Student Work

ENVIRONMENTAL DESIGN YEAR 2
John Gray

ENVIRONMENTAL DESIGN YEAR 4
Jason Wall - Architecture Option

M2 ARCHITECTURE
Evan Schellenberg
Mackenzie Sinclair

M2 INTERIOR DESIGN
Ivanka Waplak
Adéle Sinclair

M2 CITY PLANING
Deepa Chandran
Sangwoo Hong

M2 LANDSCAPE ARCHITECTURE
Sujana Devabhaktuni
Connor Redman
John Gray | The site for this project was the area on University of Manitoba campus where the three architecture buildings are located. We explored the site and observed many different conditions and aspects of the area including the atmosphere, presence, interior and exterior circulation of people and the light quality at night. To express the traits of the site we created sketch models, site maps and sketches.

From the analysis we noticed that many people used JAR as a thoroughfare or a connection to the tunnels, that the space between JAR and Dafoe road is very dark at night and there was no indoor connection between C.A.S.T. and the other architecture buildings. We decided to focus on making a structure that would rectify these issues. Therefore we designed a structure that would run along the existing sidewalk between JAR and Dafoe road. We drew perspectives along the sidewalk and through JAR that helped us to determine how our structure would be layed out.

Once we determined the views we wanted our structure to have we developed the initial design plans. We also constructed wooden models of the existing buildings at a scale of 1:200, so that we had buildings to help us understand mass and scale.

After our initial design and exploration we each made our own sketch model at a scale of 1:100. From there we took elements from each design that we felt best represented our goals and applied them to our final design. This included the second floor interior space with an exposed first and third floor from one design, the roof top usable green space from another and the ramp system from the third design.

Our final model was designed to solve the issues we found with the site in the most effective way. To do this, we created a ramp system that extended from JAR all the way to Dafoe road that provided wheelchair access. The second floor was a series of ramps as the heights of JAR and C.A.S.T were different. The ramps allowed a unique way to create an indoor connection between the two buildings. The structure is designed to allow people to continue to use the informal path in front of JAR that connects Dafoe road and the Engineering complex. It encourages people to hangout above Dafoe road and watch buses and people travel below. It also provides opportunity to have lectures, events or socializing on the second and third
levels. The structure also allows the areas in front JAR to be utilized during the evening and night.  

To improve the lighting conditions in front of JAR we created a level of light that is similar to twilight. Lights in our design are placed behind frosted glass panels, that extended from below the second floor to above the third floor. The glass was frosted so that it has clear sections alternating with frosted sections in a pattern identical to the exterior of JAR. The glass panels extend below the second floor to hide the wavy floor pattern to create a different experience between the inside and outside. The stairs were designed like a courtyard to create an inside outside condition allowing it to rain or snow right through the structure. Instead of glazing the stairs had fencing placed on the exterior to create a visually appealing change.

Group Members: Darian Mckinney, Quingyang Guan

John Gray
Environmental Design: Second Year Student 2016-2017
Instructor: Jae Sung-Chon, Instructor II
The Spatial Recall studio engages regional and national conversations of reconciliation by examining what reconciliation means regionally and nationally in relation to the Residential School System. The proposed National Centre for Truth and Reconciliation (NCTR) is located along the Red River on Indigenous lands occupied by the University of Manitoba (formerly Southwood Golf Course). The guiding theme of truth and re/conciliation embraces notions of recognition, respect, reciprocity, restoration and resistance with a profound sense of accountability to the legacy of the residential schools, for those that followed, and the record of Indigenous engagement on the land.

Project: As a proposal for the National Centre for Truth and Reconciliation, the project inserts the visitor into a series of specific spatial conditions which aim to provide a fuller understanding of the historical and contemporary spatial contexts of First Nations people; both physical and psychological. This in turn will create a deeper connection to the place and its message, thereby fostering the desired conversation. The Centre accomplishes this by presenting these spaces in guided sequence informed by the chronology of the colonization of Canada’s Indigenous peoples, and begins with one’s approach from the surrounding site. The spaces are as follows:

**Pre-colonization Space** – Existing within the surrounding landscape, it is represented by the grassland in the building’s foreground and the gathering space within the re-established forest.

**Reserve Space** – Within the exterior space formed by the architecture, a connection to the land remains, yet new notions of boundary placed upon the visitor begin to change their relationship with it. This condition is representative of the boundaries which comprise reserve land and the way in which they began to change Indigenous people’s relationship with the land they occupied.

**Residential School Space** – A sombre sense of isolation is imbued by a long dark space meant to evoke the journey through the corridors of a residential school. Hope is present however, as penetrations of light within the corridor represent the strength of the survivors and their lasting legacy.

**Post-residential School Space** – Conditions become less constrictive, yet this new space feels unfamiliar and directionless. It represents the confusion felt by many survivors upon release of the school system due to their loss of identity. Once again hope exists here, as the space takes the form of a gallery in order to make known the traditional modes of cultural production which bring about healing and enable the reconnection of survivor to culture.
Conciliation Space – Bright, warm and imbued with a sense of directionality, this is a gathering space formed by conditions conducive to healing through the forging and strengthening of relationships.

Re-conciliation Space - Part of healing and building toward the future involves a re-conciliation with one’s past and a reconnection the land. Here archival and ceremonial spaces which contain knowledge and encourage cultural practice ensure the culture’s survival and growth.

The architecture itself is designed to minimize its impact on the natural landscape both visually through its low construction and physically through its siting within the existing golf course fairways. The siting also maximizes the NCTR’s public interaction through its proximity to the university and its interception of the existing pedestrian pathway. A cross patterned screen along the front of the building acts as a second skin to protect the building from solar and wind loads and is informed by various traditional Indigenous architectural typologies. The screen also plays with light and shadow to dematerialize the building and further meld it into the surrounding forested area. The Great Hall’s aesthetic finds its influence in west coast longhouse construction, particularly the large cedar planks which make up the facade.

Jason Wall
Environmental Design: Architecture Option 2016-2017
Instructor: Ed Epp
University of Manitoba Gold Medal Recipient

Jason Wall is a recent graduate of the Architecture option in the Environmental Design program, and is currently in the Master of Architecture program at the U of M. To say that Jason’s final year in the ED program was challenging yet rewarding would be an understatement. His introduction to the Indigenous people of Canada, their culture and history, has altered the way in which he now understands his own world and history. Jason considers it a privilege that his growth as a designer has continued during the summer as a member of an established Winnipeg architecture firm. Outside his design, Jason’s time is primarily spent with his wife and playing basketball.

For more information please visit the National Centre for Truth and Reconciliation’s official website at www.nctr.ca
In Absentia

Mac Sinclair | This proposal culminates with an offshore research facility for the monitoring of wave harvesting devices and their surrounding ecosystem. Ultimately, I deployed a series of hypothetical drawings and models in order to investigate notions of scale, culture, and context. Together, these inquiries examine how an unacquainted site could be critically and evocatively engaged. The constructs established by the initial inquiries provided the foundations for a hydraulics research and testing facility situated near Point Conception, California.

The intent of this thesis is to discover how a situated and engaged design process can compensate for one’s physical absence. Ultimately, I am questioning how architecture can be used as a platform for evaluating current cultural and climactic trends. The underlying belief of this project is that architecture should not be sterile, innocuous and confined; it should dare us to question, reconsider and progress. This thesis pursues a critical design process in which the dreams of the student can propagate in absentia.

Mackenzie Sinclair

Department of Architecture
2016-2017
Advisor: Eduardo Aquino Ph.D, Associate Professor

Mac Sinclair earned his Bachelor of Environmental Design (through the Architecture Masters Preparation program/AMP) and Master of Architecture at the University of Manitoba. He holds a prior degree in Geography from the University of Victoria. He is currently working at HCMA Architecture + Design in Vancouver. He earned the Manitoba Association of Architecture Medal for his comprehensive Design Thesis project.
This project investigates the architectural implications of a Clownmade City. In a post-industrialized world that has forgotten how to play, how can an architecture be created that does not narrow or delineate human activity, but instead promotes ideas of play between the wants, needs, and desires of its inhabitants? In Homo Ludens: A Study of the Play-Element in Culture, Johan Huizinga defines play as an essential activity in flourishing societies. Play is not only a key element in unlocking our imagination, but also in how we interact with the world around us. However, it is evident that we as a society are losing our ability to play in ways that generate new modes of physically engaging our urban environment. This project seeks to explore and better understand how notions of play can be used as both tools for the design process and as architectural elements that will allow individuals to engage the urban environment in more meaningful ways. This project recognizes that the invitation to play is to enter into and experience an autonomous world that is subject to its own rules and logic, and seeks to better understand how these experiences can help, envision, shape, and construct architectural space. The clown or trickster acts as a guide to these notions of play, as he/she has long been a student of human behavior and is a key character in engaging society in serious play. Architecturally, this work develops through the invention of several improvisational structures and architectural interventions that react to the characters, situations, and rules inherent in a particular place, while also exploring how the serious play of the modern clown can engage and experiment with ideals of architecture, time, and space.
Deepa Chandran | The ease with which an individual can access available transportation facilities determines his/her access to basic amenities that are crucial to maintaining a minimum standard of living, and therefore, is a key component of individual/community well-being. From this perspective, analyzing the accessibility of public transit to marginalized communities is critical to unfolding the link between transportation inclusion and well-being in automobile-centered cultures. The marginalized status of Winnipeg’s North End neighbourhoods, which is also known for its disproportionately high concentration of low-income households and Indigenous population, is well established by various research studies. These neighbourhoods significantly lag behind the rest of the city, with regard to major indicators of socio-economic development and continue to exist as a physically isolated district within Winnipeg. Based on a mixed-research framework, this study explores the importance of public transit services to Winnipeg’s North End community and the current level of transit accessibility to its residents. The study, although at an exploratory level, also examines the existing barriers to transit facilities in the area, socio-economic implications of the current level of transit accessibility, and strategies to improving transit accessibility to its residents.

This study was completed in two stages; based on the data collected from Winnipeg Transit, the first stage involved quantitative analysis of transit services and related amenities in the study area. In order to examine issues of transit equity at the broader level, the accessibility figures were compared against the corresponding figures of the Osborne Village-Fort Rouge Area; an area with comparable geographical location and built form. The second stage of the study, i.e., semi-structured interviews with grass root level community workers serving the North End, was conducted with the support of Winnipeg Boldness Project; a community organization functioning in...
the North End. This research adopts a holistic approach to understanding the concept of ‘accessibility’, and recognizes the importance of socio-economic, perceptual, and demographic factors that shape demand for transit facilities in an area. The study also demonstrates the need to incorporate qualitative approaches in transit planning rather than being completely guided by numbers. Although insufficient to establish as a general rule, the analysis suggests that Indigenous residents are likely to encounter additional barriers to transit accessibility as compared to non-Indigenous residents in the city; hence, this study emphasizes the need to include transit accessibility as a component of urban-Indigenous welfare policy frameworks. The lessons learned from the study will also provide an initial framework to explore the link between community wellbeing and transportation inclusion of other socio-economically vulnerable communities in the country.

Deepa Chandran
Department of City Planning
Graduate Studies Student, 2016-2017
Advisors: Janice Barry Ph.D, Associate Professor

As an international student from India, Deepa Chandran entered the Master of City Planning program in 2014. With specialization in Human Geography and Planning, she also has Masters’ and Bachelor’s degrees in Geography. She worked as a Research Fellow of the Council of Scientific and Industrial Research (CSIR), India, for five years. Currently, she works with the Community and Regional Planning office of the Manitoba provincial government. She has received several scholarships in recognition of her academic achievements, which includes the University of Manitoba Graduate Fellowship and the Thomas B Yauk Fellowship sponsored by Manitoba Professional Planners Institute (MPPI). Deepa is passionate about Indigenous planning, public transportation, and sustainable community development.
As spatial information has become more accessible and cheaper, interest in using Geographic Information System (GIS) has increased in a variety of fields including geology, social science, land management, and urban design. GIS has been considered a tool to provide geographically more accurate information and maps, but there are still underexplored questions about whether GIS is a tool that encourages or hinders active public participation in community planning practices; or whether it only intensifies fact-based research methods rather than encouraging more comprehensive approaches. In order to address these questions, this practicum examines how GIS may be useful to encourage public participation, how information and knowledge collected from residents or a neighbourhood can be applied to developing a GIS model and how these data can be incorporated with community plan. To analyze and illustrate the processes, this practicum explores community gardens in the Daniel McIntyre and St. Matthews Communities in Winnipeg, Manitoba and aims to develop a GIS model to assist with the process of identifying the strategical locations for future garden sites.

Through aggregating residents’ perception collected from two field surveys and a workshop, this research identified top three areas about positive changes, areas for improvements, and areas for future community gardens, and compared the results in GIS.

This research identifies that Participants’ perception about positive changes tends to rely on physical improvements that people can easily visualize in their mind. However, perception about areas for improvements is more linked to their emotional sense. For example, when some of participants drew circles to identify areas for improvements, they mentioned unsafe feeling or experience in the areas. However, when participants described positive changes, they generally recognized community service improvements or physical changes, such as repaired streets and bike path. It means using perception in community plan can help identify how physical interventions influence residents’ emotional perception about their communities.

This research also identifies that there are different response patterns between surveys and a workshop. Residents’ responses in regards with areas for improvements tend to be areas with safety concerns. However, community staff members in a workshop looked for specific places that could be upgraded or restored by physical interventions such as abandoned condos and facilities.
From these perspectives, findings from this research suggest that residents’ narrative and informal information can be a strong means to identify areas that need more improvement and require community's strategical actions to resolve the challenges.

Another finding is that maps can effectively encourage communications and identify people’s understandings and experience about environments that they are interacting on a daily basis. The type of exercise also increases a sense that they are valued in their community and makes them more supportive of community planning and plans.

The last finding is that GIS can be a participation tool to support community plans in inner-city neighbourhoods. Community organizations can use this analysis to develop strategies for areas in needs of improvements and to identify what strengths their communities have. More specifically, GIS can visualize intangible and narrative ideas driven from residents and enable to quantify the qualitative information. It also persuasively conveys the information to communities. It means, as a communication tool, maps make people easily express their thoughts, and when many residents’ perceptions are aggregated into a map, it could represent common concerns about their communities.

Sangwoo Hong graduated the Master of City Planning in 2016. He is currently working as a Jr. Program Officer with Indigenous and Northern Affairs Canada (INAC) to assist in developing an interactive mapping tool to support INAC’s informed decision-making. His passions involve geospatial analysis using GIS to support community-based land use planning and urban design.
Ivanka Waplak | From the moment of birth, humans begin to perceive and mold an understanding of the world. Sadly, all over the world many children, especially those with mental and physical disabilities, are left alone to navigate and form an understanding of their surroundings. In Ukraine, children born with disabilities are often abandoned and left to the responsibility of the Ukrainian orphanage system, a stigmatized system plagued with abuse and child maltreatment. Through this abuse and severe under stimulation, healthy physical and mental development cannot successfully prosper.

This practicum project is a study of how the built environment of a child transition centre can aid in influencing mental and physical healing of social orphans within Ukraine. The design incorporates built elements that support physical and psychological growth, which are intended to support social orphans in healthy childhood and adolescent development. Druzi combines healthcare design, education design, and residence design to create a programme that ensures social orphans gain the tools needed to transition into society and one day become contributing members of the community.

For more information on Ivanka’s project visit https://mspace.lib.umanitoba.ca/handle/1993/32452
Ivanka was born and raised in Winnipeg, Manitoba. She most recently completed a Masters of Interior Design degree at the University of Manitoba, as well as a Bachelor of Environmental Design degree that was achieved a few years prior. Ivanka grew up within the Ukrainian Canadian community in Winnipeg and belongs to several Ukrainian organizations within the city. Her Ukrainian upbringing influenced her decision to base her Masters practicum project within the country that is still home to the majority of her family. Throughout her Masters education, Ivanka has been interested in the way an interior environment psychologically affects its users, which consequently became the main point of interest for the design of Druzi Transition Centre.
Adéle Sinclair | This practicum presents a proposed dental clinic and mix-use facility in Comitancillo, Guatemala. The clinic is for use by Dentistry for All (DFA), a Canadian Volunteer organization that conducts two-week long clinics in Comitancillo bi-annually. Occupancy is shared with The Maya-Mam Research and Development Association (AMMID), a local organization, based in Comitancillo. The building design developed from the inside out. The human experience in space, the importance of a sense of place and the physical and emotional comfort of both the patients and DFA’s volunteers was equally important to the design as the functional requirements that orchestrate the most efficient workspace for the dentists and the volunteer staff. The building form developed as a response to required functional adjacencies between the clinic and the flexible, mix-use spaces that will be shared by DFA and AMMID. Samual Mockbee, a late American architect with a socially rooted design philosophy believed that the best way to make architecture is by letting the building evolve out of the culture and the place. Through a volunteer experience with DFA in November 2016, I was able to learn about the work that DFA does in the community and about the culture of the Maya Mam people, which fostered a sense of place, helping me understand the ‘Genus Loci’ of Comitancillo.

The connection between humans, the built environment and the natural environment was further explored through the philosophy and methodology of Biodesign. The work and findings of architect Mick Pearce, and researchers, Rupert Soar and Scott Turner on the passive ventilation system that cools African termite mounds, inspired the passive ventilation system in the design. Using this principle seen in nature and applying the concept to the built environment creates an opportunity to connect the built and natural environments in a more harmonious way.

Frank Lloyd Wright wrote: “No house should ever be on a hill or on anything. It should be of the hill, belonging to it. Hill and house should live together, each happier for the other.”

Rethinking the way we design, build and inhabit our world is critical to creating contemporary, sustainable and relevant designs that consider both human needs and the natural environment. Biodesign methodologies potentially offer the opportunity to bridge the gap and restore harmony.
between the living and the constructed, as these methods demand an awareness of nature. Architect, Samual Mockbee believed that architects and designers “should take the lead in procuring social and environmental change,” therefore it is our responsibility as designers to create spaces for social change in which the built and the natural environment coexists harmoniously.  

Connecting people with nature through innovative, responsible and sustainable design practices while developing a space that fosters wellbeing, a sense of place and positive experiences was the design philosophy and driving force behind the proposed dental clinic and mix-use facility in Comitancillo, Guatemala.

Adéle Sinclair
Department of Interior Design
Graduate Studies Student, 2016-2017
Advisors: Tijen Roshko, Associate Professor

Adéle completed the Master of Interior Design degree in May of 2017 and convocated in October 2017. She came into the MID program through the pre-Masters option. She holds a Bachelor Honours Degree in Fine Arts from the University of Manitoba, with a major in sculpture. Adéle was born in South Africa and lived in Somerset East, Eastern Cape before moving to Pinawa, Manitoba, Canada in 2000. Her work in the MID program was highly influenced by her interest in the intersection between the natural and the build environment, and how this space effects the human experience. Investigations in Biodesign philosophies and methodologies, the notion of sensorial design, the importance of ‘place-making’ and the idea that good design transcends economic constraints are just a few of the principles that inspire Adéle’s design philosophy.

Sujana Devabhaktuni | Abundant with natural resources, the land and its people once flourished in the northern territories. Cree, Chipewyans and Inuit communities lived in Manitoba by hunting, trapping and fishing. The communities seasonally moved between the tundra and the boreal forest following the caribou and moose herds. This symbiotic relationship with the land ended upon arrival on the Europeans. In the 17th century, HBC offered household goods, guns and ammunitions in exchange for fur and relied on First Nation communities for food. In 1917, the government of officials came to a conclusion that the high demands of trade threatened species such as beaver, caribou and wood bison; they prohibited hunting. The decline of the fur trade and the hunting ban resulted in the separation of people and communities from traditional lands. This separation affected the physical and mental well-being of the Indigenous people. Lacking proper shelter and food sources, people slowly fell into despair, and many became addicted to alcohol and other substances. This destroyed family relations. Since 1955, alcohol, prostitution and violence have become a common scenario in the north.

Even today, most of the communities in northern Manitoba lack access to nutritious food due to limited food availability, high prices and low affordability. Food transported from southern regions via air, train or trucks is highly expensive due to geographic remoteness, accessibility and to high transportation costs. In Northern Manitoba census division 22 and 23 over 75% of the households experience food insecurity. 1.7% of the population suffered severe food insecurity. 5.7% were compromised in the quality or quantity of food intake and 5.0% worried about running out of food due to a lack of adequate financial support.

The proposal aims to end hunger and provide nutritious traditional food to the communities by developing sustainable caribou, moose and musk ox reserves. These wildlife reserves
are proposed to be developed in the natural habitat of each species adjacent to the communities. The natural habitats provide food required for the animals while being protected from their predators. Resource availability, plant redevelopment, grazing cycles, the thermal resistance of the animal, predator zones, the population of the community, food insecurity, and anthropocene footprint are primary determinants to identify the location of the reserve.

The reserves will initially begin on a small scale with ten calves of each species at the identified locations and take up to 30 years to function as a food source for the communities. The established 36000-hectare reserves with a population between 800-1000 animals will provide food for 250 families at each location there by contributing to health and well-being of the communities.

Sujana is currently a graduate student in the Landscape Architecture program, with a bachelor's degree in Architecture. Since her graduation, she has worked with landscape architecture firms in India for five years. Sujana is currently working on her practicum which focuses on the emphases of the cultural changes and their reflections on the landscape with a focus on urban and rural communities along Thammileru river in south-eastern India.
Connor Redman  | How powerful can a line be? Landscape Architects rely on lines every day. From conceptual sketches to construction drawings, Landscape Architects design in a world of lines. A line can become a path, a building, or an entire city. Lines can unify, guide, and protect. Lines can create beauty and art. Lines can create community. But Lines can also divide. Lines can silence, isolate, and neglect. A line can increase the rate of homicide by 4 times, unemployment by 5 times and premature mortality by one and a half times. Lines are powerful. And in few places is the power of a line as apparent as in the lines that form the electoral divisions of Manitoba.

The M1 winter semester studio investigated Northern Manitoba with a focus on developing a regional planning strategy and design. We began the studio by creating a collage of what we know of Northern Manitoba. Polar bears, First Nation artwork, explorers, and snow... lots and lots of snow. Maybe even a train? From here, as a studio, we began to research. Books, journals, research articles, documentaries, government reports, and maps. Layers of GIS data. A two-day train ride to Churchill Manitoba. Visits with Parks Canada, a tour of the Churchill Northern Studies Centre, meeting with City Planners, and conversations with locals. Visit Camp 10. Two-day return train ride South. And in all of this research, a new collage of Northern Manitoba emerged. This collage is incredibly complex, rich with history, and unimaginably beautiful. Yet the image is also disturbing.

The differences between the Northern and Southern regions of Manitoba are striking. In nearly every measure of standard of living, Northern Manitoba falls drastically lower than both the South as well as the National average. Quality of health, income, education, incarceration rates, and access to even the most fundamental necessities such as water and electricity. All categories suffer in the North. And to add to this, climate change is likely to impact sooner and harder in the North than Southern regions.

So why didn’t our studio know this before the research? If Manitoba has the largest regional employment discrepancy out of all Canadian provinces, why don’t we talk about it? Throughout the research and analysis, I continually asked myself how can this happen? Continue to happen? And how is this not the front page of every paper? Why don’t politicians run campaigns to change this? Why don’t we decide our vote on these issues?

Perhaps it is my background in political science, but it occurred to me that part of the reason may be a result of the provincial electoral system. Specifically, the way in which we decide electoral divisions. Why electoral divisions? Well, Northern Manitoba has a grand total of Four electoral districts. Four. Four out of Fifty-seven. Winnipeg, in contrast, has Thirty-one. This means that during provincial elections all of Northern Manitoba receives four seats. Four MLA’s to represent all of the complexities of the North. Four seats are not likely to win or lose a leadership race. And politicians know this. So although the electoral divisions don’t cause the underlying reasons
for regional differences, they certainly impact the attention, discussion, and political will to create change.

Perhaps then, if any positive changes are going to be made to those living in Northern Manitoba, the process of deciding electoral divisions needs to be seriously reconsidered. This project focuses on exactly that. The framework relies on a regional population quotient that accounts for differences in populations and accommodates a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation according to the regional population quotient that accounts for differences in populations and accommodates a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly. Using this method, electoral districts rely less on population and accommodate a reasonable representation accordingly.

So what is the power of a line?

A line can mean the difference between four electoral divisions or thirteen. Four electoral divisions that most politicians can afford to ignore, or thirteen that can win or lose an election. A line can mean the difference between ignoring, or including. Forgetting or focusing on. A line can make all the difference in the world.

Connor Redman

Department of Landscape Architecture
Graduate Studies Student, 2015-2016
Advisor:

Connor Redman graduated from the University of Lethbridge with a Bachelor of Arts in General Social Sciences focusing on Political Science, Sociology and Native American Studies. Connor is now in his final year in the Master of Landscape Architecture program with a practicum focused on designing to accommodate sea level rise in Squamish British Columbia. Outside of class you’re likely to find him floundering with a fly rod or riding almost any type of bicycle.