Interpretation of the Museum Narrative:
The Re-design of the Canadian Fossil Discovery Centre

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Acknowledgments

Abstract

Museums have long been an institution of preservation and the collection of objects, art, and curiosities. Items safely stored and displayed for the public to look at, never changing. As a child seeing and learning about a museum's objects for the first time is thrilling. However over time that thrill fades and what was once magical in the eyes of our five year old self is now lackluster and monotonous. As adults we cease to visit that museum we loved as a child. Why would we? Nothing has changed, there is nothing new.

There is something special about the nostalgia of that feeling when you were five and first saw an exhibit that opened your eyes to another world. The traditional museum is still the foundation of museums in the 21st century and adapting to the new museum typology (the post-museum) is inevitable for continued success, but can it be both a traditional and a post-museum?

With new technologies and research in the field of museums and how people learn in them there has been a shift in what it is and should be to its visitors. This practicum project aims to address the shift of the interiors and exhibits in museums of the 21st century. Many factors contribute to the changing of the museum; its design, exhibits, and social construct have all been adjusted to create more inclusive experiences. Through the examination of tourism, community, post-museums and exhibition design this practicum project aims to provide a balance between the traditional and post-museum typology. The result is a stronger connection with the local community and an enriching experience for museum goers.

"The best thing, though, in that museum was that everything always stayed right where it was. Nobody'd move. You could go there a hundred thousand times, and that Eskimo would still be just finished catching those two fish, the birds still be drinking out of that waterhole [...]...Nobody'd be different. The only thing that would be different would be you."
(Salinger, 1951, p.121)

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CHAPTER 01

project overview

1.1 Introduction

The current Canadian Fossil Discovery Centre (CFDC) is home to the largest collection of marine reptile fossils in Canada, and is listed as a Manitoba star attraction and top five travel destination in Manitoba according to Maclean's Magazine (Banks, 2009). It is home to the largest publicly displayed mosasaur fossil in the world (Bruce), measuring at thirteen metres in length. In March of 2015 the CFDC unveiled a new mosasaur (Suzy) that measures nine metres in length, which is displayed alongside its male counterpart. However, the discovery centre has been described by the museum itself as inadequate and in need of improvement. The intent of this practicum will be to design a new interpretive learning centre for the CFDC using an adaptation of a Winnipeg Exchange District Building, which is similar in vernacular to Morden's main street buildings, located on 109-111 Pacific Avenue.

Traditionally museum typologies have been viewed as purely educational tools, a branch off of schools, but as the museum has evolved, specifically into the post-museum, it is taking a more central social role. They have renewed their philosophies and practices and are no longer solely described or limited to the conservation of objects. They have begun to shed their, "repressive and authoritarian symbols of unchanging solid modernity," (Hooper-Greenhill 2007, p.1). Museums have slowly been evolving into post-museums and interpretive centres, where they are becoming recreational and educational venues. By doing this museums are now competing with other free-time activities fighting for the public's attention. There is a greater focus on the user and how they can and will interact within the space and with exhibits. More attention has been placed on the visitor and their emotions, making exhibits interactive causing visitors to both physically and cognitively perform within the interior.

By utilizing the idea of the post-museum along with elements of a traditional museum the new space will encourage all ages, genders, and economic backgrounds to visit. The new design will provide areas needed to properly display artifacts and interpretive exhibits that will facilitate both cognitive and active learning. Ancillary spaces will be designed to incorporate the six emotional rewards of free time as outlined in chapter three, and increase the off hour use of the centre by the local community. Establishing a new location and design for the CFDC will create a public space where the local community can socially engage with others in and outside of their community with the hopes of becoming an economic driving force for the city of Morden.

The first chapter of this practicum will provide context and rational for the practicum project; the clients involved, goals, and pose three questions of inquiry. The second chapter will focus on the site and building; specifically the selection criteria for both building and site, current and historical building use, building materiality, and the site. The literature review will be presented in the third chapter where two topics are discussed and reviewed. These topics include Tourism and Community, and Interpretive Learning in the Post-Museum and Exhibition Design. It should be noted that branding was initially reviewed as a topic for this practicum, however it fell beyond the scope of the project. Chapter four will cover three different museum case studies in three different locations and countries. Followed by chapter five with programming, which includes; Morden's history, client profile, the users of the space's activities and needs, functional, aesthetic, and technological requirements, goals, building code analysis and spatial adjacencies. Chapter six is the design chapter where an overview of the final design is presented, all considerations are explained with visuals of the site, plans, elevations, sections and perspective renderings. Finally chapter seven will provide a conclusion to the practicum project focusing on the three questions of inquiry in the first chapter and finally explain the challenges and future opportunities that could be used moving forward.

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1.2 Context and Rational

Currently the Canadian Fossil Discovery Centre (CFDC) is located in the basement of a community ice hockey rink. The new projected building for the CFDC will be relocated within Morden, Manitoba to a site that runs parallel to the current location. Here it will have a greater presence and be easily identified, without taking away from Morden's historic buildings on the city's main street. The proposed new site will allow the CFDC to be a destination for not only out of town visitors but members of Morden's community. For this practicum an existing building in Winnipeg's Exchange District will be used as the proposed building type and act as an adaptation base model for the new museum. The new building will be easily identified and act as an advertisement for itself. As previously stated the new site location runs parallel and across the main intersection of Route 100 and Highway 3 when entering Morden. It is located near the edge of the town to accommodate for higher traffic volumes so it will not interfere with other buildings and their parking areas. The new site will have views to nature and not be adjacent to competing buildings. It will be located in an area where daily sunlight is ample to allow natural light into the space. The project will be a mixed-use building that will incorporate the local community through ancillary usage, volunteer and employment opportunities.

1.3 Clients

The client for the proposed new museum is the Canadian Fossil Discovery Centre, which is a charitable organization governed by a Board of Directors. They support and are regularly involved in both local and international outreach and research, working alongside Paleontologists and other professions within related Earth Science fields.

1.4 Project Goals

Organizational Goals:

The goals of the organization are to support local initiatives in the field of Paleontology and related earth sciences. The museum will search and excavate, document, collect, preserve, research and study, provide public exhibitions, educate, and interpret fossil and geological specimens that are primarily from the Manitoba Escarpment as well as (including) surrounding areas and related geological formations. Acquire and conserve properties with fossil-bearing strata, along the Manitoba Escarpment, enabling the museum to preserve and conserve fossiliferous areas ensuring the opportunity for future research and achievement of the museum's purpose as part of Canada's heritage. Provide support for the Paleontological/geological exploration and research of potential fossil-bearing properties along the Manitoba Escarpment or related formations outside of Manitoba. Collaborate with any individual or group, organization, university, school, museum or other institute of research in any manner within the above noted areas of interest, consistent with sound principles of scientific research and program/museum development. ("Governance")

Form and Image Goals:

• The new museum should excite and entice people to wander intuitively throughout the interior
• Incorporate social areas for interaction
• Incorporate ancillary spaces that allow for extended hour visits
• Provide views outside to give visitors a sense of reprieve from all the information in front of them, but still leave them interested to continue exploring
• The surroundings should feel safe, inviting to families, and overall comfortable, but at the same time create challenging, new, or unusual experiences

• The aesthetic should stand alone and differ from its surroundings and neighboring buildings, as it is a unique part of Manitoba's history
• The building's architecture should convey an architectural language that is inviting and intriguing
• Exhibits within the space should allow guests to engage in both cognitive and active learning and help them understand the context of where the artifact came from or would have existed
• Produce exhibits that are honest: display real artifacts that were discovered, not solely cast replicas
• Preserve what is precious in minimal display units and what is not out of case
• Provide an ethereal environment that will give visitors an aqueous sense of place

Functional Goals:

The major function of the museum is for display and learning. Visitors primarily come to museums to learn, but with the design of this new centre the space should accommodate for public socialization. This public space will include the following: a restaurant, retail space, and a theater. It will be designed for both educational and experiential purposes. The building should accommodate at the minimum, one hundred persons. The space should allow for a temporary gallery that will change either monthly, quarterly or yearly, as decided by the organization.

1.5 Questions of Inquiry

The following questions will facilitate the design and program of this project:

1) To what degree can different tourist types and the emotional rewards they receive inform the program and interior design of this practicum project?

2) Can adopting the post-museum typology help the Canadian Fossil Discovery Centre to compete with other free time activities?

3) How can interior design in museums adapt to the new evolution of the post-museum or interpretive centre typology?

CHAPTER 02

building + site

2.1 Building + Site Selection

The site selection for the CFDC will be based on the criteria listed below. Through site and building analysis this chapter will illustrate how the site at Route 100 in Morden, Manitoba and the adaptation of an existing building at 109-111 Pacific Avenue in Winnipeg, Manitoba's West Exchange meets the criteria for the CFDC. The building at 109-111 pacific Avenue will be used as a base form that will be adapted and changed so it could be located in Morden, Manitoba as there is no suitable building that currently exists within the city.

1. Location
2. Community
3. Existing site and building

Location Criteria

• Close to town center and walking paths
• Views to nature
• No competing structures
• Site is easily accessible
• Close to city entrance
• Street level access
• Ample parking surface

Community

• Close to town's main street
• Walkable
• Located in an area close to a public park
• Close enough to town, but far enough to not disrupt residential and local businesses
• Community center located along same roadway
• 2008 Cultural Capital, strong focus on art and culture in the community

Existing Building and Site

• Self-contained structure
• Single storey building
• Warehouse/garage style with large open space to support program
• Minimal interior and exterior
• Opportunity for expansion and new architectural features for both exterior and interior
• Site is surrounded by greenspace which supports exterior landscape features
• Building materiality similar to historic buildings of Morden

LEGEND

	roads
	major routes
	railway
	walking paths
	dedicated bicycle route
	trails
	site route 100
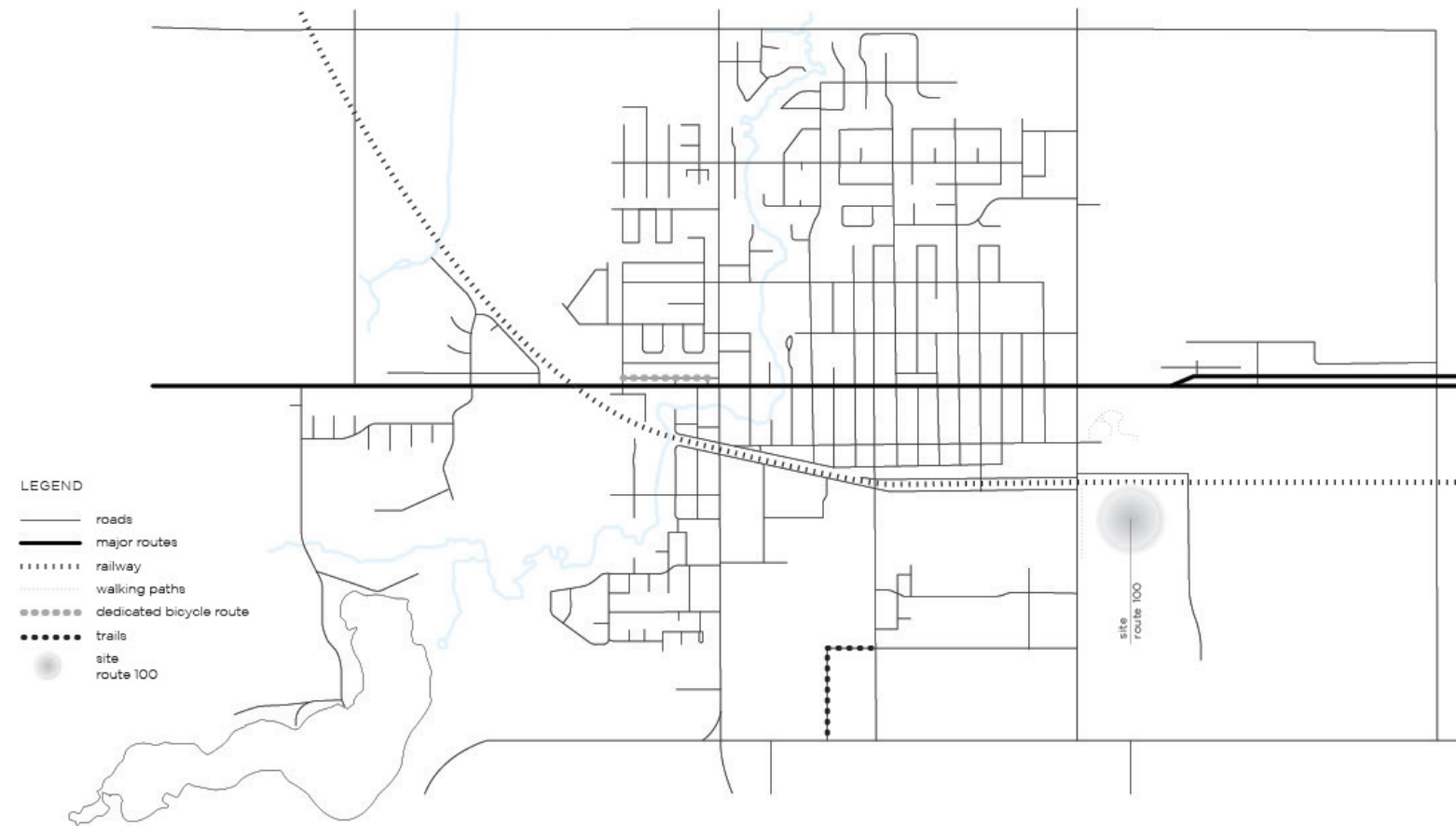
site
route 100

Figure 1. Morden road and path map

2.2 Site

Overall continuing to keep the CFDC within Morden will be beneficial as the town has a strong focus on all arts and culture within its community. Being named the 2008 Cultural Capitol by the Canadian Parliament, along with its many festivals, historic buildings, beautiful parks, outdoor activities and events in celebration of the community gives a strong appeal for continuing to keep the CFDC within Morden. It insures that there will be continued support from the community and will add to the community's already great sense of pride in their town and diverse culture.

The proposed site for the new CFDC building is located just at the edge of Morden along Route 100 from the East end of the town. The site is situated among the town's industrial park with neighbours such as the government of Canada's Morden Research Station, 3M Canada Company, Décor Cabinets, and Jordale Perry Company. CFDC's new site is surrounded by an ample amount of nature with farmland, deciduous and coniferous trees next to and on the site. The Morden Research Station located South of the proposed site and it's immediate neighbour, has a park with walking paths and multiple tree species that is frequented by locals walking the area. Although it is further from designated park areas, the site does feature a walking path to the East running alongside Route 100. It will be close to Morden's commercial district on Stephen Street that runs perpendicular to Route 100.

Stephen Street is home to a collection of late nineteenth and early twentieth heritage buildings in the Queen Anne style as well as turn of the century Italianate, Second Empire and Gothic Revival. Therefore due to the size and style of the building, coupled with the fact that Stephen Street is home to many heritage buildings, it is not a viable option to locate the CFDC in the economic hub without the repercussion of demolishing multiple buildings and businesses located there. The proposed location will be beneficial to the new CFDC as it is located in an area with views to nature, it is easily accessible with ample room for guest to park without disrupting other businesses, and there are no immediate competing buildings.

Figure 2. Morden zone map

LEGEND

industrial · institutional · parks · camping · civic center · research center · recreational · residential

2.3 Current + Historical Building Use

The building located at 109-111 Pacific Avenue in Winnipeg, Manitoba's West Exchange has been home to numerous businesses since its construction. Originally designed in 1945 as an addition to the parallel 108 Alexander Avenue Canadian Pacific Express Garage, the 109 address sits slightly lower than its parent building. Now known as the Dominion Express Company this building measures twenty five feet. The structure is comprised of masonry walls using brick construction, steel joists and concrete flooring. Since its use as a garage the building has been host to a number of different occupants. The Dominion Express Company building has been partitioned into several different businesses. Its more well-known occupant the Costume Museum of Canada called 109 Pacific Avenue home for a number of years, but most recently has become home to a local furniture store, papeterie and fitness center.

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2.4 Building Materiality

The exterior of the Dominion Express Company building at 109-111 Pacific Avenue consists of beige brick masonry, with minimal recessed faux column details. Large windows with steel grid mullions span across the entire façade of the South West, North West and South East walls. The front, South West, façade of the building consists of three openings; a garage door, single panel door and double glazing storefront door. The interior is expansive and well-lit by natural light with each window generally measuring at six feet by fourteen feet. White painted brick and exposed ceilings allow the natural light to fill the space, making it warm and inviting. It's almost entirely white interior is contrasted by the dark concrete floor. This building has, for the most part, stayed the same since its original construction, allowing any tenant that enters to tailor it to their specific needs.

Figure 3. Height ratios

CHAPTER 03

literature review

3.1 Introduction

The Canadian Fossil Discovery Centre (CFDC) is in need of a new design. This literature review focuses on two topics intended to inform the design process of this practicum. These topics will help to create a new space for the CFDC where objects will have enough space to be displayed properly, provide both cognitive and active learning options and allow visitors to choose their own experiences. They will also help to inform the ancillary spaces for the CFDC and how the local community can become an active part of the centre on a regular basis.
The first topic reviewed that will inform the brand is tourism and community. It is important to review tourism, as the CFDC is not located within the province's capital, or a major city. Tourism specifically identifies the different types of tourists that exist today and the types of activities or experiences they seek when travelling. Community will aid in informing the frequent users of the project and understanding the power of branding through tourism and community. The final topic is interpretive learning and exhibition design, exploring what it is and how it may be used in exhibition design.

3.2 Tourism and Community

Interest in tourism has been on the rise across Canada. There has been a re-branding of previous efforts to attract internal and external visitors to the province of Manitoba. Commissions of new buildings, renovations and advertisement campaigns have been occurring since 2006. The original slogan of Friendly Manitoba has been reiterated and changed over the years to include; Spirited Energy, Manitoba time; and most recently, Manitoba Canada's Heart Beats. Colin Ferguson, Travel Manitoba president and CEO, believes in the power of the new television campaigns, "…to surprise people and open their eyes about what Manitoba has to offer" (Forlanski, 2013). However the new string of visually stimulating commercials advertising what Manitoba has to offer appear to only offer what is located in the city of Churchill and Winnipeg. These spectacular sites of the polar bears, great lakes and diverse culture in the city of Winnipeg are intriguing but fail to showcase other tourist spots in the province; one of which is the Canadian Fossil Discovery Centre (CFDC). As previously stated it is home to the largest collection of marine reptile fossils in Canada and the city of Morden still has an active dig site that works in conjunction with the museum which allows any visitor to take part in a dig. The museum and dig site are something unique to the province and offer a new experience.

Unique opportunities and experiences are important to tourism in Manitoba and with Travel Manitoba`s continuous effort over the past few years to change the province`s tourism slogan it is apparent that there is a lull in tourism within the province. Something is desired to gravitate people towards Manitoba when choosing a travel destination, something that goes beyond a new tagline. Perhaps it is not only the re-branding of Travel Manitoba's slogans and advertisements that is needed, but a call for re-design of the attractions that are or are not featured in these advertisements.

It is important to define tourism as it extends to different tourist types and those attitudes and values of each type could determine programming within the CFDC. Community must also be defined to gain an understanding of the local support that will enhance the museum.

Research on tourism for the new design will help to brand the museum with regards to the types of tourists, their needs and expectations, along with general knowledge of what promotes and generates tourism. This will help to inform who is currently most likely to visit a museum and who is not and also to better understand what typical visitors are looking for once they enter a museum space. Understanding both the local community and typical tourist types will help to better gage the demographics of the CFDC and inform any ancillary spaces incorporated within the centre.

Tourism + Tourist

Tourism and travel have seen a great rise in both the number of people travelling for pleasure and the number of countries and places visited regularly (Cohen, 1972, p.164). Individuals are becoming less attached to their environments and becoming more willing to temporarily change and adapt to new surroundings (Cohen, 1972, p.165). Erik Cohen's (1972) text, *Toward a Sociology of International Tourism*, will be used as the main text to support the topic of tourism and help to define the project's programming. Cohen explains the driving sociological and psychological forces of tourism and tourists. He outlines the different tourist types, their needs, wants, and roles.

Increasingly tourists have become more aware of the world outside of their own and more interested in things, sights, customs, and cultures that are different from their own (Cohen, 1972, p.165). Cohen (1972) states that a new value has evolved: the appreciation of the experience of strangeness and novelty (p.165). It is this strangeness and novelty that attract tourists to different places, yearning to experience something outside of their normal habitat. Cohen claims that tourism is a modern phenomenon. It should also be noted that it has become more accessible to tourists than ever before. With access to the internet, multiple means of transportation, media, and modern technology, it has become convenient and relatively simple for tourists to experience cultures, things, sights, and customs outside of their own. Tourism as a cultural phenomenon is only possible when an individual develops a generalized interest in things beyond their particular habitat; when there is contact with and an appreciation and enjoyment of strangeness, and novelty is valued for their own sake (Cohen, 1972, p.165). Although the tourist does want to experience and enjoy things beyond their own habitat, an experience that becomes too strange or unfamiliar can cause them to shy away. The tourist will always be molded by their "… native culture and bound through habit to its patterns," (Cohen, 1972, p. 166). If complete abandonment of their customs occur by fully immersing into a new culture and environment this can be seen as unpleasant and threatening to the tourist, most tourists require something familiar to remind them of home (Cohen, 1972, p.166). This is why hotel chains often offer the same look in their hotels across the globe, they are offering something to the tourist that at the end of the day is, for example, the same in Spain as it is in North America. Tourists want to experience the novelty of the macro environment from the familiar micro environment. This experience combines, a degree of novelty with a degree of familiarity and the security of old habits with the excitement of change (Cohen, 1672,

p.167). The extent to which familiarity and novelty are experienced depends upon the individual's tastes and preferences. Cohen outlines different typologies of tourists and their roles which sit on a spectrum that range from little integration to full integration within the community or surroundings that are visited. They can either be institutionalized tourist roles, where all travel is dealt with in a routine way by a tourist establishment, such as a travel agency, or noninstitutionalized tourist roles where they are open to different roles and very loosely attached to any tourist establishment (Cohen, 1972, p.). Within these roles there are four tourist types; The Organized Mass Tourist, The Individual Mass Tourist, The Explorer, and The Drifter.

International Tourism Arrivals

Based on United Nations World Tourism Organization's
The One Billionth Tourist December 13, 2012

= ≈10 Million Individuals

Figure 4. International tourism arrival ideogram
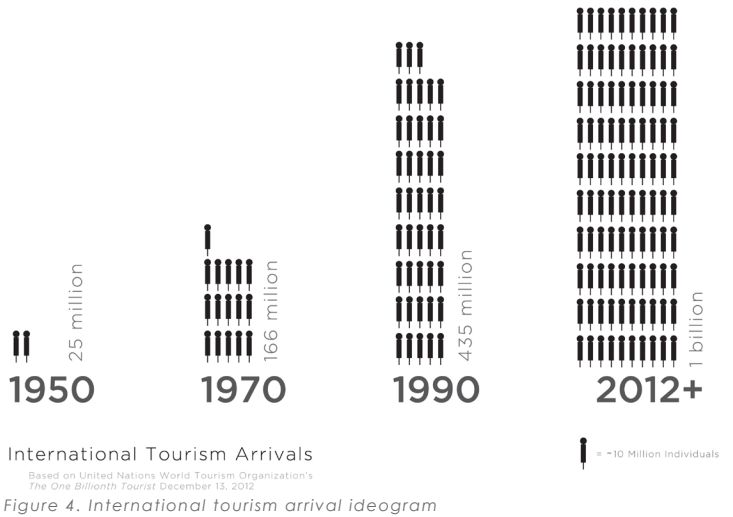
Tourist Types

The Organized Mass Tourist and The Individual Mass Tourist types both fall under the institutionalized tourist role. The Organized Mass Tourist is the least likely to go out of their comfort zone. They are the least adventurous and remain confined to their own personal "environmental bubble." For example, the organized mass tourist will take a guided tour in an air conditioned bus, travelling at a high speed through the countryside. This type of tourist will opt for the packaged-tour, make a fixed itinerary far in advance, and ensure that every step of the trip is well planned and guided. Ultimately the organized mass tourist relies on an institution to make decisions for them. Here familiarity is at a maximum and novelty at a minimum. The second tourist type that falls within institutionalized tourist roles is The Individual Mass Tourist who is similar to the organized mass tourist, but does not fully plan their trip before departure. All of the major travel arrangements are still made by a travel agency however they have more control over their time schedule and do not bind themselves to a group. This type will still experience things within their "environmental bubble," but will sometimes venture out into well-known territory. For the individual mass tourist familiarity is still dominant, but less than the organized mass tourist, and novelty is greater than routine.

Generally, a museum would see these two types of tourist the most. They would be the types to take the guided audio tour and the chartered bus from the City of Morden to the dig site where they can dig for fossils. They are being told what their options are and will only select what they will do based on that set list, and even then they may not want to be given an option, but rather be told, "This is what you will do." These two tourist types will be the main demographic for the CFDC.

The last two tourist types, the explorer and the drifter fall under the noninstitutionalized tourist role. The explorer will arrange a trip on their own, trying to stay away from the common tourist traps as much as they can, but will still look for accommodations and transportation that are comfortable. They will try to immerse themselves in the culture with the people and their native language, leaving their "environmental bubble," but always returning if a situation becomes too rough. Therefore they do not fully immerse themselves into the host society. For the explorer novelty is dominant, but not completely. The final and last tourist type, the drifter, is the most nomadic and immersed tourist of all four. They are the type to venture as far off the beaten path as possible leaving their customs and way of life behind. Connections to tourist establishments do not exist and are shunned, their trip is all on them, often they become so immersed into the host society that they will try to live the same lifestyle, sharing similar habits, food, and shelter. Money can become an issue, as they have no fixed itinerary and no defined travel goals, so they will pick up jobs along their trip when money is needed. For the drifter novelty is at its highest and familiarity disappears (Cohen, 1972, p. 167-169).

The CFDC would most likely not be able to attract the drifter, but could possibly attract the explorer. The two types would find CFDC's dig site more appealing than the centre with exhibitions. The two would like to be actively engaged with the culture and because the animals that are now extinct that active engagement cannot take place. The new culture is the people of the community and these tourists will be more interested in their daily lives than what is in the museum. However, because there is a community of paleontologists the two tourist will try to engage with this part of the community. The explorer will make their own way to the museum and dig site, but if things seem too dangerous, like severe weather they will leave and find comfortable

accommodations. The drifter on the other hand travel freely and do not constrain themselves within a branded environment. They would most likely want to visit a farm and help the local community farmers in their way of life and provide for the city of Morden. The drifter would also be the type to hitch-hike to the dig site, or any other site and try to find fossils on their own without a guide telling them where to dig. They would be more inclined to work alongside paleontologists, camping on-site and searching each day no matter the conditions.

Institutionalized Tourist

All tourist types and their roles have great effects on the tourism industry. Cohen (1972) breaks down the two tourist roles further to help explain their effects on the industry. As previously stated the institutionalized tourist relies heavily on large tourist establishments to make their decisions for them. It is a mass industry where travel is sold as a standardized package that has been mass produced. Every aspect of this package has been pre-arranged and laid out perfectly for the tourist. They are, "...given the illusion of adventure, while all the risks and uncertainties of adventure are taken out of the [sic] tour. In this respect, the quality of the mass tourist's experiences approached that of vicarious participation in other people's lives, similar to the reading of fiction or the viewing of motion pictures," (Cohen, 1972, p. 169-170). This effect is reached by tourist establishments with two interrelated mechanisms that Cohen (1972) calls *transformation of attractions and the standardization of facilities*. There is something that a country, region, or locality has that will make it different than any other place and worth visiting. It can be genuine or artificially created, whatever it may be it makes a place an attraction. Cohen (1972) refers to the German term Sehenswürdigkeiten meaning, "things worth seeing," (p.170). These "things worth seeing," or "attractions" are what drive

tourism in a given society, they attract tourists naturally and can range from nature to architecture. These "things worth seeing" would be the equivalent to Manitoba's Star Attractions signs that are posted along many roads and highways within the province.

However "things worth seeing" can also include artificially created things that Cohen (1972) refers to as, "...contrived 'tourist attractions,'" (p.170). Although the word contrived can make an artificially created tourist attraction seem worse than a genuine attraction, it is important to note that with mass tourism there is still a tendency for the manipulation and transformation of both attractions making them more suitable for mass tourism (Cohen, 1972, p.170). The attraction can be changed, staged, removed of any unsuitable elements, managed, etc., causing it to "...largely lose their original flavour and appearance and become isolated from the ordinary flow of life and natural texture of the host society," (Cohen, 1972, p.170).

"Transformation of attractions provides controlled novelty for the mass tourist," and "...the standardization of facilities serves to provide the tourist with the necessary familiarity in their immediate surroundings," (Cohen, 1972, p.171). This is notion is what was previously stated about the familiarity that tourists look for when travelling, like a hotel chain with the same interior style. The transformation of attractions and standardization of facilities have become necessary to managing mass tourism by creating a template to make all tourist experiences similar. This makes tourism more manageable, comfortable and safe for the institutionalized tourists. All attractions and facilities are pointed out and chosen for the tourist before they even begin their tour. Books, brochures, and travel agents will even give a level of importance to certain attractions and facilities to ensure that tourists will visit.

Ultimately this will lead the tourist to only pay attention to that specific spot, or item of interest on a tour without any regard to the journey it took to get there, or the surroundings. They are focused solely on what was highlighted and nothing else. "And so mass tourism has created the following paradox: though the desire for variety, novelty, and strangeness are the primary motives of tourism, these qualities have decreased as tourism has become institutionalized," (Cohen, 1972, p.172). The mass tourist is travelling in a parallel world to the one that they are visiting, meaning that natives to the visited society become detached from what use to be their culture, lifestyle, or way of life. They become less integrated with the places that they use to frequent, creating a social separation between tourist and native. Leaving the tourist to dwell in a world that appears and feels like the real thing, but in actuality is a projection of what it once was. Only on the outside are they surrounded by the actual, true host society; again they are in their "environmental bubble". The tourist only interacts with the individuals that are a part of the tourist establishment –hotel managers, tourist agents, guides—seldom with the natives (Cohen, 1972, p.173). Unfortunately this does not allow tourist to become any closer with the host society they are visiting and continues to perpetuate myths between countries. Cohen (1972) hypothesizes that, "...the larger the flow of mass tourists becomes, the more institutionalized and standardized tourism becomes and consequently the stronger the barriers between tourist and the life of the host country become," (p.174).

Noninstitutionalized Tourist

The noninstitutionalized form of tourism, the explorer and drifter, experience a much deeper and richer understanding of the host society that they visit. The will try to immerse themselves into the local culture as much as possible by avoiding the mass tourist route. As previously stated the explorer will still look for comfortable accommodations and reliable transportation, but they truly are their own guide, travelling for their own pleasure and experiences. They will try to communicate with the host society as much as possible, but not become emotionally involved or like them during their stay. However in the explorer's attempt to escape mass tourism, they become the shepherd for mass tourism; they discover new places that in turn alert institutionalized tourists of a new attraction or facility. Their "...experiences and opinions serve as indicators to other, less adventurous tourists to move into the area," (Cohen, 1972, p.175). On the other hand the drifter is the extreme version of a tourist, they are generally a young individual from affluence that rebels against it, generally students or recent graduates, that are not tied down to a job. They want to experience the world outside of their own by any means possible. The drifter revels in the excitement of the unknown, the ultimate strangeness, of meeting new people, experiences, and happenings. Travel is without any direction, timeline, or purpose, they may seem to be lost and in search of their place in the world. Drifters are not concerned with comfort, but rather affordability. Everything they do is done in the most inexpensive way, even if that requires hitchhiking and sleeping outside (Cohen, 1972, p.178).

Becoming a successful tourist attraction or facility can be good and bad because no matter which tourist type is catered to, one or more will always be uninterested. To appeal to all tourist types is nearly impossible and although tourism seems to be detrimental to the host society, it can also be beneficial. The tourism industry can separate the native individuals from tourists, but at the same time it can become a source of revenue for a community that they would not have had otherwise. There needs to be a middle ground between the familiarity

and strangeness of tourism and a consideration for the local community first and foremost before an institutionalized or noninstitutionalized tourist attraction or facility is created because at the end of the day they are the individuals that will hopefully frequent the attraction or facility the most.
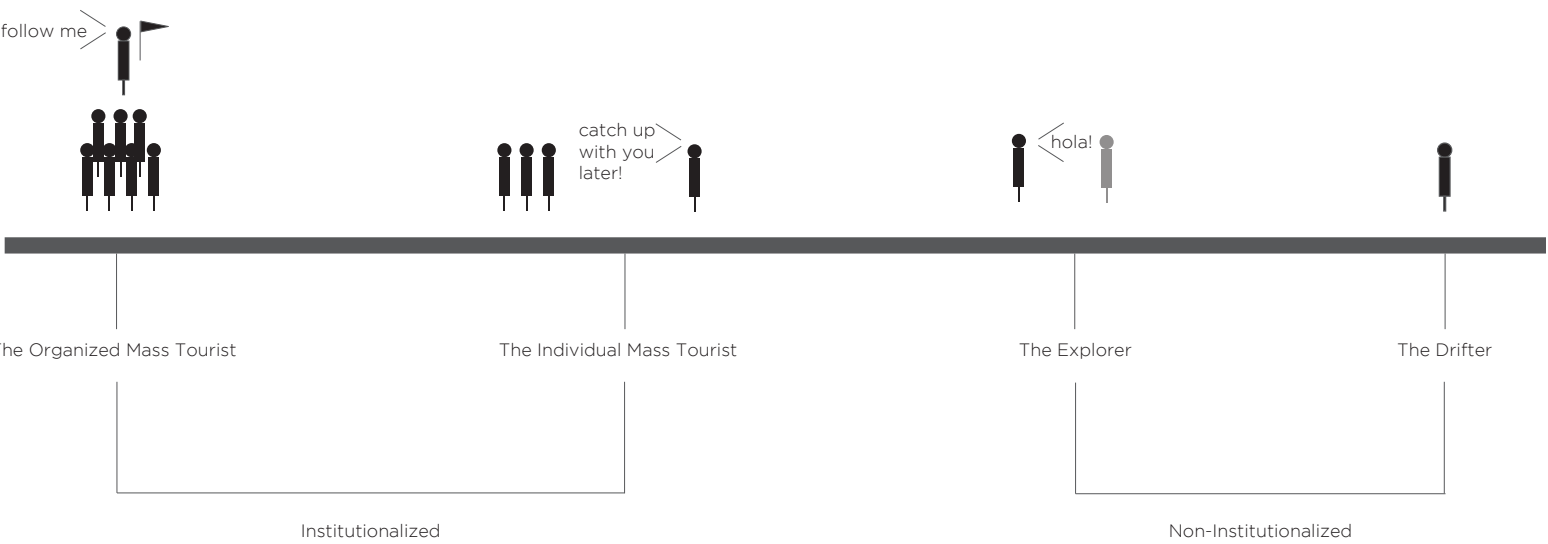

Figure 5. Tourist types

Community

It is crucial to define what community means, who the term refers to and its importance to the CFDC. The topic of community will question and define: 1) What are communities? and 2) Museum roles in the community. *Reinventing the Museum: Historical and Contemporary Perspectives on the Paradigm Shift*, edited by Gail Anderson, includes multiple texts regarding museums, two that will be used for this practicum include Claudine Brown's (1992) *The Museum's Role in a Multicultural Society* which will help to define what a community is or can be. Second, Neil and Philip Kolter's (2000), *Can museums be all things to all people? Missions, Goals, and Marketing Roles* will help to define the museum's role in the community.

Multiple authors agree that communities play a crucial role in the success of any museum, big or small. For it is the community that is the driving force behind the museum; their contribution of time, money, and support are needed to propel its initial success. If a community member will not support something in their own backyard, why would an outside visitor? Communities can be defined in numerous ways, they can range from a large group of individuals to a small inclusive group. There are an endless amount of groups that an individual can be a part of. Understanding their affiliation with certain communities will be beneficial in defining a target audience for this practicum, which ultimately defines their needs (psychological and special).

What are Communities?

In Brown's text she calls for a re-examination of "the community." Posing the question of who communities are? She states that by definition, the community is "…an interacting population of various kinds of individuals in a common location," (1992, p.143). This community will often share common history or societal, economic, or political interests. It is important to understand that community is not only an ethnic group, neighbourhood, or the residents of a defined area. In fact individuals can be a part of many communities at the same time, from the moment that an individual enters the world they become a part of some community (Brown, 1992, p.144). When the term community and museum are put together, community is often seen as the audience whose needs are not being met; the poor, underprivileged youth, or certain ethnic groups. However the truth is: "Community is any group of individuals who have the potential of being members of an institution's visiting public," (Brown, 1992, p.144).

The first type community discussed is family, this is the first community that individuals become a part from the moment they enter the world. This community provides the fundamental building blocks for the formative years of life; speech, manners, walking, standing, and social interaction. The physical location and family dynamic will determine an individual's way of life, informing their sociological integration and interaction within the community. Museums should be extremely aware of this community and have programs that are responsive in terms of time, place, cost, and logistics to accommodate family groups of different lifestyles and needs. The museum should serve families by recognizing the parents and children's roles as teacher and student. Second are educational communities, which are the most successful community with regards to the museum. School groups lead, with most being elementary, but lack any age group past pre-teen. Brown (1992) states that the "…term 'educational institution' needs to be more broadly defined and the mechanisms for collaboration need to be reconsidered and expanded on," (p.147). Museums should consider the educational communities of continuing education and certificate programs, not just those of a primary education. This community is perhaps one of the greatest influences to an individual's development. Generally, from the age of four individual's within the North American community are placed in some form of on educational facility. Whether it is day care or pre-school, individuals are being taught from the very early years of their lives. Their minds begin to be challenged learning either cognitively or actively. As they grow, their learning styles can be challenged and more complex information can be presented. Understanding that this community is constantly evolving and ranges in levels of academia can lend itself to the design of exhibitions. It reaffirms the fact that museums can have a broad audience, who may all be a part of one community, but are not all the same. Though they are all a part of the educational community they are all at different levels of knowledge and based on their first family community may know more or less.

Third is the neighborhood and workplace community. This community deals with the definition of personality that is shaped by race, class, and age; by the proximity to interaction with other communities; and by overall neighborhood personality. Neighbourhoods are immediately ascribed a personality when using the following terms; urban or suburban, inner-city, middle income, or gentrified (Brown, 1992, p.147). It is important that all museums see themselves as a neighbourhood museum because the school and neighbourhood communities represent the places where most of an individual's time is spent, where the strongest and lifelong bonds are made (Brown, 1992, p.147). The museum needs to establish itself with the local or neighbourhood community to create constant and repeat visits. If the community invests its time into something they are more likely to support it and if they won't support something in their own neighbourhood why would a tourist from across the globe?

Although the main emphasis of Brown's text is on the inclusion of multiple cultures and attracting them not only during certain points in the year, such as Black History Month, she does make several key points that can be useful for the CFDC and inclusion of community.

Museum Roles in the Community

In contrast, Kolter and Kolter's (2000) text focuses on the museum's role and responsibilities in the community by first reviewing who the museum was for and what the museum did. Originally museums were for the preservation of collections; 1) Care for the collection then, 2) to make visible. The museum is now shifting towards the notion that they exist to serve the public, "The old-style museum felt itself to be under no such obligation … The museum's prime responsibility was to collections, not its visitors," (Kolter and Kolter, 2000, p.167). Now museums are trying to reach a broader audience, create a bond with the community, and compete for the free time of other educational and leisure activities. The boundaries that once existed between museums and other recreational and educational organizations are beginning to blur and breakdown (Kolter and Kolter, 2000, p. 167-168). Now museums are faced with competition from different entertainment and cultural districts that also present collections and exhibitions in larger cities, on the internet, restaurants, sports complexes, and shopping malls, as well as fellow museums, history and science centres (Kolter and Kolter, 2000, 168).

Kolter and Kolter outline three strategies for building museum audiences and improving the museum-going experience, but the most relevant to this practicum is the second strategy, which is related to local community. Community service will raise the museum's image and have a local impact (Kolter and Kolter, 2000, p.172).

Many museums were originally generated out of a sense of place and community. Local historical societies of the nineteenth century began organizing museums to celebrate heritage and community history. For example, today historic houses like the Spencer House in England; originally built for John, the first Earl Spencer (a relative of the late Princess Diana) is open to the public for viewing every Sunday. It wasn't until the twentieth century when John Cotton Dana of Newark Museum, New Jersey developed the educational role of museums and linked them to schools, becoming the first major expression of community service. Dana regarded museums "to be of immediate, practical aid to all of the community that supports it," (Kolter and Kolter, 2000, p.178). The museum's role in community service in recent years has extended beyond education and have begun to make themselves a vital part of community life and instruments in fostering a community's sense of identity and solidarity (Kolter and Kolter, 2000, p.178). Having a museum serve its local community first and foremost creates a stronger connection and a bond that creates a pride for the community. The museum has also become an economic engine for communities by creating a growth in jobs and income, the more that a museum is visited the more staff is needed within and possibly within the host city or town at other businesses. It is the local community that will be providing the most support to a museum, they are the ones that will hopefully frequent the space the most either through visiting, spreading the word or working for the museum. Community service embraces services which are useful in fulfilling the common needs of a community as a whole, yet it also includes initiatives which reach specific groups, such as under-served ethnic groups, families with children, and young professionals, whose participation can be vital (Kolter and Kolter, 2000, p.179).

Community inclusion within the museum is vital, but is often only doable by creating programs for community groups. In terms of design it will be important to include areas for different events to take place and spatial programming for special venues for the local community.

How can the CFDC attract tourists and community?

In order for the CFDC to be a thriving learning centre it must attract an audience that is a combination of new and repeat visitors. For this project, these new and repeat visitors, will be called tourist and community. Tourists are those individuals living outside of the city of Morden and its immediate surroundings while community is the individuals living within the city of Morden and its immediate surroundings.

How can this audience be persuaded to spend their free time at the CFDC?

Stephanie Weaver outlines six emotional rewards of free time: social interaction, active participation, comfortable surroundings, challenging, new, or unusual experiences, opportunities to learn and a sense of doing something worthwhile. She also lists the four realms of experiences: educational, entertainment, esthetic and escapist (Weaver 2007). Through her research she reveals that individuals visiting a museum are not looking for only one type of emotional reward, but for a combination of reasons. For example, a restaurant goer visits their favourite restaurant, most definitely to eat, but to their favourite restaurant because it provides a comfortable surrounding, and most likely social interaction. By visiting one place they are receiving three emotional rewards if not more. Like previous research in this literature review, emotions are key for design of a museum. The four realms of experience are also key to designing a new space. Instead of

making the CFDC exclusively an educational experience, it should be designed to incorporate other experiences that visitors may otherwise, and currently do, experience at another venue. By including multiple experiences the CFDC can reach a broader audience, encouraging longer and repeat visits.

The audience is a crucial factor for a brand's success; these are the individuals that support the brand economically, socially, and through their participation within the CFDC. In *Designing Brand Experiences* (2006) Linda talks about the audience and their perception of a brand. As it is defined by Linda, the audience is whoever is on the receiving end of a brand experience, advertising, or social cause communication (p. 6). The brand experience is defined by an individual audience member's experience as he or she interacts with a brand –every time he or she interacts with that brand (Linda, 2006, p.9). For the CFDC to attract tourist and community they must first decide on their target audience which is the specific group of people or consumers for the brand. This scope can be: global, international, national, regional, or local (Linda, 2006, p.6). It is important for a brand to know its audience; what are their needs and desires? How can this centre stand out in the community and beyond?

Branding can extend itself to many different aspects beyond a logo, name, or trademark colours. It is included in the minutest details of a brand. Stephanie Weaver's (2007) book, *Creating Great Visitor Experiences*, touches on the topic of branding in museums stating, "To be considered a true brand today, the company or product must provide both functional and emotional benefits to the customer," and continues that, "...a true brand exists in the mind of your visitors, created by concrete actions you take. It is their perception of your site," (p. 44).

Another important aspect of a brand reaching tourist and the local community is what is being sold by the brand or in the case of a museum within its walls. If a museum is carrying products and the brand vision is all about community, they may want to invite the local community to provide their services for the museum. Instead of bringing in items to sell in the gift shop from China, why not have local crafters make items. This could create a greater chance for tourists to make purchases within the museum and provides them with something unique that may not be found anywhere else and is special to the community in which the museum is located. It is also important that the brand stands firm on carrying items that are produced according to standards and that they support their mission (Weaver, 2007, p.45-46). The same attitude should be taken into consideration when designing; the design should incorporate locally sourced materials and furniture. It is important for museum context and to let visitors know that local product and their community are important to them. The CFDC is a learning center, but also a brand that is portraying an image to the community.

DESIGN
CONSIDERATIONS

tourism + community

• CFDC design should make visitors feel comfortable and safe, but still excite and encourage non-guided exploration by situating different landmarks at each stage in new exhibition area

• Interior should not be too abnormal that it does not appear inviting or worse threatening; it should be neutral, clean and brighter to enhance the fossils and artifacts

• Provide a temporary exhibition space that will change periodically

• Provide a space where tourists and community can mingle and use without viewing exhibits on a regular basis

• CFDC should provide more than one of the following: social interaction, active participation, comfortable surroundings, challenging, new, or unusual experiences, opportunities to learn and a sense of doing something worthwhile

• CDFC should provide educational, entertainment, esthetic and escapist experiences through displays, visual shows, design details and materials, and immersive environments

• The CFDC should integrate the local community on a regular basis to connect tourists to the centre's surroundings

• Locally made and sourced materials and products should be used and sold when possible to connect tourists with the local community

• Ancillary spaces like a restaurant or theatre should be open after regular hours to encourage repeat site visits from tourists and the local community

• Attract tourists from a distance without being on the CFDC property by:

1) Allowing visitors a glimpse from the outside of what they will experience inside

2) Providing a visually stimulating main entrance that can be recognized from a distance

3.3 Interpretive Learning in the Post-Museum and Exhibition Design

There is a common thread that continually weaves itself through the texts of many authors such as David Dernie, Larry Klein, Eilean Hooper-Greenhill, Beverly Serrell, Shari Tishman, and Stephanie Weaver: interpretation or active learning. Although the two are different terms and are defined differently from one another, they both encourage a more engaging, hands-on approach to learning. These styles of learning are becoming the preferred method when designing exhibitions in museums, post-museums, galleries, and learning centres. Understanding interpretive or active learning is key to generating the design of a museum and its exhibits. Many museum typologies have begun to shift and re-brand themselves as interpretive learning centres or *post-museums*.

The Post-Museum

As museums continue to evolve they have increasingly become "performance spaces" for visitors and places of leisure. Museums in the twenty-first century compete with other free-time activities that are vying for the public's attention. They have begun to leave their traditional and primary roles in society as educators and transform into post-museums, where their new role is both recreational and educational. Visitors are able to physically and cognitively perform within the interior, creating a dialogue between space and body. Here interaction is key. Engaging visitors with an exhibit long before they enter a space is vital to maintaining interest and the willingness to interact and perform within the museum or learning centre. The post-museum typology incorporates experience designs with the expectation that they can compete with other recreational activities and venues.

To better understand the post-museum the definition of the *museum*

needs to be clarified. As the International Council of Museums defines it, "A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment," (ICOM, 2007). Traditionally museums of the past (and the early twentieth century, in particular) acted as exhibit galleries of the unknown. They were collection-based galleries solely utilizing artifact labels that were limited to object descriptions of who, what, when, and where. Exhibits lacked interpretive perspectives which would place objects within a larger social and historical context (Jacob, 2009, p.16). Originally these collections were private and: available only to the elite. It was only later that they became open to the public. Issues with this type of exhibiting did arise: First, they were meaningful only to those with an education and secondly, as Duncan Cameron explains, "...tended to be the value systems of the middle class if not an upper-middle-class elite," that "...determined not only the selection of material but also the priorities for its presentation," (Cameron, 2004, p.66). They focused on learning through looking, where visitors were expected to view and learn in a solitary, silent manner (Hooper-Greenhill 2007, p.192). It was believed that by using the sense of sight and hearing one could attain all the knowledge that was being offered.

Museums have come to be more than just houses of knowledge and collecting for viewing. There has been a shift in what visitors will experience and take away in museums of the twenty-first century. They became greatly influenced by modern architecture, with a change in building layout and material use, and shifted from single items enclosed in glass cases to those items being placed in a larger social and historical context.

As the museum and exhibits evolved so did the visitor's experience with the creation of interpretive exhibits. These exhibits began to go beyond educational experiences and include inclusive social experiences where interaction is key (Jacob 2009, 16-17). Museums are now beginning to shed the traditional ideas of —be quiet, do not touch and behave— reputations by introducing a new typology, the post-museum. Eilean Hooper-Greenhill, a prominent figure in new museum theory and originator of the term "post-museum" defines it as a site of mutuality, making museums open to diverse point of views and more engaged with users (Hooper-Greenhill, 2000, p.xi). Meaning, the post-museum allows for a multitude of different points of views from its visitors as no one visitor shares the exact same background, social status, or views, therefore they will not view something in the exact same way.

This engagement with users can be read in many other author's texts, in Klein's book (1986), *Exhibits: Planning and Design*: he notes that many learning theorists agree that people retain more if both cognitive, the rational, and affective (feelings) modes of presentation are used (Klein, 1986, p.19). It is important that the design will appeal to more than just the mind, it needs to have an emotional side that can generate a stronger connection and activity by the visitor. This type of exhibition design can create a bond with people and increase the chance for repeat visits.

With renewed philosophies and practices Hooper-Greenhill (2007), outlines key dimensions of how the post-museum is taking a more central social role:

> One of the key dimensions of the emerging post-museum is a more sophisticated understanding of the complex relationships between culture, communication, learning

and identity that will support a new approach to museum audiences; a second basic element is the promotion of a more egalitarian and just society; and linked to these is an acceptance that culture works to represent, reproduce and constitute self-identities and that this entails a sense of social and ethical responsibility, (p.1).

Traditionally the museum sought to educate those in a lower social status that were viewed as uneducated to their rich counter parts who, for example, owned their own paintings that they viewed on a regular basis. The museum believed that they could bring different parts of society together by allowing them to view items that the rich saw on a regular basis. However the museum, society, and education of the twenty-first century has changed dramatically. Individuals are given more choices, opportunities, and are expected to choose what is best for them, not what an institution believes is the best. Thus the post-museum typology has emerged; a model for modern learning, where it should be, "...enjoyable, foregrounding play and desire, rather than a search for a proscribed pre-determined end; a desire rather than a discipline," (Hooper-Greenhill 2007, p.199).

Enjoyment, inspiration, creativity are three of the most valued outcomes for museum-based learning according to Hooper-Greenhill's studies (2007, p.200). Indulging in a more performative approach to learning will help create a deeper learning experience for visitors. To achieve this style of learning the museum exhibitions should be interpretive.

Interpretive/Active Learning Exhibits

The word interpretative extends from the definition of interpretation which can be defined as, "communication between a knowledgeable guide and an interested listener, where the listener's knowledge meaning-making is as important as the guide's (Serell, 1996). The "knowledgeable guide" are the exhibits and the "listeners" the museum visitors. It is important for both the exhibits and visitor to work together with each contributing something to create a greater outcome.

As Beverly Serrell describes, "Interpretive exhibitions are found in all type of museums where visitors become engaged in the subject of the exhibit toward a particular end result: realizing the communication objective selected by exhibit developers," (Serell, 1996). Interpretive exhibits, active learning and personal agency can work together to create a greater learning experience within a museum. Active learning will occur when people open their minds to interaction with what information and experiences are given to them. Professor Shari Tishman of the Harvard Graduate School of Education gives the example of an art museum to further explain active learning, "...visitors are learning actively when they do such things as: formulate their own questions about works of art, reflect on their own ideas and impressions, make their own discerning judgements, construct their own interpretations, and seek their own personal connections. These sorts of behaviours are called active learning because they involve *acting* on available information—including information from one's own thoughts, feelings, and impressions—in order to form new ideas," (Tishman, 2005). Interpretive exhibits will be used to engage visitors actively with rather than passively address the information displayed. By combining the theory of interpretation with exhibits and active learning research will encourage more personal agency, meaning that there is a range of

choices that learners can choose from to shape and give direction to their own learning experience.

Exhibition Design

Exhibition design is similar to branding, if they can make some emotional connection visitors will be more likely to repeat the experience. It should not be based on only one type of visitor or a broad audience, it should consider all targeted audiences, but be more specific. The design must provide something for each type of visitor, with information being presented at a variety of levels (Klein, 1986, p.14). Ultimately a brand and exhibit design should capture the imagination of its visitors and allow them an exclusive experience that is unique to the venue.

When considering the design of the exhibits a nod to branding can help. Branding is creating a persuasive dialogue between the visitor and brand that will differentiate itself from another product, or in the case of museums from other free time activities. In this dialogue the brand is making a promise to their audience of what they can expect. The brand promise is key to attracting tourists and the local community. Perhaps one of the most significant aspects of the brand promise is its ability to capture visitor's or the audience's imagination. By capturing the visitor's imagination the brand is helping these individuals realize a dream or accomplish something that they otherwise would not have been able to do. For example; many marine parks or zoos allow visitors to look at mammals, like dolphins, but only a select few allow visitors to swim with the dolphins. In this instance the marine park or zoo is making the unimaginable possible.

Besides the design of specific exhibits, the designer must begin with an overall concept and work down towards each piece that will be exhibited. There are various factors that can be considered when designing exhibitions; light, colour, textures, sounds, wayfinding, etc. In David Dernie's (2006) book, *Exhibition Design*, different approaches and techniques to exhibition design are reviewed. The approaches presented cover three major themes in contemporary design: *Narrative space*, *performative space*, and *simulated experience*.

He states that, "Exhibition design occupies an important role in contemporary visual culture. In an increasingly complex world of persuasive media imagery, the mediatory role of 'presentation' becomes a vital tool of communication. Exhibition design is above all multidisciplinary in character and looks to graphics to create space as much as it does to architectural convention: it develops interactive software packages at the same time as acknowledging the value of simple traditional relationships between light, colour and surface, scale of a space and comfort of a human environment," (Dernie, 2006, p.16). From the three approaches the post-museum focuses on proactive engagement, a hands-on interaction within the interior; performative space. As David Derne (2006) explains, "...performativity is one of the most significant developments in contemporary exhibition design since it reaches beyond the semiotics of exhibition display and develops the notion of experience design in the recognition that the body plays a fundamental role in communication and learning," continuing that, "Performative space is an approach to exhibition design that sees the potential of display to explore new ways of interactivity: the body and its movement through the exhibition is a vital exchange between the content of the show and the private associations of the individual," (Derne 2006, 46). The museum acts as a theatre, a place for performance where the visitors move and physically interact within and

with the space. Performative exhibitions invite visitors to do things and not solely rely on static and cognitive learning skills. All aspects of the interior space become a part of the performance, the furniture, lights, sounds, exhibits and visitors.

Exhibition design is essential to the success of a museum or museum typology. As David Derne (2006) explains it, "...exhibition design considers the simple dialogue between the object(s) to be exhibited and the space in which they are presented: where the objects are, and how they will be arranged will determine the nature of the message they communicate," (p. 6). Communication is key. All aspects of the design affect the user: scale, colour, materials, lighting, sounds, and graphics. An adjustment in lighting from one space to another can convey a new meaning altogether. The simple shift in lighting can communicate something new to the user, allowing them to discover the exhibit in a different way than the one before it. Communication in exhibition design provides a direction for the users and delineates different levels of knowledge and objects that are presented.

Narrative Space

Narrative space constructs a more elastic space void of linearity. Its design varies, rather than following a chronological or sequential structure it will be episodic, where the rhythm and level of intensity range from exhibit to exhibit. Narrative space is focused on the visitor experience, the individual user, and experience design. The narrative space's rhythm varies and is revealed through the visitor's movements within the proposed narrative or story and will be presented by the grouped artifacts. These artifacts can then be further arranged into ensembles (Derne, 2006, p.23). Every aspect of the space becomes a part of the exhibition, a branded environment that is created with little

little or no retail space. All themes begin to crystalize into one central topic, where they are overlapped and presented as one entity (Dernie, 2006, p.23).

Exhibits will range in their level of engagement and technology to generate theatrical environments that are immersive and interactive. The goal for the narrative space is to allow the user to adjust the visit to their liking and engage with them on an emotional level, much like Marc Gobé believes brands should. Connecting on an emotional level with real experiences will create a personal memory attachment to the brand for the user (Derne, 2006, p.23). Derne refers to this memory as memory economy, "...the economic value attributed to a memorable experience," continuing that, it is now recognized as a powerful force in brand promotion (2006, p.23). By designing experiences brands are creating viable commercial exhibitions.

Performative Space

Performative space is a new approach and concept to spatial organization and architecture. It puts emphasis on the dialog between space, body, and time. The concept of performativity is noted as one of the most significant developments in contemporary exhibition design, it moves beyond the semiotics of exhibition display and develops the notion of experience design (Derne, 2006, p.48). It recognizes that body is fundamental in communication and learning. This type of space is individual or user centered, it is an approach that envisions the opportunity for the body to interact actively. It is a, "… vital exchange between content and private associations of an individual visitor," (Derne, 2006, p.48). Performative space is an invitation for visitors to "do things"; movement and action are required, rather than static observation. It is important to understand that in the

case of performative space exhibits go beyond the active learning of screen-based interactives. These displays as Derne (2006) explains,"… are like transitional objects that mediate inner and outer worlds," (p.49). The performative exhibit devices are not limited to one technology, they can range but must invite visitors to think through the content of the exhibition. These devices can range from something as simple as ramped access, change in seating, or more elaborate motion censored environments with lights and sound. Performative space turns the museum environment into a theatre where the visitors are the actors.

Simulated Experience

This type of exhibition design is more directly related to digital technology and their aid in the display of real objects. Simulated experience exhibits can be simulated environments, reconstructions, and virtual reality. These exhibits provide museum learning with immersive multi-media experiences that parallel the realm of video games and film. The simulated experience offer a greater opportunity for a more inclusive and extensive engagement (Derne, 2006, p.74-77).

…

The museum as a performative space is the most fitting to this practicum, it recognizes that the body of a visitor plays a fundamental role in the space. However, all aspects of the interior become a part of the performance: the furniture, lights, sounds, exhibits and visitors. Exhibits, as Larry Klein (1986) lists, should be conscious of architecture, interior and exterior space, traffic planning, crowd control, furnishings, lighting, and acoustics, all types of audio-visual presentation, computer technology, as well as materials, construction, and installation methods. Engaging visitors can be simple: sliding a flap, an interactive screen, or

or a more advanced motion censored visual. Colour is also vital to affecting the mood of visitors and setting the tone of an exhibit's environment. Sounds, smells and other visual elements help to enhance the context of an exhibit. The exhibits should have a sense of timing, drama and fantasy. Being privy to something that is unique to a certain area or that has long since become extinct gives a sense of fantasy and to add context to these exhibits will ignite the imagination of a visitor. All parts should be cohesive from the signage to the graphic image of an exhibit and not overdone. The exhibits should be considered an "experiential system" that Klein explains as beginning the moment that a visitor is made aware that an exhibit exists and then makes the decision to experience it. All barriers or boundaries between exhibits should be minimized, disguised, and softened through strong visuals that create spatial links instead of the use of separate rooms. This allows visitors to experience exhibits in a natural and organic way, encouraging intuitive wandering. Pathways are another essential part of exhibition design, the sizing, grade, materials, easy turns and views should all be considered.

Van Dyke in Klein (1986) notes critical viewing distances: a hundred yards away, fifty, ten, close up and inside. These critical distances are important to the museum as a whole and not just its interior. Views of the exhibit should be visible at different distances; a visitor's first glimpse of an exhibit's will generate the excitement of what is to come. This can begin from a sign on the highway, or a view of a part of the exhibit from the exterior of the museum. Little cues that can be seen on the way in and out of the museum create a lasting impression for visitors. It is a visual cue to remind them about what they saw and experienced.

Ultimately the museum should be honest to its visitors and provide them with authentic findings that are carefully displayed in an intriguing

visual. Visitors should be provided with options and a sense that they are seeing a piece of the collection in context that is as close to the 'real thing' as possible. Although the post-museum and interpretive learning are at the forefront of new museums and have a good theoretical backing, they are not necessarily proper for all museum typologies. Using the core ideal of what a post-museum is and what interpretive learning provides to individuals is key: inclusion of a diverse community of visitors, where they are considered equally among objects displayed, and providing them with exhibits that give them the power to make their own decisions and perform in a space using their body, beyond the sense of vision and sound. However, there is still something to be desired about the traditional museum typology, where only viewing was allowed. It brings with it a nostalgia of the past and the preciousness of what we are privileged to view, and only view. There is a transparency between the two that will be used as a guide for the design of this practicum.

DESIGN
CONSIDERATIONS

interpretive learning in
the post-museum +
exhibition design

• The floor plan should allow for a more open concept of exhibition display that allows visitors to be in control of how they experience the space, whether it is actively or cognitively, or both

• Visitors should be invited to explore the depths of their imagination through the exhibition design and allow them to use their bodies to perform in the museum: by providing areas of hands on learning where guests can physically touch displays and other elements, and creating an vast, ethereal and aqueous area for rest and contemplation that gives context to the environment of the Mosasaur

• Provide an experience that people can engage with and fulfil their desires to hypothetically "swim with the dinosaurs" through an interactive and multisensory environment that will be achieved with materials, light, and texture

• Make visitors feel a range of emotional experiences by designing in a sensorial way using change in lighting, ceiling heights, and room size

• Be honest to visitors by displaying the actual fossils that have been discovered and not only cast replicas like the ones displayed in the current museum

• Design multiple types of display units to break monotony within CFDC by using both contextual and non-contextual units, artificial and natural light, and materials

CHAPTER 04

case studies

4.1 Introduction

This chapter focuses on three case studies that contributed to the design of this practicum project. Each one was chosen based on their typological fit and/or their characteristic of preservation. The first case study, Horno^3: Museo del Acero, was reviewed for its unique adaptive re-use of a different building typology and programming. The second case study that was review is Montreal's archaeology museum, Pointe-à-Callière. It provides precedence for a unique exhibition style of archaeological remains and the way that people circulate through a space. The last case study, the Royal Ontario Museum Michael Lee-Chin Crystal, it provides an example of contemporary architecture and interior design and the impact that it has on the local community. These three studies combined helped to plan and refine the design details for this practicum.

4.2 Horno³: Museo del Acero

Designer: Grimshaw
Site Location: Monterrey, Mexico
Size: 6500 m2
Completion: 2009

This museum was chosen as a case study because of its spatial programming and adaptive re-use qualities. It encompasses all aspects that the CFDC will strive to achieve, from the successful exhibit designs, promotion of active and cognitive learning, mixed-use and engaging interior design.

Located in the city of Monterrey, Mexico Horno³ transformed an ageing industrial artifact, the blast furnace (No.3) into an educational facility with an array of uses. Originally built in the 1960s the blast furnace at Parque Fundidora was the site of the country's first steel mill, but as technology processes for steel progressed over the years the mill was eventually rendered obsolete. It closed in 1986 and became a National Archeological Industrial Site. The surrounding land was reclaimed and restored providing green spaces for residents, and educational, recreational, and business facilities (Jacob, 2009). Standing at seventy metres high the Horno³ acts as a symbol reminding the city of a hard working past and an architectural challenge for architects Grimshaw. Commissioned by the Steel Museum Civil Association (A.C.) the blast furnace restoration and new museum building creation of six thousand five hundred square metres began in 2005 with construction ending in 2009.

Keeping the Horno³ blast furnace was important to the design of the new museum building, it is the heart of the space and a symbol of the converted steelworks public park (Figure 1). Ultimately the space needed to meet the needs of a large museum while preserving its historical character. "The new building needed to be inclusive and one that the older generations who worked at the former plant and their children and grandchildren would feel represented their proud history while looking forward to the future" ("Horno 3 Steel Museum"). The intention of the new museum was to provide a fun educational environment for families, adults, and children to discover the history of steel making, science and technology. Titled as a science and technology center the museum was designed to provide visitors with choices. These choices are both unique and in some instances unusual and occur within and outside the museum, these include: learning about the history of steelmaking in Mexico, a playful and interactive

science based steel gallery, a special effects show located within the blast furnace, teaching rooms, a restaurant, museum store, an ore lift ride that takes visitors to the top of the furnace and Canopy h3, an adventure trail with zip lining, rappelling and a suspension bridge.

Utilizing the blast furnace as a part of the museum is a unique design element to the building. The furnace establishes an industrial aesthetic in the space with a large mass as the focal point. It makes use of new and old steel construction methods, simple polished concrete or rubber flooring, a slag pit, original brick and torpedo car tracks are still visible in the floor. The space uses an open concept floor plan that centralizes around the circular blast furnace and ovens. Steel ribbons with red neon tube lighting meander through the history gallery to guide visitors through each area, while simple track and recessed lighting illuminate other spaces throughout the museum. Warm colours of red, orange and browns are used in all areas of the museum to mimic that of molten steel. Any addition that was added to the space was subtly incorporated to ensure that it did not take away from the original design of a steel working mill. These design considerations and choices are sensitive to the original site and are positive features of the museum.

Overall the museum achieves many positive attributes making it a truly unique and engaging experience for visitors of all ages. The museum successfully re-designs and re-develops an existing space, provides visitors with choices, uses icons to anchor spaces within the museum as a navigational tool, gives a multilayered multimedia experience and presents something new to guests year round. Most prominently the museum takes great advantage of an already existing site through adaptive re-use and new building construction. It was able to re-design an old blast furnace into a working and usable interior space where

guest can watch a furnace special effects show. The interiors of the old steel mill were also re-used; all the old brick columns and torpedo car tracks are still visible in areas of the museum and the museum's main gallery was carved out of a large slag pit (Jacob, 2009).

Secondly, by offering a variety of activities and exhibitions the museum does not cater to one specific type of tourist, group or age demographic. For example, the Canopy h3 is geared towards an adult crowd that is eighteen years or older. It gives visitors a chance to experience the architecture of the site at a new point of view. Canopy h3 is not only a learning experience for adults but a thrilling activity that invites adventure seeking visitors and gives the museum an extra edge beyond its unusual architecture. Like adults, children have the opportunity to learn in the museum as well, but in a playful way. Interactive exhibits help children to better understand the context of steel work, which was an important part of their city's history. George Jacob (2009) describes how visitors are engaged with mention of children, "The steel gallery makes use of immersive environments and full body play to transport visitors to the mill or the mine to experience different processes. Kids can slide down a giant cutaway model of a blast furnace or ride an elevator deep into a coal mine. Visitors of all ages can operate a model electric arc furnace, blast for ore in a mine, or design a futuristic vehicle using steel" (p. 160). It is through using interpretive active learning that the museum is successful at teaching a broader audience and helps to keep the interest of visitors.

Another reason visitors stay intrigued is through the design and spatial programming of the museum. In the steel gallery exciting icons are used to anchor spaces such as a replica torpedo car and full size delivery truck. These icons help visitors navigate from space to space, or exhibit to exhibit. They entice visitors to discover and wander

intuitively through the museum by triggering a sense of curiosity. In order to truly understand the meaning of each object it is placed within a larger three dimensional context, like in the steel gallery where there are large scale diagrams of iron making, steelmaking, and milling forms (Jacob, 2009). Imagery and displays like this help to provide a better understanding of what people are viewing rather than flat, two dimensional, information heavy exhibits. Here individuals are provided with a multilayer and multimedia experience that help retain the stimuli set before them.

Multi-sensory exhibits can further communicate moods and messages to visitors. Through video and audio Museo del Acero is able to provide these multi-sensory experiences. For example, the Horno3 blast furnace has been altered into a theatre, the Rhythm of Steel Theatre, where a sound and light show takes place. With the use of music, video and lighting the audience is taken on an auditory and visually stimulating ride of Horno3's history and what occurs in a blast furnace. Strong imagery and realistic sounds help to reinforce the educational messages rather than have visitors view information without retaining a true understanding.

Finally, the museum offers special events during certain months which could entice old visitors to come back to the museum again as well as new ones. Science Under the Stars is a free family activity that invites families to the museum Esplanade area's 3 furnace stoves to watch science documentaries. The museum has an alliance with National Geographic and Cablevision to present National Geographic documentaries that offer science to visitors and an, "...alternative non-formal education to guide the mentality of families toward positive societal construction and offer an alternative cultural entertainment to families" ("Science Under the Stars").

Events such as these could be powerful to attract new families to visit the museum as they are free and do not require a commitment to pay admission to the museum, but ultimately it could encourage them to visit when they would not have otherwise. The event creates something new for returning visitors and creates new visitors itself.

This case study is an ideal study for the re-development and re-branding of the Canadian Fossil Discovery Centre. It employs both active and cognitive learning throughout the entire museum by interpretive means and aims to provide learning experiences for every age. Jacob (2009) states, "Museo del Acero involves a lot of firsts. It is the first time a blast furnace has been repurposed to function as a museum in Mexico, and it's the first time Mexico's story of steel has been told in an interpretive facility" (p.163). Exhibits in the Museo del Acero also provide context for where a certain artifact came from or would have worked in, which is a major part of the proposed exhibit design for the CFDC. These exhibits also act as a wayfinding method and lead visitors throughout the museum by using certain exhibits as anchor points.

It is a good example of renovation/adaptive re-use of an existing structure, which in this case is the blast furnace. This museum takes an unlikely structure and is able to transform it into a large scale museum through additions and building re-design. It is spaces like this that can help to inform a site location for the CFDC that may not necessarily need to be the perfect size or dimensions but rather something that is unique to the city of Morden.

Museo del Acero also incorporates the community aspect into the museum with the additions of a restaurant, Science Under the Stars and Canopy h3. These are activities that the community can utilize

outside of the museum. The restaurant is open past museum hours, but is still attached to the building and as previously stated Science Under the Stars changes the documentary that will be shown throughout its running time. These aspects are important to the new CFDC museum, which has a goal to incorporate community public use space; a space that members of the community can visit regularly without paying admission to enter the museum.

Design Implications

Based on the review of this case study and the design that was implemented, the following will be considered for the design of the CFDC:

• Utilize an unusual existing element into design
• Open concept floor plan with steel ribbon as wayfinding
• Different light and surface colours to enhance environmental context
• Use icons to anchor spaces and act as navigation
• Work with building's existing elements
• Design different areas that are designated to different age groups, so there is something for everyone that visits

4.3 Pointe-à-Callière

Designer: Dan S. Hanganu/Provencher Roy
and Lemoyne Lapointe Mange
Site Location: Montréal, Québec
Size: 14417 m2 (exhibition space: 6720 m2)
Completion: May 17, 1992

Pointe-à-Callière was chosen as a case
study for its unique interpretive interactive
exhibitions that provide context for visitors,
preservation of archaeological remains,
and for the movement within the interior
spaces that include both horizontal and
vertical. The Éperon and Place Royal and
the Archaeological Crypt will be the primary
focus of this case study.

Figure 8. Pointe-à-Callière Éperon building

Pointe-à-Callière was chosen as a case study for its unique interpretive
interactive exhibitions that provide context for visitors, preservation
of archaeological remains, and for the movement within the interior
spaces that include both horizontal and vertical. The Éperon and Place
Royal and the Archaeological Crypt will be the primary focus of this
case study.

Founded as a part of Montréal's 350th birthday celebration, Pointe-à-
Callière is an archaeology museum located in the Old Port of Montréal.
This location was the point of land where Father Vimont held a mass
celebration for the founding of Montréal. It was also at this spot that
Chevaleir Louis Hector de Callière's, third governor of Montréal's, home
was built. The main purpose of the museum is to showcase Montréal's
history of culture and trade and the museum location is distinguished as
Montréal's birthplace. It is carefully designed to protect and maintain
archaeological remains located beneath street level. There are many
unique features of this museum; it is not contained within one single
massive building, but rather it spans from one building to another,
moving both vertically and horizontally. More specifically Pointe-à-
Callière encompasses six buildings which include; the Éperon, Place
Royal and the Archaeological Crypt, the Anicenne-Douane, the
Youville Pumping Station, the Archaeological Field School, and the
Mariner's House. The museum has four permanent exhibitions and three
temporary exhibitions that change yearly, a restaurant, lookout deck,
meeting room, and a gift shop (Pointe-à-Callière, 2015).

It is a unique museum in comparison to most as it was designed to be
placed in situ of the birthplace of Montréal. It sits above archaeological
remains that if necessary can be continued to be explored as an active
dig site. The Éperon, Pointe-à-Callière's main building, was designed
to fit the triangular footprint of the site's previous tenant, the Royal
Insurance Building. The building's contemporary design respects the
previous architectural proportions of the Royal Insurance Building and
conforms to the surrounding buildings by matching and maintaining
similar roof lines, the proportions of walls and openings (Pointe-à-
Callière, 2015). Architect Dan S. Hanganu said, "The challenge was
to build, and preserve at the same time. It was both inhibiting and
stimulating," (Pointe-à-Callière, 2015). Although contemporary in
comparison the building stands as major beacon in Montréal's Old Port,
as a nod to the past, but a step forward into new design and life in
Montréal.

Minimal design help the exhibitions within stand out. Upon entering the
museum visitors are greeted by a vast, almost empty space, with high
unfinished ceilings where aluminum heating, ventilation and cooling
(HVAC) units are visible. Small acoustic panels repeat along the ceiling
plane in unison with window mullions and floor tiles. The interior is similar
to the exterior, using minimal materials and no decoration. Rectilinear
lines dominate the interior with exception to the rounded stone columns
from the original building, the circular ticket counter and HVAC units.
Here the use of hard and monochromatic materials are prevalent.
Almost all of the building makes use of cement, tile, original grey stone,
metal and glass. The materials and finishes are simple, clean and dark
with the only real texture coming from the stone of the archaeological
remains. The focal point of the space is the image of what looks like
a close up of rust on metal that appears behind a large stainless steel
panel at the back of the space. This wall is actually the entrance to
the theatre, which remains closed for the entire length of the show,
Yours Truly, Montréal, and will not open until it is complete. It seamlessly
blends into the interior, giving no real hint to what it is.

Wayfinding and spatial flow are a major issue within the museum. When entering the Éperon it is unclear where a visitor enters the theatre or the exhibition spaces. It is not immediately apparent which could be the thought process behind the design. The lack of wayfinding does encourage visitors to wander the space, but as one walks throughout the museum it does become confusing, causing visitors to read information and see exhibits that run based on a timeline throughout history incorrectly. Because the museum uses both horizontal and vertical movement, wayfinding and exhibit anchors need to be more detectible. However, what the museum lacks in wayfinding is made up in exhibition design.

As previously stated, this museum is unique, especially in its exhibits. The museum's greatest successes are the inclusion of real building remains, interactive exhibits, and the 270° theater. Most prominent of all the exhibitions are the archaeological remains exhibit, Where Montréal was born, that visitors can walk through. It provides visitors with an authentic experience, allowing them to get close to the real thing. When using the term authentic Ning Wang's article of authenticity in tourism will be used. He cites the Constructivist approach to authenticity, where authentic can be, "...the authentic reproduction which resembles the original and thus look credible and convincing," and secondly, "...authenticity means genuine, historically accurate, and immaculate simulation," (Wang, 1999 p. 354). This underground route covers six centuries of history starting in the Éperon building and continuing under the street to Place Royal and the Archaeological Crypt. As visitors walk through they can experience many different exhibits that include visual, audial, and hands-on displays. Painted floor guides help visitors to navigate the space taking them from archaeological remains to interactive activities that encourage visitors to try out activities from everyday life during the Amerindian Period. Visitors will make their way through a vaulted stone tunnel on their way to the archaeological crypt

Figure 9. Projection exhibit

where Little-Saint-Pierre River once flowed. Once in the archaeological crypt the exhibitions become more interactive and interesting. The use of multiple surfaces for exhibits cause visitors to look closer and deeper at what is being presented to them. The floor is inlaid with five models showcasing the evolution of the city's core. Using the floor as a display is unique and fits the context of the museum, re-enforcing the ideology of a crypt and digging for remains in the ground. Another successful component to the museum's exhibits are the use of projections on the archaeological remains. These are used in both the Where Montréal was Born exhibit and the multimedia theatre. These projections are both audial and visual. The Market Day Projection lets visitors relive a market day in 1750, where characters are shown in the town square living out their daily lives and the multimedia show uses the archaeological remains to show the history of Montréal over the years, with projections on the 270° screen and on the remains as well.

This museum has offerings for visitors of all ages, but caters more towards families and younger demographics, mostly primary school aged groups. Especially with the Pirates or Privateers? Exhibit, which on the museum's web-site states that it is, "...geared towards visitors (age 6-12) and family to discover and measure up to sailors of St. Lawrence River in New France," (Pointe-à-Callière, 2015). In this exhibit visitors can climb aboard a large replica ship and experience the life of a privateer by taking part in different tasks. This area of the museum is dedicated to large groups that are either schools or families. The programming of the space is evidence, with a hall filled with picnic tables for visitors to meet and gather for lunch. A more sophisticated area of the museum that is targeted towards a mature and adult crowd would be the L'Arrivage restaurant. It is located in the Éperon building just below the observation deck and offers guests a lunchtime only table d'hôte menu (fixed price, multicourse meal).

Pointe-à-Callière is an excellent case study to examine for this practicum project. Like the Horno3 steel museum it uses both active and cognitive learning throughout with interpretive exhibitions. Its sensitivity to an existing archeological dig of authentic remains with the use of multi-surface projections and exhibits will help in the exhibition design of CFDC's fossils and objects. By combining new technology with old artifacts and remains that are situated in the original settings visitors are being given a more authentic experience. The terms authentic and real are important to consider when designing a museum or interpretive centre for it can determine who will or will not visit. If visitors are knowingly being presented with a false or un-authentic experience it becomes less appealing to them and thus results in negative feedback and a loss in repeat visits and new visits.

Finally, the museum's ability to fit in seamlessly with its surroundings is a great attribute. Although the Éperon is modern in comparison to neighbouring buildings it is careful to remain sensitive to the beauty of its Old Port location. It showcases itself as a building with presence, by using modern lines and materials like glass and steel, but still considers the site's previous tenant by using its original footprint and not encroaching on the public space surrounding it. This is an important factor for the CFDC to consider as its location will not be situated in a metropolitan that has large, modern and, overly extravagant architectural gesture buildings. It is important for the CFDC to be relevant and prominent within the community, but not solely for its building's overbearing architectural presence like many renovated and adaptive re-use museums have become

Figure 10. Floor dioramas

Design Implications

Based on the review of this case study and the design that was implemented, the following will be considered for the design of the CFDC:

• Design in situ, place structure above archaeological remains
• Interior materials are similar to the nature of what is being displayed
• Utilize multiple medias for exhibition display
• Consider designing an addition to the existing structure that is complimentary to original structure
• Keep the integrity of original exhibit pieces without being too intrusive

Figure 11. Stairway through archaeological remains

4.4 Royal Ontario Museum
Michael Lee-Chin Crystal

Location: Toronto, Ontario, Canada
Design: Studio Libeskind
Date: 2007
Square Footage: 388,000 ft2

This case study is of particular importance due to its controversial addition. It is for this reason that this case study will be reviewed, as an example of the effect that a contemporary design can have within a community.
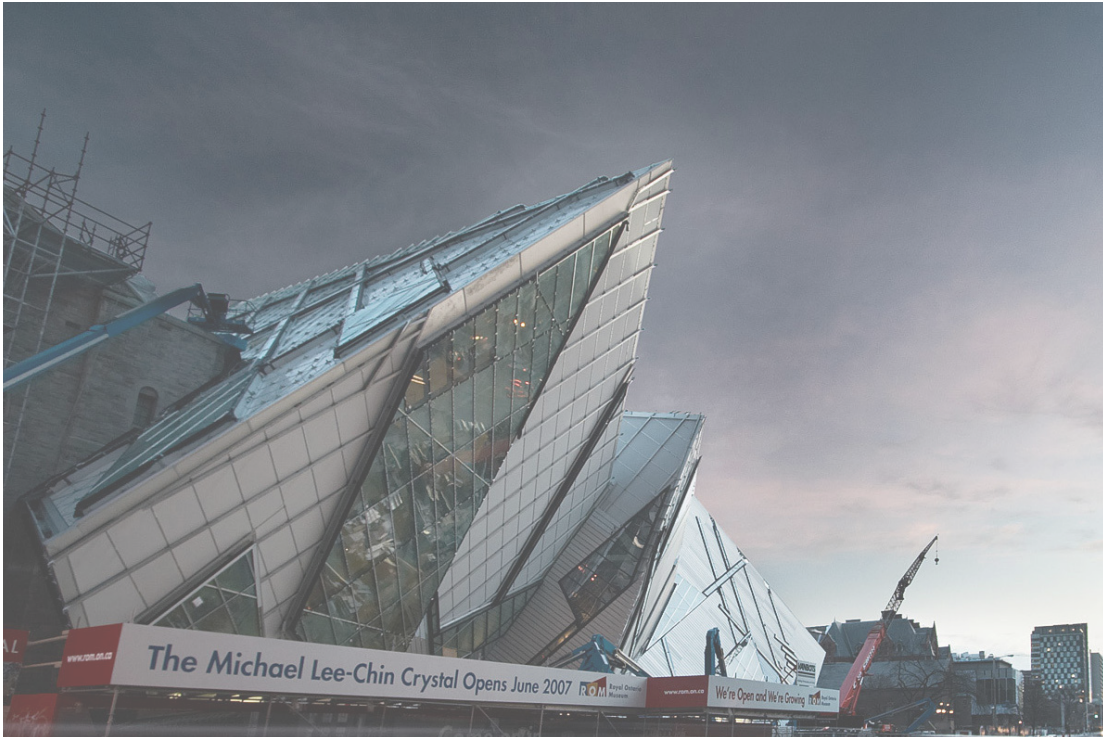

Figure 12. Daniel Libeskind Lee Chin Crystal Royal Ontario Museum, copyright Sam Javanrouh, used with permission

The Royal Ontario Museum (ROM) or the Lee-chin Crystal as it is often referred to, is located in Toronto, Ontario's downtown on Bloor Street West near the University of Toronto. Dubbed as one of the largest museums in North America, the ROM is home to many exhibits and galleries that include; ancient cultures, fossils and evolution, Canada, textiles and fashion, biodiversity, Earth and space, contemporary culture, and world art and culture. It was officially created in 1912 with its doors opening to the public in March of 1914. The ROM "... instantly became an object of pride for Toronto," (Siddiqui, 2015). Over the years the museum underwent multiple expansions and renovations, with its most recent and controversial in 2007. The focus of this case study will be on the most recent renovation by Studio Daniel Libeskind with Bregman + Hamann Architects, the Michael Lee-Chin Crystal.

The ROM's original structure was managed by the University of Toronto, with buff-coloured brick and terracotta adorning the elegant Italianate Neo-Romanesque structure. Originally designed by Toronto natives Frank Darling and John. A. Pearson, this building housed five separate museums. As the years went on space became limited and collections grew larger there was a need for an expansion. In the 1920s during the Great Depression a new wing was erected by hand using local materials. At that time the new wing facing Queen's Park was deemed a "masterpiece of architecture," (Siddiqui, 2015). Once again in 1978 after being recognized as a separate entity from the University of Toronto in 1968, the ROM began renovations to extend spaces that were needed including, a new curatorial centre and library. The next and most recent renovation in 2007, the Michael Lee-Chin Crystal is described by the ROM's website as, "... a distinctive new symbol of Toronto for the 21st century. The Lee-Chin Crystal marks the beginning of a new age for the ROM, announcing the Museum as the country's premier cultural and social destination," (Siddiqui, 2015). However,

the Lee-Chin Crystal has created much controversy for the museum. Located at the Bloor Street West main entrance is a massive and imposing structure of glass, steel and aluminum cladding that protrude from (but do not touch) the original Darling and Pearson building. A shiny parasite on the existing historic building commands attention from visitors and pedestrians on the exterior. With the structure standing at ten stories high with the tip hanging over the side walk, the crystal almost has a looming presence over visitors and pedestrians below. The hard angular lines of the building juxtapose its original form which continue once inside the main entrance. Not only have some of the community seen this renovation as a waste of money and uninviting but "Visitors have also complained that they find the entrance confusing and inhospitable," (Taylor, 2013).

The interior of the Lee-Chin Crystal is much like the exterior, angular and massive. Right angles are rare in the interior, only one vertical wall exists. Even the windows are cut into long angular openings that give visitors a partial view to the outside. Small white track lights on the walls try to blend with the all-white interior. The only other interior feature that is not white are the black lines that run across the floor mimicking the lines of the track lighting on the wall. Almost all surfaces have a smooth and light appearance, with the exception of areas where the old museum building peeks in. Wayfinding is difficult in the museum when all surfaces are skewed and converging at different points. Although the interior is simple, light and minimal it has a feeling of heaviness and complexness at the same time. Its angles can feel uncomfortable and take away from what is being displayed. Though the designers tried to give the space an all-white art gallery feel, so it does not compete with the displays, the numerous angles and lines are distracting (Lostracco, 2007).

The Lee-Chin Crystal Galleries are home to the ROM's dinosaur and mammal exhibits, the South Asian, African/Americas/Asia Pacific and Middle East galleries, and a collection of textiles and costumes (Lostracco, 2007). These galleries leave little room for interpretive exhibits or authentic scenes. However, this could be due to the size and varieties of the collections that they house. Interpretation and authenticity are good, yet too much can be overbearing for visitors. Visitors do want to experience the 'real thing' and be able to choose how they learn, but constantly being given the choice can be too much. There needs to be a mixture of both active and cognitive learning.

With all of the negativity and controversy towards the Lee-Chin Crystal and an attitude of "Build it and they will come," Kate Taylor of the Globe and Mail writes, "Trouble was, they didn't come –at least not in the huge numbers that advocates of the Crystal, designed by star architect Daniel Libeskind, had predicted: Projections of 1.4 million annual visitors streaming through the doors are proving unrealistic, as total visits remain around a million," (Taylor, 2013). That is why the museum has begun to create better communication with the public. Taylor explains, "The black, angular lobby, about as welcoming as the entrance to the Death Star, has since last summer culminated in a cast of a skeleton of the sprawling Futalongnkosaurus, the largest dinosaur display in Canada," (Taylor, 2013). The museum now incorporates parts of exhibits into the main entrance so they are visible from the street to make the museum more inviting and enticing. Providing a glimpse of what a visitor could potentially see can spark intrigue, making visitors more likely to step inside. Simple acts like this and even the changing of the logo to read as, ROM, with the center O changing to any graphic related to a collection within the museum are steps towards making the museum more appealing to the public.

Accounting for space that can house large temporary exhibits is a positive attribute of the Lee-Chin Crystal galleries. Having a generous amount of space for new travelling collections is a great way to get repeat and local visitors. Although the ROM has had backlash from the community, it stands as a very valuable case study for this practicum. It showcases how important it is to consider the environment and community around it and what visitors need and expect and how those needs and desires can be met in the most logical way. In some ways it also helps to identify the targeted users and people surrounding the museum. Designers are almost always concerned with the look of the building or space and who specifically will be using it. This case study stands as a clear reminder that not all of the community will be using this space, some will be only viewing it from the exterior. So it is important to consider that passerby; how does this building effect the sidewalk that they walk on almost every day, what sight lines have been blocked, does the amount of traffic affect the surrounding neighbourhood? It is wonderful to design something unique that brings attention to an old building, but making sure that it is well thought out, purposeful and not jarring making people not want to visit is equally important. Design must consider the human scale and put visitors at the forefront of its design, especially in a publicly used space.

Design Implications

Based on the review of this case study and the design that was implemented, the following will be considered for the design of the CFDC:

• Design an addition to the existing building that is sensitive to the original, but still unique
• Consider an addition to the existing structure that can be utilized after museum hours
• Ensure that wayfinding is simple and easy to read
• Consider the use of a visual element for wayfinding
• Design with the intent of making users fell safe, comfortable, and welcomed, but at the same time excited to enter the building

Figure 13. Royal Ontario Museum Lee Chin Crystal interior, copyright Sam Javanrouh, used with permission

CHAPTER 05

programming

5.1 History

Although Morden is a small town located between Manitoba's capitol and the border of the United States it is rich in history, which is still visible when walking down the main street. Perhaps the most interesting residents of Morden were the mosasaurs, plesiosaurs, giant turtles and other monster fish that swam in the prehistoric salt water millions of years ago. Originally Morden was known as the "...Colorado Sea which covered most of Southern Manitoba, Saskatchewan, Alberta, and the United States to the Gulf of Mexico. This sea retreated and gave way to fresh water Lake Agassiz. Centuries later the Mound Builders came and grew corn, squash, pumpkins, beans and tobacco," ("history" 2015). After the retreat of Lake Agassiz the soil became rich in nutrients, allowing different fruits, wild herbs, flowers and shrubs to grow. At this time the Chipewayan, Cree and Assiniboine began to inhabit this part of the country ("history" 2015).

Over the years many groups passed by and settled in places near Morden, but none set within what is currently known as Morden. In 1874 Alvey Morden and his family came close to what is now known as Morden, settling one mile north.

In 1882 the Canadian Pacific railway made its way to Morden, what was then known as Cheval a stop along its route. The steam locomotives were provided with water from Mort Cheval Creek, which prompted the erection of a water tower. At this time nearby residence began to move into Morden, literally moving buildings each day and by 1900 Morden had become a large town of over 1500 people. Schools, churches, hospital service, a nurse's residence, and electricity all began to emerge in the town.

Today Morden's population sits around 3300 and looks at diversification as a part of its growth. Tourism and industry is promoted by taking advantage of its natural resources, providing the City with stability and optimism ("history" 2015).
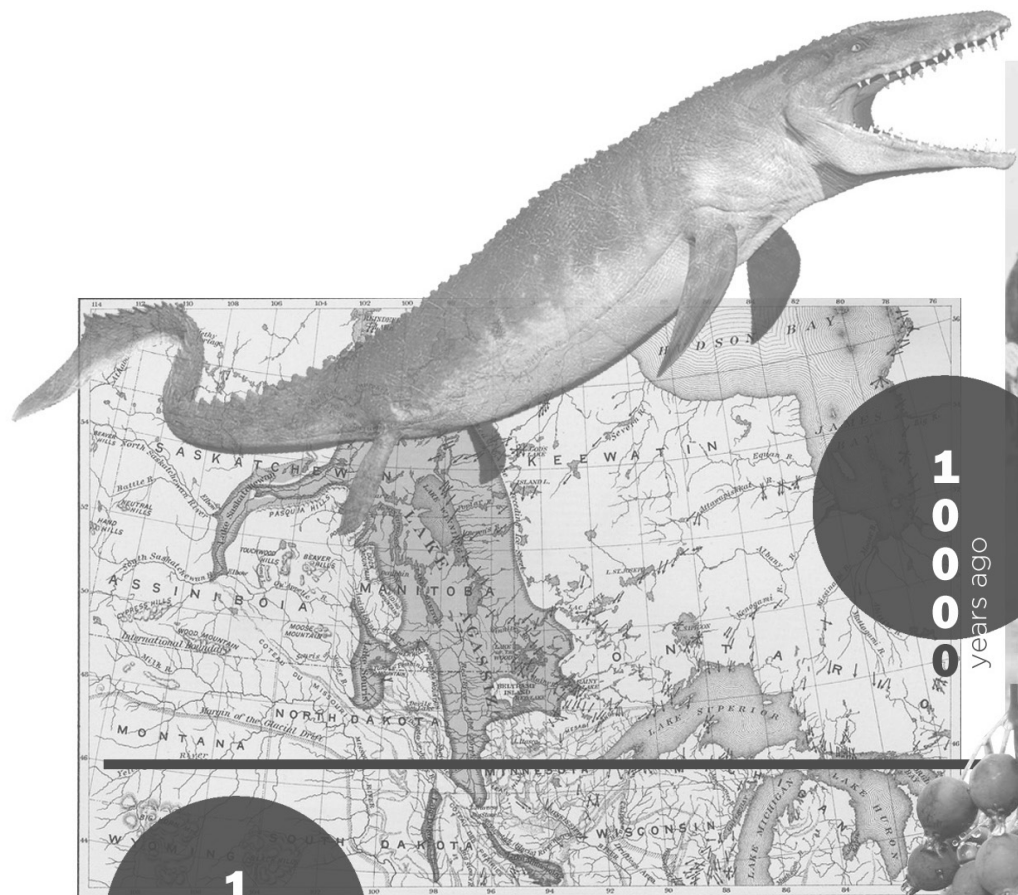
136 - 65 million years ago

10000 years ago

1874 - 1882

1900

CHEVAL
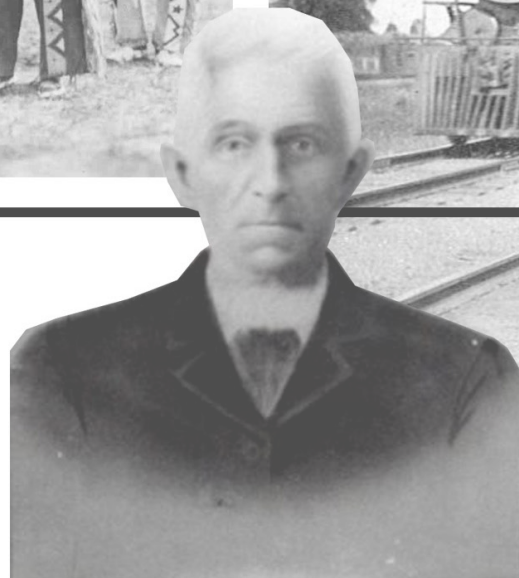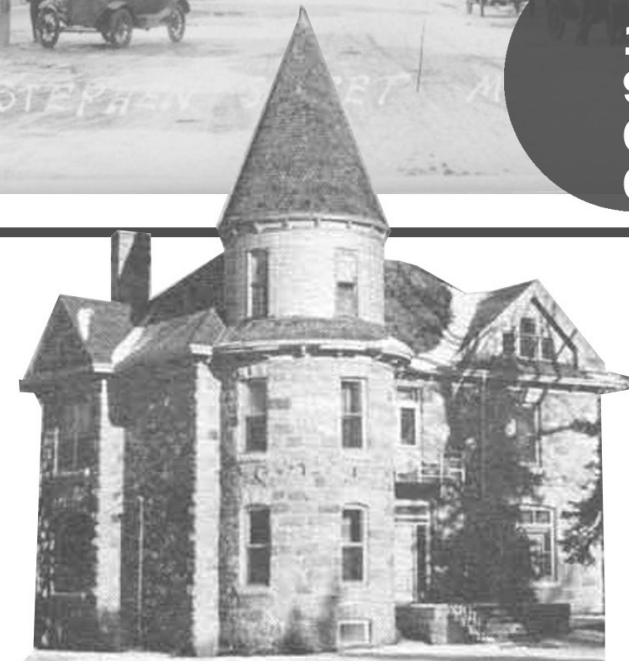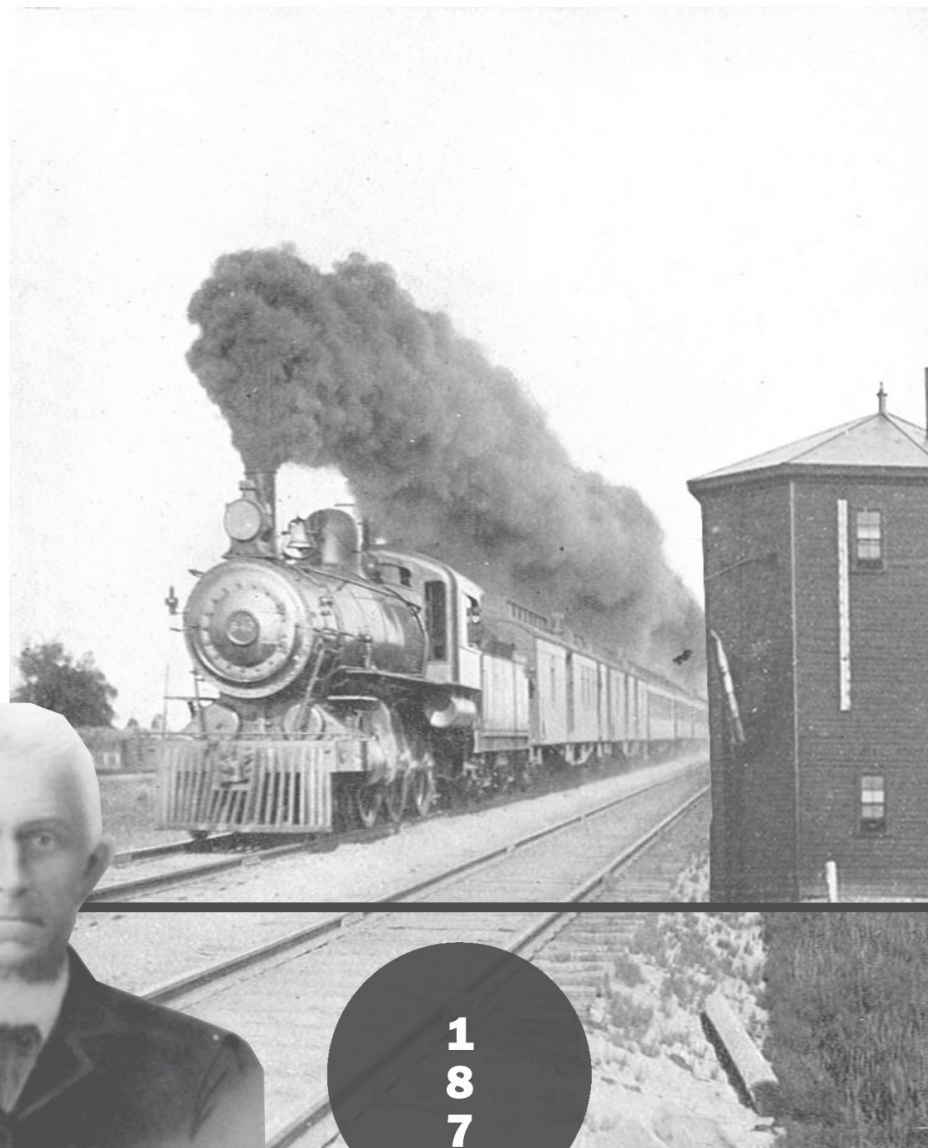
Figure 14. Morden timeline

5.2 Client Profile

The client for the proposed new museum is the Canadian Fossil Discovery Centre (CFDC), which is defined as a charitable organization governed by a Board of Directors including:

- James Bamburak - Director
- Joe Brown - Secretary
- Kevin Campbell - Chairman
- Heather Francis - Director - City of Morden Appointee
- Brian Fransen - Vice President - Western School Division Appointee
- Vince Galati - Director
- Chris Leach - Director
- Walter Siemens - Treasurer
- Kent Winning – Director

Mission Statement

"Dedicated to excellence in fossil preservation, research and learning experiences."

Values/Goals

As outlined by the CFDC, its' primary purpose is to:

Firstly, support local initiatives in the field of Paleontology and related earth sciences. Search and excavate, document, collect, preserve, research and study, provide public exhibitions, educate, and interpret fossil and geological specimens including prehistoric environments primarily from the Manitoba Escarpment as well as (including) surrounding areas and related geological formations.
Secondly, acquire and conserve properties with fossil-bearing

strata, along the Manitoba Escarpment, enabling the Centre to preserve and conserve fossiliferous areas ensuring the opportunity for future research and achievement of the Centre's purpose as part of Canada's heritage.
Third, the provision of support for the Paleontological/ geological exploration and research of potential fossil-bearing properties along the Manitoba Escarpment or related formations outside of Manitoba. It will be the policy of the CFDC to encourage collaboration with any individual or group, organization, university, school, museum or other institute of research in any manner within the above noted areas of interest, consistent with sound principles of scientific research and program/museum development.
CFDC will work closely with landowners whose generous provision of access to their land has allowed the Centre to successfully achieve its primary purpose. If the production of bentonite mining is to resume, the Centre will encourage working with new potential mining companies to coincide with its primary purpose. ("Governance")

Needs

The Canadian Fossil Discovery Centre (CFDC) is in need of improvement and expansion. There is a need for more space to properly display findings that are constantly being discovered and new exhibitions that will help educate visitors through cognitive and active learning. The museum also needs a branding strategy to help promote the museum and attract new and old visitors. In order to incorporate the local community of Morden, Manitoba there is a need for a new centre that incorporates mixed-use. The centre should incorporate space for public use that people may visit regularly whether they are attending the CFDC or not.

5.3 Spatial Adjacency

The following figure illustrates the desired relationship between spaces and their relative sizes.
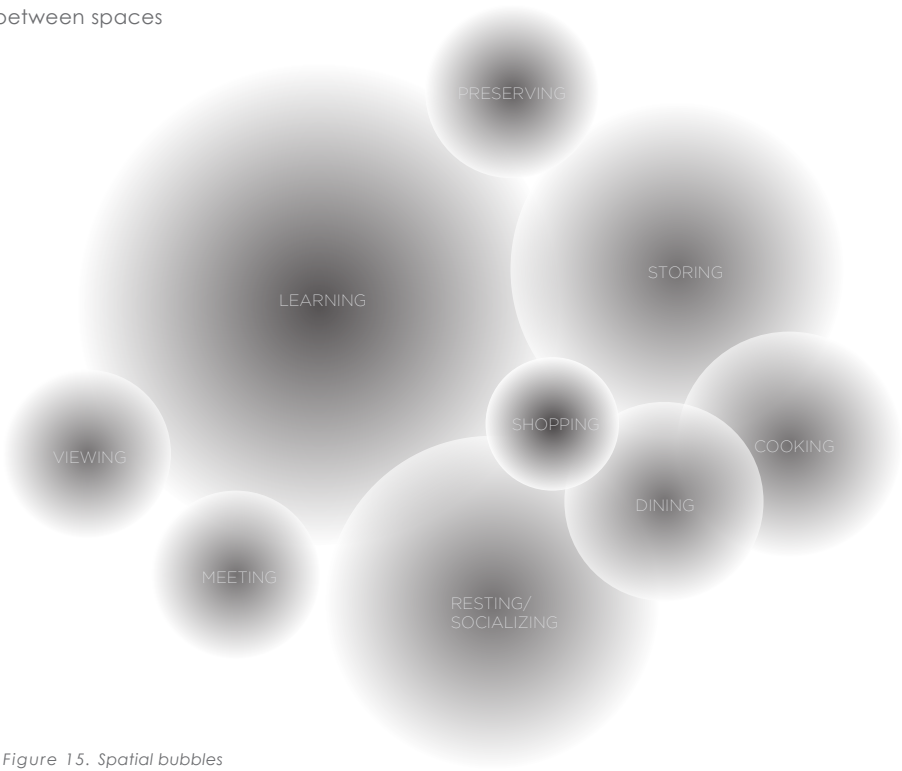
Figure 15. Spatial bubbles

5.4 Users

PRIMARY USERS	AGE & GENDER	ACTIVITIES	DURATION	FREQUENCY	NO. OF INDIVIDUALS
Board of Directors	30+ M/F	• oversee all aspects of the museum • organize, plan, direct, supervise, financial	3 hrs	Monthly	9
Manager	20+ M/F	• care of museum and its' objects • responsible for all museum acquisitions and exhibitions • financial • leader of all other museum members	8 hrs	Daily	1
Guide/Activity Coordinator	20+ M/F	• explain and tour visitors around museum and exhibits • speak to groups • help and educate visitors in special events	8 hrs	Daily	2
Workers/Volunteers	16+ M/F	• guide visitors, work in exhibit areas, gift-shop, restaurant, library • help and educate visitors daily and during special events • monitor museum areas	4-8 hrs	Daily	20
Receptionist	18+ M/F	• answer phones, handle paperwork, answer and direct inquiries, direct visitors, handle tickets and sales	8 hrs	Daily	2
Visitors & Students	5+ M/F	• socialize, travel museum, interact with exhibits, lounge, learn • monitor visitors and exhibits	2-5 hrs	Daily	varies daily
Security	18+ M/F		8 hrs	Daily	4

Table 1. Primary users

SECONDARY USERS	AGE & GENDER	ACTIVITIES	DURATION	FREQUENCY	NO. OF INDIVIDUALS
Janitorial Staff	18+ M/F	• responsible for cleaning all areas of the space	4 hrs	Daily	3
Organizations	18+ M/F	• rent space for short period of time to hold events or meetings	1-3 hrs	Varies	allow for up to 50 persons
Universities/Schools	5+ M/F	• use for a visit, walk through, in conjunction with class/course	2-3 hrs	Varies	varies
Research Institutes	20+ M/F	• use to analyze, confirm or identify items in exhibits	2-8 hrs	Varies	varies

Table 2. Secondary users

TERTIARY USERS	AGE & GENDER	ACTIVITIES	DURATION	FREQUENCY	NO. OF INDIVIDUALS
Maintenance Staff	18+ M/F	• responsible for maintenance of the space	1-3 hrs	Varies	2
Delivery persons	16+ M/F	• responsible for delivering mail, food, merchandise or exhibit pieces	1-3 hrs	Varies	varies
Speakers	20+ M/F	• visit occasionally for events	2-3 hrs	Varies	varies

Table 3. Tertiary users

5.5 Needs

PRIMARY USERS	PSYCHOLOGICAL NEEDS	SPECIAL NEEDS
Board of Directors	• privacy (washrooms, offices, research areas) • socialization • safety and comfort	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare
Manager	• privacy (washrooms, offices, research areas) • socialization • safety and comfort	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare
Guide/Activity Coordinator	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • large open areas • creative space • areas of rest and reflection	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment
Workers/Volunteers	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • natural and artificial light • areas of rest and reflection	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare
Receptionist	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • natural and artificial light • areas of rest and reflection	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare
Visitors & Students	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • natural and artificial light • areas of rest and reflection • large open areas • active and cognitive learning opportunities • contextual exhibiting	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare • proper font size and colour on exhibits for individuals with impaired vision • learning environments for different education levels
Security	• privacy (washrooms, offices, research areas) • safety and comfort • natural and artificial light	• efficient and effective wayfinding • accessible for visual, cognitive, and mobile impairment • reduced glare

Table 4. Primary users needs (continued on next page)

SECONDARY USERS	PSYCHOLOGICAL NEEDS	SPECIAL NEEDS
Janitorial Staff	• privacy (washrooms, offices, research areas) • safety and comfort	• efficient and effective wayfinding • accessible for visual, cognitive, and mobile impairment • reduced glare
Organizations	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • large open areas • creative space • areas of rest and reflection	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare
Universities/Schools	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • large open areas • natural and artificial light • creative space • areas of rest and reflection	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare
Research Institutes	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • natural and artificial light • areas of rest and reflection	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare

Table 5. Secondary users needs

TERTIARY USERS	PSYCHOLOGICAL NEEDS	SPECIAL NEEDS
Maintenance staff	• privacy (washrooms, offices, research areas) • safety and comfort • natural and artificial light	• efficient and effective wayfinding • accessible for visual, cognitive, and mobile impairment • reduced glare
Delivery persons	• privacy (washrooms, offices, research areas) • safety and comfort	• efficient and effective wayfinding • accessible for visual, cognitive, and mobile impairment • reduced glare
Speakers	• privacy (washrooms, offices, research areas) • socialization • safety and comfort • natural and artificial light	• efficient and effective wayfinding • auditory options for visually impaired • accessible for visual, cognitive, and mobile impairment • reduced glare

Table 6. Tertiary users needs

5.6 Functional, Aesthetic, and Technological Requirements

Workshop + Meeting Room

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Meeting + Workshop Room					
Seating	20	18" x 20.75" x 17"	Yes	Yes	
Horizontal Work Surface	1	102" x 30" x 30"	No	Yes	
Horizontal Storage	1	48" x 18" x 21"	Yes	Yes	

Total Estimated Area Required: 525 ft^2

Notes: The number of people attending the workshops and conferences may vary, therefore the space should allow for flexibility in terms of furniture.

Table 7. Workshop and meeting room furniture, fixtures and equipment requirements

BOH Services/Kitchen + Dining

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
BOH services/Kitchen					
Food preparation surface	2	72" x 30" x 35"	Yes	Yes	
Oven	1	29" x 48" x 40"	No	Yes	
Freezer	1	54" x 82" x 40"	No	Yes	
Refrigeration	1	30" x 30" x 70"	No	Yes	
Sink	2	48" x 22" x 10"	No	Yes	
Lateral storage	2	48" x 24" x 74"	Yes	Yes	
Seating	2	18" x 20.75" x 17"	Yes	Yes	
Horizontal work surface	1	60" x 20" x 29"	Yes	Yes	
Dining					
Seating	56	23" x 22" x 30"	Yes	Yes	
Horizontal eating surface	14	28" x 28" x 29"	Yes	Yes	

Total Estimated Area Required: 2630 ft^2

Table 8. BOH services/kitchen and dining furniture, fixtures and equipment requirements

Manager Office

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Task seating	1	18" x 20.75" x 17"	Yes	Yes	Ergonomic and adjustable
Guest seating	2	23" x 22" x 30"	Yes	Yes	
Horizontal work surface	1	60" x 20" x 29"	No	Yes	
Horizontal storage	2	48" x 18" x 21"	No	Yes	
Lateral storage	3	Varies, 24"deep lowers, 18" uppers	Yes	Yes	
				Yes	
Computer	1	16" x 2" x 11"	No	Yes	
Telephone	1	9" x 7" x 5"	No	Yes	

Total Estimated Area Required: 306.9 ft^2

Table 9. Manager office furniture, fixtures and equipment requirements

Washrooms

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Female					
Stall	3	60" x 60" (x1) 36" x 36" (x3)	No No	Yes Yes	
Water closet	3	26" x 17" x 27"	No	Yes	
Sink	2	15"x 8"	No	Yes	
Mirror	2	30"x 50"	No	Yes	
Male					
Stall	2	60" x 60" (x1) 36" x 36" (x3)	No No	Yes Yes	
Water closet	2	26" x 17" x 27"	No	Yes	
Urinal	1	13" x 14" x 21"	No	Yes	
Sink	2	15"x 8"	No	Yes	
Mirror	2	30"x 50"	No	Yes	

Total Estimated Area Required: 306.9 ft^2

Table 10. Washrooms furniture, fixtures and equipment requirements

Lobby

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Task seating	3	18" x 20.75" x 17"	Yes	Yes	Ergonomic and adjustable
Storage	3	29" x 19" x 27.25"	No	Yes	
Horizontal Surface	1	64" x 24"(lower) plus 11"(upper) x 28"(lower) plus 15.5"(upper) 48" x 18" x 21"	No	Yes	
Computer	3	16" x 2" x 11"	Yes	Yes	
Telephone	1	9" x 7" x 5"	Yes	Yes	
Public seating	10	84" x 28" x 17"	No	Yes	

Total Estimated Area Required: 3250 ft^2

Table 11. Lobby furniture, fixtures and equipment requirements

Laboratory

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Lateral storage	6	48" x 24" x 74"	Yes	Yes	
Cart	9	24" x 18" x 38"	Yes	Yes	
Microscope	3	11" x 8" x 30"	Yes	Yes	
Computer	3	16" x 2" x 11"	Yes	Yes	
Seating	12	25" x 17" x 26"-34"	Yes	Yes	Ergonomic and adjustable
Horizontal work surface	9	96" x 36" x 34"	No	Yes	Should be 3-sided frame for stool to fit and stainless steel

Total Estimated Area Required: 2100 ft^2

Table 12. Laboratory furniture, fixtures and equipment requirements

Collections

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Storage	14	228" x 12" x 89.25"	Yes	Yes	Compactable

Total Estimated Area Required: 3750 ft^2

Table 13. Collections furniture, fixtures and equipment requirements

Theater

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Seating	36	26.5" x 28.5" x 42"	No	Yes	
Screen	1	Varies	No	Yes	

Total Estimated Area Required: 1290 ft^2

Notes: Two spaces should be designated for individuals in a wheelchair as per the National Building Code.

Table 14. Theater furniture, fixtures and equipment requirements

Janitor Closet

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Sink	1	24" x 36"	No	Yes	
Storage	3	36" x 18" x 72"	No	Yes	Adjustable
Cart	1	22" x 46" x 38"			

Total Estimated Area Required: 68 ft^2

Table 15. Janitor closet furniture, fixtures and equipment requirements

Gift Shop

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Seating	1	26.5" x 28.5" x 42"	Yes	Yes	
Display	1	Varies	No	Yes	

Total Estimated Area Required: 400 ft²

Notes: Two spaces should be designated for individuals in a wheelchair as per the National Building Code.

Table 16. Gift shop furniture, fixtures and equipment requirements

Exhibition Space + Gift Shop Stands

Location + Item	Quantity	Size	Mobility Required	Durability	Special Requirements
Display	Varies	Varies	Yes	Yes	All displays should be accessible for children and those in wheelchairs. Also allow for interactive displays as well.
Public seating	3	9" x 7" x 5"	Yes	Yes	
Gift stand	2	84" x 28" x 17"	Yes	Yes	

Total Estimated Area Required: 16580 ft²

Will be any space that is left over after all ancillary spaces are accounted for

Notes:
1. Exhibition displays will vary greatly so there is not one dimension that will suit all types of units. However the space should be large enough to accommodate both Mosasaurs' skeletons.
2. The gift shop will not be one self-contained shop, but rather have pop-up stations throughout the centre.

Table 17. Exhibition space and sift shop stands furniture, fixtures and equipment requirements

5.7 Goals

Organizational Goals

The goals of the organization as previously stated are to support local initiatives in the field of Paleontology and related earth sciences. The museum will search and excavate, document, collect, preserve, research and study, provide public exhibitions, educate, and interpret fossil and geological specimens that are primarily from the Manitoba Escarpment as well as (including) surrounding areas and related geological formations.

Acquire and conserve properties with fossil-bearing strata, along the Manitoba Escarpment, enabling the museum to preserve and conserve fossiliferous areas ensuring the opportunity for future research and achievement of the museum's purpose as part of Canada's heritage. Provide support for the Paleontological/geological exploration and research of potential fossil-bearing properties along the Manitoba Escarpment or related formations outside of Manitoba.

Collaborate with any individual or group, organization, university, school, museum or other institute of research in any manner within the above noted areas of interest, consistent with sound principles of scientific research and program/museum development. ("Governance")

Form and Image Goals

The new museum should excite and entice people to wander intuitively throughout the interior. It should incorporate views outside to give visitors a sense of reprieve from all the information in front of them, but still leave them interested to continue exploring. The aesthetic should stand alone and differ from its' surroundings and neighboring buildings, as it is a unique part of Manitoba's heritage. Exhibits within the space should allow guests to better understand the context of where the artifact came from or would have existed in.

Function Goals

The major function of the museum is for display and learning. Visitors primarily come to museums to learn, but with the design of this new museum the space should accommodate for public socialization spaces as well. This public space will include the following: a restaurant, cafe, library, and retail space. The building should accommodate at the minimum, one hundred persons.

Issue: Image
Objective: The building should act as an advertisement for the museum
Concept: Relocate the museum to a new building where it is primary to all other uses
Concept: Consider constructing a new building
Concept: Consider highlighting a popular item that can be seen from the exterior of the building
Concept: Consider better signage

Issue: Space
Objective: Relocate Canadian Fossil Discovery Centre
Concept: Consider relocating to an area that has views to outside
Concept: Consider relocating to an area where the building can stand out

Objective: Incorporate Community
Concept: Consider utilizing museum for other purposes than viewing and learning from exhibits, such as an event space
Concept: Consider the building as a mixed-use space
Concept: Consider an additional use for the museum that is open beyond regular hours

Objective: Larger display areas
Concept: Consider the use of more contextual exhibits to give a sense of place

Issue: Exhibits
Objective: Variety of exhibit types
Concept: Consider using both cognitive and active learning exhibits

CHAPTER   06

theoretical application

6.1 Introduction
6.2 Application summaries

6.1 Introduction

This practicum reviewed three topics: Tourism and Community, and Interpretive Learning in the Post-Museum and Exhibition Design. Through the review of each topic a re-design of the Canadian Fossil Discovery Centre was generated. Beginning with the layout of the floor plan this chapter will highlight key areas in the CFDC and what was taken from the review and where those topics will be applied.

6.2 Application Summaries

tourism + tourist

Tourism continues to rise, causing people to travel to destinations all over the world visiting "things worth seeing" or "attractions" that drive tourism in a given society.

Those that travel can be divided into two different tourist groups, either institutionalized or non-institutionalized. With institutionalized being less adventurous, where comfort, and safety is a priority. Non-institutionalized tourists are adventurous and tend to venture into the local environment without guidance, mingling with local culture. Ultimately the tourist wants to experience something new, strange, or wondrous, something they have not seen before.

Summary of Strategies

Make visitors feel comfortable and safe, but excite and encourage both guided and non-guided exploration.

Simulate an environment that once existed, creating a projection of what once was.

With flow of mass tourists native inhabitants of the area begin to disassociate.

Design Application

Minimal interior, with an open floor plan where exhibits can be seen from a distance, allowing them to choose their experience.

Anchor exhibits simulate the Lake environment of the Cretaceous reptiles, using life size replicas, fossil remains and materials that contextualize the space.

Inclusion of theater and restaurant space that can be utilized during and after CFDC's hours for tourists and local community.

Table 18. Tourism and tourist application summaries
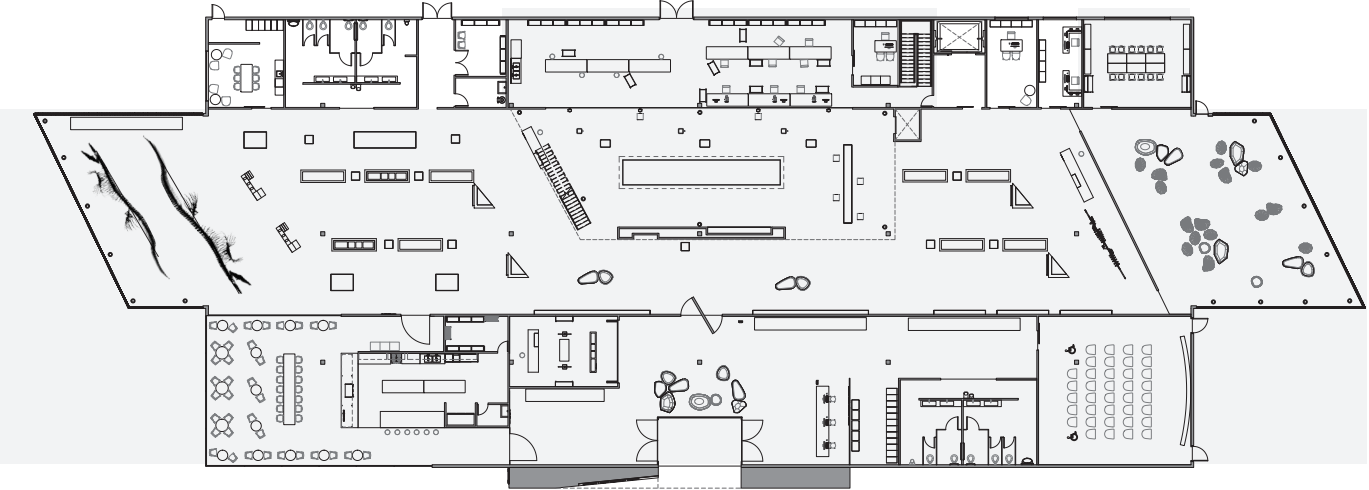
Figure 16. Tourism and tourist design application

community

An interacting population of individuals in a common location are what defines the term community. However an individual can be a part of multiple communities at once. The local community is crucial to a museum, they are the driving force behind it. They should raise the museums image and have a local impact (Kolter and Kolter, 2000, p.172).

Summary of Strategies

Museum community and local community are members of an institution's visiting public.

Museum serves the public and competes with other free time activities.

Become a part of community life. Serving the community first creates a stronger connection and bond, creating pride for the community.

Design Application

Inclusion of laboratory, boardroom/ classroom, restaurant, and theater to serve the community and those working for the museum, preparing exhibits and fossils, gives purpose to the site for other reasons besides tourism.

Inclusion of other free time activities like eating, socializing, and film screenings.

With a gift shop and gift stands throughout the museum the local community have the opportunity to sell local goods and the restaurant provides a space for socializing and for work opportunity.

Table 19. Community application summaries
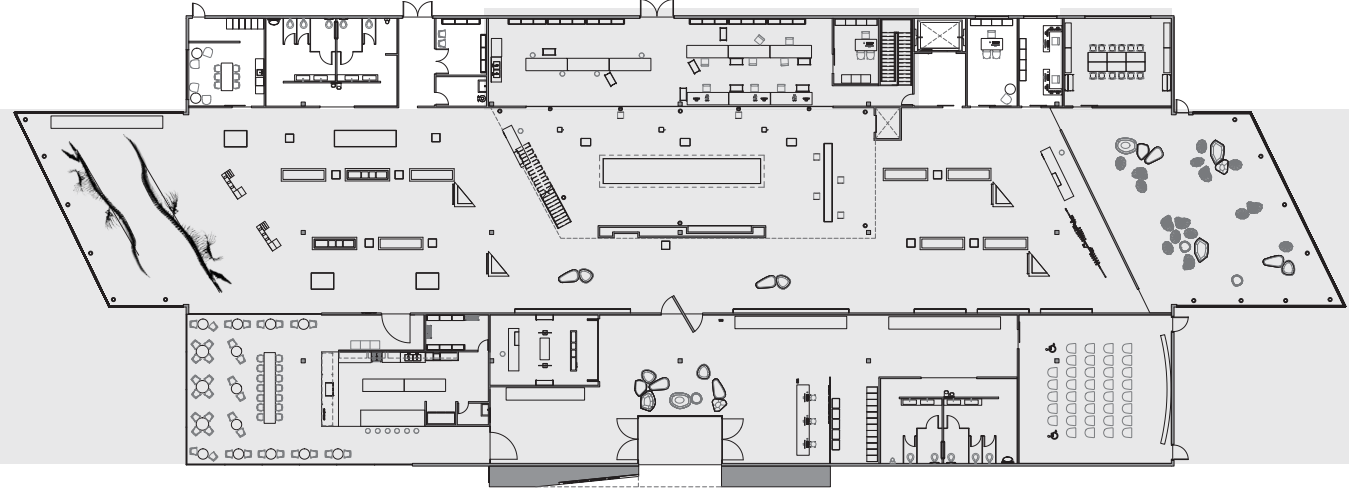
Figure 17. Community design application

the post-museum

Emerging as a response to the traditional museum's sole purpose of preservation of collections, the post-museum puts the visitor first while still providing preservation. It promotes inclusion of all individuals with different backgrounds, economic standing, gender and age, serving all individuals equally. The post-museum emphasizes interpretive learning and interaction between visitors and exhibits.

Summary of Strategies

Both educational and recreational.

Interaction is integral to learning, engaging visitors before they enter the space.

Include inclusive social experiences where interaction is vital.

Design Application

Active laboratory and viewing deck give visitors multiple views into the fossil preparation process. Classroom can serve university students studying paleontology and serve as an activity room for children. Theater and restaurant serve as recreational venues.

Views from the exterior are located at each end of the building, engaging people passing by on walking paths or driving on the road coming from the North or South.

In the diorama interactive wall projection technology will require individuals to complete tasks in groups to play games.

Table 20. Post-museum application summaries
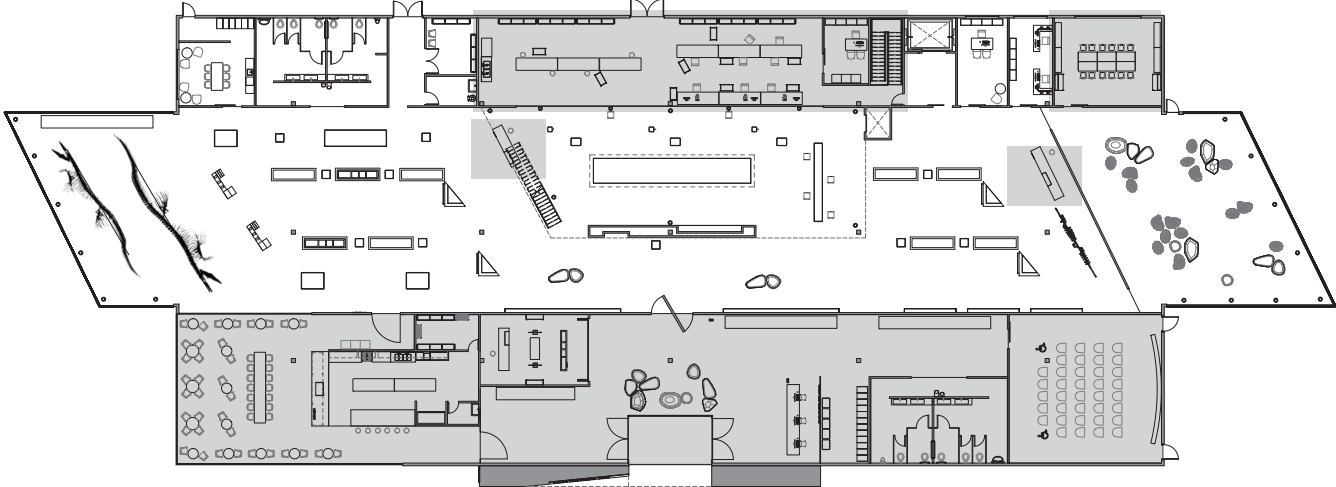
Figure 18. Post-museum design application

exhibition design

Exhibition design involves a multitude of different attributes, from lighting, sound, materials, and organization. It has begun to re-think how it presents information and how artifacts are displayed and considers different spatial layouts that guide visitors in different ways; providing different opportunities and emotional experiences. This practicum follows the narrative space typology.

Summary of Strategies

Elastic space void of linearity; design varies, not following chronological or sequential structure.

Rhythm and intensity range from exhibit to exhibit.

Allow users to adjust visit to their liking and engage on an emotional level.

Design Application

Only one partition wall exists in the space, allowing visitors to choose their own experience unguided. Different exhibits range in lighting and atmosphere.

Diorama is a darker, aqueous exhibit that allows more play with interactive wall projections and lightweight modular furniture. At the opposite end the Bruce and Suzy fossils are in a natural light filled space that acts as a reflection and resting space.

CFDC includes areas just for viewing artifacts and some mixed with interactive and non-interactive exhibits.

Open plan that allows visitors to choose where they will begin and end their visit.

Table 21. Exhibition design application summaries
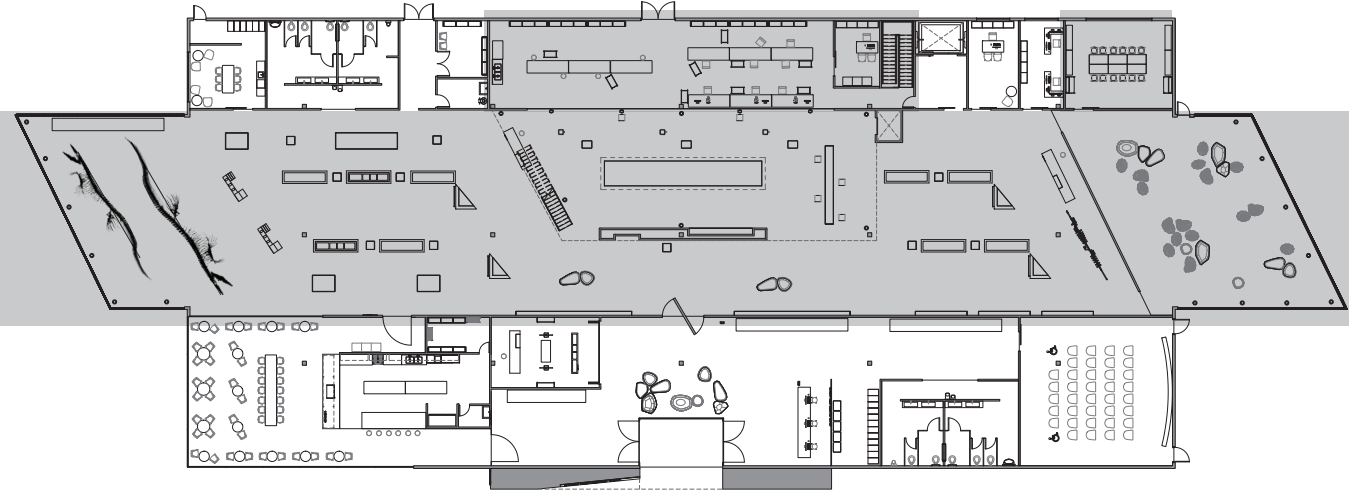
Figure 19. Exhibition design application

CHAPTER 07

design

7.1 Design Overview

This chapter outlines the proposed design for the Canadian Fossil Discovery Centre in Morden, Manitoba, located along Route 100. The proposed design considers the relocation of the CFDC into a new building type with a re-design and consideration for its exhibits and program. The result is a mixed-use building that allows both tourists and the local community to actively engage and socialize on a regular basis. Using transparencies in both the physical appearance and research, where definitions are blurred and mixed; the programming of the space was created. The intent of this practicum is to provide the CFDC with a new space that could adequately house, preserve, research, and display their collection in both a traditional and post-museum typology for new and old visitors, while still providing ancillary experiences to both tourists and the local community. The process that informed the design proposal is a synthesis of the previous chapters including the literature review, case study analysis, building and site analysis and program. These processes combined to determine the context and rational of this proposed design. Due to the scope of this project not all areas were fully developed. There are four main areas that this proposal focuses on, which are as follows:

Exterior Façade + Entrance

Lobby

Exhibition Space

Restaurant

Throughout this chapter a description of each space will be given highlighting its design features, key elements, and the reasoning behind those decisions. This chapter will begin with the spatial organization of the design presented in plan, along with horizontal, and vertical elevations and sections.

The re-designed CFDC is located in Morden, Manitoba where different cultures and community pride reign. Located in the prairies, Morden's architecture is rich in Queen Anne style homes. Every building or facility appears to accommodate its prairie surrounding. Creating a contemporary, minimal, stream lined design that keeps the local community at the base of its design was key to the intent of this practicum.

7.2 Spatial Organization

Site + Building

Located along Route 100, the CFDC will be situated in a location along a major road and walking path. The site allows for both vehicular, foot, and cycling traffic. Visitors are given two paths of entry to the buildings main entrance; and maintenance and fossil deliveries, a back entrance with ramp to the collections and maintenance room. The site is surrounded by greenery giving individuals within the museum views to the outside, whether in the restaurant, exhibit space or those working within the museum.

The exterior building has three focal points: the first being the black steel powder coated main entrance, located at the west side of the building, that slightly protrudes from the exterior wall. The second and third focal points are located at both the north and south ends of the building. These house two of the CFDC's main permanent exhibitions. These ends act as anchors within the interior and exterior, breaking the uniformity of the building. These extrusions act as advertisement for the centre and can be seen when driving either northbound or southbound down Route 100.

N
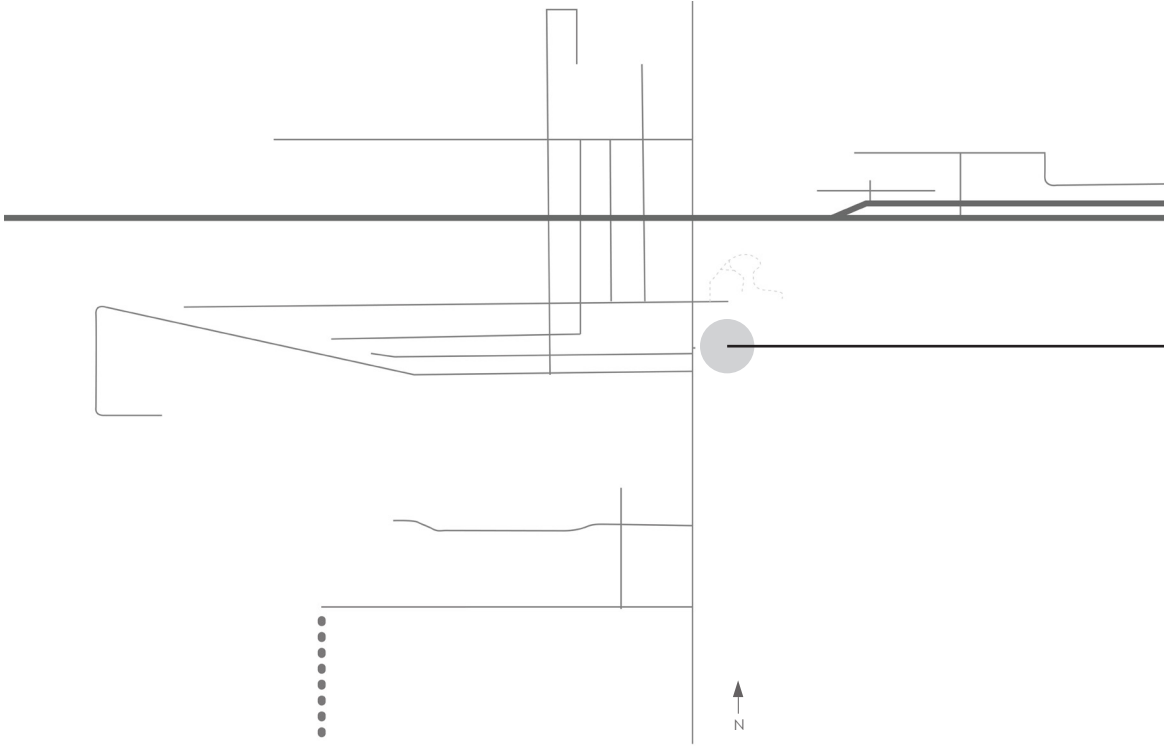
Figure 20. CFDC site location map

N
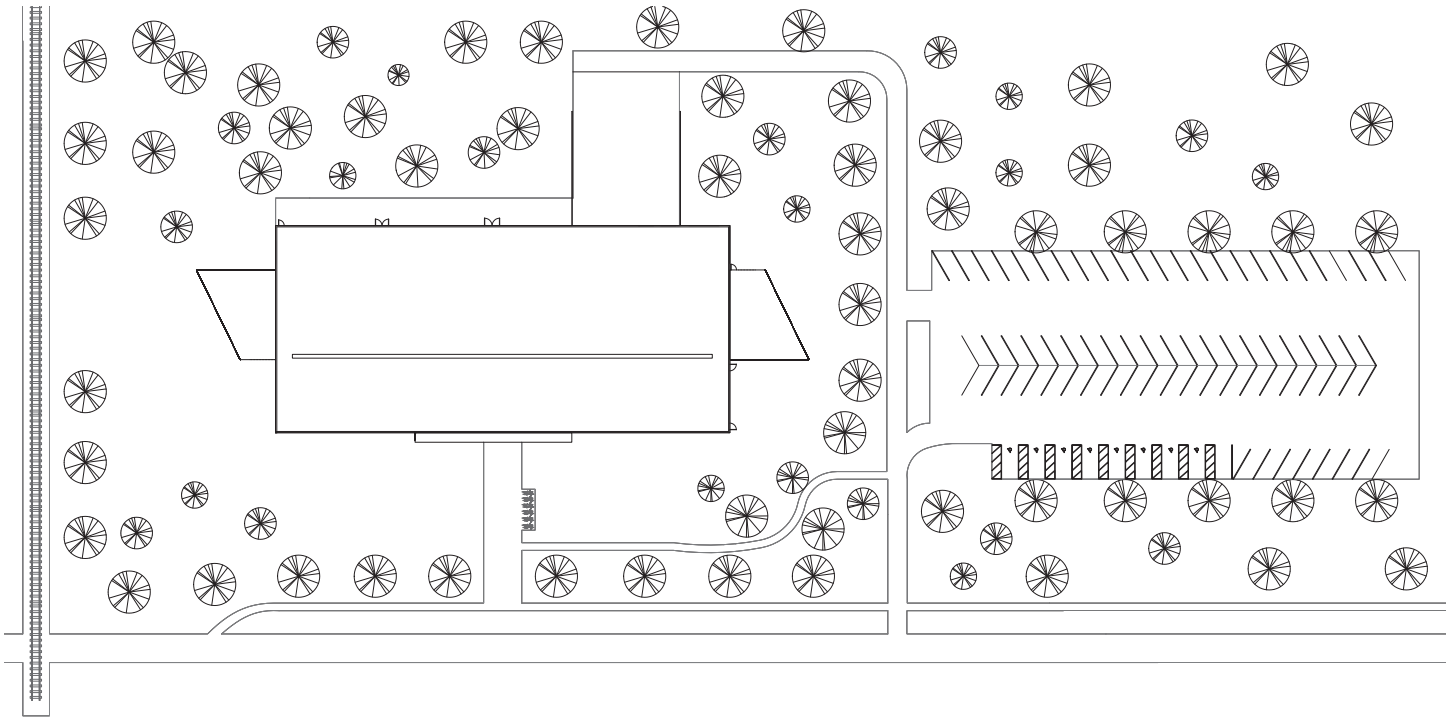
Figure 21. Site plan N.T.S.

Main Level

The main floor plan follows the idea of a narrative exhibition space, where the visitor chooses their own route through the space, thus making their own narrative. This design divides the CFDC into three sections, stacking different uses. Support spaces that will be utilized by those working in the building are mainly located at the back (East) side of the building, with exhibit space (middle) for visitors, and at the front (West) ancillary spaces that can be used by the local community and tourists. The plan centralizes the exhibits, the main purpose of the building, with two anchor points of major exhibits, Bruce and Suzy and a life size diorama. The exhibition space has an open concept plan allowing visitors to experience the CFDC at their own pace and order.

Viewing Deck

For visitors to get a better view into the lab and those preparing fossils a viewing deck was designed. From here visitors can look down into the lab or out over the main exhibits where they will be have a closer view of hanging fossils. This level also acts as additional space for exhibits, specifically the casting and fossil preparation process. The viewing deck features a central opening to get a full view of a partially excavated fossil below. This allows visitors to choose how they experience a non-interactive exhibit.

Lower Level

Collections and the maintenance room were moved to a lower level to make the most of the exhibition space without taking away square footage. The collections have an elevator that connects directly to the laboratory for easy access to fossils. The lower level can be accessed by a ramp at the back of the building as well.

Room Legend

1. 101 main entry
2. 102 lobby
3. 102a reception
4. 102b lockers
5. 103 washrooms
6. 104 theater
7. 105 gift shop
8. 106 restaurant
9. 106a kitchen
10. 106b chemical closet
11. 106c dry storage
12. 107 exhibition
13. 107a bruce + suzy
14. 107b fossils + rocks
15. 107c geology + excavation
16. 107d temporary exhibit
17. 107e diorama
18. 108 staff room
19. 109 washrooms
20. 110 fire exit
21. 111 storage
22. 112 janitor closet
23. 113 laboratory
24. 113a curator office
25. 114 elevator + loading
26. 115 manager office
27. 116 security
28. 117 boardroom/classroom
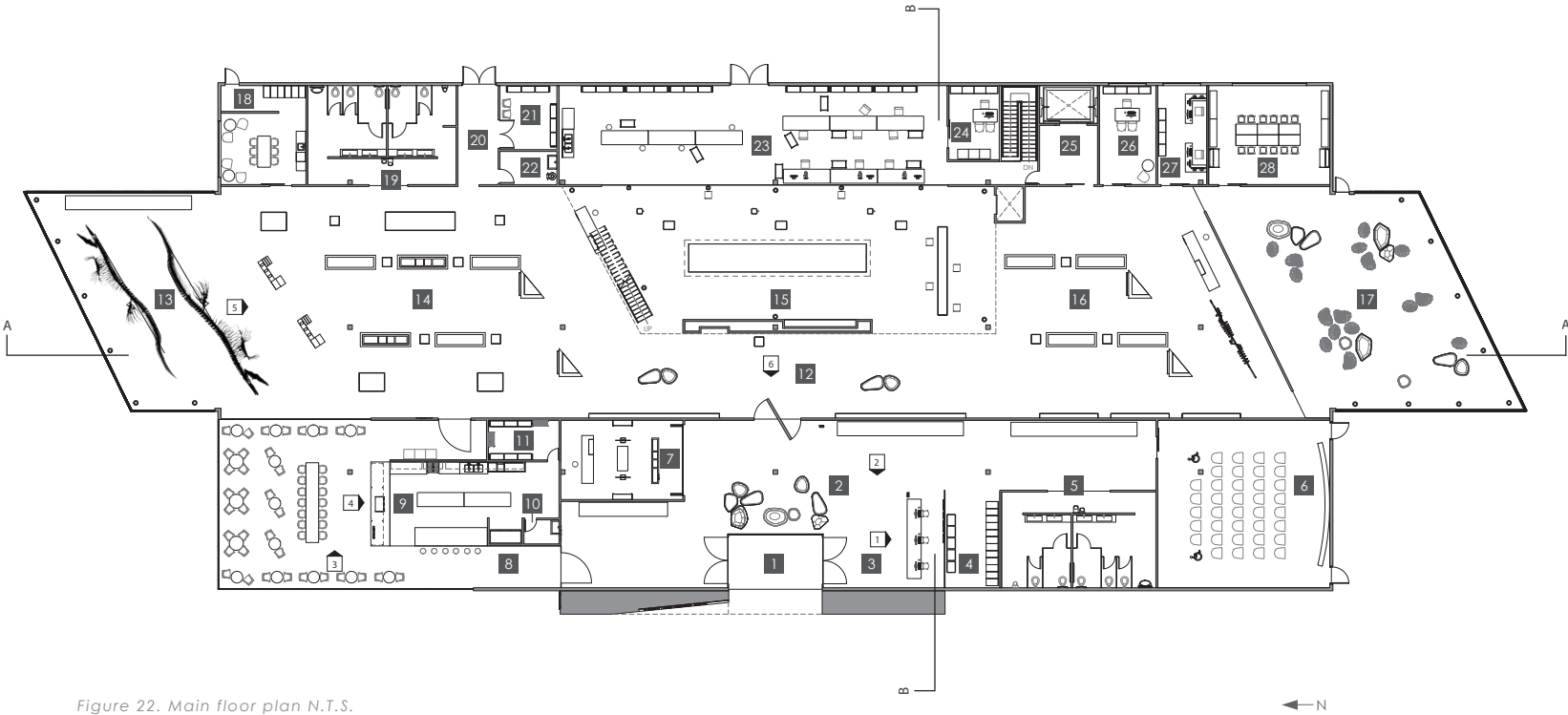
Figure 22. Main floor plan N.T.S.

Figure 23. Viewing deck floor plan N.T.S.

←N
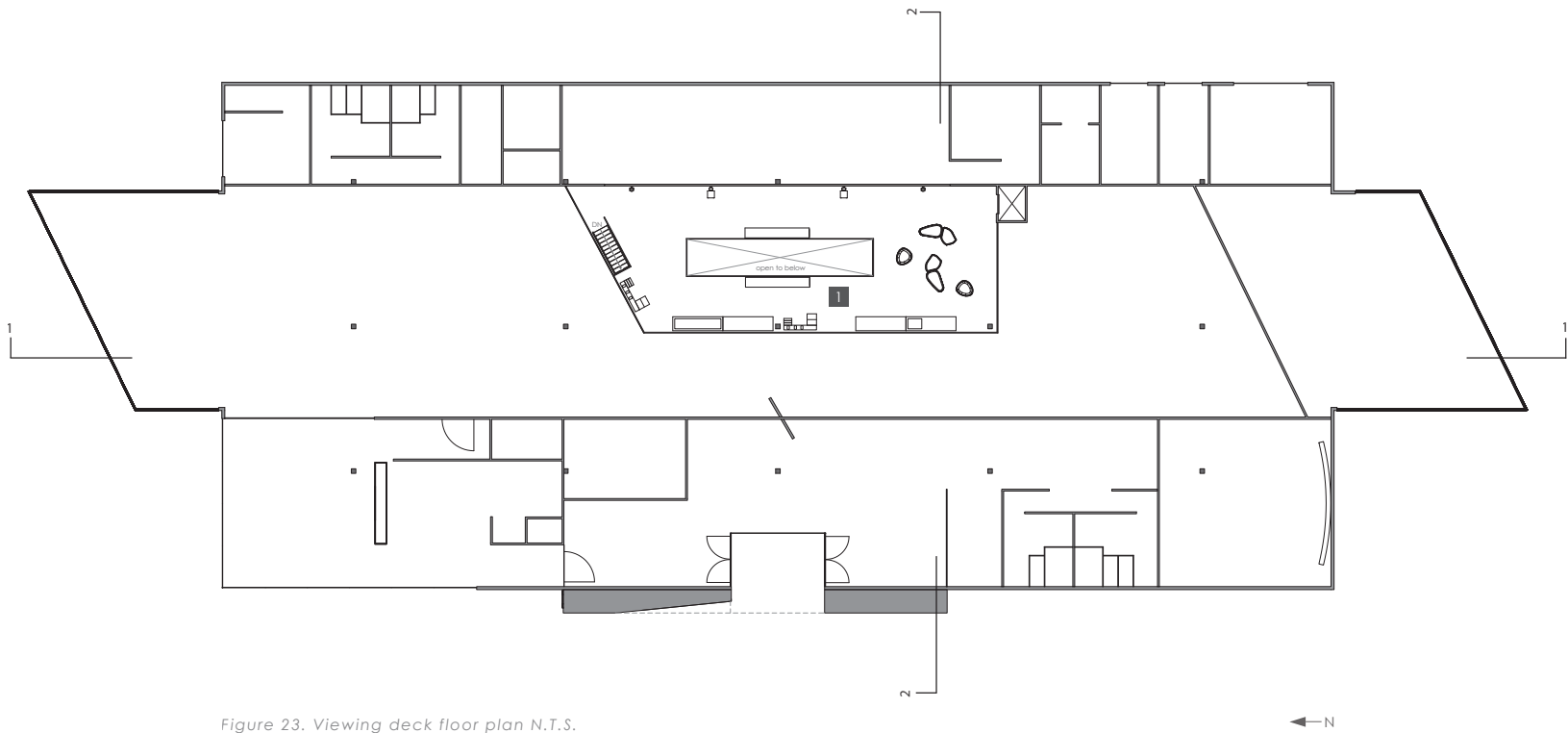
Viewing Deck Room Legend

1.   201 fossil preparation

Lower Floor Room Legend

1.   001 collections
2.   002 maintenance
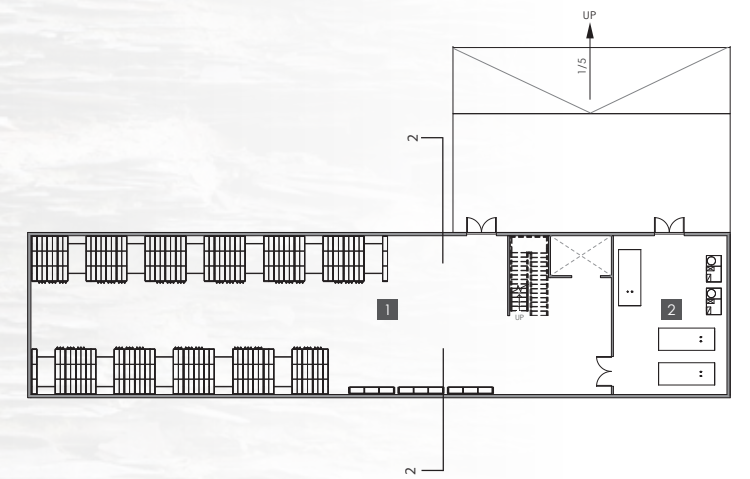
Figure 24. Lower level floor plan N.T.S.

←N

7.3 Design Elements

Exterior + Entrance

Every material used throughout the CFDC was carefully considered and referenced to the spaces and objects within the interior. On the exterior large panels of Manitoba's local Tyndall stone cover the façade then continue to the inside. The use of this material that follows the strategy from the tourism and community review of this practicum. It is symbolic, referencing the objects within; Tyndall is often imprinted and preserves fossilized remains. Cladding the centre in Tyndall gives a sense of encasing and preserving what naturally occurred and what the CFDC is doing. Like the fossils within the stone has been recovered from the ground, dusted, cleaned, and buffed to highlight its intricacies. Breaking the continuous wrap of stone on both the north and south

ends of the building are optical glass bricks. With slight imperfections the bricks emote an image similar to water, giving a slight hint at what is waiting inside for visitors without revealing too much. These bricks are used at opposite ends of the building for both programming reasons and branding. These glass extensions are the first views of the museum that will be visible from the road, with the north end facing towards town and Morden's main street. Although visitors may not get a full view inside or of the overall building, they are being provided with a distorted highlight that can only be discovered once inside. Black powder coated steel frames the main entrance, providing contrast from the building's stone façade. It with the use of locally produced letters for the CFDC sign. The exterior of the building reflects the materiality of its interior.

Figure 25. North facade exterior perspective

Figure 26. West exterior elevation
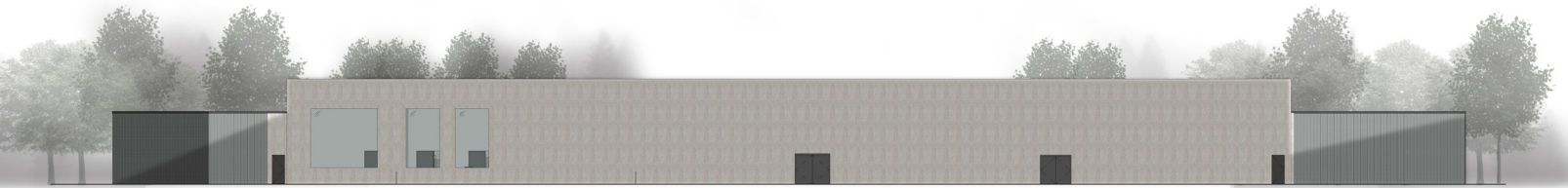
Figure 27. East exterior elevation
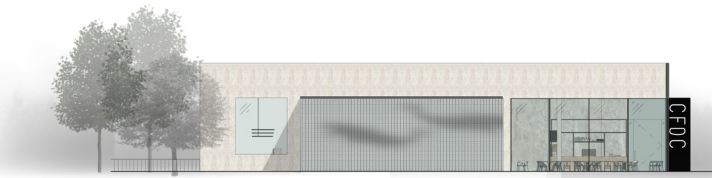
Figure 28. North exterior elevation
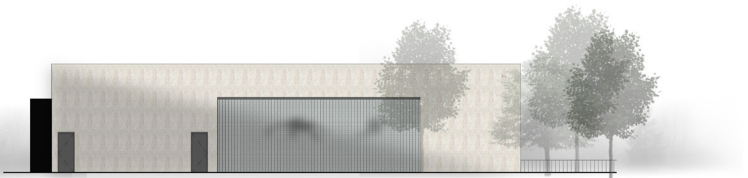
Figure 29. South exterior elevation

Exterior + Entrance

Every material used throughout the CFDC was carefully considered and referenced to the spaces and objects within the interior. On the exterior large panels of Manitoba's local Tyndall stone cover the façade then continue to the inside. The use of this material that follows the strategy from the tourism and community review of this practicum. It is symbolic, referencing the objects within; Tyndall is often imprinted and preserves fossilized remains. Cladding the centre in Tyndall gives a sense of encasing and preserving what naturally occurred and what the CFDC is doing. Like the fossils within the stone has been recovered from the ground, dusted, cleaned, and buffed to highlight its intricacies.

Breaking the continuous wrap of stone on both the north and south ends of the building are optical glass bricks. With slight imperfections the bricks emote an image similar to water, giving a slight hint at what is waiting inside for visitors without revealing too much. These bricks are used at opposite ends of the building for both programming reasons and branding. These glass extensions are the first views of the museum that will be visible from the road, with the north end facing towards town and Morden's main street. Although visitors may not get a full view inside or of the overall building, they are being provided with a distorted highlight that can only be discovered once inside. Black powder coated steel frames the main entrance, providing contrast from the building's stone façade. It with the use of locally produced letters for the CFDC sign. The exterior of the building reflects the materiality of its interior.

Figure 30. Main entrance perspective

Figure 31. 1 | South lobby elevation

Lobby

CFDC's lobby is a site of neutrality. It is a space for socializing, where visitors can wait to enter the museum, theater, or restaurant. Its focal point is the main entrance that mimics the display cases of the museum using black powder coated steel mullions. Directly in front of the main entrance is modular seating that allows visitors to change their configurations. Hanging above the seating is an art installation mimicking water. This spot could be utilized as a changing exhibit space for the local community. Encouraging them to create an installation for the CFDC semi-annually, which in turn will give them a chance to become a part of the museum community and create a visual interaction with tourists.

The gift shop will be stocked with locally manufactured items, which are also used throughout the museum as signage and (post boxes) for museum map stands. This creates another connection between the community and the museum.

Figure 32. 2 | West lobby elevation

Figure 33. Lobby entrance perspective

Figure 34. Restaurant perspective

Restaurant

Mosa is the restaurant and ancillary space for the museum's local community and tourists. It can be accessed through the lobby or the monitored door connected to the exhibition space.

Both the North and West walls use glazing opening the space to natural light and giving views to outside. The East wall will use metal mesh along with glazing, creating a transparency, to give visitors a partial view to the interior of the CFDC and to Bruce.

This space will give guests a more boutique restaurant feel and follow the museum's neutral palate. Floors will use polished concrete and hexagon white Bianco floor tiles and concrete walls. To compensate for all of the hard surfaces and the acoustics the ceiling will use an organic acoustic panel system that is made from sunflower seed husks.

The restaurant will have a modern prairie style, with warm golden toned wood for the farm table, some chairs, the serving counter and chefs table. These colours tie into the colours of the prairies and the sunflower seed ceiling references the prairie fields of wheat, corn, and sunflowers that line the highways.

Its open kitchen will allow guests to watch as their meal is prepared and the inclusion of a chef's table and farm or family style table provieds opportunities for socialization with both the locals, tourists, and staff.

Figure 35. 3 | East restaurant elevation

Figure 36. 4 | South restaurant elevation

Figure 37. South rocks + fossils exhibit perspective

Figure 38. 5| South exhibit elevation

Exhibits

The core of the CFDC is the exhibition space. When entering into the space from the lobby visitors will cross a threshold of natural light from the skylight above. This light creates the illusion of stepping through a boundary into another world. The skylight was added to compensate for the lack of windows within the exhibition space and to provide natural light. The light cast alludes to the feeling of stepping through a waterfall, with the ceiling sloping down toward the exhibits, spatially directing visitors towards them.

There are various types of exhibits; wall hung, suspended, table, glass case, floor recessed, and interactive. The idea was to design an exhibition layout that would allow people to wander through the museum and create their own narrative, without following a predetermined path laid out by the museum. The variations in exhibits also force visitors to move horizontally and vertically. Visitors will get different views of the museum and its objects depending on what level they are on. Things that are suspended from the ceiling from ground level may be difficult to see, but on the viewing deck they can get closer and experience interactive technologies that animate the static fossils.

All exhibit cases will use a UV glass that will protect the integrity of the objects displayed inside. Most exhibit cases will also be modular to allow the CFDC to change when it needs to, while still keeping its anchor spaces the same. This provides both aspects of a traditional museum and post-museum.

The exhibition space also uses gift stands at two different points within the centre that will offer guests with items that are in the lobby gift shop and exclusive to visitors who pay admission.

Custom Display Unit

A display unit was designed as a modular and changeable piece in the exhibit space. The display is a triangular shape that mimics the angles of the building and of the CFDC's new website design. It is made of charcoal painted MDF and provides a blank space for museum curators to display information and objects. One side of the unit will have a detachable acrylic piece that can be laser cut with text, have an item placed behind it, or both. Another side of the unit features a bench that will be recessed to provide visitors with a space to rest, sit, and reflect. The MDF unit will act like art gallery walls often do: it can have text placed on, peeled off, and repainted.

Figure 29. North west rocks + fossils exhibit perspective

5'

A ———————— A

FOSSILS

Ut re earum rerat vidunti nulparci
di aut et atquiatemeEnt ex exceped
que volestr umquia con et quam et
volupta sperferum de liberch illore,

4" charcoal powder
coated stainless
steel toekick

7'-9"

6'

5'

8'

6'

8'

7'-10"

8'

6'-9"

1'-6"

1/4 " acrylic sheet

3/4" standoff screws

eggshell charcoal
painted 1" MDF

miter joint with wood
1/8" biscuit
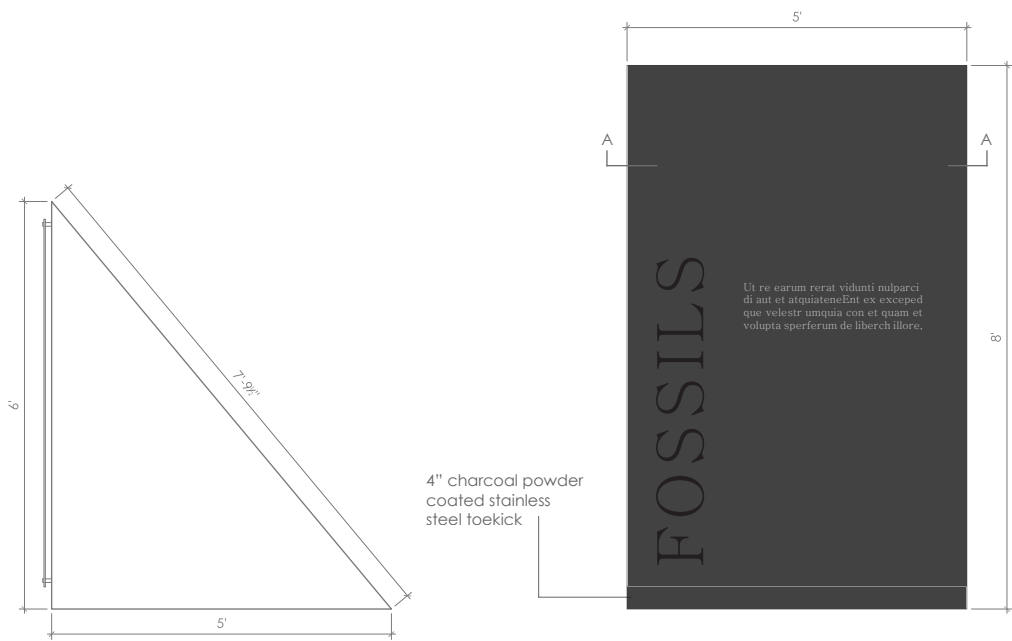
Figure 40. Display unit plan

Figure 41. Display unit text elevation
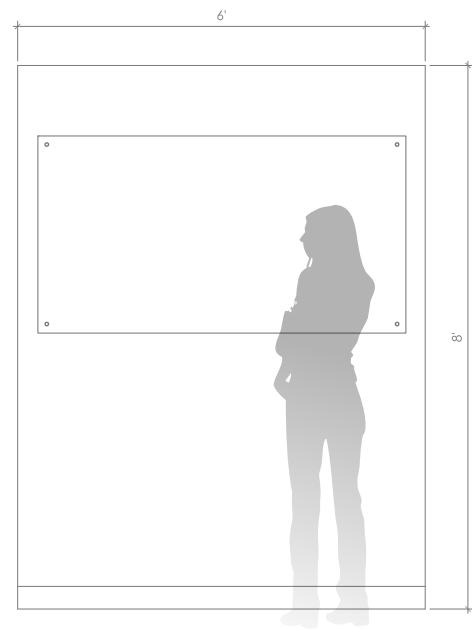
Figure 42. Display unit acrylic sheet elevation
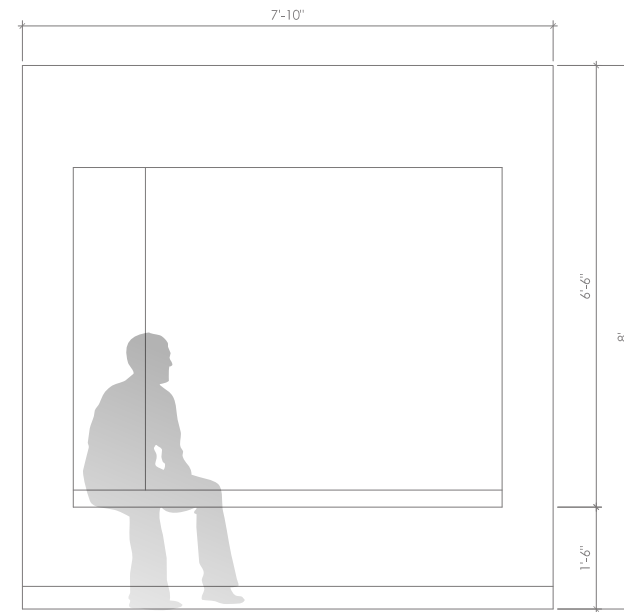
Figure 43. Display unit seating elevation
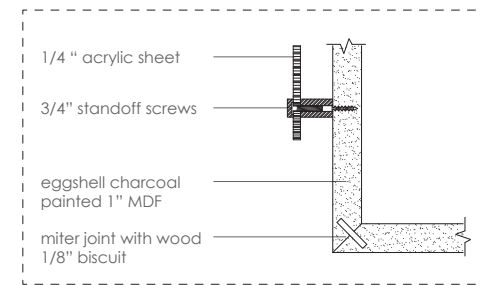
Figure 44. A | Display unit section

Figure 45. A | North south section

Figure 46. B | East west section

T.O. ROOF
25' - 0"

U.S. OF ROOF
17' - 0"

VIEWING DECK
10' - 0"

MAIN LEVEL
0' - 0"

LOWER LEVEL
-17' - 0"

Figure 47. Suspended fossil excavation diorama exhibit perspective
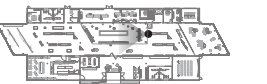
Figure 48. Under viewing deck perspective

Exhibits continue under the viewing deck, with a full glass wall the stretches from the floor to the ceiling above the viewing deck. From this area visitors will have an eye level view of the fossil preparation laboratory. In front of the laboratory wall are touch screens to provide additional information of the excavation and fossil preparation process.

This exhibit area also features a large floor recessed display case with a partially excavated fossil that can be observed in finer detail at the main level and from a macro perspective at the second level viewing deck. It is illuminated with light from above the viewing deck, creating a focal point within the geology and excavation exhibit area.

Light within this area has been reduced to highlight the laboratory and fossil excavation exhibit. The glow from the laboratory lighting will be the main light source in addition to recessed floor lights.

Figure 49. View of dig exhibit perspective

The viewing deck focuses on informing visitors about fossil preparation, but from here they can also get a closer look at the suspended fossils. They are not being displayed in context, but with the use of the *Jurascope* by ART+COM studios visitors can watch the fossils come to life. The Jurascope act like binoculars; visitors look through the viewfinder and point it towards a fossil. Once the fossil is in view the Jurascope slowly brings it to life. First it will add muscle, followed by the skin and lastly placing it in its original ecosystem, where it interacts with its surroundings.
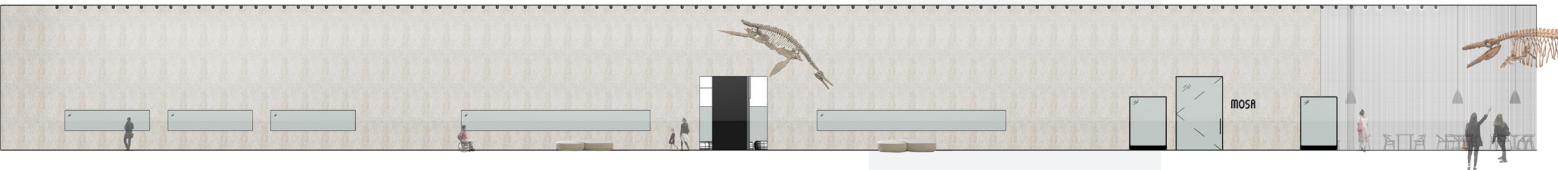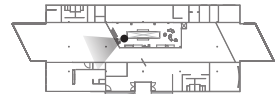
Figure 50. 6 | South restaurant elevation

Figure 51. North viewing deck perspective

Diorama Perspective

The diorama exhibit will be designed in reference to the current CFDC diorama. However the re-designed diorama will include full size replicas of the marine reptiles, placing the visitors in the exhibit.

With the use of materials and technology visitors will be able to view these reptiles in context. The space will provide an immersive and interactive environment for both adults and children. *Living Stones* by Smarin will be used as seating. These modular floor cushions come in various shapes and sizes; they are easy to move and lift for children and adults. Having these modular pieces allow visitors to create their our landscape within the space. They can pile up the cushions, lay back and relax while staring up at the reptiles "swimming" above.

The diorama ceiling will use a *Mediamesh®* from GKD metals that uses little L.E.D.s to project an image. The mesh will show the ecosystem of the sea creatures suspended with a continuous looped video of the sea that they once inhabited.

The diorama will be an interactive area that encourages play and the use of one's imagination. Flooring in the diorama contrast the rest of the buildings hard surfaces with the use of Interface carpet tiles (*North*

Sea) that have the patterning of water. This will enhance the context of the exhibit and provide a soft surface for visitors at play.

The wall separating the diorama from the regular exhibition space will use interactive projection technology from *Motionmagix* that requires the movement of the body. The projection can be set to project on the wall or floor. When visitors are not interacting with am image of water will be projected, but once an individual steps in front various games will begin that require more than one individual to act.

Like the Bruce and Suzy exhibit, the diorama is mostly encased by the optical glass brick. However due to the nature of this exhibit a light, airy space will not suite the context. To compensate for the natural light that would normally fill this space *SPD Smart Glass,* by Innovative Glass Corp., was added to darken the exhibit. The glass can be controlled manually by works on its own as well. As light hits the glass it will fade to blue, giving the space an aqueous feeling.

Figure 52. Diorama perspective
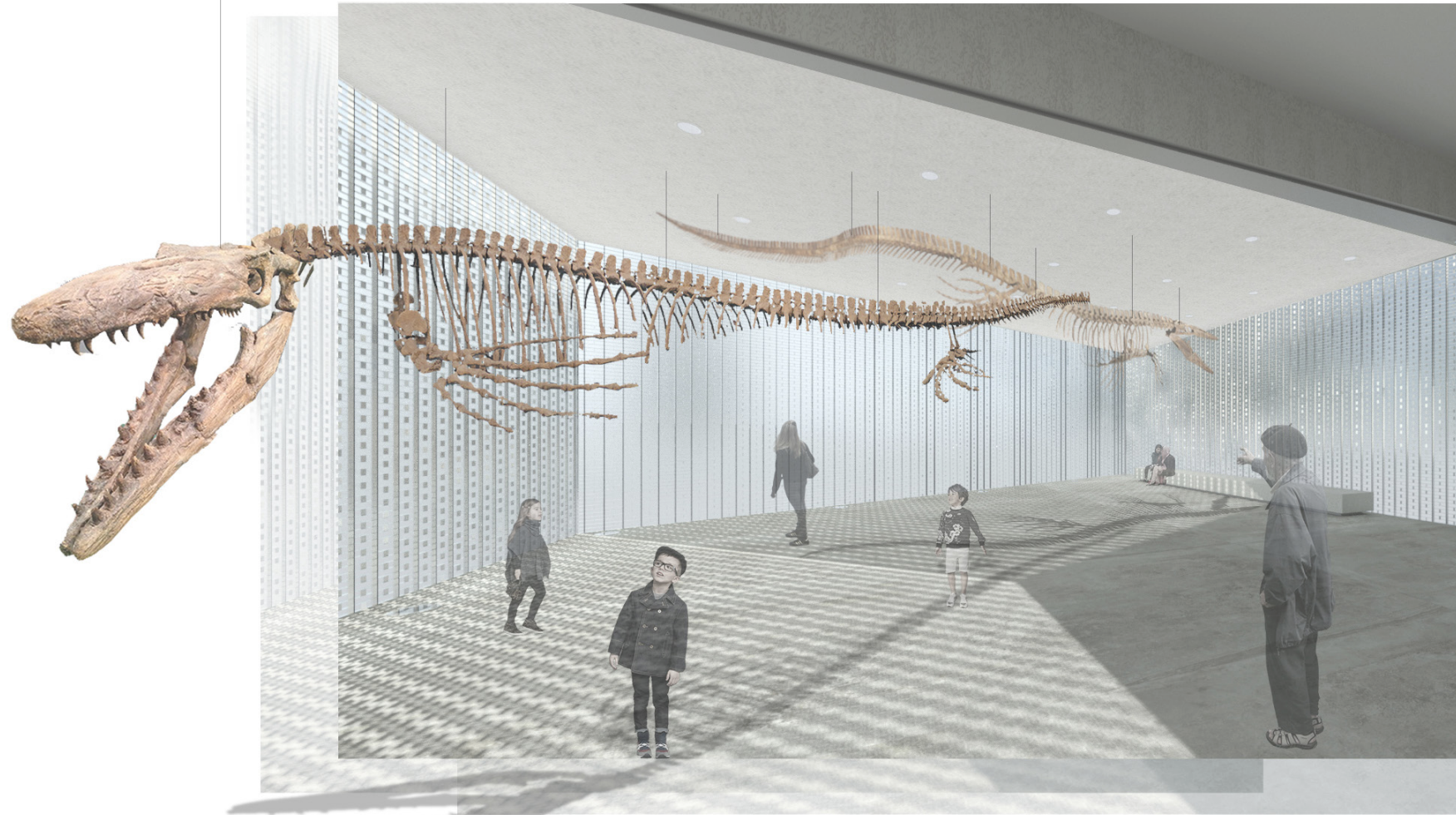
Figure 53. Bruce and Suzy exhibit perspective

Bruce + Suzy Perspective

Glass bricks coated with a UV film will be used to create an aqueous environment, evoking the contextual atmosphere of the exhibit. The UV film in necessary to aid in the preservation of the fossils displayed within the space. The glass bricks have slight imperfections that will cause a reflection of light to shimmer across the ceiling and floor, visually alluding to the idea of water. This will help to provide context to the fossils without being excessively literal.

Bruce and Suzy will be suspended from the ceiling allowing visitors to experience and interact with the fossils directly, without a barrier of rope or glass enclosure. This space will act as a space of rest and reflection. Enveloped by light reflections on both the ceiling and floor, the space will provide an area of serenity for visitors in which they can reflect on what they have learned and appreciate the world's largest Mosasaur fossil.

The ceiling of the exhibit will be lowered to 16' to provide visitors with an intimate experience with the fossils. Felt will line the ceiling of the exhibit to help absorb sound within, creating a more serene environment.

WC3

WC2

MM1

PCS

CPT1

TSVL1

CT2

CT3

WC4

WC1

AT1

GB

Figure 53. Material selections

Caravaggio pendant light, Cecilie Manz (top left); House Number Aluminum , LIXHT (center); Voxel pendant light, Eureka Lighting (top right); Wishbone chair CH24, Hans J Wegner (right); LessThanFive chair, Michael Young and Coalesse (bottom right); Living stones, Smarin (bottom center); Mailbox and post, LIXHT (bottom left); Pogo, Bloom (bottom left).

Figure 54. Sample furniture and fixture selection for CFDC

	MATERIAL	MANUFACTURER	PATTERN NAME	CODE	COLOUR
AT1	Acoustic Panels	Organoid	Sunnabluamma	0151	Sunflower seed husk
AT2	Acoustic Ceiling Tile	Armstrong	Perla	3093M	White
CPT1	Carpet Tile	Interface	Net Effect	B602	North Sea
CPT2	Carpet Tile	Interface	Human Nature	HN810	Limestone
CPT3	Carpet Tile	Interface	Concrete Mix	100022	Brushed Keystone
CT1	Terrazzo Porcelain Tile	Julian Tile	Hexagon	TEI400	Bianco
CT2	Terrazzo Porcelain Tile	Julian Tile	Hexagon	TEE400	Beige
CT3	Terrazzo	Olympia Tile	Decostone	NV.DS.WHT.2424	White
ESD	Electrosfatic Dissipative Tile	Armstrong	Excelon SDT	51956	Fossil Gray
GB	Glass Brick	Hiroshi Nakamura & NAP	Optical	N/A	Transparent
GLAZ	Glazing	Innovative Glass Corp	SPD Smart Glass	N/A	Clear/ Lt Blue Tint
MM1	Metal Mesh	GKD Metal Fabrics	Kiwi	N/A	Stainless Steel
MM2	Mediamesh	GKD Metal Fabrics	Mediamesh® V6xH5.0	N/A	Stainless Steel
P1	Paint	Benjamin Moore	N/A	1590	Paper White
P2	Paint	Benjamin Moore	N/A	1651	Midnight Oil
PCS	Concrete	TC Floors West	Polished Concrete	N/A	Grey
TSVL1	Felt	Bolyu	Svelte	SVL51	Thundershow
TSVL2	Felt	Bolyu	Svelte	SVL58	In the Dark
WC1	Stone	Gillis Quarries Ltd	Tyndall (Rubbed)	N/A	Grey
WC2	Concrete	Florium	La Roche Di Rex	744994	La Roche Grey
WC3	Wallpaper	Calico	Inverted Spaces	N/A	Ursa
WC4	Wallpaper	Maharam	Traverse	399587-001	Alp

Table 22. Material schedule

Room No.	Room Name	FLOOR		CEILING		NORTH WALL		EAST WALL		SOUTH WALL		WEST WALL	
		Mat	Fin	Mat	Fin	Mat	Fin	Mat	Fin	Mat	Fin	Mat	Fin
001	Collections	CONC	PCS	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
002	Maintenance	CONC	PCS	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
101	Entrance	CONC	CT3	GWB	P1	-	WC1	-	WC1	-	WC1	-	WC1
102	Lobby	CONC	CT3	GWB	P1	-	WC1	-	WC1	-	WC1	-	WC1
102a	Reception	CONC	CT3	GWB	P1	GL	-	-	-	GWB	WC3	-	WC1
102b	Lockers	CONC	CT3	GWB	P1	-	WC1	-	-	-	WC1	-	WC1
103	Washrooms	CONC	CT2	GWB	P2	-	WC1	-	WC1	-	WC1	-	WC1
104	Theater	CONC	CPT3	GWB	TSVL2	-	TSVL2	-	TSVL2	-	TSVL2	-	TSVL2
105	Gift shop	CONC	CT3	GWB	P1	GWB	WC4	GWB	WC4	-	-	GWB	WC4
106	Restaurant	CONC	CT1	-	AT1	GL	-	GL	MM1/WC2	-	-	GL	-
106a	Kitchen	CONC	PCS	-	AT1	-	-	-	WC2	-	WC2	-	WC2
106b	Chemical closet	CONC	PCS	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
106c	Dry storage	CONC	PCS	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
107	Exhibits	CONC	PCS	GWB	TSVL1	-	WC1	-	WC1	-	WC1	-	WC1
107a	Bruce + Suzy	CONC	PCS	GWB	TSVL1	-	WC1	-	WC1	-	WC1	-	WC1
107b	Fossils + Rocks	CONC	PCS	GWB	TSVL1	-	WC1	-	WC1	-	WC1	-	WC1
107c	Geology	CONC	PCS	GWB	P1	-	WC1	-	WC1	-	WC1	-	WC1
107d	Temporary Exhibit	CONC	PCS	GWB	TSVL1	-	WC1	-	WC1	-	WC1	-	WC1
107e	Diorama	CONC	CPT1	GWB	P1/MM2	GWB	P1	GB	GLAZ	GB	GLAZ	GB	GLAZ
108	Staff	CONC	CPT2	GWB	P1	-	WC1	GWB	P1	GWB	P1	GWB	P1
109	Fire Exit	CONC	PCS	GWB	WC1	-	WC1	-	WC1	-	WC1	-	WC1
110	Washrooms	CONC	CT2	GWB	P2	-	WC1	-	WC1	-	WC1	-	WC1
111	Storage	CONC	PCS	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
112	Janitor Closet	CONC	PCS	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
112a	Laboratory	CONC	ESD	-	AT2	GWB	P1	GWB	P1	GL	-	GWB	P1
113	Curator Office	CONC	CPT2	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
114	Loading	CONC	ESD	GWB	P1	GWB	P1	GWB	P1	GL	-	GWB	P1
115	Manager Office	CONC	CPT2	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
116	Security	CONC	CPT3	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
117	Board/Classroom	CONC	CPT2	GWB	P1	GWB	P1	GWB	P1	GWB	P1	GWB	P1
201	Fossil Preparation	CONC	PCS	GWB	TSVL1	GL	MM1	GL	MM1	GL	MM1	GL	MM1

Table 23. Finish schedule

GL- glazing   CONC- concrete   GWB- gypsum wall board

LEGEND

	recessed L.E.D. floor light
	recessed L.E.D. light
	voxel L.E.D. pendant fixture
	mini grid L.E.D. light
	caravaggio pendant fixture
	eureka 5-switch pendant fixture
	eureka 3-switch pendant fixture
	indirect/direct L.E.D. pendant fixture
	L.E.D. track lighting

22' ceiling
20' ceiling
16' ceiling
sloped ceiling

CT 600 x 1200 mm ceiling tile
GWB gypsum wall board

20' - 0" CT
20' - 0" GWB
20' - 0" GWB
16' - 0" GWB
21' - 10 1/2" GWB
22' - 0" GWB

2.3°

Figure 55. Light plan

Figure 56. Ceiling plan

LEGEND

exit sign

motionmagix projector

suspended art installation

suspended fossils + replicas

mediamesh L.E.D. screen

CHAPTER   08

conclusion

8.1 Response

Museums have dramatically shifted in the twenty-first century, impacting the way and what people learn in them. The post-museum takes a more central role in its community and places a higher value on people compared to traditional museums. They emphasize interpretive learning; that involves cognitive and active actions. The typical, large glass, display cases housing a multitude of objects has shifted to contextual or single item displays that provide a better understanding of the objects. However, the provision of multiple options can be overwhelming and the constant change of spatial organization disorienting. There is still a desire for simplicity in a society driven by technology and social media. The nostalgia of something we saw when we were little that opened our eyes to a new world that we were unaware of.

This practicum project was an exploration into museums, what they were, what they are now, and how people learn in them. Furthermore, who attends them and what they mean within the community. The findings revealed that museums have changed; in what they are called, what they display, how it is displayed and the ancillary spaces that they include. In response to the review of multiple literary sources and case studies this practicum project attempted to answer three questions:

To what degree can different tourist types and the emotional rewards they receive inform the program and interior design of the project?

The different tourist types helped this practicum with the choice of materials and ancillary spaces that were added. The four different types provided the emotional and physical needs of the CFDC's visitors and provided the target audience for this museum. Institutionalized tourists would be the group that would frequent this space, with the possibility of catching the attention of a noninstitutionalized tourist (The Explorer). The institutionalized tourist needs to feel safe, comfortable, guided at times and that they are being privy to something that is worth seeing. Tourists want to see something that cannot be seen anywhere else. For this reason I chose to keep the CFDC in Morden. It is not one of the top places to visit in Manitoba, but keeping the centre there could boost tourism. Its location is close enough to Winnipeg that it does not feel too far off the regular path of most tourists, but just far enough away that it could attract noninstitutionalized tourists.

The design of the CFDC does provide tourists with things that they can only see in a museum typology; the fossilized remains of cretaceous creatures that no longer exist. The design displays them in a way that is contextual, but in a more sophisticated style. The space utilizes smooth, clean, minimalistic materials that emotively resemble or reflect the environment that the fossils once inhabited. It also provides individuals that enjoy the traditional museum style, of things behind glass, while still allowing those that feel more inquisitive the opportunity to experience the habitat of the displays through technology; with the use of the ceiling mounted Mediamesh® and Jurascope.

The case studies also provided insight into the design of this practicum project and the different tourist types and rewards they receive. By viewing other museum typologies it was evident that this space needed to challenge what the current CFDC could be. Community was present in all of the designs; Morden is a strong and proud community. They feel proud of their current museum and what it is home to, that it is mostly ran on a volunteer basis. One strong study for this practicum was the Lee Chin Crystal at the Royal Ontario

Museum. It provided an example of a contemporary addition to a traditional museum. From an architectural standpoint it was amazing, but to the local community and some visitors it was too vulgar and threatening. Tourists and local visitors would find its harsh angles ominous and intimidating to enter. This was a major issue as one of the emotional rewards is comfortable surroundings. This practicum design utilized this reward when considering the exterior façade, entrance, and exhibition display.

The design was kept fairly contemporary in its materiality and application, but linear lines were used to gently guide visitors from space to space and provide that comfort.

The four realms of experiences from the emotional rewards of free time include educational, entertainment, esthetic, and escapist. The design of this project touches on all four; education is a given, this is a museum where people will come to learn, but while doing so they are also being given the option for social interaction with the inclusion of the restaurant and theater. Entertainment overlaps with education in the space, specifically in the diorama exhibition. Visitors will be provided with motion censored interactive projections, modular furniture that is light enough for children to easily move, and a ceiling mounted screen that provides a unique display of the objects habitat or eco system. The esthetic in the design is present through its simplicity. Few materials were chosen; first, to highlight, not distract from the objects and secondly, to reference the objects original habitat without being too literal. For example, the glass bricks emote the image of water from the inside and outside and when light hits them they create scattered light patterns that reflect within the exhibit creating an escapist realm, the final realm. People can experience the emotion of being underwater with these objects, triggering their minds to imagine what their habitat was like.

Can adopting the post-museum typology help the Canadian Fossil Discovery Centre compete with other free time activities?

I believe that elements of the post-museum typology are good for the CFDC to help it compete with other free time activities. As stated earlier the CFDC is located in the basement of a recreation centre, it does not have a strong presence visually within the community or the building that it is in. The fact that it is located in a centre that is only used when sporting, or some community events occur is not beneficial. It needs to stand alone and have an ancillary space that provides something for the community that they do not have or that they do on a regular basis.

People need to eat; they eat every day and often three times a day, so including a restaurant was essential. This also provides a secondary use to the museum during off hours and promotes community inclusion with tourists. The restaurant can provide a convenient place for tourists to eat and individuals that choose to go on one of the museum's fossil digs, either before or after. It will provide the community with a unique place to eat in comparison to the many fast food and chain restaurants already in Morden.

The new design also includes a theater that will be used for the museum as a part of its exhibits, but as well as after regular museum hours. The idea is that after hours the theater can operate like a regular theater where the community can use it to see movies, documentaries or, other films that go beyond the scope of the museum. This idea came from the case study of the steel museum; they offer visitors monthly events where their blast furnace is used to show documentaries. It provides a place for the community and their families to go without having to commit to going through the entire museum. Currently Morden only has a drive in theater; including this ancillary space provides the community with a

more traditional movie experience that they would only experience if they drive into the closest major city.

How can interior design in museums adapt to the new evolution of the post-museum, or interpretive centre typology?

The CFDC's interior can adapt to the new museum typology, however it does not need to fully adapt. The post-museum is a useful guide for the ever changing museum, but it borders on creating a space for only one type of user. It promotes the idea of constant evolution of exhibits, which is useful to continually attract tourists and repeat visits, however it can be too much. I believe that a balance needs to be used between the traditional and post-museum. The post-museum promotes interactive, active learning where visitors should use all of their senses, in comparison to the traditional museum that was only for the visual sense. The post-museum also includes all ages, genders, and economic backgrounds, things that all businesses of the twenty-first century should try to achieve.

8.2 Reflection

Designing something that balanced between both the traditional and post-museum was essential to this design. This was the main decision for creating two anchor exhibits at both ends of the building. They are exhibits that will stay the same through the years, with the center exhibits having the ability to change. The plan of the exhibition space has an open concept and all of the display cases are modular, allowing them to be arranged into any configuration. So as the museum grows and new discoveries are made, the museum can adapt.

The design was kept minimal to allow visitors to interpret what they are viewing on their own, but still includes subtle hints through the materials, fixtures and technology. Creating a neutral space where people can make their own conclusions was critical. It will allow the visitors to use their imagination. The post-museum typology is most prevalent in the diorama area, where visitors can fully immerse themselves in an underwater experience. This space utilizes the body to be an active participant, whether it is moving the stone-like furniture, moving in front of the motion censored projectors or laying down to look up at the suspended sea creatures and L.E.D. mesh screen.

The concept of interactivity from the post-museum combined with the case study of Montreal's archaeology museum helped to design the exhibits. Giving the visitors the opportunity to view exhibits in different ways was considered for the placement of different displays within the interior. The displays do not follow one uniform height or line within the centre. Displays like the inlaid floor exhibit of a fossil excavation under the viewing deck force people to look down and to go up to the viewing deck to get a full view of the display.

This practicum project has explored tourism, community, museums and exhibition design, however many of these findings can be applied to spaces beyond the museum typology. They emphasize the importance of community, inclusion, and mixed use. These findings could be used when developing any public use space. Instead of designing a space that only provides a place to eat, why not include a place to play too? It also confirms that the design and what can be viewed from the exterior can act as an advertisement. This is a rule that any type of design can utilize. Designing a space or exterior in a certain way can impact the emotions of those visiting or passing by. How things are displayed are also relevant to any type of exhibition space or retail space. Carefully considering how visitors will move with the displays will provide an impact on what they learn, take away, or purchase while in the space.

These topics and case studies have been crucial in the design of this practicum project and can be used in the planning and designing of future projects. They helped conceptualize the design of the CFDC; a contemporary space that brings an upscale museum style to Morden. It is very contemporary in comparison to the current architectural landscape, but celebrates the diversity that is within Morden. Like its community members, its architectural community should be diverse too. I think the contemporary design compliments Morden's growing community. It showcases something that is unique to its location (the fossils) and celebrates them with the design of a special home. Although the appearance may look contemporary its materials are traditional. The CFDC's design provides a mixture of both traditional and contemporary, in its exhibits, materiality, and design. It is this balance that will hopefully provide the CFDC with the longevity as Morden's main attraction.

The centre will grow with you, but Bruce and Suzy will always stay the same. Suspended; swimming past each other with the prairie sunlight dancing on their bones.

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APPENDIX A

building code analysis

Route 100 Morden, Manitoba
29 500 square feet
Sprinklered building
1 Storey with basement

Based on the National Building Code of Canada 2010

Volume 2 Division B
Part 3

Section 3.1. General

3.1.2. Classification of Buildings or Parts of Buildings by Major Occupancy

3.1.2.2. Occupancy Classifications

Major Occupancy Group A Division 2 – Assembly Occupancies not elsewhere classified in Group A

3.1.5. Non-combustible Construction

3.1.5.4. Combustible Glazing and Skylights

Skylight in a building of non-combustible construction are permitted if the assemblies have a flame-spread rating of not more than 150 if the ceiling opening is not more than 25% of the ceiling area or room they are in.

3.1.5.10. Combustible Interior Finishes

Combustible interior finishes, including paint, wallpaper, and others are not more than 1 mm thick and all other finishes, other than foamed plastics, are permitted if not more than 25 mm thick, and have a flame-spread rating not more than 150 on any exposed surface.

3.1.8. Fire Separations and Closures

3.1.8.7. Maximum Openings

Size of opening in an interior fire separation shall not be more than 22 m², with no dimension more than 6 m provided fire compartments on both side are sprinklered throughout.

3.1.8.11. Self-Closing Devices

Every door in a fire separation shall be equipped with a self-closing device designed to return the door to a closed position after every use.

3.3.2. Assembly Occupancy

3.3.2.3. Non-Fixed Seating
Non-fixed seating shall conform to the NFC.

3.4 Exits

3.4.2. Number and Location of Exits from Floor Areas

3.4.2.1. Minimum Number of Exits

Every floor area intended for occupancy shall be served by at least two exits.

3.4.2.3. Distance Between Exits

The least distance between 2 exits from a floor area shall be a) one half the maximum diagonal dimension of the floor area, but need not be more than 9 m for a floor area having a public corridor, or b) one half the maximum diagonal dimension of the floor area, but not less than 9 m for all other floor areas.

3.4.2.5. Location of Exits

Where more than one exit is required from a floor area, the exits shall be located so that the travel distance to at least one exit shall be not more than 40m in a business and personal services occupancy (sex work area, sex work organization) 45m in a floor area that contains an occupancy other than a high-hazard industrial occupancy when sprinklered (all other areas).

3.4.3. Width and Height of Exits

3.4.3.2. Exit Width

The minimum width of exits shall be 800mm for doorways.

3.4.3.4. Headroom Clearance

Exits shall have a clear height over the clear width of the exit of not less than 2050mm.

3.4.4. Fire Separation of Exits

3.4.4.2. Exits through Lobbies

1) No exit from a floor area below the first storey shall lead through a lobby.

2) Not more than one exit from a floor area is permitted to lead through a lobby, provided the lobby conforms to the requirements for exits, except that the fire separation between the lobby and adjacent occupancies are permitted to open onto the lobby need not have a fire-resistance rating provided the lobby and adjacent occupancies are sprinklered.

3.4.5. Exit Signs

3.4.5.1. Exit Signs

Every building door will have an exit sign placed above or adjacent to the exit if the building occupant load exceeds 160 persons.

3.7. Health Requirements

3.7.2 Plumbing Facilities

3.7.2.2. Water Closets

The number of water closets required for 76-100 persons at a minimum are two male and four female water closets. Urinals can be substituted for two thirds of the number of water closets required, except in the case where only two water closets are required for males, in this case one water closet is permitted to be substituted for one of the water closets.

3.7.2.3. Lavatories

One lavatory is required in a room containing two water closets or urinals, and one additional for each two additional water closets or urinals.

3.8. Barrier Free

3.8.1. General

3.8.1.2. Entrances

Not less than 50% of the pedestrian entrances of a building shall be barrier-free and shall lead from the outdoors at sidewalk level or from a ramp.
3.8.1.3. Barrier-Free Path of Travel

The unobstructed width of a barrier-free path of travel shall be not less than 920mm.

3.8.2. Occupancy Requirements

3.8.2.1. Areas Requiring a Barrier-Free Path of Travel

A barrier-free path of travel from the entrances required to be barrier-free shall be provided throughout the entrance storey.

3.8.2.3. Washrooms Required to be Barrier Free

At least one barrier-free water closet shall be provided.

3.8.3. Design Standards

3.8.3.3. Doorways and Doors

Every doorway that is located in a barrier-free path of travel shall have a clear width not less than 800mm when the door is in the open position. A threshold for a doorway shall be not more than 13mm higher than the finished floor surface and shall be bevelled to facilitate passage of wheelchairs. Every door that provides a barrier free path of travel through an entrance, including the interior doors of a vestibule where provided, shall be equipped with a power door operator that allows persons to activate the opening of the door from either side if the entrance serves a building of Group A and D major occupancy more than 500m² in building area.

A vestibule located in a barrier free path of travel shall be arranged to allow the movement of wheelchairs between doors and shall provide a distance between 2 doors in series of not less than 1200mm plus the width of any door that swings into the space in the path of travel from one door to another.

The floor surface on each side of a door in a barrier-free path of travel shall be level within a rectangular area a) as wide as the door plus the clearance required on the latch side and b) whose dimension perpendicular to the closed door is not less than the width of the barrier-free path of travel but not exceed 1500mm.

3.8.3.6. Spaces in Seating Area

Designated Wheelchair spaces in fixed seated areas for 2-100 persons require a minimum of two wheelchair designated spaces.

3.8.3.8. Water Closet Stalls

At least one water closet stall in a washroom required to be barrier-free shall be,
a) not less than 1500mm wide by 1500mm deep;
b) equipped with a door that provides a clear opening not less than 800 mm wide when it is open;
c) has a water closet located so that the clearance between the fixture and the wall on one side is not less than 285 mm and not more than 305 mm;
d) be equipped with grab bars;
e) be equipped with a coat hook mounted not more than 1200 mm above the floor on a side wall and projecting not more than 50 mm from the wall, and
f) have a clearance of not less than 1700 mm between the outside of the stall face and the face on an in-swinging washroom door and 1400 mm between the outside of the stall face and any wall-mounted fixture.

3.8.3.11. Lavatories

A barrier-free washroom shall be provided with a lavatory that
a) is located so that the distance between the centreline of the lavatory and the side wall is not less than 460 mm;
b) has a rim height not more than 865 mm above the floor;
c) has a clearance beneath the lavatory not less than 760 mm wide and 735 mm high at the front edge;
d) has insulated pipes where they would otherwise present a burn hazard;
e) has a soap dispenser located close to the lavatory and not more than 1200 mm above the floor;
f) has a towel dispenser or hand-drying equipment located close to the lavatory, not more than 1200 mm above the floor.
At least one mirror shall be mounted with its bottom edge not more than 1000 mm above the floor or be inclined.

APPENDIX B

construction drawings

Figure 57. Lower level construction plan N.T.S.

Figure 58. Main level construction plan N.T.S.