CREATING ABORIGINAL ARCHITECTURE

A DESIGNER'S GUIDE TO THE NORTHERN PLAINS

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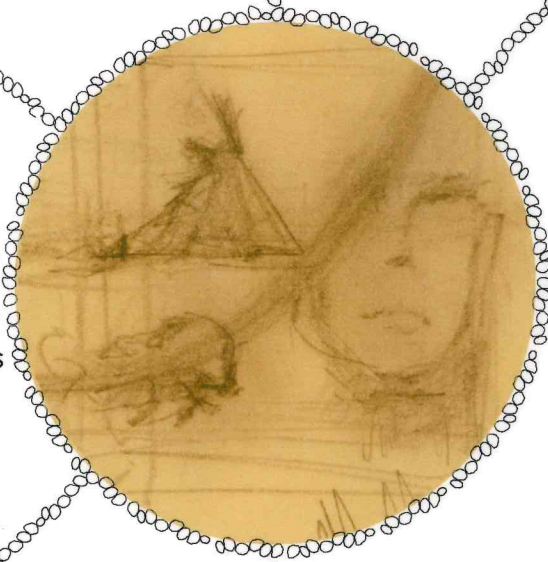
RAIC Syllabus Design Thesis



INTRODUCTION

"The methodology of the natives is nothing but a heterogeneous mass of silly stories to the general reader, but when there is a competent guide to instruct those who are unlearned in the civilization of this people, there will follow new revelations of the unity of their methodology, and its influence upon the education of the race." (McLean, 1887, p.131). An appropriate quote since it was written over 100 years ago and we are still learning about Aboriginal culture (Figures 1.0.1, 1.0.2 & 1.0.3)

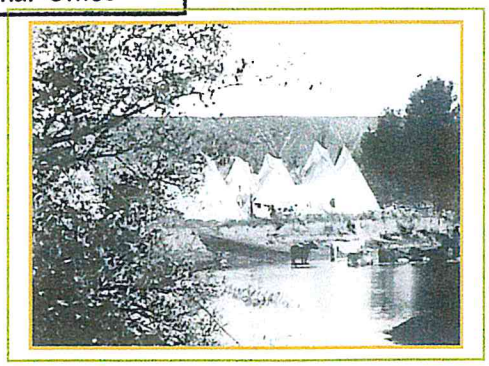


Figure 1.0.1: Migratory culture
- Nabokov and Easton (1989)

Figure 1.0.2: Corralled
- Nabokov and Easton (1989)

Figure 1.0.3: Today
- photo by author

In order to properly assess the culture we need to have a better understanding of the Northern Plains people, their history and how they lived.

Through literature research of the Northern Plains Indians, ongoing interviews and review of existing contemporary facilities, this thesis, Creating Aboriginal Architecture – A Designer's Guide to the Northern Plains, is an attempt bring together some understanding of our local Aboriginal (in Particular First Nation culture) then applying this research to a related demonstration project – Aboriginal Student Centre on a site located on the University of Saskatchewan campus.

The goal of this combination of research and application is to bring together concise information

for designers that can either be used to assist, re-familiarize, or provide basic understanding of Saskatchewan First Nations history and culture and its application to the built environment.

This paper consists of three Parts:

Part 1 – History and Culture:

- History
- Spirituality
- Medicine Wheels, The Circle, the Number Four and Colour
- Traditional Aboriginal Architecture

Part 2 – Conceptual Development

- Programming
- Site Selection
- Contemporary Design Research
- Conceptual Site Development
- Concept Development

Part 3 – Demonstration Project

- Aboriginal Student Centre

From a designer's perspective, you need to know your client before you can create a built form.

PART 1
HISTORY AND CULTURE

1.1 INTRODUCTION

The following is a compilation of major points and cultural aspects of Northern Plains people. Cultural topics include spirituality, medicine wheels and traditional aboriginal architecture.

As part of this section it was my goal to not only review the history and culture but also to become immersed within the culture. I achieved this by participating in a sweat ceremony, spending a night at the Wanuskewin Heritage Park and attending a couple of powwows. These experiences supplemented the literature and gave me a deep understanding of what these traditions mean to Aboriginal people.

1.2 HISTORY

The Great Plains covered a large area of North America that reached as far south as Texas, and as far north as Central Saskatchewan (Figure 1.2.1).

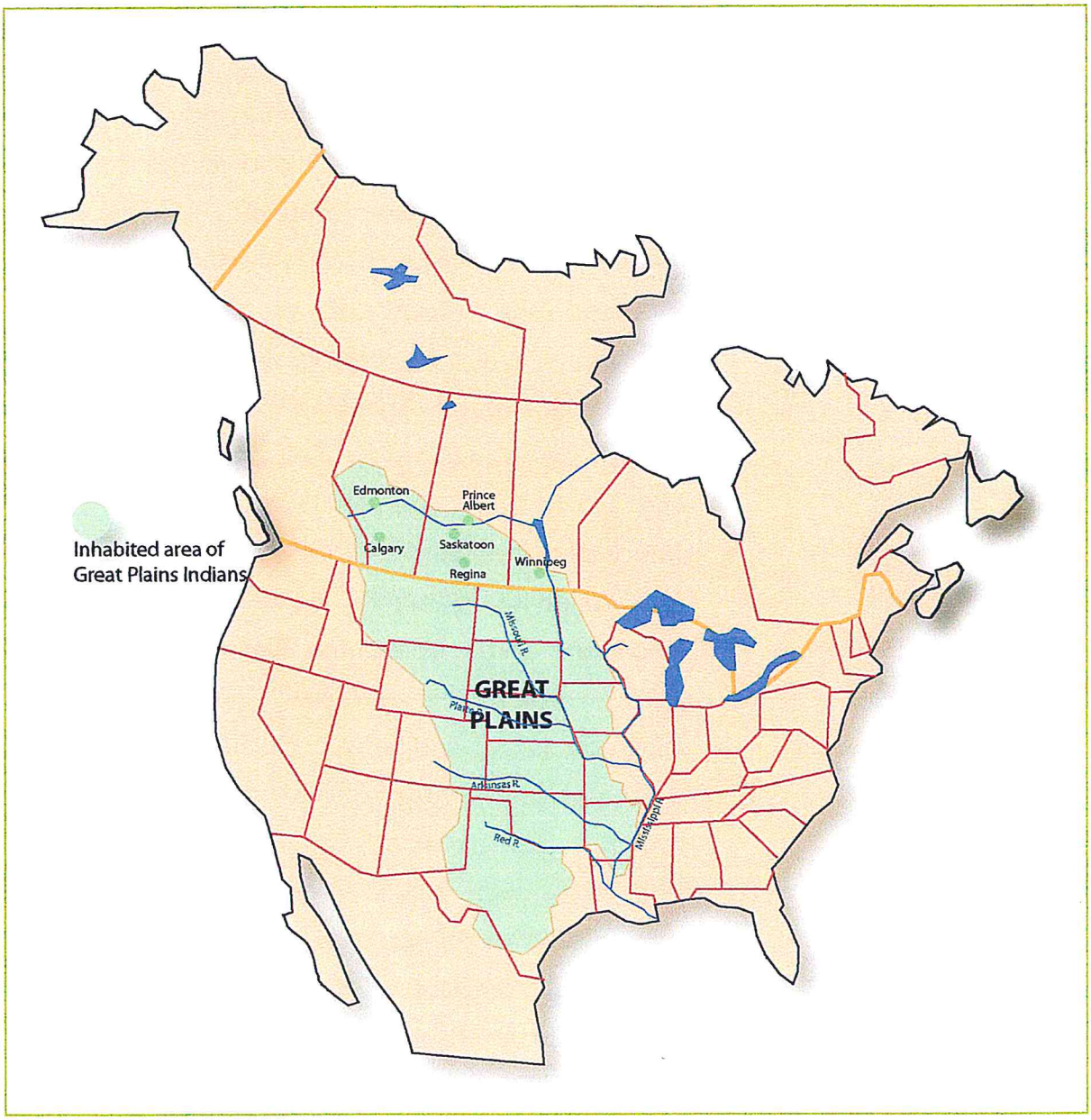


Figure 1.2.1: Inhabited Area of Plains Indians

- recreated by Author from information by Nabokov and Wanuskwin Heritage Park

The Northern Plains refers to the boundary of the Great Plains in the Northern United States and Southern Canada.

Northern Plains Indians were a transient culture and big-game hunters. Their primary game was the bison, which supplied them with food, shelter, clothing, and bone tools. Other game included deer, elk, and antelope. Their livelihood tied to the movements of the bison herds and disciplined by the harsh weather and limited resources.

For more than 12,000 years, people have occupied the grasslands of Canada's prairie provinces. Since these people were, as stated by Liz Bryan, "touching only lightly on the land" there is very little left behind indicating their presence. Much of what would have been left was demolished by the demands of the twentieth century.

Scientists generally agree that the Native Americans came across the Bering Strait at some point. When this occurred is still debatable. Linnamae (1988), indicates that there is no general consensus as to when migration into the New World occurred. Some scientists estimate as early as 70,000 years ago, while others estimate it was during the waning days of the Ice Age 12,000 years ago. The Bering Strait migration scenario is supported by tooth and blood analysis that has linked Native American ancestry to Mongoloid races of Siberia and Northern China (Bryan, 1991). There is also overwhelming geological evidence that several land bridges formed at different times between Siberia and Alaska during the Ice Age (or what is known as the

Pleistocene era). Zoologists have combined the two areas, northern Asia and North America, into a single life zone because the animals in each area are so much alike (Driver, 1961; Bryan, 1991).

Archaeologists have classified four periods of time to North America based on human settlement - Early Prehistoric, Middle Prehistoric, Late Prehistoric and Early Historic. The following chart (Figure 1.2.2) outlines these periods and briefly identifies primary influences from each culture.

Periods	Years Ago		Points		
Early Historic	Present - 250				
Late Prehistoric	250 - 2000	550-250	**Late Side-Notched**	**Plains Side-Notched Point**	
		1,200-800		**Prairie Side-Notched Point**	
		1,800-800	**Avonlea**		Introduction of the bow and arrow
		2,000-1,200	**Besant**		First appearance of ceramics
Middle Prehistoric	2,000 - 7,500	3,800-1,850	**Pelican**		Bison Jumps reused Medicine Wheels not used
		4,150-3,100	**McKean**		Bison Jumps not used
		4,700-3,050	**Oxbow**		Bison Jumps not used Medicine Wheels appear
		7,500-4,700	**Mummy Cave**		Bison Jumps used
Early Prehistoric	7,500 - 12,000	10,000-7,500	**Plano**		Introduction of the atlatl
		11,000-10,000	**Folsom**		
		12,000-11,000	**Clovis**		

Table 1.2.2: Chart information from Bryan, 1991; Linnamae and Jones, 1988
For simplicity sake, the early people who occupied the Americas have been given names according to the stone point they used at the time.
– compiled by author

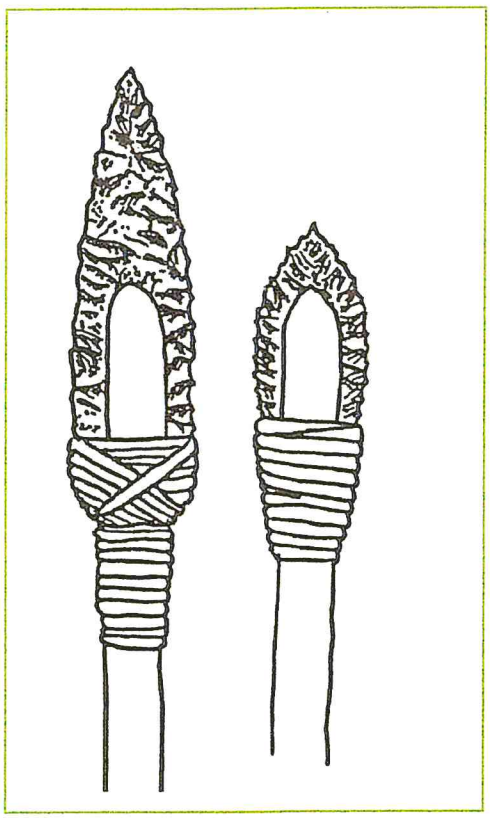


Figure 1.2.3: Illustration on the left is a Clovis; Illustration on the right is Folsom - *Bryan, 1991*

Archaeologists refer to stone 'points' because they are the lasting signs of the people who have occupied this land for thousands of years. Stone points have been found in archaeological digs and in a lot of instances, found within the archaeological remains of hunted game.

Stone points are considered, "cutting edge of the society" by Knut Fladmark of Simon Fraser University (Bryan, 1991).

Early Prehistoric Period (7,500 –12,000 B.P.)

The Early Prehistoric Period is period of transition from a tundra-like or scarcely vegetated area to the modern climate we have today. During this period there were three distinct projectile points: The Clovis, Folsom points which are referred to as the Fluted series and the Plano points. (Linnamae & Jones, 1988)

The Clovis (11,000 – 12,000 B.P.)

The Clovis was the earliest people according to their rock points. Named after the site in New Mexico where they were first identified, these people were nomadic hunters who roamed North America generally east of the Rockies at a time when big game was plentiful. Such game included mammoths, bison, bears, camels, horses, wolves and antelope. These were the last of the big game hunters (the animals of the Pleistocene era were much larger than the animals which followed their extinction). The Clovis points fluted or carved out on each side of the point and then slid onto a notched wooden shaft to create a spear. (Figure 1.2.3) In

1980, fluted points of the Clovis were found on the prairies southwest of Calgary. These, through cross-dating, were given an approximate age of 11,000 years. A Clovis-type projectile was discovered in the Saskatoon area a couple of decades ago. (Linnamae & Jones, 1988; Bryan 1991)

The Folsom (10,000 – 11,000 B.P.)

The Clovis point evolved into the Folsom point (named after a site in New Mexico where they were first found). The Folsom points were fluted almost the entire length of the point. (Figure 1.2.3) The early Clovis points are found mostly with mammoth kills, whereas the Folsom are more commonly found in bison excavations. It was at this time in history that the occupants of the land switched from the mammoth, which was heading towards extinction along with other Ice Age animals, to the bison, an animal that would sustain the livelihood of the North American occupants for the next 11,000 years.

Other points similar to the Folsom are called the Plainview, named after the Texas site where they were found, and the Mainland points. Linnamae and Jones (1988) mention a point that is similar to the Folsom called the Milnesand - Mainland and Milnesand may be one in the same. These were almost identical to the Folsom but without the flutes. Because these have been found to be above and below the Folsom points in some excavations archaeologist have categorized the Clovis, Folsom and Plainview into a single group call the Fluted Tradition or Fluted Series. No Folsom flutes have been

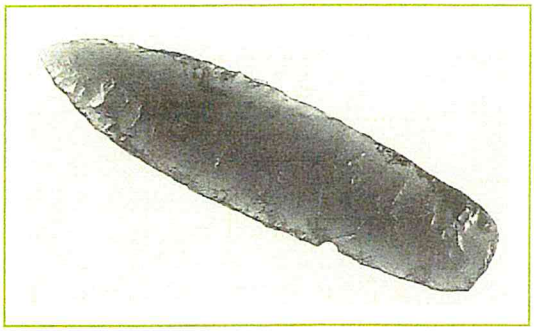


Figure 1.2.4: Plano point – Agate Basin
- *Bryan, 1991*

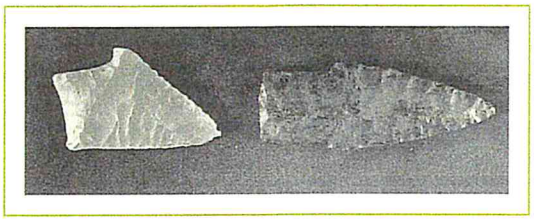


Figure 1.2.5: Object on the left is a Cody knife; object on the right is an Alberta point
- *Bryan, 1991*

found in the Saskatoon area. (Linnamae & Jones, 1988; Bryan, 1991)

The Plano (7,500 – 10,000 B.P.)

The Plano people (Spanish for plains) were the next to occupy the plains, and in greater numbers. The Plano points consist of a variety straight or rounded bases that are leaf-shaped and un-fluted. These points are categorized into two main groups known as lanceolate series: Agate Basin/Hell Gap – unstemmed (Figure 1.2.4) and Alberta/Cody - stemmed (Figure 1.2.5). These points are suggested to be the finest ever made, more artistic and seemingly less utilitarian than the fluted points that were before. It is believed that the Plano people migrated from the southern plains all the way to the Northwest Territories where evidence of them has been dated back 6,000 years. Small bands of Plano hunted on the Canadian plains, likely keeping shelter in wooded valleys and foothills during the winter and spending summers on the open plains. They primarily hunted bison and tanned their hides for clothing and shelter. Plano points have been found in the Saskatoon area (Linnamae & Jones, 1988; Bryan 1991).

Middle Prehistoric Period (2,000 – 7,500 B.P.)

This time period is one of climatic fluctuations that began with a warm and dry period known as the Altithermal, followed by the return of colder and wetter conditions. The period is also marked by a technological shift from previous lanceolate spear

points to side notch dart tips that were used with a spear throwing device known as an atlatl (Aztec name). (Figure 1.2.6 and 1.2.7) (Linnamae & Jones, 1988)

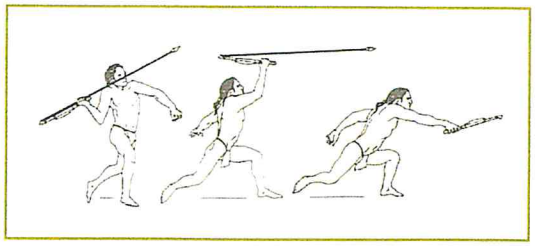


Figure 1.2.6: Atlatl

Figure 1.2.7: Atlatl use at Wanuskewin - *photo by author*

The Mummy Cave (7,500 – 4,700 B.P.)

The Mummy Cave culture (named for a cave in northern Wyoming where a mummified man was discovered) were the first on the Canadian plains to regularly use atlatls. The culture was nomadic big-game hunters indicating that the lifestyles of the ancient plainsmen did not change considerably. However, the Mummy Cave people were the first to use the bison jump where bands would likely join together for these mass kills. Mummy Cave points have been difficult for archaeologists to classify because of the similarities between the Mummy Cave style to that of later points and the fact that there are so few. Figure 1.2.8 shows what is believed to be a Mummy Cave knife. Mummy Cave sites have been discovered in the Saskatoon area. The best known is called the Gowan site located in the southwest part of the city, which dates back 6,000 years. (Linnamae & Jones, 1988; Bryan, 1991)

Figure 1.2.8: Mummy Cave knife

The Oxbow (4,700 – 3,050 B.P.)

Believed to be an evolved version of the Mummy Cave people, The Oxbow (named after the site in Oxbow Saskatchewan where a projectile point was first found) was a nomadic big-game hunting culture that relied almost entirely on the bison for food and shelter. The Oxbow points were slightly different

than the Mummy Cave points. The points were generally triangular shaped with accented side notches and a u-shaped base (Figure 1.2.9). Several sites have been unearthed in the Saskatoon area containing these points. During this era, with the stabilization of the environment, it appears that new people began to settle on the plains. Archaeological records show far more evidence of people, artifacts and settlements than ever before indicating that civilization on the plains was starting to quicken. Oxbow participated in trade that extended to the Pacific Coast, Great Lakes and to the Dakotas. Some of them buried their dead indicating they believed in the supernatural. And they built the first solid architecture on the plains known as medicine wheels (Linnamae & Jones, 1988; Bryan, 1991).

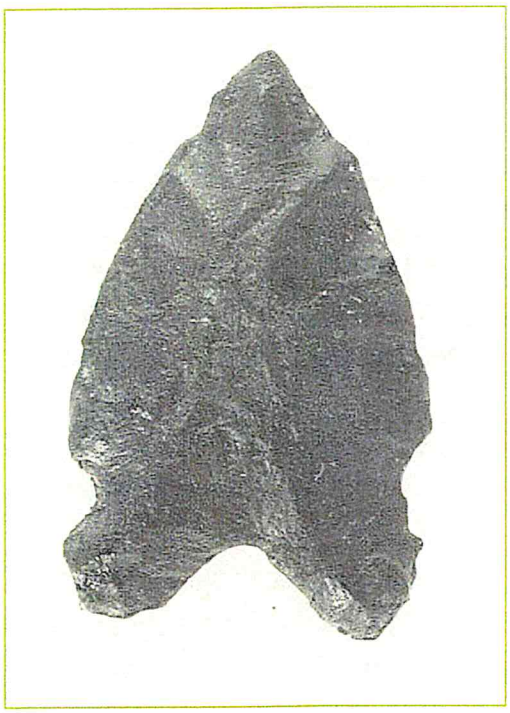


Figure 1.2.9: Oxbow Point
- Bryan, 1991

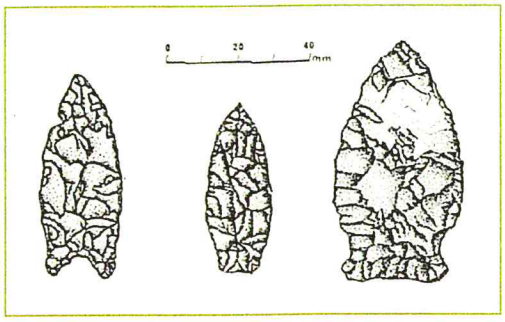


Figure 1.2.10: McKean (left), Duncan (Centre), Hanna (right)
- Bryan, 1991

The McKean (4,150 – 3,100 B.P.)

Another group called the McKean occupied the plains 500 years after the first evidence of the Oxbow. The McKean are based on three types of points: McKean, Duncan and Hanna (Figure 1.2.10). Some archaeologists believe the McKean migrated into Canada from the Great Basin or Rockies in the United States. It has been noted that these two cultures appeared to be living harmoniously for a 1,000 years after which they both seem to disappear (Brumley, 1975; Linnamae & Jones, 1988).

The Pelican Lake (3,800 – 1,850 B.P.)

At around the time that the Oxbow and McKean points disappeared, a radical new point

appeared that was triangular in shape with straight sides and a straight base and corner notched. This point was named the Pelican Lake point, named after location in Saskatchewan (Figure 1.2.11). Many of these stone points were made of imported stone supporting a theory that this culture had migrated onto the plains, possibly from the south and the east (Linnamae & Jones, 1988; Bryan, 1991).

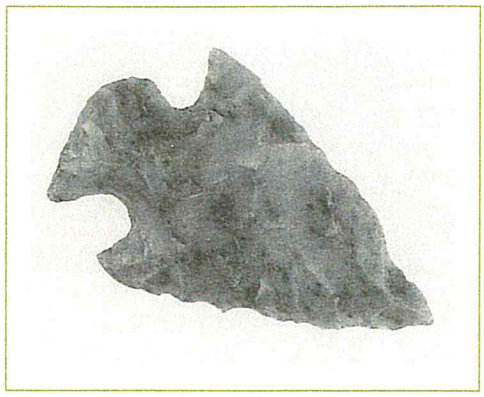


Figure 1.2.11: Pelican Lake point - *Bryan, 1991*

As mentioned earlier, the Mummy Cave hunters used bison jumps. However, after the Mummy Cave people, the jumps were abandoned for about 1,000 years including the years of Oxbow and McKean. The people who used the Pelican Lake points were communal hunters who reused the jumps. It would appear that the Pelican Lake people were a more disciplined society because of the fact they would organize into a communal bison killing. The Oxbow and McKean people only seemed to come together into groups for ceremonies. Evidence also indicates that the Pelican people either knew little or never cared about medicine wheels - the medicine wheels that have been excavated show no signs of their presence. This culture was large and mobile, evidenced by the great numbers of tipi encampments, and points found throughout the northern grasslands that were traded with people from the west, south and Eastern Woodlands. This culture has been called the "Renaissance people of the plains" because of their reuse and perfection of the Bison jump. They had sophisticated social and political structures and lasted for at least 1,000 years, ultimately spreading into parklands, mountains and

Boreal forests (Bryan, 1991).

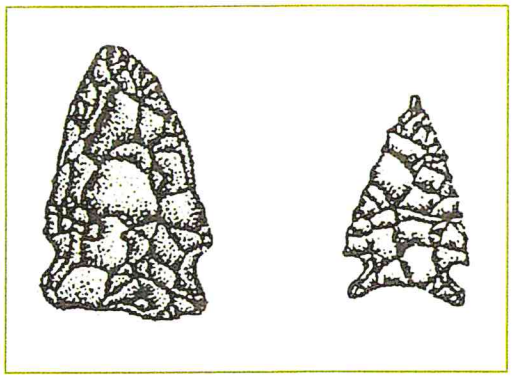


Figure 1.2.12: Larger Besant style points on the left believed to be used with a spear and atlatl, the smaller and finer Avonlea style point on the right believed to be used with the bow and arrow
- Bryan, 1991

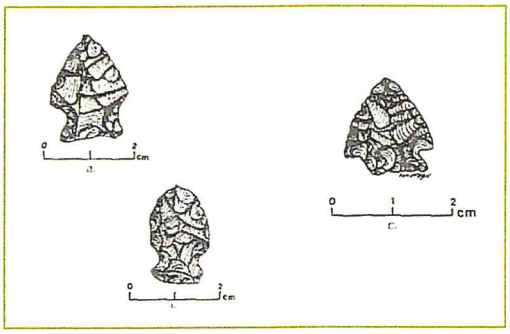


Figure 1.2.13: Two Besant points on the left, Avonlea point on the right
- Linnamae and Jones, 1988

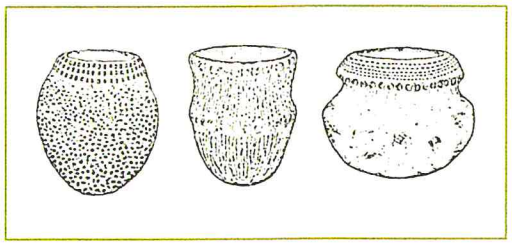


Figure 1.2.14: Prehistoric pottery found in Alberta
- Bryan, 1991

Late Prehistoric Period (250 – 2,000 B.P.)

This period marks the time of very successful communal bison hunting, the first appearance of ceramics and the bow and arrow.

The Besant (2,000 – 1,200 B.P.)

The Besant culture appeared on the Northern Plains 2,000 years ago. Their points are lancealote dart points characterized by their broad side-notches and straight bases (Figures 1.2.12 and 1.2.13). Although ceramics were already being used in other areas of North America (Bryan, 1991), the Besant culture marks the first appearance of ceramics on the Northern Plains (Figure 1.2.14). (Linnamae & Jones, 1988)

Some archaeologists (Frison, 1978) believe this culture epitomized communal bison hunting on the plains that was never to be surpassed by the cultures that followed.

Where the culture came from and their fate is still disputed. Did they migrate from the south or northern Boreal forests? Did they migrate from the parklands and forest fringes in the east whose point simply evolved from the late Oxbow period? They knew how to make pottery, so did they migrate from the Eastern Woodlands where the people were the first in Canada to possess the knowledge to create ceramics? Besant and Pelican Lake points have been found side-by-side at kill sites and camps, what does this mean? Regarding their fate, archaeologists

have yet to address this issue. Some suggest the Besant were the precursors of the later side-notched cultures and others feel they were assimilated into the Avonlea who occupied the plains at the same time as the Besant. (Reeves, 1983; Linnamae,1988; Bryan, 1991)

The Avonlea (1,800 – 800 B.P.)

The first arrowheads on the Canadian Plains have been linked to the Avonlea people, whose name is given for the site in Saskatchewan where signs of their culture, including the first arrowheads, were found. Their points are small, finely made side-notched arrow points (Figures 1.2.12 and 1.2.13).

Like the Besant, it is unsure where the Avonlea people came from. Some archaeologists believe they evolved from the Pelican Lake people (Byrne, 1973; Adams,1977; Reeves, 1983) while others think they may have migrated from the north or west, possibly the Mississippi Valley (Husted, 1969; Morgan, 1979; Linnamae & Jones, 1988). Regardless of their origins, there is a general consensus among archaeologists that the Besant was the first culture on the plains to possess ceramics and the Avonlea were the first to use the bow and arrow. However, both cultures would eventually possess both (Bryan, 1991).

The Besant/Avonlea cultures co-existed for approximately 700 years, but both were distinct. This is apparent in the two different styles of points, the pottery and overall lifestyles. Both relied almost totally on bison, killing them using both jumps and pounds. They would follow the herds and move to the open

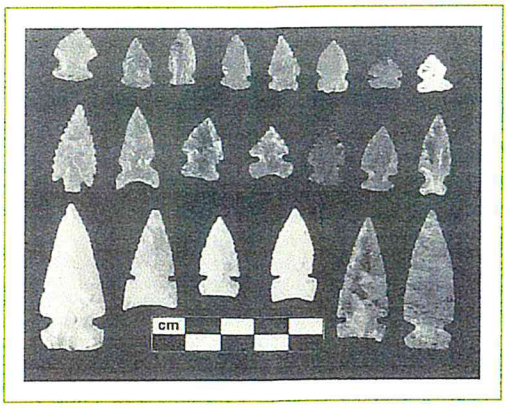


Figure 1.2.15: Assortment of Old Women's or Late Side-Notched points
- *Linnamae and Jones, 1988*

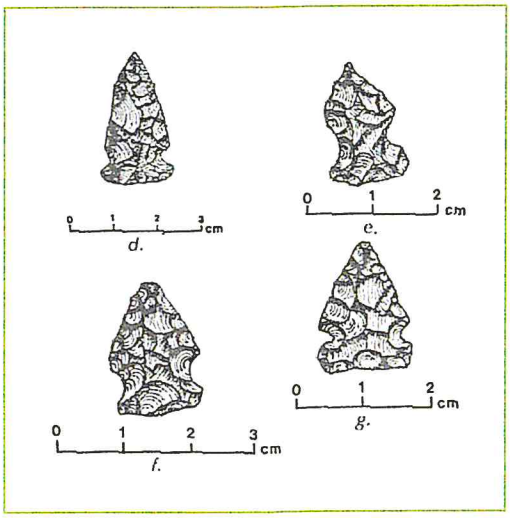


Figure 1.2.16: Examples of Prairie Side-Notched points
- *Linnamae and Jones, 1988*

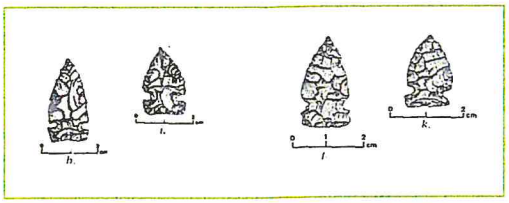


Figure 1.2.17: Examples of Plains Side-Notched points
- *Linnamae and Jones, 1988*

plains in the summer and to the protection of river valleys in the winter. Both of these cultures used tipis, however, some evidence has been found of wigwam use at Besant sites indicating evidence of eastern origin to that of the Woodlanders. Archeaologists are puzzled as to how these two cultures were able to co-exist yet maintain their cultural differences over a long period of time. Typically what occurs in this type of situation is that either one of the cultures is assimilated into the other or there is a melding of the two cultures. This did not occur with the Besant and Avonlea (Bryan,1991).

Late Side-Notched (1,200 – 250 B.P.)

The Avonlea arrow points were replaced by another style of side-notched points refered to in Alberta as "Old Women's", while Saskatchewan they are known as "Late Side-Notched" (Figure 1.2.15). These points became the standard arrow tips for more than 1,000 years – up until the Plains way of life and the bison were gone (Bryan, 1991).

Late Side-Notched points are divided into two different types or sub-points; the Prairie Side-Notched (Figure 1.2.16) and the Plains Side-Notched (Figure 1.2.17). The Prairie Side-Notched were small points with side-notches close to the base corners. These points existed during the time, and bared some resemblance, to that of the Avonlea. Because of this, it is suggested that the two cultures may either be closely connected to one another, or one may have influenced the other. Plains Side-Notched are small, triangular shaped points that have narrow side-

notches that are located higher up from the base than that of the Prairie points (Linnamae & Jones, 1988).

There are distinct differences between these two sub-points; the location of the side-notches (Prairie side notches close to the base – sometimes touching it, Plains side notches are higher), and the craftsmanship (the Plains being the better crafted) (Kehoe, as cited in Bryan, 1991;Dyck, as cited in Bryan, 1991).

As per other periods, archaeologist cannot determine what happened to the Besant and Avonlea, or where the Late Side-Notched or Old Woman's points came from. As mentioned above, Linnamae and Jones(1988) suggest a relationship between the Prairie Side-Notched and the Avonlea. He also mentions that the Prairie Side-Notches have been described as crude and asymmetrical. Dyck (as cited in Bryon, 1991) sees a relationship of the Praire Side-Notched to those of the Eastern Woodlands and the Plains Side-Notched to the points used in the Middle Missouri region. He also mentions that because the craftsmanship of the Plains points was so well done that they strongly represent the Avonlea.

Until approximately 800 A.D. (1,200 B.P.) the cultures on the Northern Plains remained uniform - archaeology findings support this. Findings through ceramics and points indicate that the culture on the western plains was stable for a long period of time. During the last thousand years there has been climate change from warmer weather to moister grasslands;

to a drought that lasted two centuries; followed by a period of cold winters with cooler summers. There was only little change in their arrow points and ceramics, and no technological innovations occurred during this period. This was an indication that after 11,000 years, the occupants of the plains had become efficient bison hunters and were well adapted to the harsh prairie environment (Bryan, 1991).

Archaeologists are able to piece together the Northern Plains people's livelihoods. They have a good idea of how and where they lived and what they killed, how they killed, cooked and preserved their kill. They used leather for shelter and clothing, adorned with homemade beads, shells and teeth. Their technological advances are understood as mentioned earlier; thrusting spear to atlatl to bow and arrow, and the boiling pit for food preparation to the use of ceramics.

All cultures on the plains were nomadic hunters. They had little resources, relying on bison and herd movements while being exposed and disciplined by to the harsh prairie environment. After 800 A.D., strong influences from the south created new ideas; new people came onto the plains along with new trading. These strong influences led the plains to diverge with the east and for the first time, creating a boundary between east and west (Bryan, 1991).

The new people were horticulturists known as the Mississippi culture. These new people migrated from the Mississippi and Missouri region to, as far north

as North Dakota, taking land that was suitable for gardening and displacing other cultures in a domino effect as they migrated. The Mississippi culture were farmers who used the river valleys for gardening. At about 900A.D. - 1,200A.D., the area to the north of the Mississippi region became a warmer, moister climate ideal for their primary crop, which was corn. Farming cultures were more advanced in areas of organization and governance. This 'settled' lifestyle also allowed for more leisure time for such things as politics, games and the arts. On the plains there was some shift from a nomadic way of life to part-time farming. Some of the nomadic bison hunters along the way took up the traits of the Mississippi culture to become part-time farmers. This culture would hunt in the spring after crops were planted, spend the summer on the plains hunting bison, returned for fall harvest and after harvest they would venture out again to hunt. Larger farming villages didn't require their men to hunt because the nomadic hunters of eastern Saskatchewan and southern Manitoba were eager to barter with the villagers for items that were traded up the Mississippi from the south. Agriculture was never practiced in Saskatchewan, except for a brief time on the southeastern edge. The prairies lacked the wide flood plains and the prairie landscape was too hard to cultivate. Agriculture was not practiced until the introduction of the horse and plow in the late 1700's (Bryan, 1991).

There is no hard evidence that proves the Mississippi culture migrated into Canada. There is speculation that they may have migrated into

Manitoba and a site in Alberta suggests they may have migrated along the river valleys through Saskatchewan to Alberta – a site located east of Calgary called the Cluny site. Why they would migrate to Alberta is unknown. It may have been due to the drought that occurred between 550-700 years ago that greatly affected the horticulturalists. During this time they may have abandoned their agricultural way of life for the nomadic bison hunter, or they may have been running from disease brought over by the Europeans. During the time of the drought, there is a gap between the points used; Prairie Side-Notched (1,200 – 800 B.P.) and the Plains Side-Notched (550 – 250 B.P.). Does this indicate a low population on the plains? There have been signs of Mississippi style ceramics found in Saskatchewan. Did they occupy the land, or were these trade goods? Like the other cultures before them, archaeologist are unsure as to what may have occurred and why there are signs of the Mississippi culture located in Alberta for a brief period of time. Was this short period due to the fact that they could not survive, or did they just become part of the plains culture? The Cluny site contained some information that may support the theory of southern influence – horse bones (Dyck, as cited in Bryan, 1991)

Early Historic Period (present –250 B.P.)

During the later part of the Late Prehistoric Period, there is evidence indicating that there was European influence long before European settlement on the plains. The Plains people were starting to see

signs of a new culture as goods were slowly finding their way from the East. These signs were through the introduction of new diseases, for which they had no immunity to, the horse, the gun then other material goods including alcohol. Change started to occur rapidly and is evident as explorers, traders, missionaries and soldiers, were documenting and recording the existing culture. But as quickly as they were documenting, the evidence was becoming obsolete. The First Nations people were changing from the influence of the European trade, which caused them to adopt new life-styles and shift territories. Archaeologists have had trouble trying to reconstruct the period immediately before documentation; the period archaeologists refer to as Protohistoric. The piecing together of the Plains culture and society came only by excavating sites that contained material items such as horse bones, European iron or glass beads. Very little existed to indicate any change or alteration in the societies. There is poor documentation during this transition period as the writers would only document for their own purpose and were typically confined to the river valleys, which were the trade and travel routes of the European settlers. During this time it was fortunate that several artists came to North America to visually document the cultures. North America is also fortunate in that oral histories into Indian culture and society are available. This oral information along with some of the written documentation and artist depictions, help archaeologists validate and piece together evidence of protohistoric life on the plains.

A stone ring with a central hearth becomes a hide tipi complete with fur blankets, some postholes and a pile of bones becomes a bison pound, arrow points fixed to wood shafts with feathers, horses and dogs are used with travois, human skeletons are wrapped in deerskin with porcupine quills and beads for decoration (Bryan, 1991).

The evidence from the oral, written and artist depictions of this time portray the Plains culture as one that was transformed by the horse. The horse was a re-introduction onto the Plains. As indicated earlier, there was evidence of horse bones dating back to the Clovis period 12,000 years ago. The horse, along with the other big game of the time, became extinct. Why or how this occurred is still up for debate. Some archaeologists claim that it was due to sudden climatic changes where others suggest that the big game were hunted to extinction. The re-introduction of the horse to North America had an instantaneous and enormous impact to the Plains culture. In a matter of decades, the Plains people "became one of the greatest equestrian cultures the world has ever known" (Bryan, 1991. p. 183). The horse improved the culture in some ways, and also caused some problems in others. New improvements came in the way of new and improved hunting strategies - hunting became more efficient. The horse allowed the cultures to track and follow bison herds more quickly and easily. This in turn affected their living patterns. The horse allowed tribes to transport and accumulate more material goods. The increased efficiency allowed for more leisure time,

which provided more time for things like politics, religion, arts and crafts, and ceremonies. Because tribes were able to move and cover more territory, this led to some intertribal territorial problems and horse-altered warfare. Another benefit with the horse versus the dog for transportation was that tribes no longer had to have large numbers of dogs for transportation of goods. Dogs would devour a lot of bison meat; the horse would eat the available vegetation, which meant more food, or less killing, for the tribe. Bryan (1991) sums up the effects of the horse on the Plains culture as such: "The nomad bison hunters reached a cultural crescendo, a tremendously bright flowering, like the last fierce light from a glittering candle. Ironically, this took place only a few years before the end of it all" (p. 185).

The major source of European trading on the Northern Plains was to the northeast. By 1670 A.D. English and French trading posts were established in the Hudson Bay area. The Hudson Bay traders found little use for the horse in the wooded areas they occupied. The major migration of the horse came from the Spanish settlers in the South. However, during the time when the horse was coming up from the south, the gun was being introduced. No guns came up from the southern Spanish settlements, likely due to the fact the Spanish feared for their own safety. The gun came onto the Plains from the northeast with the Woodland Cree, who had become traders, being one of the first cultures to possess the new technology. Soon after 1700, the Assiniboins in Manitoba and Saskatchewan possessed

the technology (Bryan, 1991). It took some time before the western portion of the plains culture would use the gun. It was most coveted for warfare but not for hunting as the gun had little use for bison hunting because the loud noise would cause a stampede, and many hunters still preferred the traditional bow and arrow. The Plains Indians did not rely on trading as the woodlanders did. They had sustained themselves for 12,000 years and continued to do so. They did not need the imported blankets or food since the bison provided all of that, and then some. When they finally desired to trade for goods such as tobacco, metal goods (including metal arrow points) and guns, the Plains Indians did not trek through the woodland areas. They relied on the Woodland Cree, who became the middleman between the Hudson Bay traders and the Plains Indians until trading posts were established in the Plains areas (Bryan, 1991).

Because there were so few furs on the Plains, the main trade item for the Plains Indians was bison hides and pemmican. Merchants and traders valued pemmican as a food supply that would be used for long treks by merchants and traders. This may have had an effect on the bison decline. It was the first time that the Plains people were killing bison for something other than their immediate and required needs. Even though the culture had started to kill for reasons other than their own sustainability, the main culprits to the bison's decline were European settlers (Bryan, 1991). When the railroads were being constructed, bison were killed for food for railroad workers. Bison hides were coveted and merchants

slaughtered large herds, stripping only the hides and leaving the remaining carcasses to rot. European high-class and ranchers shot bison for amusement. During settlement, the military advised the government to kill off the bison - depleting the food supply and way of life for the Plains people, in order to fight the resistance that was occurring. With the depletion of the bison, tribes were competing for the last remaining bison. Intertribal warfare became fiercer than ever (Vecsey, 1981). What was once cultures working together for food and shelter were now cultures at war.

By the late 1800s, the bison herds were gone and so to was the Plains way of life that had been for 12,000 years. By 1878 the last of the bison entered the Cypress Hills area. The effect of the near extinction of the bison is put in perspective when comparing its effects on the Plains people to cutting off or depleting today's oil supplies. Prices for trade goods such as furs were depleting and smallpox and other diseases were starting to affect the Plains or First Nations people. There is speculation that the First Nations people were given blankets infected with smallpox (Wanuskewin workshop, 2004).

With European settlement occupying more and more land, there were questions as to what should be done with the Plains people. In the 1800s, prior to mass settlement on the Plains and the west, Indian Acts were already in place in the east. With more settlers moving west, and a threat of a land takeover from the south (United States), the government entered into Treaties with the Plains

people. The Treaties were used to create a relationship between the government and the First Nations people. The First Nations people were provided land, annuities, and protection of traditional economies, relief during famine, immunity to taxation, education and health benefits. In exchange, the Crown was given the opportunity to settle the lands. Today, the Treaties are still going through interpretation and are considered living documents or relationships between the Federal Government and Saskatchewan First Nations.

There are six treaty boundaries in Saskatchewan (Figure 1.2.18)

- Treaty #2 Manitoba Post Treaty (1871)
- Treaty #4 Qu'Appelle Treaty (1874)
- Treaty #5 Winnipeg Treaty (1875)
- Treaty #6 Treaty of Fort Carlton and Fort Pitt (1876)
- Treaty #8 (1899)
- Treaty #10 (1906)

Five of the treaties; Treaty #4, #5, #6, #8 and #10, were negotiated in the territory which we now call Saskatchewan. The sixth treaty boundary is Treaty #2 located in the Southeast of the province. There are no Treaty #2 First Nations in Saskatchewan.

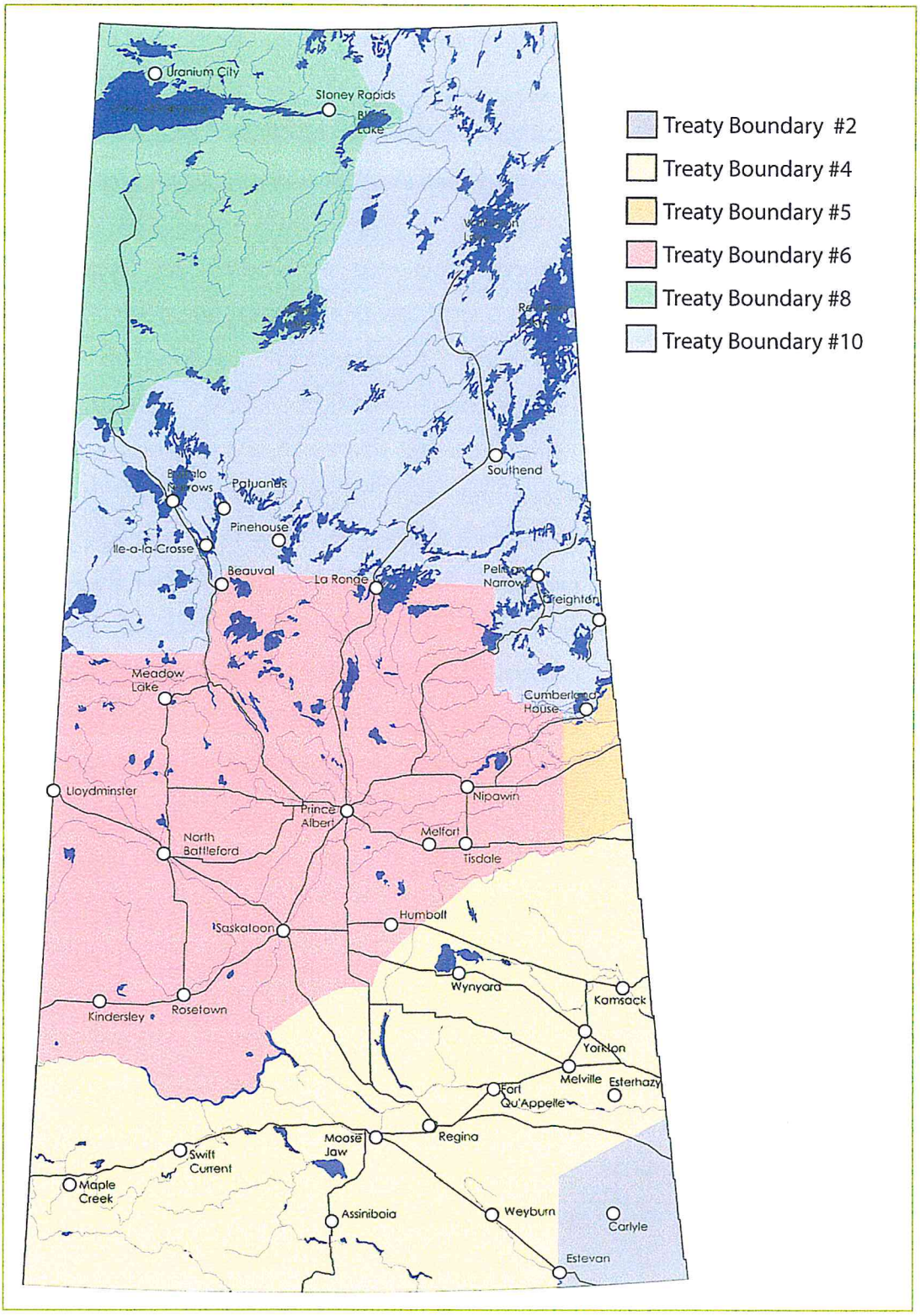


Figure 1.2.18: Treaty boundaries of Saskatchewan
- recreated by author

Reserves lands were part of the treaties. The nomadic Plains culture was forced onto these small tracks of land. They were stripped of their traditional ways and history in the hope that they would abandon their old lifestyles and become farmers (Conn, 1982). A lot of Reserve land was unsuitable for agriculture. There were instances where some Reserve land was considered too good to be a Reserve and the band was relocated. One example was the Thunderchild Reserve in the 1890s (Wanuskewin workshop, 2004). Some First Nation Agriculture did flourish in some areas, such as North Battleford, but there were complaints from non-Aboriginal farmers that the First Nations people were receiving handouts. Therefore First Nation farming was crushed by the 1900s. Reserve schools were created where the young were taught of the European ways and traditions.

In 1876, the Indian Act consolidated all laws relating to "Indians and Lands Reserved for Indians". By the 20th century, the Treaties were basically ignored and the Indian Act was legislated throughout the entire country. The government started doing things illegally such as forcing Aboriginal people to sign-out in order to leave a reserve. The Royal Canadian Mounted Police did not uphold this because they knew it was illegal. The Indian Act also prohibited their traditional spiritual practices (Wanuskewin workshop, 2004). The ultimate goal of the government with the Treaties and the Indian Act was total assimilation of the First Nations people into the larger Canadian society. The thought was that

the First Nations people would forget about their culture, traditions and history and basically become extinct (Hick, 2003; Wanuskewin workshop, 2004).

Trying to understand the different cultures from the past can be confusing. Archaeologically dating cultures based on artifacts appears simpler than trying to piece together tribal areas and descendants. As this thesis is focusing on the Northern Plains, which only contained some of the tribes; for example Sarcee, Plains Cree, Dakota (Sioux), Assiniboine, Blackfoot, Atsina, Hidatsa, Mandan (Figure 1.2.21). There are other tribes within Saskatchewan that were not considered plains Indians or have become immigrants over time such as Saulteaux who have eastern Anishinabeg origins and Dene who were not bound to one area and were caribou hunters; following caribou migration in the winter months and fishing on the Great Lakes during the summer. To make the Dene even more complex, the Dene share similar cultural values with those of the Inuit.

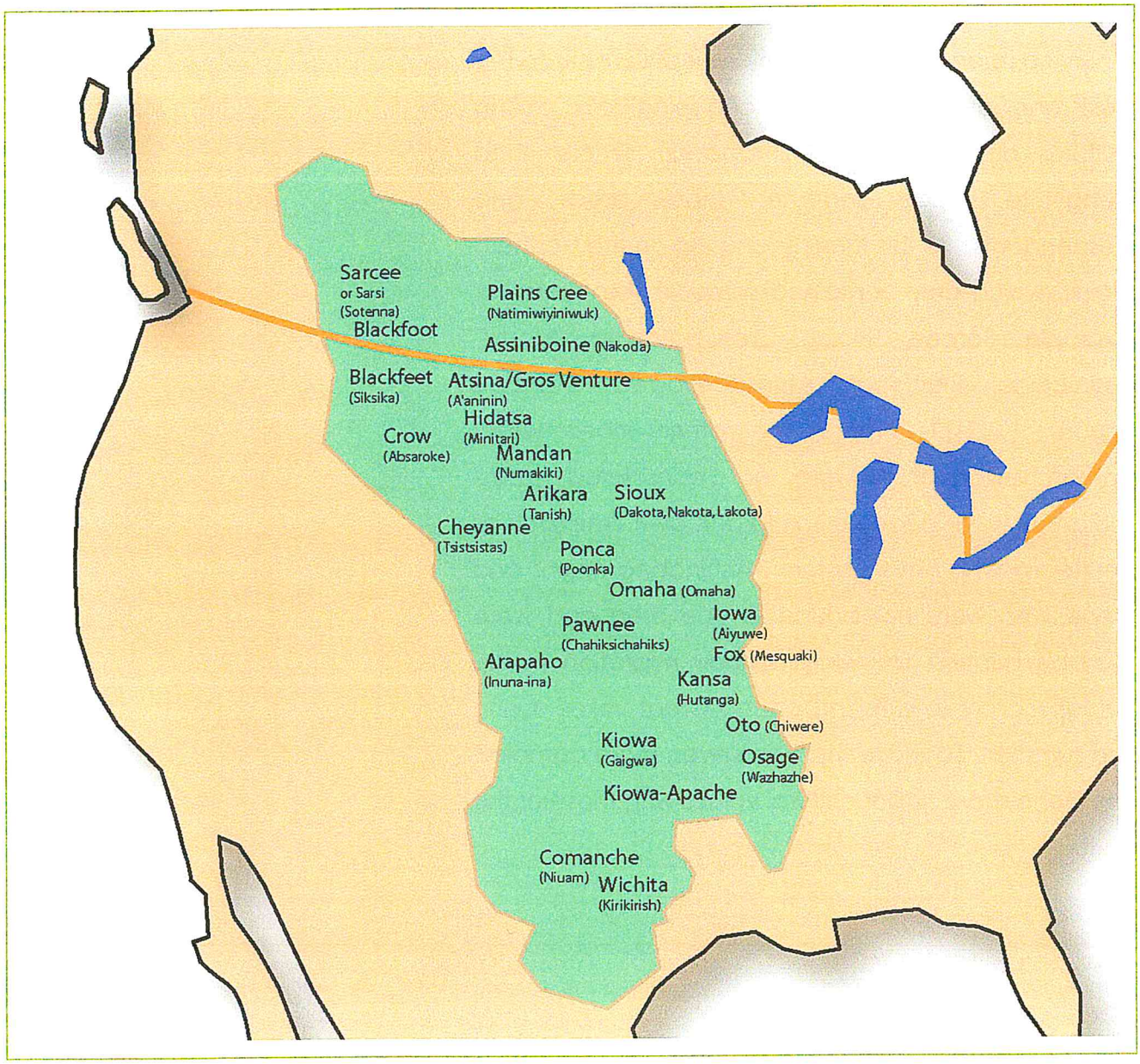


Figure 1.2.21: Great Plains cultural areas (Words in parentheses are traditional names used by bands or tribes.)
- recreated by Author based on information by Nabokov and Easton, 1989; Conn, 1982

Linguistic Groups

Located on the Saskatchewan Indian Cultural Centre web site (SICC, 2004) there is an article called the "Name Game". This article discusses the issues related to the understanding of the naming of the Siouan cultures in Canada and the United States. It was suggested that the Assiniboine separated from the Sioux approximately 500 years ago and that the two cultures share the same language but different dialects; Assiniboine (Nakota) and the Sioux (Dakota and Lakota). One may be confused when reading the article and can understand how, in the past, there would have been some communication and translation problems.

Within Wanuskewin Heritage Park's museum, several cultures are listed:

The Nehiyawak (Cree)

Algonquian linguistic group

Only group that has continuously occupied central Saskatchewan since the late 1600s. The Nehiyawak were prominent traders with the Hudon's Bay company and typically acted as middle men between the Hudson's Bay and western Canada. There are three different Nehiyawak or Cree cultures; Plains, Swampy and Woodland and each speak different dialects of the same language.

The Dakota

Siouan linguistic group

The Dakota are said to have been close allies with the Nakota and Lakota. All three cultures shared similar

traits and spoke a similar language but each had a different dialect.

The Nakota (Assiniboine – Nakoda)

Siouan linguistic group

The Nakota were said to be close allies with the Nehiyawak (Cree). This culture immigrated to the Plains from the eastern woodlands where they once traded with French Fur traders then the Hudson's Bay Company.

The Anishinabeg (Saulteaux)

Algonquian linguistic group

This group migrated from the eastern woodlands to become traders and Plains hunters sometime after the arrival of the Nehiyawak (Cree).

The Dene

Athapaskan linguistic group

The Dene are a northern culture that relied on freshwater fishing for their livelihood. During the fur trade, this culture moved further south into Alberta, Saskatchewan and Manitoba seeking furs. The Europeans eventually displaced these people to Northern Saskatchewan.

The Blackfoot Confederacy

Algonquian linguistic group

This group consists of three nations; Siksika (Blackfoot), Kainai (Blood) and Pekuni (Peigan). These were High Plains hunters and warriors who fought and traded with the Nehiyawak and Nakota. They mainly lived in

Alberta but sometimes traveled into the Saskatchewan area. Today they are mostly in southern Alberta and Montana.

The Tsuu-t'ina (Sarcee)

Athapaskan linguistic group

Tsuu-t'ina brought the Athapaskan language from the north. Legend has it that a group of people tried to cross a frozen river. The group that made it across before the ice broke became the Tsuu-t'ina and the one left behind became a Subarctic culture. It is speculated that the Tsuu-t'ina, along with the Siksika (Blackfoot) entered the Saskatchewan area from Alberta at various times. Today, only a small number of Tsuu-t'ina live around the Bow River area near Calgary, Alberta.

The Atsina

Algonquian linguistic group

This culture was located in Montana and Southwestern Saskatchewan and would sometimes ally with the Blackfoot Confederacy to work or fight against the Nehiyawak and Nakota. Their present home is in Montana.

The Hidatsa/Mandan

Siouan linguistic group

These cultures were more farmers than Plains hunters resulting in more permanent earth lodge dwellings.

Explorer Peter Fidler made reference to these same types of dwellings along the South Saskatchewan River; however, his findings have not

been able to be archaeologically verified. Majority of Hidatsa now live in Montana.

An example of potential confusion to understanding the type of groups is the above-mentioned Atsina; they are also known as Gros Ventre. It is said the Gros Ventre group split from their counterpartrs to the south; the Arapaho, and journeyed north. This group was given the French name Gros Ventre; they call themselves Ahe or A'aninin, the Arapaho gave them the name Atsina (Native Languages, 2004).

Another example that becomes confusing is the Sioux and Assiniboine groups. It has only been recently that the term Sioux has become acceptable to the Plains cultures; the word has been an insult ever since it was first introduced. The Sioux cultures have always referred to themselves as "An Alliance of Friends" which is translated into three different words from three different dialects. In the Santee dialect it is spelled and pronounced 'Dakhota', in the Yankton dialect it is 'Nakhota', and in the Teton dialect it is 'Lahkota'. The name Sioux is a shortened name from the word Nadouessioux that was derived from the Ojibwa word nadewisou. The French, who were at war with the cultures at the time, gave the Dakhota, Nakhota and Lakhota groups the Ojibwa name nadewisou, which basically means 'treacherous snakes' (Lakota International, 2004). There is confusion regarding the Assiniboine cultures as well. It has been said that the Assiniboine were once members of the Sioux, particularly by governments

and ethnographers (SICC, 2004). French Jesuit missionary, Pierre Jean Desmet suggests the Assiniboine were once Yanktonai Dakota (Sioux) band members. Based on oral histories, all sources refute this claim. One source indicates that the Assiniboines were actually Algoquain. However, the Assiniboine language is a dialect of Dakota (Fort Belknap Indian Community, 2003). The name Assiniboine is derived from Chippewa words u sin' and u pwawn which mean 'stone boilers' – some Assiniboine's are referred to as 'Stoney'. Assiniboine's refer to themselves as Nakona or Nakonabi which means "The Friendly People". Modern forms of these names are Nakoda and Nakodabi. (Wamakashka Doba Inazhi). Depending on which interpretation one makes, the reference to the Nakota as Assiniboine, could be considered incorrect and the proper traditional name is Nakona or Nakoda.

These examples show how complicated things have become over the past three centuries with European contact interpreting the cultures incorrectly. Only now are people respecting the Aboriginal people and trying to piece together – properly – their origins.

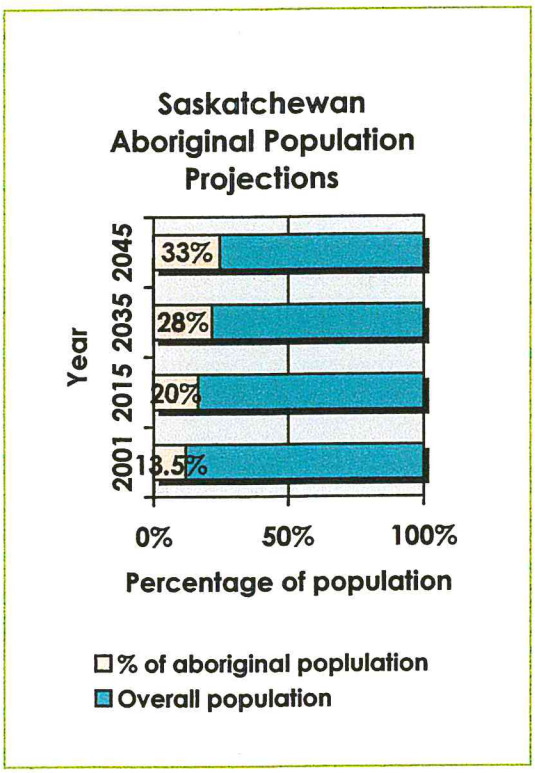
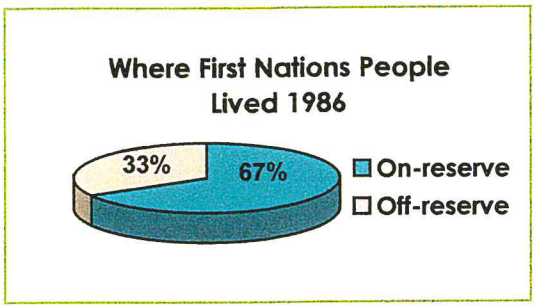


Figure 1.2.21



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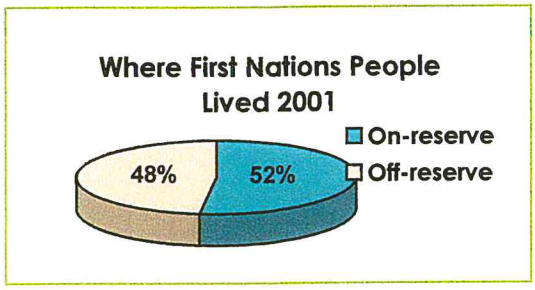


Figure 1.2.23

Around the 1920s, the First Nations population was at a low and it appeared that the government's intentions on assimilation were becoming a reality. (Wanuskewin workshop, 2004) This is no longer the case. In 2001 the aboriginal population was approximately 13.5% or 135,000 of Saskatchewan's overall population of approximately 1,000,000. This percentage is expected to increase to 33% by 2045 (Figure 1.2.21). Another interesting statistic is the increase in off-reserve population (Figures 1.2.22 & 1.2.23). This statistic is based on a recent trend of First Nations people moving between small urban communities and their home community on reserves. The majority of the off-reserve percentage lives in our largest cities – Prince Albert, Regina and Saskatoon (Government of Saskatchewan, 2003).

Federation of Saskatchewan Indian Nations (FSIN)

The Federation of Saskatchewan Indian Nations (FSIN) is the Indian formed government in Saskatchewan that represents seventy-four First Nations in the province (Figure 1.2.24). There are three First Nations located within the Treaty #2 boundary but these are Treaty #4 First Nations. Four First Nations that are non-Treaty: Standing Bison, Wahpehton Dakota, Whitecap Dakota and Wood Mountain.

Tribal Councils

There are ten Tribal Councils in Saskatchewan. Each Tribal council consists of First Nations bands. The purpose of the Tribal Council's is to assist bands with issues that deal with Federal programs and funding.

The Tribal Councils are:

- Agency Chiefs Tribal Council (3 First Nations)
- Battlefords Tribal Council (7 First Nations)
- Fill Hills Qu'Appelle Tribal Council (11 First Nations)
- Fort Carlton Agency Council (2 First Nations)
- Meadow Lake Tribal Council (9 First Nations)
- Prince Albert Grand Council (12 First Nations)
- Saskatoon Tribal Council (7 First Nations)
- Southeast Treaty #4 Tribal Council (2 First Nations)
- Touchwood Agency Tribal Council (5 First Nations)
- Yorkton Tribal Council (6 First Nations)

There are 10 Independent First Nations who are not members of Tribal Councils.

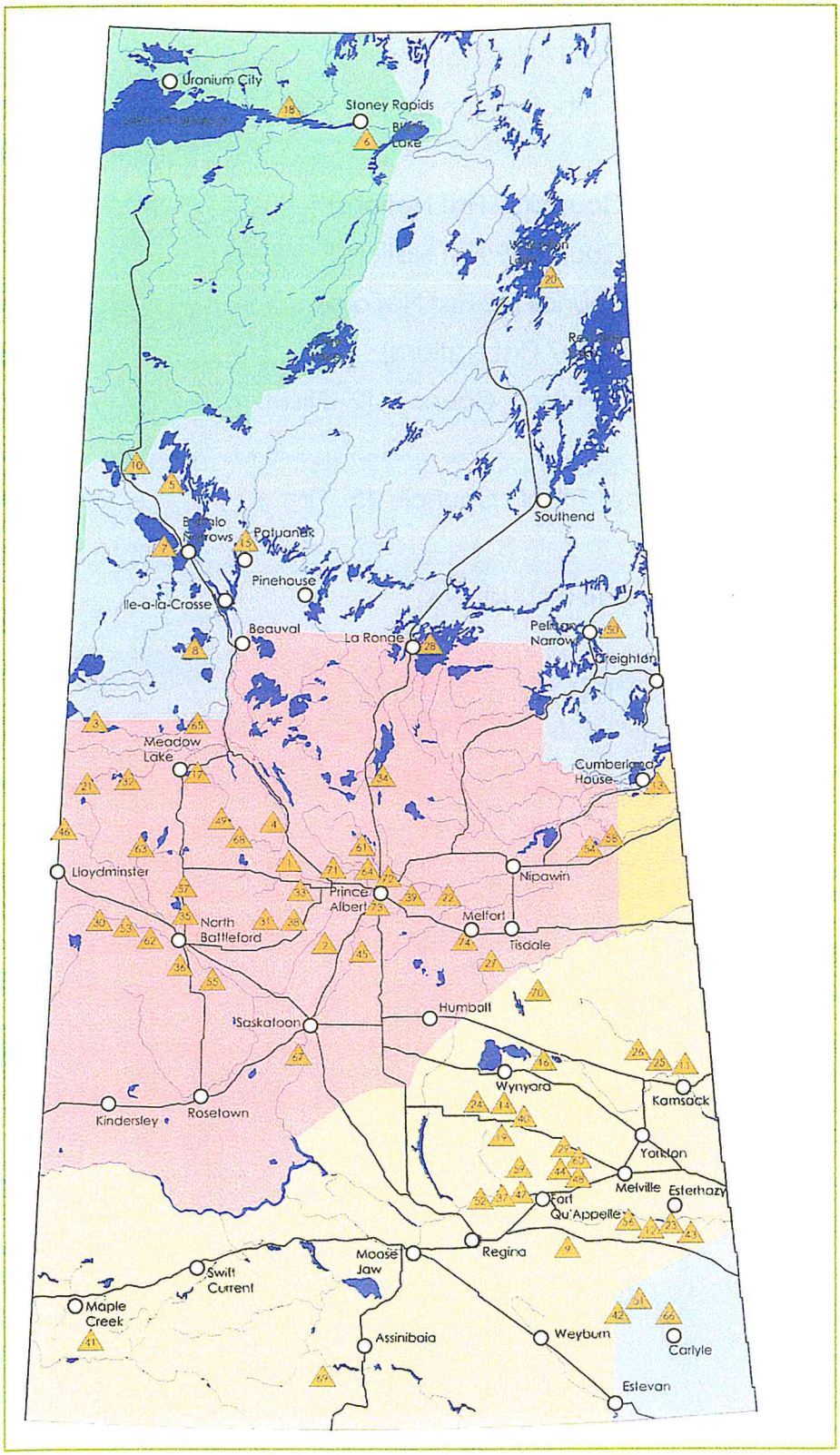


Figure 1.2.24: 74 First Nations in Saskatchewan

There is still division amongst the different tribes and bands, each a unique culture within the Aboriginal community. And it is understandable why. In the past groups have split from one-another for various reason But they do stand united for their people and want recognition with the fact that they are unique as a whole from other Canadian cultures.

1.3 SPIRITUALITY and CEREMONIES

Figure 1.3.1: Vision quest site
- Bryan. 1991

Figure 1.3.2: Vision quest site
- Bryan. 1991

It has been documented historically that Plains Indians were a spiritual people, evidenced by their burials and ceremonies. Their superstitions would come from fears of the natural forces they would witness everyday and had tremendous respect for all things natural. They believed in the existence of a Great Spirit and that all things were related back to the Great Spirit. The eagle is said to represent the messenger between the earth and the Great Spirit. The bison provided their livelihood and they would show their appreciation of this through ceremonies such as the Sun Dance (McLean, 1889).

It has been said that the plains people believed in many gods in the form of the sun, moon, and stars as well as anything that was strong or strange, such as an animal, person or even an odd-shaped stone. The way Plains men received power was through visions – or vision quests, where the man would go to a secluded place (see Figures 1.3.1 & 1.3.2), typically on a high peak, and spend several days without food or water. (Vescey, 1981) Men could raise their status by having successful vision quests (Driver, 1968) and men who became known for seeing several visions were known as medicine men. These men were said to be able to see the future and cure disease.

Historically, among archaeologists, spirituality is difficult to interpret. Evidence of the Plains culture being spiritual or superstitious may have started with the Oxbow people. Gravesites have been found that

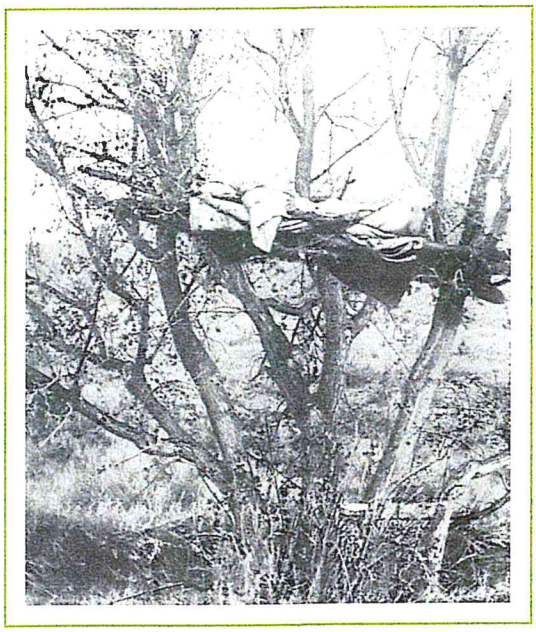


Figure 1.3.3: Gravesite
- *Nabokov and Easton, 1989*

Figure 1.3.4: Stone cairn
- *Bryan, 1991.*

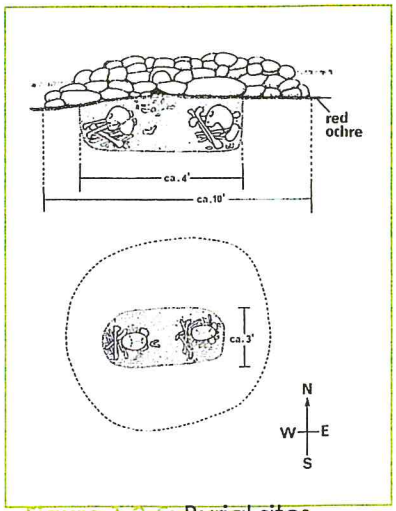


Figure 1.3.5: Burial sites
- *Bryan, 1991.*

contain evidence that Oxbow had some faith in the afterlife. These typically were not the traditional style of burial we see today. Historically, Plains people would expose the dead bodies to the elements first and not bury them immediately after death. The exposed bodies would be placed onto a wooden scaffold and left to decompose then the tribe would return sometime later to retrieve the skeletal remains (Figure 1.3.3). These remains would be bundled up and transported to a traditional burial site. Sometimes animal bones, typically the bone with the best meat from such animals as bison, deer or antelope, were buried with the remains. This could have symbolized food for travel in the afterlife. Sometimes leg bones from a dog were buried possibly signifying transportation in the afterlife (Bryan, 1991). The Oxbow was also the first to assemble Medicine Wheels (Section 1.4 Medicine Wheels and the Circle), some of which may have a link to spirituality such as burial sites (Bryan, 1991).

There is currently no evidence indicating that the McKean people used large gravesites similar to the Oxbow - there is little evidence that they even buried their dead. In Canada, there is only one site and it contains cremated remains. However, there are sites in the United States indicating that there were McKean burials beneath the floors of dwellings. Pelican Lake burial sites have been found (typically on hilltops) and these sites contained artifacts such as shell beads and grizzly bear claws (the grizzly bear was believed to possess great physical and supernatural power by prehistoric people) (Figures

1.3.4 & 1.3.5). Pelican Lake people either cared little about medicine wheels or knew nothing about them.

The Sun Dance

Studies indicate that the McKean people used medicine wheels for ceremonial purposes such as the Sun Dance - an annual ceremonial gathering held during the summer. The Sun Dance was the indication of social organization among the Plains Indians. The ceremony took place in a circular area surrounded by willows with a central pole (Figures 1.3.6, 1.3.7 & 1.3.8). The ceremony would also have a preparatory tipi for the participants. One person, typically a medicine man, who directed tribesmen in the construction of the lodge, would coordinate the preparation. The entire process is ceremonial; from selecting the site to selecting the items for lodge construction. The centre pole was selected from a tree, which would have a fork in it. The fork would represent an eagle's nest; the eagle was one of the Plains Indians' most sacred animals as it was seen as a messenger to the Great Spirit and courageous, swift and strong.

The bison was the main theme of the Sun Dance. The bison symbolized life, for it was the bison that had given the Plains Indians life – food, shelter, clothing. The Plains Indians were conflicted people who viewed the bison as a sacred animal, closer to the Creator than themselves. But they killed the bison for survival and felt they need to reconcile for this deed (Atwood-Lawrence, 2004). The bison gave themselves to the Plains people so the plains people

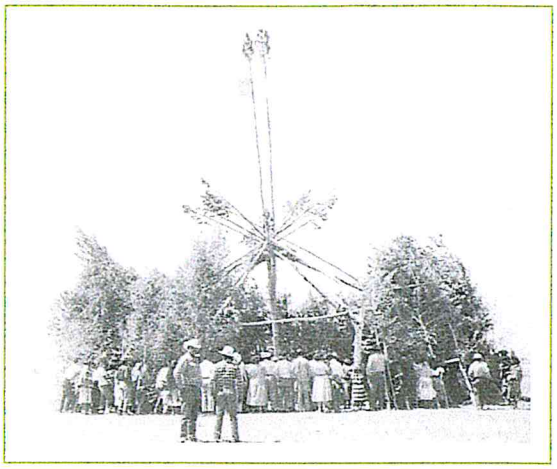


Figure 1.3.6 Sun Dance lodge

Figure 1.3.7 Sun Dance lodge

Figure 1.3.8: Sun Dance lodge

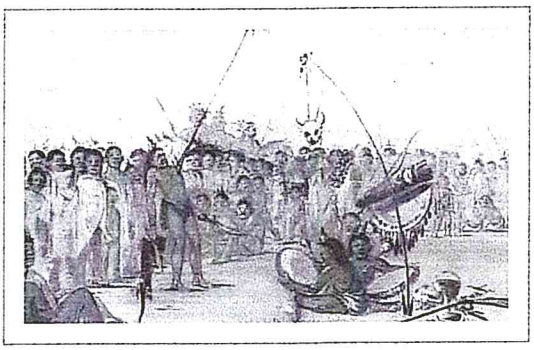


Figure1.3.9: Sun Dance
- Atwood and Lawrence, 2004

would offer part of themselves in return to nature by sacrificing through fasting and self-inflicted pain.

This ceremony was important to the Plains people in that it indicated their belief or religious needs where the tribe would be guaranteed their own existence, solidarity, resistance of enemies and supply of food. The Sun Dance, which would typically take place during the summer solstice in June, is seen as a ritual with a compound of aims, like fulfilling a vow, healing the sick, gaining a particular favour, making good war or hunting-medicine, etc. (Vescey, 1981). This grueling ceremony consisted of participants dancing for three days and nights while not eating or drinking. There have been eyewitness accounts of Sun Dance ceremonies where warriors would skewer themselves through each breast and back. (Fig. 1.3.9) These skewers would be attached to the central pole and the warriors would try and free themselves by ripping the skewers from their bodies.

Like the vision quest, men could raise their status within tribes by this public self-torture and carry with them the scars of integrity and bravery (Driver, 1981). It was because of these types of self-torture rituals that, in the 1880's, the Canadian government (2004) officially discouraged, and in some places banned, the Sun Dance. About twenty years ago the Sun Dance was once again allowed, but without the self inflicted torture.

The Powwow

Another ceremony that is very common today is the Powwow – a cultural event that was also discouraged. Typically a spring event, a Powwow was held to celebrate the seasonal renewal of life; a congregation to sing, dance, renew old friendships and form new ones. This ceremony had religious significance with opportunities to hold naming and honouring ceremonies. In some tribes this celebration was a prayer to the Great Spirit.

During the 1900s, the powwow was again accepted and became more prominent through the 1950s and 1960s. Over the past twenty years there has been a surge of powwows as they have become more popular in larger centres; not just on reserves, and have become an educational event for younger aboriginal generations and visitors alike.

The modern powwow is an evolution of varying dance traditions that have been combined with warrior, social and ceremonial dances. Some powwows are non-competitive, but there are circuits throughout North America that provide competition for dancers and drummers. This consists of campouts and opportunities to enjoy the traditional activities.

Powwows are participated in a circle with dancers in the centre and the drums and audience around the perimeter. The dancers occupy the central space and proceed in a clockwise, or sun-wise direction. Most powwows are held outdoors and the ones that are on reserves are typically held in permanent structures called arbours (Figures 1.3.10 & 1.3.11). The outmost perimeter of an arbour is a

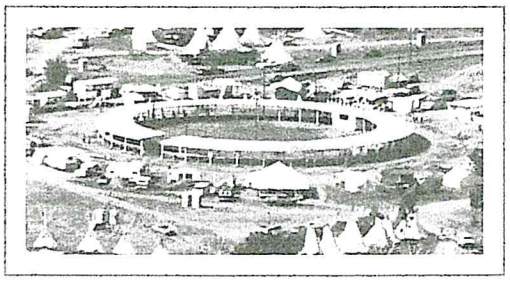


Figure 1.3.10

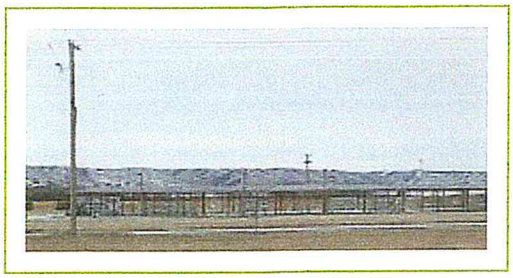


Figure 1.3.11: Powwow arbour at Treaty Four Governance Centre
- *photo by author*

Figure 1.3.12: Powwow at Beardy's Reserve
- *photo by author*

Figure 1.3.12: Men's Traditional dress

covered gallery for the spectators, within the centre of the arbour is an open space with a pole in the centre. A large canvas roof is used to cover the centre (Figure 1.3.12). Each session of a powwow begins with the Grand Entry - a parade of all the dancers. The Eagle Staff is carried into the circle followed by the American and/or Canadian flags, provincial flag and tribal flags.

There are several different dances (in order of Grand Entry and performances):

- Men's Traditional Dance
- Men's Fancy Dance
- Men's Grass Dance
- Women's Traditional Dance
- Women's Fancy Dance
- Jingle Dress Dance

Men's Traditional Dance

The Men's Traditional dancers tell a story with their movements – one of hunting, tracking, fighting, or imitating the courtship dances of prairie birds. This style originated from when war parties or hunters would return to their villages and dance out their stories. The dancers' feet stay close to the ground while their heads and upper bodies actively play out their story. The dancer's head and upper body do most of the movements with their feet staying close to the ground. The Traditional dress are natural in colour or subdued and consist of items that the dancers carried such as shields, weapons or honour staffs (Figure 1.3.12).

The Men's Fancy Dance

The Fancy Dance is a relatively new style of dancing and takes the basic steps and dress from the Traditional dance. The dress is more colourfull than the Traditional dancers and includes a bustle worn at the back of the neck (Figure 1.3.13). The colours and dress help accentuate the athletic movements of the dance.

Figure 1.3.13: Men's Fancy dress

The Men's Grass Dance

The Grass Dance may have originated with the Omaha Tribe in the 1860s where men would tuck grass in their belts and clothing. Today, the dress is brightly coloured with shirt and pants that are heavily tasseled in ribbon, yarn or cloth which emulates swaying prairie grass (Figure 1.3.14). The dance is more active than that of the Traditional dance with men shaking their shoulders, swaying their torsos and changing direction suddenly throughout the dance. Sometimes the dancers will feign being off balance only to quickly and gracefully recover at the last second.

Figure 1.3.14: Men's Grass dress

The Women's Traditional dance

The Women's Traditional Dance is a dance of expression. Originally, women did not participate in dances but rather surrounded the circle and kept their feet moving to the beat of the drums. Those early movements have transcended to today where dancers move with subtlety and grace with their feet close to the ground and their bodies either bobbing or moving forward. Like Men's Traditional, the dress is

Figure 1.3.15: Women's Traditional dress

Figure 1.3.16: Women's Fancy/Shawl dress

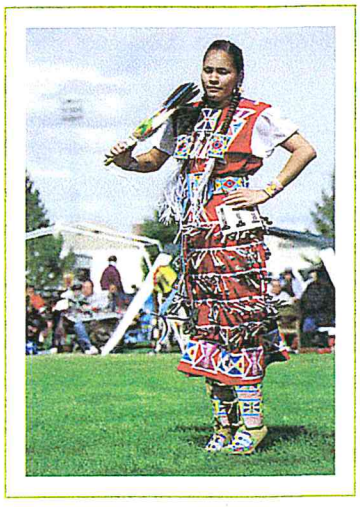


Figure 1.3.17: Women's Jingle dress

subdued and typically consists of women wearing shawls and long buckskin or cloth dresses (Figure 1.3.15).

The Women's Fancy dance

The Women's Fancy Dance or Fancy Shawl Dance is similar in style to the Men's Fancy dance and consists of a lot of spinning. The dress is brightly coloured with the main feature being a fancy shawl. This shawl is typically outstretched, resembling wings (Figure 1.3.16).

Women's Jingle Dress dance

The Women's Jingle Dress Dance may have originated in Minnesota. The traditional story accounts a holy man who had a dream of four women wearing jingle dresses. These four women showed the holy man how to make the dresses, how the dance was performed and what songs to use. Today, this dance is very popular among women dancers on the Northern Plains who make and wear these dresses, which are covered with rows of small triangular metal cones, or jingles (Figure 1.3.17). The dancers move in any graceful fashion that will allow the jingles to chime with the beat of the drums.

There are other performances and events related to a powwow:

- Intertribal Dance or Social Dance – everyone, including tourists are welcome to dance.
- A Dropped Eagle Feather – the eagle feather is considered sacred. When one falls from a

dancer's outfit, the powwow is stopped, spectators are to rise out of their seats and uncover their heads. A ceremony is then performed to restore the feather.

- Honour Songs – songs performed for an occasion. For example, a deceased relative.
- Honouring Veterans – Veterans are well honoured. They are the flag-bearers and retrieve dropped eagle feathers. Veterans are honoured because they gave their lives so people could live.
- The Gift-Away – Unlike societies where people expect gifts for accomplishments, the Plains cultures believe a person being honoured should provide gifts. Traditionally it is said that a chief was the poorest of the tribe because he gave away things such as horses, food and blankets if his people needed them. Give-aways by people being honoured or in honour of someone else are common at powwows.

The drums are considered more than a musical instrument to those who play them. It is said the drums have a life of their own and regarded as having its own spirit with some drum groups having ceremonies to bless and name their drums. In some traditions the drum symbolizes a heartbeat, in others it symbolizes thunder. The term drum is used for the group sitting around the drum playing and singing (Figure 1.3.18) with several groups competing at powwows. Each group has one or more lead singers who start the songs. Songs vary for the different

Figure 1.3.18: Powwow drums

events, such as grand entries, the different dance categories, and honouring ceremonies. Songs are not written but recorded and learned by the performers and dancers. Some songs are traditional and passed down while others may be more contemporary and written about existing issues. Some songs are sung in the traditional languages allowing the languages to be passed down to the younger generations while others are sung in vocables (rhythmically sung syllables) such as 'hey', 'yah' or 'lay'. This form of singing allows drummers and dancers from all tribes to be able to learn or remember the song.

The Sweat Lodge

A common ritual throughout early North American cultures is the sweat. There are two types of sweats, or ways sweats are induced; direct fire and hot rock or water vapour method (sauna). The first European settlers noted that the sweat or sweat bath served a couple of purposes; the Aboriginal people used it for cleansing their skin, and cleansing or purging their bodies of sickness. Another prominent use of the sweat is for spiritual rituals where individuals would construct a small water vapour style sweat lodge to help them with spiritual vision journeys, which would typically consist of fasting prior to the sweat.

Direct fire sweating is done within a large lodge that can accommodate up to a dozen people. The majority of these lodges were permanent semi-subterranean earth-covered lodges with tunneled entrances, structures constructed out of

logs and bark, and covered with sod or mud complete with a tunneled entrance. These were collectively owned by the men in a village and commonly utilized for daily group affairs or clubhouse. An open fire within the centre of the lodge created direct fire sweating. The fire would be built up throughout the day and eventually fuelled to the point where heat within the space would cause the occupants to sweat. The smoke would become unbearable for the occupants of this style of lodge. To avoid this, the occupants would lie on the ground and breathe the fresher air.

Hot rock or water vapour sweating was the most common among the early North American cultures, including the nomadic Plains culture. The lodge for vapour sweating was temporary, permanent or portable and the overall structure was small and domed shaped. The stationary lodges were constructed out of logs and bark, and then sealed with mud or sod. Temporary lodges (Figrue 1.3.19) were constructed out of bent willows, which were then covered with hides or blankets. Within the centre of the small lodge there was a small depression in the ground; this would be the eventual location for the source of the heat. Outside of the lodge was a fire, which would be built-up over sometime in order to get enough heat for the stones that would be placed within the fire. The entrance to the lodge would be placed so that it is facing east. Outside the entrance is where the external fire is located (Figure 1.3.20). The heated stones were taken from the fire and placed within the central pit.

Figure 1.3.19: Sweat Lodge
- Nabokov and Easton, 1989

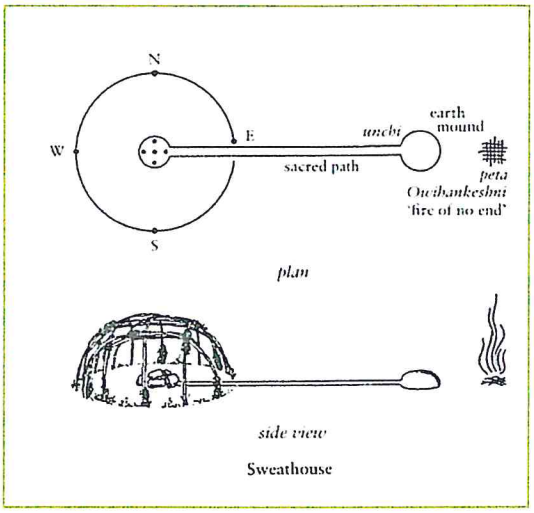


Figure 1.3.20: Sweat Lodge
- Nabokov and Easton, 1989

Water was then splashed onto the stones to create vapour and increase the heat within the space.

The common use for the vapour sweat was for rituals, a practice that is continued today. While some sweat lodges were permanent, they were typically only used for a particular occasion. In the past, a man would construct a sweat lodge as part of a ritual with the purpose of seeking a vision that would help with a situation he was dealing with (for example a chief may be seeking a vision or help as to whether or not to attack another tribe). Today you can find sweat lodges that are permanent hot rock or vapour sweat lodges used for group sweats. These are used for rituals that typically consist of several 'rounds' lasting anywhere from 10-15 minutes with heated rocks being placed in the pit between rounds. As more rocks are added, the temperature within the lodge intensifies. People enter the lodge and proceed around the pit in a clockwise direction. Once everyone is in the lodge, the person looking after the fire and heated rocks closes a flap, sealing the interior from any daylight – the only light comes from the glowing rocks in the pit. The person performing the ceremony uses a braided wand of grass that is dipped in a pot of water then splashed over the rocks. As the rocks are splashed the heat intensifies – similar to a sauna.

As part of the cultural research and understanding, a person needs to attend a sweat - an amazing experience that is difficult to describe. It is a spiritual journey into the aboriginal culture. The best analogy of the sweat is its comparison with the

European gothic cathedrals where coloured light through stained glass and rose windows help create a large open and spiritual space and where Christians pray for guidance. A sweat lodge is the complete opposite - a small, confining, black space, where you have no choice but to look inwards. Contributing to this spiritual experience may be the fact that a participant is not constrained by clothing and is offered more freedom by wearing only a pair of shorts. Just as Christians attend a church to pray for guidance, many Indian cultures find that using a sweat lodge heightens their spiritual and religious awareness.

If a person asks around you may be able to get the opportunity to participate in a sweat. Wanuskewin Heritage Park performs sweats, but it may be more beneficial if you were able to attend a private sweat at a First Nation such as Beardy's since local Aboriginal people rather than non-Aboriginal people would likely attend and therefore more cultural experience would be attained. At Beardy's First Nation, there is a private sweat lodge set in a wooded clearing consisting of two shelters. From the outside it appears as a wooden shed, but within is a sweat lodge. The shed is equipped with a stove and is used for shelter during the winter months. The entrance to both the shed and the lodge faces east and the fire that is used to heat the stones for the sweat is to the east outside the entrances - similar to Figure 1.3.20. Pictures of the structure are not allowed, the reason is unknown, but it is not uncommon for Aboriginal people to refrain from

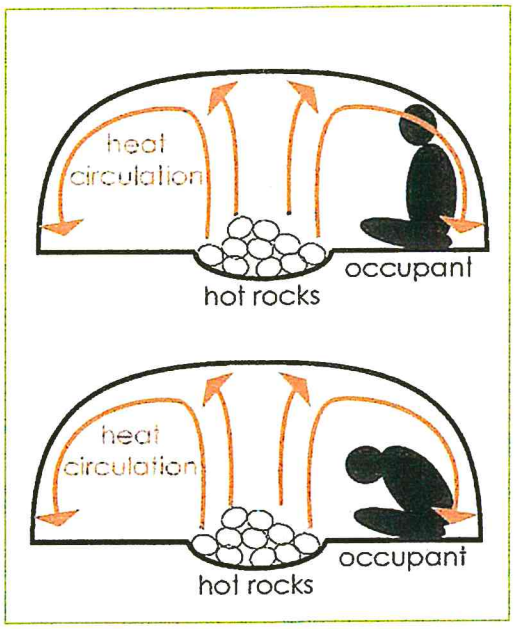


Figure 1.3.21: Lean forward to minimize exposure to the heat.
- by author

pictures, as it is believed by some that a picture captures and steals a person's soul.

A contemporary sweat consists of seven rounds. The first couple of rounds were very relaxing, but by the end of the third round the heat started to become almost intolerable and painful. A person may wish to pray and chant in the Cree language so to not only fully understand the ceremony but also to help ignore the amount of heat the body is being exposed to. However, the heat becomes so hot to the point where one cannot even pray. Some people will wish they could pray out loud but at the same time, will likely not be comfortable doing that. The alternative to getting the mind off of the pain is to grunt. Contrary to instinct, you need to lean towards the central pit; the source of the heat, with your head down rather than away. The heat within the space immediately rises to the roof then circulates along the roof to behind the back (Figure 1.3.21) and participants find that their back gets extremely hot. You may take a towel into the sweat with you to keep on your back. The temperatures in the sweat lodge reach such a high temperature that you are asked to remove any metal jewelry (ie: necklace, earings, nose ring, etc.) because they will sear your skin.

By the time a sweat gets to round four, participants may find themselves wanting to leave the lodge during the ceremony. Being a first timer or novice, the person performing the ceremony will likely let one leave at anytime, if they wish, without offending anybody. At some point in the ceremony, likely after the third or fourth round, novice individuals

will require a towel to wrap around themselves during the remainder of the sweat. This provides some insulation from the searing heat. The towel will become so drenched with sweat that it will be able to be wrung out. At some point between rounds, when one walks out of the lodge they will feel like collapsing. Feeling exhausted and drained, their head will be spinning and body soaked with sweat - it is amazing. Some of these feelings will still exist the next day – exhaustion and very soft skin.

A person gains more respect for nature by attending a sweat simply because you are within a simple structure built from willows with heat provided by stones and water. The combination of these elements that create the heat within is a humbling experience.

Sweats can vary between the people who perform them. The structures are typically the same but what may vary is the ceremony. When attending the Beardy's sweat, a person is told to bring a yard of cloth (either blue, red, white or green) and a pack of tobacco. Before the ceremony, participants meet with the person performing the ceremony and the elder and are asked why they are there and what they wish to gain from the sweat. The cloth is then handed over to the person performing the ceremony and the tobacco is offered to the elder as a gift and sign of respect. The cloth is then taken and along with all the others - everyone in attendance brings a yard of cloth, is hung from the willow structure inside the lodge. The cloths represent the participants and why they are there. After the sweat ceremony each

piece of cloth is taken and tied in the trees amongst the other pieces from past ceremonies. It is an honour and humbling experience having the cloth, or spiritual representation, placed alongside others.

Smudging

Another common ceremony for purification and spiritual preparation is smudging – or sacred smoke bowl blessing. Smudging is the burning of herbs; most common being, sage, cedar and sweetgrass, and using the natural spirit of the herbs to create a cleansing smoke bath. This smoke bath is used to purify people, ceremonial or ritual space, and ceremonial tools and objects – the smoke banishes negative energies. Done by an individual or a group of people, smudging has many different rituals or methods and sometimes the herbs are mixed or used alone. Smudging is always performed in a clockwise direction and typically starts in the east and finishes in the north. For group smudges, the performer of the ceremony may walk slowly around with the bowl continually fanning the smudge bowl with a feather and stopping at each individual. Individuals then bathe themselves with the smoke by spreading the smoke over their heart, then their head, their arms and finally over their legs. This is not the only way to bathe - there is not a right and wrong. An individual is to look inward and see where they need to smudge to cleanse and purify themselves.

1.4 MEDICINE WHEELS, The CIRCLE, the Number Four and Colour

The Medicine Wheel

The earliest evidence of architecture on the Plains is in the form of stone circles dotting the prairies. Some of these circles are clearly tipi rings; excavated central hearths are indicators to archeologists. However, some of these circles are clearly not tipi rings because evidence shows that these have been created along with stone cairns (pile of stone rocks), stone lines radiating out and constructed in places that are unsuitable for tipi encampments. These stone forms have been given the name "Medicine Wheels". The name is derived from one of the first sites found in Wyoming where the stone form contained a circular hub and rim complete with lines of stone radiating between the two circular forms (Figure 1.4.1). As is with all medicine wheels, the origins of this wheel shaped formation is unknown, and because anything mysterious or magical is considered good or bad medicine in the Plains culture the term Medicine Wheel had been given to all of these formations regardless of shape or size (Bryan, 1991).

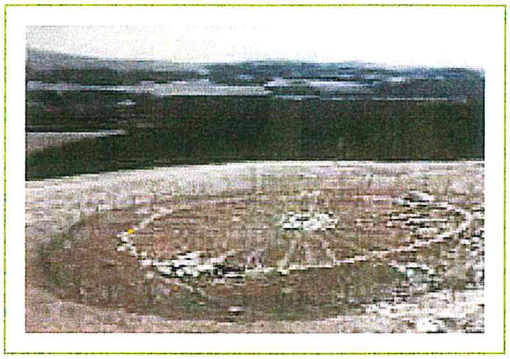


Figure 1.4.1 : Reconstructed Medicine Wheel at Bighorn, Wyoming http://www.virtualsk.com/current_issue/endangered_stones.html

Most Medicine Wheels are found in Alberta and Saskatchewan. Bryan (1991) describes them as not looking anything like a wheel but rather collectively as a puzzling lumping together of different forms. She refers to them as double and single rings, some with radiating arms –anywhere from three to twenty-eight; some without hubs, others without a rim,

and in some instances neither hub nor rim. The confusing lumping together she is referring to is the fact that all these structures are considered Medicine Wheels, however, a lot of them in fact, do not look like a wheel whatsoever, some are not even symmetrical.

To help clarify the 'confusing lumping together' stated by Bryan, Brumley (1988) states that "The term "medicine wheel" has been used since the late nineteenth century to describe a wide variety of aboriginal surface stone structures found on the northern Plains" (Pg. 1). Upon his review of medicine wheels Brumley (1988) has defined three characteristics that could be used to formulate a definition:

1) "Medicine wheels are largely constructed of unmodified natural stone, possibly with some earth intentionally incorporated into the construction of prominent central cairns.
2) All medicine wheels consist of a combination of at least two of the following three primary components:
    a. a prominent, centrally located stone cairn of varying size;
    b. one or more concentric stone rings of generally circular shape; and/or
    c. two or more stone lines radiating outward from a central origin point, central cairn or the margins of a stone ring.

3) Medicine wheels are made up of a generalized and radially symmetrical arrangement of the above primary components" (Pg. 2).

Brumley also indicates that medicine wheels typically have additional stone features that he refers to as ancillary features – such as cairns, radiating lines of stones and in some instances, additional stone rings (tipi rings in some cases) (Figures 1.4.2 and 1.4.3). Using these three characteristics, Brumley categorized medicine wheels into eight subgroups. The following charts have been created based on Brumley's information outlining these subgroups, showing the different configurations and describing each subgroup's characteristics.

Figure 1.4.2: Medicine Wheel with adjacent tipi stone rings; British Black Cairn near Medicine Hat Alberta.
- Archaeological Survey of Canada

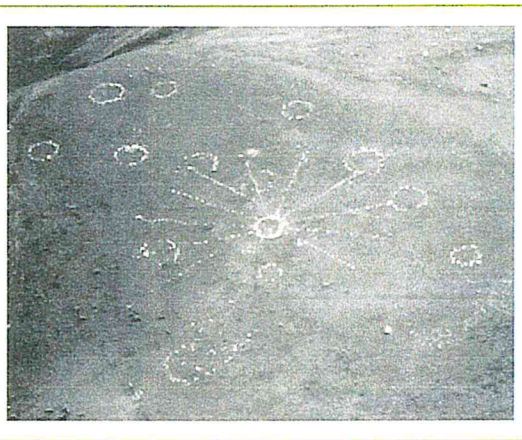
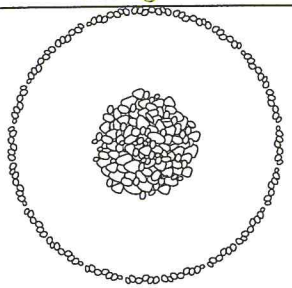
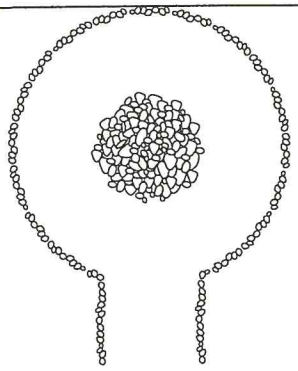
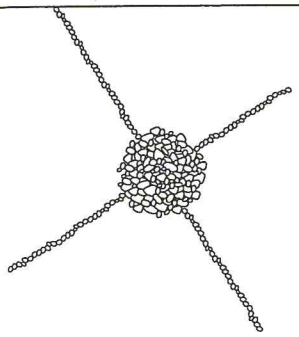
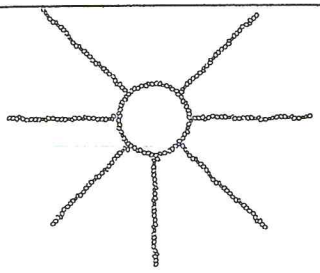
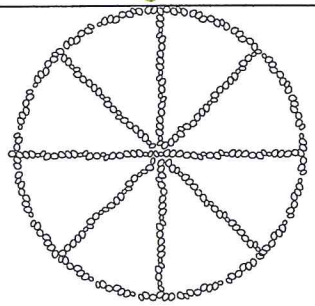
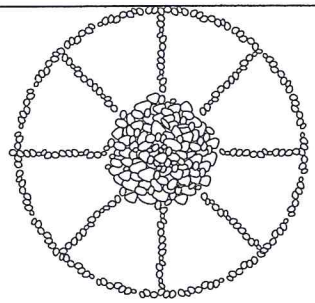
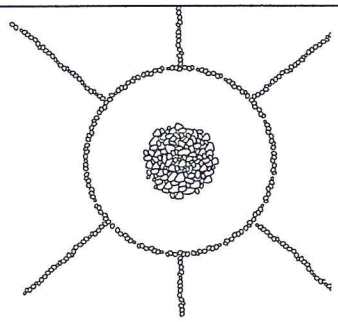
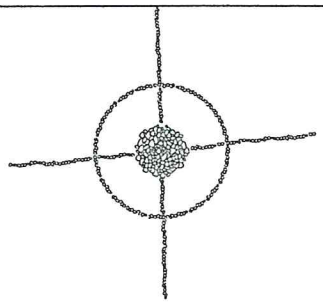


Figure 1.4.3: Ellis medicine wheel with tipi rings near Medicine Hat, Alberta
- John Brumley

	Configuration	Features	
Subgroup 1		- Prominent stone cairn surrounded by ring - Cairns 0.5-2.5 m dia. (mean 1.4m)	- 33% of all Medicine Wheels - Most frequent on summit of high hills or ridges away from major river, stream or coulee valleys - Found on prairie surfaces which border major river valley margins
Subgroup 2		- Central stone cairn surrounded by stone ring - Two parallel lines extend outward to form path - Stone ring 9-27 m dia. - Cairns 4-8 m dia. (mean 5.75), height 1-1.25 m	- 9% of all Medicine Wheels - Open prairie surfaces along the margins of major river valleys - On open prairie surfaces away from various types of escarpments - On open prairie surfaces at the crest of a hill, away from escarpment edges - Opening varies, typically southeast facing
Subgroup 3		- Prominent central cairn with two or more stone lines extended in various directions - Cairns 3-8 m dia. (4,75 mean), height 1.8-2 m - Spokes 5-103 m in length - Sometimes cairns are incorporated into spokes (ends or midpoints) - Ancillary tipi ring size stone circles have been noted at some sites.	- 18% of all Medicine Wheels - On open prairie adjacent to major stream valleys (and river) - On open prairie surfaces along the edge of a major escarpment feature - Open prairie atop high hills or ridges or intermediate
Subgroup 4		- Stone ring with two or more stone lines extending out from its margins - Stone ring 1-9 m dia. (mean 5.6) - Average number of spokes 7.4 (one has 3, another 18) - Spoke length 1-120 m, sometimes linear series of small cairns - At 4 sites 2-3 spokes branched - The ends from 1-14 spokes at 11 features were marked by small stone cairns - Seven structures contained hearth rings - Tipi ring size stone circles were observed at 7 sites - Small to intermediate stone cairns were found at 11 sites	- 17 of the 67 Medicine Wheels - On open prairie surfaces along major river valley - On open prairie surfaces atop the crest of a ridge or hill - In the central portion of a major river valley bottom - And intermediate

	Configuration	Features	
Subgroup 5		- Stone ring dissected into segments by four or more stone lines radiating out from a central origin point - No central cairn is present - Ring diameter 10-24 m - Spokes 4 or 6	- 3% of all Medicine Wheels (2 of 67) - Terraced area in river valley or prominent rise in open prairie
Subgroup 6		- Central stone cairn surrounded by a stone ring - Two or more stone lines connect the stone ring to cairn - Rings 6, 25 and 27 m dia. - Cairns 2.5, 4 and 9 m dia. (height 1.6 m) - Some cairns around or near peripheral circle considered ancillary - Some cairns within circle	- 4% of all Medicine Wheels (3 of 67) - Atop a high hill on the prairie surface overlooking river valley - "on the slightly slopping..." - Open rolling prairie country
Subgroup 7		- Central stone cairn surrounded by a stone ring - Two or more stone lines extend outward from the margins of the stone ring - Ring 12 m dia. with 6 spokes (3 spokes 18-135 m, 2 spokes branch, cairn 2.5m dia. 20cm high - Ring 15 m dia. with 22 spokes (spokes 0.5-26.7 m long, 13 of these spokes are 1m or less in length, cairn 6 m dia. with intermediate height) - Small cairn mark terminus of 3 large spokes, 2 gaps in the circle wall (doorway openings) one door between two or the large spokes – similar to Subgroup 2 - 20 stone circles outside the wheel with four small to medium stone cairns	- 3% of all Medicine Wheels (2 of 67) - On prairie surface along lake or river valley
Subgroup 8		- Central stone cairn surrounded by a stone ring - Two or more stone lines extend outward from cairn and pass through ring wall before terminating - Cairn 1 m dia. (intermediate height), stone circle 10 m dia., doorway gap in southeast, 7 stone lines 15-75 m long, southwest stone line terminates at a small cairn - Cairn 30' dia., 5 stone lines ea. ending at a mound of stones about 3' dia., elliptical circle of stones 62' x 50' surrounds central cairn	- 3% of all Medicine Wheels (2 of 67) - Atop the summit of a prominent hill or terrace surface in river valley

There are many theories behind these structures and the current issue of protecting them. Yanko (2004) looked at a medicine wheel located at Moose Mountain Saskatchewan. The site, first noted in 1895 by land surveyors, has been sacred for Northern Plains Indians for more than 2,000 years, but its origin and purpose remain a mystery. The surveyors noted that the central cairn at the time was 14 feet high. Yanko (2004) mentions how Ian Brace, an archaeologist with the Royal Saskatchewan Museum, has indicated that the cairn is now only a foot-and-a-half high. Brace explains that the main reason for this change is from visitors coming to the site and taking rocks from the central cairn. This is a concern with First Nations and archaeologists with regards to all medicine wheels. Brace also suggests an interesting theory in that there could possibly be an older bolder alignment beneath the existing one. The Moose Mountain wheel has been carbon dated to 800 BC, while some wheels date back about 4,000 years.

Much like the circle symbolization that will be discussed later in this Section, Yanko (2004) mentions that even though medicine wheels are sacred to all Plains Indian groups, their symbolism and meaning vary from tribe to tribe. Yanko interviewed a Cree elder from Saskatoon, Simon Kytwayhat. Kytwayhat talks about his perspective of the medicine wheel, which he had learned from elders. Kytwayhat is quoted as saying "In time, I came to see the real meaning of the medicine wheel is the brotherhood of man. How you treat others comes back to you around the circle."

When talking about some of the meanings and theories behind the wheels, Yanko writes, "If First Nations' peoples have divergent views on the meaning of the medicine wheel, members of the non-Native community, including scientists, are often poles apart." The article lists the following non-Native groups and their beliefs of the wheels:

The Mormon Church:
Medicine Wheels were built by Aztecs

Swiss author Erich von Daniken:
Medicine Wheels are linked to pre-historic astronauts

New-Agers:
Embrace Medicine Wheels as spiritual symbols and construct their own near existing sites

Colorado astronomer John Eddy:
Proposed Medicine /wheels were calendars who's cairns and spokes aligned with celestial markers to forecast events like the return of the bison

In Yanko's article, Ernie Walker, head of the Department of Anthropology and Archaeology at the University of Saskatchewan is quoted as saying, "We don't know whether or not some have astronomical alignments or not – if some do, they're very much in the minority. A lot of (archaeologists) doubt it." Brace supports this quote by indicating that celestial alignments would be difficult at the Moose Mountain site because with a 17 foot crest separating one side

from the other a person cannot stand on one side of the wheel and see the other, suggesting this would be a requirement for any celestial alignment.

Walker states that "most archaeologists of the Northern Plains recognize eight different classes or styles of medicine wheels" – as per Brumley's eight subclasses shown in the previous charts. Walker also indicates that archaeologists and Blackfoot elders agree that these wheels "were monuments to particular people, or events that happened in the past."

The article mentions that Brace has come up with a medicine wheel definition that categorizes the wheels into four groups: burial; surrogate burial; fertility symbol; and "medicine hunting". Burial and surrogate burial are gravesites and memorials. The boulders that make up the longest line points are in the direction of the honoree's birth and the shorter ones to places of courageous acts or deeds. Fertility wheels are similar to those symbols found in other pre-historic North American cultures. These wheels would contain buried offerings, likely under the central cairn. Brace suggests that the Moose Mountain wheel is a medicine-hunting wheel and after it was created, was continually amended and served as a permanent guide for the succeeding generations of the nomadic Plains people. It may be suggested that the Moose Mountain wheel was essentially a device that pointed tribes in the direction of food or to people who had food to share. This would support his theory on other stone alignments buried beneath the existing one.

The medicine wheel theories strengthen the belief and symbolization of the circle and how it was a part of Plains Indian culture for the past 4,000 years.

The Circle, the Number Four and Colour

The circles philosophy is probably the most significant cultural teaching with Aboriginal people. It was, and still is, part of every element of their lives from their architecture to their teachings and spirituality.

The circle represents no beginning and no end. Plains people believed and understood that nature in itself is a circle or cycle - from the seasons, to night and day, to their livelihood. The Plains philosophy on livelihood was that they came from the land, they took from the land (bison), and they became the land (fed the bison). Figure 1.4.4 shows this cycle at Wanuskewin Heritage Park and is symbolized by bison rising out of the earth and is captured in a pound or killed with a bison jump. The bison was hunted for livelihood (food, shelter, clothing), but everything including the people, eventually go back to the earth. It is evident of the circles significance by its use throughout the centuries from the Plains tipi, ceremonies (Sun Dance, Powwow, Sweat lodge), and medicine wheels their lives were structured around a context of circles or cycles such as the seasons. Also with features such as the circular forms of the moon and the sun, it is no wonder this form has had a significant presence in the lives of the Plains Indians.

Figure 1.4.4: Bison sculptures outside main entrance of Wanuskewin
- photo by author

Figure 1.4.5: Wanuskewin roof designed to show four elements
- *photo by author*

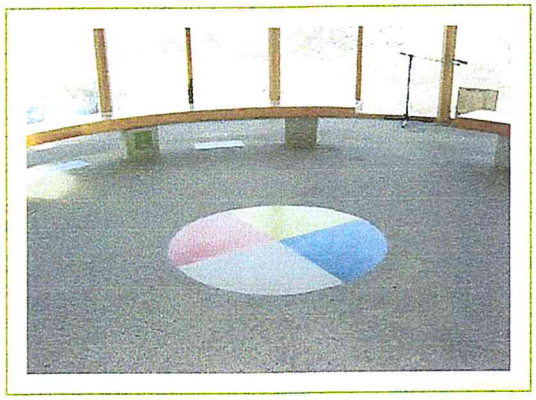


Figure 1.4.6: Circle and colour representation in circular seating area at Wanuskewin
- *photo by author*

Figure 1.4.7: North façade of FNU; bands of colour starting from top (yellow, blue, red, green); ceremonial tipi at bottom with white.
- *photo by author*

Another significant symbol that is commonly used with the circle, either physically or symbolically, is things in fours. At Wanuskewin (Figure 1.4.5) for example the philosophies such as the four directions (north, south, east and west), four peoples, four seasons and four times of life is a theme that is symbolic in the facility's design (Yanko, 2004). It's not specific as to what is meant in Yanko's article when he mentions four times of life but it could be interpreted as; infant, teenager, adult and elder.

The number four is commonly expressed in the form of a circle divided into four quarters with each quarter represented by a different colour. Research shows that colours may not always be the same and depends on the particular culture or group of elders. In Yanko's interview with Cree Elder Simon Kytwayhat, Kytwayhat associates the four directions with the four peoples or races. The four colours that Simon Kytwayhat associates with directions are: Red - East, Indian person, the eagle and spirituality; Yellow - South, Asians, the Sun and intellect; Black - West, black race, the Thunderbird and emotion; White - North, white man, winter and physicality.

Elder Walter Linklater at the University of Saskatchewan has another set of values for colours and their cardinal points: Yellow – East; Red – South; Dark – West; White – North. Walter refers to 'dark' rather than black as per Simon Kytwayhat and may be considered blue or black.

At Wanuskewin (Figure 1.4.6), the colours used and their associations with the cardinal points are: Yellow - East; Blue - South; White - West; Red - North.

It should be noted that during the planning of Wanuskewin, a group of twelve elders acted as advisors (Yanko, 2004). So it would be assumed that there were likely some differences of opinion and a consensus made on certain cultural issues – colour and cardinal directions being one of them.

At the First Nations University of Canada (FNU) located in Regina (Figure 1.4.7), the colours represented there are white, blue, yellow, red and green - five colours. However, only four colours are used in the ceremonial tipi (Figure 1.4.8) and their logo (Figure 1.4.9). The five feathers shown in the logo represent the five First Nation Tribal Groups; Cree, Saulteaux, Dene, Dakota and the Assiniboine. One could assume that the use of five colours in the building's design was to represent all colours that are used by all First Nations bands in the Province and likely represents the five First Nation Tribal Groups.

These same five colours are also used in the Saskatchewan Indian Cultural Centre (SICC) logo (Figure 1.4.10). The colours and their meanings for the SICC logo are: Yellow – East and Sun; Blue – South and Thunderbird; White – West and Wind; Red – North and Buffalo; Green – Mother Earth.

Aside from the green colour, these colours and cardinal points are the same as the combination used at Wanuskewin.

The difference in the use of colour is shown in Figure 1.4.11. These are examples of First Nation logos and their different uses of colour - the circle, the number 4 and colour all being represented. Notice the difference in the colours between the different

Figure 1.4.8: FNU Ceremonial tipi; yellow – east, red-south; blue-west; white-north
- photo by author

Figure 1.4.9: First Nations University logo

Figure 1.4.10: SICC logo – five colours used

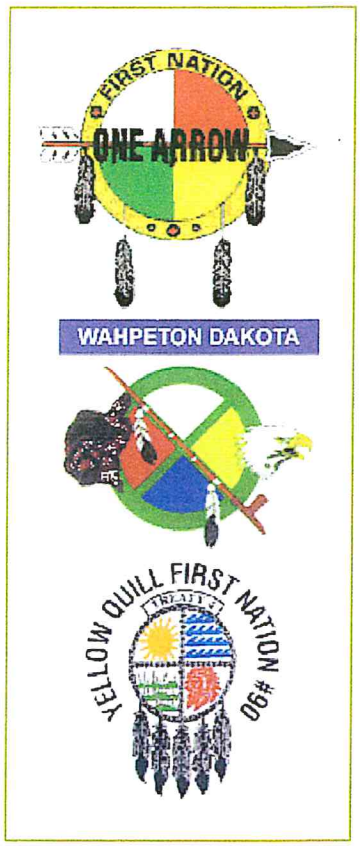


Figure 1.4.11: First Nation logo - logos taken from web sites and assembled by author

bands. Red is always represented because it is seen as the most powerful of symbols.

Figure 1.4.12 is a table of compiled information showing the comparisons of the different usage of colour and their relative cardinal points and it is obvious that there are differences with the cardinal points and their relationships to colour among First Nations. Colour combinations may not always be the same and typically depend on the particular culture or group of elders. The main thing is that even though there are some differences; and a person needs to be aware that there are, the general meaning and symbolization behind the circles are typically one in the same.

Cardinal Directions	**Simon Kytwayhat** (Elder)	**Walter Linklater** (Elder)	**Wanuskewin**	**First Nations University** (FNU)	**Saskatchewan Indian Cutlural Centre** (SICC)
East	Red	Yellow	Yellow	Yellow	Yellow
South	Yellow	Red	Blue	Red	Blue
West	Black	Dark	White	Blue	White
North	White	White	Red	White	Red

Figure 1.4.12: Table showing colour and cardinal point comparisons; FNU and SICC use 5 colours – fifth colour is green.

1.5 TRADITIONAL ABORIGINAL ARCHITECTURE

Throughout North America, early cultures lived in several different styles of dwellings; each style was developed based on the unique climates, available materials and social and economic situations. Nine zones identified group together cultural areas that have commonalities based on several different factors such as climate zone, ecology, raw materials and major building types (Figures 1.5.1 & 1.5.2). The nine zones or cultural areas are:

- Northeast/Great Lakes
- Southeast
- Great Plains
- Plateau
- Subarctic
- Northwest Coast
- California
- Great Basin
- Southwest

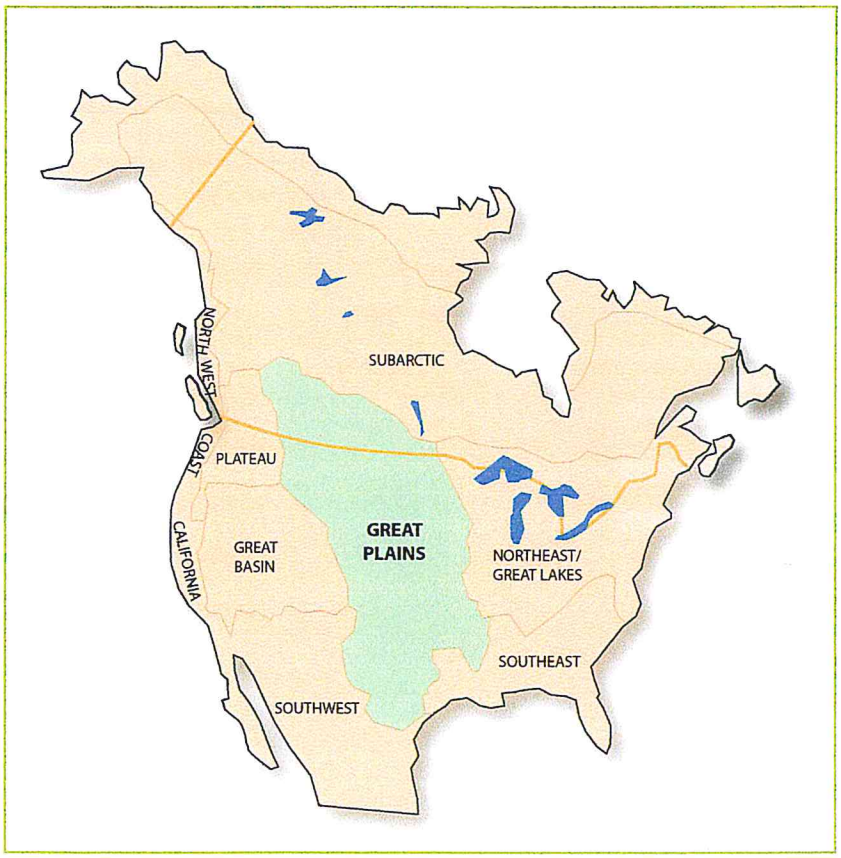


Figure 1.5.1: Cultural areas taken from Wanuskewin, 2004and Nabokov and Easton, 1989 recreated by author

Cultural Area	Climate Zone	Ecology	Raw Materials	Major Building Types
Northeast/Great Lakes	Temperate	Woodlands	Saplings, birch and elm bark, sinew, reed	Wigwam, longhouse, Subarctic tipi
Southeast	Subtropical	Woodlands, tropical	Saplings, wattle-and-daub, palmetto thatch	Town house, chickee
Plains	Temperate, Continental steppe	Prairie	Timber, saplings, sod, grass, hide, canvas	Earthlodge, grass house, tipi
Plateau	Continental steppe, Highlands	Forest, prairie	Timber, saplings, sod, reed, canvas	Pit house, tipi, elongated tipi
Subarctic	Subarctic	Mountains, tundra, forests, waterways	Timber, saplings, bark, snow, hide, canvas	Wigwam, tipi
Northwest Coast	Temperate	Forest, islands, waterways	Cedar, timber, split planks and bark	Plank house
California	Temperate, subtropical	Forest, mountains, valley, desert	Redwood timber and split planks, earth, timber, saplings, brush, reed	Plank house, earthlodge, wikiup, bark tipi
Great Basin	Continental steppe, desert	Forest, mountains, valley, desert	Saplings, brush	Wikiup, tipi
Southwest	Hot arid	Desert, valley, rivers	Adobe, timber brush, stone	Hogan, wikiup, ki, ramada, pueblo, kiva

Figure 1.5.2: Nabokov and Easton, 1989

In their analysis of Native American architecture, Nabokov and Easton (1989) base their writing on two basic methodologies; the environment and the culture. They believe that in order to understand the different factors that created these dwellings a person must look at the climatic response that was made through the use of the available materials and technology. But to understand dwellings in their entirety, a person must also include cultural factors such as social organization, patterns of food gathering, religious and spiritual life, and history. Nabokov and Easton quote Amos Rapoport as he suggests that materials, technology and

construction should not be considered 'form determinates' but rather 'modifying factors'. It is suggested then that the two basic methodologies, the environment and culture, could be considered as modifying factors and form determinants. Thus it is the culture or form determinates that decide what and how it is to be built while everything else is a modifier.

Nabokov and Easton (1989) lump the all the factors and determinants together into what they believe are the six most important factors:

- Technology
- Climate
- Economics
- Social organization
- Religion
- History

Technology

During construction, Aboriginal people used the natural materials made available to them; wood, bark, leaves, grass, reeds, earth, snow, stone, skin, and bones. These materials were used in conjunction with three types of construction; tensile or bent frame with covering, compression shell, and post and beam wood frame with various wall materials. For the most part, materials were tied, wrapped, and knotted together. Even though their structures were very important, they were not considered permanent craftsmanship, but rather improvisational and practical – and construction techniques followed time honoured rules with little attempt to preserve

materials. Materials and techniques contributed to the overall appearance and materials were pushed to their limits while not restricting ideas (Nabokov and Easton, 1989).

Climate

Warming and cooling techniques were sometimes incorporated as hidden engineering into a dwelling. For example, in cold climates, dwellings were more compact and smaller (easier to heat) than dwellings in temperate climates. Subterranean dwellings were easier to heat, while dwellings in chilly climates that were typically built on grade were large and drafty. To help control drafts within the larger structures, hanging mats were used. Other techniques used to help control draftiness were split-planks, adobe or snow-block windbreaks that would be built against doorways.

To deal with the cold climate, subarctic tribes would continuously layer their floors with fresh and fragrant pine boughs. In severe conditions or the worst of the winter season, tribes would simply migrate to sheltered and warmer environments. Dwellers would wear heavier clothes indoors and had built up natural tolerances to variations in temperature. Another way to deal with the climate was to build a variety of structures and spaces that allowed occupancy during different times of the day. For example, in the warmer climates a dweller would simply avoid the southern location within a dwelling. A central hearth typically heated dwellings and large structures would consist of many. Insulation methods

were created to help maintain heat within and keep the cold out. These methods consisted of double shelled insulated walls. Plains tipis used an inner liner creating an insulated air pocket, enabling the pocket to be stuffed with grasses. To further assist in the insulating process, snow would be piled up around the outside perimeter. Earth lodges and adobe walled structures were thermal masses, which enabled heat absorption during the day and released the heat at night. These mass walls would also act as an effective wind barrier. When relief from the heat was required, arbours were typically used in nearly all encampments. Arbours (ramadas in the Southwest) consisted of post and beam structures and were covered with available materials such as leafy boughs, split cactus trunks, cornstalks and willow boughs. To assist in the shading and cooling, water would be splashed on the cover resulting in evaporation and drop in temperature. Another method to further assist in diminishing the heat was incorporating raised sleeping and working platforms. This technique allowed air to flow beneath the dwellers, which was a great benefit to tribes located in hot and moist areas. This also had another benefit in that it kept the occupants off the ground and away from potential vermin (Nabokov and Easton, 1989).

Social

Social organization had a significant impact on the size of their dwellings. Rules typically governed who lived with whom, where a person moved after

marrying, dwelling size and dwellings spatial relationships in most cultures. The way a dwelling's space was organized and used typically reflected the society as a whole. Within a dwelling there would be rules on placements and use of space (based on sex, age, marital status, etc.). Internal use of space and placement was an essential social rule for transient cultures, such as the Plains Indians, because they would always maintain their roles and relationships (like a routine) through internal dwelling organization. Societal rules may determine who erected the dwelling, who owned the dwelling and where a dwelling was positioned. Plains Siouan and Pueblo would divide their society into halves, which would then be reflected in the placement and occupancy of dwellings. Men's and women's roles in dwelling construction would vary depending on the culture. In Central North America – women were responsible for building or supervising construction; West Coast and eastern seaboard – men were responsible; Southwest and Great Basin – men and women shared responsibility; Mandan Hidatsa earthlodges along the Missouri river – men would cut and erect only the frame while the women were responsible for the entire dwelling (Nabokov and Easton, 1989).

Economics

None of the cultures had dwellings that suited all seasons. In the least, a culture was semi-nomadic and would have a winter and summer dwelling. Most relied on different food sources for the summer and winter; changing their location in the spring or fall, but

one of the locations would always be considered 'home'. On the Northwest Coast; where it was considered 'home' during the winter months in their coastal dwellings, dwellers would remove some of the wall planks form their shelters and take them inland by canoe to their spring location and use them for siding on their makeshift shelters. They would then bring them back 'home' in the fall. More sedentary settlements would find themselves eventually moving (such as the woodland cultures in the east) after a village would exhaust building and garden materials. Other factors such as infestation, overcrowding and garbage buildup would result in relocating. Typically, highly mobile cultures would stay at 'home' when the weather permitted them to, such as in the winter. This time was used for storytelling and family gatherings. However, once weather permitted, they would become mobile once again (Nabokov and Easton, 1989).

Religion

Along with social order, Native Americans would view their beliefs through their architecture. Some cultures metaphorically linked their dwellings to that of the creation of the world – and considered themselves able to renew their world through remodeling or rebuilding. For example, The Navajo believed the mountains to be their model of the first house, with four posts lined up with the cardinal direction and floor space divided into day and night domains. The Hidatsa of North Dakota believed the cosmos to be a giant earthlodge with its 'sky' dome

held up by four pillars, like their lodges. Sometimes myths are used to describe the construction of a dwelling. These myths are then used to help teach in the building process that included the type of materials to use (Nabokov and Easton, 1989).

History

Nobokov and Easton (1989) suggest that Indian Architecture was evolving prior to European arrival in North America. Nobokov and Easton do not get specific, but base their statement on archaeological finds and dating. Non-archaeological interest suggests that it was the semi-subterranean pit houses that were the most common and had the most influence around North America. Subterranean dwellings have been located in Siberia; where it is stated that the North American cultures migrated from; and there are similarities to older style Pueblo's form in the Southwest. Subterranean winter dwellings are found across the arctic and other areas along the west coast, California and Plateau areas. It is also suggested semi-subterranean style influenced the Earthlodges found along the northern part of the Missouri River and down to the partially excavated dwellings in the Southeast. This suggestion of one style influencing North America is based on speculation and not on hard evidence. Nabokov and Easton (1989) believe there to be too many differences in the different climates, materials and terrains to be a convincing argument. But, as mentioned earlier, climate and materials are only one factor.

The arrival of Europeans had a tremendous impact on Indian architecture. Disease, trade, depopulation, warfare and relocation of Indians to reserves all influenced a change in traditional forms and styles. In some instances, these influences forced a 'fusing' of different tribal styles. Entire villages and tribes coming together caused changes in building traditions and sometimes abandonment occurred. Modern materials and tools such as nails, hammers, paint, cloth, bricks and milled lumber were made available while traditional materials such as hides and bark became harder to get. Reservation life also changed the architecture by limiting the traditional and natural resources and materials that were once used for traditional architecture. Indians were no longer allowed to move around to adequate places that would allow for their livelihood. European settlers and leaders believed that traditional aboriginal architecture was considered primitive and pagan and they disapproved the dwellings, considering them to be unhealthy and disease breeding (Nabokov and Easton, 1989).

Based on these factors, several different major dwelling types were used throughout North America (Figure 1.5.3).

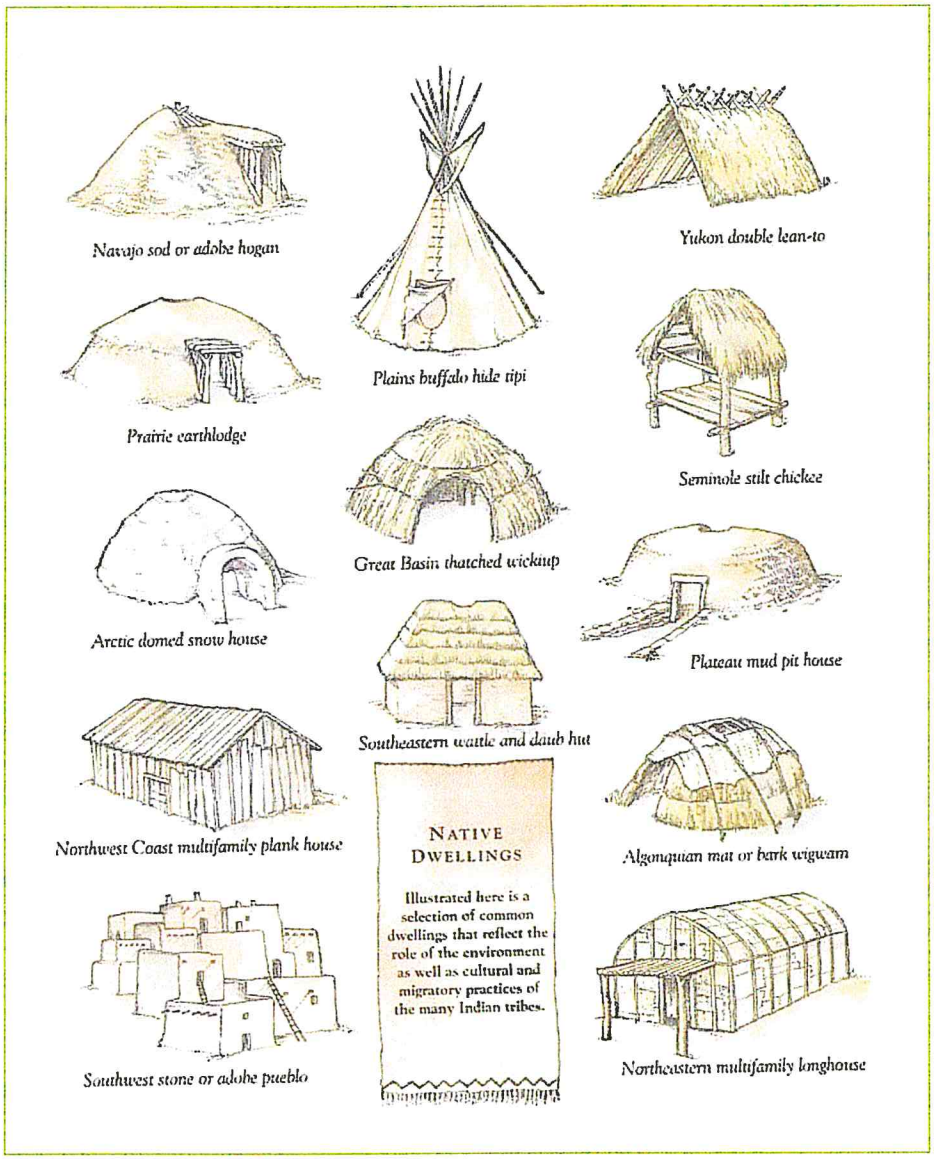


Figure 1.5.3: - REFERENCE

The majority of the forms are circular in shape. This could be in part due to the construction materials, as most are not straight. Square or rectangular floor plans were rare in native architecture and only occurred more so after

European contact. Typically native architecture used structures that were vertical rather than horizontal such as the settlers did with the log house (Koerte, 1974). American architect O.S. Fowler studied octagonal dwellings. He advocated circular form because they were more efficient and produced a greater utilization of space (Koerte, 1974) (Figure 1.5.4 show's Fowler's analysis on spaces with similar floor areas). Another factor is that due to minimal surfaces created by circular enclosures, thermal efficiency is created, which is a great benefit to the dwellers in that they require less 'fuel' to heat their space. Circular spaces create a focal point – the centre, which was utilized for hearths in almost all of the native dwellings. The circular form also created what is seen as a better plan for conversing – especially in groups, where everyone is involved in conversation. Koerte (1974) refers to this a "concentric use of space" and compares this with unfocused rectangular forms typically found today.

According to Nabokov and Easton (1989), there were three types of shelters common to the Great Plains; the Grass House, the Earthlodge, and the Tipi.

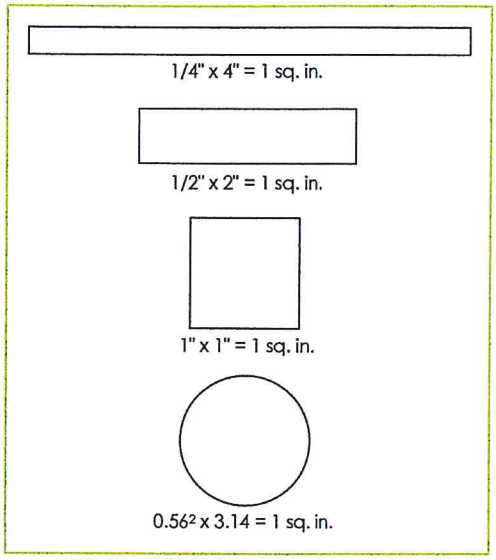


Figure 1.5.4: Comparative analysis of different configuration using the same area
- Koerte, 1974

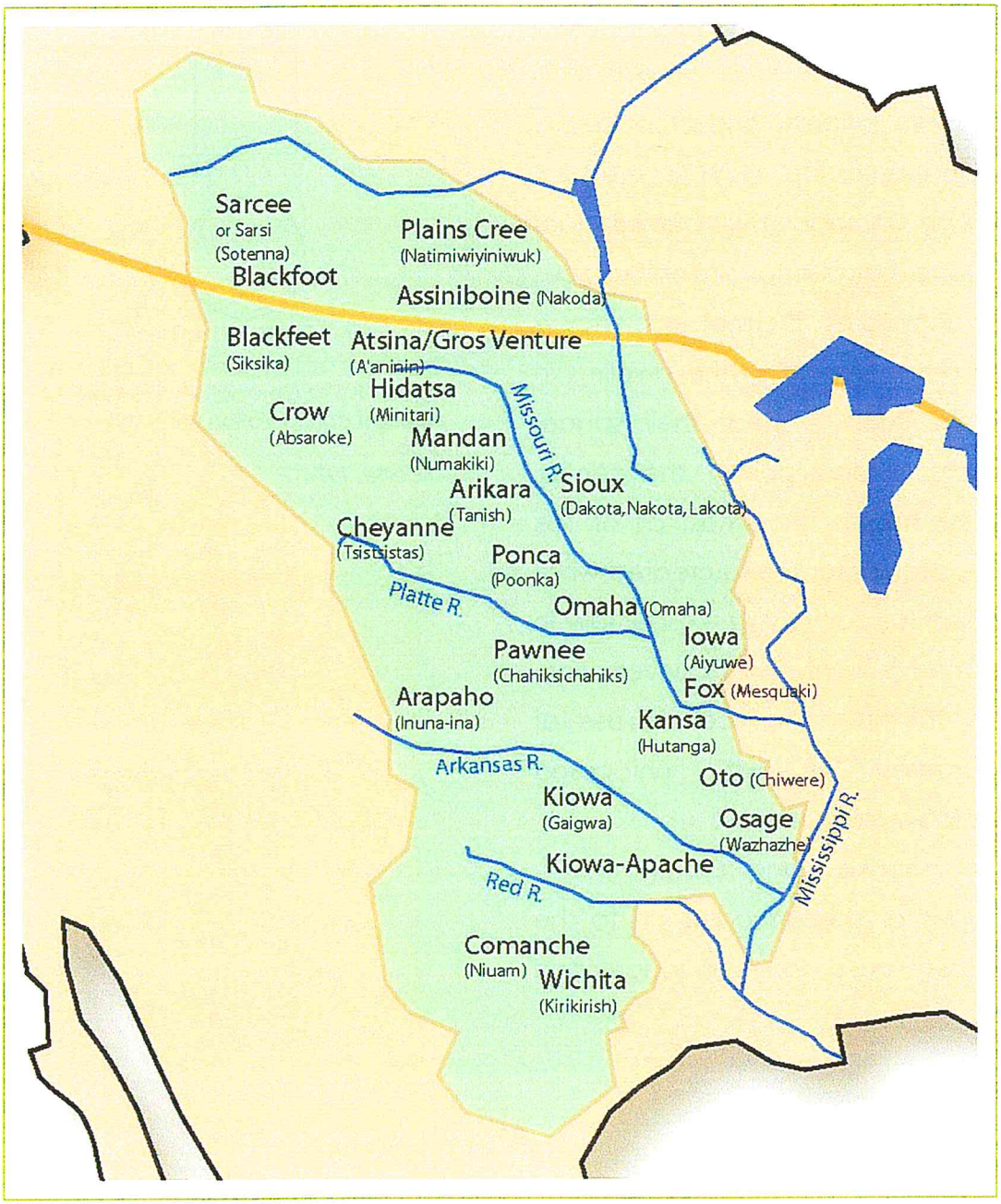


Figure 1.5.4: Late pre-historic Tribal areas of the Great Plains

Earthlodge

The earthlodge first appearing around 700 AD., was common along river systems and used by semi-nomadic cultures (Figures 1.5.5 & 1.5.6). There were three main areas on the Plains where earthlodges were constructed; The Dakotas; the central Plains region of Kansas and Nebraska; and the linguistically related cultures located in the central-southeast areas. In the Dakotas it was the Mandan, Hidatsa and Arikara cultures, in the central region it was Pawnee and in the central-southeast region it was the Omaha, Ponca, Oto, etc. (Figure 1.5.4). These cultures were typically traders and farmers growing such things as corn, squash, beans, watermelons, sunflowers and tobacco. The northern cultures would have Earthlodge villages that were typically summer 'homes'. During the winter months, these same groups would build smaller earthlodge structures in sheltered floodplains. Earthlodge cultures would also use tipis during the fall hunts for buffalo – which became more common with the arrival of the horse (Nabokov and Easton, 1989).

All earthlodges were typically constructed the same (Figure 1.5.7). The structure consisted of wooden post and beam construction with a four-post system in the centre and smaller posts with beams around the perimeter. Wooden roof rafters were used that spanned between the central and perimeter structures and a smoke hole was maintained in the centre. The walls around the perimeter were constructed of vertical or slanted wooden posts or split-planks, and referred to as

Figure 1.5.5: Earthlodge
- Nabokov and Easton (1989)

Figure 1.5.6: Earthlodge village
- Nabokov and Easton (1989)

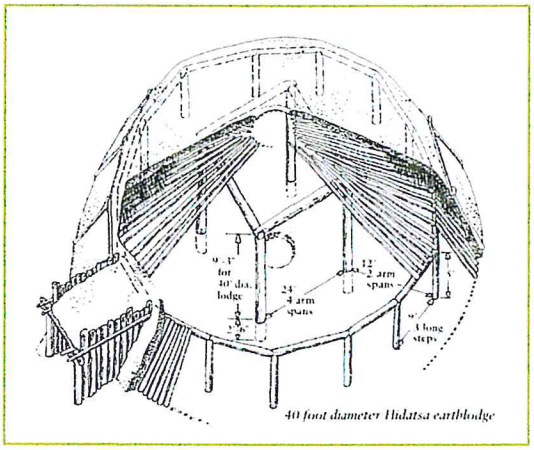


Figure 1.5.7: Earthlodge structure
- Nabokov and Easton (1989)

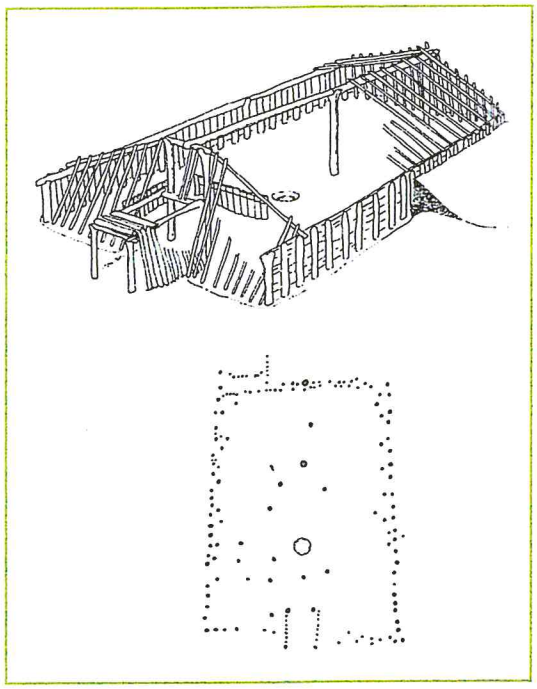


Figure 1.5.8: Rectangular earthlodge
- Nobokov and Easton (1989)

puncheons. Smaller sticks or willows were overlaid perpendicular to the rafters and walls to provide additional structure and cushion for the layer of earth and sod that would make up the dwellings façade.

Earthlodges have a circular footprint, however, archaeological evidence in North Dakota indicates that some earlier earthlodges were rectangular (Figure 1.5.8) (Nabokov and Easton, 1989).

As previously mentioned, cultures such as the Hidatsa, Mandan, Pawnee and Arikara, would integrate myths or rituals into the materials, construction and layout of their dwellings. The Hidatsa and Mandan believed the four pillars in the earthlodge related to the four pillars that hold up the 'sky' dome. The Hidatsa also believe the earthlodge to be a living entity with its spirit living in the central beams. The Pawnee worshipped several celestial deities and incorporated these beliefs as symbolism in their dwelling and village layouts (Nabokov and Easton, 1989).

Although the earthlodge settlements were typically found along the Missouri river, an explorer by the name of Peter Fidler documented an earthlodge site along a Saskatchewan river. To date however, there is no archeological evidence of there being earthlodges in Saskatchewan.

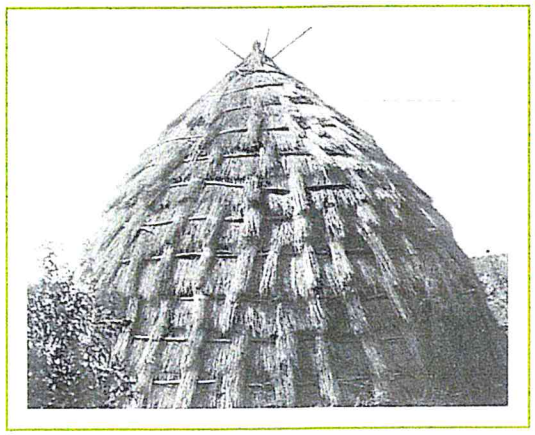


Figure 1.5.9: Grass House
- Nabokov and Easton (1989)

Grass House

The grass house was popular in the southern Plains and constructed by the Hasinai, Kitchai, Wichita and Caddo tribes (Figure 1.5.9) (Nabokov and Easton, 1989). These were gardening cultures

that would construct their villages on the lower slopes of valleys, taking advantage of the fertile soils. There is a myth related to the grass house called the Red Bean Man myth. It is said that this myth told the people how to build the first grass house; how to harvest the materials, how the materials were used and how to divide the work between male and female (Nabokov and Easton, 1989).

Figure 1.5.10 shows an illustration of the structure of a grass house. These dwellings consisted of post and beam structures with bent poles tied together at the top. Four of these poles would extend longer than the other, representing the four directions. Horizontal strapping consisting of saplings was fastened to the pole and grass thatching was then woven through the strapping and tied down using strips of buffalo hide. The thatching was done in a way that the upper pieces would overlap the lower pieces and would act like a shingled roof. Unlike the earth lodge and tipi, there was not a smoke hole in the top; rather, the smoke would filter through the grass façade (Nabokov and Easton, 1989).

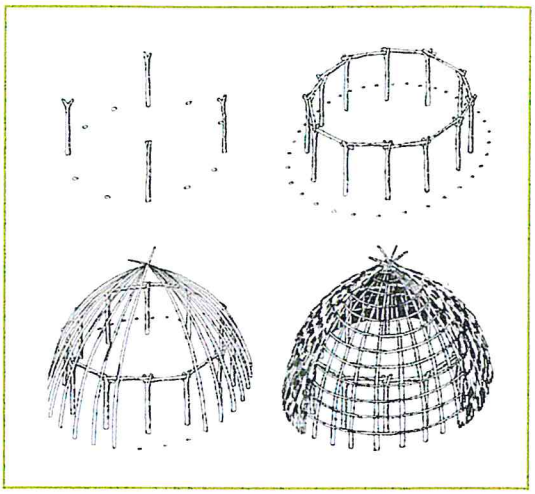


Figure 1.5.10: Grass House structure
- Nabokov and Easton, 1989

The Tipi

A common dwelling that occupied the plains for over 5,000 years (Bryan, 1991), in particular the Northern Plains, was the tipi, an example of nomadic architecture (Figure 1.5.11). Tipi comes from the Lakota (Sioux) word meaning "a place for living" (Conn, 1982) and is spelled "tepee" or "teepee". The most accepted form of spelling is "tipi".

Sometimes the tipi gets confused with the

Figure 1.5.11: Hide tipi – appears to be a 4-pole foundation
- Nabokov and Easton(1989); Conn (1982)

wigwam – both mean the same thing - a dwelling. Wigwam comes from an eastern dialect and refers to bark covered eastern woodland dome-shaped dwellings (Laubin, 1977). It is likely that sweat lodges are referred to as wigwams because their shape is similar to that of a wigwam. However, a sweat lodge is not a dwelling.

Typically, dwellings evolve from climatic response. Arnold Koerte (1974) notes that the tipi evolved from an economic base, the bison, and is not a climatic response since it is "independent of a particular climatic region" (Pg. 166). But unlike other structures, "the tipi stands as an early example of three specific qualities of construction – prefabrication, portability and re-usability – which are of considerable concern today" (Pg. 166). Koerte does admit that one of the three qualities – portability – does in fact allow for climatic response by allowing the dwelling to be moved from an undesirable to more desirable climate.

Canadian scholar Ted Brasser believes the tipi has evolved from two traditions; shorter tents consisting of uncertain framing that existed five thousand years ago which could have eventually developed into a four pole framing system, and the northeastern woodland conical tent that used three poles and was brought onto the Plains by the Cree during the 1600s (Nabokov and Easton, 1989). Brasser's theory is based on his analysis of the use of stone 'tipi-rings' and subarctic dwellings. Koerte (1974) also supports an evolution that involved what he calls "earlier primitive conical" tents that were

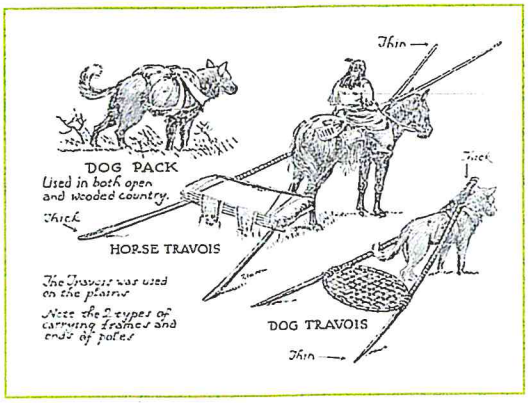


Figure 1.5.12: Travois evolution - Koerte, 1977

small and stationary dwellings used for short hunting stints and how these were similar to the birch bark tipis located in the eastern woodlands.

One undisputable evolution was the change that was made to the tipi with the arrival of Europeans and the horse. The nomadic tipi was transported by travois (Figure 1.5.12); a "primitive vehicle for transporting goods used by some North American Indian tribes, consisting of two poles supporting a frame and dragged along the ground by a man or an animal" (The Scribner-Bantam English Dictionary, 1985). Harold Driver (1968) suggests that the travois originated because the Plains are treeless, therefore poles had to be dragged onto the Plains. Originally, a dog was used to drag the travois, but eventually it was the horse that was used (Figure 1.5.13). The horse allowed more and heavier goods to be transported, resulting in tipis becoming much larger (Figure 1.5.14). A change of material, hide coverings to canvas, allowed tipis to become much larger. These large dwellings would have been less efficient with regards to heating than the smaller traditional style due to size and as Driver (1968) suggests, less windproof. Koerte (1974) supplements his discussion of tipi evolution with the fact that prior to the arrival of the horse at around 1600, the people of the Plains would remain in one place and were earthlodge dwellers, only going out on short hunting excursions for deer, elk and buffalo. These were once transient cultures that had given up on the nomadic ways for an easier farming lifestyle and not relying solely on the buffalo. However, with the introduction

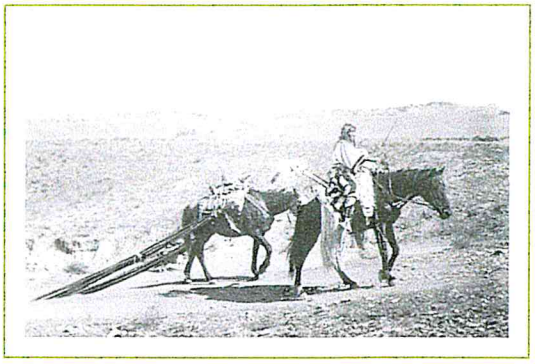


Figure 1.5.13: Horse travois
- Nabokov and Easton, 1989

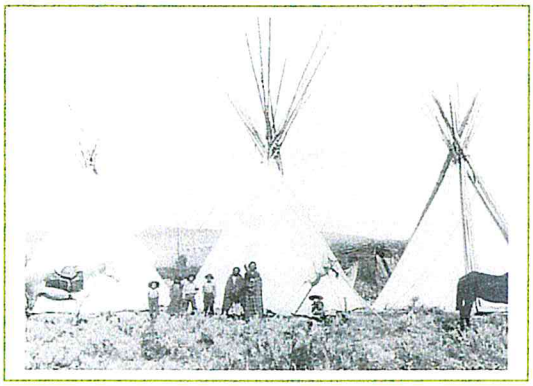


Figure 1.5.14: Tipi evolution
- Nabokov and Easton, 1989

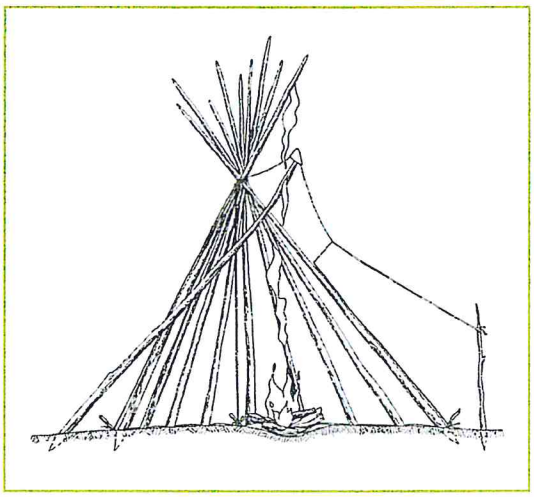


Figure 1.5.15: Tipi structure
- Nabokov and Easton, 1989

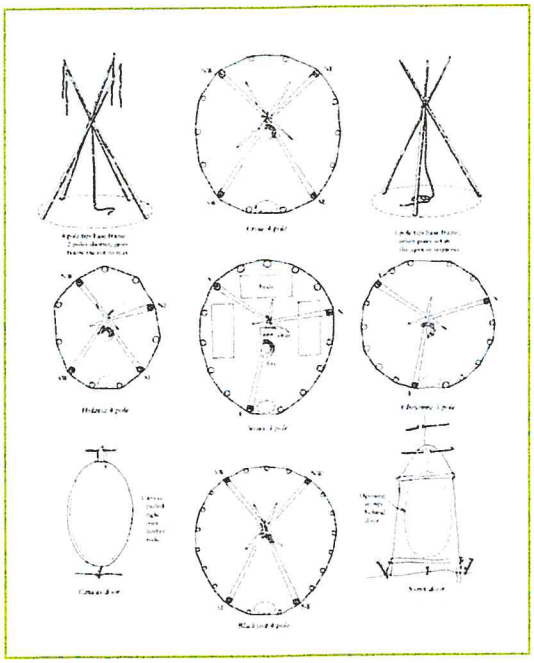


Figure 1.5.16: Tipi plans showing 3-pole and 4-pole foundations
- Nabokov and Easton, 1989

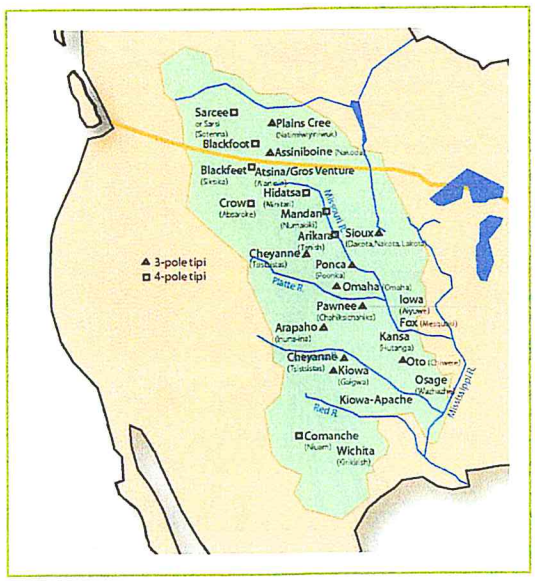


Figure 1.5.17: Distribution of 3-pole and 4-pole foundations
- Information from Nabokov and Easton, 1989; Laubin, 1977; re-created by author

of the horse and the ability to cover a vast amount of land, the transition back to a nomadic lifestyle was too alluring.

The tipi required very few materials: wooden poles, stakes, pins, hide covers and hide strips used as rope. These materials were used to create a structure that was easy to assemble and disassemble in both warm and cold conditions. The preferred material for poles was long and straight lodgepole pine. The covering was made out of sewn together buffalo hides and the stakes used to hold down the hide around the perimeter were buffalo ribs, wood or stone. As indicated earlier, archaeological evidence indicates that stones were an alternate use to stakes in holding down the hides. The remains of 'tipi-ring' encampments were the result of the dwellers simply dismantling their camps and leaving the stones behind (Bryan, 1991).

The tipi was not a true cone but rather a tilted cone with one side steeper than the other (Figure 1.5.15). The steeper backside faced the prevailing winds; the lower-sloped front side, entrance opposite the prevailing winds, would assist in bracing the tipi against the wind. This offset also allowed the smoke hole to be placed directly over an internal hearth located in the centre of the tipi. This structural offset makes the floor plan not an exact circle, but rather egg shaped.

Nabokov and Easton (1989) suggest that there were two types of structures or foundations; a tripod or three-pole foundation and a four-pole foundation (Figure 1.5.16). The three-pole structure was typically

used on the southern Plains and the four-pole was used in the north (Figure 1.5.17). Once the foundation was erected, other smaller poles would be placed to complete the structure. Traditional tipis would then be covered with buffalo hides. The smoke hole above the central hearth would have flaps that would be controlled by two poles on the outside (Figure 1.5.18 & Figure 1.5.19)); there is some suggestion that there were occurrences of these flap poles on the interior (Nabokov and Easton, 1989), but typically these were exterior poles. These flaps can be adjusted; closed for rain, open for smoke, and assist with drafts. Another feature used within a tipi was a dew cloth. This interior lining consisted of leather or canvas panels tied inside the tipi around the perimeter to create a liner. Covering the lower quarter of the tipi, this liner enabled some protection from any air penetration around the lower perimeter of the tipi and would draw this air up towards the smoke hole improving smoke removal (Conn, 1982). This liner also enabled the tipi to be insulated during cold weather by allowing dwellers to stuff grass between the liner and the cover. Another function of the dew cloth was to help keep any water from rain; that would run down and drip off the poles, away from the occupants. Additionally, a versatile feature of the tipi was the ability to roll-up the cover during hot summer stretches, which would help catch any breeze while still providing shading (Nabokov and Easton, 1989).

As with other dwellings such as the earthlodge, there were social arrangements involved with a tipi.

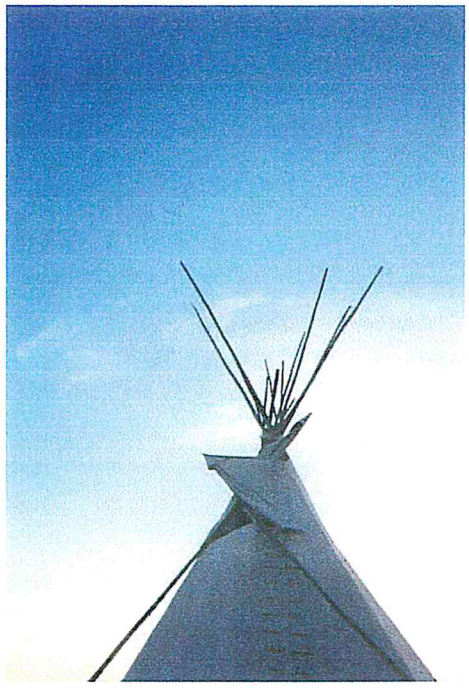


Figure 1.5.18: Smoke flaps closed
- photo by author

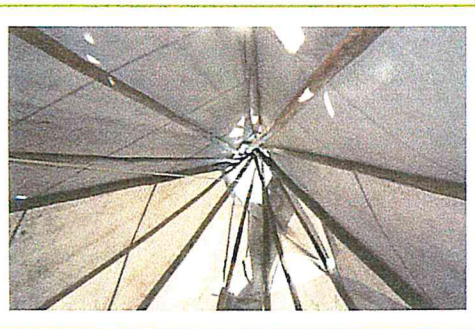


Figure 1.5.19: Smoke flaps closed – interior of tipi
- photo by author

Erection, dismantling, and tanning, cutting and sewing of the hides were the work of the women; while the gathering of the poles would likely have been the job of the men (Driver, 1968). There were also social arrangements within a tipi. The doorway would typically face the rising sun (east), which also happens to generally coincide with the opposite direction of the prevailing winds. The oldest (elder) would sleep on the opposite side of the door with the fire between that person and the door. Men would sleep on the north side and women on the south. Utilitarian items such as firewood or cooking implements would be kept beside the door (Nabokov and Easton, 1989). Today, there are teachings attached to a tipi's structure. Each pole holds a meaning or value that is used by some First Nation groups for holistic teachings to young aboriginals. The following was taken from Beardy's Reserve north of Saskatoon with each pole being given a meaning and that same meaning in its Cree name.

Pole 1 - Obedience (Manahitamowin)
Pole 2 - Respect (Kisteyihtowin)
Pole 3 - Humility (Tapahteyimowin)
Pole 4 - Happiness (Wiyatikkweyimowin)
Pole 5 - Love (Kisewatitatowin)
Pole 6 - Faith (Tapowakeyihtamowin)
Pole 7 - Kinship (Wahkowhtowin)
Pole 8 - Cleanliness (Kanateyimowin)
Pole 9 - Thankfulness (Manaskomowin)
Pole 10 - Share (Wicihitowin)

Pole 11 - Strength (Sohkeyihtamowin)
Pole 12 - Good child rearing (Miyo-Opikinawasowin)
Pole 13 - Hope (Iyitateyihtamowin)
Pole 14 - Ultimate protection (Kanaweyimikosowin)
Pole 15 - Control flaps from wind (Maminaweyitatowin

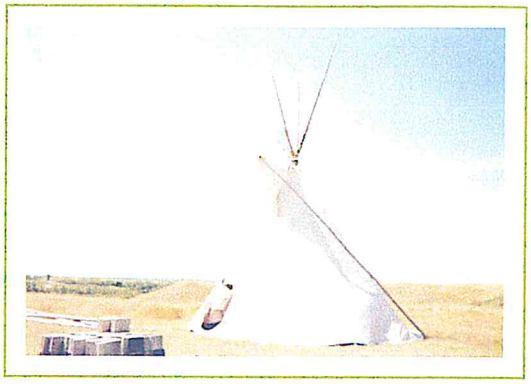


Figure 1.5.20: Overnight tipi stay at Wanuskewin
- phtoto by author

As part of any cultural research on tipis, a person should take the opportunity to spend a night in a tipi at Wanuskewin (Figure 1.5.20). Not knowing what to expect, people will be pleasantly surprised. The inside is very spacious and unlike typical pitch-tents, there is plenty of headroom even near the extremities. The canvas allows a good amount of natural light penetration; coupled with the opening at the top of the tipi, even when the entrance flap is closed, ample lighting is still provided within the space. As the sun would rise in the morning, a slow progression of increased lighting levels within the entire space is somewhat peaceful. This would not occur in a hide tipi where the only light would come from the hole at the top or the entrance if left open. The canvas provides a good sound barrier creating a nice and somewhat silent and peaceful sleeping space.

Simply put, the tipi is a simple conical form that was constructed of the available elements. This form was a dominant fixture on the Plains for thousands of years and to this day, symbolizes the Northern Plains Indians.

Traditional aboriginal architecture arose out historical, ecological, demographic and cultural circumstances. These cultures were semi-permanent

or transitory, and yet their architecture was always able to blend harmoniously with the land while able to create spaces for 'cultural living' – comfort and tranquility (Nabokov and Easton, 1989). A person needs to experience these dwellings in order to help to fully understand them and appreciate the modifying factors and form determinants. The amount of material in their structures, and the simplified forms contain proportions and aesthetics that appear to be just right. In comparison to today's architecture, it's complexity versus simplicity.

Even though one can find a lot of information on the history and use of the tipi, the only way a person can truly understand the 'feel' of the tipi is by actually being in one. It was being able to visit several tipi's and actually stay in one that helped sum-up these findings. Much like a sweat experience, it is one thing to read about Aboriginal culture and spirituality, but it is totally another thing to be able to experience it.

PART 2
CONCEPTUAL DEVELOPMENT

2.1 INTRODUCTION

The second part to this thesis is the conceptual development of the demonstration project. The framework for the development consists of using information from Part 1 in addition to information gathered on some Aboriginal Projects throughout the Province. The additional information consists of site visits of Aboriginal facilities and interviews with designers in an attempt to understand the design process they had experienced when working on their respective projects. As one can see in Part 1, deciphering historic and even modern information on our local Aboriginal cultures is difficult. Part 1 shows that there are definitely distinct cultural groups even today and it is clear there is never one answer to traditional interpretations.

The demonstration project for this thesis is an Aboriginal Student Centre at the University of Saskatchewan. As indicated in Part 1, the overall Aboriginal population in the Province is increasing, this same trend is also occurring in the Aboriginal student population at the U of S. In 2003, there were a total of 1,300 self-proclaimed aboriginal students at the U of S. Today, there are currently 1,800 self-proclaimed aboriginal students at the U of S, making up almost 10% of the overall full time equivalent (FTE) of the student body. 50% of these students are First Nation, 49% are Metis and 1% is Inuit.

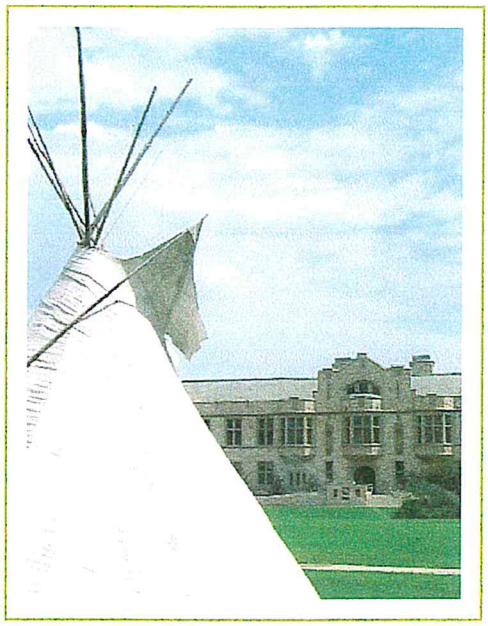


Figure 2.1.1: Tipi in the Bowl – University of Saskatchewan - *photo by author*

There are currently two support groups for Aboriginal students at the U of S; the Indigenous Student's Council (ISC) and the Aboriginal Student's Centre (ASC). The ISC represents the Indigenous or Aboriginal student body on campus and the ASC provides student services to Aboriginal students. Currently these two groups are in separate locations and their space allocations are inadequate to properly support current and future student support needs.

The goal of the project is to create an Aboriginal Student Centre on the University of Saskatchewan campus that will house both the ISC and the ASC, creating a hub of support for Aboriginal students. The overall vision is to provide student space; identity and amenities to Aboriginal students that will help foster Aboriginal student achievement at the University of Saskatchewan while at the same time, provide knowledge and understanding to non-aboriginal students and the campus community.

2.2 PROGRAMMING

The Aboriginal Student Centre programming is comprised of the two groups previously mentioned; the Indigenous Student's Council (Student Space) and Aboriginal Students' Centre (Student Services). The space requirements are adjusted to meet the current needs with allowance for future growth and have been reviewed by each group.

In addition to these two core user groups, additional space is to be provided for ceremonial and teaching purposes. The final programming consists of three main areas:

- Student Space
- Student Services space
- Ceremonial/Teaching (interactive)

Indigenous Student Council (ISC) Programming

Student Space	Qty.	
Lounge	1	100 sq.m.
Student Office	1	12 sq.m.
Computer Centre	1	26 sq.m.
Resource Room	1	35 sq.m.
Storage/Kitchen	1	12 sq.m.
Total allocation (net)		**185 sq.m.**

Lounge Space

- Consists of movable furniture
- Utilized by students on a daily basis
- This space is used for gatherings and small group ceremonies between students and elders

- Host events such as weekly potlucks.

Student Office

- Consists of desk space, telephone usage and is the internal ISC support space.

Storage/Kitchen

- Used for general miscellaneous storage and a kitchenette that would consist of a sink, microwave, counter space and cupboards.

Computer Centre

- Provides computer access to students and would consist of approximately 8-10 computers.

Resource Room

- This space would house general information for students such as job postings and support literature.

Aboriginal Student's Centre (ASC) Programming

Student Services	Qty.		
Elder's Meeting Room	1	16 sq.m.	16 sq.m.
Elder's Offices (2)	2	12 sq.m.	24 sq.m.
Manager's Office	1	12 sq.m.	12 sq.m.
Admin. Offices (2)	2	10 sq.m.	20 sq.m.
Workstations (2)	2	8 sq.m.	16 sq.m.
Secretary	1	12 sq.m.	12 sq.m.
Waiting area	1	11 sq.m.	11 sq.m.
Photocopy/file/storage	1	11 sq.m.	11 sq.m.
Total allocation (net)			**122 sq.m.**

Elder's Meeting Room

- This space would be used as a small ceremonial and gathering space.

- Ceremonies such as smudging would occur in this space.
- Space doubles as a meeting room for the ASC.

Elder's Office

- Two Elder's offices are required (one male and one female). These are general offices, which do not require typical office desks and shelving, but rather a small desk and table for one-on-one counseling with students.

Managers Office

- Typical office space that consisting of desk, shelving and computer connection.
- Space adequate to meet with 2 people.

Administrative Offices

- Two offices are required for administrative staff dealing with confidentiality.
- Typical office space that would consist of desk, shelving and computer connections.
- Space adequate to meet with 2 people.

Administrative Workstations

- General open-office workstations for support staff

Additional programming

In addition to the two units (ISC and ASC) additional programming elements are to be provided that will support the vision of providing support and amenity space and provide opportunities for the non-Aboriginal campus community to experience and learn about Aboriginal culture.

Additional programming	Qty.		
Meeting Room	1	38 sq.m.	38 sq.m.
Ceremonial/Teaching Space (300 people)	1	325 sq.m.	325 sq.m.
Change Rooms	2	10 sq.m.	20 sq.m.
Building Foyer (see below)			
Total allocation (net)			**385 sq.m.**

Meeting Room

- Both the students and administrative staff can access the meeting room.
- This room would also available to the campus community.

Ceremonial/Teaching Space

- An indoor gathering space that could hold ceremonies such as a pow-wow.
- Needs to be multi-function space allowing for full utilization.
- The Ceremonial/Teaching space needs to be designed so that it is not only used for ceremonies but also function as a teaching space for the U of S.
- The indicated allocation for this space is used as a starting point and based on standard room requirements for lecture theatres. Additional net area will likely be required for this space to function as a ceremonial space

Change Rooms

- Small change rooms are required in addition to washrooms for performers.

- The Student Space and Meeting Room can also help accommodate the performers.

Display and Interpretive Space

- Buildings entrance and main foyer should be utilized as a display or interpretive.

2.3 **SITE SELECTION** (see Appendix A)

The site selection process included an evaluation of fourteen sites on the University of Saskatchewan (U of S) campus (Figure 2.3.1 and Appendix A). Positive and negative factors were used to help determine whether or not the site would be suitable for this project. The factors included:

- Adjacency to colleges and campus amenities
- Visibility to the public and campus community
- Traffic flows (pedestrian and vehicular)
- Access to building services to the site
- Impact of site on the U of S Master Plan

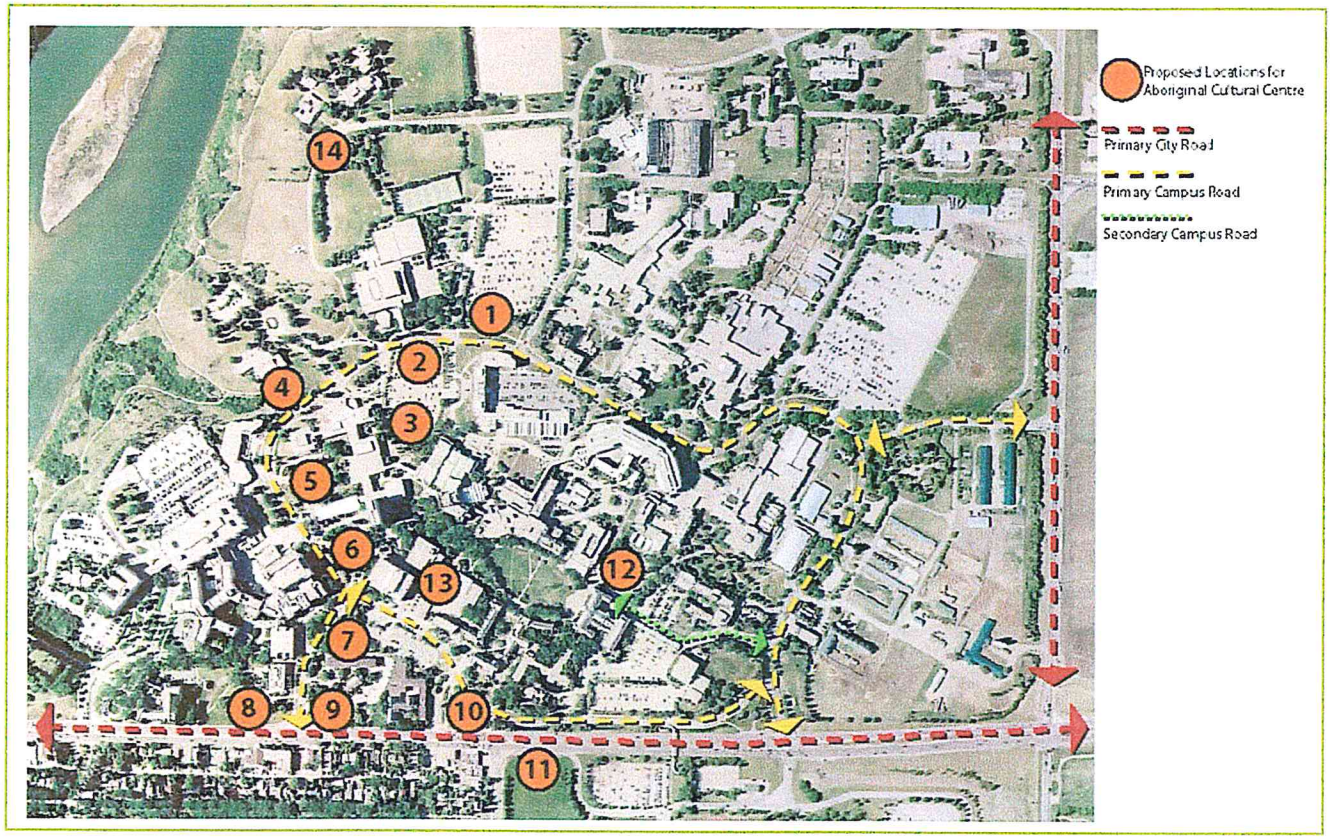


Figure 2.3.1: Aerial view of U of S campus showing sites that were reviewed

The Indigenous Student Council was consulted during the site review process, and in addition to the above criteria, they suggested the following considerations:

- Close to student amenities
    - Place Riel student centre
    - Main Library
    - Bus service
- Easily accessible and visible to off campus visitors
- Close to parking
- Ultimately preferred location in campus core

The analysis included some sites (Sites 4, 14) that were situated along the riverbank adjacent to the South Saskatchewan River. These sites would seem to be legitimate sites for an Aboriginal facility because of their proximity and link with nature. However, because this project is a Student Centre, it is better suited as a campus core facility and not placed in a location where it would not be fully utilized by the users and the public. To meet the vision of this facility, it was important that the site be located either in or immediately adjacent to the campus core, giving the facility a high profile placement while making it part of the heart of campus or 'campus village'. This narrowed the site selection down to six sites - Sites 2, 3, 5, 6, 7, 12 &13.

Wiggins Court (Site 6) (see Appendix A)

The deciding factor for the site became apparent when reviewing the U of S Master Plan. The Master Plan shows a potential future development (Figure 2.3.2) in the form of a tipi that is suggested to act as a skylight and access to the lower tunnel system between the Arts Tower and Place Riel. Adjacent to this site in the Master Plan is a future classroom wing addition to Arts.

Figure 2.3.2: Wiggins Court Master Plan concept. Also shows future classroom wing development

Wiggins Court has several positive factors:

- Located within campus core – establishing an Aboriginal presence central to campus
- Close to the 'Bowl' – central green space on campus and used for powwow ceremonies (Figure 2.3.3)
- Adjacent to student amenities and Colleges
- Excellent pedestrian (student) access
- High visibility – located at a main entrance to campus
- Identified in Master Plan as potential building site.

Figure 2.3.3: Powwow in the Bowl
- photo by author

Wiggins Court is a green space gateway into the core of campus and is a highly used pedestrian thoroughfare. The Master Plan indicates Wiggins Court as being one of the few sites available within the Core of campus for future facilities and is therefore considered 'premium' space – ideal for a facility that will pay respect to Aboriginal people. The

ISC and ASC were consulted on this space and they would fully support this particular location.

The site analysis was based on physical and functional criteria, constraints and overall campus vision. The next step was establishing additional aboriginal criteria for the site and creating a parti and overall project concept.

2.4 PROJECT DEVELOPMENT REVIEWS

With programming established and a site selected on campus, how can an aboriginal facility become part of a campus that is predominantly Collegiate Gothic and Modern in architectural style?

Contemporary Design Review (see Appendix B)

In Section 1.5 there is mention of 'form determinants' and 'modifying factors'; form determinants consisting of environment and cultural factors; and modifying factors consisting of materials, technology and construction. Programming and spatial relationships would be considered form determinants since they determine what and how something is to be built. Traditionally there were rules for usage of space and placements within traditional aboriginal dwellings. Even sun dance lodges (Section 1.3) had programming components (Figure 2.4.1).

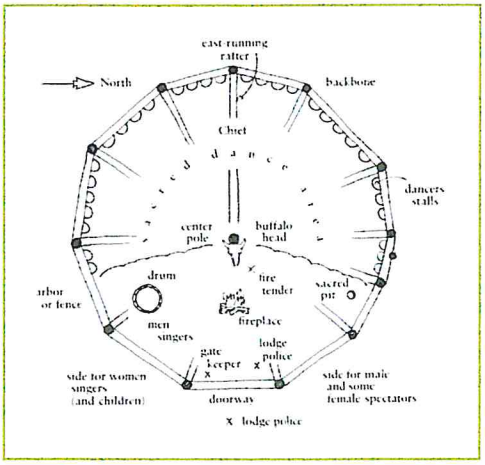


Figure 2.4.1: Sun Dance lodge plan - *Nabokov and Easton (1989)*

How can these same principles on placement be used in contemporary design? In conversations with local designers, I was able to find some information on how they dealt with the programming and spatial adjacencies in their projects. In 2003 I took the opportunity to interview local architects who had some experience with aboriginal projects - the majority of these projects being schools. Obert Friggstad (personal communication, 2003), mentioned how their design team would use design charettes where they would have their programming areas represented as cut-outs. In their charettes with the client they would then look at how the different

programming areas such as classrooms, gymnasiums, staff rooms, etc. should be placed. Friggstad talked about how there would be times when the Elders would not be comfortable discussing their ideas or how they interpreted their own cultural ideas. To help in facilitating this, the program pieces would be left with the Elders who would then come back to the next design charette with how they think the spatial relationships and adjacencies should be placed. This seems to be a common issue with First Nations clients in that they come across as being unconfident or shy when discussing traditional values (T. Rusick, personal communication, 2003) and sometimes have difficulty expressing their ideas (D. Kindrachuk, personal communication, 2003).

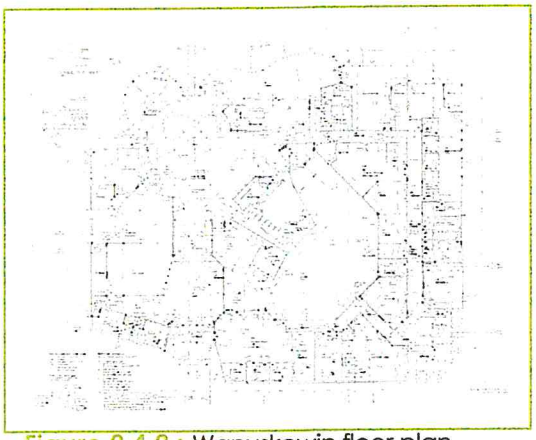


Figure 2.4.2 : Wanuskewin floor plan - courtesy Wanuskewin Heritage Park

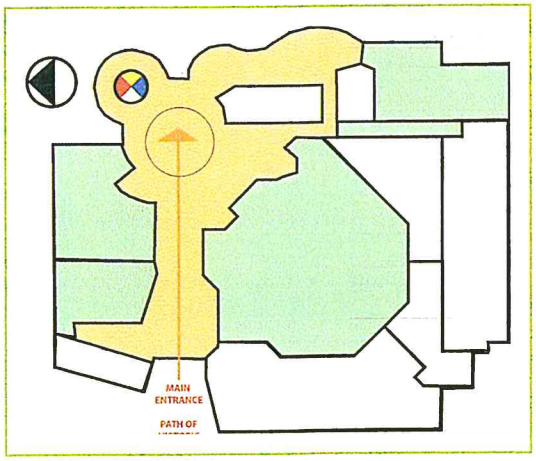


Figure 2.4.3 : Wanuskewin (showing main entrance and path of historic bison jump)

In an interview architect Lawrence Dressel (personal communication, 2003) on his Wanuskewin Heritage Site project (Figures 2.4.2) with regards to the programming stated that his design team worked in conjunction with several other agencies that included the City of Saskatoon, Meewasin Valley authority and a group of Elders. Lawrence could not recall the specifics with regards to programming and its evolution, but the process had input from the Elder group, which provided guidance in programming as it related to such issues as the cardinal points. Being a heritage site, this project has unique programming elements such as a museum, gallery, cafeteria, office spaces, public meeting rooms and archaeological lab spaces. The site criteria drove the programming; by this I mean that the driving force behind the project was the archaeological find by Ernie Walker.

The Wanuskwin site is the location of a historic bison jump and the site became a National Historic site. The programming was then set-up as an information and tourist facility. As mentioned, cardinal values helped in the programming adjacencies in that the path of the bison jump essentially became a programmed element (Figures 2.4.3 and 2.4.4). The main entrance into the facility is this path with the other programming elements being worked around this traditional and historic element.

Figure 2.4.4 : Wanuskewin entrance
- photo by author

On a school project on Nekaneet First Nation, the client had produced guidelines that incorporated the social fabric of the community's beliefs into this facility. The school was to have the basic purpose of providing cultural framework into its programming and design that would teach the kids the cultural traditions of Nekaneet First Nation. Although the school was required to have a core curriculum, the vision was to go beyond the curriculum and provide teaching of strong spiritual values to the children of Nekaneet; recognizing that the children will be walking in "two worlds". This philosophy was merged with the programming and design of the facility by using Nekaneets colour values and their relationship to the cardinal points (Figure 2.2.5). (Kindrachuk, personal communication, 2003). This 'concept-planning model' was produced based on the traditional values of Nekaneet. In comparing this diagram with the colours and cardinal point values in Section 1.4, it is again noticeable that the different cultures have their own interpretations. The goal in the design of the facility was to place the

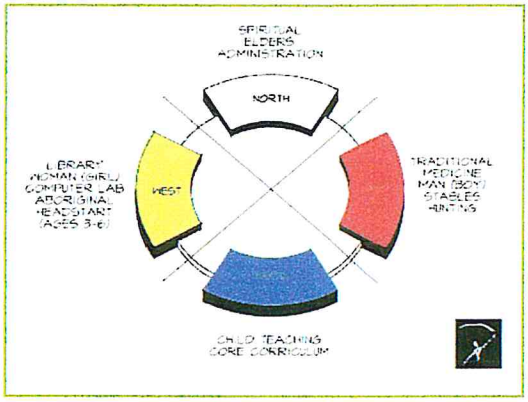


Figure 2.4.5 : Nekaneet 'concept planning model'
- courtesy Kindrachuk Agrey Architecture

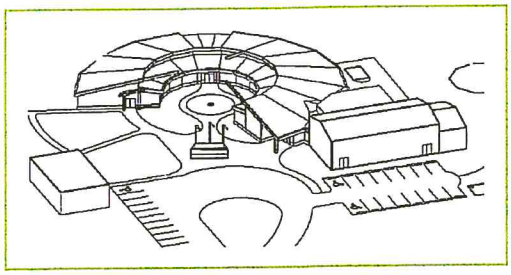


Figure 2.4.6: Nekaneet
- courtesy Kindrachuk Agrey Architecture

programming elements in the different cardinal areas as per the diagram. Another 'value' that the client wanted portrayed in the design was the value or strength of three. This is depicted in the design as three large structural members extending over the courtyard. These members represent the three foundation poles found in their tipis (Section 1.5). The final plan (Figure 2.4.6) did not achieve the planning model in its entirety. A designer may not always be able to achieve all the goals set out when trying to incorporate aboriginal traditional values in a design, but the important thing is that some were and an attempt was made to include as many values as possible (Linklater, personal communication, 2005). The macro goal was to have programming orientated with the philosophy behind the planning model. The micro programming goal was to deliver a holistic education model. Through the Elders programming, the goal was to teach the children on traditions, spirituality, history, and language. Children would also participate in feasts, ceremonies and celebrations. These larger cultural events can be held within the gymnasium or within the school courtyard.

Using Wanuskewin and Nekaneet as examples of conceptual frameworks, the Aboriginal Student Centre required a cultural programming element that would not only support the physical programming elements but also provide an overall cultural form determinant. What additional 'programming' type factors such as the bison run at Wanuskewin and cultural philosophy that produced Nekaneet School

could be developed and used for the demonstration project at the University of Saskatchewan?

2.5 CONCEPTUAL SITE DEVELOPMENT

In looking for an aboriginal concept that is not only unique to the U of S campus but also fits in with the overall concept the first thing considered was the type of facility being developed. This is a permanent facility; therefore, what are traditional permanent aboriginal architectural pieces? Medicine Wheels (p.60-61) were permanent pieces of architecture, evident in the fact that some still exist today. Other permanent, or semi-permanent, architecture were earthlodges (Figure 1.5.3) and ceremonial spaces such as sundance lodges (Figure 1.3.6) and today's powwow arbours (Figure 1.3.10). Another non-architecture factor, which has permanence among the Aboriginal culture, is spirituality.

The vision for this project is to create a support base for aboriginal students, which includes assisting in the overall campus orientation. For visitors and student the U of S campus can be confusing and determining one's orientation can be difficult. This is due to several different building orientations, including within the campus core. An aboriginal facility in the core of campus must be able to fit in with this confusing grouping of buildings. If the Medicine Wheels historic use was for orientation and wayfinding, could this same cultural principle be utilized on campus to help establish orientation within the core of campus for Aboriginal and non-aboriginal students?

Linking with Campus

The original campus master plan created by Brown and Vallance in 1909 (Figure 2.5.1) implemented two simply ways to create a sense of uniqueness on the new campus:

- All campus buildings aligned with a single major axis that was purposely angled off of the city's existing grid pattern.
- Introducing roads that consisted of curves (Kerr, 1998)

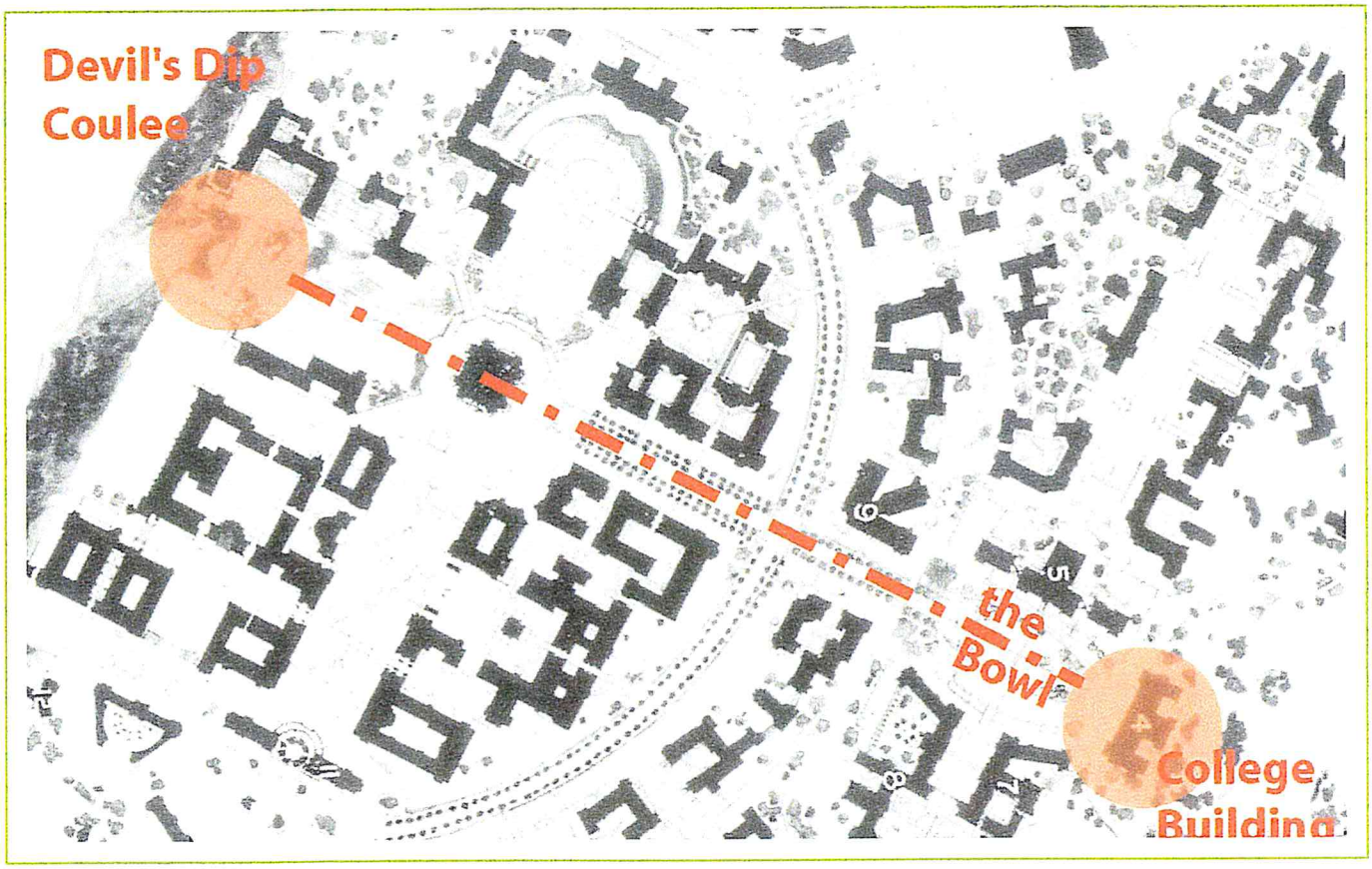


Figure 2.5.1: Original Master Plan – College Building/Devil's Dip axis

The major axis was anchored on each end by two different types of structures. One man made; the College Building situated at the southeastern end of the Bowl; the other a natural land formation known as the Devil's Dip – a coulee which feeds the South Saskatchewan River.

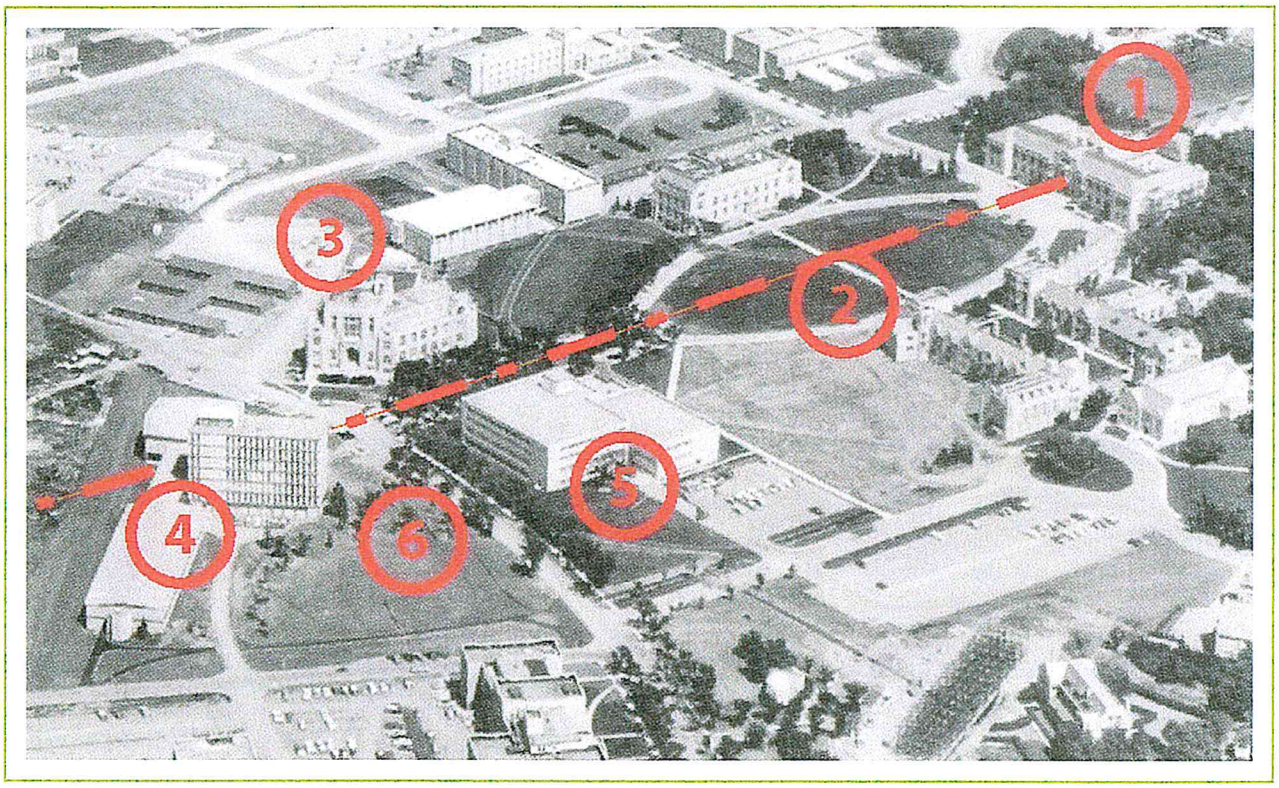


Figure 2.5.2: Campus 19--) 1) College Building; 2) The Bowl: 3) Thorvaldson; 4) Arts Building; 5) Murray Library; 6) Future Wiggins Court

By the 1960's, new facilities were being constructed that no longer considered the original vision of campus or the main campus axis, in particular the Arts Building. The Arts Building was placed so that it interrupted the major axis thereby replacing the Devil's Dip as an axial point feature.

A review of the Arts axis shows that it is perpendicular to another axis that runs through the original Thorvaldson Building (Figure 2.5.3). The

Thorvaldson axis intersects the original master plan axis creating a hub at a location in front of Arts.

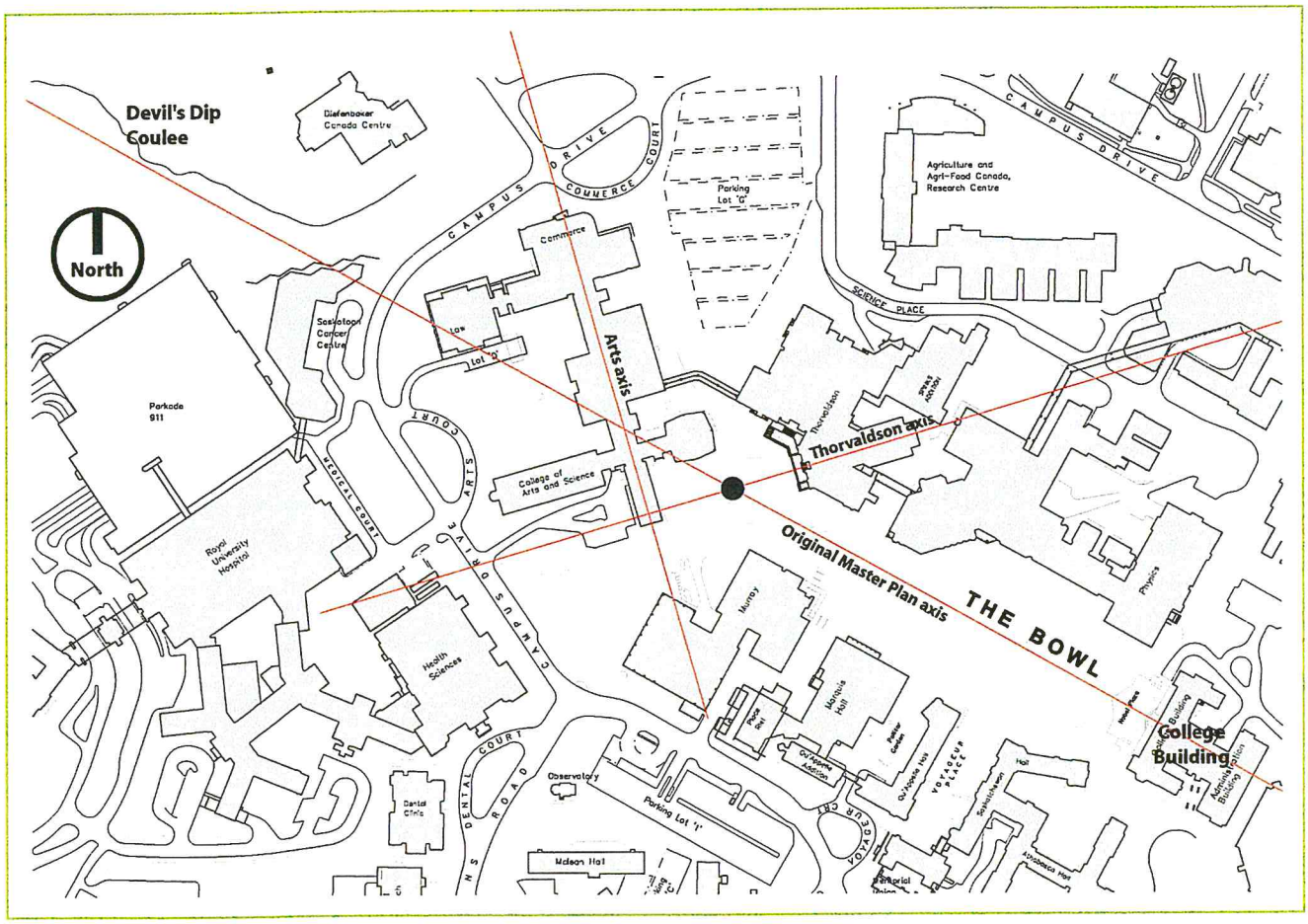


Figure 2.5.3: Axis research: Original Master Plan axis, Arts axis and Throvaldson axis. Black dot indicating intersection of Master Plan and Thorvaldson axis.

Medicine Wheel Used as Cultural Anchor

When considering the Medicine Wheel as a potential concept a person needs to ask what type of Medicine Wheel would be suitable for the site. Using the table in Section 1.4, of the eight subgroups identified in the table, the Subgroup 3 medicine wheel (Figure 2.5.4) is a suitable type that could be considered for this particular site. Subgroup 3 wheels

are found on open prairie adjacent to major stream valleys and rivers and include the following features:

- A prominent central cairn with two or more radiating stone lines
- Sometimes cairns are incorporated into the radiating spokes (ends or midpoints)
- Ancilliary tipi rings

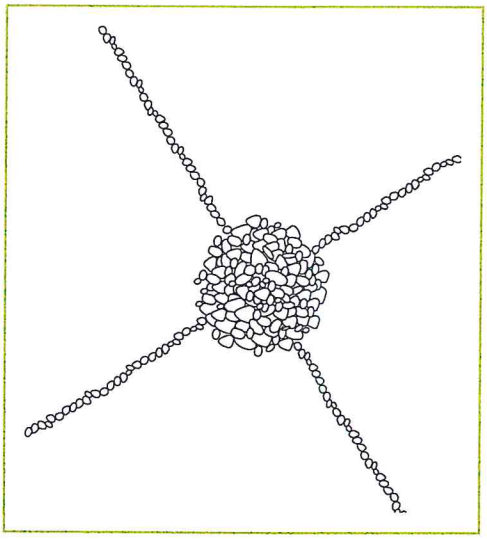


Figure 2.5.4: Subgroup 3 Medicine Wheel

According to Section 1.4, medicine wheels consist of at least two of three primary components:

- Prominent central stone cairn
- One or more concentric stone rings
- Two or more radiating stone lines

Their uses vary from directional finders and markers to memorials. Spirituality is established with the Medicine Wheel as some were used to mark the seasons and times of the year, such as the summer solstice, a major cultural event in Aboriginal culture. This information was conceptualized and applied to the Aboriginal Student Space project site (Wiggins Court).

Figures 2.5.5 & 2.5.6 shows how using the medicine wheel concept can be tied into the original and existing campus axis, create orientation and re-establish the connectivity of the original campus axis to Devil's Dip. Nodes or markers that radiate out from a central cairn provide orientation to the campus core (original axis) and the direction to Devil's Dip. These same markers line up with the summer solstice (rising and setting of the sun).

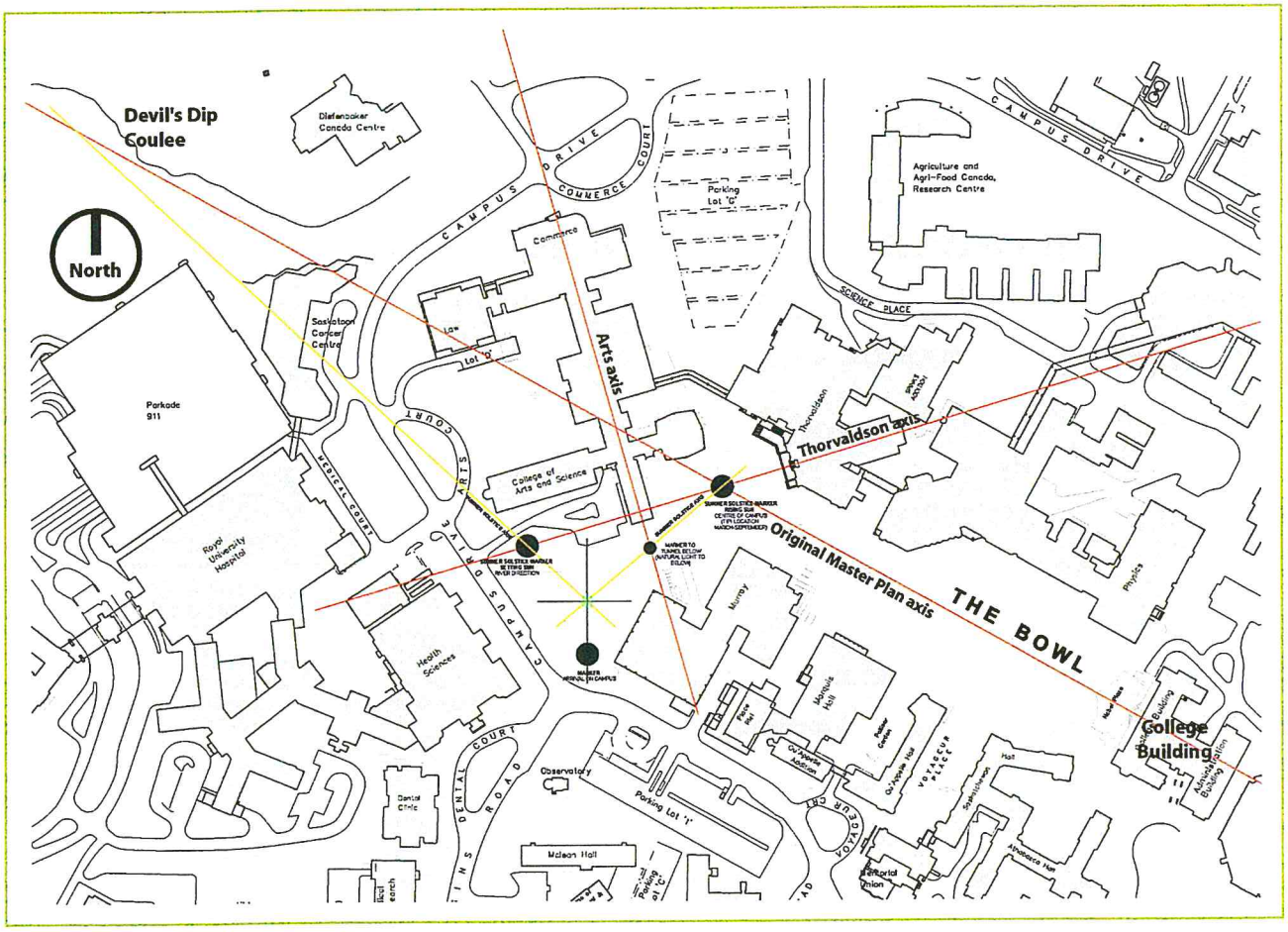


Figure 2.5.5: Medicine Wheel and Summer Solstice concept applied to Wiggins Court. Central 'cairn' established (green marker). Aligns with Original Master Plan axis and Devil's Dip

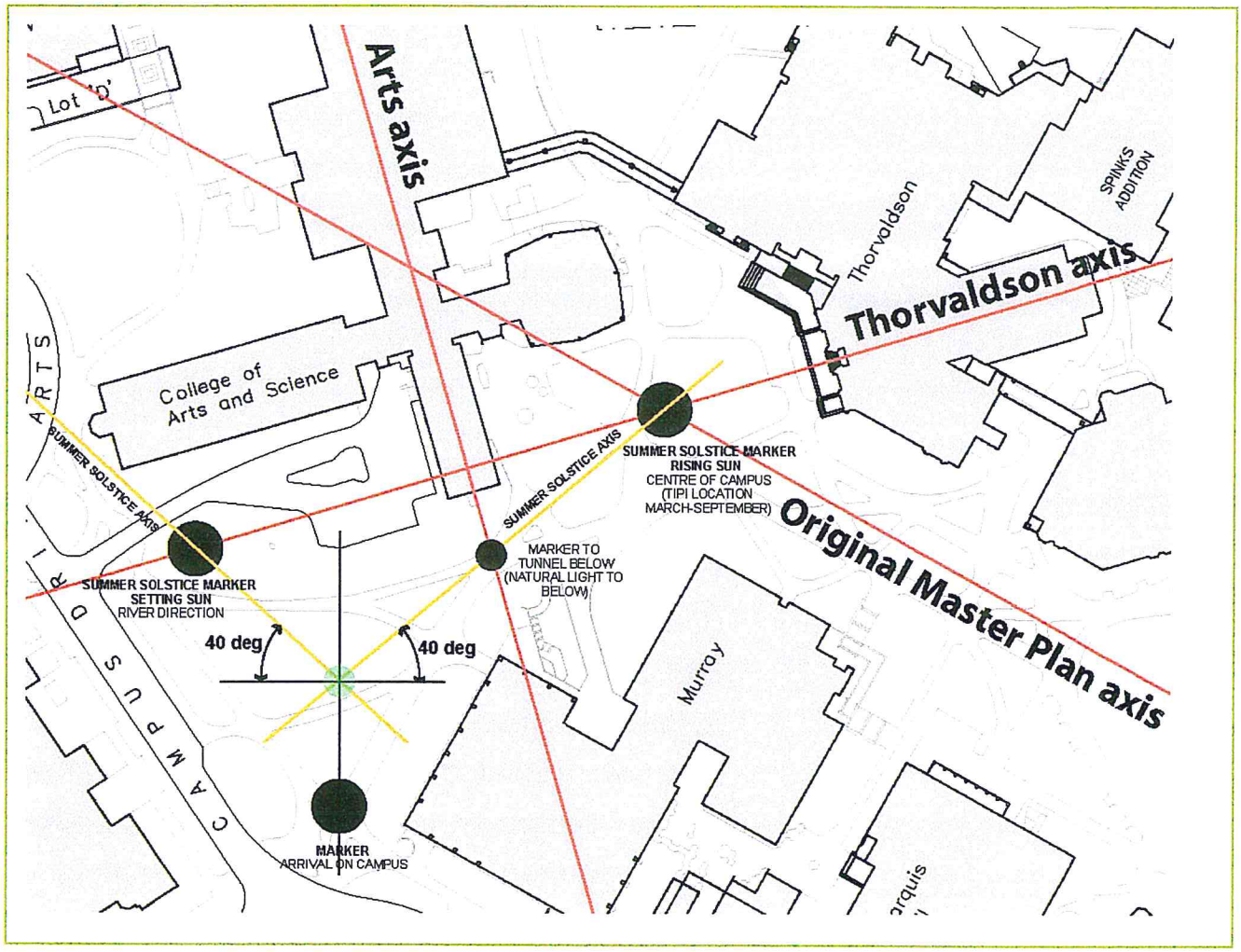


Figure 2.5.6: Solstice angles were reviewed and based on 52 deg. North Latitude

By applying this concept, a central point or central cairn was established within Wiggins Court. This cairn would be a memorial to the 74 First Nations in the Province represented by 74 stones from each First Nation. This will assist with the overall support model of the facility and the site and make the students feel at home when they are on campus knowing that a piece of their home is with them.

From this central point markers radiate out from the central cairn establishing direction and

orientation from the site in three primary directions (Campus core (main axis), River (devil's dip) and arrival on campus at intersection (southern marker) - note how these markers establish a link back to the original Master Plan axis and Devil's Dip. Another marker indicates the location of the lower tunnel between Arts and Place Riel. The marker along the main axis indicates a tipi location (ring) that will establish an Aboriginal presence directly in line with the College Building. This tipi would be erected during March and September (equinox) symbolizing the Northern Plains culture is on the hunt. When students arrive in September the tipi will be removed and placed within the Aboriginal Student Centre facility. This interprets the migratory culture and how they have relocated to a winter 'home', the Student Centre. Section 1.5 mentions that during the colder months of the year, the transient cultures became stationary and used this time for storytelling and family gathering. It would be during these slow times that traditions would be passed on. Elders play an important role in aboriginal traditions because they are the storytellers and supporters of these cultures. Figure 2.5.7 shows a computer model study of the Medicine Wheel concept.

The Medicine Wheel concept has been tied back to campus making the concept not only unique to its particular site, but also a unique design philosophy. How can this cultural anchor now be become part of the building's programming and create a cultural synergy?

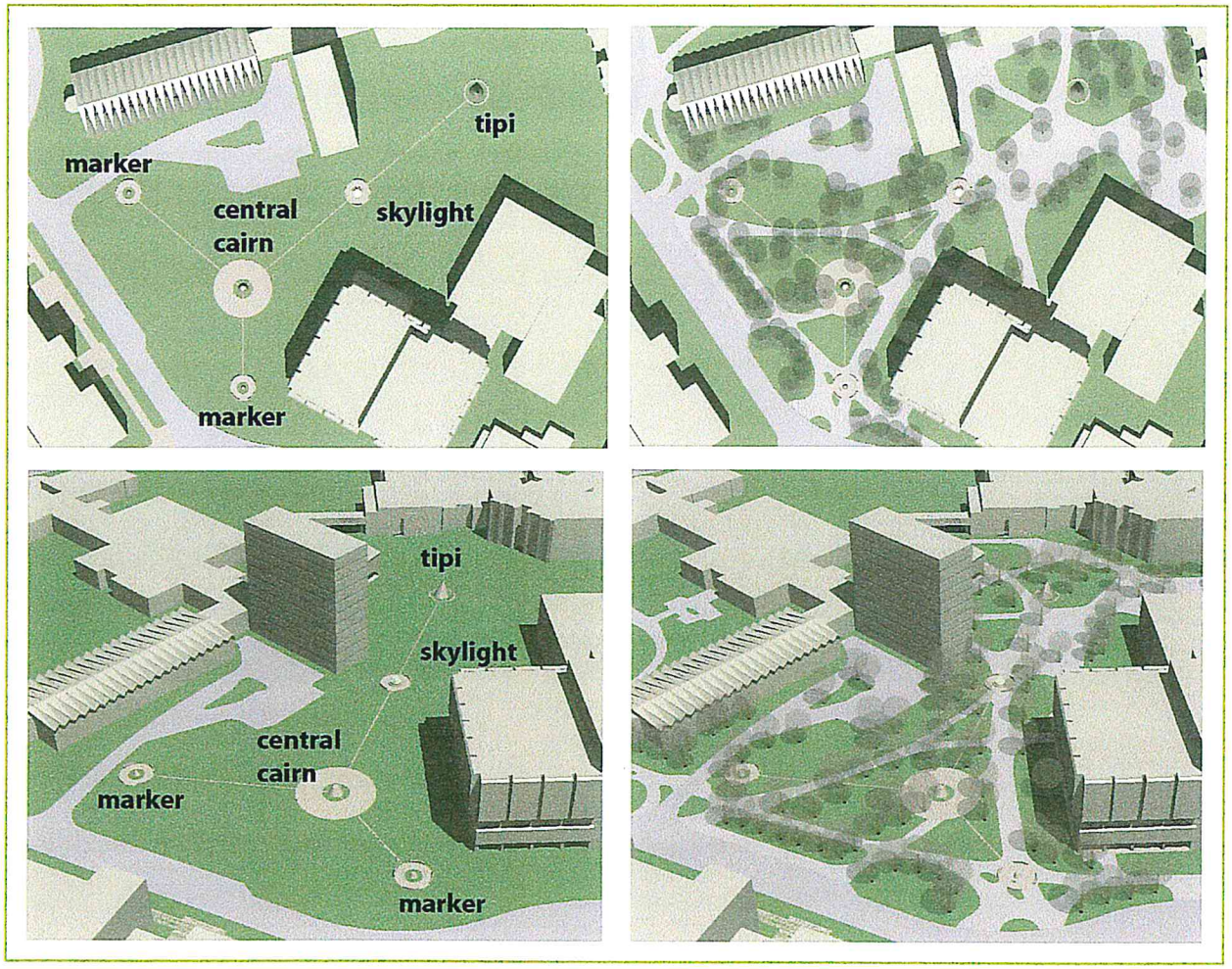


Figure 2.5.7: Computer model showing Medicine Wheel concept

2.6 CONCEPT DEVELOPMENT (see Appendix C)

With an understanding of cultural programming, and cultural 'anchor' formed for the facility, the next process is form development. Programming placement is very important in Aboriginal cultures. As indicated in Part 1, program elements were placed in certain areas of a dwelling or ceremonial space for cultural reasons. Linking the programming philosophy to the concept established is Section 2.5 is the first process of the building concept.

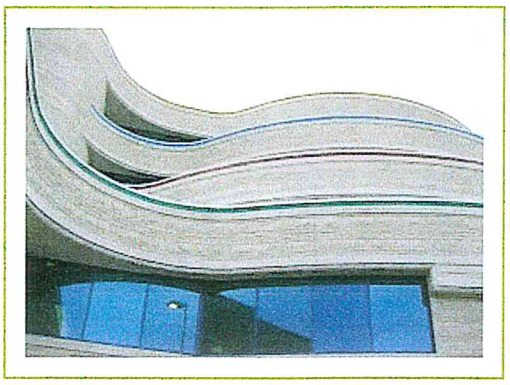


Figure 2.6.1: FNU Regina

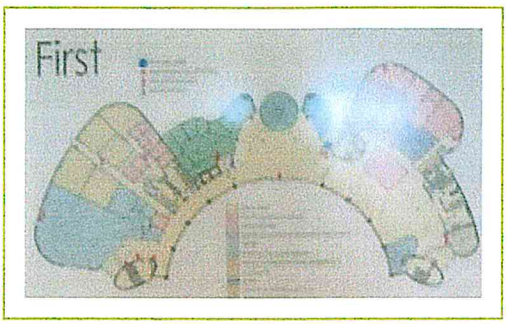


Figure 2.6.2: FNU floor plan

Figure 2.6.3: Treaty Four Governance Centre

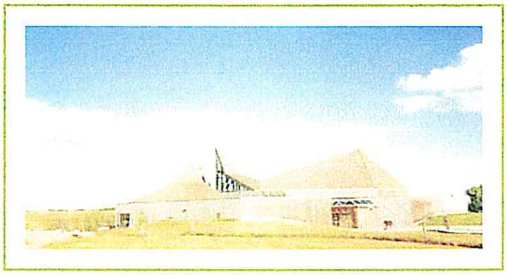


Figure 2.6.4: Wanuskewin – tipis in a valley
- photo by author

Establishing Guidelines for Building Form

Part 1 mentions that almost all Northern Plains Indian architecture is circular in form and not rectilinear. Some local contemporary examples of this are The First Nations University (FNU) in Regina (Figures 2.6.1 & 2.6.2), Nekaneet First Nation School and to some extent the Treaty Four Governance Centre located in Fort Qu'Appelle (Figure 2.6.3). The majority of contemporary Aboriginal architecture is rectilinear.

If the consideration for the facility is the fact that it is permanent piece of architecture, how can a migratory culture be portrayed in this permanent form? This is not an uncommon issue in some contemporary designs where symbolism is used. For example, at Wanuskewin, four triangular elements and the long roof can be interpreted as four tipis located in a valley (Figure 2.6.4). These triangular elements also serve the function of clerestory lighting

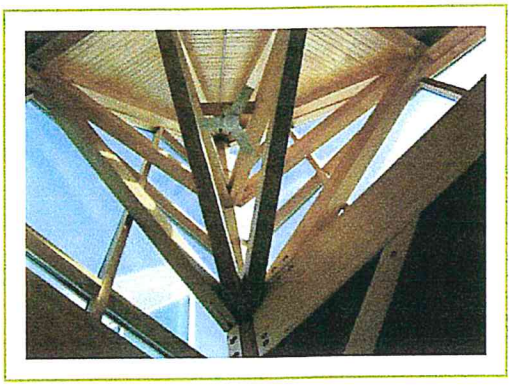


Figure 2.6.5: Wanuskewin – Clerestory windows (top of tipi)
- *photo by author*

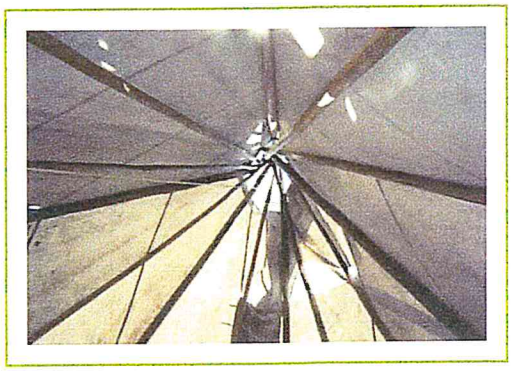


Figure 2.6.5: Wanuskewin – interior of tipi
- *photo by author*

Figure 2.6.7: Whitecap First Nation School
- *courtesy Kindrachuk Agrey Architecture*

(Figure 2.6.6). Entrance elements are commonly tipi symbolic in that they mark the entrance and provide natural light to flood the internal spaces (Figure 2.6.7). Symbolism is popular among contemporary design and allows for some interpretation into the aboriginal culture. Other elements such as colour and masonry work are also used to provide an aboriginal motif.

Tipi or Not Tipi

The culturally dominant piece of Northern Plains architecture is undoubtedly the tipi. The tipi is a very strong element and can be found in many contemporary aboriginal facilities in Saskatchewan. Tipi structures are common among contemporary facilities in Saskatchewan. Three examples are the White Buffalo Youth Centre (Figure 2.6.8), the Willow Cree Healing Lodge located at Beardy's Reserver (Figure 2.6.9) and the Treaty Four Governance Centre (Fort Qu'Appelle) (Figure 2.6.10).

Contrary to traditions, these tipi elements are represented as permanent structures when in fact the tipi was migratory and capable of climatic and economic response. Unlike the tipi, the Aboriginal Student Centre is a permanent piece of architecture and therefore the tipi or a tipi structure was found unsuitable for the centre. However, as indicated in Section 2.5, because the tipi is a very prominent symbol of aboriginal culture, and a potential cultural teaching tool, consideration was given to providing a tipi as part of the overall concept of the facility – a real tipi that functions as intended. By eliminating the

tipi as a building concept, other suitable design criteria needed to be established.

Figure 2.6.8: White Buffalo Youth Centre
- photo by author

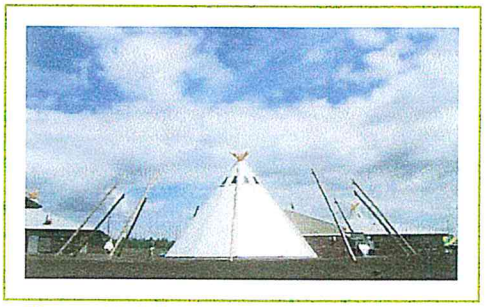


Figure 2.6.9: Willow Cree Healing Lodge
- courtey Friggstad Downing Henry Architects

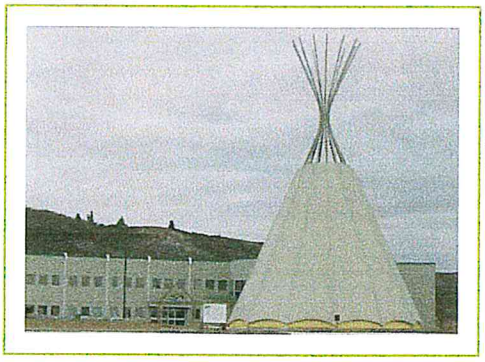


Figure 2.6.10: Treaty Four Governance Centre – claim to have the worlds largest inhabited Tipi
- photo by author

Programming Adjacencies

For concept development, understanding cultural relationship programming (spatial adjacencies) needed to be explored based on the information gathered to this point. With the Aboriginal Student Space project, there are three distinct programming items: Student Space, Administrative Support (Elders) Space and Ceremonial/Teaching space. How should these three programming elements be organized within an Aboriginal Facility? As indicated in Part 1, placement within aboriginal dwellings were in accordance to certain beliefs. The internal areas in a tipi had significance with regards to programming.

Understanding these placements is important with aboriginal facilities because there are cultural reasonings behind for them. Nekaneet School used a programming model (Figure 2.4.5) that was developed by the Chief and council members indicating where they wanted certain programming elements placed within their school.
Interpreting this type of philosophy to the Aboriginal Student Space project and the established Parti, placement of the three major components was based on creating a support and teaching philosophy – from student to teaching to elder. This 'educational journey' is symbolized in the solstice concept established earlier. The student space is placed on the radiating arm of the rising sun

(indicating the beginning), the ceremonial/teaching space is located along the southern solstice marker (similar to powwow arbours) and the Elder's space is placed along the radiating arm indicating the setting sun (Figure 2.6.11). This 'educational journey' or cycle is revised everyday.

The Ceremonial/Teaching space lines up with the stone cairn and internal tipi creating a cultural axis between the Student Space and the Elder's space, thus completing the conceptual vision of the student support facility.

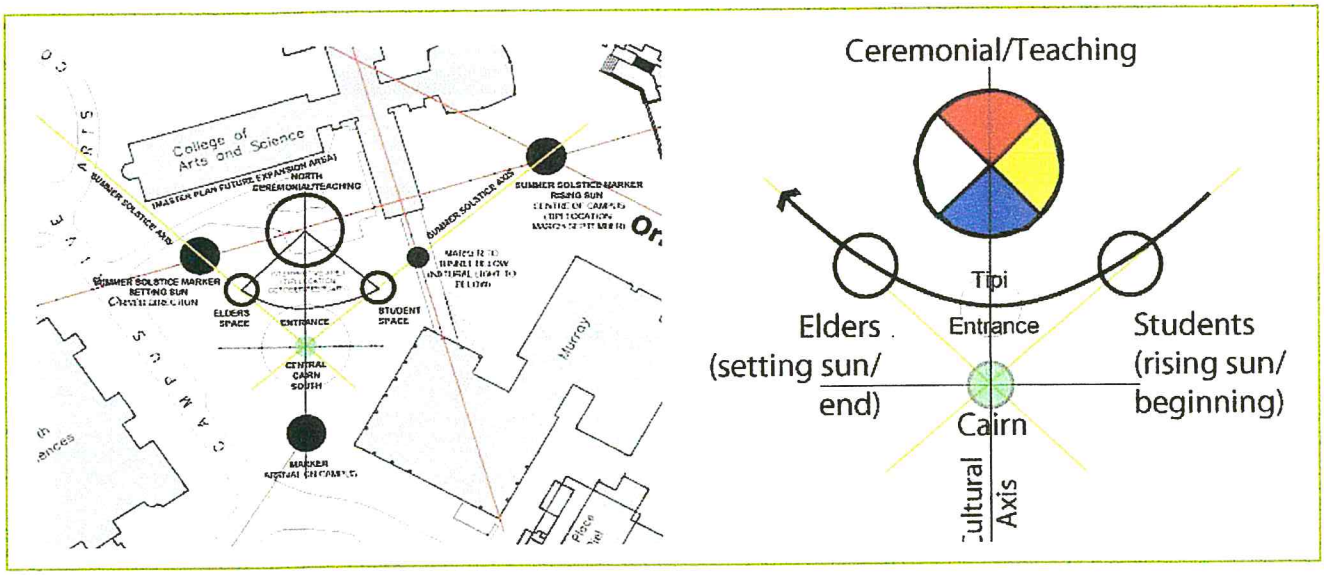


Figure 2.6.11: Final Aboriginal Student Space concept philosophy (Appendix D)

3.1 DEMONSTRATION PROJECT (see Appendix D)

The final design for the demonstration project has taken into consideration all of the research from Parts 1 and 2 and has been graphically represented in Appendix D.

In addition to the overall concept and philosophy that was established, additional modifying factors were reviewed such as structure, circulation, natural lighting and ventilation. Some factors were based on the basic principles of the tipi. As an example, the smoke flaps purpose for ventilation and lighting. Structure was based on permanent Aboriginal architecture such as the post and beam systems utilized in earthlodges and today's powwow arbours. Types of materials were also considered and based on the historic research and the materials that were available to the Northern Plains. The overall geometry and form was based on symbolisms such as the plains, tipis, ceremonial spaces, earthlodges, and the fact that traditional Aboriginal architecture is non-rectilinear. This creates a circulation pattern that is more wandering - feeling like one is 'exploring' the facility. This overall 'exploring' concept begins with the outer wheel markers throughout the site.

Technical data

The final building design meets the programming requirements that were initially established (Section 2.2) with some minor adjustments – with the exception of the Ceremonial/Teaching space.

Final programming:

Indigenous Student Council (ISC) Programming

Student Space	Qty.	
Lounge	1	110 sq.m.
Student Office	1	12 sq.m.
Computer Centre	1	26 sq.m.
Resource Room	1	35 sq.m.
Storage/Kitchen	1	11 sq.m.
Total allocation (net)		**194 sq.m.**

Increase of 9 sq.m.

Aboriginal Student's Centre (ASC) Programming

Student Services	Qty.		
Elder's Meeting Room	1	34 sq.m.	34 sq.m.
Elder's Offices (2)	2	10 sq.m.	20 sq.m.
Manager's Office	1	12 sq.m.	12 sq.m.
Admin. Offices (2)	2	10 sq.m.	20 sq.m.
Workstations (2)	2	9 sq.m.	18 sq.m.
Secretary	1	12 sq.m.	12 sq.m.
Waiting area	1	11 sq.m.	11 sq.m.
Photocopy/file/storage	1	11 sq.m.	11 sq.m.
Total allocation (net)			**138 sq.m.**

Increase of 14 sq.m. - Elders Meeting Room gained in allocation with some cut-back on their office space.

Additional programming

Additional programming	Qty.		
Meeting Room	1	38 sq.m.	38 sq.m.
Ceremonial/Teaching Space (300 people)	1	465 sq.m.	465 sq.m.
Change Rooms	2	10 sq.m.	20 sq.m.
Building Foyer (see below)			90 sq.m.
Total allocation (net)			**613 sq.m.**

Additional space was required for the Ceremonial/Teaching space (due to its multi-use) - an additional 140 net sq.m.).

Building Foyer (Interpretive Space) allowance is approximately 90 net sq.m.

Total Building Areas

- Total Building **net** (without Building Services) 945 sq.m.
- Total Building **gross** 1550 sq.m.

Building Code Classification

Section 3.2.2.7: Group A, Division 2, up to 2 Storeys, Sprinklered.

This allows for a combination of combustible and non-combustible construction – allowing for exposed wooden structure.

3.2 CONCLUSION

It is intended that this thesis provides an understanding of the local Aboriginal culture and apply it to design. While at the same time, it creates a 'guide' that can act as a resource for designers to learn some basic knowledge and understanding of Saskatchewan First Nations history and culture, and apply it to the design process. It is an important time in Saskatchewan where First Nation and Aboriginal population is increasing. Designers will immediately realize that these are unique cultures, and although this thesis may not cover the amount of detail it would take to fully understand them, it does provide a basic document that references important elements such as history, spirituality, Medicine Wheels, colour and traditional aboriginal architecture.

One may assume that this thesis should have included a critique of existing modern aboriginal or First Nations architecture in the province. Rather than critiquing existing modern aboriginal architecture it was felt that it was more significant to understand the process of design by understanding the client. After reading this 'guide', which combines historical and cultural research into the aboriginal client and designer process one may be better equipped to critique our provincial aboriginal architecture and come to the realization that there are few choice examples.

During the Demonstration Project process, there were difficulties in the design development of the Aboriginal Student Space facility until it was

realized that the concept must go beyond the building. As Wanuskewin tells the story of the Plains Indians or even as Daniel Libeskind's Jewish Museum in Berlin tells the story of the Jewish people, the Aboriginal Student Space demonstration project tells the story of Plains Indians. This story is told not only through the building but also the project's parti and connection to the existing environment. Depicting the culture's spirituality, history and culture goes beyond the building. It is the understanding of the culture, in many aspects, that should determine a designer's overall concept.

In designing for aboriginal peoples, things should be kept simple. Sometimes issues may tend to be overanalyzed, in particular when trying to incorporate too much Aboriginal symbolism into a design. This thesis kept the philosophy of simplicity in mind while stripping the concept down to its basics (cultural philosophy) and understanding the Aboriginal concept behind the design. Break it down to the basics. For example, what are the essentials of a tipi and why has or was it so successful as a cultural design and icon? It is this kind of thinking that starts the process of creating Aboriginal architecture.

Understanding and researching our local First Nations is a fulfilling journey. For example, immersing into the First Nations throughout the province by meeting knowledgeable people, both Aboriginal and non-Aboriginal, participating in sweats and powwows, and spending a night in a tipi at Wanuskewin are all essential research components for anyone wanting to learn and appreciate

Aboriginal culture. Developing this deep understanding of local Aboriginal and First Nations culture is vital to the design process.

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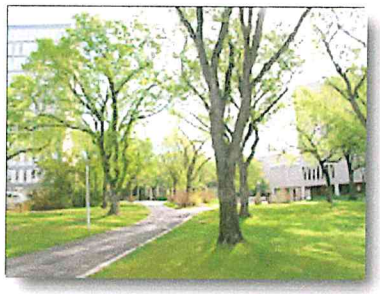
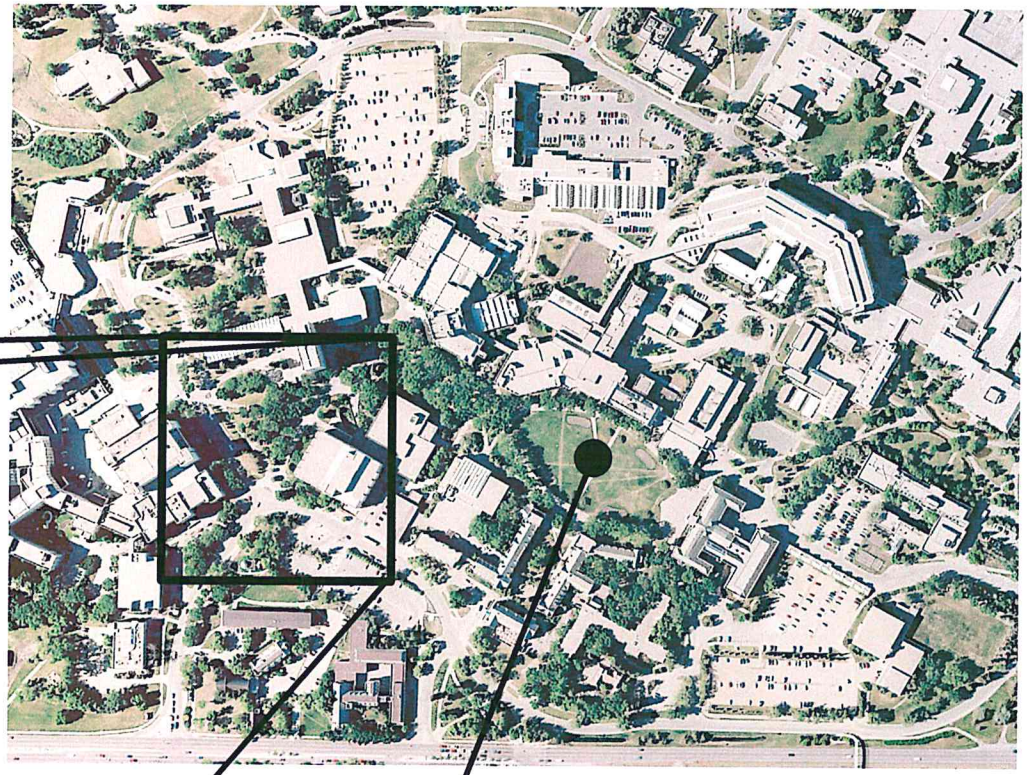
Appendix A



Wiggins Court



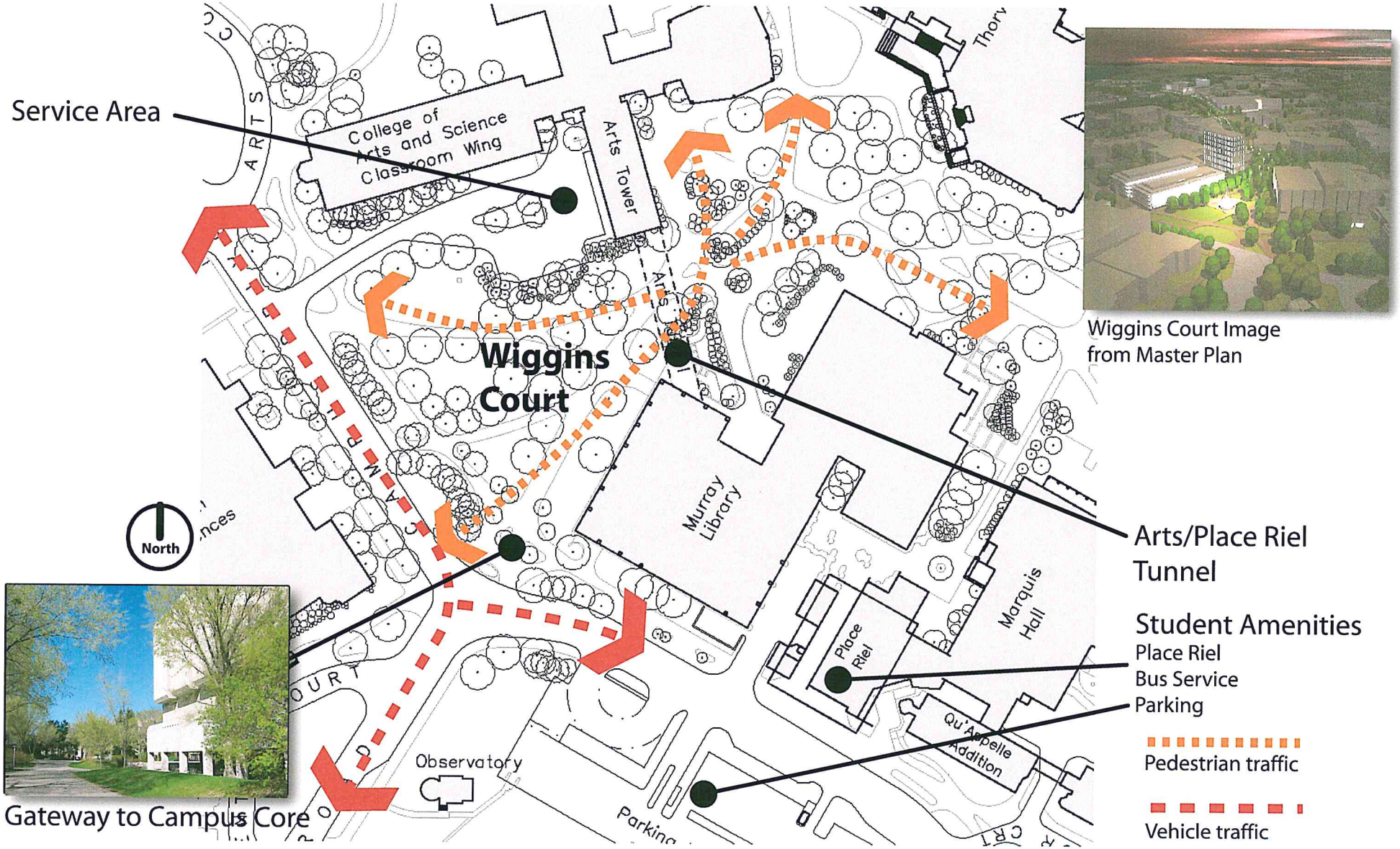
The Bowl

Aerial view of campus core

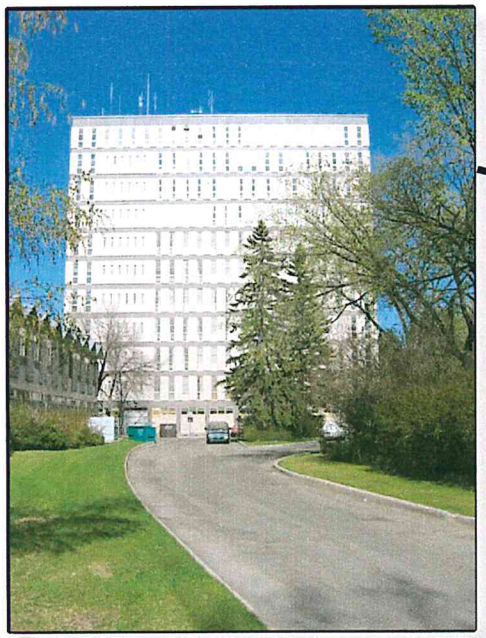
Aerial view of Wiggins Court

Wiggins Court

Site Selection - Wiggins Court

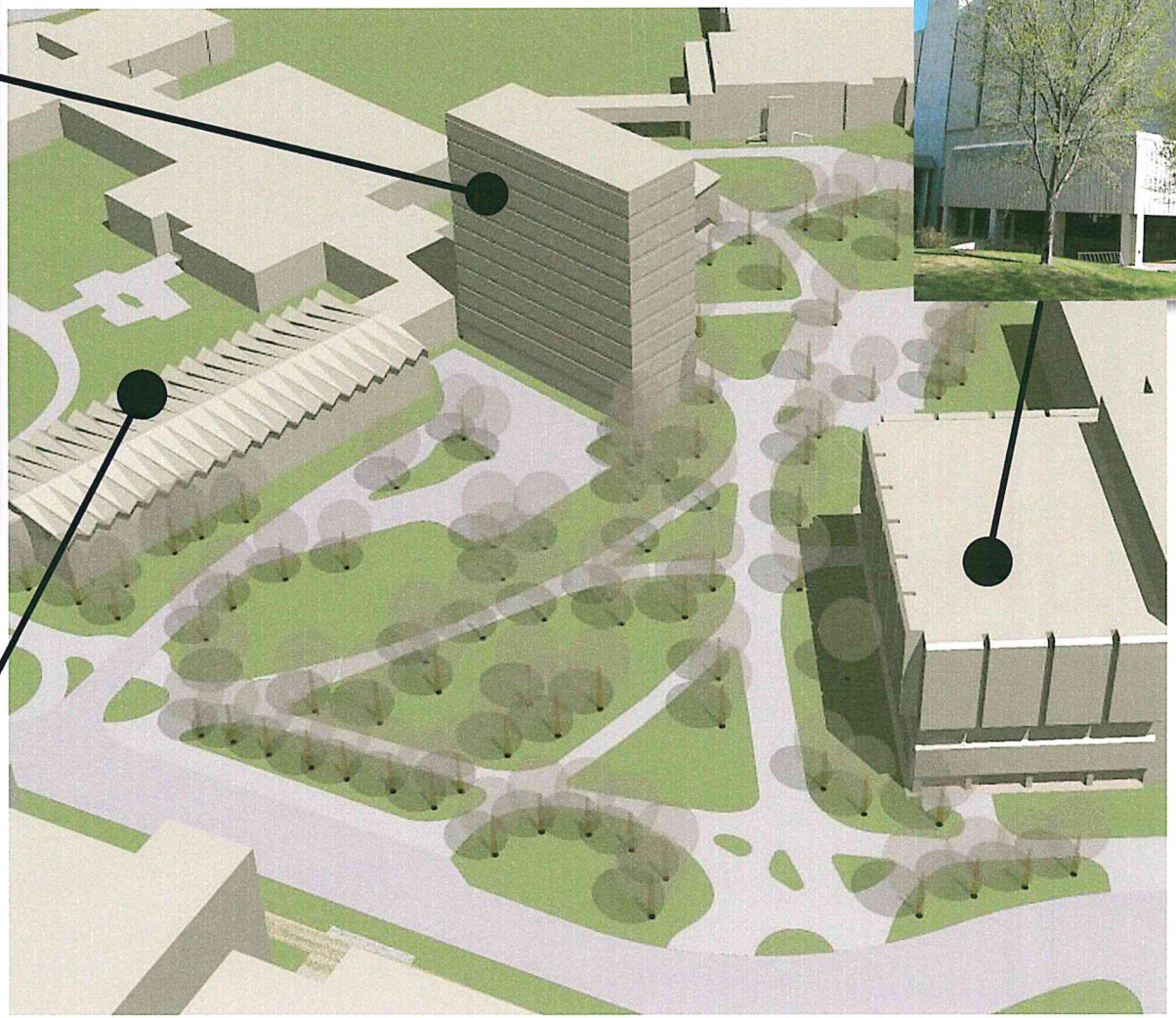


Site Selection - Wiggins Court



Arts Tower

Arts Classroom Wing



Computer Massing - Wiggins Court

Murray Library

Site Selection - Wiggins Court

1
Parking Lot F Site

Positives

+ Access off Campus Drive
+ Excellent vehicular access
+ Site services available
+ High visibility
+ Adjacent parking currently available 'Lot G & F' (some negotiating would be required)

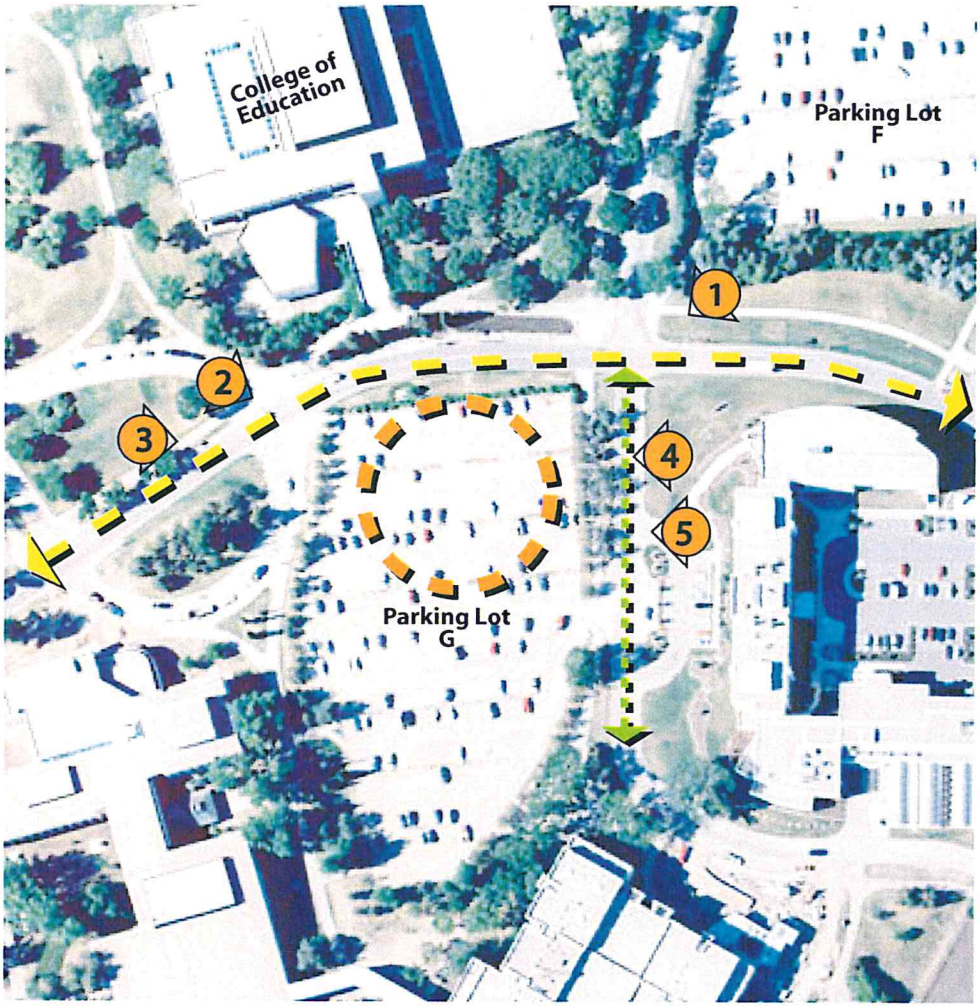
Negatives

- Large set-back required (~ 13m) because of infrastructure (duct bank)
- Beyond campus drive perimeter, therefore further distance from campus core
- low pedestrian access
- Removal of large amounts of vegetation
- likely loose some existing parking stalls from 'Lot F'

1

2

2
Parking Lot G Site



Positives

+ Access off Campus Drive
+ Excellent vehicular access
+ Site services available
+ High visibility

Negatives

- Last remaining large site located in core area and current parking
- recommended that site remains protected for academics

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2

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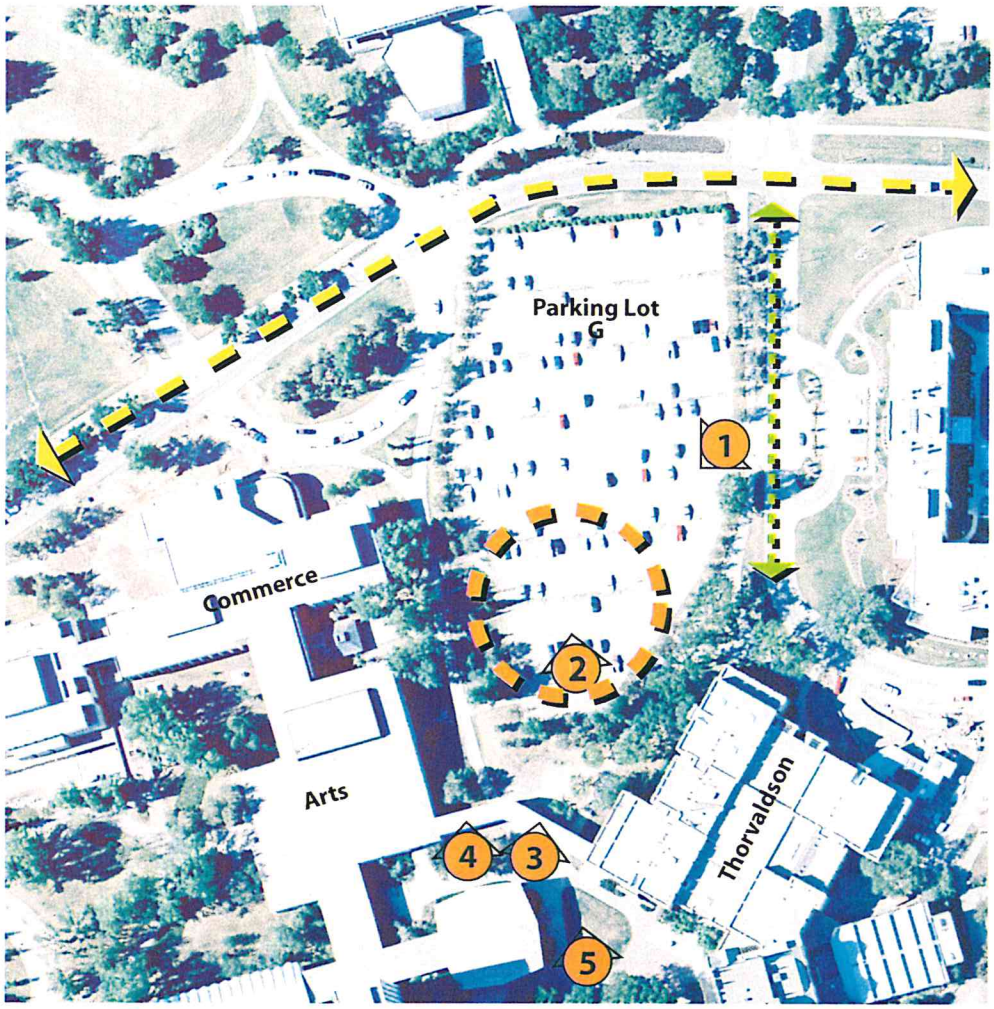
5

3
Parking Lot G Site



Positives

+ Located within campus core (Bowl)
+ Excellent pedestrian access

Negatives

- Last remaining large site located in core area and current parking
- recommended that site remains protected for academics
- Site servicing required
- Low visibility

1

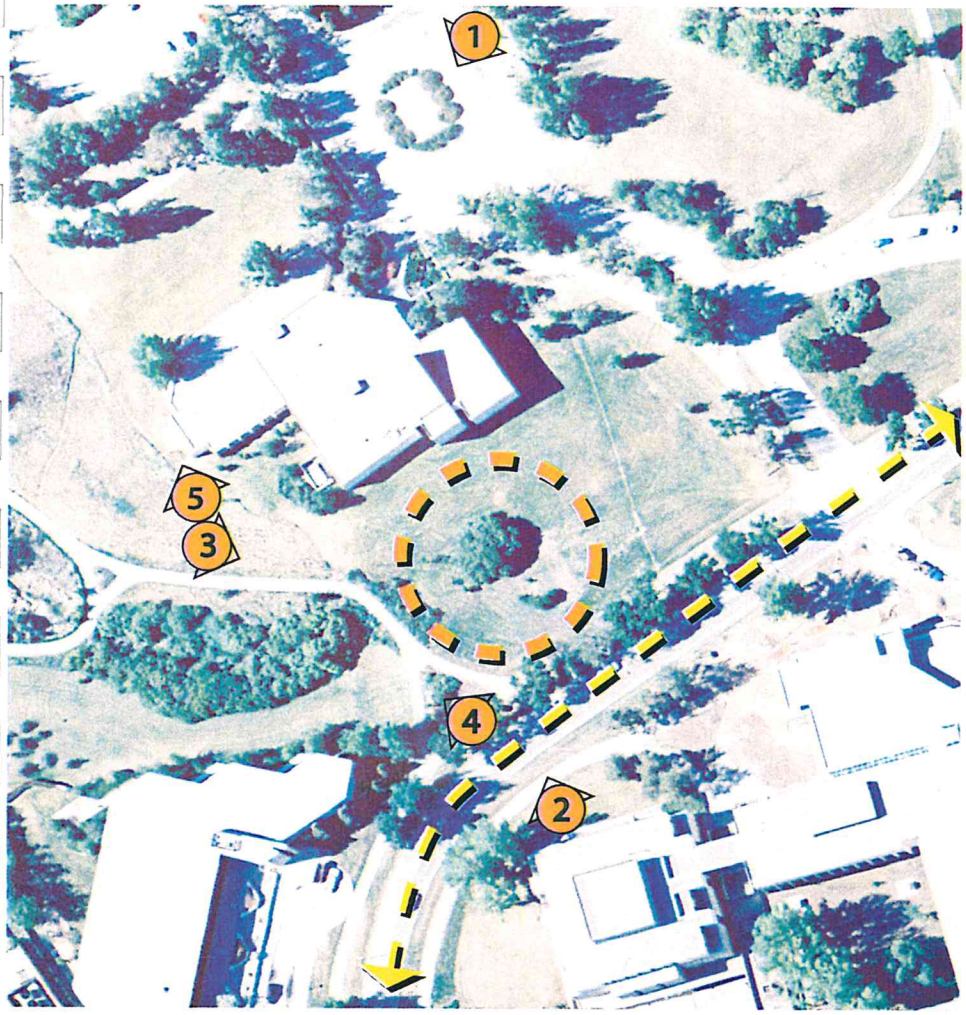
2

3

4

5

4
Diefenbaker Centre Site



Positives
+ High visibility
+ Located adjacent to campus core
+ Access to site services
+ Located adjacent to Campus Drive

Negatives
- Site work required
-Extended pedestrian access
- Master plan shows addition to Diefenbaker Centre with this site shown as wetlands for storm water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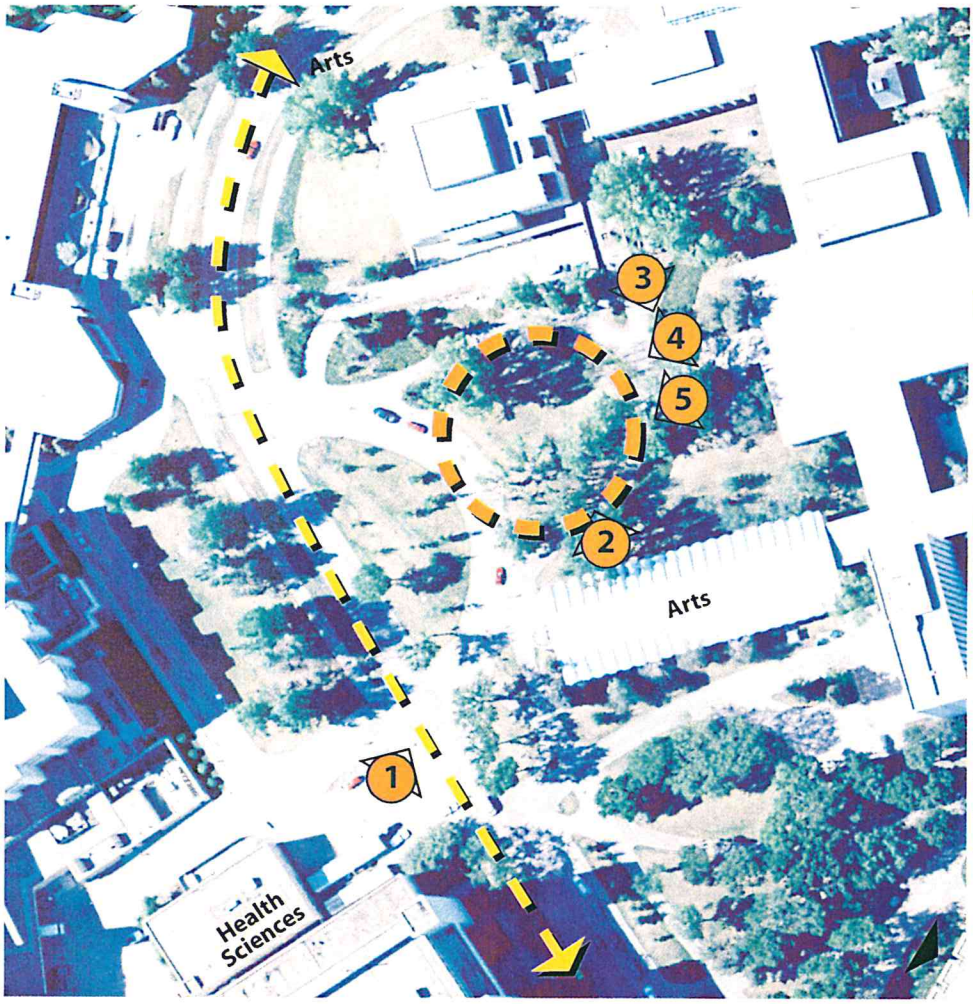
Arts Court Site



Positives
+ Excellent pedestrian access
+ High visibility
+ Located within campus core

Negatives
- Will be an extremely dense site in the future (Health Sciences)
- Indicated as Law Addition in Master Plan
- Some site servicing required
- Challenging topography
- Extensive vegatation removal
- Future site for College of Law expansion

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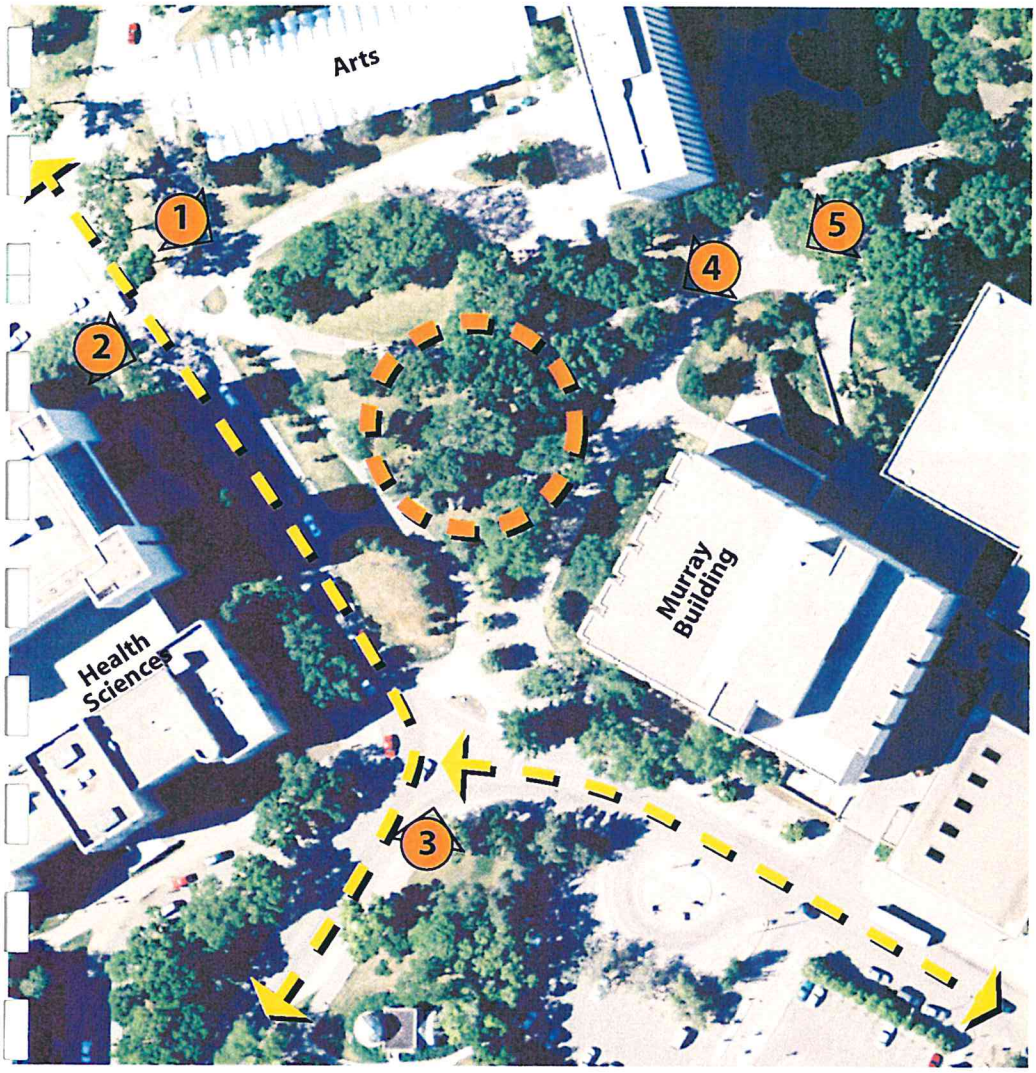
Wiggins Court Site



Positives

+ Excellent pedestrian access
+ Extremely high visibility
+ Located within campus core
+ Access to site services
+Proposed location for Aboriginal skylight feature and entrance to tunnel between Arts and Place Riel

Negatives

- Extensive vegation removal
- Located at busy intersection
- Indicated as 'Greenspace Gateway' in Master Plan
- May be impacted by Academic Health Sciences and/or Saskatchewan Lecture Theatre complex

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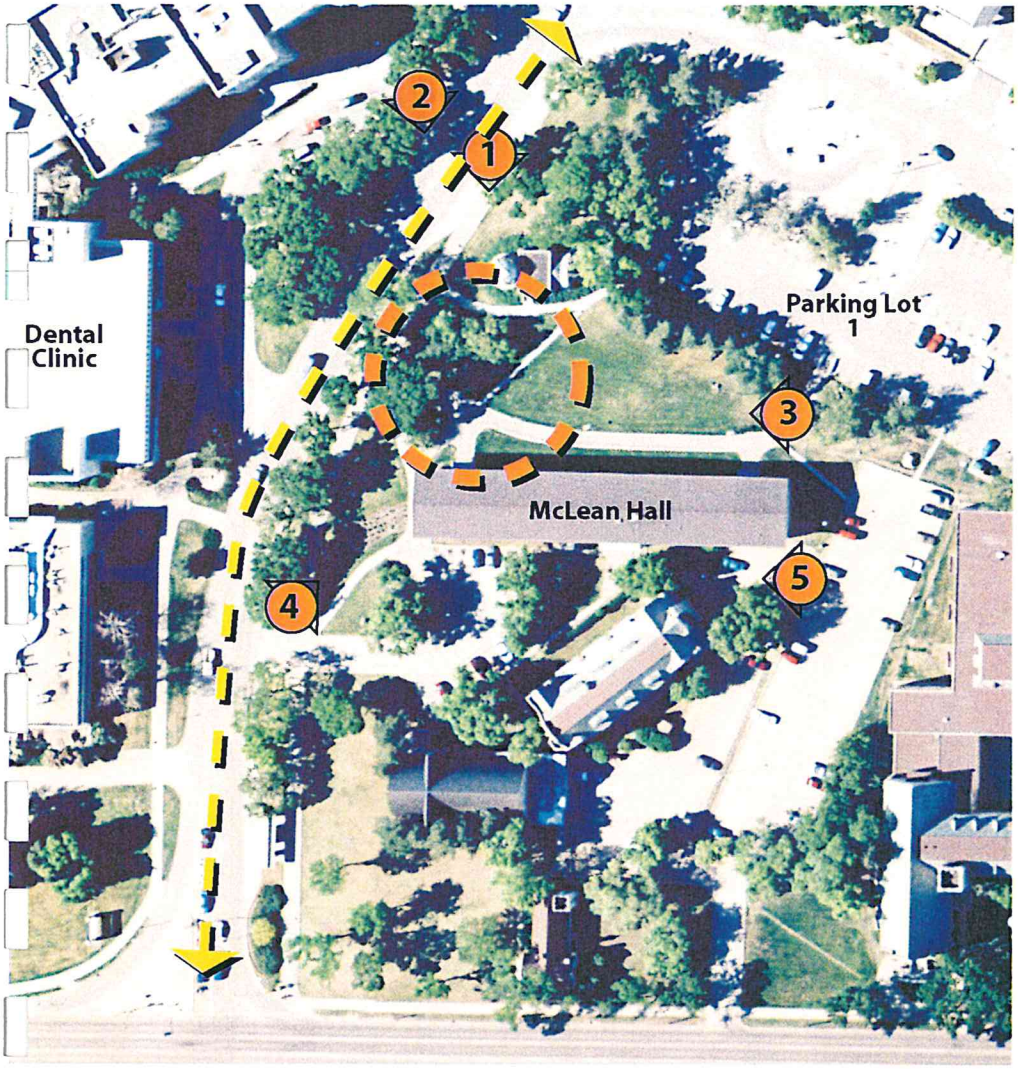
McLean Hall Site



Positives

+ Access off Campus Drive
+ Site services available
+ High visibility
+ Excellent pedestrian access
+ Adjacent parking currently available 'Lot 1' (some negotiating would be required)
+ Excellent pedestrian access
+ Located close to campus core

Negatives

- Some vegation removal
- Located at busy access to campus (Wiggins Road)
- Need to review potential road re-alignment

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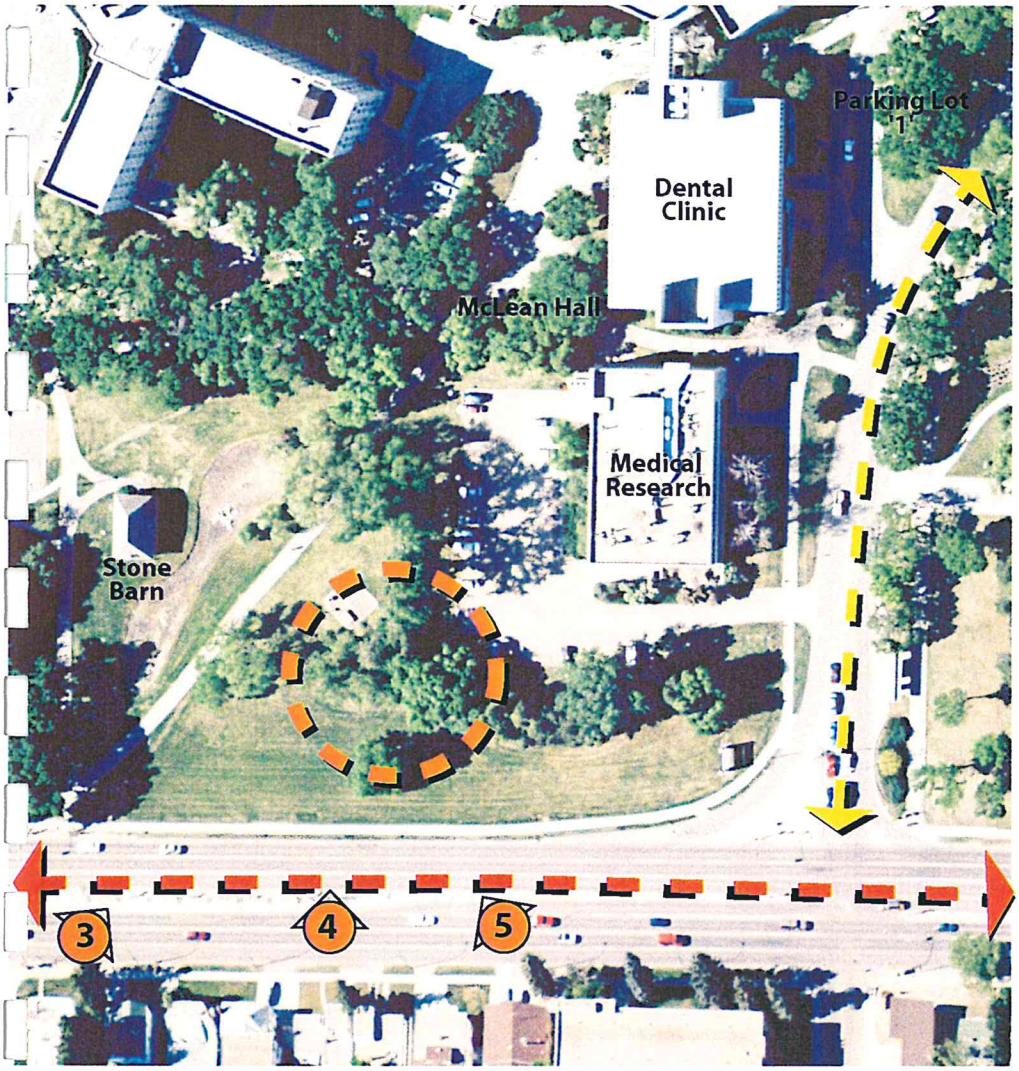

8 College Drive and Wiggins Site

Positives

+ Access off Campus Drive (requires further evaluation)
+ Extremely high visibility
+ Located close to existing campus core

Negatives

- Some vegation removal
- Located at busy intersection (Wiggins and College Drive)
- Costs for site services

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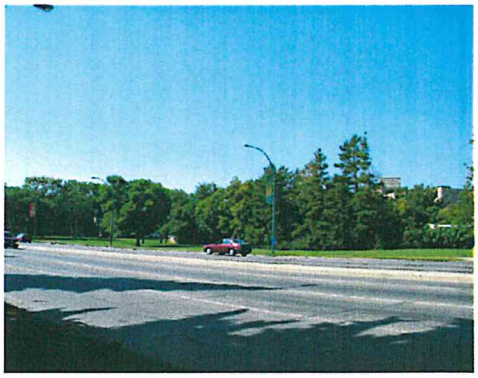

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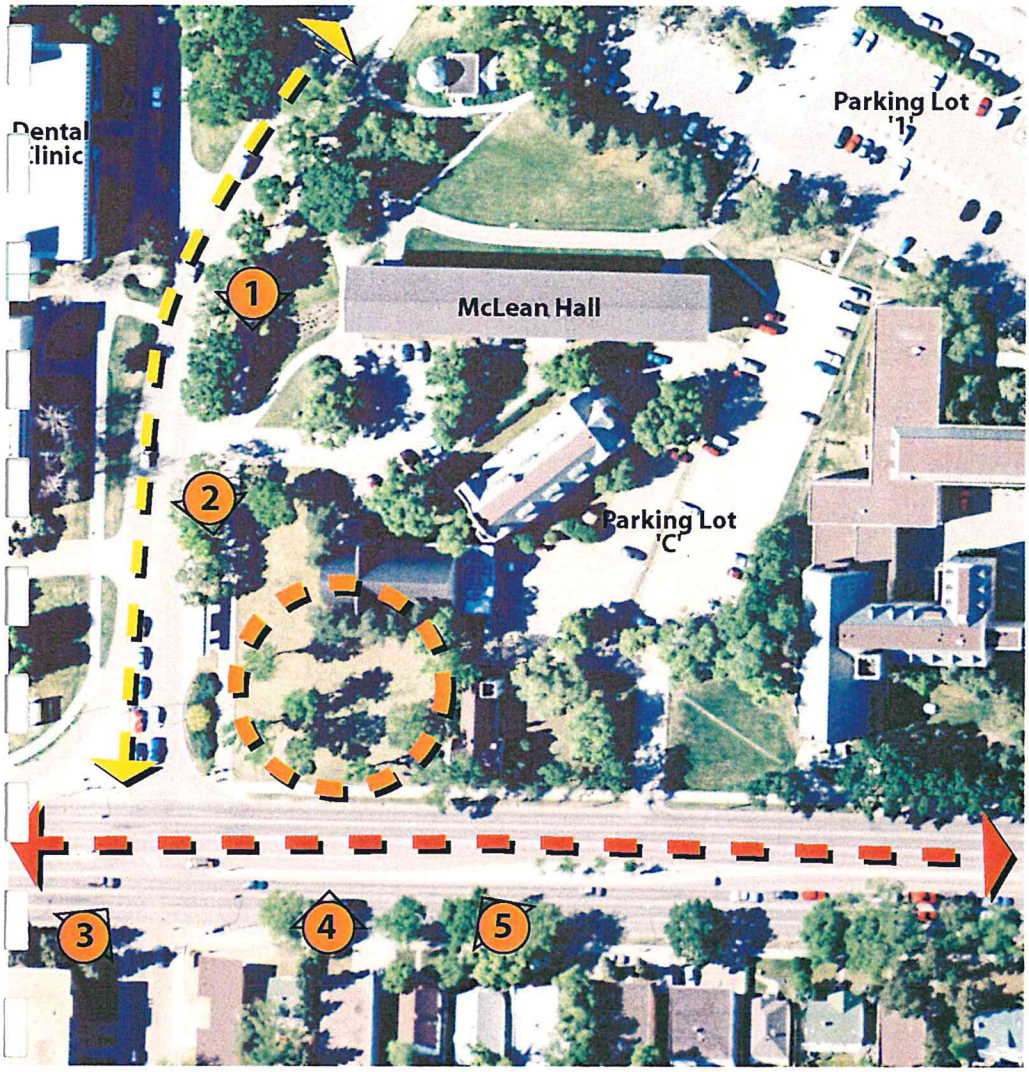
9
Emmanuel & St. Chad Site



Positives

+ Access off Campus Drive
+ Site services available
+ Extremely high visibility
+ Adjacent parking currently available 'Lot C' (some negotiating would be required)
+ Excellent pedestrian access
+ Located close to existing campus core

Negatives

- Some vegation removal
- Located at busy intersection (Wiggins and College Drive)
- Some costs for site services
- Limited expansion area
- Concern over suitability for daycare function
- Potential site for Saskatoon Theological Union

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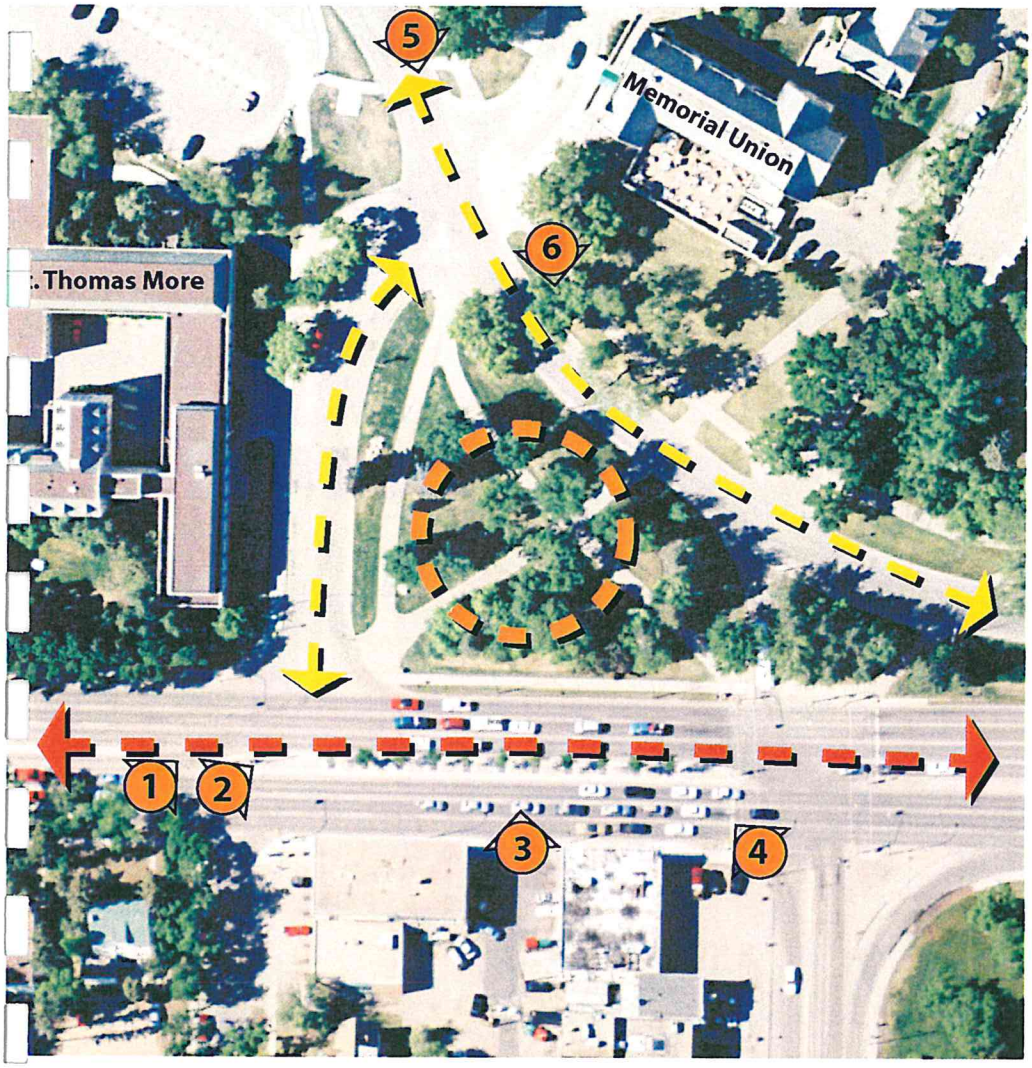
10
Bottomley Road Site



Positives

+ Access off Campus Drive
+ Extremely high visibility
+ Close proximity to new parkade
+ Excellent pedestrian access
+ Located close to existing campus core

Negatives

- Extensive vegetation removal
- Located at busy intersection (Site access is very limited for vehicular traffic)
- High cost for site services
- Very limited expansion area
- Master Plan does not shown any development in this area.

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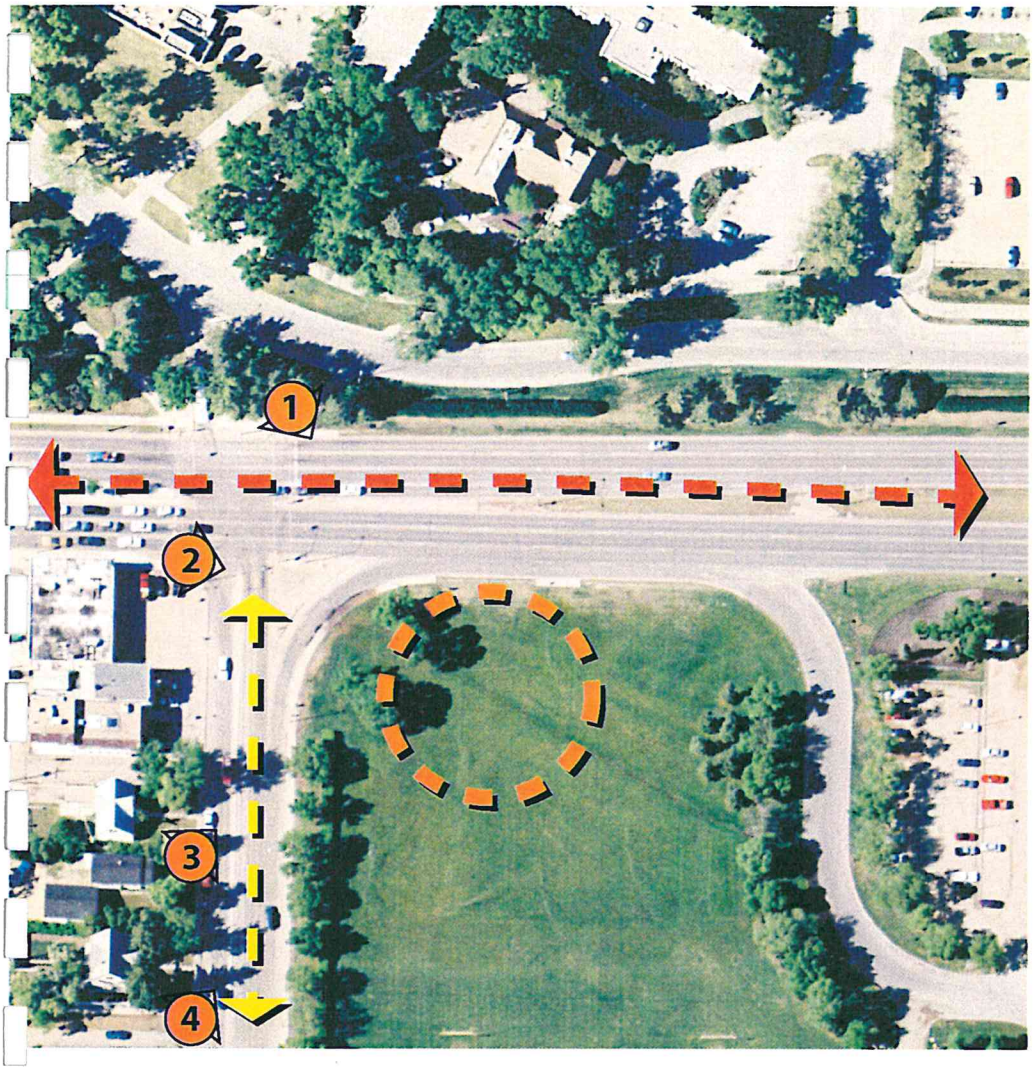
11

College Drive and Cumberland Site



Positives

+ Access off Campus Drive or Cumberland
+ Extremely High visibility
+ Adjacent to new parkade
+ Excellent pedestrian access
+ Large expansion space

Negatives

- Located at busy intersection
- High cost for site services
- Master Plan does not shown any development in this area
- Need to evaluate in terms of residential plan

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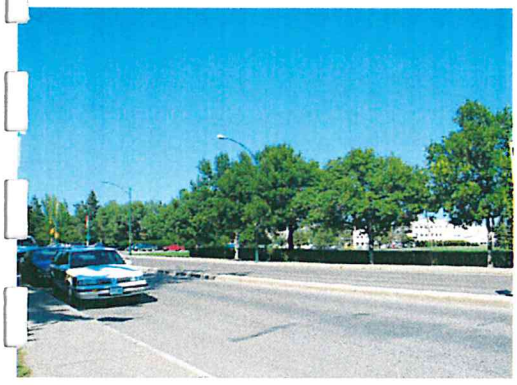

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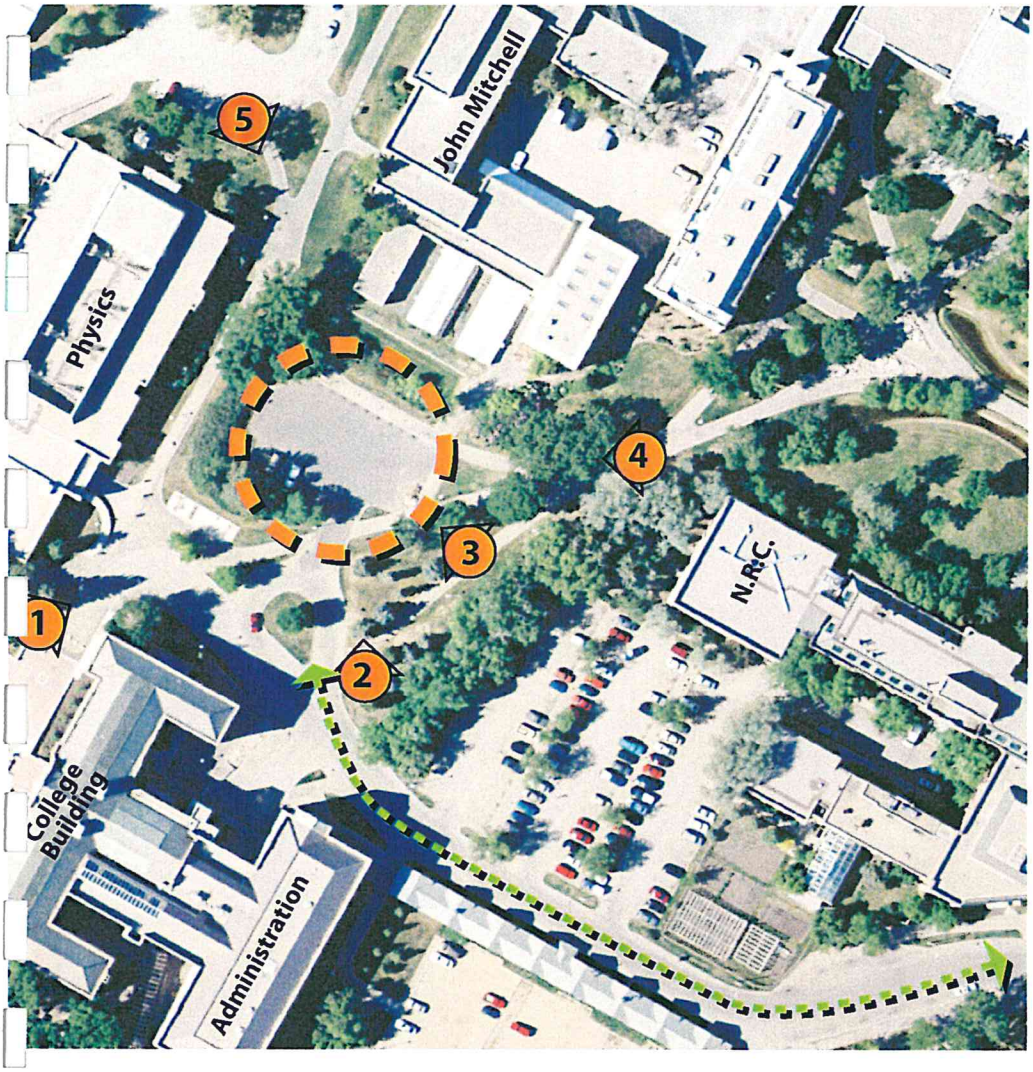
12
Parking Lot 8 Site



Positives
+ Located in Campus Core
+ Low visibility
+ Excellent pedestrian access
+ Large expansion space
+ Site services available

Negatives
- Limited expansion space
- Site services require possible relocation (duct bank)
- Master Plan does not show any development in this area (but recent discussion of 'Admin. North' or residential development
- Very limited vehicular access

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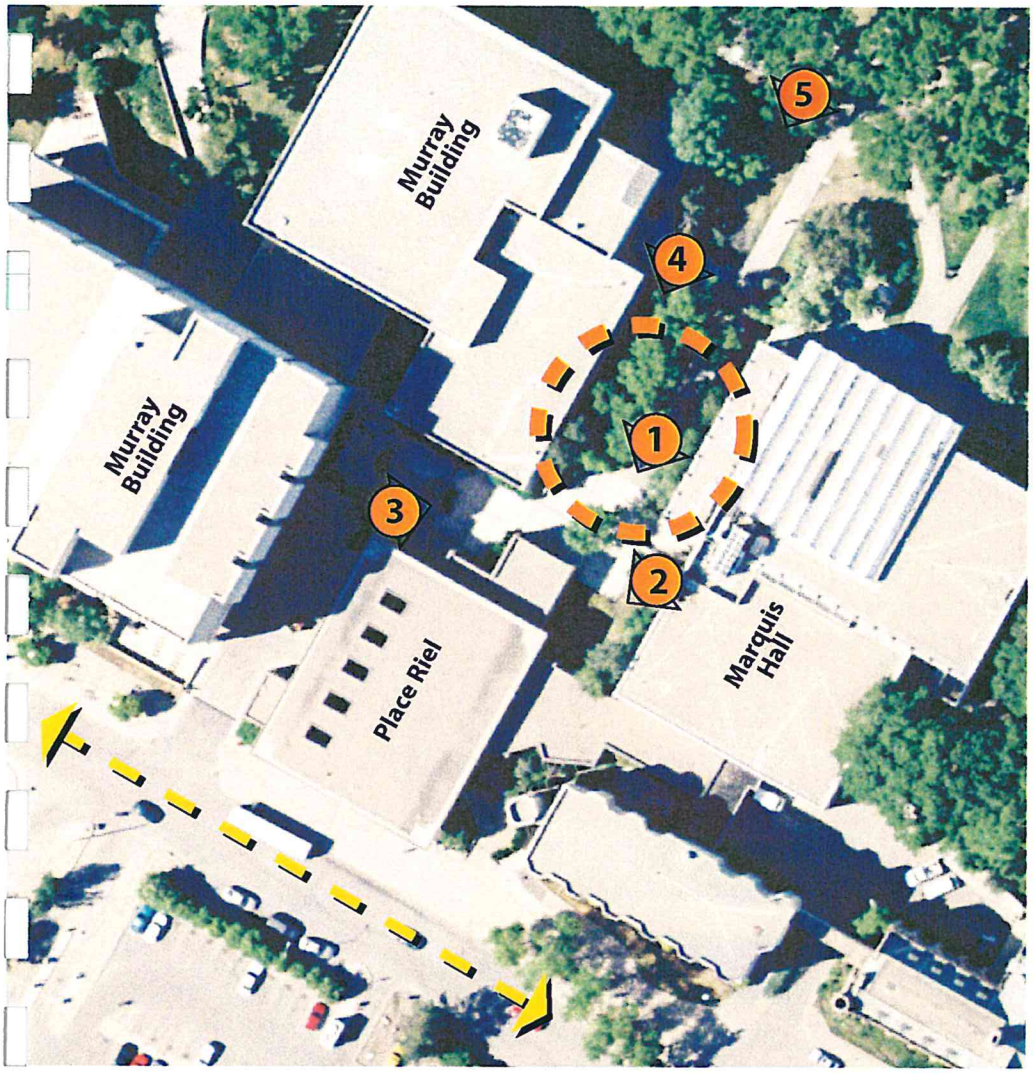
13
Marquis Infill Site



Positives

+ Excellent pedestrian access
+ Located within campus core
+ Access to site services
+ Indicated as built space in Master Plan

Negatives

- Extensive vegation removal
- Located with busy area
- Coordination with mechanical services (duct bank and adjacent buildings) = increase costs

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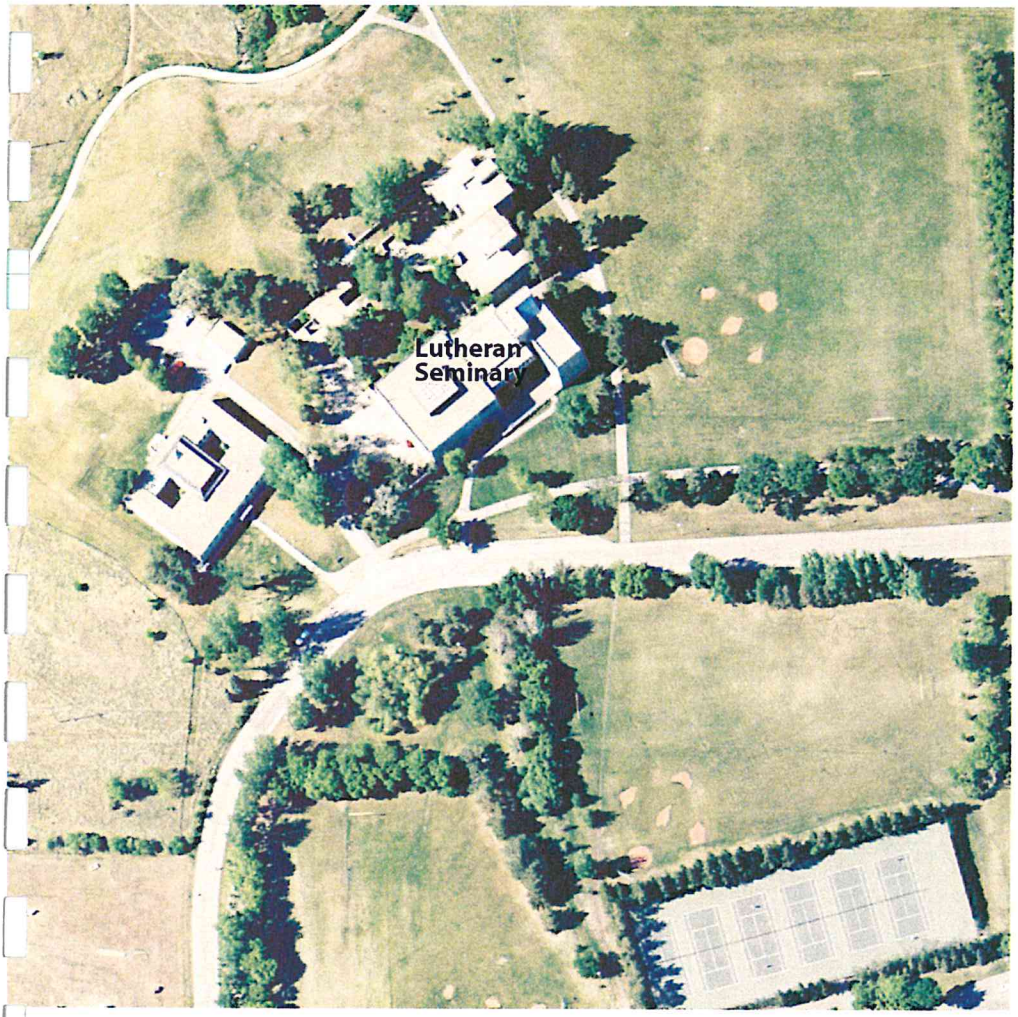


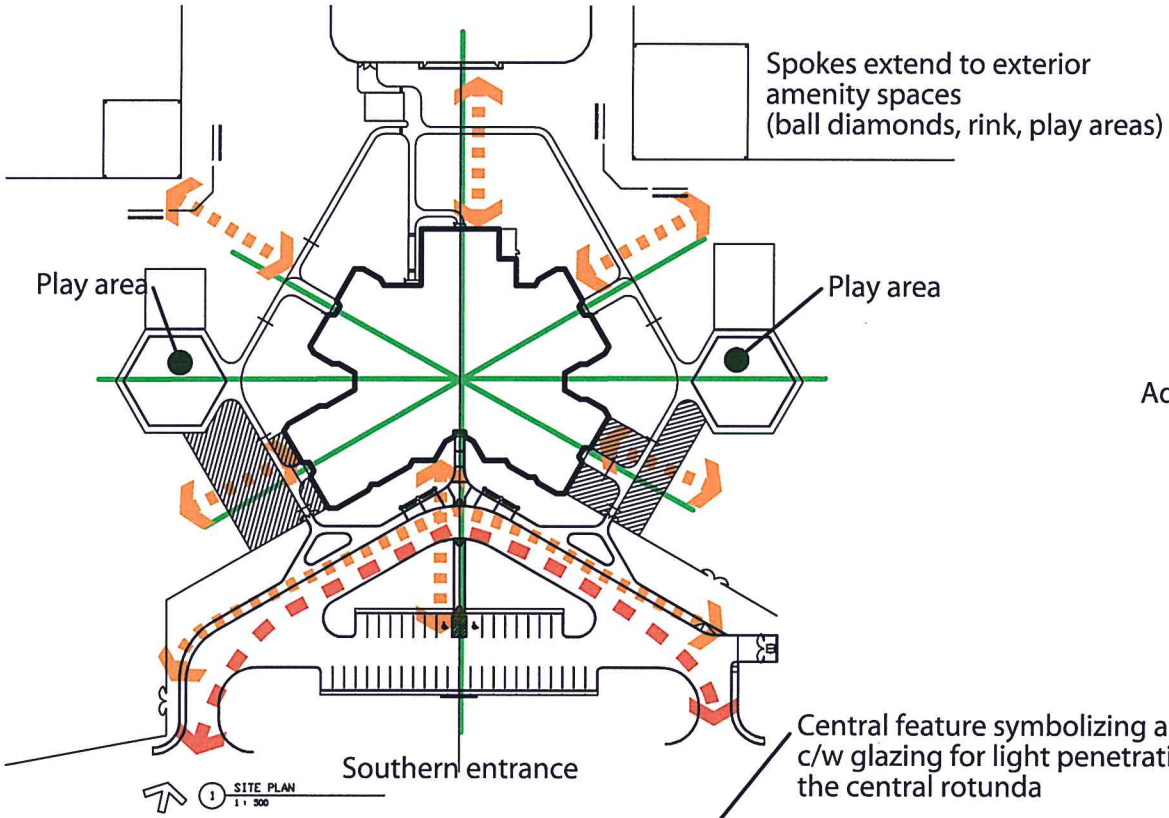
14
River Valley Area/ Lutheran Seminary Site

Note:
The Lutheran Seminary may, at some point, be turned over to the University of Saskatchewan

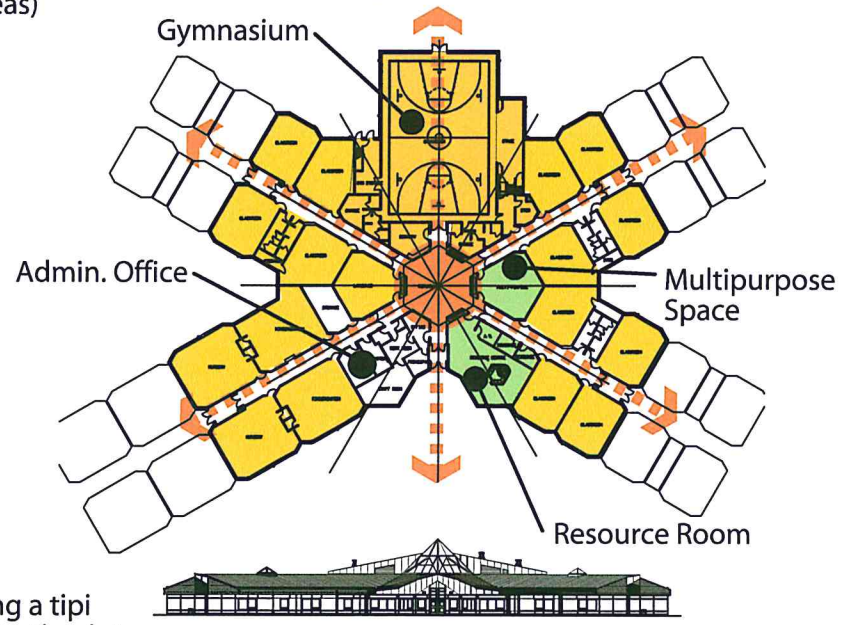
Positives
+ High visibility from accross the river, extremely low campus visibility
+ Scenic setting
+ Excellent potential for incorporation into Master Plan

Negatives
- Remote site removed from campus core
- Site servicing required

Appendix B



Medicine Wheel concept used
- central rotunda
- radiating spokes for circulation



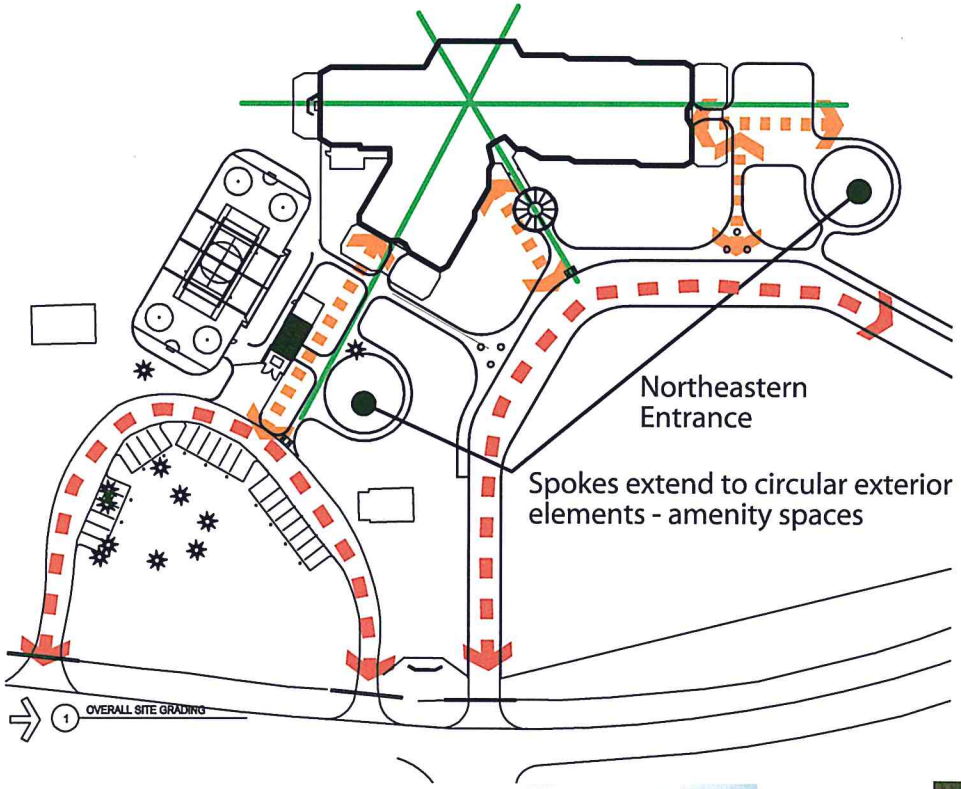
Central feature symbolizing a tipi
c/w glazing for light penetration into
the central rotunda

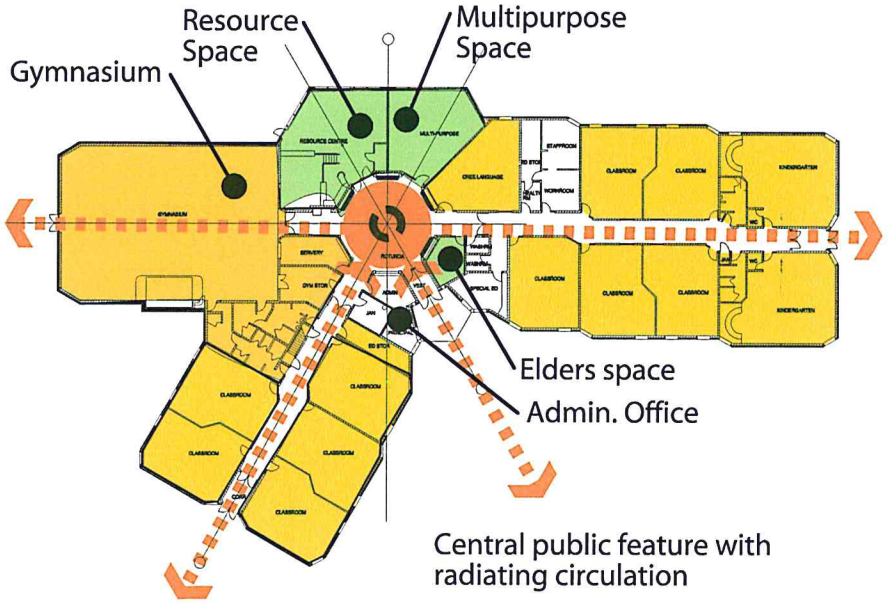
Exterior finish is brick and
pre-finished metal
Brick work based on local
bead pattern

Note the colours used:
Red, Yellow, Blue and Green

Existing Projects - Onion Lake F.N. School (Primary School)

Plans and Photos courtesy of Friggstad Downing Henry Architects





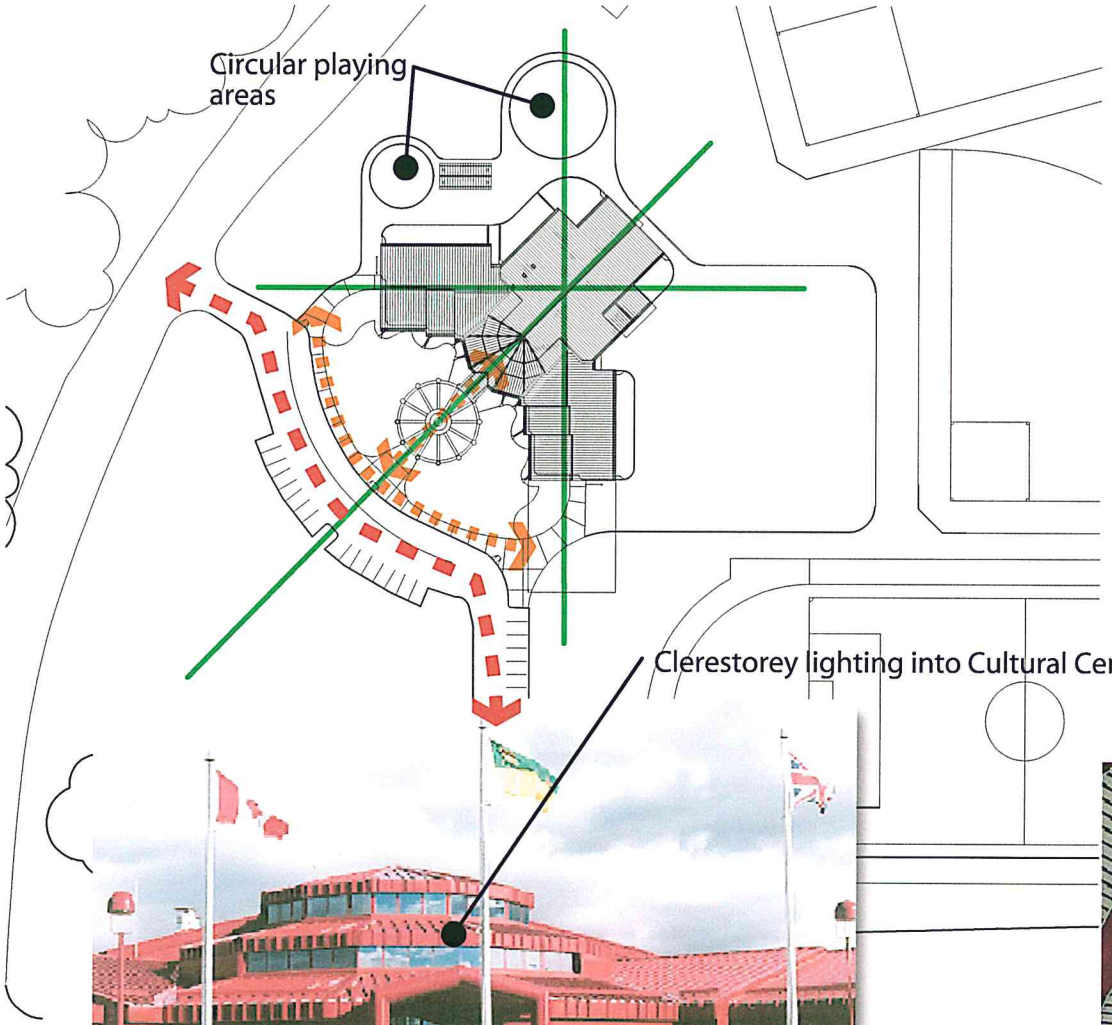
Exterior finishes
brick and prefinished metal

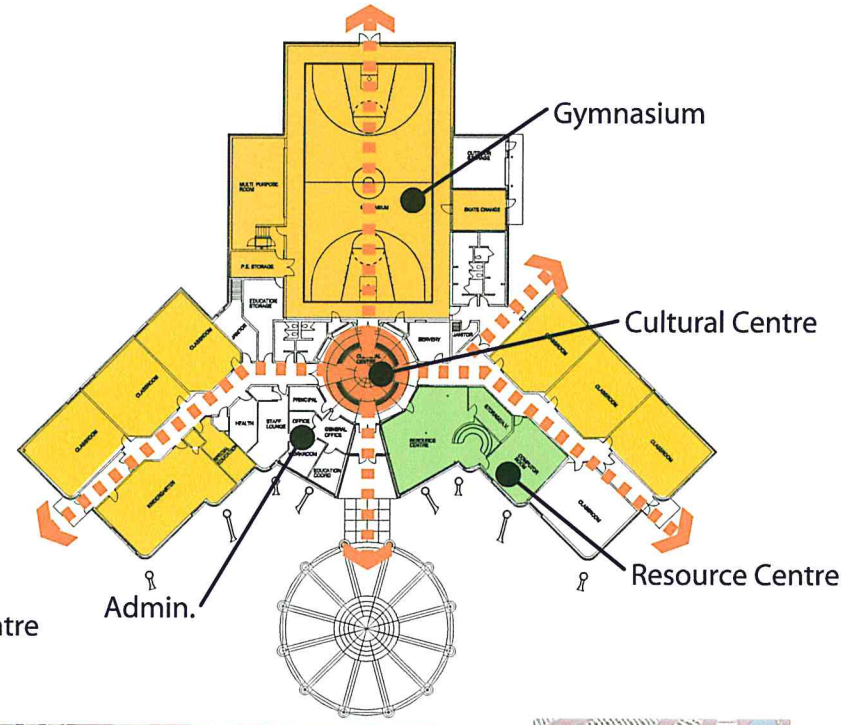
Central foyer feature - natural light

Local artwork exterior tile

Existing Projects - Big River F.N. (Mistahi Sipiy Elementary School)

Plans and Photos courtesy of Friggstad Downing Henry Architects





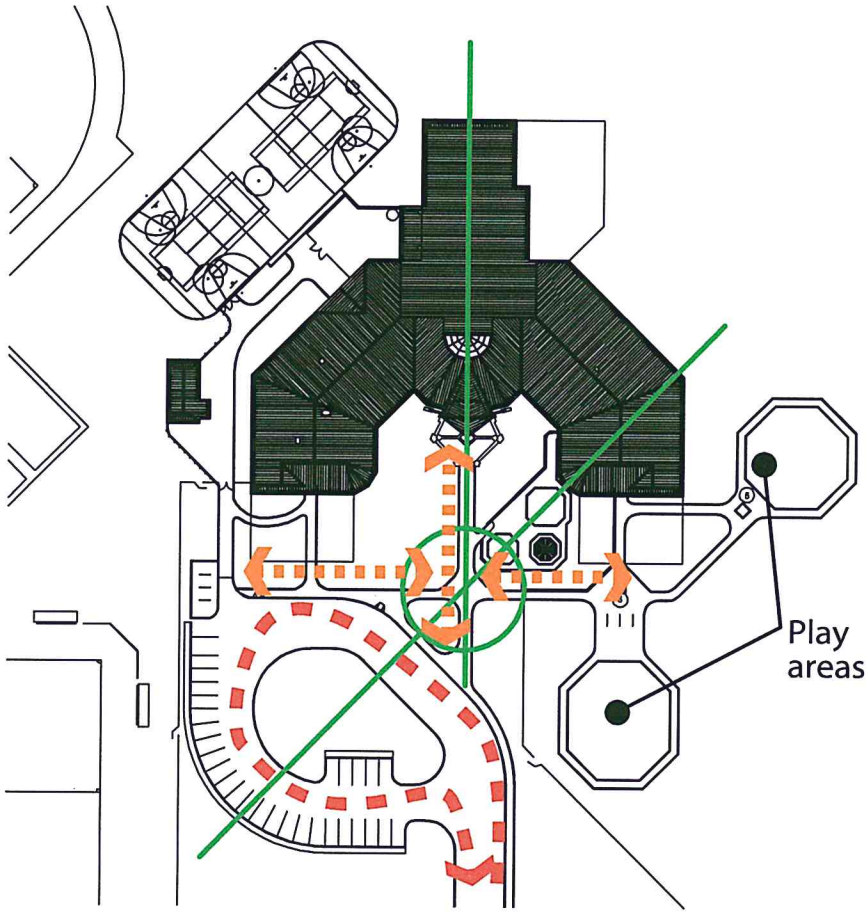
Exterior finish is brick with prefinished metal

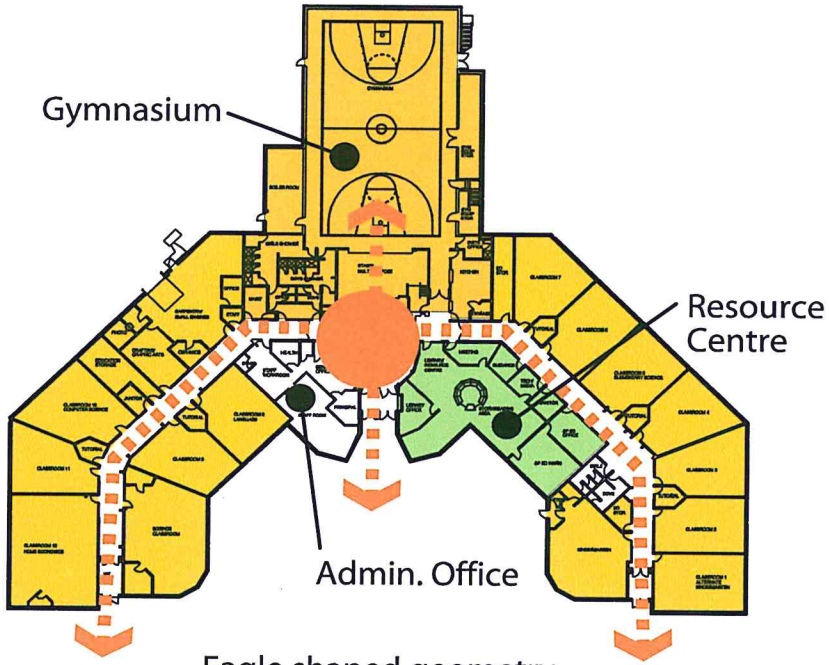
Suspended art work

Cultural Centre

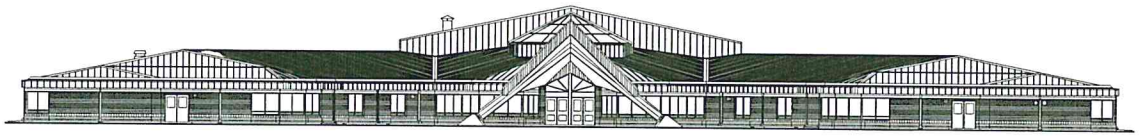
Existing Projects - Mosquito-Lean Man Grizzly Bear F.N. (Mosquito School)

Plans and Photos courtesy of Friggstad Downing Henry Architects



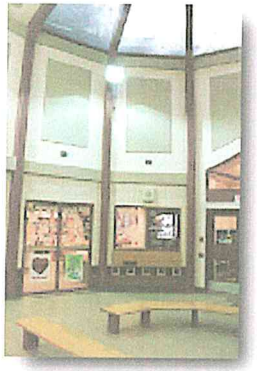


Eagle shaped geometry



Symbolic tipi entrance element

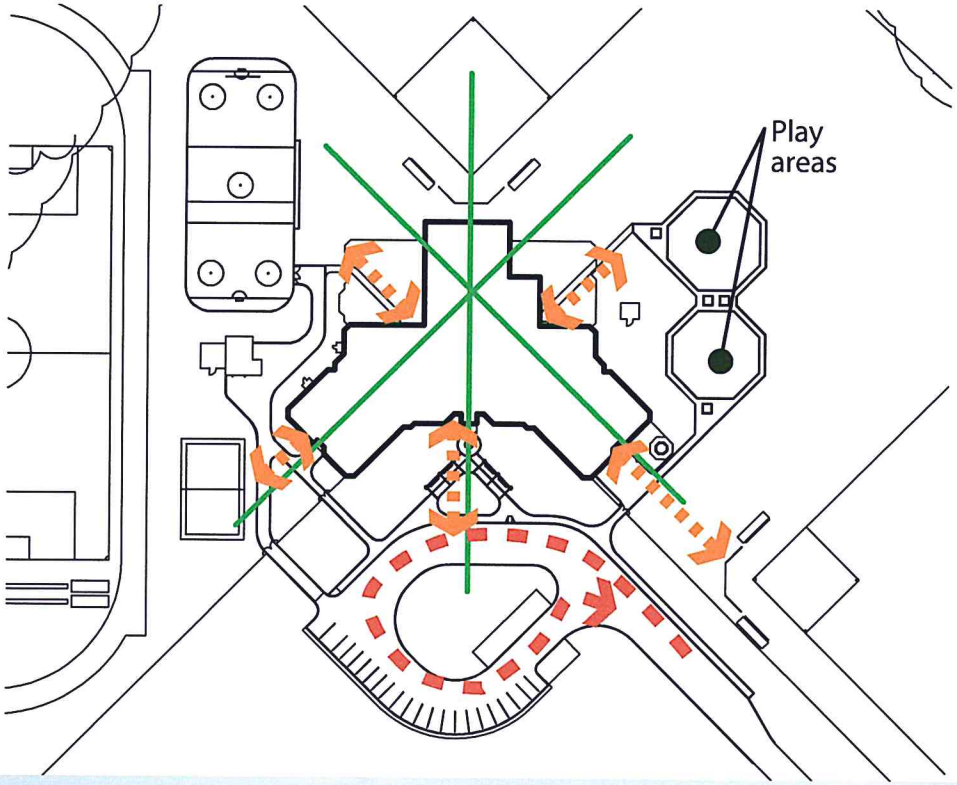
Circular reading space in Library

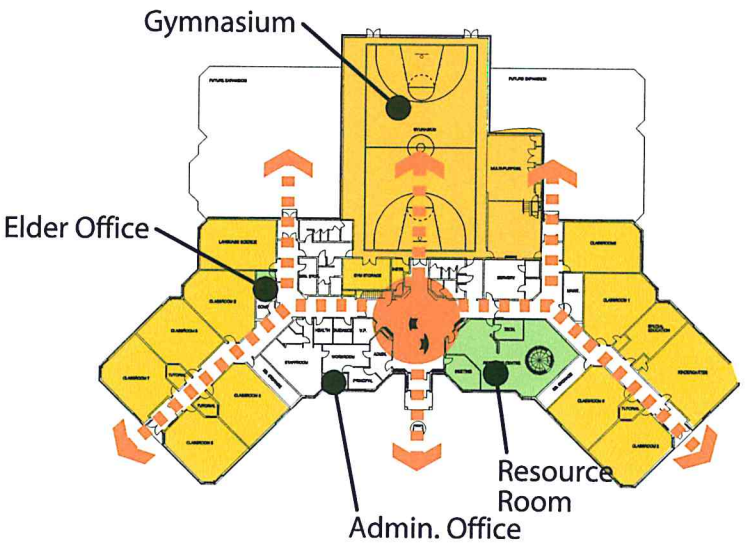


Central rotunda area

Existing Projects - Cote F.N. (Chief Gabriel Cote Education Complex)

Plans and Photos courtesy of Friggstad Downing Henry Architects





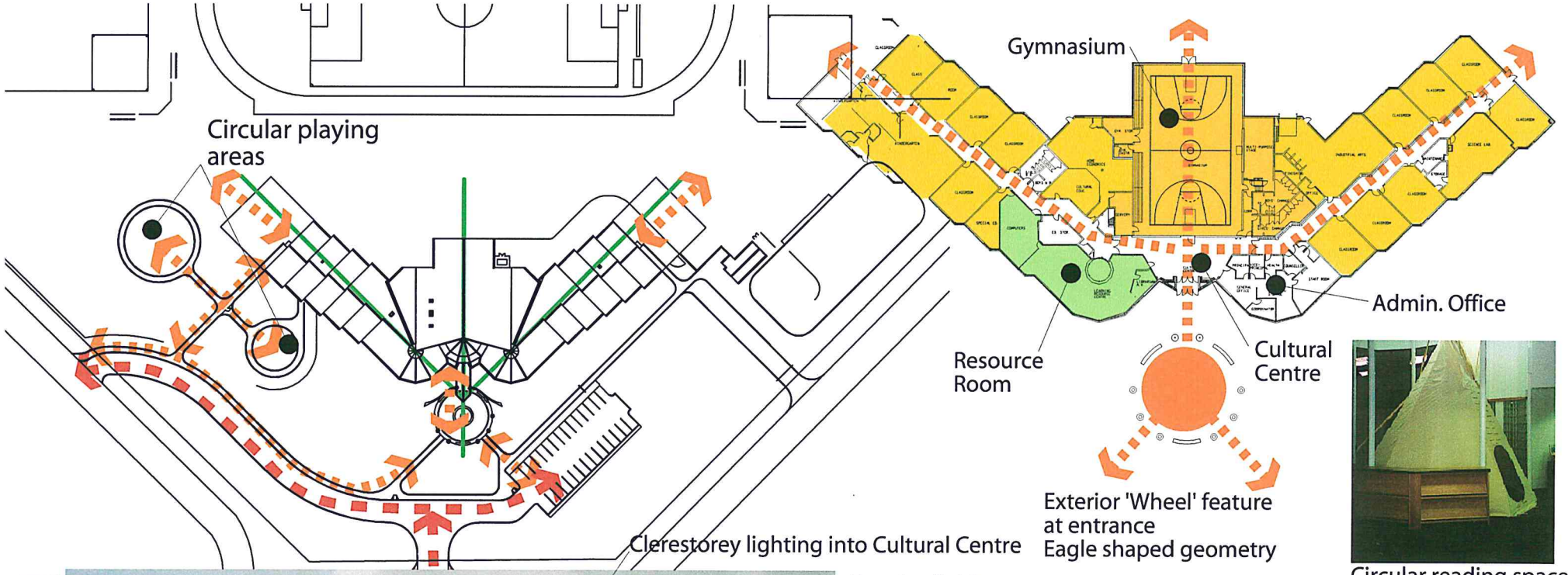
Exterior finishes
brick and prefinished metal

Circular reading space
in Resource Room

Local artwork on
exterior tile

Existing Projects - Muskowekwan F.N. School

Plans and Photos courtesy of Friggstad Downing Henry Architects



Circular reading space in Resource Room

Clerestorey lighting into Cultural Centre

Exterior finishes are brick and prefinished metal

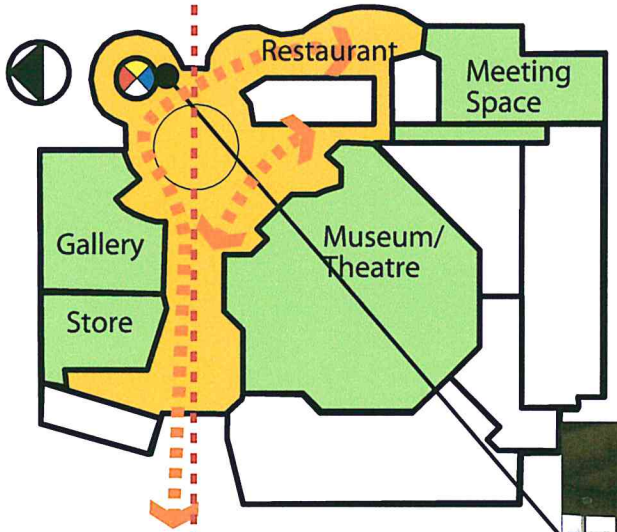
'Wheel' feature

Clerestorey lighting in entrance foyer

Local artwork on interior finishes

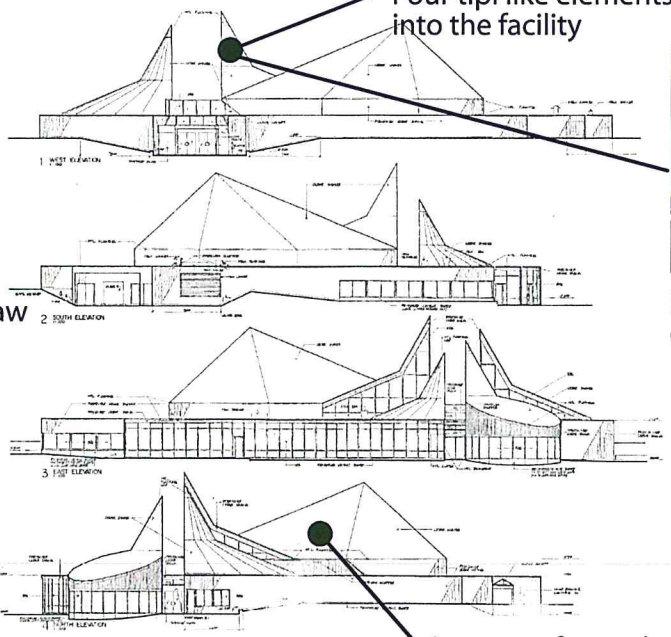
Existing Projects - Little Red River F.N. (Little Red River School)

Plans and Photos courtesy of Friggstad Downing Henry Architects



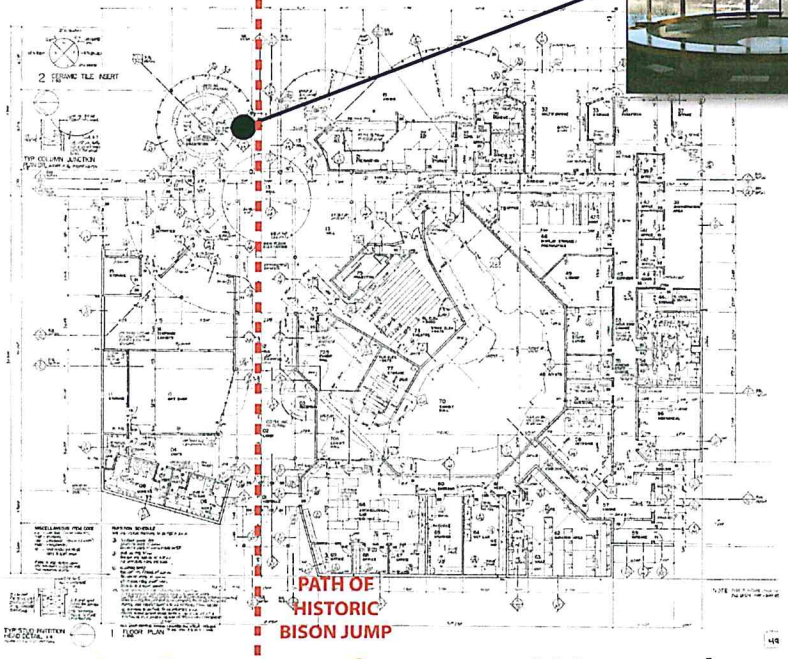
Four tipi like elements that bring natural light into the facility

Interior finishes consist exposed wood strucutres



Curvilinear windows overlooking valley draw visitors into the space

Gathering Space



Large roof over theatre and museum space resembles shape of a tipi
Overall feature resembles a tipi grouping in a valley.

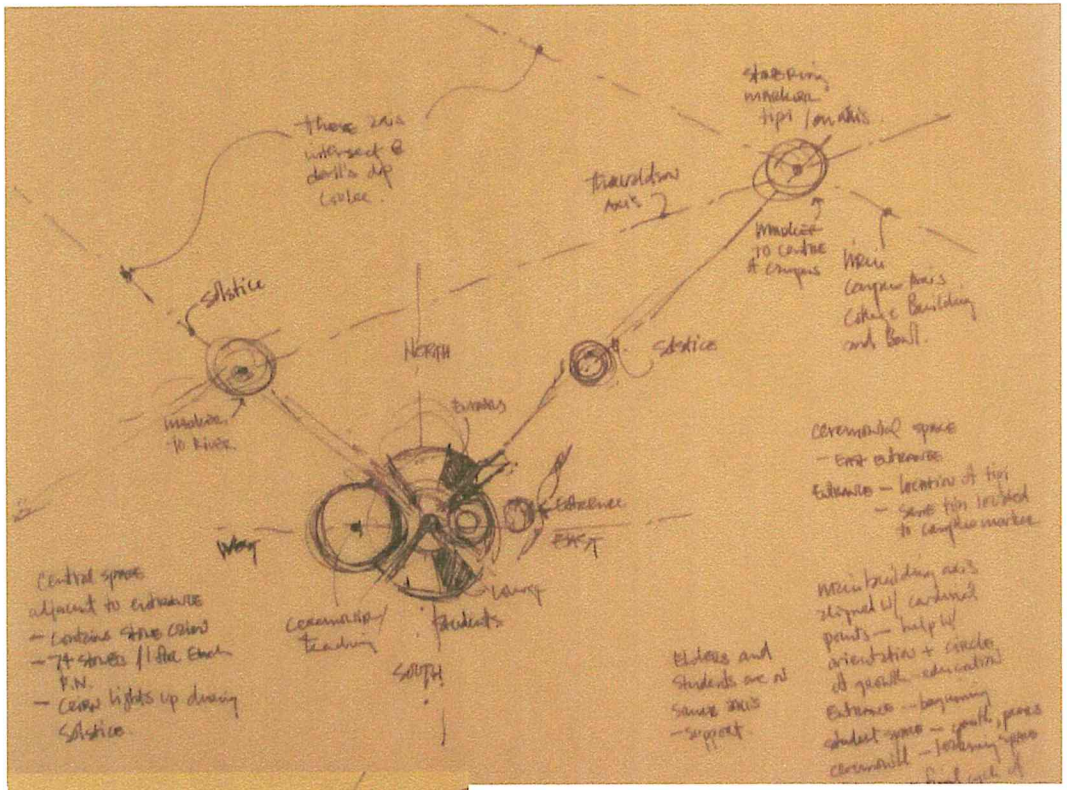
Exterior finishes consist of cedar and glazing

Exterior finishes consist of cedar and glazing

Existing Projects - Wanuskewin

Plans and courtesy of Wanuskewin

Appendix C

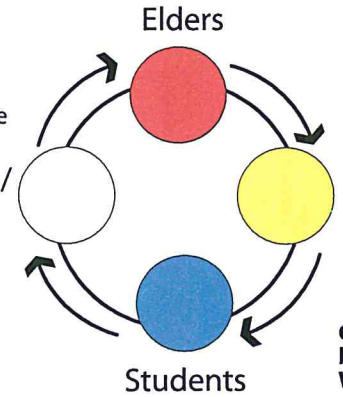


Central adjacent to entrance
- contains stone cairn
- 74 stones/1 for each First Nation
- Cairn lit up by sun during summer solstice

Ceremonial Space
- east entrance

Tipi from main axis located in entrance area while students are on site

Main building axis aligned with cardinal points
- help with orientation on campus
+ circle of support and education

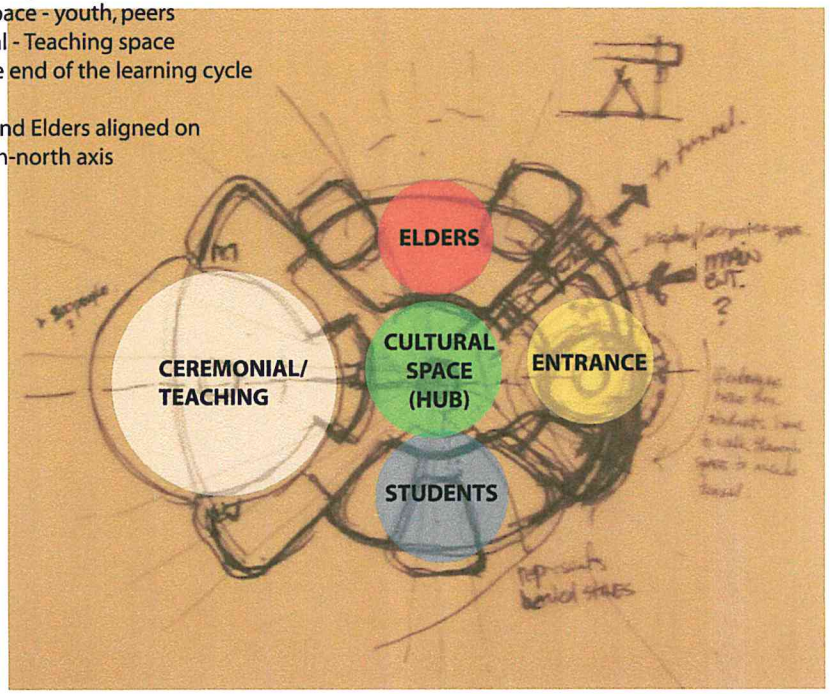


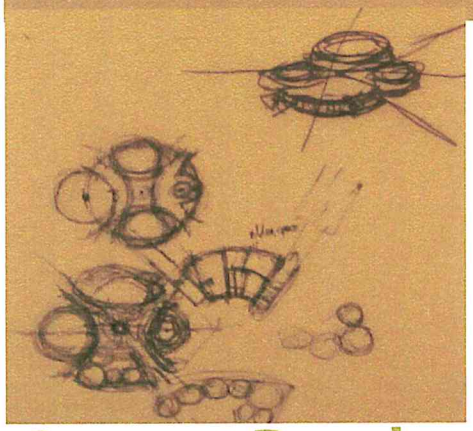
Colours used based on Wanuskewin

Circle of Support

Entrance - begiinning
Student Space - youth, peers
Ceremonial - Teaching space
Elders - the end of the learning cycle

Students and Elders aligned on same south-north axis



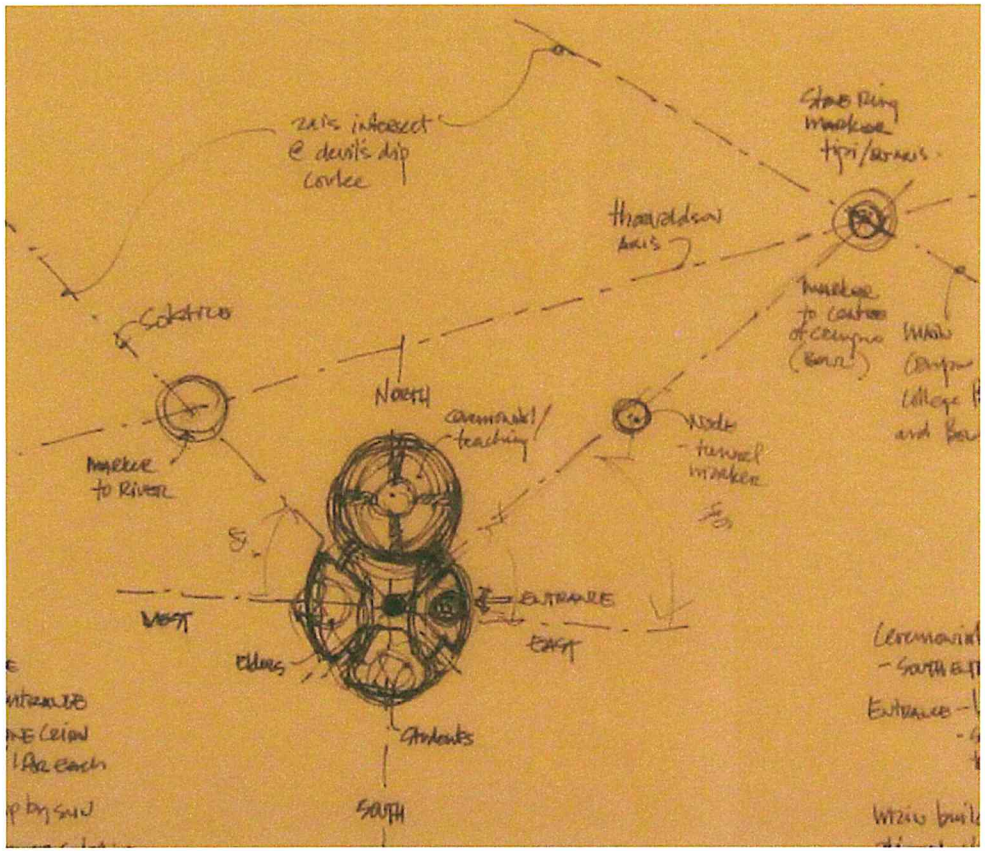


Concept 1a and 1b used the same colour wheel (Circle of Support) with colours representing different values:

Concept 1a
Red = elders
Yellow = entrance
Blue =students
White = ceremonial/teaching

Concept 1b
Red = ceremonial/teaching
Yellow = entrance
Blue = students
White = elders

Concept Development - Concept 1a



Entrance opens into central space
- contains stone cairn
- 74 stones/1 for each First Nation
- Cairn lit up by sun during summer solstice

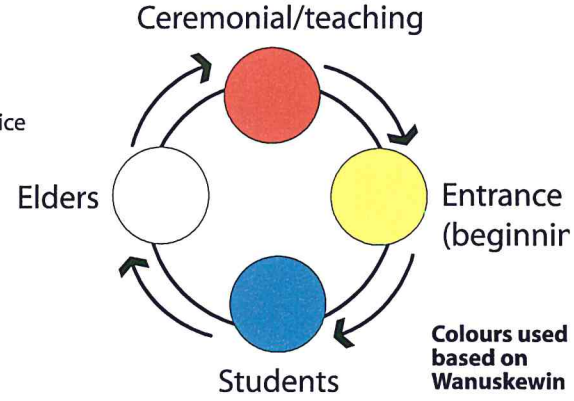
Ceremonial Space
- South entrance

Tipi from main axis located in entrance area while students are on site

Main building axis aligned with cardinal points
- help with orientation on campus
+ circle of support and education

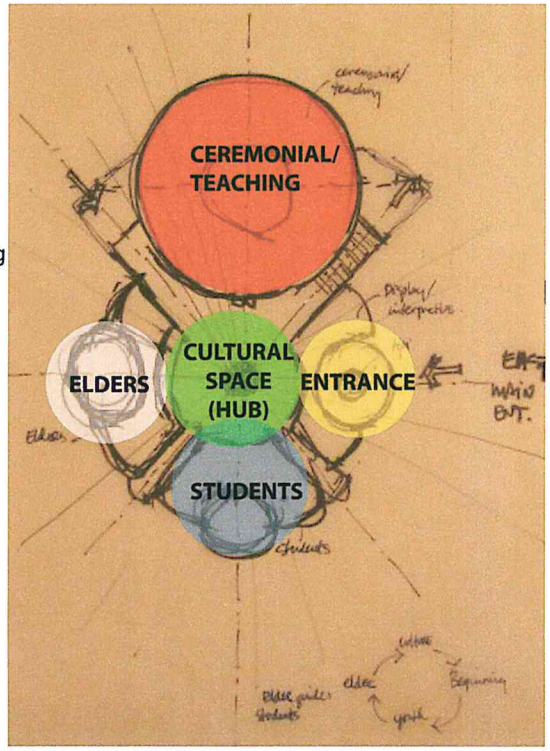
Entrance - begiinning
Student Space - youth, peers
Elders - across fromentrance (tipi)
- between students and ceremonial/ teaching
- support students (guidance)
Ceremonial - Teaching space

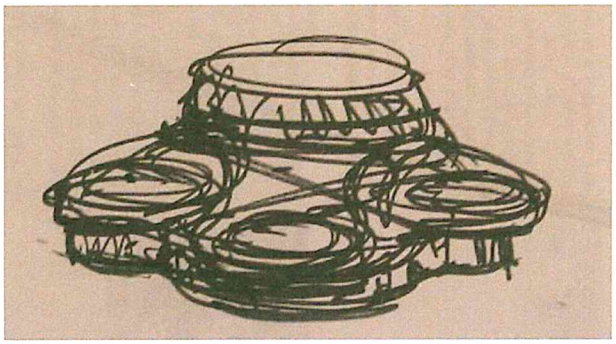
Students aligned with Ceremonial/teaching space
Elders aligned with entrance

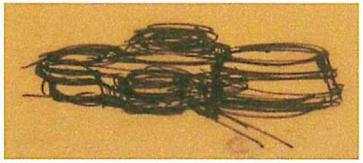


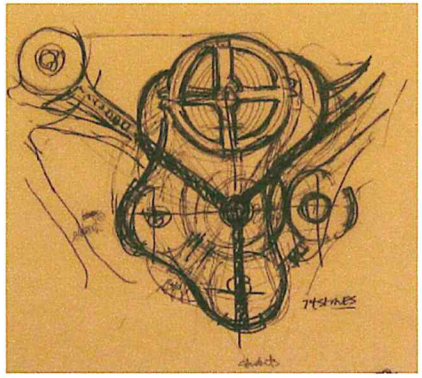
Colours used based on Wanuskewin

Circle of Support

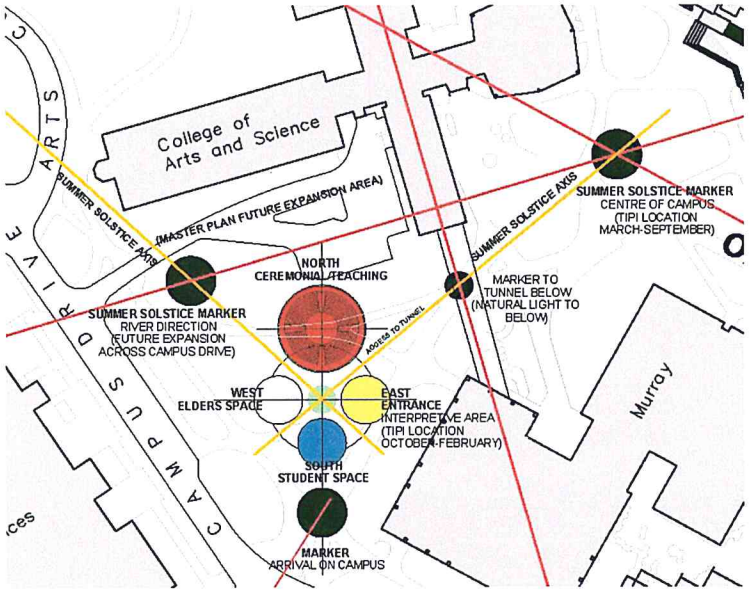


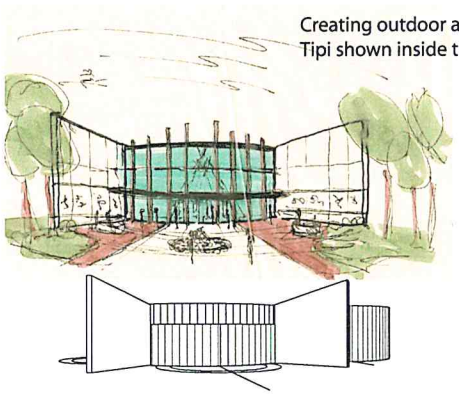




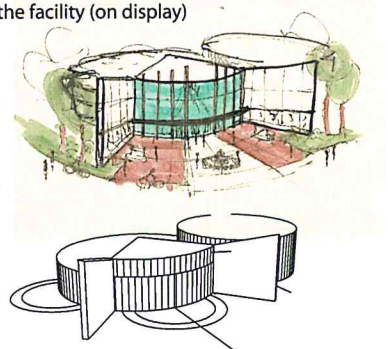


Concept Development - Concept 1b



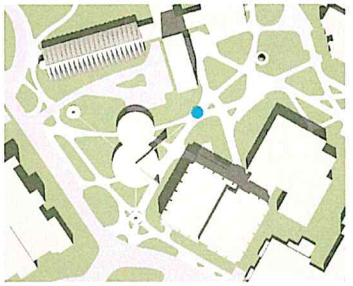


Creating outdoor amenity space at entrance
Tipi shown inside the facility (on display)

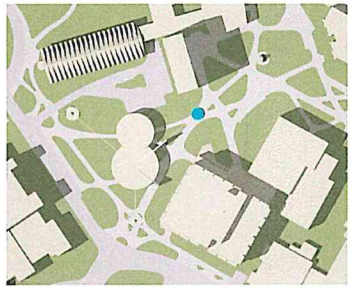


Solar study showed the entrance was in shadow for the majority almost entire day on June 21st.

June 21st 8:00am

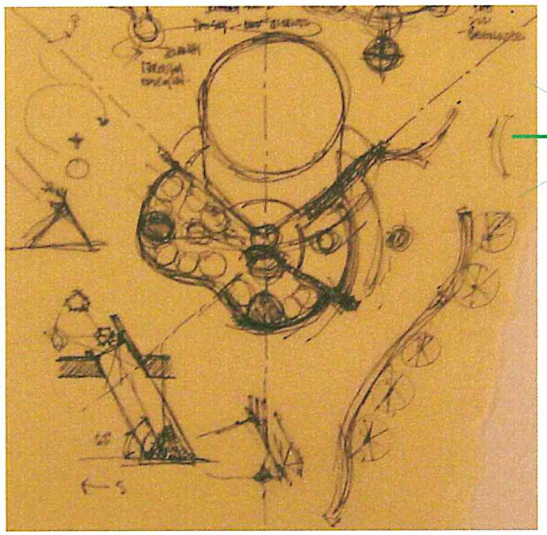


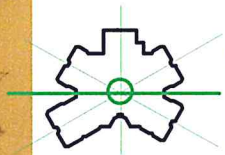
June 21st 12:00pm



June 21st 4:00pm

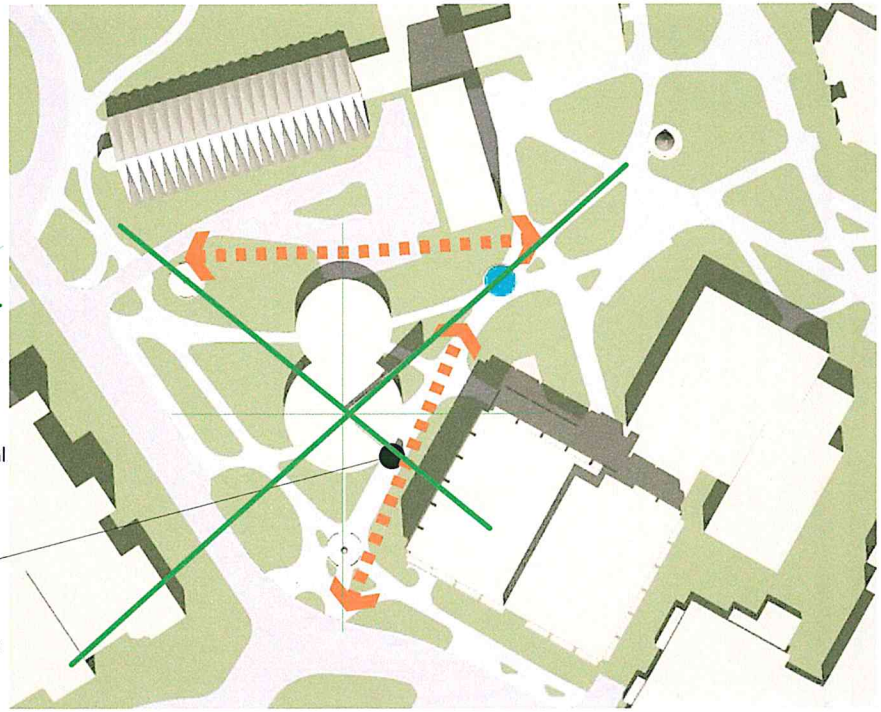
December 21st 12:00pm
Solar Study



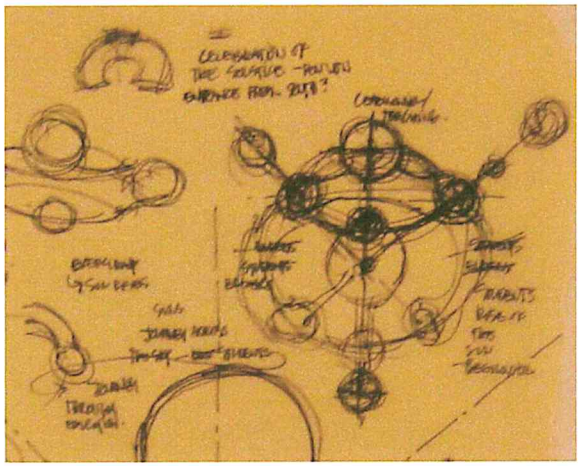


Concept similar to Onion Lake F.N. school where central rotunda acts as hub of 'Wheel'

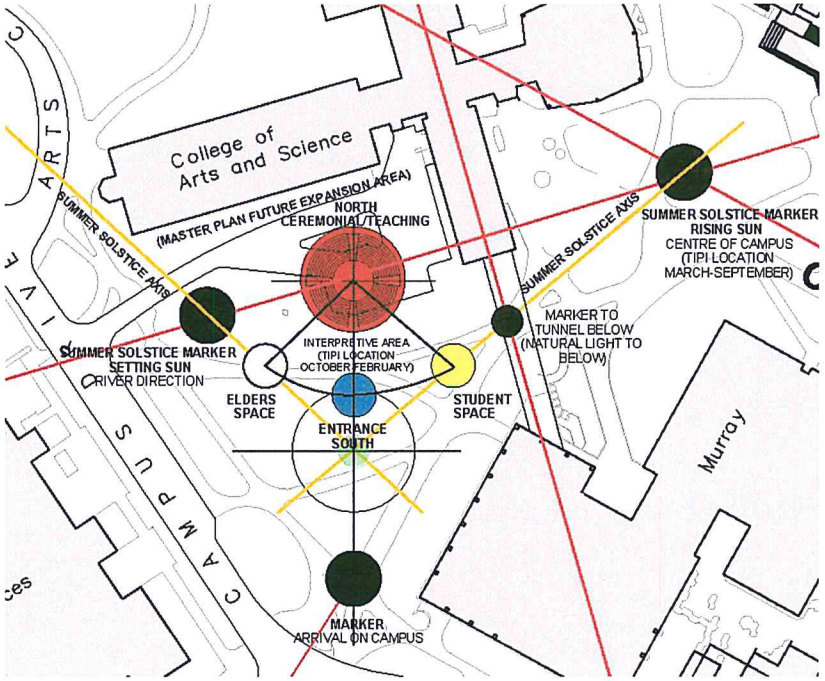
Building blocks 'gateway' into core of campus and impedes pedestrian flow through the site

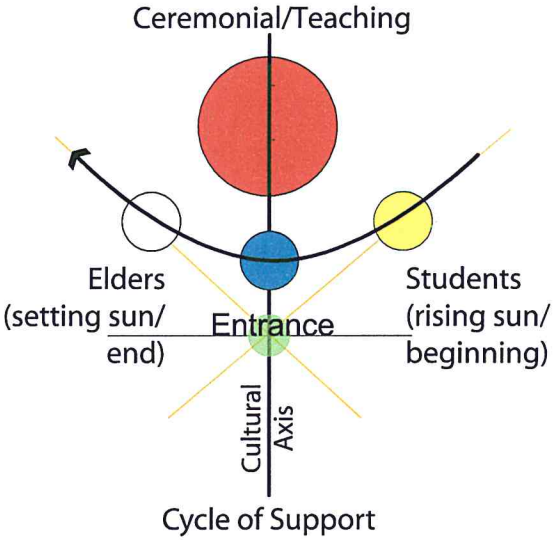


Concept Development - Concept 1b - con't



Central Cairn becomes outdoor entrance feature
- contains stone cairn
- 74 stones/1 for each First Nation
- originally this central site was considered for a tipi (tipi is moved inside)





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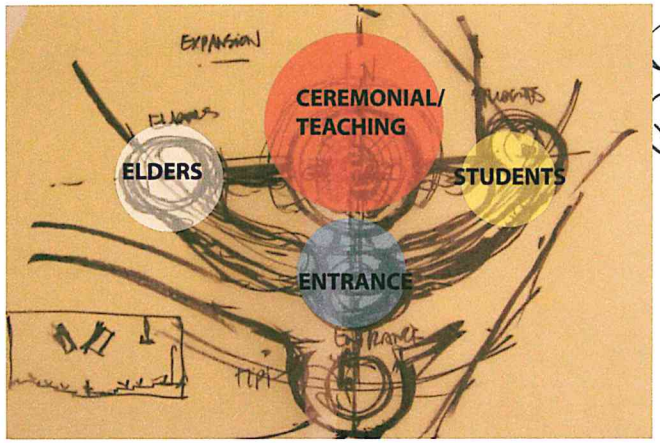
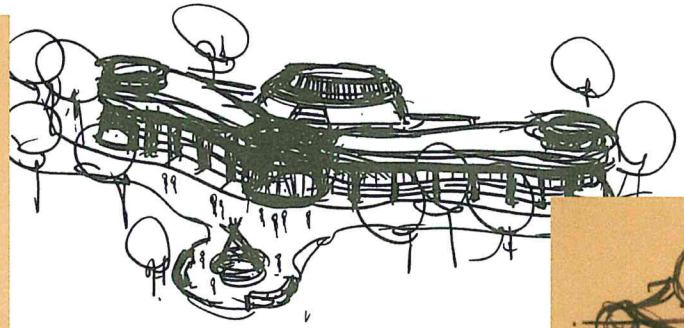
- 74 stones/1 for each First Nation
- originally this central site was considered for a tipi (tipi is moved inside)

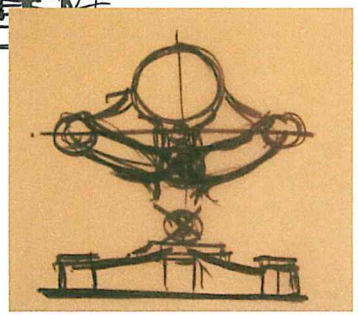
Main entrance and Ceremonial Space
- South entrance
- lined up with solstice

Cultural axis created along north-south axis (Cairn-tipi-ceremonial space)

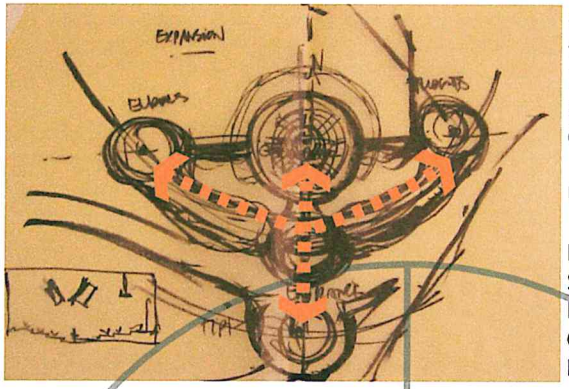
Cycle of Support vs. Circle of Support
Cycle being daily-seasonal (rising and setting sun)
Student Space - beginning, rising sun
Elders - ending, setting sun
Ceremonial - Teaching space - to contain central feature (pole) that becomes lit up by the sun on the solstice







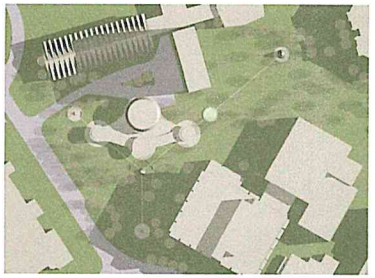
Concept Development - Concept 2a



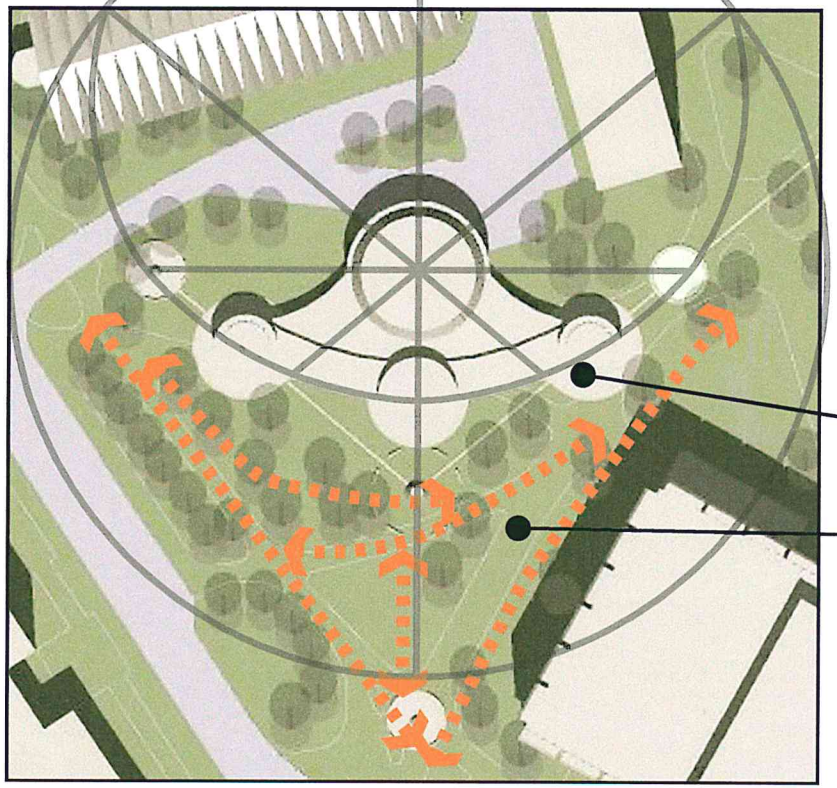
Overall curvilinear geometry representing the plains
Round elements represent 'wheels' on the plains
Ceremonial space is arbour shaped

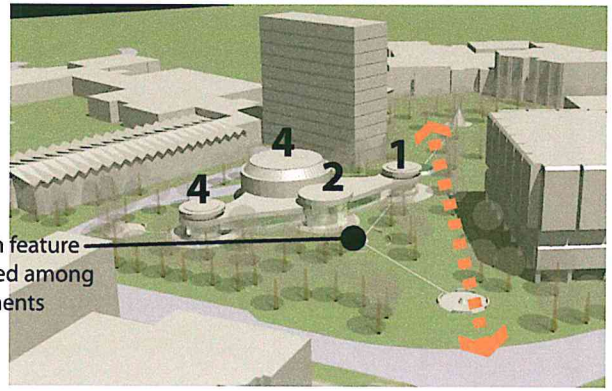
Use element of four (4) within the flow

Four elements currently are:
Student space
Elder space
Ceremonial/Teaching space
Entrance

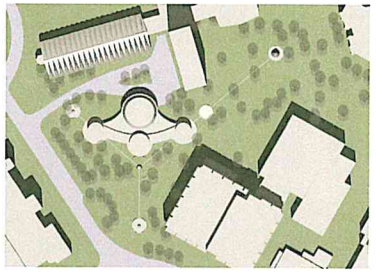


June 21st 8:00am

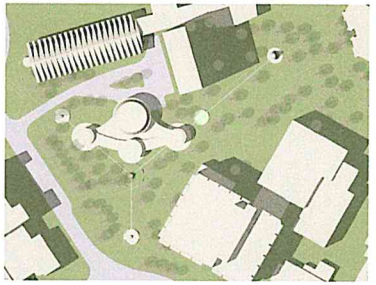




External cairn feature not considered among the four elements



June 21st 12:00pm



June 21st 4:00pm

'Gateway' to campus core is maintained

Curved element represents path of sun about centre of ceremonial space

Improved pedestrian circulation through site

Concern was internal circulation was too linear - not enough circular or natural flow
Design too symetrical (western style of design - should be more 'random')

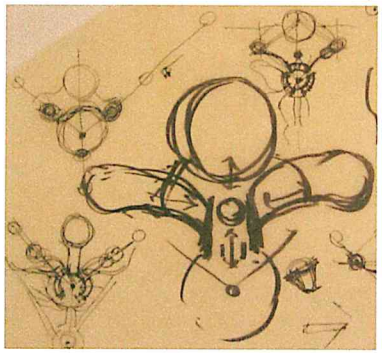
Solar study indicates ample amounts of sunlight on site and facility

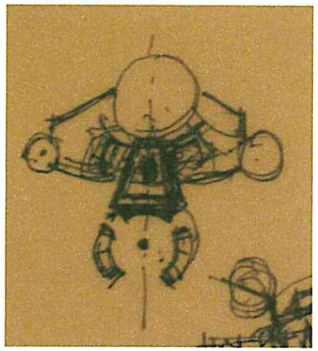
December solstice supplies light to facility

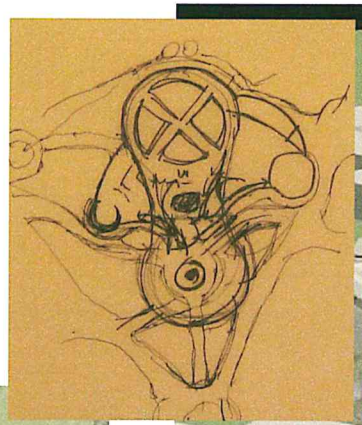
December 21st 12:00pm

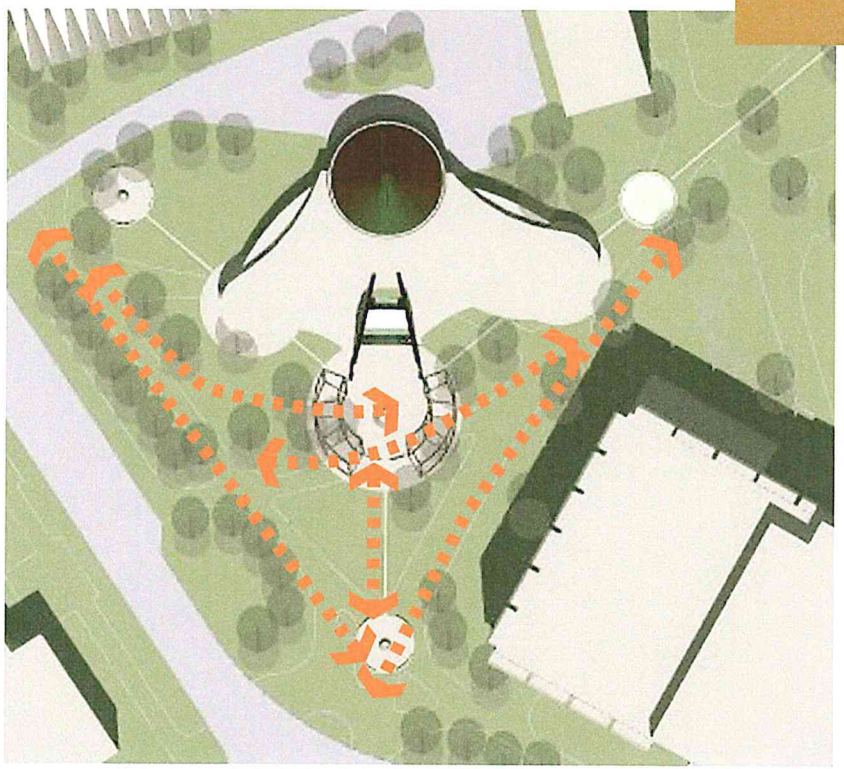
Solar Study

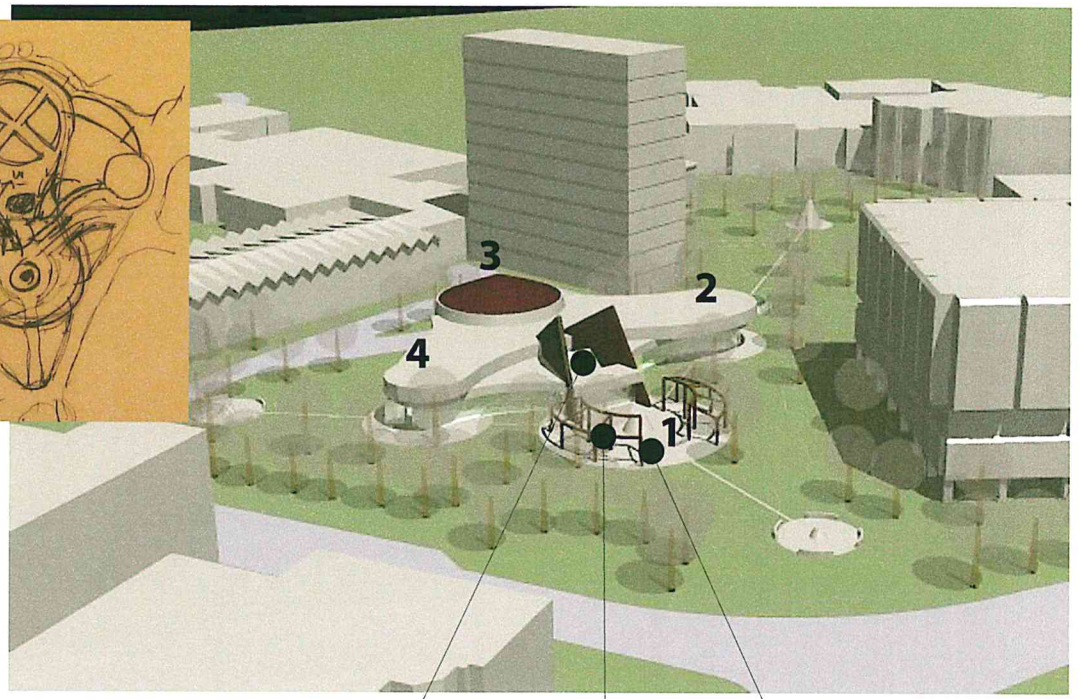
Concept Development - Concept 2a - con't











Entrance element - symbolic of tipi flaps
Two tipi flaps add tension to the flow - but
to assist in the internal circulation desired
only consider one element
Glazing over entry should be more prominent

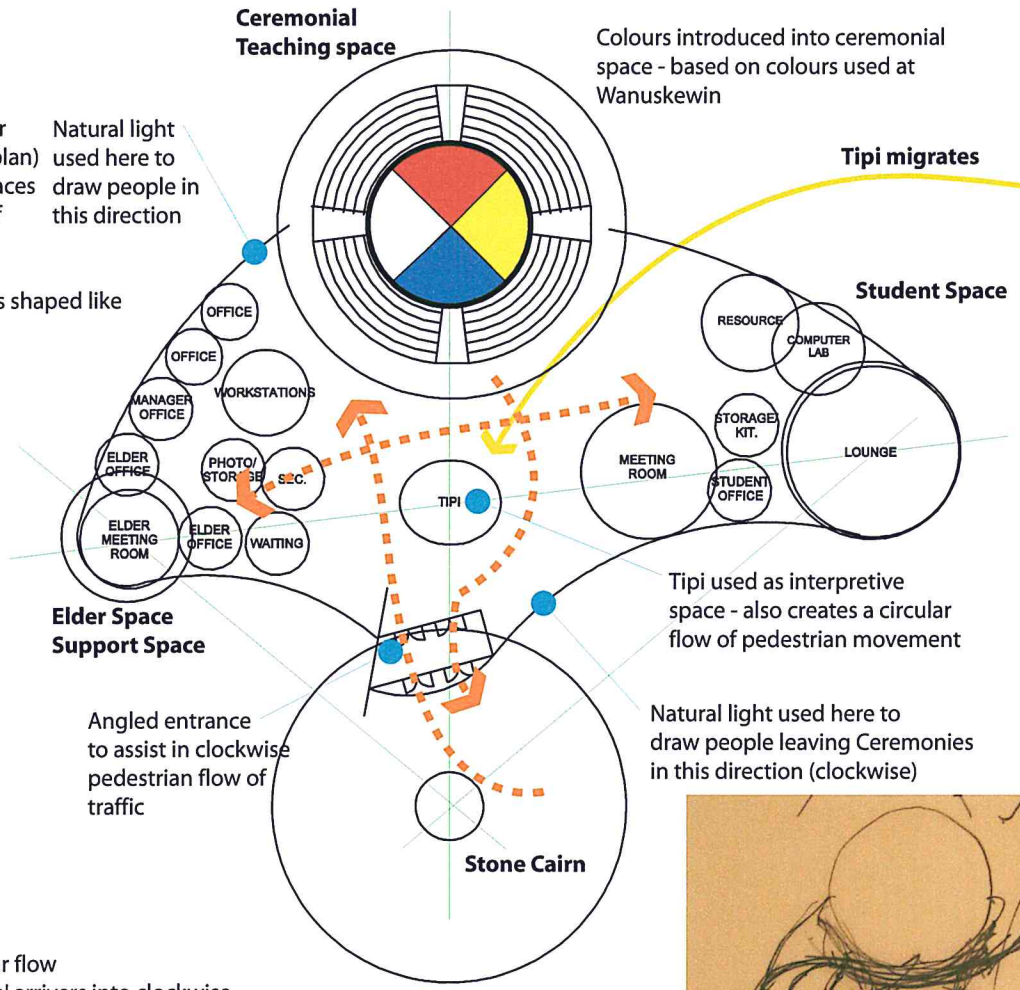
Materials are being considered
- reviewing U of S pallete of field stone and tyndall
stone as dominate finishes
- all these materials being considered
- copper considered for flaps (durn almost
black) symbolizing the smoke covered
hide flaps (historic)
- copper also considered for Ceremonial
roof finish
- green tint glazing?

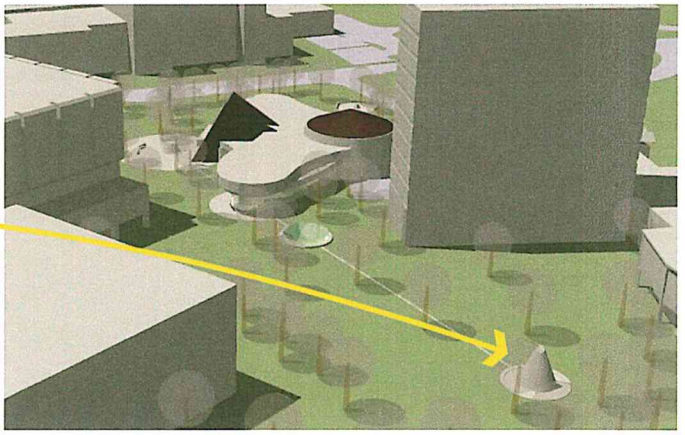
External cairn feature becomes
fourth element -not the entrance

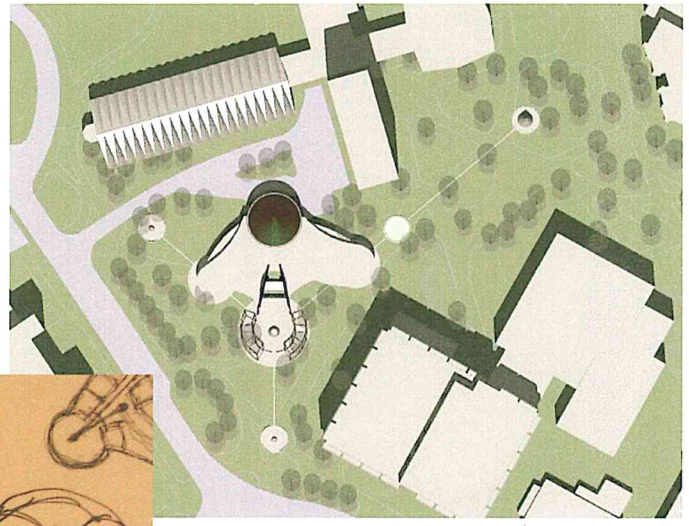
Concern about arbour feature out around
the Cairn
Impedes natural circulation through the cairn area
Arbours were (are) not part of Medicine
Wheels

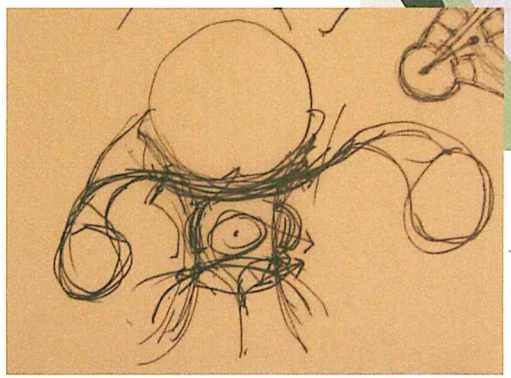
Concept Development - Concept 2b

Geometry
Asymmetrical geometry
- larger student space
- smaller elder space
balanced by teatering Elder space (appears heavier in plan)
- different sized circular spaces reflect the different sizes of dwellings that would have occured
Ceremonial space becomes shaped like earthlodge (sloped walls)



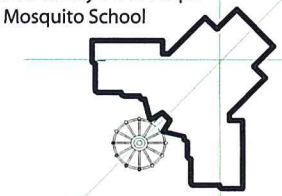




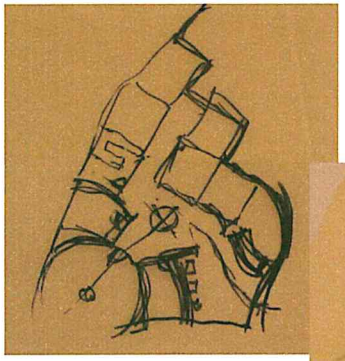


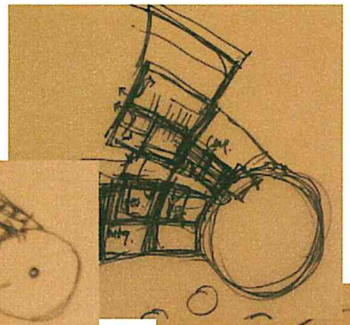
Circulation
- central tipi creates circular flow
- angled entrance to 'guide' arrivers into clockwise movement
- natural lighting used to assist in circulation (drawing visitors through the space)

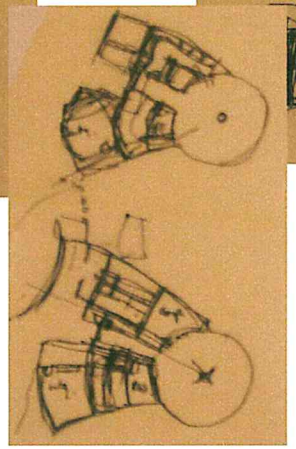
Wheel courtyard concept at Mosquito School

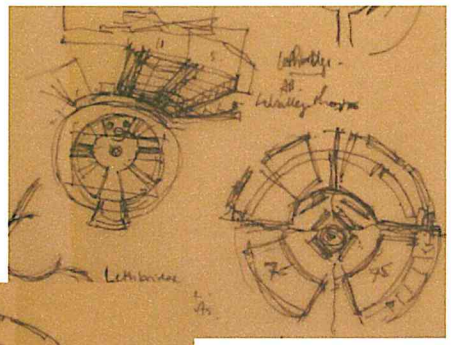


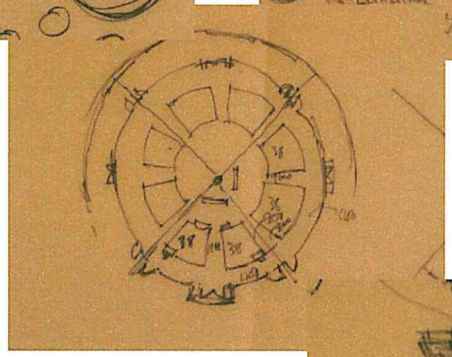
Concept Development - Concept 2b - con't

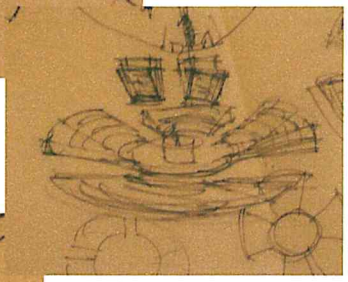


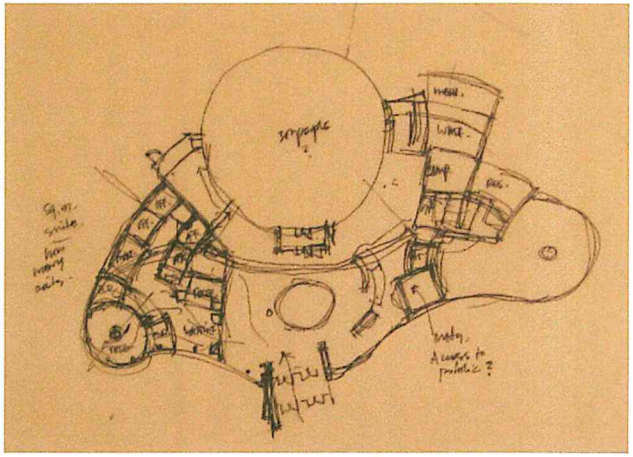


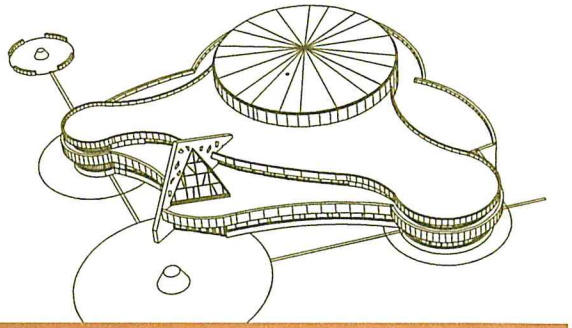


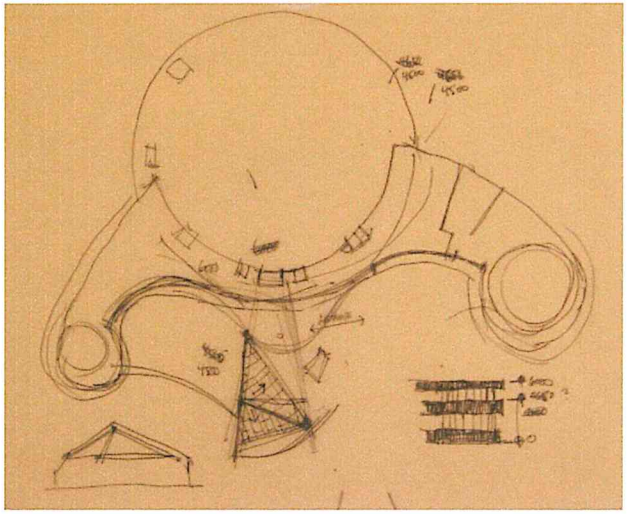


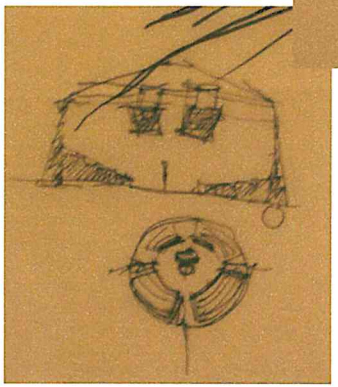




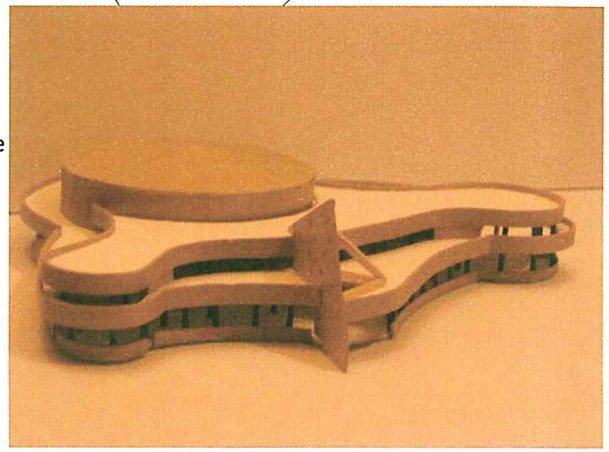






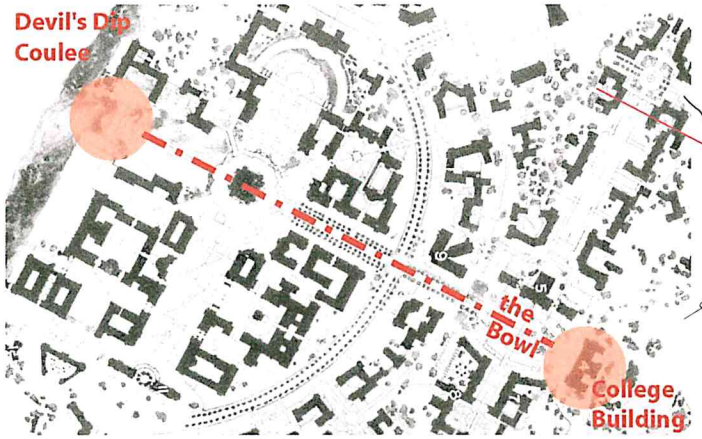


Ceremonial space analysis
gave an increase in allocation
to the space due to the multi-piurpose
use of the space.
Allocated space was based on Lecture
Theatre.
An approximate addition of 100 sq.m.
is required to be able to maintain the
compination Ceremonial and Lecture
space



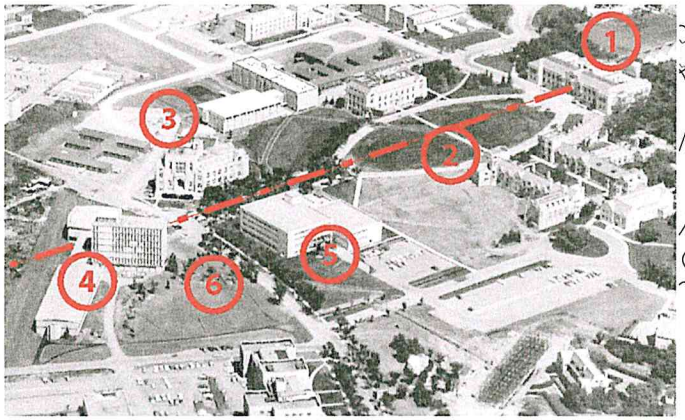
Concept Development - Concept 2b - refinement

Appendix D



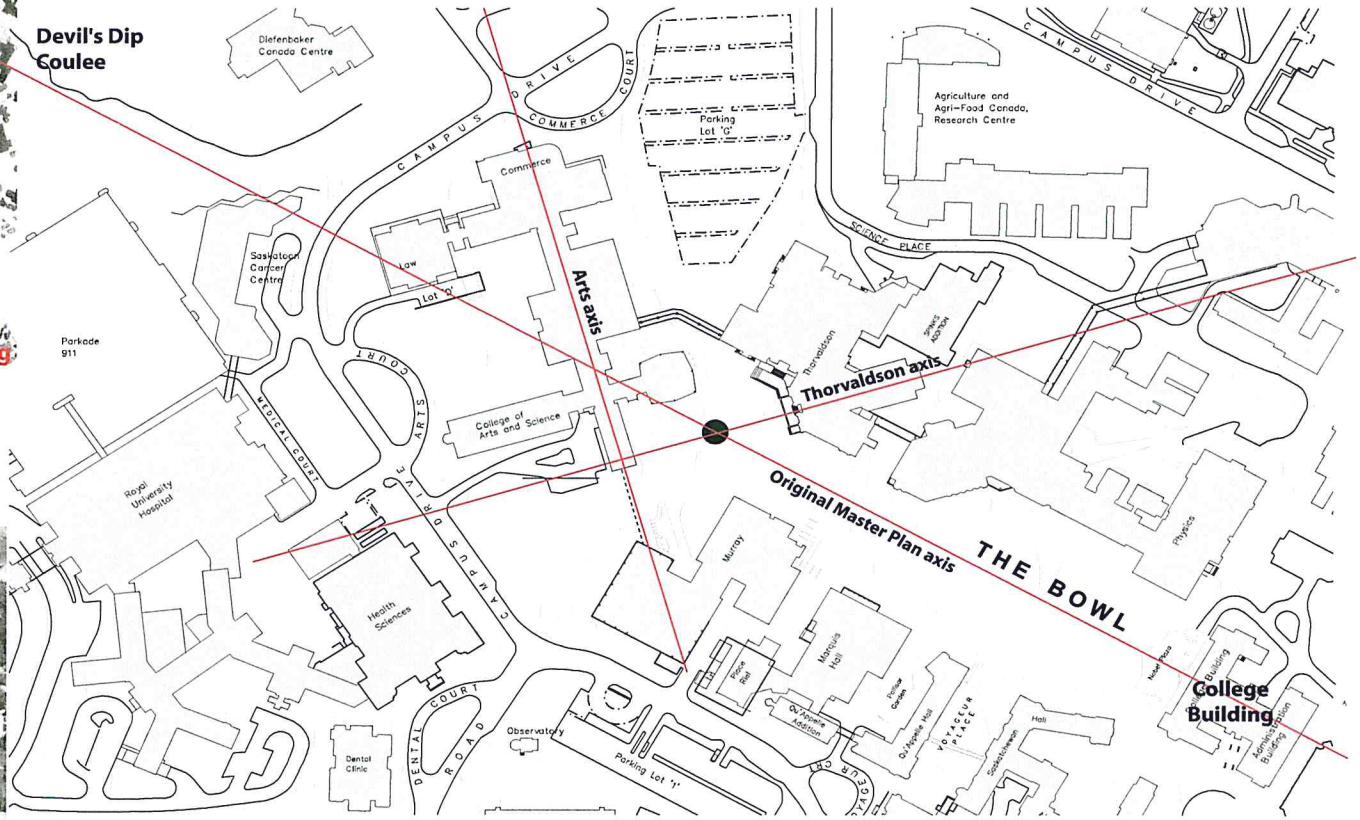
Original U of S Master Plan
Brown and Vallance - 1909

North



Aerial View U of S - 1960s

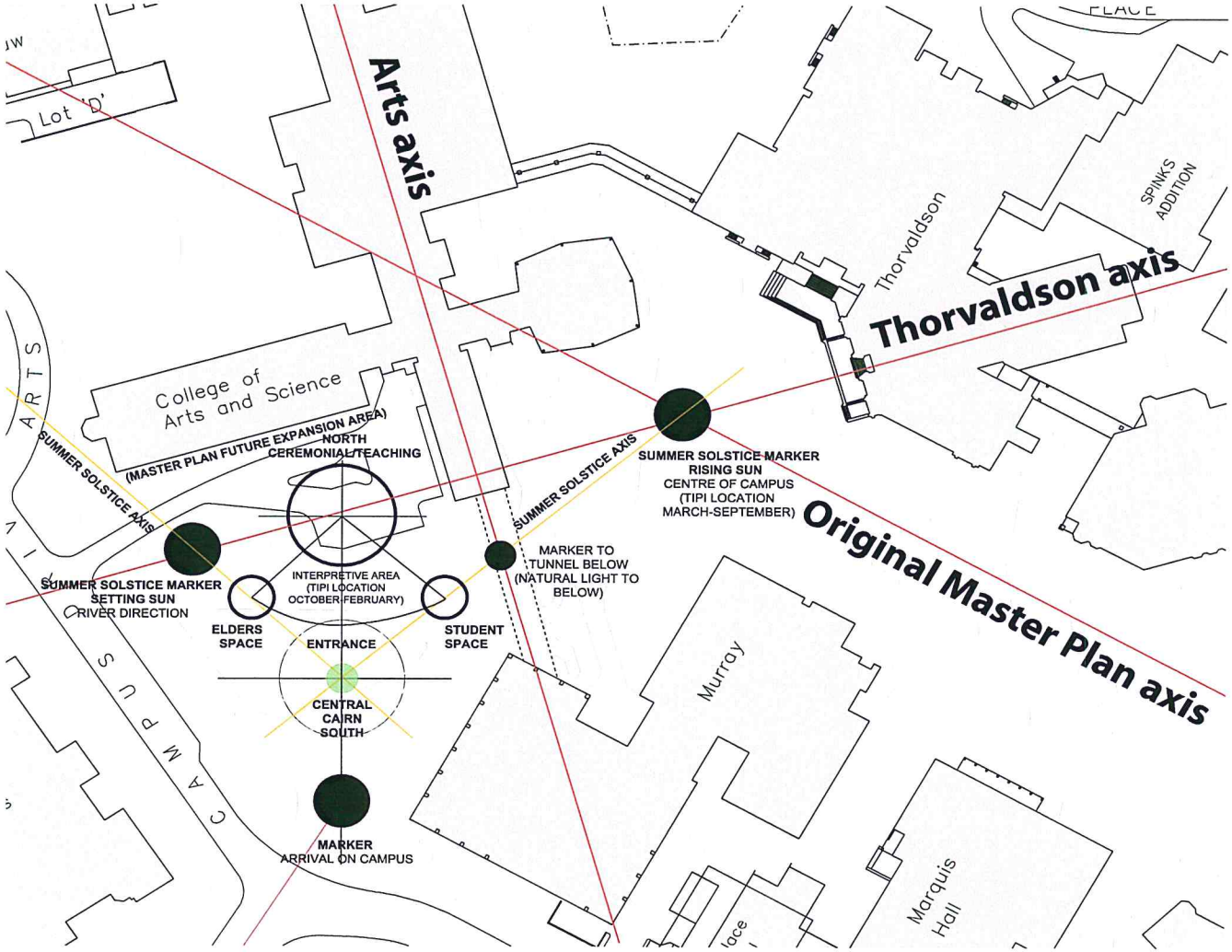
1 - College Building
2- The Bowl
3 - Thorvaldsoin
4 - Arts Building
5 - Murray Library
6 - Future Wiggins Court



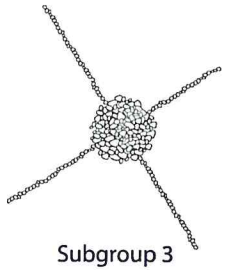
North

Original Master Plan (College Building - Devil's Dip), Thorvaldson and Arts Building axis

Concept Development - Parti - campus axis study



Review of Wheels for site

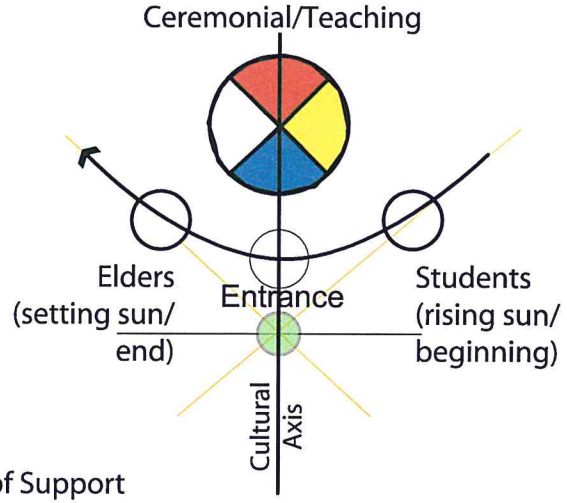


Subgroup 3

All Wheels consist of a least 2 of the 3
- Prominent central stone cairn
- One or more concentric stone rings
- Two or more radiating stone lines

Categorized into 4 goups
- Burial (gravesites and memorials)
- Surrogate burial (gravesites and memorials)
- Fertility symbol
- Medicine hunting (permanent guides)

Subgroup 3
- Found on open prairie adjacent to to major stream valleys or river
- Prominent central cairn with 2 or more radiating stone lines
- Sometimes cairns are incorporated into radiating spokes (ends or midpoints)
- Ancillary tipi rings



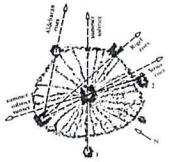
Cycle of Support

Central Cairn becomes outdoor entrance feature
- contains stone cairn
- 74 stones/1 for each First Nation
- originally this central site was considered for a tipi (tipi is moved inside)

Main entrance and Ceremonial Space
- South entrance
- lined up with solstice

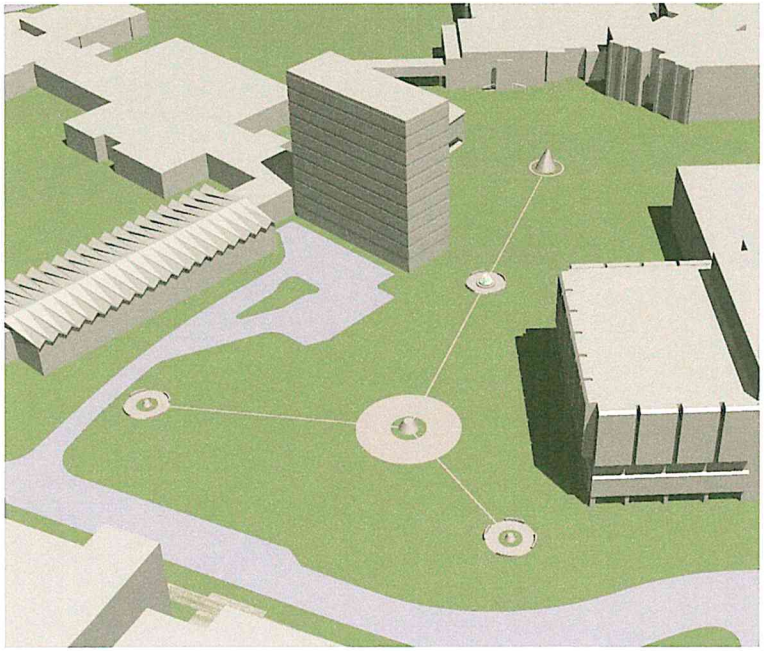
Cultural axis created along nort-south axis (Cairn-tipi-ceremonial space)

Cycle being daily-seasonal (rising and setting sun)
Student Space - beginning, rising sun
Elders - ending, setting sun
Ceremonial - Teaching space - to contain central feature (pole) that becomes lit up by the sun on the solstice

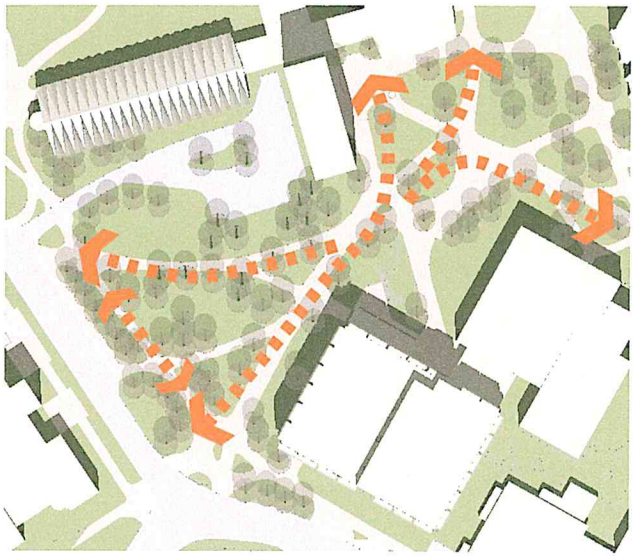


North

Concept Development - Parti - Medicine Wheel and the Solstice

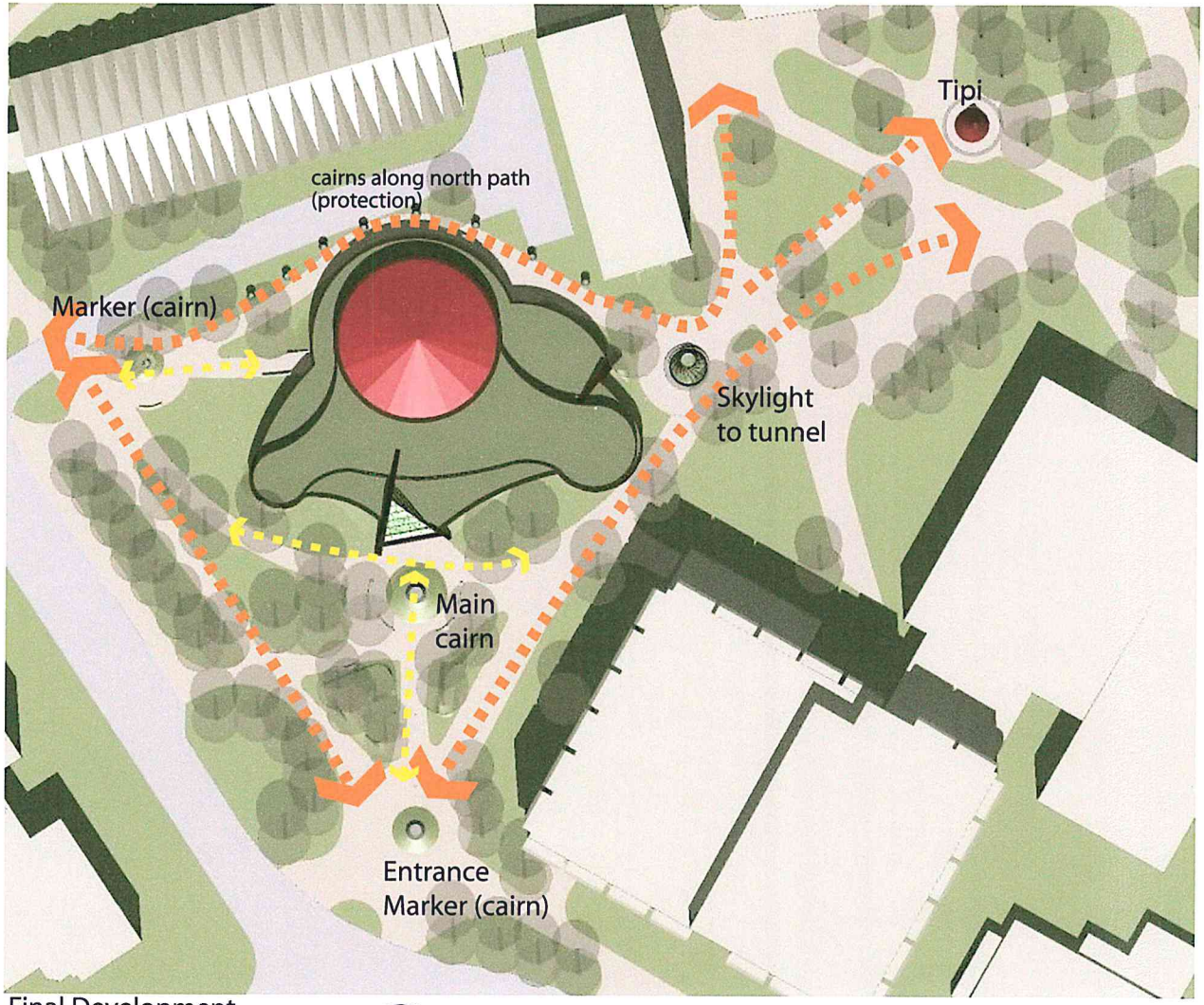


Concept Development - Parti - Computer model of 'Wheel Concept'



Wiggins Court - Existing

Primary circulation through the site



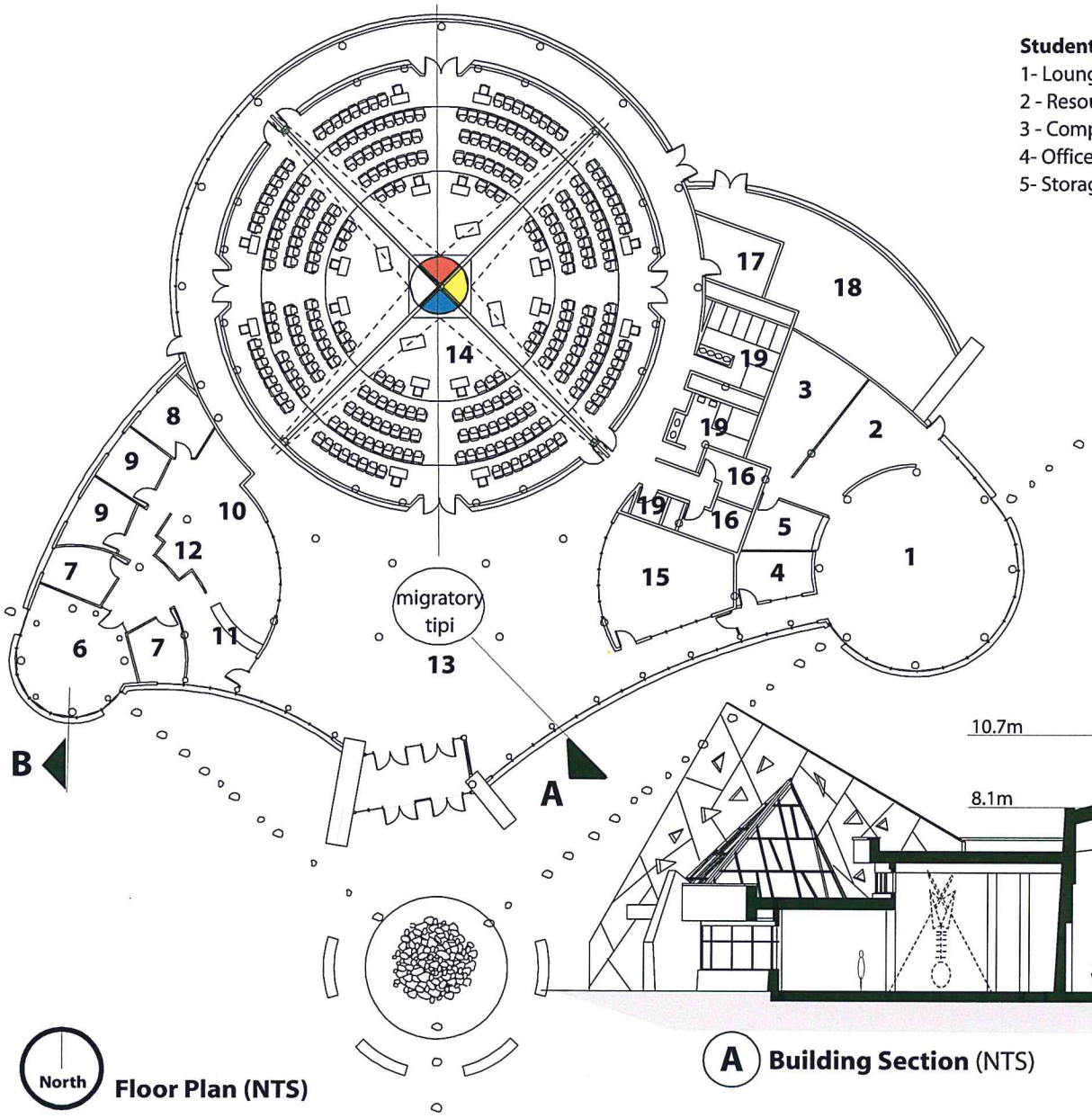
Final Development

Primary circulation through the site

Secondary circulation

North

Final Development - Site Plan

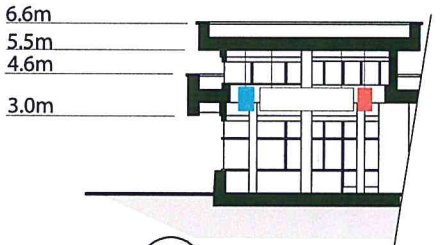


North **Floor Plan (NTS)**

Student Space
1- Lounge
2 - Resource Room
3 - Computer Lab
4- Office
5- Storage/Kitchenette

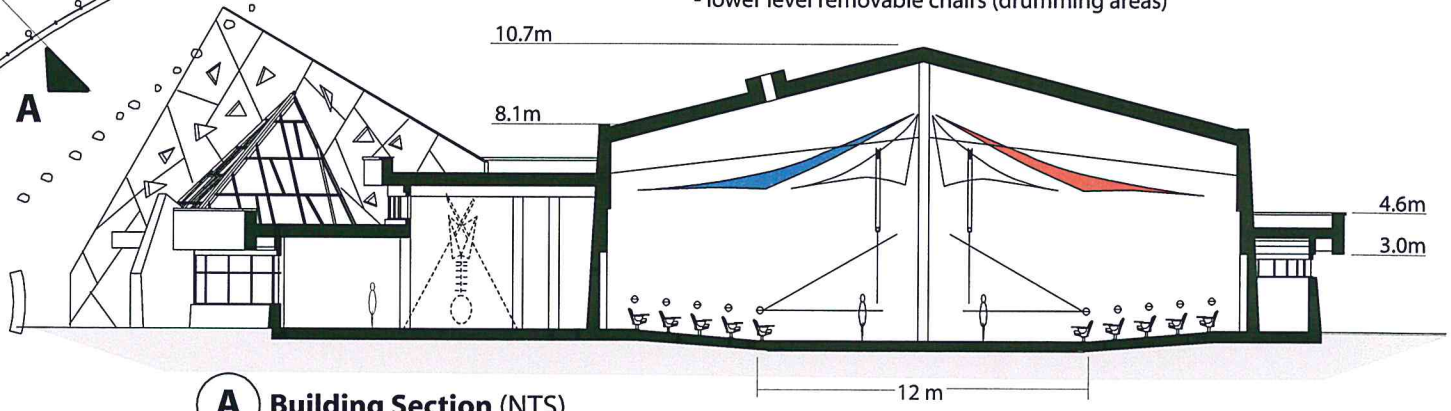
Student Support
6 - Elder Meeting Room
7 - Elder Office
8 - Manager Office
9 - Office
10 - Workstations (2)
11 - Reception/Waiting
12 - Photocopy/File/Storage

Additional Space
13 - Entrance/interpretive area
14 - Ceremonial/Teaching
15 - Meeting Room
16 - Change Room
17 - Storage
18 - Building Services
19 - Washrooms



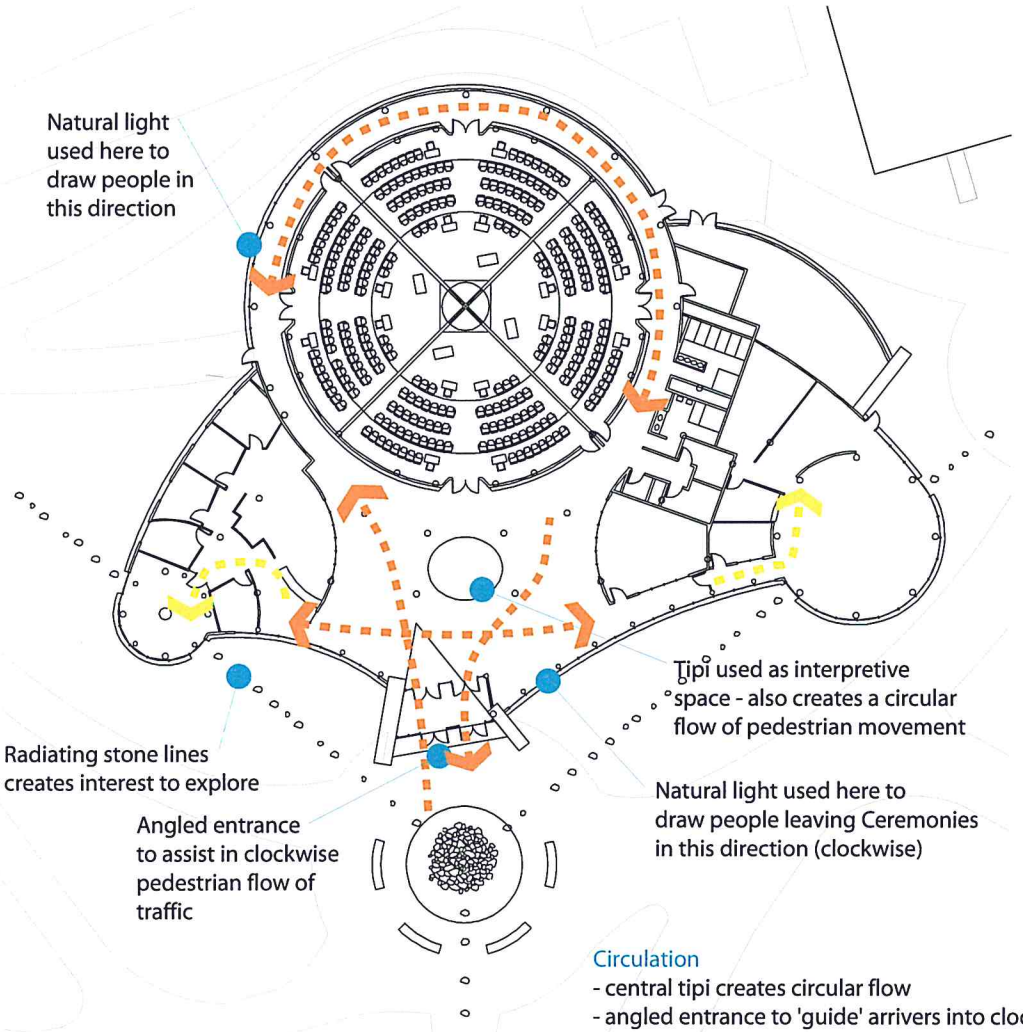
B Building Section (NTS)
- Elders's space (Student Lounge similar)

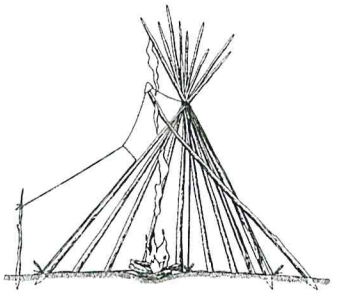
Ceremonial/Teaching
- 304 seats
- 4 dividable quadrants (76 each)
- red rm, yellow rm, blue rm, white rm
- suspended fabric (similar to arbours) to assist with acoustics
- lower level removable chairs (drumming areas)



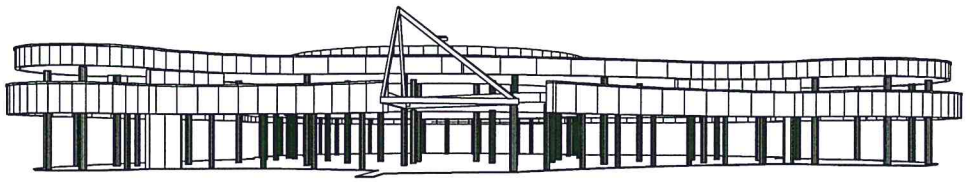
A Building Section (NTS)

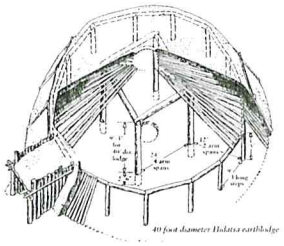
Final Development - Plan and Sections





Tipi polee support one another
- student support concept
- expressed in the entry element





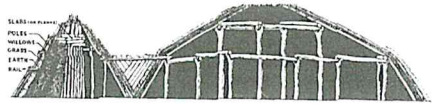
Earthlodge structure

Sundance lodge structure

Powwow arbour

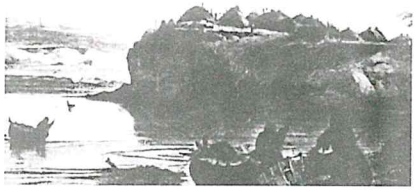
Post and Beam

Circulation
- central tipi creates circular flow
- angled entrance to 'guide' arrivers into clockwise movement
- natural lighting used to assist in circulation (drawing visitors through the space)
- Exposed structural members create open corridors



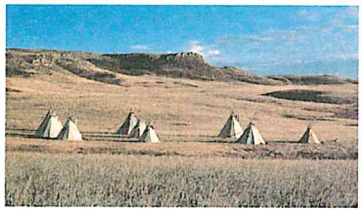
Section through earthlodge - shows additional structure - addition

Final Development - Circulation and Structure



Earthlodge village

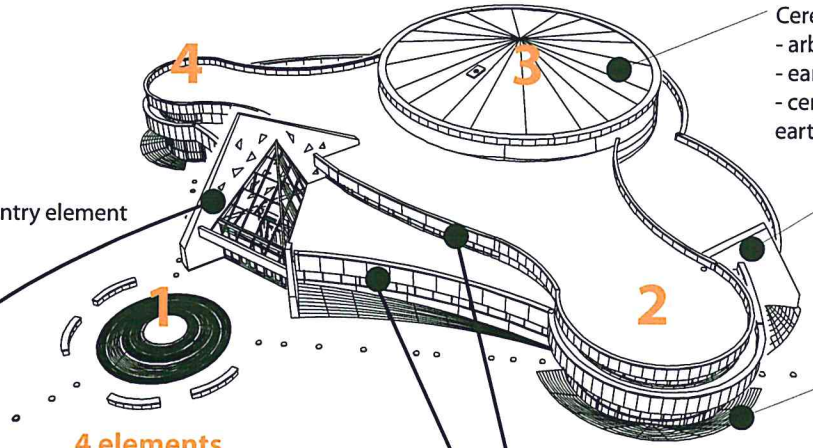
Powwow arbour



Tipis on the plains

Tipis on the plains

Tipi symbolized in form only
- providing functionality
- shadowing 'flap', ventilation and natural light - tipis basics



Main entry element

Ceremonial/Space
- arbour
- earthlodge (semi-permanent)
- ceremonial space becomes shaped like earthlodge (sloped walls)

Another tipi 'flap' element for mech. room ventillation

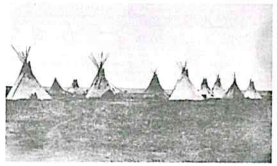
Some grading up to building to increase 'grounding' effect

4 elements
Central Cairn
Student Space
Ceremonial/Teaching Space
Elder Space

Curvilinear lines represent the plains and river valley
Non linear - dwelling were not rectilinear
Glazing represents water (south Saskatchewan river)

Circular programming space
(Stone rings on the plains)
Different sizes indicate different uses
(larger tipi for larger family - students)
(modest tipi for elder))

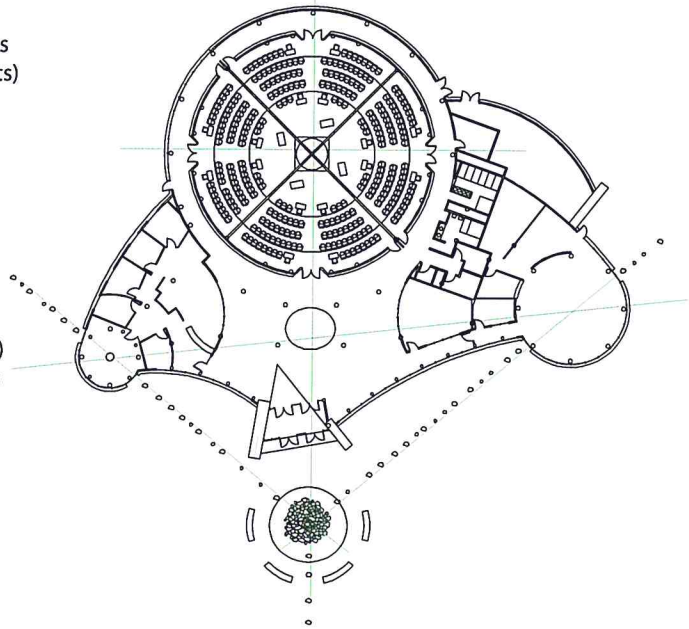
Damaged culture with glimmers of hope
Entry element symbolizes the tipi
- copper changes to dark colour (smoke blackened flap)
- holes in flap alow light natural light to create a migratory dance of 'tipis' across the plains
- holes also representative of ember damage that occured to hides



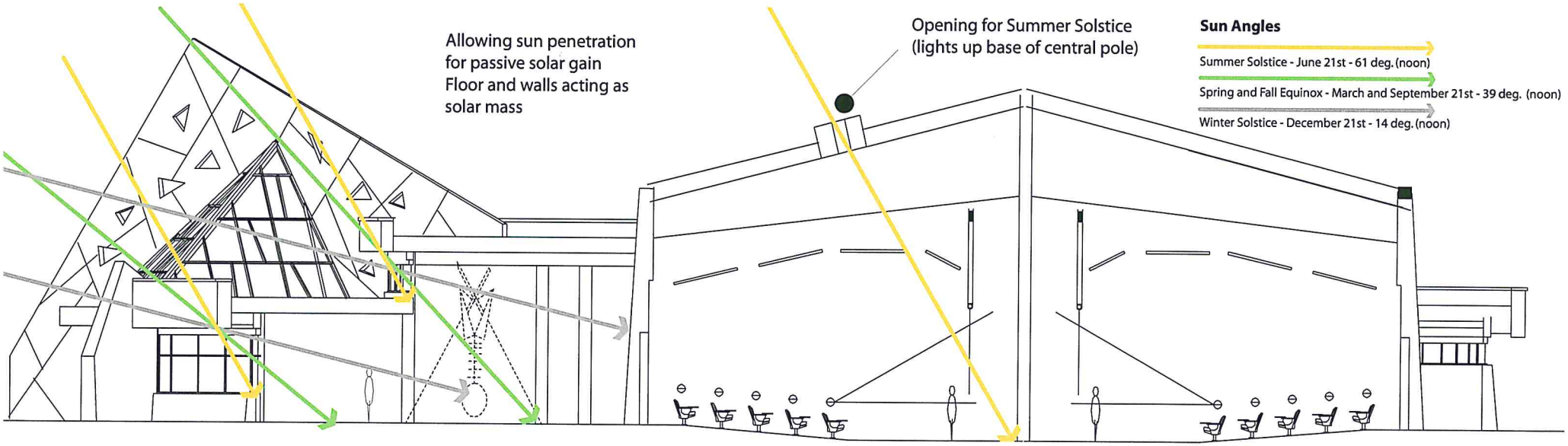
Tipi flaps would become black from smoke

Migratory dance of light

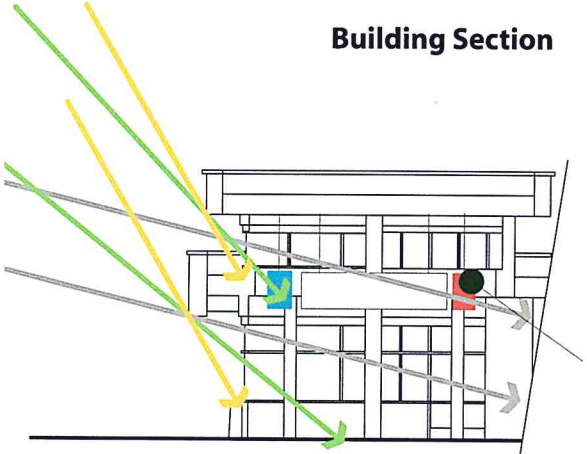
Geometry
Asymmetrical geometry
- larger student space
- smaller elder space
balanced by teatering Elder space (appears heavier in plan)
- different sized circular spaces reflect the different sizes of dwellings that would have occured



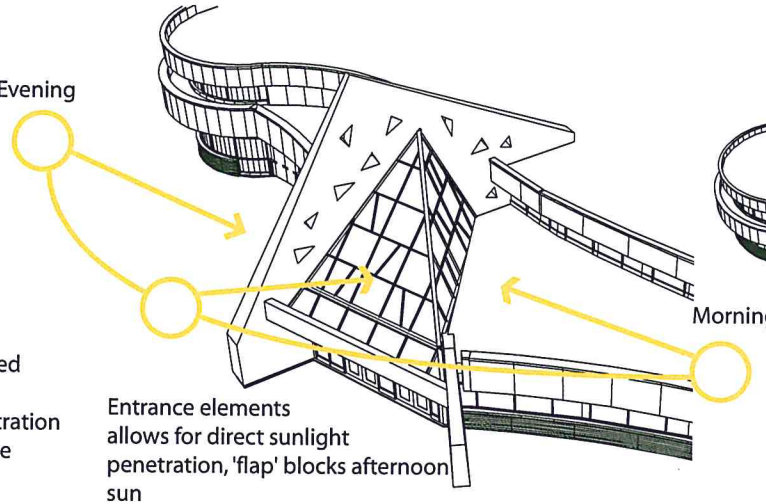
Final Development - Form

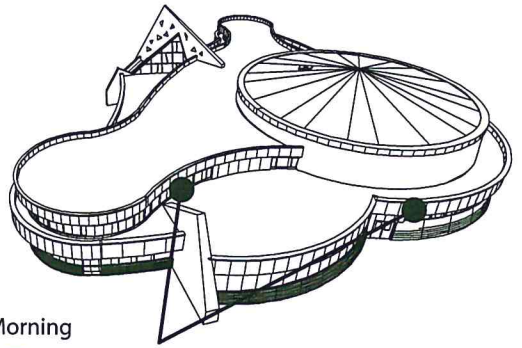


Building Section



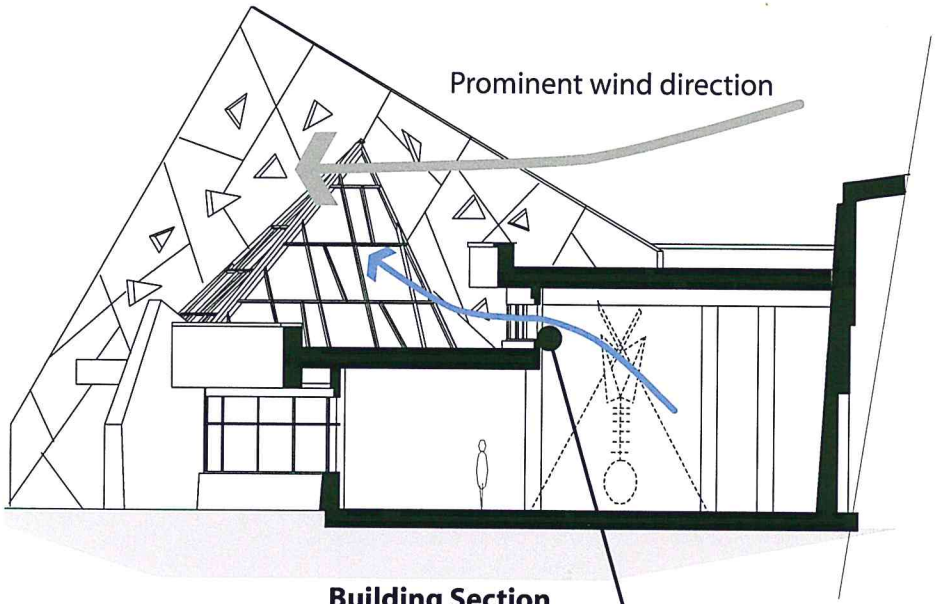
Building Section - Elders' space
(Student Lounge similar)



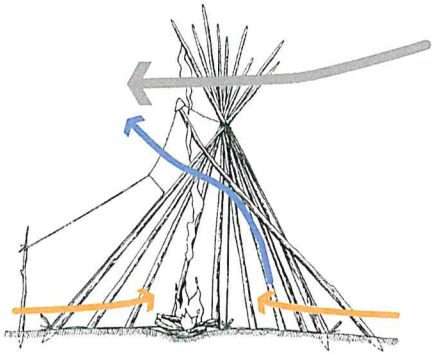


Tapered overhands on northside
to allow for maximum light penetration

Final Development - Natural Light

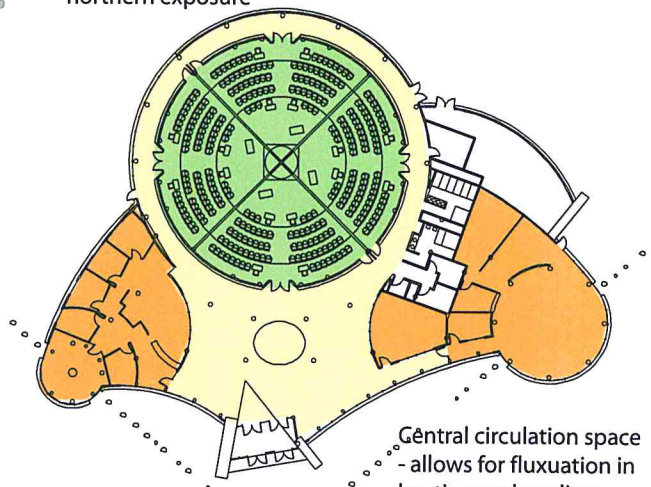


Building Section



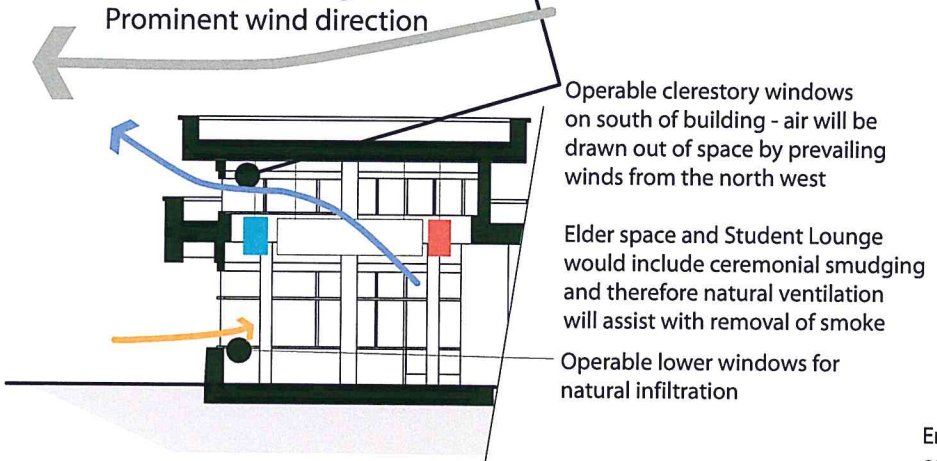
Tipi - natural ventilation

Ceremonial/Teaching space greatest load
- north location
- exteriro walls - reduced southern exposure/increased northern exposure

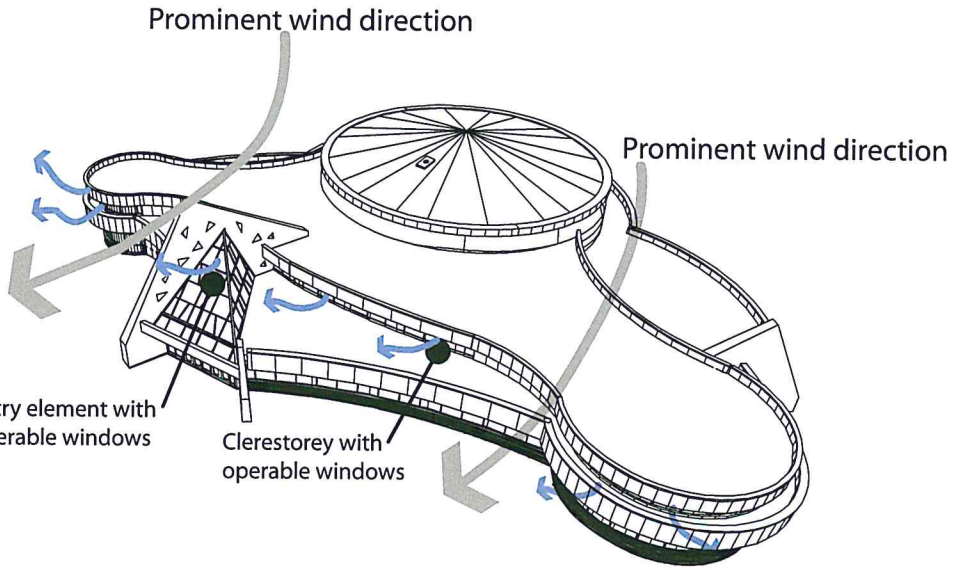


Central circulation space - allows for fluxuation in heating and cooling

Facility zoning



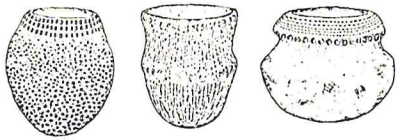
Building Section - Elders's space (Student Lounge similar)



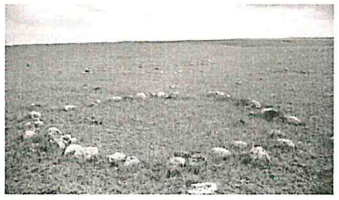
Final Development - HVAC

Northern Plains materials

Earthlodge



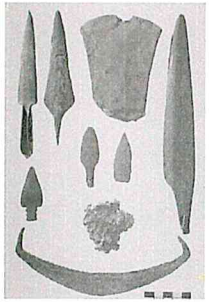
Clay pots



Stone rings -
Medicine Wheels and tipi

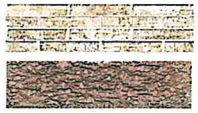
Wood and hide

Wood



Copper tools
- traded or migrated from the east?

Chosen pallette
(durability)



Brick (clay) - textured finish - light colour for plains, dark colour for base

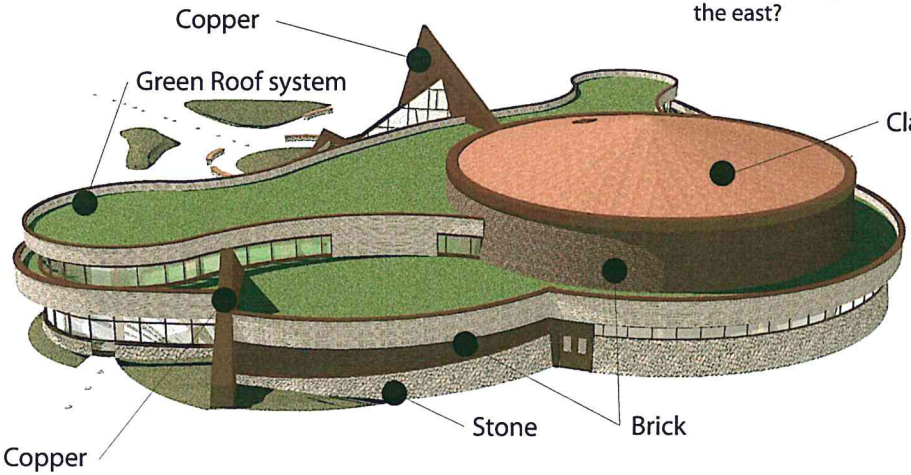
uncut vs. cut
Norther Plains culture did not manipulate stone
Uncut stone - stone rings (visually grounds the building)

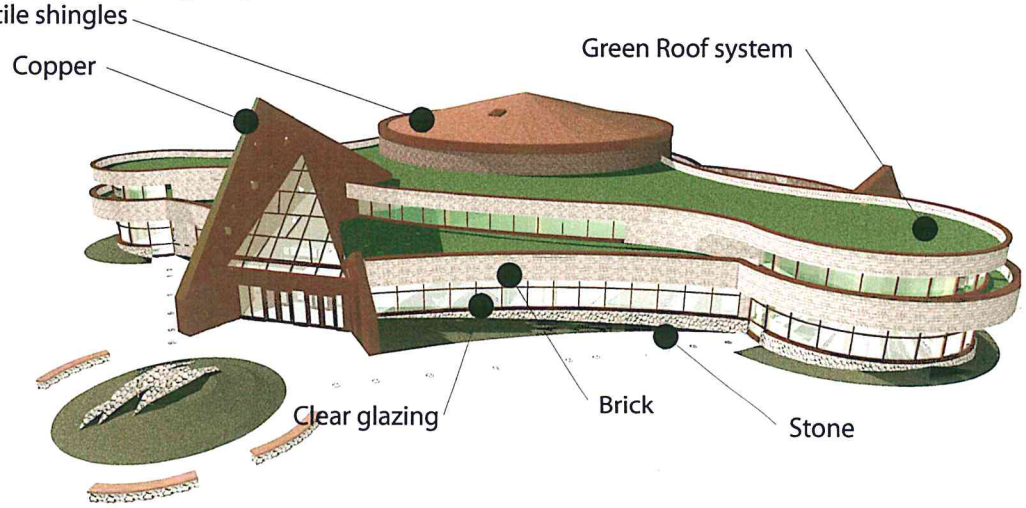
Clay tile shingles - durable, aesthetic, natural and provide for good heat absorption

Exposed wood
Clear glazing

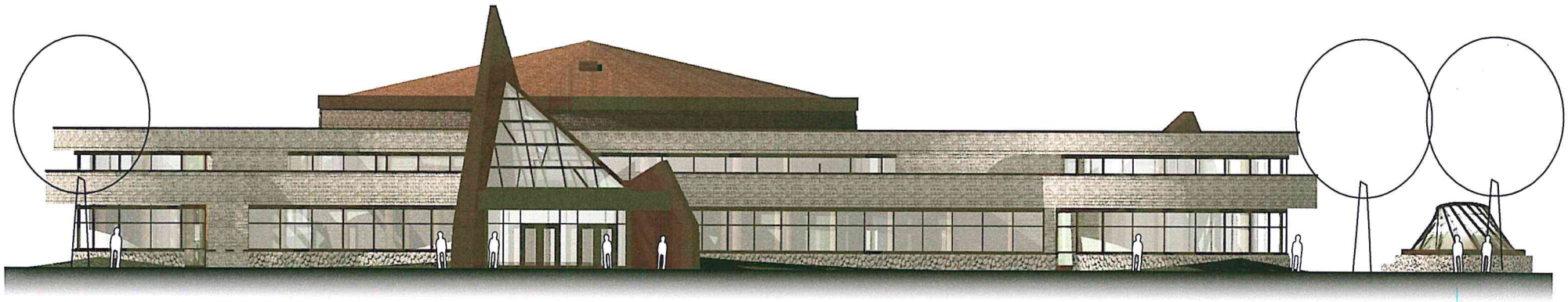
Concrete floor
- hammered finish

Green Roof - University of Ottawa
- increases energy efficiency
- provides good aesthetics for view of building from taller adjacent buildings

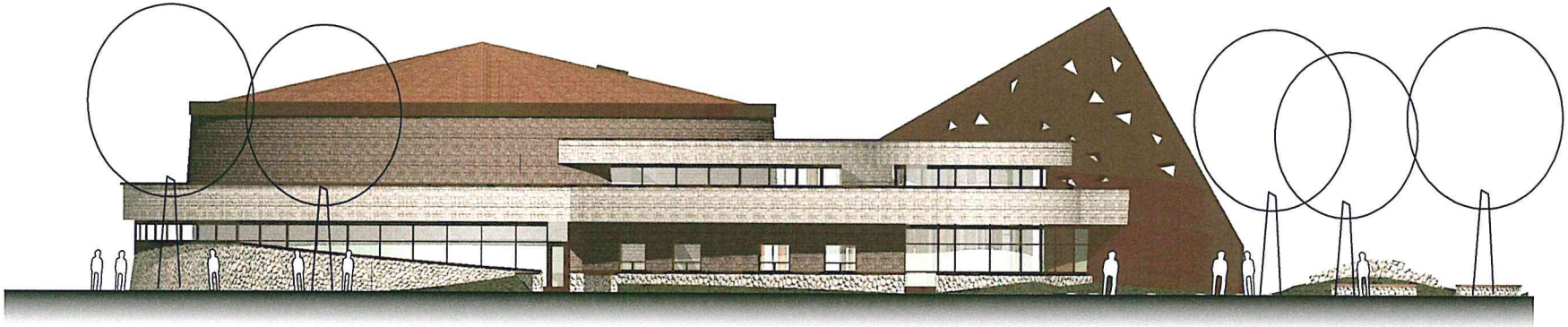




Final Development - Materials

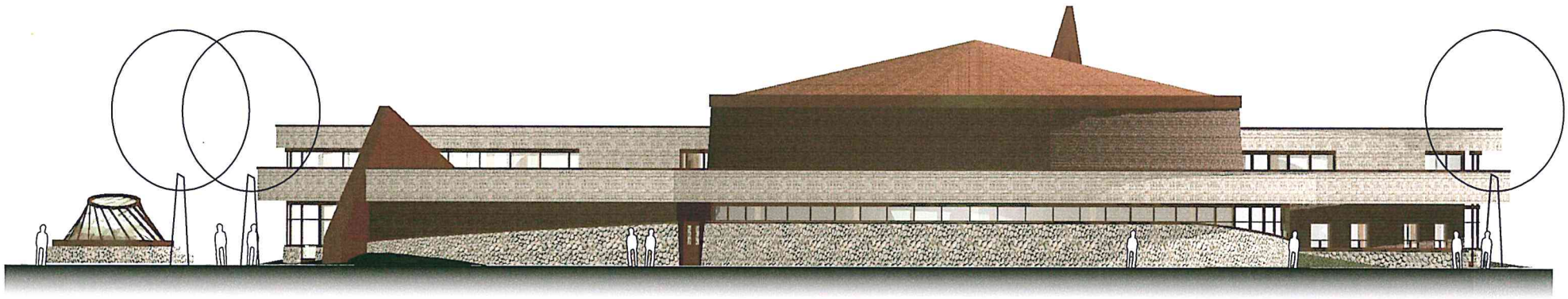


South Elevation

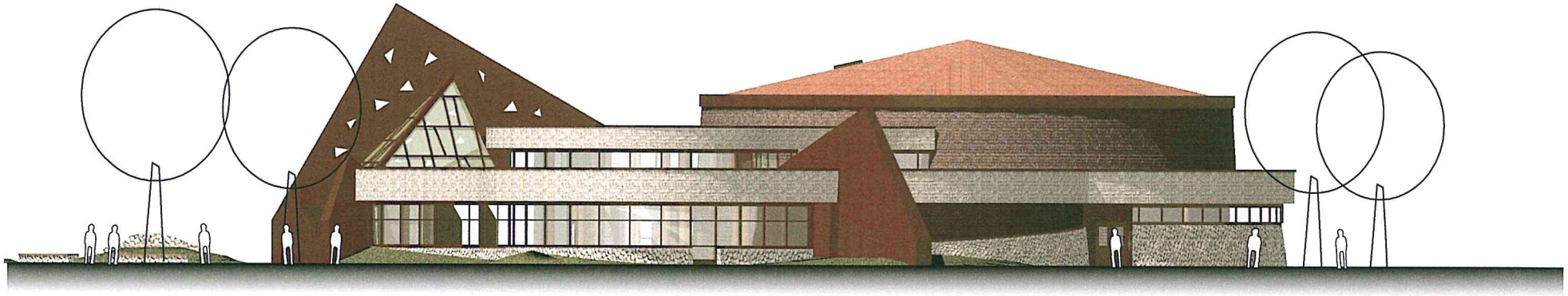


West Elevation

Final Development - Elevations



North Elevation



East Elevation

Final Development - Elevations

Approach from south

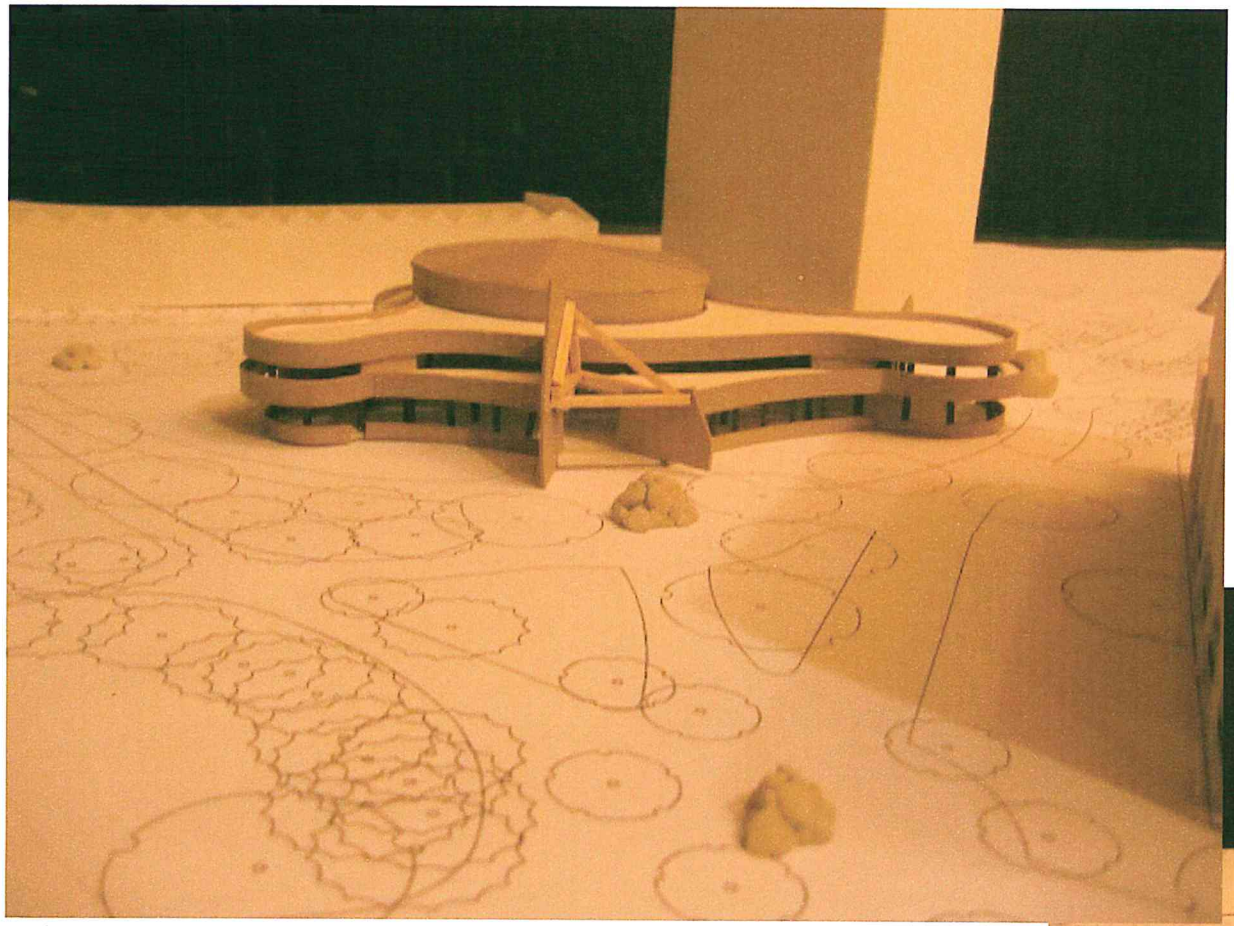
Aerial view from Murray Library

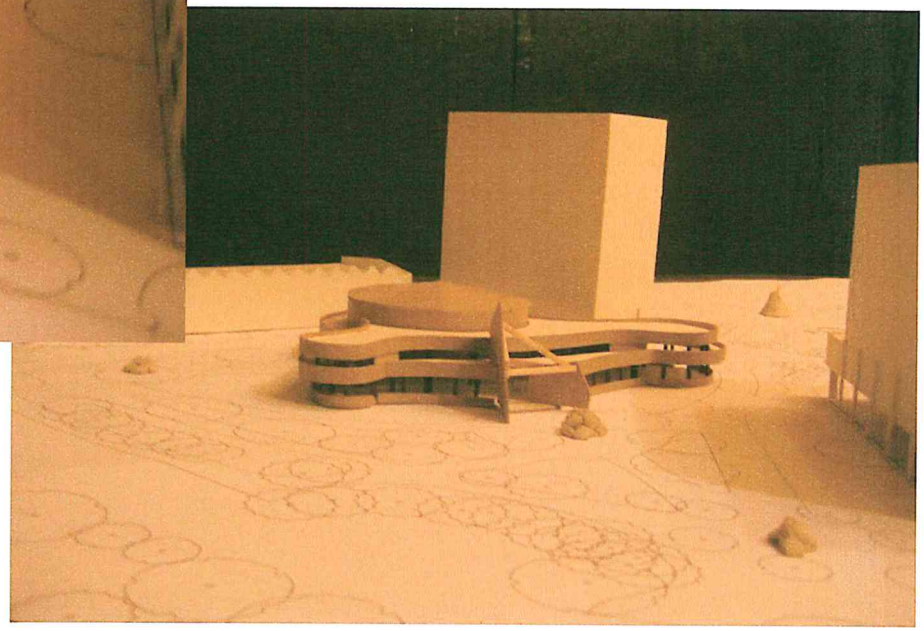
Entrance and Cairn

View of west entrance

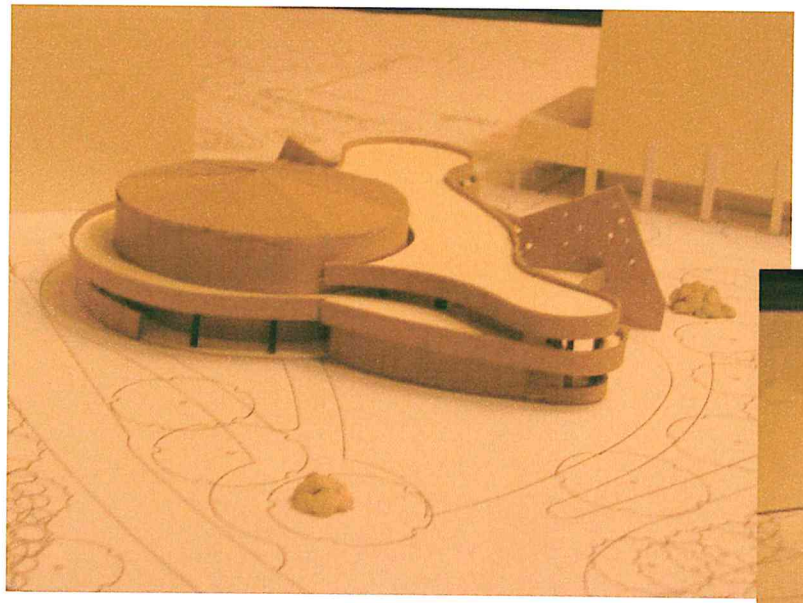
View of tunnel skylight

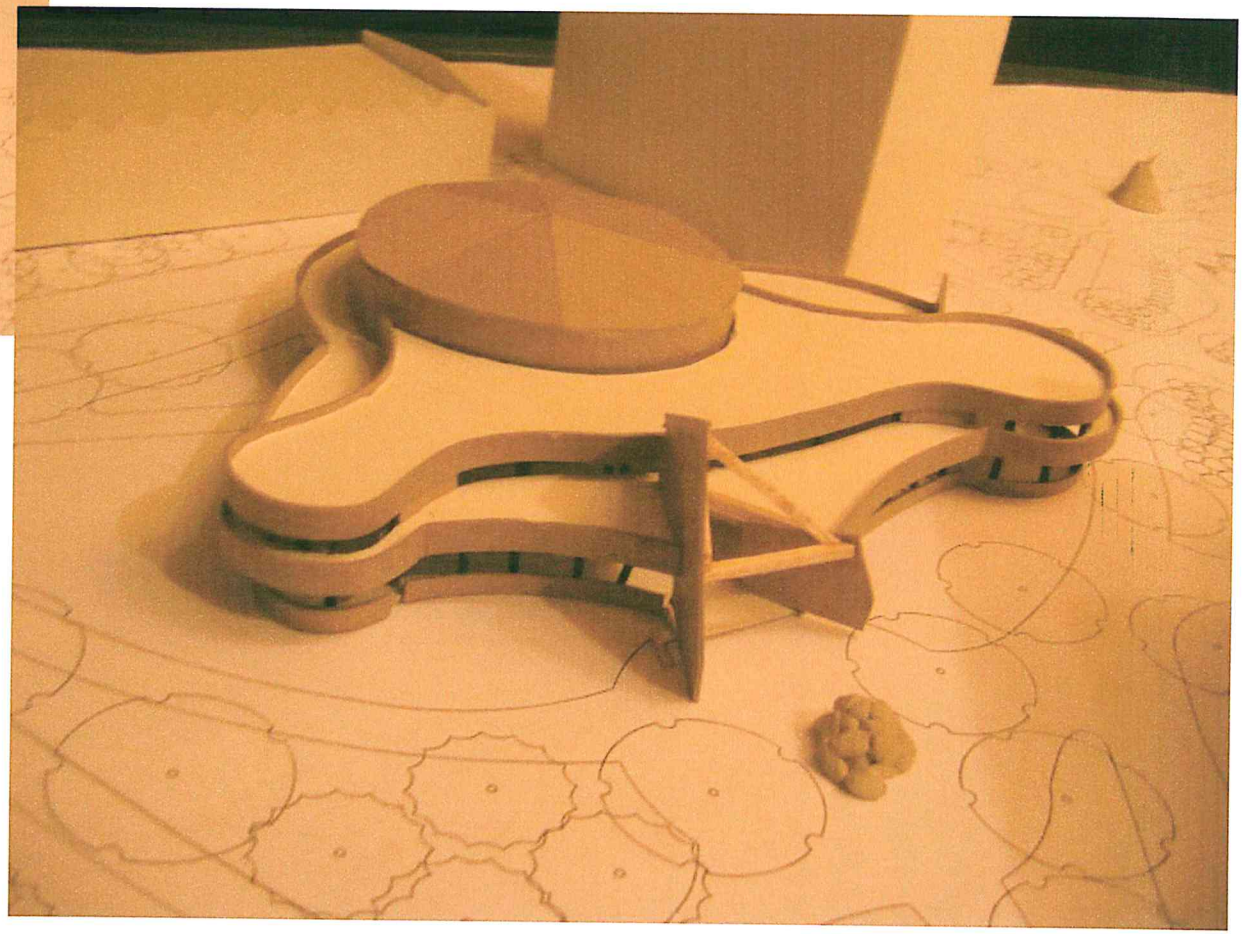
Final Development - Renderings



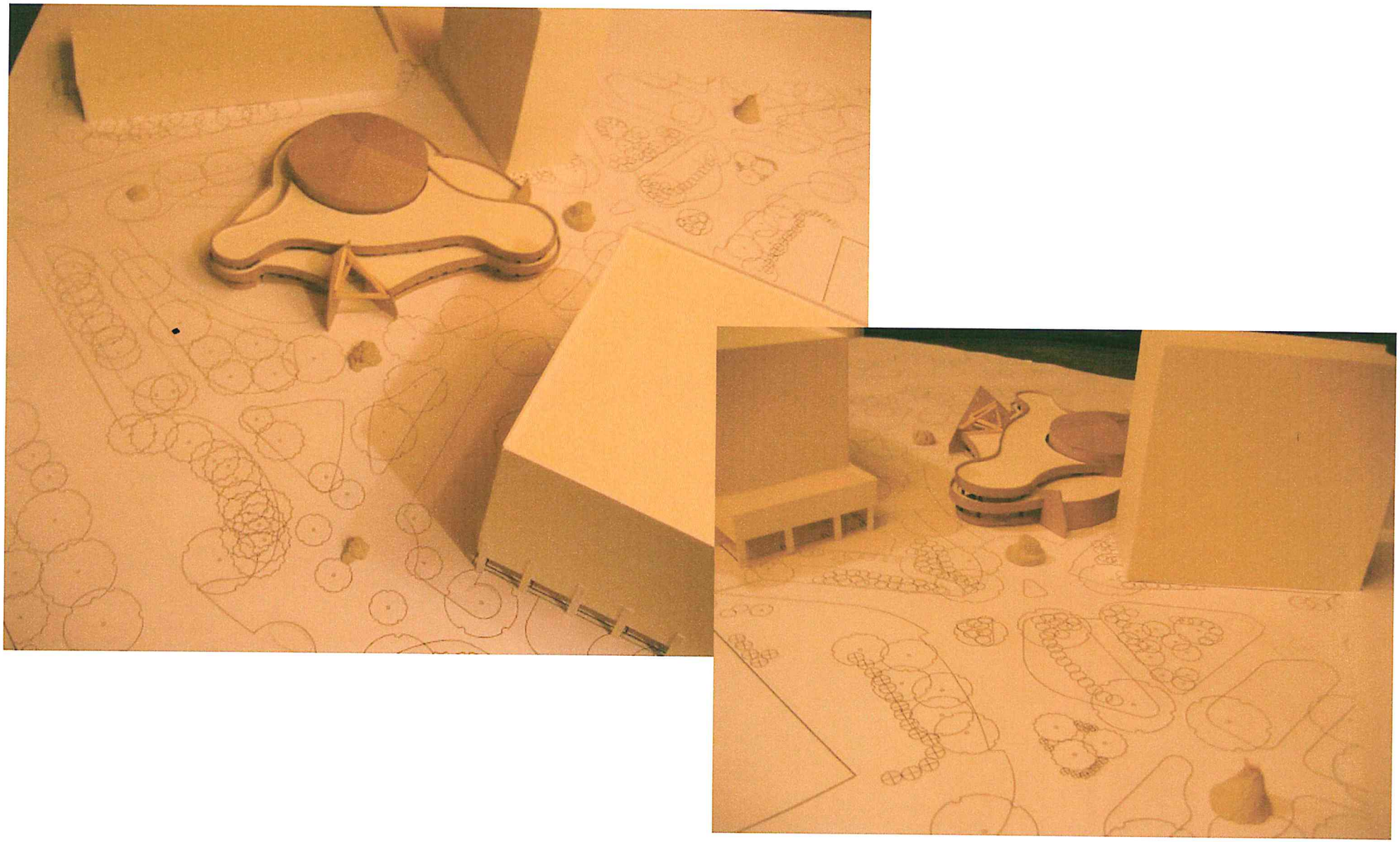


Final Development - Model





Final Development - Model



Final Development - Model