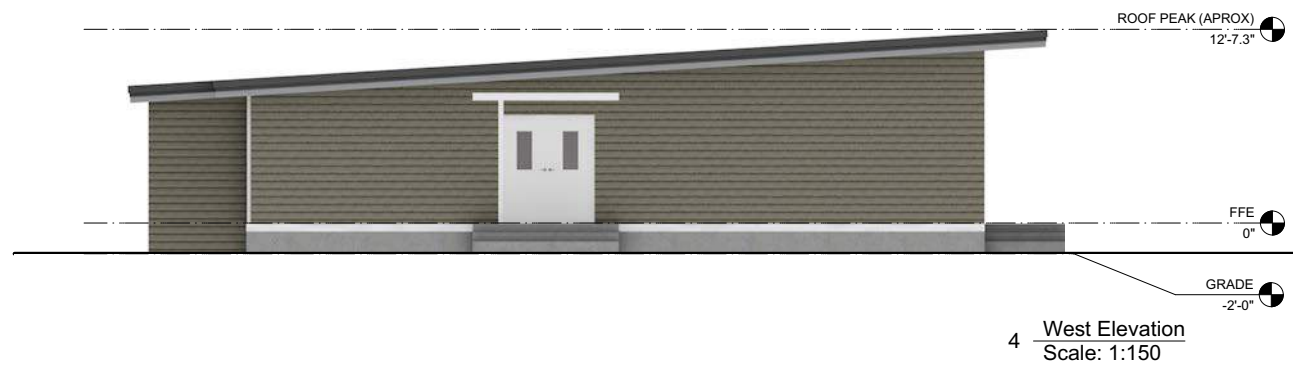
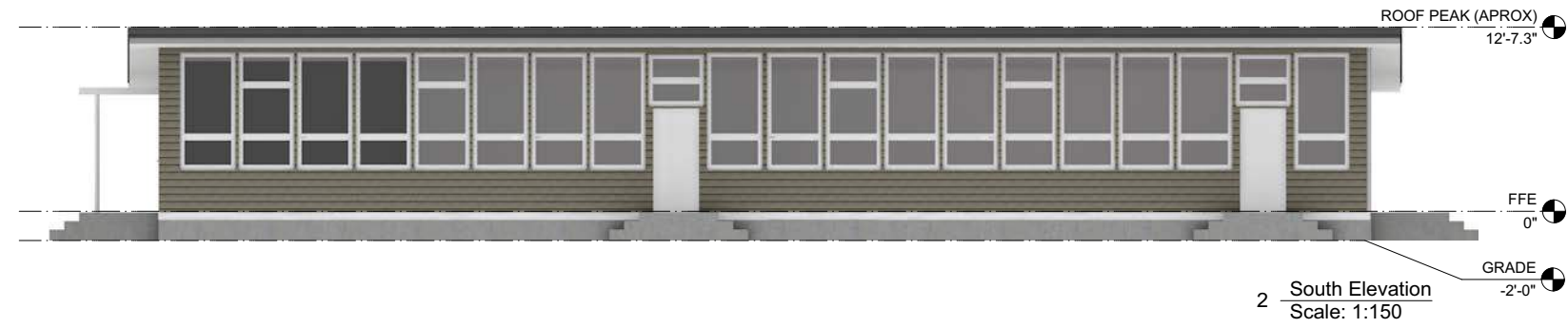


1 Main Floor Plan
Scale: 1:150

Existing Program

- ① EXISTING KITCHEN
- ② EXISTING WASHROOMS. (NO CHANGE)
- ③ EXISTING COMMUNITY ROOM
- ④ EXISTING DAYCARE SPACE
- ⑤ EXISTING OFFICE

BUILDING ELEVATIONS



DESIGN AID SHEET

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ORDER OF MAGNITUDE PROJECT ESTIMATE

Lund Order of Magnitude Costing				
Total Gross Floor Area		6920 SqFt		
	Estimated Value	\$/Sqft	Estimated Value	\$/Sqft
Construction Hard Costs - Building				
Estimated Net Building Costs	2,422,000.00	350.00	3,460,000.00	500.00
Construction Contingency - (%3)	72,660.00	10.50	103,800.00	15.00
Estimated total Building	2,494,660.00	371.00	3,563,800.00	530.00
Soft Costs				
Design Fees %10	249,466.00	36.05	356,380.00	51.50
Architectural				
Interior				
Structural				
Mechanical				
Electrical				
Disbursements (%2 of fees)	4,989.32	0.72	7,127.60	1.03
Survey	0.00	0.00	0.00	0.00
Geotechnical	0.00	0.00	0.00	0.00
Quantity Surveyor fee	0.00	0.00	0.00	0.00
Legal Fees and Expenses .2%	4,989.32	0.72	7,127.60	1.03
Insurance \$6 for every 1K	14,967.96	2.16	21,382.80	3.09
Commercial kitchen Upgrade	100,000.00	14.45	200,000.00	28.90
Furniture furnishings & Equipment	0.00	0.00	0.00	0.00
Project Interim Finance costs	0.00	0.00	0.00	0.00
	374,412.60	54.11	592,018.00	85.55
Estimated total Project cost (excluding gst & Contingency)	2,869,072.60	414.61	4,155,818.00	600.55
Contingency (10%)	286,907.26	41.46	415,581.80	60.06
Escalation (5%)	143,453.63	20.73	207,790.90	30.03
Estimated Total Project Cost	3,299,433.49	476.80	4,779,190.70	690.63
GST	164,971.67	23.84	238,959.54	34.53
Estimated Total Project Cost	3,464,405.16	500.64	5,018,150.24	725.17

Next Steps

When the community has secured funding and the necessary community support to move forward, the next phase of the project will be Design Development of the site and expansion. MHA anticipates the following sequential steps for the next stages of design.

Project Team

Before design work continues, a comprehensive Project Team would be created that would include the Owner's reps, community and political reps, MHA, a full engineering team and a construction manager.

MHA would solicit proposals for the engineering team for the Project and make recommendations for the Owner to select from. MHA anticipates the Engineering team would include:

- Surveyor
- Geotechnical Engineer
- Civil Engineer
- Structural Engineer
- Mechanical Engineer
- Electrical Engineer
- Landscape Architect

MHA would solicit proposals from General Contractors for pre-construction Construction Manager services. Their services would include review and description of constructibility, costing and schedule for site work and building systems.

Site Design

Planning the development of the site will take the coordinated and focused efforts of most of the Project Team.

next steps would include:

- A surveyor would create a detailed topographic Survey Plan.
- The project team would review and finalize the architectural Site Plan design with the Stakeholder Group.
- MHA would update the architectural site plan design as

needed.

- The Project Team would review and determine the construction sequence and schedule for the Project.
- The geotechnical engineer would determine the bearing capacity of the ground as needed for all buildings and provide a geotechnical report.
- The electrical engineer would prepare a preliminary load calculation for the buildings and the site and forward the results to BC Hydro to determine what electrical infrastructure was required.
- Working with the Regional District the civil engineer would determine the water, storm sewer, sanitary sewer and sewage disposal requirements for the project.
- The Construction Manager would provide cost estimate, constructibility, and schedule for site services.
- MHA would coordinate and prepare a detailed site planning package of site plan documents

Building Design

Planning the development of the Expansion will also take the coordinated and focused efforts of most of the Project Team. Those efforts will include:

- Review and finalize the expansion program with the Stakeholder Group;
- Update the program as needed;
- Update the existing building plans as needed to reflect the amended program;
- Review the major architectural elements with the Stakeholders and revise the design as needed to capture the big ideas;
- Working with the electrical engineer determine the primary electrical systems for the Building;
- Working with the Structural engineer determine the primary structural systems for the buildings
- Working with the mechanical engineer determine the primary HVAC and plumbing systems for the buildings;
- Review and finalize the preliminary, order-of-magnitude

construction cost Budget

- Review and revise the design drawings as needed to suit the Budget
- Prepare an updated preliminary design Development package
- Present the updated Preliminary Design package as a report to the Stakeholder group in Lund

Cost Control

- Consultant team to prepare an outline specification for costing
- Regional District to Prepare a project budget
- Construction manager to prepare a detailed construction cost estimate based on design drawings and out specifications.
- Construction Manager to comment on constructibility (design development)

Schedule

- Regional district to create a project schedule that includes funding and agency approvals.
- Construction manager to create construction schedule.