

HEALING UNIVER(CITY)

Creating a System of Meaningful Places
Through the Conception of Body

by
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ABSTRACT

Creating a sense of place; a meaningful urban landscape has been one of the great challenges of the contemporary built world. Urban fabric once molded and sanctified by religion, myth, and subtle forces, is presently understood through formal and functional issues. This thesis contends that an important part of the experience of place is through understanding the landscape as a part of a greater narrative of spiritual or energetic significance. In a contemporary context, this can be engaged through the conception of the human body.

The human body has held a special role with regards to the built world. We assess the world with the aid of our physical bodies and our relationship to space is shaped by the understanding of ourselves as psychological and spiritual creatures. Currently, North American culture is undergoing great change in the comprehension of the body. This includes a reality where the energetic or subtle body is recognized as a valid element of human existence and an inherent mind-body connection is being supported by advances in the world of science. There is also an increasing awareness that the divide between human beings and the natural environment is detrimental to both physical and mental health.

The city of Toronto is in a period of redefinition and this new interest in the human condition can play a central role in the development of the city fabric. Its main civic avenue, University Avenue, becomes the site for an urban project guided by respect for the physical, energetic and cyclical nature of the human being. A network of public spaces is created that allows people to reconnect to the city as a part of a narrative of body, energy, and the cycles of the natural world.

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INTRODUCTION

“We are so engaged in doing things that achieve purposes of outer value that we forget that the inner value, the rapture that is associated with being alive, is what its all about.”

-Joseph Campbell, *The Power of Myth*

The built world of today is one of incredible strength and efficiency. Great towers hover in the sky, bustling streets and thoroughfares move millions to where they need to go. However, the modern city; this amazing specimen of human ingenuity; is lacking. Lost is the connection to a greater network of natural and spiritual worlds once widely considered by pre-modern cultures in the creation of the city. This thesis reacquaints the city with these networks through engaging the bond between the built world and the human body.

The narrative of the body, both of metaphor and proportion have been imbued in architecture through the millennia. This interrelationship can act as a guide for an alternative model for the city and is examined in the first chapter. Like the city, the human body, once permeated with powerful myth and narrative, became a collection of mechanical parts with the onset of the modern era.

However, in the realm of the body, there is a sense that great change is occurring. Recent scientific discoveries, influences of ancient somatic theories and disenchantment with the existing mechanistic model have returned the body to an energetic realm. Thus, the human body and the developing conception of it becomes the foundation upon which a more compassionate view of urbanism is tabled.

The urban project as described by Christian Devillers becomes a valuable starting point for an investigation of urbanism that reflects this changing role of the body. In his lecture delivered on May 4 1994 at the Pavillion de l’Arsenal, Devillers explains the urban project as a process as opposed to a procedure. He goes on to quote Manuel de Sola-Morales: *“I do*

not accept the pessimistic claim of the urbanist who can resolve all problems and who carries all the sins of the world. I refuse the idea of the social engineer which is to resolve, save, cure. One must add something of value. One can bring some clarity and emotion.” Devillers then defines the urban project as ‘*a bit of clarity and emotion*’ with the aim to render space useable; the term ‘*useable*’ representing a plurality of functions.

Devillers’ urban project can be divided into a process that includes:

- 1) Identifying the site as the place of the project
- 2) Recognizing the qualities of the place, especially those not immediately evident
- 3) Producing value by making specific proposals, rendering the space useable, so that the value of the place is rendered effective
- 4) Making intentions clearly known and articulated using both written and drawn expression in plan and three dimensional form using a range of scale.

-Christian Devillers, The Urban Project, Marie-Paule Macdonald, Translator’s Introduction unpublished

The second chapter examines the city of Toronto and identifies its main civic boulevard, University Avenue as the site for the urban project. University Avenue is a clear example of an urban project with prestige, funding and ample design effort that lacks the recognition of the full spectrum of human existence. Mapping and analysis tools are used to understand the city of Toronto and University Avenue’s place within it. An investigation of the site also takes place in the subtle realms as well as the personal, ethereal and energetic. Ultimately, this chapter investigates the additional layers to how we may understand and conceive place utilizing the metaphor of the body and its subtle energy. It is within this process that combining the narrative of the chakra system and the urban fabric is used to create an alternate view

of the city. This translates into a process that includes a consideration of the energetic or spiritual aspects of the site.

The third chapter describes a specific proposal for University Avenue. The image of the *chakra* system and city as one entity developed in the second chapter becomes the guiding force for the urban project. The multi-directional force of energy applied to the human being, is applied to the city. It shapes a narrative of the human experience upon the city fabric weaving the physical with the energetic realms of experience. The site becomes a journey towards a fullness of self reflected by a wholeness of city.

CHAPTER 1

THE BUILT WORLD, THE HUMAN BEING

The understanding of what it is to be a human being can both reflect and inform the built world. The physical human body is an already widely studied area with regards to architectural proportion and theory. Through an examination of the conception of what it is to be human and this relationship with the built world, we may begin to understand our contemporary position with respect to the human being and space.

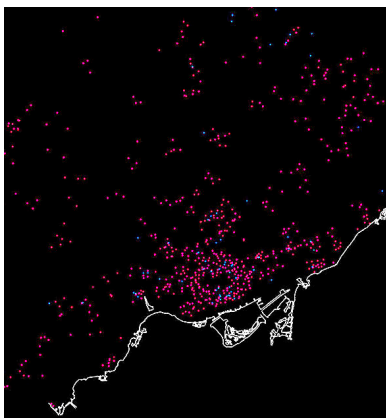
i) The Contemporary Human Entity - New Understanding

The conception of the human being that recognizes an energetic aspect is increasing. Some may trace this change to the late 1960s with Aquarian Age mythology, pop culture astrology, and the New Age movement. However, this can be seen in many facets of contemporary North America and influences can be traced to a number of factors including globalization, scientific research and increasing disillusionment with allopathic healing systems.

Globalization has exposed conventional Western culture to somatic theory, religion, and belief systems from around the world. In particular, somatic philosophies from the Far East have gained widespread acceptance. Greatly influencing North American culture are analogous aspects of somatic theory found within a diverse group of Asian belief systems.¹ One such aspect is the Eastern understanding of body as something to be developed in conjunction with particular practice such as medicine, art and religion. In traditional Chinese medicine, dissection of cadavers for research was culturally undesirable, thus, diagnoses were based on careful observation through the doctor's senses. Not knowing the organs' exact locations allowed for Chinese medicine to consider the patient beyond the physical realm.

Fig 1.1
Map of Toronto: numerous facilities for the study of mind/body/energy related activities show gaining popularity

Burgundy: Yoga studio
Blue: Tai chi studio
Red: Martial arts studio



The increase of mind-body integration through training is another prevalent idea. The connection is considered a process or a skill to be achieved. Practitioners of martial arts or yoga doing seemingly impossible physical feats are a testament to this training. The increasing popularity of these techniques can be clearly seen in a North American context. A 2001 study performed by the Sporting Goods Manufacturers Association reported on www.namasta.com showed that *Tai Chi*, Pilates and Yoga are the exercise activities with the highest growth all showing increases from 30-40%. The website further reports that in 2005, 5.5% of Canadian adults were practicing yoga. Worldwide estimates of *tai chi* practitioners on www.worldtaichiday.org is 20% with recent studies in North America expounding the health benefits. Recently, at the University of Waterloo School of Architecture a map was developed showing the density and location of yoga, tai chi, and martial arts centres appearing around Toronto. (See fig 1.1)

The presence of a third entity that is neither mind nor body but which is considered the root of both is another key element in Asian belief systems regarding the body. *Ch'i*, *dravya* or *sattva* are all terms in eastern culture to denote this entity as some sort of energy or life force. Gerald James Larson describes it in his essay *Ayurveda and the Hindu Philosophical Systems*² as “subtle matter”. The implication of an increasing understanding of this third presence is great in North American culture. Not only do these ideas return the human being to a mystical realm, but in the introduction to *Self as Body in Asian Theory and Practice* Thomas P. Kasulis states “...when we properly understand the true dynamic of the mind-body field, we find that the field’s boundaries extend beyond what we normally think of the empirical self.”

One particularly moving vision of this energetic system is the *chakra* system. Derived from of ancient Indian somatic theory,

it has been much popularized in North America. In Anodea Judith's preface to her second edition of *Eastern Body, Western Mind* (2004), she describes the coming of age of the *chakra* system with an assertion that its model of human existence has been embraced by mainstream culture. The system was first introduced to the Western world by Arthur Avalon in 1927, in his book, *The Serpent Power*.³

The *chakra* system is located in the realm of the subtle body, (the energetic or psycho-spiritual body that all beings are said to have). *Chakras*, are, in essence, centres of energy, seven of which are stacked from the base of the spine to the top of the head. When awakened, energy moves in a multidirectional flow between the base located at the perineum to the seventh chakra at the crown of the head. The *chakra* is essentially the system where the body and spirit most strongly connect and link to the world at large.

*"If the outer world is to be transformed, the process must begin within. If the inner world is to be transformed, it must be understood in the light of the outer forces that shaped it. These realms are not separate but we lack a systematic means of tying them together. The value of the chakra system is that as the inner and outer world connect, we become aligned-spiritually, mentally, emotionally and physically"*⁴

Beyond cultural influences, a change can be seen in contemporary science where research is further challenging the understanding of the human being. For example, the discovery of neuropeptides marks an important step in comprehending the inherent relationship between the body and the mind. The brain, the immune system, nerve cells and a number of other organs secrete neuropeptides. Receptors for these hormonal messengers are extremely numerous within the areas of the brain that are responsible for emotion. In addition, it has been shown that the brain has receptor sites for molecules exclusively produced by the

Fig 1.2 Model of human used in Acupuncture showing meridians. Acupuncture use in the Western world continues to increase.



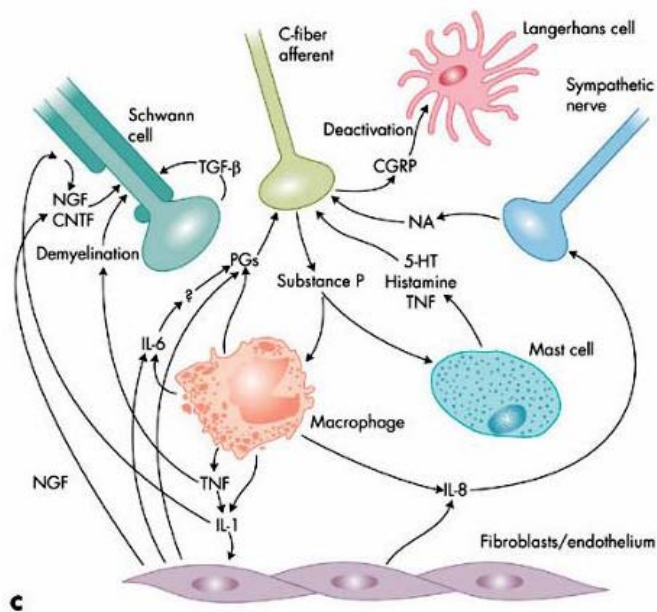


fig 1.3
Cytokines and neuropeptides. Diagram showing interactions between nerves, endothelium, and immune cells.

immune system, further pushing the idea that the mind and healing are inextricably interrelated.

Ernest Lawrence Rossi in his paper *Sleep, Dream, Hypnosis and Healing: Behavioral State Related Gene Expression and Psychotherapy*⁵ pushes ideas about the mind-body connection as he discusses the implications of new knowledge derived from the Human Genome Project: “*The new interdisciplinary approach of behavioural state related gene expression, by contrast, is beginning to explore how behavioural state modulate certain patterns of gene expression. This implies that the interaction between the genetic and behavioural levels is a two way street. Genes and behaviour are related in cybernetic loops of mind-body communication.*”⁶

The limitations of the separate mind-body model are increasingly being recognized. Disenchantment grows as the contemporary world searches for a model that truly represents peoples’ experiences and feelings. This frustration is a large factor for the conceptual shift, particularly in the realm of medicine. Patients are pushing for a different approach to health care that treats them in a wholistic mind-body and energetic or spiritual basis. Proponents of mind-body medicine generally state that the official medical world lags woefully behind in embracing alternative forms of the human being let alone healing systems, yet one can see a surge in the amount of books, articles, television specials on the topic of alternative and/or complementary medicine in popular culture. In fact, medicines and

treatments considered alternative or complementary are a multi-billion dollar industry in North America. A 2002 survey done by the National Centre for Complementary and Alternative Medicine found that at least 36% of adults in the United States used some form of complementary and alternative medicine in the last twelve months.⁷ A statistics Canada Health Report (catalogue number 82-003-XIE) by Jungwee Park found that in 2003, 20% of Canadians over the age of twelve reported using some type of alternative or complementary health care. People with chronic conditions such as fibromyalgia used this form of medicine at a higher rate of 25-30% depending on the illness. Furthermore, some therapies based on an understanding of the human entity that includes an energetic realm have become a part of mainstream medicine such as acupuncture and meditation.

The demand for a model of humanity reflecting a being with an inherent mind-body connection and energetic component is significant and growing at a rapid rate. With the consistent bond between the built world and the conception of body, designers are thus faced with an immense opportunity to consider these realms when creating space.

ii) Historical review:

The Conception of Humanity, Universe, and Built World

The relationship between the human body and architecture can be traced from the earliest of civilizations. The Caryatids on the Acropolis of ancient Greece are a clear example of this. The columns, shaped as human figures, show this inherent relationship between humanity and architecture. Although they bear a large force upon their heads, the figures look free from any burden, each with one leg slightly uplifted, ready to walk away at any moment. The Caryatids are a fine representation of the ancient Greek perception of the body which form a unified understanding with conflicting ideas. The ancient Greek world was a time of great myths: a universe where Apollo drove his chariot and the sun would move across the sky. It was a time when the ill would trek to the temple of Asklepios to sleep and the requirements of healing would be revealed in dream. Yet it was also the time where rational thought in the Western world had its beginnings.



fig 1.4
Caryatids, Acropolis, Greece.

Pythagoras is marked as a particularly important figure in the movement towards rational thought. Yet, as we observe his teachings, it is clear that a spiritual world was connected to his logical world of numbers. Numbers were sacred as the purest of ideas, disembodied and eternal: *“The line connecting music with numbers became the axis of the Pythagorean system. This axis was then extended in both directions: towards the stars on one side, the body and soul of man on the other.”* The realms of wonder and aesthetics were interrelated with reason.⁸

The inner realm of the soul and the exterior realm of the universe are linked in works of Plato, Plotinus and Anaximander as described by John Hendrix in his book *Platonic Architectonics* where he quotes Plato: ... in *Timaeus 34*, *“And in the center he (the demiurge) put the soul, which he diffused throughout the body, making it*

also to be the exterior environment of it.” (pg 26) he further quotes “when the Creator has framed the soul according to his will, he formed within her the corporeal universe, and brought the two together, and united them center to center.” (pg 27)

The Christian world view in the Medieval period brought with it a different conception of the human body. Christianity is credited with saving Europe from relapsing into barbarism during this time. However, the climate of despair prevented it from evolving into a balanced, integrated, evolutionary view of the universe and of man’s role in it.⁹

The organizing principle of the Medieval period was divinity. The strict adherence to theology did not allow for people’s understanding of themselves to move beyond what was revealed in religion directed by this worldview of God and the heavens. Part of this medieval Christian conception of body included the notion that physical life on earth was temporary. However, one’s physical body was inherently possessed by a sacred authority. Discussing this dual existence, Severianus wrote “...the lower heaven consisted of crystalline or ‘congealed’ water, which prevented it from being set aflame by the sun and the stars; and that was kept cool by the liquid water on top of it, which, on the Last Day, God would use to extinguish all the lights”. Augustine reflected that this liquid phlegm was also present in the heads of men.¹⁰

The Renaissance period used analogies as a method to understand the world. In the essay *City as Place of Representation*, Diana Agrest explains in regards to the renaissance city that “*The city and architecture represent what cannot be seen- the secrets of the universe as understood by religion- thus becoming the means by which one is able to ‘see’ the invisible...*” She goes on to use the example of Rome:

...the Catholic Church had just battled with the reformation movement. In the face of its newly defined political and religious roles, the transformation of Rome became necessary. In is within this context that Pope sixto V and Domenico Fontana presented a scheme for the development of the city. The great arteries proposed by Fontana are intended to link the great Christian basilicas in Rome to facilitate the circulation of the faithful. The sacred character of the city is no longer restricted to a special section. Instead the whole city becomes a sacred space, acquiring an ideological role. The streets connecting the churches soon become important commercial arteries; several goals are attained simultaneously as the religious or ideological, the economic, and the political advance along the same route. Catholicism, which comprises a collective, or social religion as opposed to the individualism of Protestantism, constructs a new city- a city of streets and squares rather than of buildings.¹¹

The Enlightenment brought change to the conception of the human from a divine organizing principle to a physical one. It set up a framework from which the modern world would understand the human body and the spaces that were created for it. Galileo's arguments in favour of mathematics as the criteria for physical truth were an important catalyst for this change¹². He was able to describe a universe that obeyed mechanical laws to which the human body belonged.

René Descartes pushed these ideas further by setting the foundation for a differentiation between spirit and matter regarding the human being. In his *Principles of Philosophy*, he described the soul as an indestructible substance. So too, was the spiritual substance of the human mind, though changeable. Comparatively, he stated that the composition of the physical body is alterable and is therefore not eternal - that the soul was inherently different from the body.¹³ The influence of Descartes did not end there. His grid system became the framework from which designers analysed and created

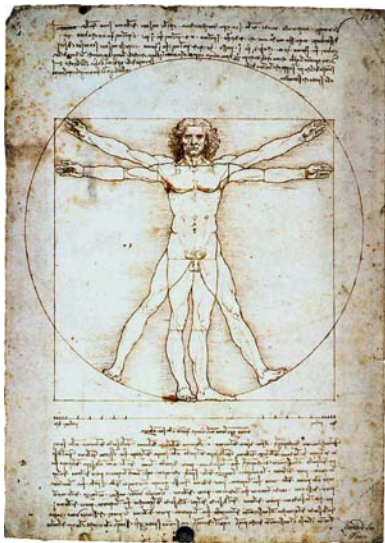


fig 1.5 The work of Vitruvius examined the physical body having divine proportions. The Vitruvian Man as drawn by Leonardo da Vinci remains today one of the most prominent images of the human figure.

the world. Architectural problems moved into a deductive mode - a mental exercise. Vision became the predominant sense that people depended upon to solve three dimensional issues and aesthetics and beauty were measured visually. The other bodily senses, which were not considered to be prime instruments of thought, fell to an inferior status.¹⁴ Rational thinking, deduction, and dependence on vision to solve architectural problems went on to influence the modern period.

iii) The Human Being and Modern Age

*The life-world in Europe and America was being transformed in depth - the unparalleled technical saturation of the human perceptual apparatus through innovations in transport and communications was redefining the body and its relations to the world beyond it...*¹⁵

The influence of the Enlightenment on the modern era is clear. The modern world relied heavily on a legacy of reason and parameters set up by Descartes. *"A specialized architecture which ignored and excluded the more general function of extending the human self and order onto a portion of the earth into an 'ethnic domain' had been academically sanctioned as early as the seventeenth century, when western Europe began to industrialize. At that time the human and divine themes perpetuated by the aristocracy and church were challenged by the engineers, militarists, and industrialists whose influence was rapidly expanding."*¹⁶

The nascent human relationship with the machine furthered the separation between the realm of thought and the physical body. The predominant metaphor for both architecture and the human being became the machine. Technological advances in building science allowed modern buildings to physically seal themselves off from nature. Indeed, large windows were used in the modernist design, but this was a visual exercise. With the advent of central heating and air conditioning, glazing remained for the most part,

inoperable.

One of the most influential architects of this period, Le Corbusier reflected this growing intimacy with the machine. A house literally became “*a machine for living in*” and his urban projects brought the machinist mentality to the urban scale. Norma Evenson in her book *Le Corbusier: the Machine and the Grand Design* notes that Le Corbusier viewed the city as “*a perfect expression of man’s ability to master his environment.*” She also quotes him “*A City! It is the grip of man on nature. It is a human operation directed against nature, a human organism for both protection and work...*” Major themes in his urban projects (such as *A City for Three Million* (1922), *Voisin Plan* (1925), and the *Radiant City* (1930)) had themes of vehicular speed, wide greenbelt areas, massive housing projects, and super blocks with a separation of living, working and playing.

The modern mechanized world went also affected the conception of humanity. Advances in the technology of the microscope introduced people to a cellular level where the mind and spiritual functions seemed uninvolved with the processes in the body. The introduction of antibiotics in 1939 and high-tech medicine freed people from numerous illnesses. It was a medicine considered almost all-curing, a medicine where the patient had little active participation. It was also a medicine that concentrated upon the physical body alone, disconnected from any esoteric world that had once dominated medicine.

Although the early to mid-twentieth century represented rapid technological development and a close relationship with the machine, the seeds of a new conception of the human being can be found in the modern era. In 1905, Einstein presented his Special Theory of Relativity. A key component to the theory was that time became another dependent coordinate in the kinematical transformation equations - the space/ time field was now understood

fig 1.6 La Ville Radieuse presented at the Brussels congress of CIAM 1930.

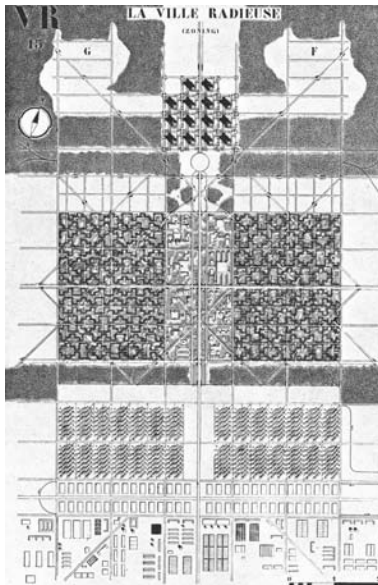


fig 1.7
Boiler house at Goetheanum
For just as you have a physical, an etheric and an astral body, the smoke also has at least an etheric part. And this etheric part goes a different way from the physical. The physical part will go upwards, but the etheric part is really caught by these little shoots that reach upwards. A time will come when people will see the physical part of the smoke rising while the etheric part wafts away...

-Rudolf Steiner



as a new entity. These new developments in physics (i.e. quantum and nuclear physics) introduced the world to a physical truth beyond Newton's Laws, which were once considered to be the only means to understand the physical world. When an alternate way to conceive the physical world was discovered, the foundations of the existing beliefs were shaken. The conception of the world had changed.

While Le Corbusier expounded upon the benefits of the machine, other movements such as the Arts and Crafts Movement opposed many of the mechanistic ideals. Rudolph Steiner's work is often related to organicism and aspects of art nouveaux. However, his interest in morphology went beyond the outer appearance of natural forms. His architectural work focuses on the inherent spiritual connection between architecture, people and the universe; that through design, one could enhance the human relationship to a universal power. His active time as an architect was 1907-1924.

Steiner's beliefs on the spiritual origins of the human body and architecture are of particular interest. During the stage of human evolution that he denoted as "Old Saturn", Steiner believed that the underlying spiritual organization of the body was laid out – long before matter existed. Thus, in its primal stage, the human was made up of forces that would only later be filled out and embodied in matter. Similarly, Steiner believed that architectural work took place within an energetic realm that was finally embodied in a physical thing. Although created by material things, the quality of space enclosed is of non material character.

In the modern era, the machine came into the forefront with a rationalism that can be traced to the enlightenment. However, with developments in physics and a few smaller movements, it was also the beginning in shaping the contemporary human entity.

Endnotes

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CHAPTER 2

TORONTO: UNIVERSITY AVENUE

This chapter examines both physical and subtle energetic elements in the urban fabric focusing on the largest Canadian city and its main civic avenue: Toronto and University Avenue.

Exploring the human condition as a combination of energy and matter, esoteric and scientific, gives great opportunity for the understanding of how our built world could be created. With the great strides in technology that the modern world has been marked with, important elements of human existence have been overlooked - particularly in the realm of city building.

An analysis has been developed to cover both the physical and social attributes of the site through conventional mapping techniques as well as an exploration of the experiential and energetic qualities of the site. The energetic system of the *chakras* are utilized as a guide to understanding the more subtle and symbolic nature of the site.

i) Inception

The Great Lakes were created by the receding Wisconsin glacier approximately 14,000 years ago. A number of aboriginal peoples have been known to settle upon the land that is considered modern day Toronto with the Great Lakes as a sacred, life-giving force for the region.

Connections between water, religion and culture are inherent. For example, *Ji-gon-sa-she*, the Mother of Nations (Huron-Iroquois) is said to have been born on a tributary of Lake Ontario¹. This sacred understanding of the lakes by the First Nations community can be seen today as a group of Anishinaabe-kwe and supporters try to raise awareness to the spiritual and environmental importance of the Great Lakes. To do so, the group has carried a bucket of water around all the Great Lakes beginning with Lake Superior in 2003. 2006 marked the year they did so for Lake Ontario².

Europeans explorers first entered the region in the 1600s and by 1805, the Toronto Purchase was finalized. It transferred approximately 250,000 acres of land to the British; a fourteen mile stretch running along Lake Ontario (from present day Scarborough to Etobicoke and thirty miles inland).

Fig 2.1 Fort Rouille (Toronto) 1749





Fig 2.2 Aerial photograph of downtown Toronto.



Fig 2.3 Toronto Locator Map: Golden Horseshoe Region, on the northern shore of Lake Ontario.

ii) The Contemporary City

Contemporary Toronto and the Greater Toronto Area are facing enormous growth with the population meeting the five million threshold. Recently, there has been a renaissance of culture, civic pride and interest in urbanism. In a step towards a directed policy for urban growth, the 2002 Official Plan for the city of Toronto was released and on July 6th 2006, the Ontario Municipal Board partially approved the new official plan. The Official Plan's basic principles are: diversity and opportunity, beauty, connectivity, leadership and stewardship. This is linked closely to the City Council's strategic plan that embraces the ideal of sustainability as a central concept. See figure 2.6 for the key policies.

Beyond the moves in the Official Plan, numerous politicians and civic leaders describe contemporary growth, energy and timing as Toronto's moment to "shine"; adding the moniker "world class city". Toronto has placed bids to host both the Olympic Games and the World Fair. None of the major bids have been successful and a sense of desperation is evident as Toronto continues to search for an opportunity to show off on the world stage. Some civic leaders continue to imagine how great the city could be with the investment and attention that arrives with a large international event.

Another aspect of the increased civic pride in the city can be seen in the high-profile cultural institutions being built or renovated by international and influential local architects such as the Royal Ontario Museum's Michael Lee-Chin Crystal by Daniel Libeskind, the Art Gallery of Ontario addition by Frank Gehry and The Four Seasons Centre for the Performing Arts built by the Toronto-based firm Diamond and Schmitt.

Fig 2.4
Logos from past Olympic bids



Fig 2.5
Growth Policy: Toronto's Official Plan, Page 11 Chapter 2: Shaping the City

- a) *Focuses urban growth into a pattern of compact centres and corridors connected by an integrated regional transportation system, featuring frequent, direct, transfer-free, inter-regional transit service;*
- b) *Makes better use of existing urban infrastructure and services;*
- c) *Results in better water quality through water conservation and waste water and stormwater management based on watershed principles;*
- d) *Reduces auto dependency and improves air quality;*
- e) *Increases the efficiency and safety of the road and rail freight networks in the movement of goods and services;*
- f) *Encourage GTA municipalities to provide a full range of housing types in terms of form, tenure and affordability, and particularly encourage the construction of rental housing in all communities;*
- g) *Increases the supply of housing in mixed use environments to create greater opportunities for people to live and work locally;*
- h) *Recognizes Pearson International Airport as a major hub in the regional economy and improves access for passenger travel and air cargo for all GTA residents and businesses, including convenient transit access to Downtown Toronto;*
- i) *Recognizes the importance of Union Station as the major hub in the regional transit system;*
- j) *Improves the competitive position of the Toronto regional economy internationally and created and sustains well paid, stable, safe and fulfilling employment opportunities for all individuals; and*
- k) *Protects, enhances and restores the region's system of green spaces and natural heritage features, the natural ecosystem and the natural corridors that connects these features and protects the regions prime agricultural land.*

One of the most high profile design competitions of the city is the redevelopment of Toronto's waterfront, widely recognized as the keystone to becoming a "world class" city. The introductory statement from the Toronto Waterfront Revitalization Corporation website sets up the main goal for the project:

*"The waterfront belongs to the people of Toronto. They need to be able to get to it and to fully enjoy it once they get here, that's what this project is about, giving the public uninterrupted, beautifully designed access to their waterfront."*³ ~Robert Fung, Chairman of the TWRC Board of Directors (emphasis by author)

However, the waterfront competition had a significant flaw that may be recognized in the delineation of the site that was set out for the entries:

*"The design competition includes the area from the water's edge along the Western Gap in the west to the Parliament Street Slip in the east, a distance of 3.3 km. The designs will connect and build on existing successful spaces like the Music Garden, the water's edge York and John Quay promenades and Park and provide a distinct and recognizable identity for Toronto's revitalized waterfront."*⁴ (emphasis by author)

Although there is room for improvement along the water's edge, the major issue plaguing the waterfront is its connection to the rest of the city. Access from the city to the water is a predominantly north-south condition. (see fig 2.7) The site does not allow for "uninterrupted beautifully designed route" to the waterfront area.

In recognition of this, the proposal to be outlined in Chapter 3 develops a route for people to reach the waterfront through a connection from University Avenue.

Fig. 2.6 Plan from winning submission by West 8 and du Toit Allsopp Hillier for Toronto Waterfront design competition

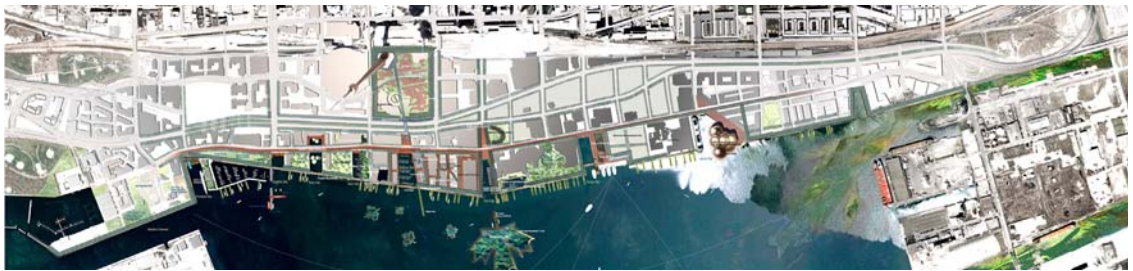
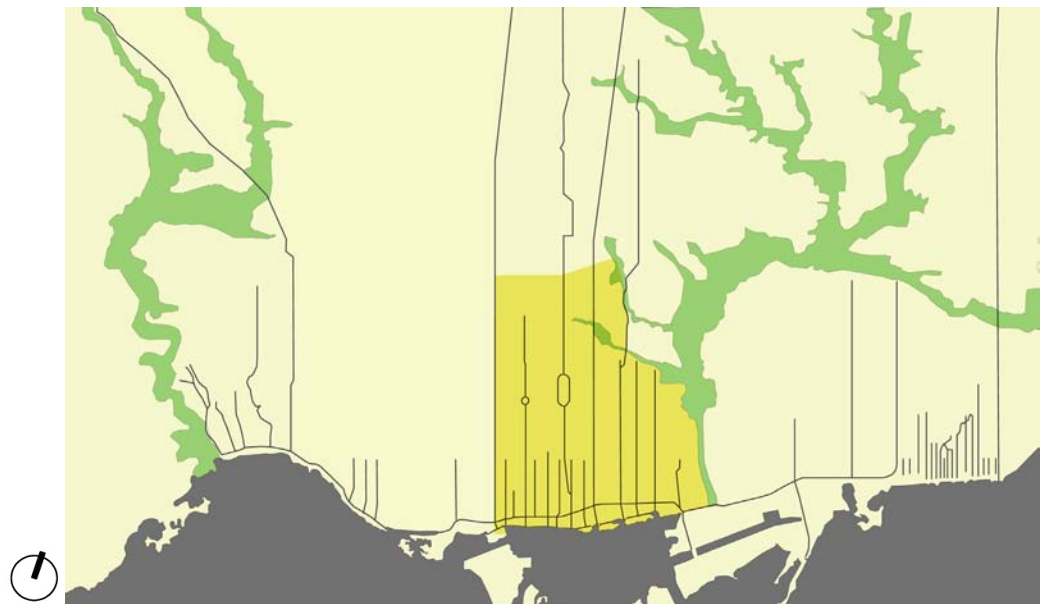


Fig 2.7 Toronto Streets that lead to water. Downtown core highlighted in Yellow, major river systems in green.



iii) University Avenue:

University Avenue is located in the physical centre of the city and has a prominent, symbolic place within Toronto and the province of Ontario. Running predominantly north-south, its northernmost point begins at the base of Queen’s Park at College Street with a connection to Queen’s Park Crescent East and West. It continues south with eight lanes of traffic. At King Street, its width is reduced and the direction angles to the southeast towards Union Station.

A number of government offices and corporate headquarters line the street. The area north of Dundas, the site for a number of Toronto’s largest health facilities is known as the Health District. It was recently renamed the Discovery District to highlight the health related research and development occurring in the area. The government of Ontario has invested over \$50 million dollars in the new MaRS facility and its programs located on the southwest corner of University Avenue and College. (located on Fig 2.8)

University Avenue had its beginnings as the drive for King’s College, the first college of modern day University of Toronto, founded in 1827. The drive was modeled after scenic paths in French parks, and Queen’s Road and Backs drives in Oxford and Cambridge; it was essentially a park lined with pink flowering chestnuts while commercial traffic was stopped at the gates at Queen Street. In 1859, the street opened to the public and was renamed University Avenue to avoid confusion with College street.⁵

In the late 1920s, an Advisory City Planning Commission was established in the City of Toronto. The plan included an extension of University Avenue which ended at Queen Street (see fig 2.11, 2.12, 2.13). The synopsis of the report explained that a straight, direct extension of university was to too far removed from the commercial and financial centre. There was also issue with the

Fig 2.8 Toronto’s downtown core with major streets and railway. University Avenue highlighted



Fig 2.9 MaRS facility location



Fig 2.10 Toronto from the air in 1918. Note the green oasis (top left) University Avenue.



Fig 2.11 aerial photograph of Toronto today



Fig 2.12
Study No. 18
Proposed University Avenue Extension as
Queen's Park Avenue
Advisory City Planning Commission
1929

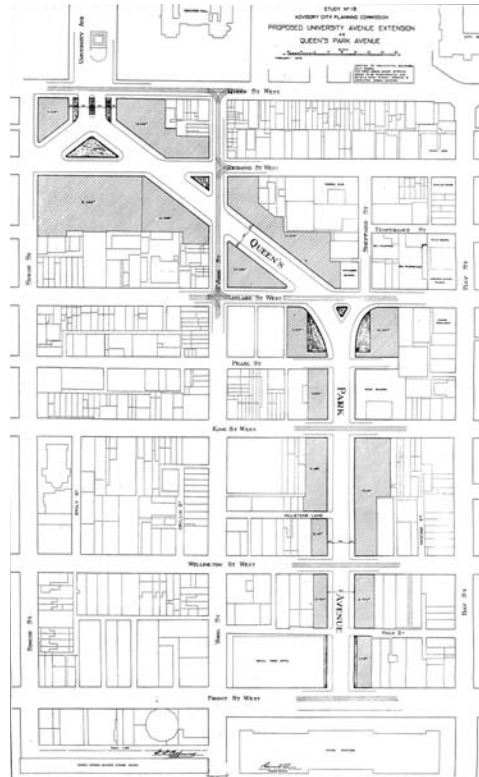


Fig 2.13
Study No. 25 Proposed University Avenue
Extension as Queen's Park Avenue
with Vimy circle.
Advisory City Planning Commission
1929

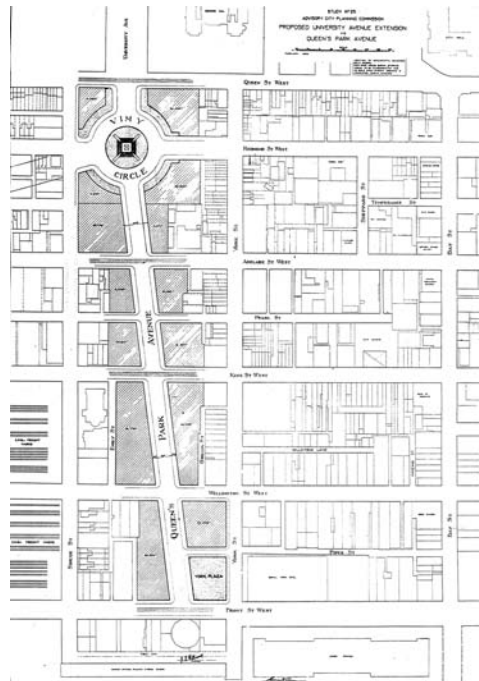
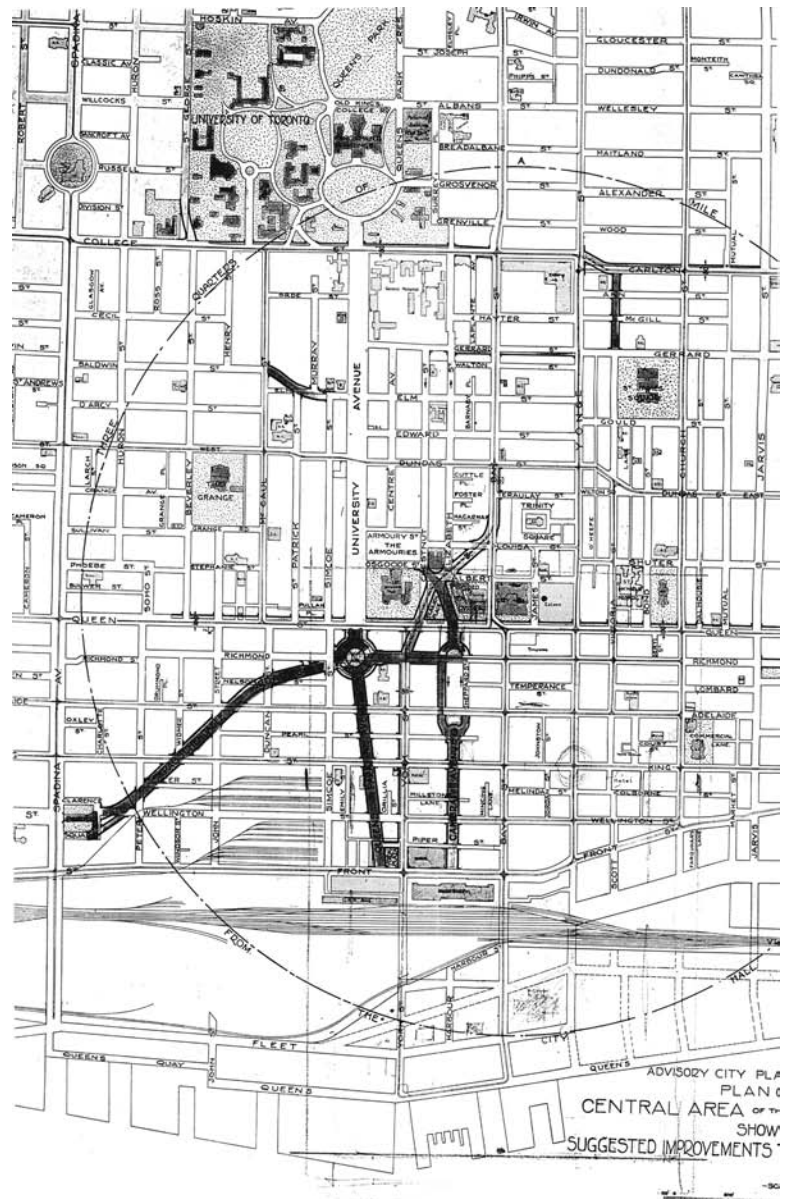


Fig 2.14
Map showing University Avenue extension
with other suggested improvements.
Advisory City Planning Commission
1929



adjacency with the railway freight yard.

One of the possibilities examined in the extension included a suspension bridge over the railway tracks at a cost of five million dollars. The cost of the bridge was prohibitive; especially as the Depression had set in and gripped the finances of the city. The consistent width was abandoned and the new extension for University Avenue angled to the east and narrowed to the already established York Street railway underpass and linkage to Union Station.⁶

With its central location, its relationship to the University of Toronto and Ontario Legislative Assembly, University Avenue became Toronto's main civic avenue. John Sewell wrote: *"In the late 1950s, when it was clear that many new large office towers were about to be built in Toronto, city officials decided that one street deserved to consist of buildings designed to the highest standards and quality so no one would be in any doubt that this particular street would be a remarkable place."*⁷

The resulting avenue has received much criticism. Sewell goes on to state that university avenue is *"probably the most boring and uninspired stretch of buildings downtown."* Sewell is not alone in his criticisms and interest on his street. University Avenue has been the topic of many articles, academic case studies, and commentaries.

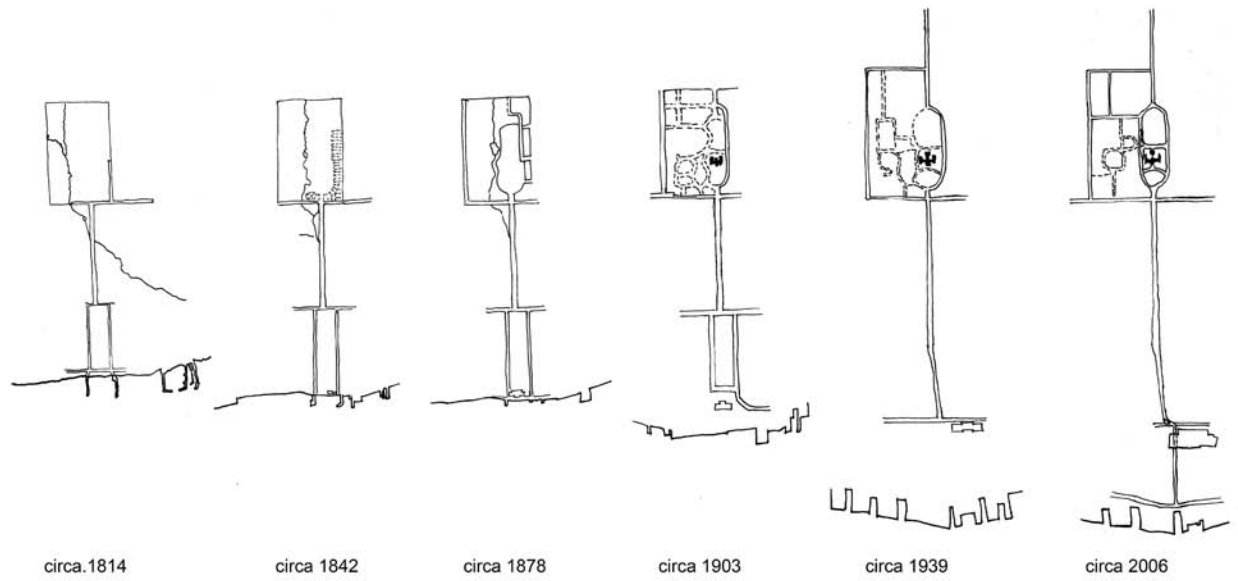


Fig 2.15 University Avenue iterations

Fig 2.16 South view from Ontario Legislature.
Left: 1927
Right: 2005





fig 2.17 A tree beginning to die in the health district



fig 2.18 A dead tree yet to be removed in the financial district.

iv) Vegetation

The Tree Advocacy program in Toronto was implemented in the year 2000. The program seeks to leave a legacy of trees for future generations by initiating tree planting along city streets, arterial roads, neighbourhood parks and in ravines. Since its inception, the Tree Advocacy Planting Program has planted over 400,000 trees, shrubs and herbaceous plants at over 300 locations across the city. However, one can observe that a number of the urban trees are struggling to survive beyond the first ten years of being planted. There are 15,000 tree pits in the city of Toronto and most have a 1.2m x 2.4m dimension with newer ones having concrete walls going down as far as a metre into the ground⁸. Most tree root systems do not go deep so much as out, making these tree pits uninhabitable.

University Avenue is no longer a park-like place for people to promenade. The city has developed the drive into an arterial road and it struggles to develop a system of planters that can support tree life. In some areas north of Queen Street the planters have been connected below ground creating a trough allowing for the roots to reach a greater amount of soil. This development will allow the tree to survive for at least thirty years but at a cost of \$10,000 per tree⁹. As the urban infrastructure requires replacement at a large scale in the upcoming decade, it is feasible to plan for the reintroduction of trees as a part of a cohesive program to improve the urban forest of Toronto.



Fig 2.19 University Avenue as a tree-lined street.

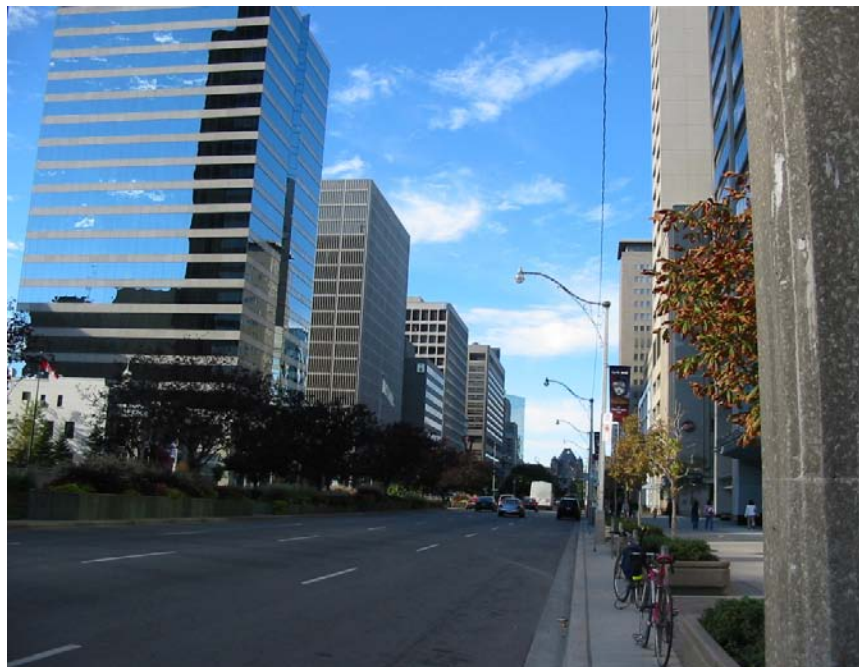


Fig 2.20 University Avenue as an arterial road today.

The gardens that inhabit the medians on University Avenue are elaborately planted and well maintained. They were originally designed by the Dunington-Grub office in Toronto. Howard Dunington-Grubb (1881-1965) worked on the project in the mid 1950s and is known for emphasizing architectural influence on the landscape, providing a controlled ornamental backdrop for human use.¹⁰

The medians of University Avenue, although pretty, do not reflect the role they could have in re-attuning people to the natural world. One main concern is the planting cycle that takes place every year. During the spring, numerous plants are planted that flourish through the summer. However as fall and winter arrive, the plants are removed leaving empty planters devoid of life. (The trees remain.) This connection to the seasonal cycles is one of the simplest and most obvious ways urban dwellers can reconnect to the natural world. Chapter 3 explores alternate planting systems that would allow for the plants complete the seasonal cycles all while being witnessed by people. With this proposal, gardens are more than ornamental, rather they provide an important connection to the natural world.

2.21 The medians along University Avenue: a well kept area.



Fig 2.22 Planter in late summer



Fig 2.23 Planter in late fall



v: Mapping:

Fig 2.24: Downtown Street widths. The physical width of University is only surpassed by major highway routes.

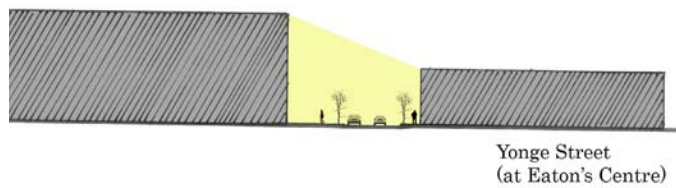
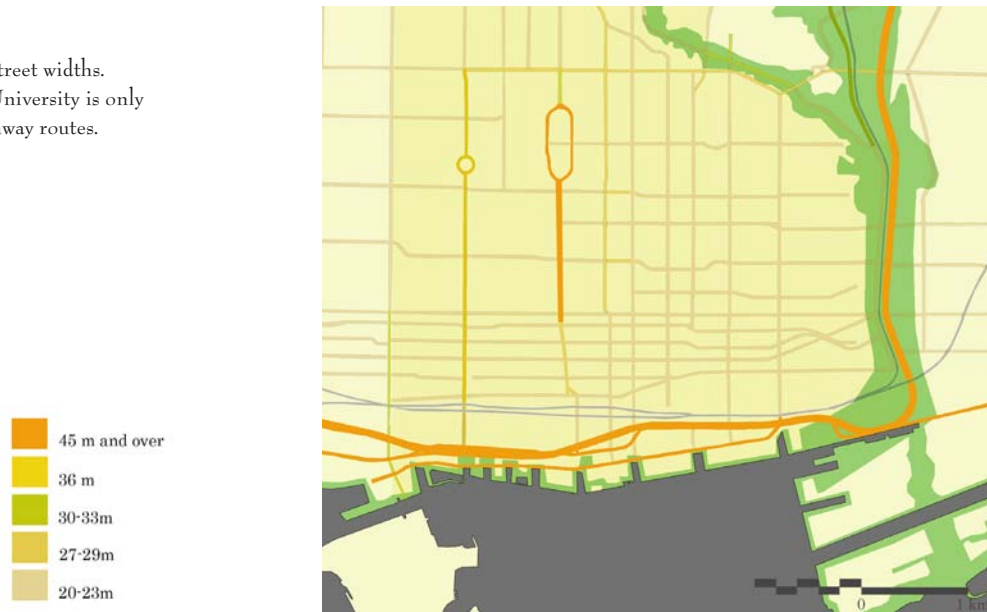


Fig 2.25
Diagram of typical street sections of some of Toronto's major streets (scale 1:200)

Volumes of buildings and terminating vista further enhance the physical presence of University.

Fig 2.26:
Toronto landmarks

1. Royal Ontario Museum
2. University College
3. Spadina Circle
4. Legislative Assembly Building
5. Alan Gardens & Conservatory
6. Art Gallery of Ontario and OCAD
7. Canada Life Building
8. Law Courts
9. Toronto City Hall
10. Eaton's Centre
11. Dundas Square
12. American Embassy
13. Osgoode Hall
14. Old City Hall
15. City TV, MuchMusic
16. Bank of Canada
17. Four Seasons Centre
18. Scotia Bank Towers
19. St James' Cathedral
20. Roy Thompson Hall
21. TD Bank Towers
22. St Lawrence Market
23. Toronto Convention Centre
24. BCE Place
25. Hockey Hall of Fame
26. Flatiron Building (Gooderham)
27. Rogers Centre (Sky Dome)
28. CN Tower
29. Union Station
30. Air Canada Centre
31. Harbourfront Centre
Power Plant Gallery
Queen's Quay Terminal
32. Red Path Sugar Factory

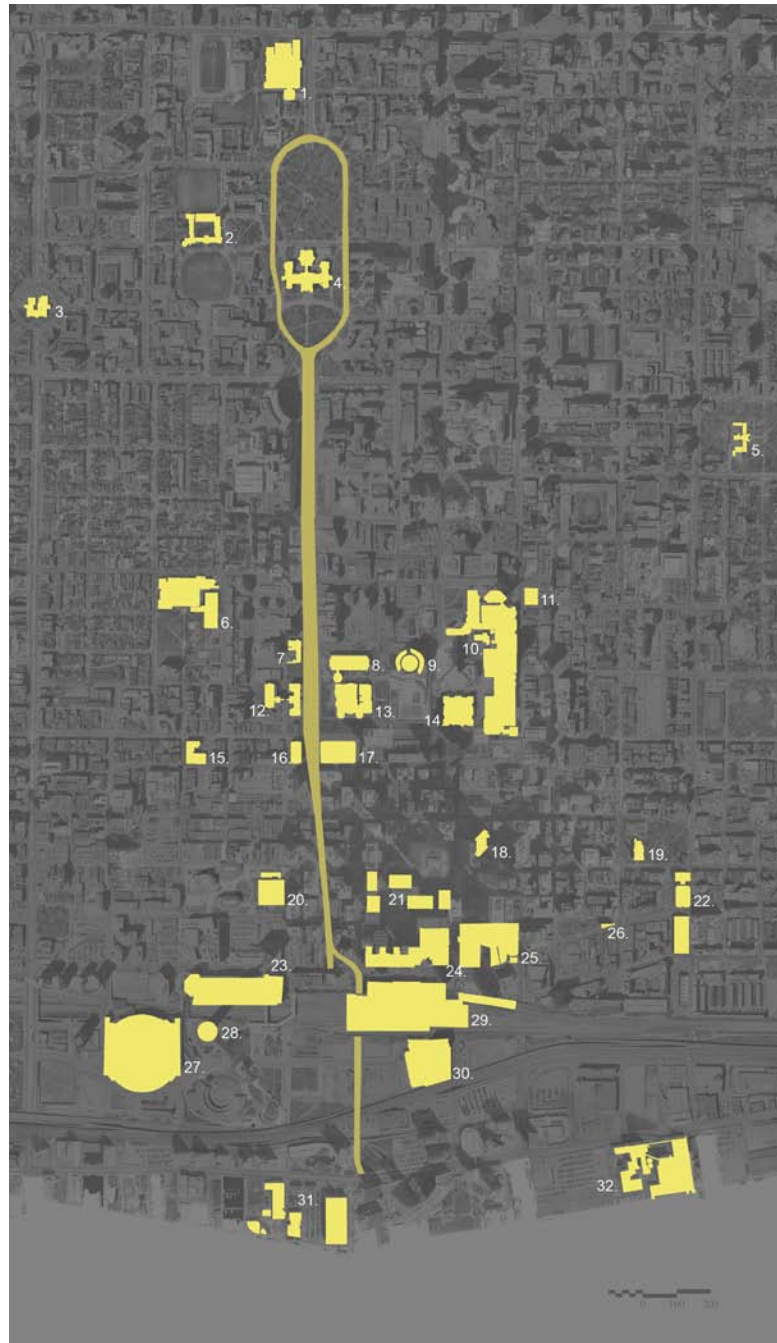


Fig 2.27 image of Critical Mass moving southwards down University Avenue (May 2003).



Fig 2.28 Farmers demonstrate regarding aid in provincial budget (March 2006).



Fig 2.29 Anti-war protest. Second anniversary of Iraq war (March 2005).



Fig 2.30
Protest and parade routes



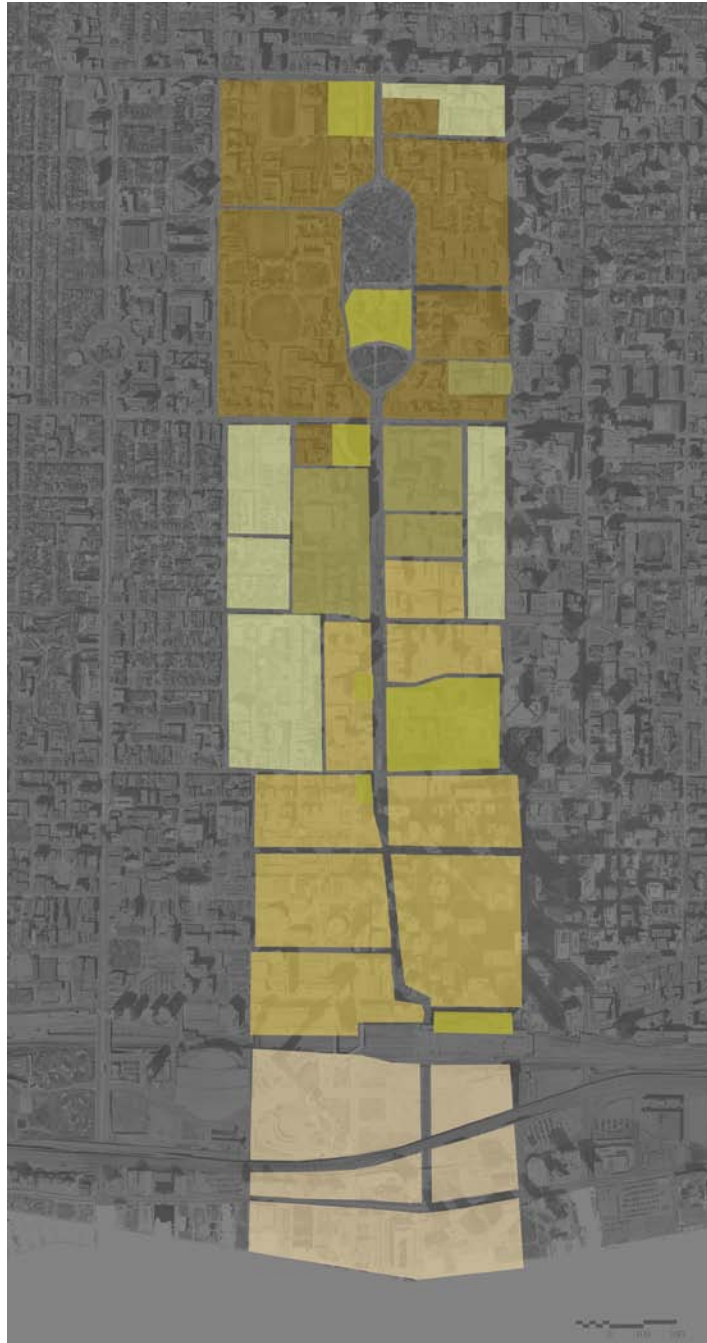


Fig 2.32 Underground system
Accessible to public:
Toronto's Yonge/University
subway line and the
underground PATH system.

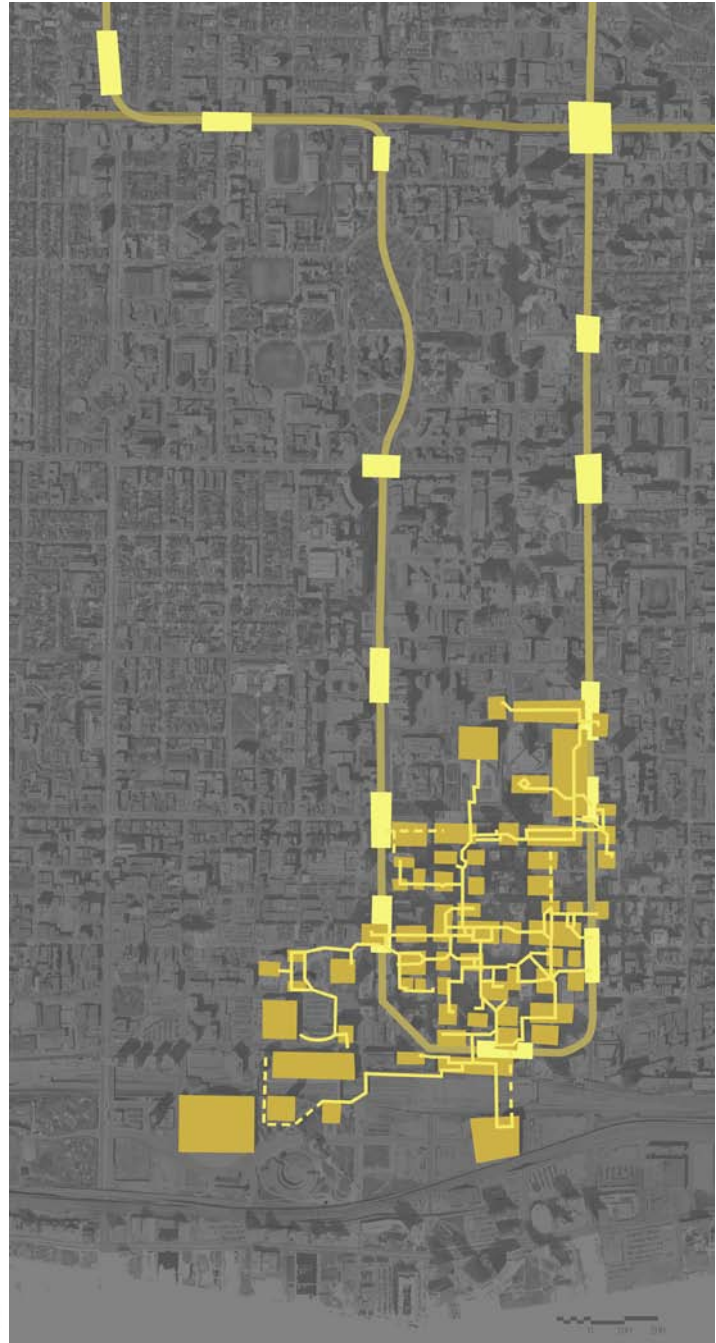
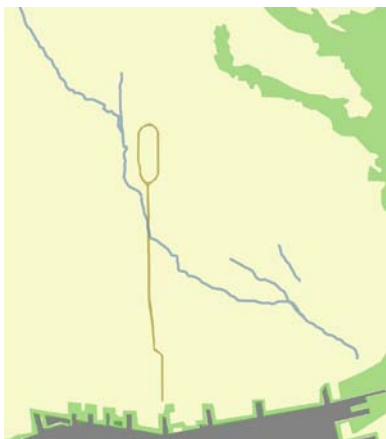


Fig 2.33 Toronto: bounded on the east by the Don River and on the west by The Humber River. Lake Ontario sits to the south. Map of natural heritage sites.



Fig 2.34 Long buried Taddle creek (and other small rivers like it) represents a buried element to city life.



vi) Subtle Features

Chapter 1 examined the ideas of subtle energy pertaining to the human being. In this chapter, these ideas are applied as they concern the city: Toronto as a whole and finally to the area along University Avenue.

From the inception of the city, Lake Ontario represents an essential presence for Toronto. It literally provides life through drinking water and also acts as an important economic feature. The central waterfront also presents a venue for culture and commerce. As a powerful natural, life giving feature it has a spiritual richness that could emanate through the city. (Fig 2.34)

The figural nature of the University Avenue axis allows for the superimposition of the human entity onto the site. Layering the *chakra* system onto the site can help express subtle energy on a physical plane. Recall that the role of the *chakras* in the human body allows the body and the mind access to each other. This moment of connectivity between matter and subtle energy is the starting point for a deeper understanding of urbanism. Through mapping the relationship between subtle energy, use, and the physical nature of University Avenue, we can see the symbolic possibilities of the site.

This methodology reflects the contemporary city as a physical, psychological and energetic organism that we shape and respond to inherently.

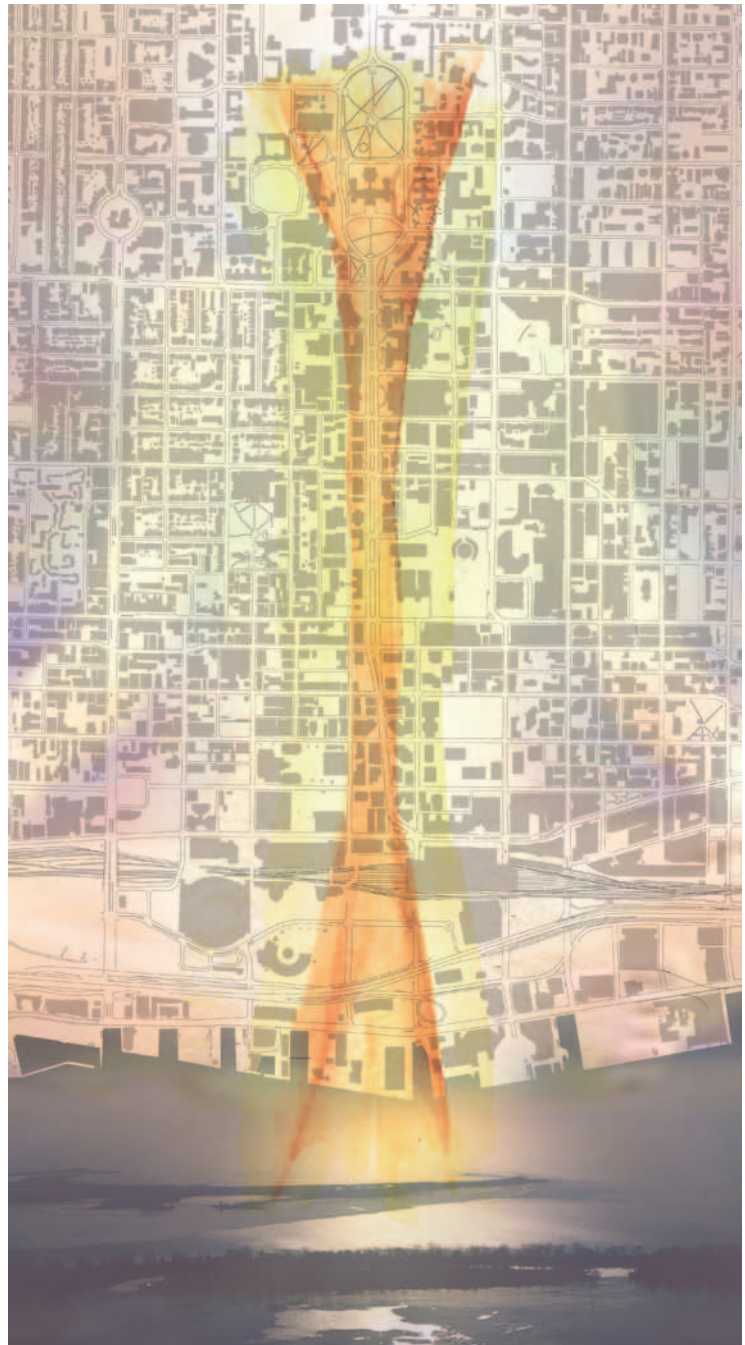


Fig 2.35 City as body: Exploring the ideas of energy deriving from Lake Ontario upwards and the city at large downwards along the spine of University Avenue.



Fig 2.36 A child is drawn to the water's edge but is unable to touch the water

Fig 2.37 subtle experiences

Life:

Roots of Tree cramped in planter, roots being forced upward, energy repressed



Light:

Sunset: Strong Warm western light beams through buildings hitting the facade of structures.



Movement: Standing on the medians, the rush of traffic creates noise and distorts peace.



Fig 2.38 View of Lake Ontario to the Toronto islands.



Fig 3.39 Canada Day 2006, a vibrant waterfront



Top: Fig 2.40 View up York Street. This stretch of the Gardiner is somewhat unkempt.
Bottom: Fig 2.41 Crossing Lakeshore Boulevard under the Gardiner Expressway. The Air Canada Centre visible in the background.



Fig 2.42 Land south of the railways tracks is undeveloped. A barrier en route to the vibrant waterfront. Ads for proposed condominium projects on the site are appearing.



Top: Fig 2.43 Approach to pedestrian and vehicular underpass at York Street and railway tracks.

Bottom: Fig 2.44 view within the interior pedestrian underpass

Facing Page: Fig 2.45 exterior pedestrian experience. Darkness, traffic noise and pollution are main attributes of the space.



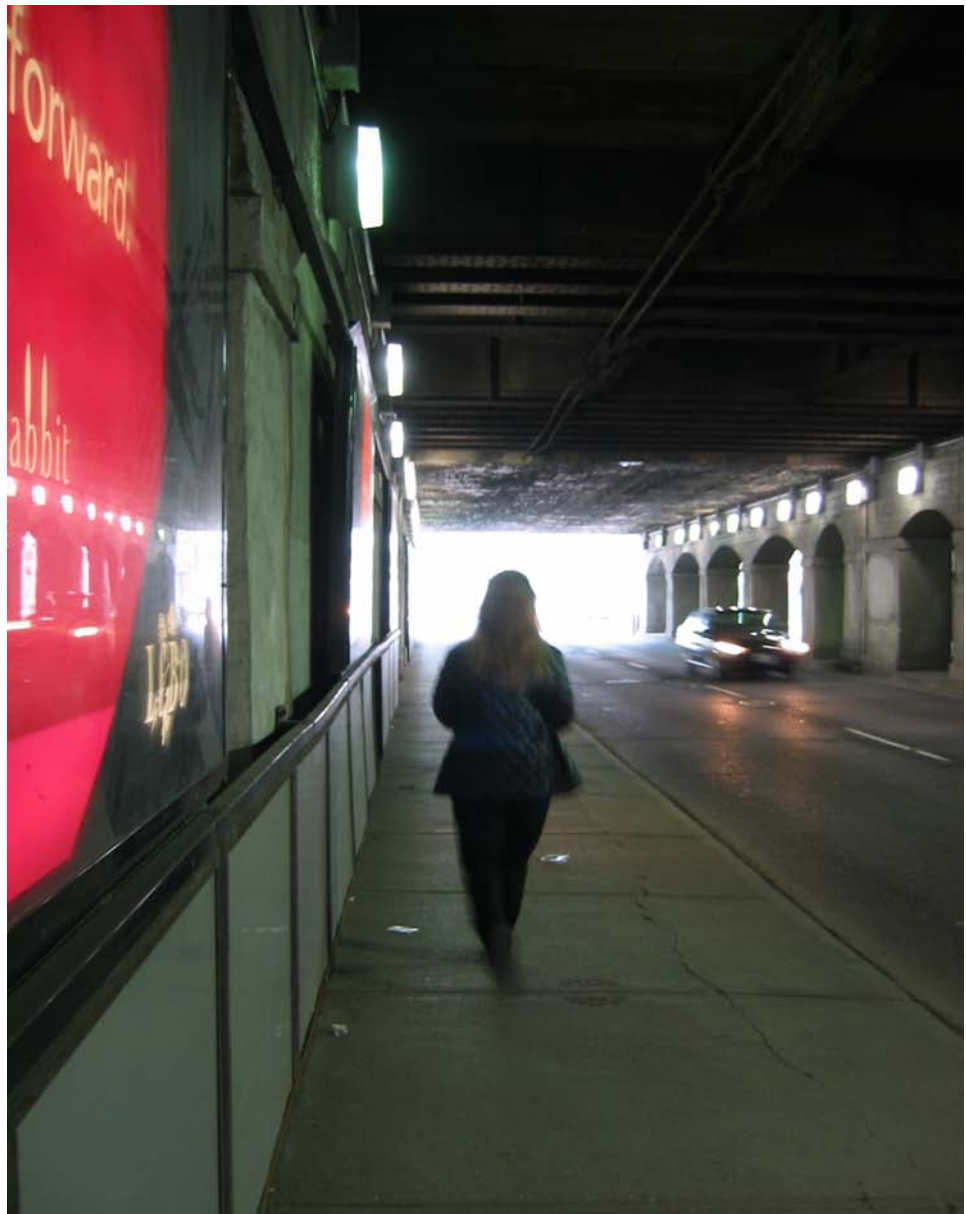


Fig 2.46 View southward at the 'kink' in University Avenue.



Top: Fig 2.47 Sidewalk and road conditions at Queen Street. The popular Canadalife building with mature greenery act as a successful sidewalk life

Bottom: Fig 2.48 Sidewalk and road condition in hospital district. Graffiti embellishes tree planters which house spindly, dying young trees. The medians brighten up in the spring with blossoms.

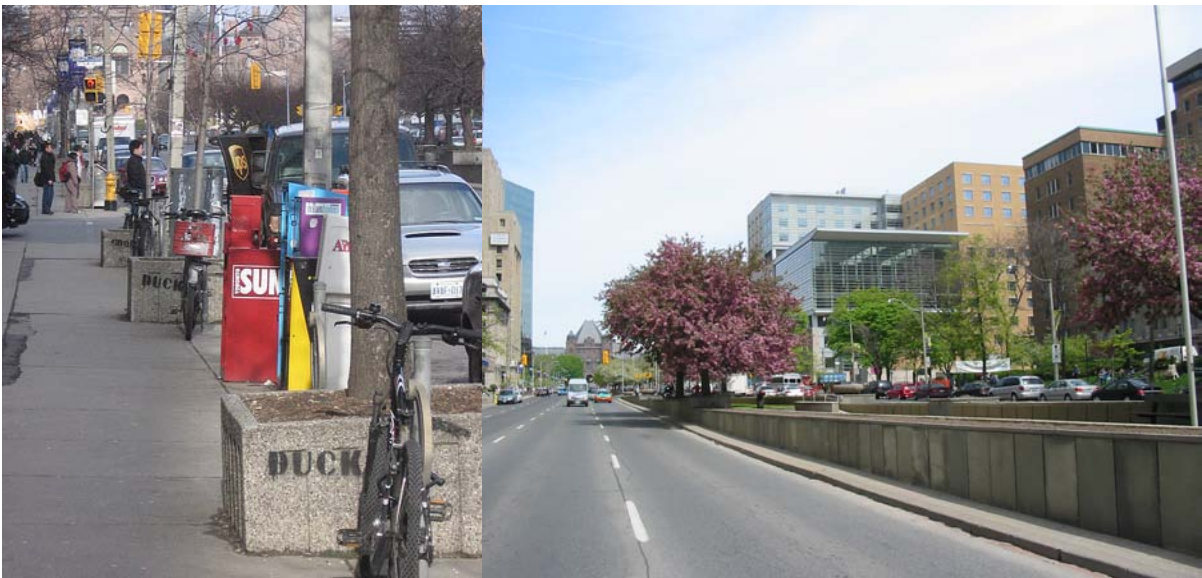


Fig 2.49 The terminating vista of Queen's Park. Sunset on a fall day.



Top: Fig 2.50 Queen's Park even, treatment of trees. View down path.

Centre: Fig 2.51 Queen's Park central clearing of King Edward VII equestrian statue resting on mound. Benches face outward. Children like to sit under the belly of the horse.

Bottom: Fig 2.52 Pedestrians run for their lives across University Crescent East where it becomes Avenue road.



Fig 2.53
University Avenue: Program and observation

Sahasrara, Thousandfold

- University Crescent East and West converge to become Avenue Road.
- Entry to Queen's Park is blocked by large monument.
- Fast traffic blocks pedestrians from entering park.

Ajna, To Perceive and Command

- Provincial Legislature.
- King Edward's statue sit on small hill -Benches surround hill facing outward. A space people pass through.

Vissudha, Purification

- Formal garden space, no real focal point with little afforded for large gatherings or protests.
- people sit by themselves.

Anahata, Unstruck

- Hospital/medical district.
- Banal street experience.
- Very fast traffic.
- Little care for backs of large buildings.

Manipura, Lustrous Gem

- Financial District.
- University Avenue reduces in width and angles to York Street underpass. Views and cohesiveness obscured.
- There are no more planted medians.

Svadhithana, Sweetness

- Union Station and train tracks.
- York Street Tunnel an unwelcoming prospect for pedestrian.
- No sense that there is anything beyond the tracks.

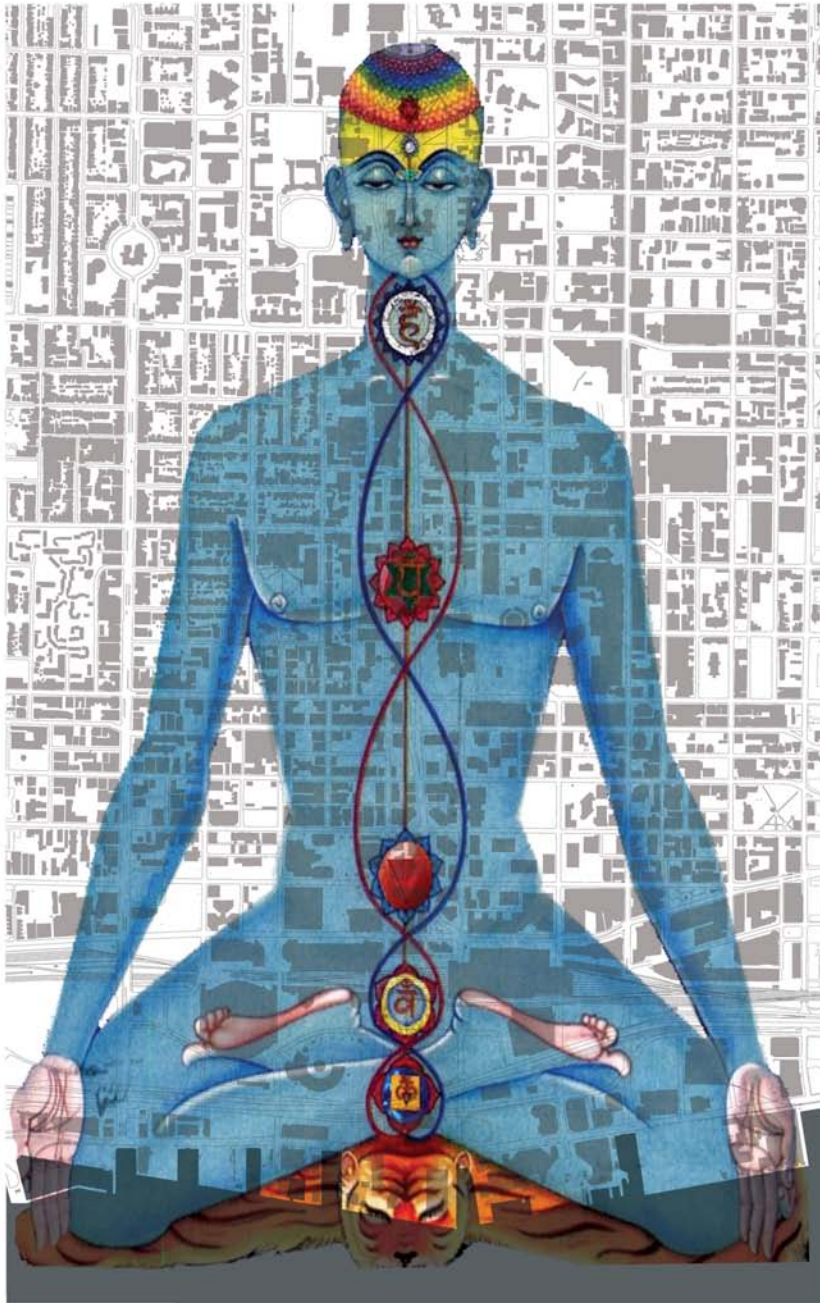
Muladhara, Root

- Queen's Quay, Power Plant Art Gallery parking lot.
- People may walk along a boardwalk but are unable to engage the water beyond visual.
- Scale of buildings and spaces are large.



Fig 2.54
University Avenue: Imbued with Chakra system

CHAKRA SYSTEM



Sahasrara, Thousandfold

A two-way gate to the beyond, opening outward, beyond ourselves to the infinite. Important themes: transcendence and immanence, ideas of a higher power, divinity and union.

Ajna, To Perceive and Command

Important themes: light, archetypes, symbols, intuition, transcendence, visions, images.

Vissudha, Purification

Important themes: to find one's voice, communication, creativity, listening, resonance.

Anahata, Unstruck

Meeting of mind and body; important themes: deciphering messages from one's body, love, balance, self reflection, relationships, intimacy, anima/animus, eros, thantos, grief, compassion.

Manipura, Lustrous Gem

Inertia of matter and movement are converted into willed activity, Energy becomes action. Important themes: Autonomy, personal responsibility, energy, activity, will, power.

Svadhithana, Sweetness

Movement has a pleasure in itself. Important themes: movement, feeling, yielding, self gratification, sensations, sensual connection.

Muladhara, Root

The source and origin of the liberating current from which things grow up. Important Issues: foundation, grounding, stabilization, focus.

As Devillers explains in his 1994 lecture on The Urban Project, a key element in the process is the recognition of the quality of place, particularly those not immediately evident. In numerous cultures and time periods, quality of place included more than the physical, social and environmental aspects. In fact, the spirituality or energy derived from natural, historic or mythical/religious features of the site guided major decisions. The human physical and energetic body becomes a guide to reconnect to these values.

Toronto may have a number of such features. The largest and perhaps most obvious is Lake Ontario. In conjunction with the narrative of the body on the site, Lake Ontario becomes the root, the place from which Toronto grounds itself and receives nourishment. By considering the narrative of the *chakra* system upon University, another opportunity for understanding and humanizing the quality of place arises.

The sanctification of the local landscape is a fundamental function of mythology...

-Joseph Campbell

The Power of Myth Pg 91

(Endnotes)

- 1 www.motherearthwaterwalk.com
- 2 www.greatlakesforever.org
- 3 www.towaterfront.ca <http://www.towaterfront.ca/dynamic.php?first=43fa75b221b08&second=43fa7f3cddad8&third=442c38f26aee1>
- 4 www.towaterfront.ca
<http://www.towaterfront.ca/dynamic.php?first=43fa75b221b08&second=43fa7f3cddad8&third=442c38f26aee1>
- 5 Toronto Street Names, an Illustrated Guide to their Origins. Wise, Leonard & Gould, Allan. (2000) p216
- 6 Spacing Magazine, Boulevards of Fancy. Issue 4, Spring/Summer. Clement, Joe. (2005)
- 7 Eye July 2005 John Sewell
- 8 Spacing Magazine, Issue 3 2004/2005 Irving, Todd p45
- 9 Spacing Magazine, Issue 3 2004/2005 Irving, Todd p45
- 10 <http://www.thecanadianencyclopedia.com/index.cfm?PgNm=TCE&Params=A1ARTA0011587>

CHAPTER 3

A NEW VISION FOR UNIVERSITY AVENUE

In understanding the approach to design described in this chapter, it may be helpful to revisit the world of medicine where two terms have separated approaches to treatment. The New Merriam Webster Dictionary defines:

Cure: to restore to health

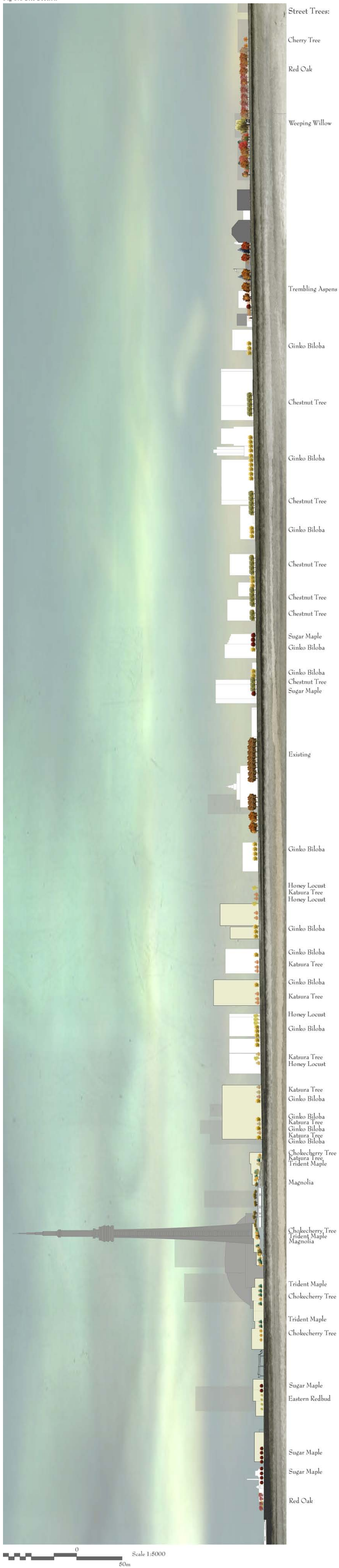
Heal: to make or become sound or whole; also: to restore to health.

Both terms signify a return to wellbeing, however within the term healing, there is a sense of becoming whole as a part of the process. In a similar way, this urban project suggests an approach that through the narrative of the *chakras*, the main civic avenue of Toronto can be conceived as a cohesive physical and energetic entity.

Through design, one can alleviate traffic issues, environmental problems, and address some social issues. However, to bring the site to a sense of unity, recognition of all the features of the site as examined in chapter 2 need to be considered. Through infusing the figural plan of University Avenue with the *chakra* system, an astonishing pattern emerges between the urban fabric with the physical and energetic body. Important issues with the *chakra* system translate directly to physical and programmatic elements of University Avenue

In this chapter, specific proposals have been developed with the body including the *chakra* system as a guide. It inspires the creation of a series of public spaces that in conjunction with one another address urban issues but also represent a part of a greater energetic system. It is through this framework of an interconnected energetic system that a rich texture is layered upon the city.

Fig 3.1 Site Section



i) Master plan and site section

Fig 3.2 Master Plan

Sahasrara, Thousandfold

*Transcendence is the path of liberation
Immanence is the Path of manifestation
To embrace them both is to see the divine within and
without as an inseparable unity.*

To allow for the 'two-way' gate to be open for traversal by pedestrian and cyclist, there is a need to ameliorate the visual block caused by the monument and secondly by providing a formal entry sequence that leads one into the *Ajna* moment. Plantings chosen for colour, fragrance, texture, meaning and to be enticing all year round.

Ajna, To Perceive and Command

*Opening the third eye, the organ of inner perception.
The creation of meaning and bringing it into
consciousness*

The King Edward statue presents an opportunity for discourse about archetypes and images in our culture. Bringing the greater-than-life sized statue upon a base to ground level to eventually be stumped in scale by the large, constantly growing willow tree. A child-scale turtle sculpture allows for small scale touch and reflects the mythology of the creation myth of some first nations people. The reflecting pool is a literal translation of the world of reflections but also of illusion as it appears much deeper than it is.

Visudha, Purification

*Vibrating into expression, entering the etheric from the
physical plane
The gateway between the inner world and the outer.
Recognition of subtle rhythmic pulsations that move
through all things
The voice is a living expression of one's basic vibrations*

A public square with a stage area in front of the Legislative Assembly building represents the place for the voice. The formal square cuts into the slight slope of the front lawn and is eroded on the edges by organic forms.

A public space marks the entry area for the square. Program and amenities reflect the need for the large public voice but also the small scale world of discussion.

Anahata, Unstruck

*The expansion beyond the limited ego into a wider
sense of connection with all life including a conscious
unity with the world around us-socially, ecologically, and
mythically.
Balance; between the mind and body, anima and animus,
attachment and freedom, Eros and Thanatos*

Street tree plantings and important aspect of intervention. Existing Chestnut plantings to be complemented by historically medicinal tree Ginkgo Bilboa.

Life to seep into support area of alleyways and back streets that relate to surrounding communities to be planted as well. Facades of parking garages and large scaled structures to be developed with greenery.

On the Road to Healing pharmacy and community health centre to act as a nexus point for the community. A place for cultural axis of Dundas to cross with official health axis of University Ave to meet, communicate and heal.

Canada Life Building and Osgoode Hall. This represents a successful area on University. The large canopy of trees in front of the Canada life building provide scale and shade and the fountain commemorating the Boer war creates a landmark

Manipura, Lustrus Gem

*The receiver, creator and distributor of raw energy.
To restructure the way that we think about power and to
channel and contain that power within our own being.
The move to combination and synergy rather than
separation and struggle
Passivity is left behind*

Existing kink in University to be replaced with straight, uniformly wide avenue. New buildings on more efficient, orthagonal sites will replace the demolished structures. Mixed use programmes of commercial and financial to be complemented with entertainment and cultural activities in the area to the avenue. High rise residential may also provide housing close to work area.

The street tree planting continues here with trees that reflect bright and powerful colours in the call and rich greens in the summer.

Svadhithana, Sweetness

*By moving the body, we build muscle tissue increase
circulation, stimulate nerve endings, and generally enhance
the body's flexibility and aliveness. The flow of pleasure
and excitation throughout he nervous system bathes the
organism in sensation and awareness. Movement has its
own pleasure; through change the body finds stimulation
and expansion.*

A Landscape bridge flanked by mixed-use buildings to create programmed and inhabited passage over railway tracks. A bridge that acts as a park, shopping area and a place to live. Reflective ponds to be used for skating and shinney in winter and a green slope becomes a toboggan hill for year round activity.

The bridge leads to a pedestrian Mall with mid rise mixed use buildings. The median patterns continue through the mall.

Muladhara, Root

*To bring Muladhara to consciousness is to bring
awareness to our root to uncover the past, to examine it,
to delve into it. Going down to our roots bring us into a
singular simplicity and anchors us into the commonality
of the collective unconscious. It brings us home to the
earth. It is the foundation for the entire chakra system,
recognizing human life is dependent upon a supply of
energy.*

Pedestrian Mall leads to a market and store area around Queen's Quay Terminal and the PowerPlant Art Gallery. A quay pool spills into a large pool within the lake.

Italicized text derived from Anodea Judith's *Eastern Body, Western Mind*.



CHAPTER 3

ii) Chakra 7: *Sahasrara*



Facing page:

Fig 3.3 Detailed plan of Queen's Park

1. Speed bump/ crosswalks
2. Major park entrance
3. Shade garden
4. Red oak lined sandstone path
5. Children's park area
6. Trees cleared for open play area
7. Recreational walking/ running path
8. Denser tree planting
9. Ajna: see following detail plan
10. Street tree planting
11. Garden with pathways
12. Existing fountain to be surrounded by seating
13. Park entrance

Fig 3.4 Great White Trillium, the floral emblem of Ontario (1937).

Trilliums are a rare find within the city, thus their use in Queen's Park creates a particularly special moment. Their use marks the park as horticulturally significant space if more rare variants are planted such as the Painted Trillium or Yellow Trillium. Transferring plants can be difficult, so propagation is often done by seed where three to five years may be required for plants to reach flowering size. However, once established, these plants are virtually maintenance free.



Sahasrara, Thousandfold

The crown *chakra*, *sahasrara* is a lotus with one thousand petals. The petals face downward towards the earth in connection to the nurturing ground. The physical location of this site is the entryway into Queen's Park and the connection of University Avenue to the rest of the city. An existing monument is relocated to allow for an openness of the park towards the city while a pathway lined by red oaks draws people into the park.

Several crosswalk/speed bumps (1.) are introduced to address high speed traffic, accessibility and connection to the city while street tree planting addresses views and connections to radiating streets (10.). Also addressing connections is the sandstone pathway based on most travelled existing paths and desire lines observed on the site. A recreational path that loops for around the entire site for approximately 1.5 km is laid with wood chips to allow for low impact walking and running. The path becomes a natural extension of Philosopher's Walk.

To address the monotonous park experience, trees are relocated/removed in some areas while planted areas are densified in others creating naturalized woodlot areas (3, 8) that can provide ideal conditions for the growth of Trilliums (see fig 3.4). A garden (11.) is located on the south end of the park where an existing fountain is made a centrepiece

Fig 3.5 entering the park. View southwards on Red Oak path during the winter.



Fig 3.6 street section through Queen's Park Crescent West looking northward.



iii) *Ajna*, To Perceive and Command

The sixth chakra relates to the third eye, the organ of inner perception. The third eye witnesses the internal screen where memory and fantasy, images and archetypes, intuition and imagination intertwine on endless display... we create meaning and bring it into consciousness. -Anodea Judith, Eastern Body, Western Mind p344

The larger-than-life equestrian statue (1.) is unmoved in plan, but the hill it rests upon is removed. A Weeping Willow (4.) is planted behind the statue where its growth and change constantly alters the perception of the statue. The reflecting pool is constructed of polished black granite. The water depth is a mere inch but due to the reflectivity of the granite, its depth appears infinite. The illusion of the pond is further addressed with the sculpture of a bronze turtle (3.) that appears to be slipping into the depths of the water. The turtle creates a smaller scaled sculpture that children can relate to - creating a playful element to juxtaposes the stern equestrian statue. The turtle itself references a number of creation myths as well as the natural world.

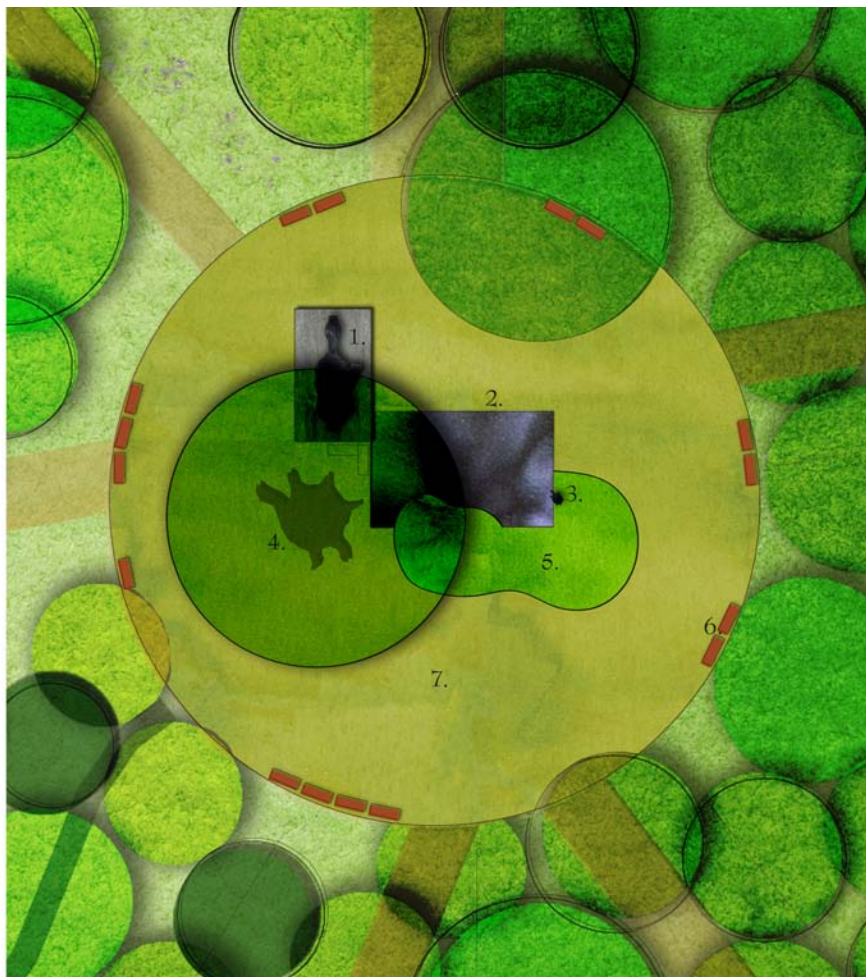


Fig 3.7 detailed plan
Ajna Chakra

1. King Edward VII equestrian statue
2. Reflection pond
3. Bronze turtle
4. Weeping willow tree
5. Grass
6. Picnic tables and benches
7. Sandstone paving



Fig 3.8 View towards *Ajna*, the centre of the park



v) Chakra 5: *Vissudha*

Fig 3.9 Detail plan of Queen's Park Square



Vissudha, Purification

In the fifth chakra, we open a gate that allows our inner self to get out into the world. (Judith p 296)

It is also the point of communication between the mind and body, the conscious and unconscious. The voice is an important aspect of this chakra as the demonstration of vibration within.

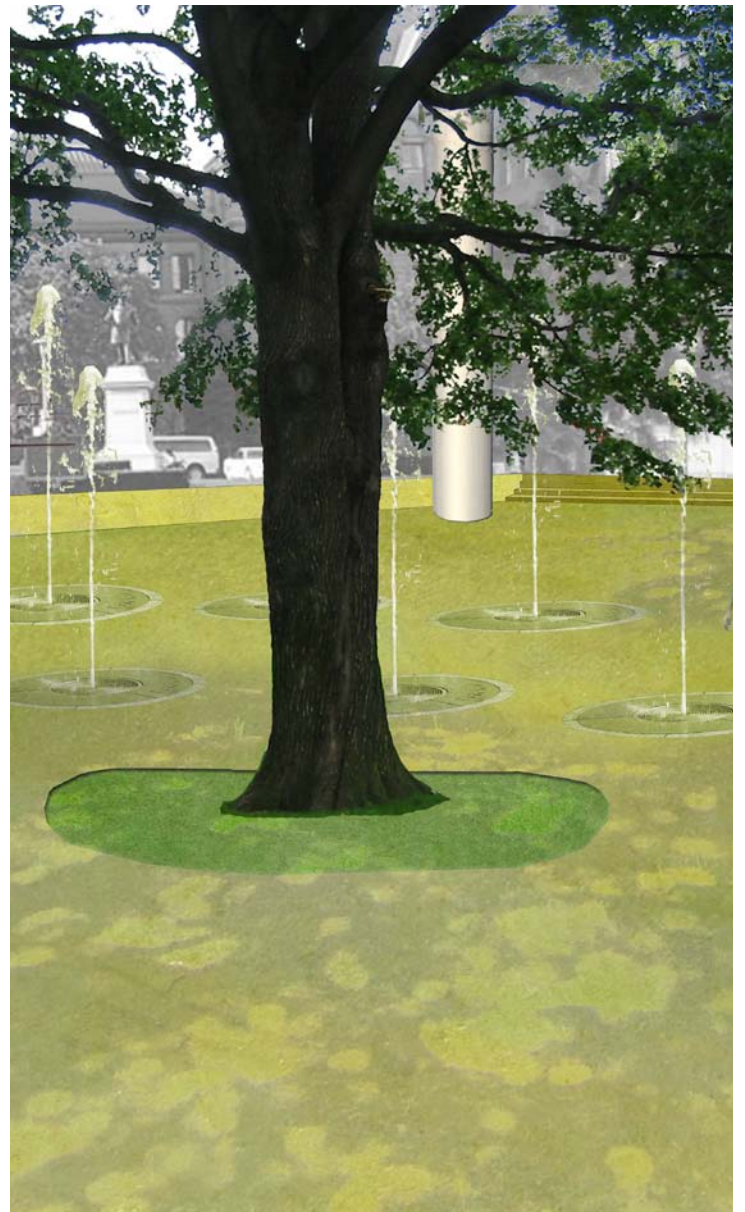
A public square is created on the front lawn of the Ontario Legislature building. Protests and events have occurred here frequently, but with no amenity provided for gathering or communication. A sense of enclosure is created for the square by cutting the square into the existing slope ending at a stage (2.) that is approximately a metre higher in elevation. The formal square is interrupted by organic hills spilling onto the square from the park. Positive micro-climates and places to sit are created at these moments.

Plantings are chosen specifically to reflect the nature of sounds and vibration. Gardens around the building will be planted to specifically attract song birds such as roses and honeysuckle. Trees that reflect this sense of vibration are also to be planted around the park. Trembling aspens vibrate at the slightest wind creating sound. During the winter, the wind will whistle through the needles of with the Eastern White Pine, Ontario's official tree.

Fig 3.10 Longitudinal section of Queen's Park Square



Fig 3.11 View in Queen's Park Square







Facing page

Fig 3.12 *Anahata*, detail plan of hospital district

1. MaRS facility
2. Toronto General Hospital
3. Sick Kids' Hospital
4. Hydro
5. Princess Margaret Hospital
6. Mount Sinai Hospital
7. Toronto Rehab

Anahata, Unstruck

The basic issue that we encounter in the heart chakra deal with balance, love, and relationship.

-Anodea Judith, *Eastern Body Western Mind* p229

Although the new MaRS biomedical research facility at University and College has been getting a great amount of attention, it is not the key to bringing a sense of life back to this area. However, the added attention and people brought to the site could become a positive element.

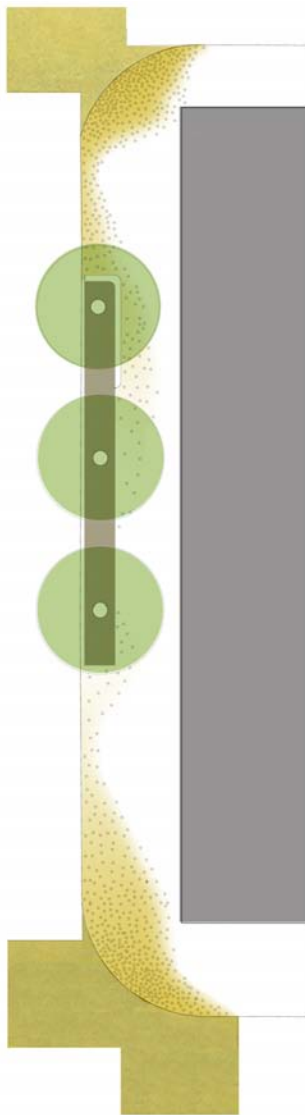
One of the most important aspects in humanizing the site is breaking up the wide street, decreasing the sense of scale through street tree plantings. They are imperative in creating a smaller grain of texture and scale for pedestrian life. The pattern of planting varies down the length of University providing a changing rhythm down the site. The trees are quite regular in some areas, while more syncopated in others. This provides a varied experience for the pedestrian. Also, the varying rhythm provides a visual cue for vehicular traffic which will result in slightly slower driving speeds. The more confined sense of space created by the double row of trees also encourages slower driving. There are four major rows of trees. Two along the sidewalks and two beside the cycling lanes.

Lessons learned from decimated urban tree populations in other cities due to disease encourage a varied use of tree species. The species utilized were chosen for their hardiness to climate and urban life but also for their seasonal traits, texture, coloring, smell, as well as their symbolic or historical uses. The use of numerous species also provides for a varied experience down the street. Appendix A shows the species to be used. Effort must be made for the survival of these street trees. The typical single tree planter is abolished and trough-style planters are to be used to allow for greater room for roots to

Fig 3.13 Paving pattern and street tree planting



Fig 3.14 Detailed typical of paving patterns



develop into maturity.

The planting system along the medians must also be addressed. Removing the annuals and perennials in fall to plant new plants in spring is unacceptable. Rather, a method needs to be developed that allows for people to experience the seasons through these medians. Appendix A lists a number of suitable plants that are hardy to the local climate, provide interest in all seasons and also relate to the narrative of the chakras within the body. An example of this can be seen in the hospital district where Lamb's Ear is recommended. This plant has a rich history with regards to health in that the soft leaves were historically used as bandages.

Another issue to consider is the recent addition of advertising signage on the medians. This should be discouraged as the signs do not provide any amenity to the site and cause further blockage for entry and use. However, some commercial activity may be appropriate on some of the medians such as small kiosks or vendors. They may be particularly successful at busy intersections where people crossing the street must break at the median between lights.

Linking the medians to each other is a continuation of the sandstone paving introduced in Queen's Park. Paving ties into the sidewalks where paving stones are to be embedded into the concrete sidewalks in a pattern that gets denser as one approaches an intersection and more dispersed as one moves away. This provides a rhythm and texture for the sidewalk pedestrian and has an added benefit for the visually impaired as the intensity of texture denotes the approach of an intersection.

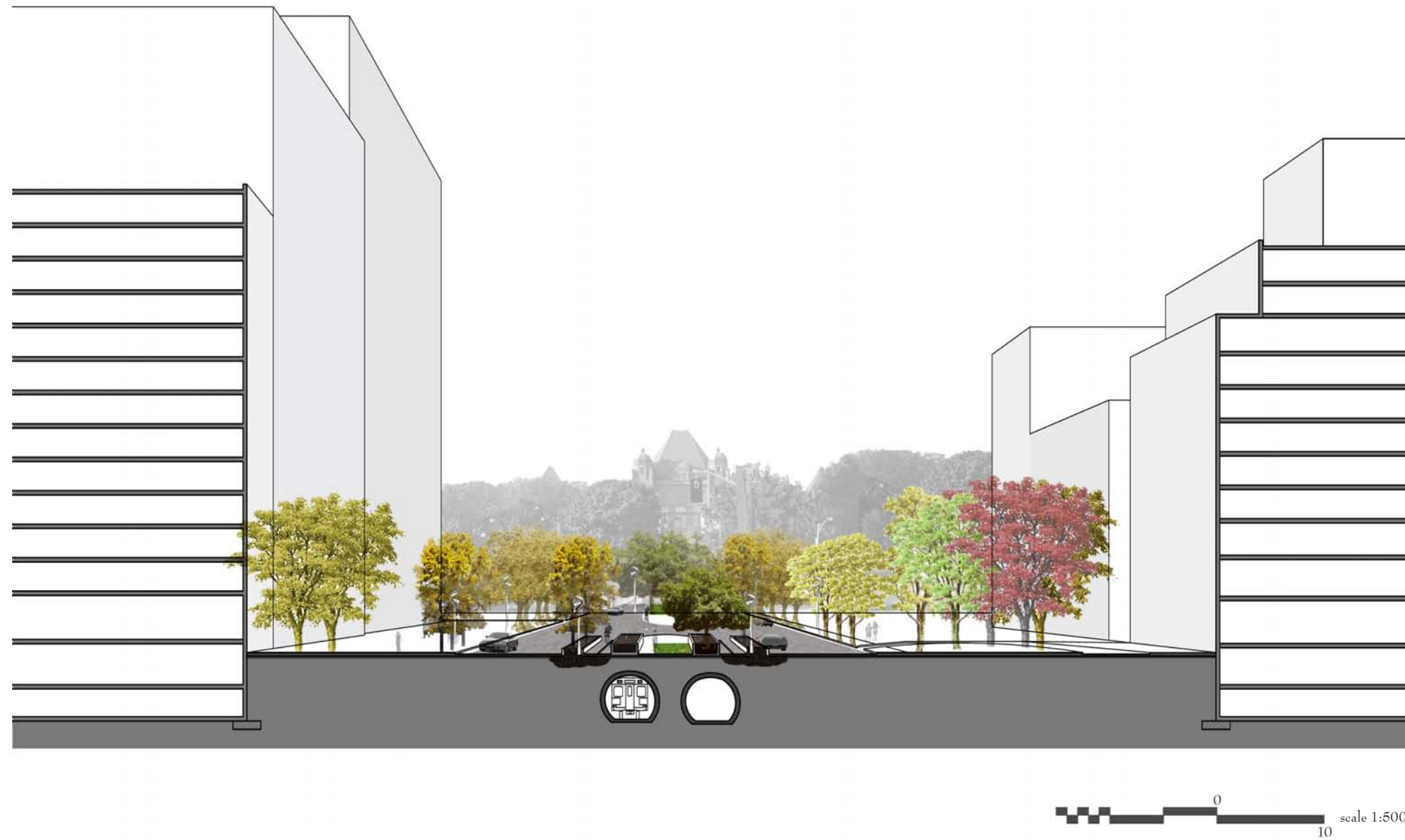


Fig 3.15 Sectional perspective looking northward towards Legislature Building from Hospital district in autumn

Toronto continually struggles with congestion and is working towards providing alternatives to driving around the city. To encourage alternate modes of travel, two double cycling lanes are placed on either side of the central median. This provides the city with a much needed cycling route that connects into a small system of existing lanes (see fig 3.16). The cycling lanes are located on the left of vehicular traffic rather than the typical far right for a number of reasons. The cycling lanes and planters provide a greater sense of width for the planted medians and protect the park areas from being overwhelmed by traffic. The trees are planted to provide a variety of experience for both the cyclist and the median pedestrian. For example, dense columnar trees can provide a moment of quiet and privacy on the median while a more open area provides views and a connection to the street. Furthermore, the overwhelming scale of the street is reduced with the cycling lane tree plantings.

Traffic lights and laws need to be adjusted to allow for the cyclists to travel along the left lanes. For example, vehicular left turns must be done during the left-turn signal only. Cyclists may require designated lights akin to a 'flashing green' for turning off the avenue onto another street. Public education and traffic signage will be an important aspect of the success of the cycling lanes.

To provide for the cycling lanes, two lanes of vehicular traffic are removed. This leaves University Avenue with six lanes dedicated to vehicular traffic during rush hour and four lanes of moving traffic and two lanes of parking during off hours.

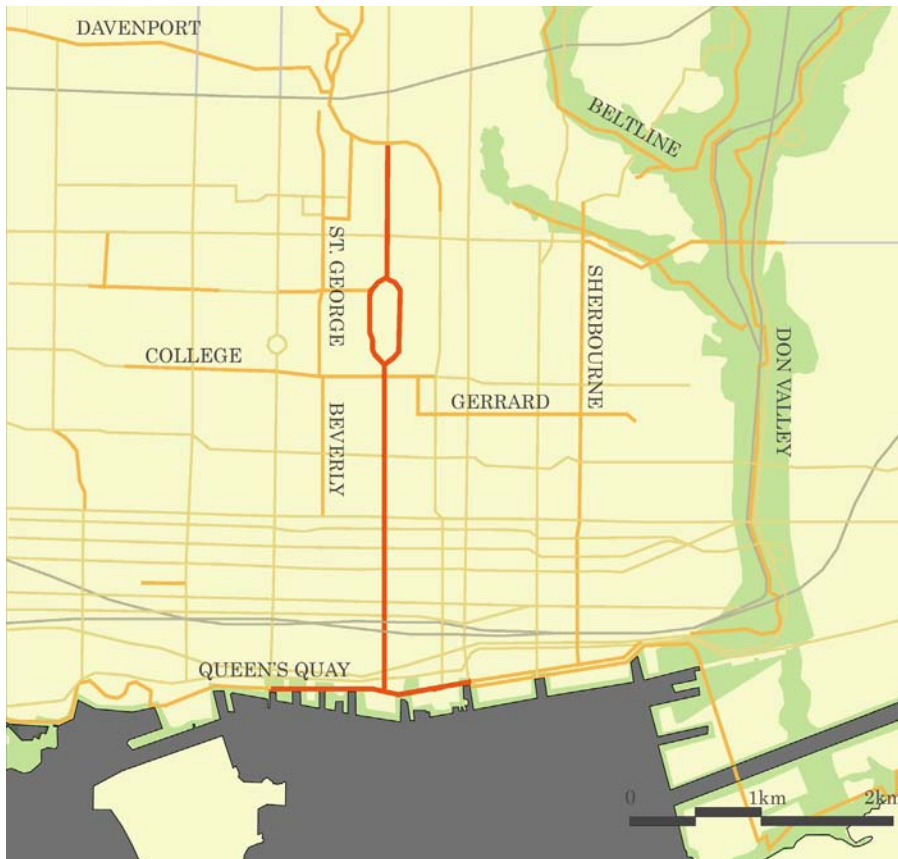


Fig 3.16 Connecting to the city beyond; becoming a part of Toronto's bike network.

Red represents proposed bike lane, streets highlighted in orange represent roads with existing bike lanes in the downtown core.

Fig 3.17 view from bike on bike lane



Fig 3.18 *Anahata* plan including facade and street treatment of auxiliary streets.



With the large amount of attention given to large structures and their profiles along University Avenue, smaller side streets that connect to local neighbourhoods are left as derelict support spaces. These spaces, act as the arrival route, school area and neighbourhood for many. Street tree plantings and facade treatments are proposed. Screens can be used to support numerous types of vines to green these spaces.

Fig 3.19 view northwards on Murrery Street behind hospitals





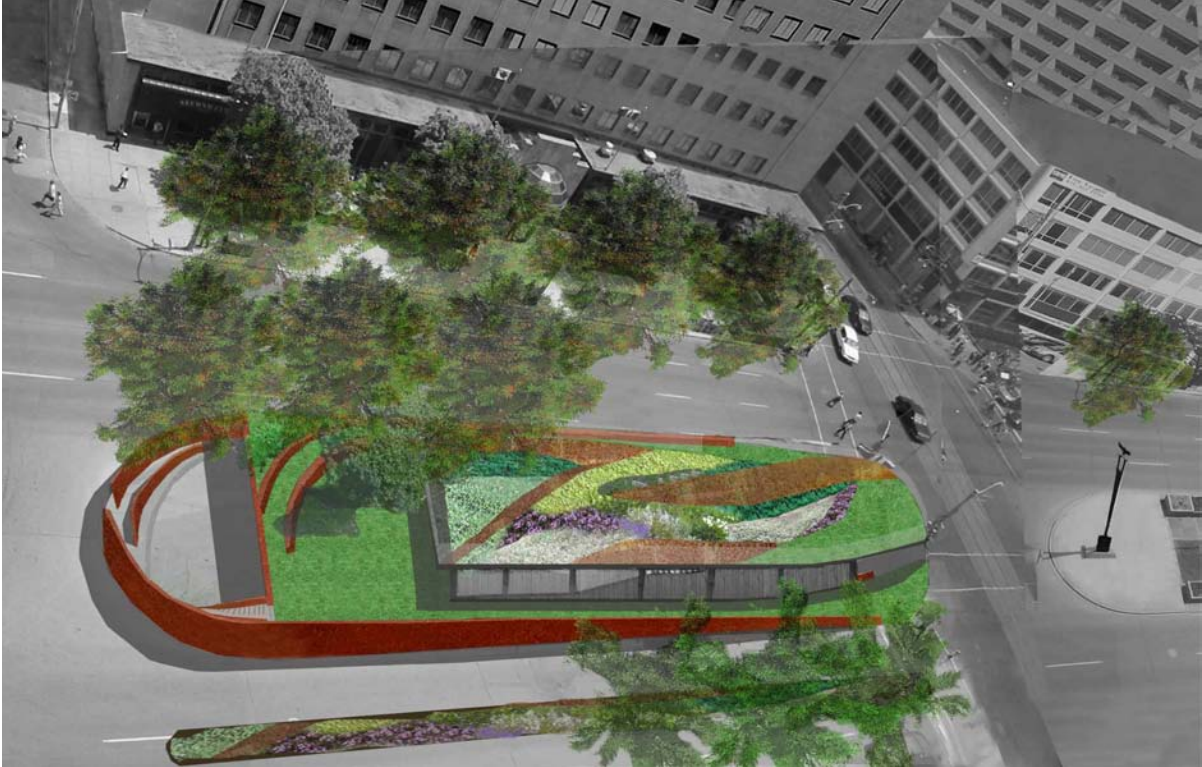
Facing page:
Fig 3.20 Detail plan *Anahata* University
Avenue Health district continued.
1. Location of *On the Road to Healing*

An experiment on inhabiting the medians in a different way, a facility *On The Road to Healing* represents an intersection of varying approaches to health. Conceived as a landmark, the facility provides services and expertise for patients who are interested in utilizing complementary and alternative medicine. The facility represents a place for open and safe communication between the disparate approaches to healthcare. It will house health professionals who are knowledgeable in the area of drug interactions and are familiar with alternate approaches to healing providing peaceful spaces for support meetings, information sessions, and healthful drinks.

Fig 3.21 View from street



Fig 3.22 View from neighboring office





Main Floor Plan

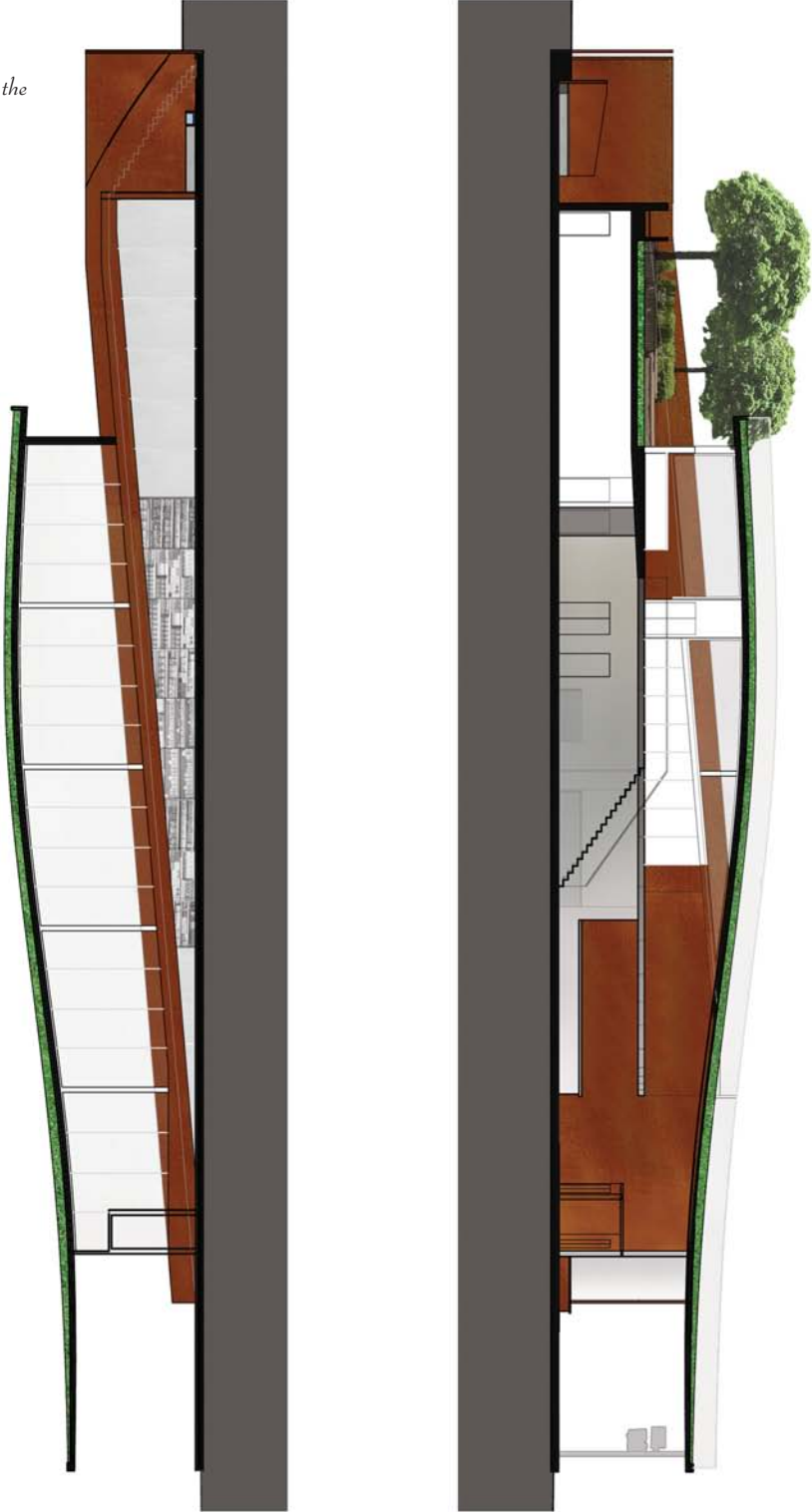
Second Floor Plan

Fig 3.23 Floor plans of *On The Road to Healing Community Health Centre*

1. Opening to street
2. Exterior meditation space
3. Multipurpose Room: Opens onto the meditation space and can be used for activities such as yoga classes and support group meetings
4. Pharmacy preparation area
5. Pharmacy counter
6. Display floor: The pharmacy provides service for allopathic medicine, complementary and alternative medicine. With drug interactions between different medicines increasing, getting them from a single source with pharmacists trained will help to prevent problems.
7. Display and Storage
8. Ramp to Patio
9. Patio
10. Health Juice Bar prepares complementary and alternative medications that are complex or time consuming to make. It also prepares health centred drinks.
11. Consultation Rooms are meeting spaces between health professionals patients who are interested in or are in the process of using complementary and alternative treatments.



Fig 3.24 Sections A-A and B-B of *On the Raod to Healing*



Section A-A

Section B-B



Fig 3.25 Resting on the rooftop garden



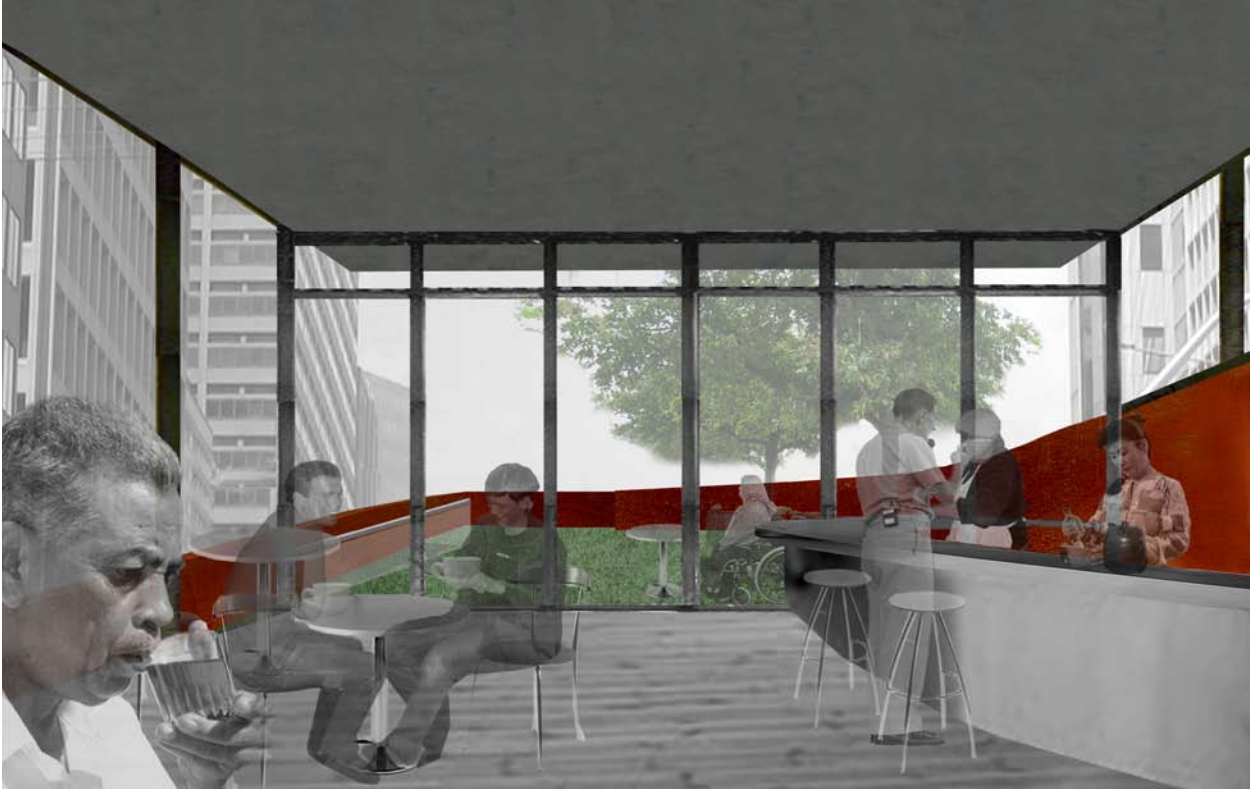
Fig 3.26 View into multipurpose room from patio

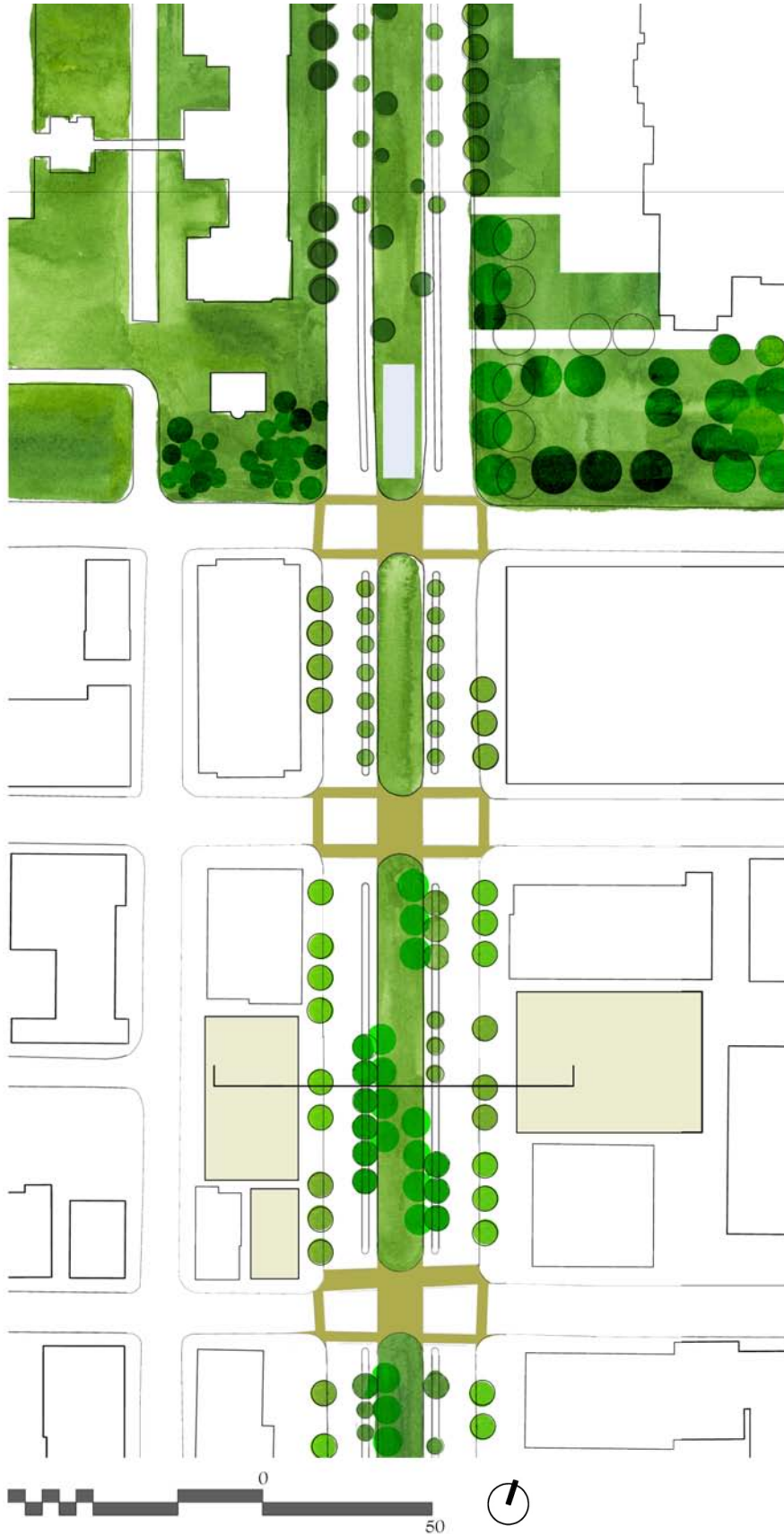


Fig 3.27 View from Display Area



Fig 3.28 View from booth in cafe





Facing page Fig 3.29 *Manipura*,
Detailed plan of Financial district

Manipura, Lustrus gem

In the chakra system as a whole, the purpose of the third chakra is to transform the inertia of matter and movement into a conscious direction of willed activity.

-Anodea Judith, Eastern Body Western Mind p170

Judith elaborates on the issues of the *Manipura chakra*, as an inner shift of conflict towards synergy, the combination of forces working together. She goes on to say “*We must be willing to leave passivity behind. We must be willing to leave the way it has always been, to transform our habits set a new course...*”

The area surrounding the Canada Life building and Osgoode Hall represents an area of some existing success and vibrancy on University Avenue. The active area of Queen Street and the intersection with the large African War memorial is a meeting place and is understood as a gateway to the city. There is an opportunity to draw people from this successful moment to University Avenue. The continuation of the tree plantings and the construction of buildings that include varied programmatic elements of residential, cultural/entertainment, and retail with the existing commercial office space will bring people to the site beyond office hours.

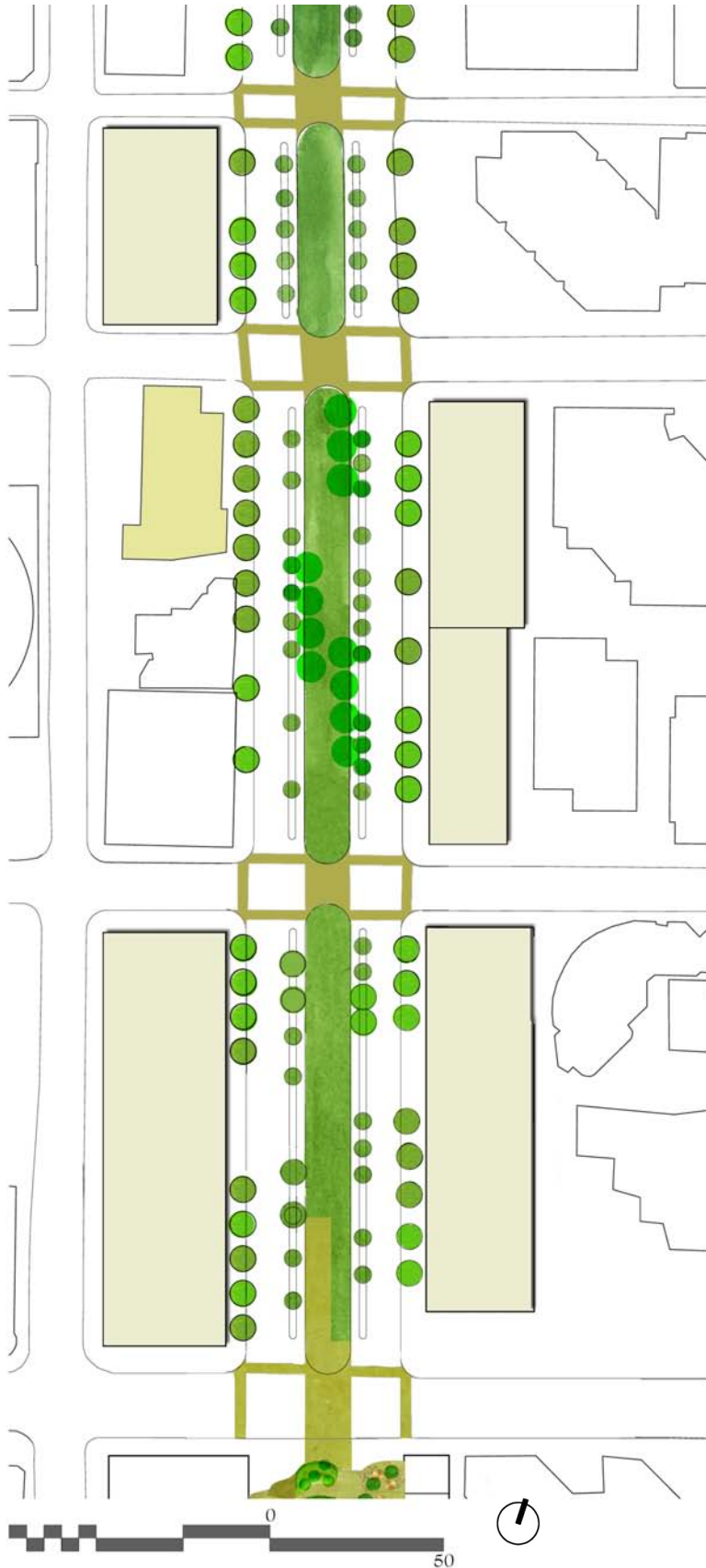


Fig 3.30 Plans of proposed Financial district. Grey buildings represent new structures. The Yellow structure locates St Andrew's Church.

Fig 3.31 Sectional perspective looking northwards from financial district in spring



Facing Page Near right: Fig 3.32
Demolition and construction diagram.

-Brown represents buildings to be
demolished corresponding to photos on
right.

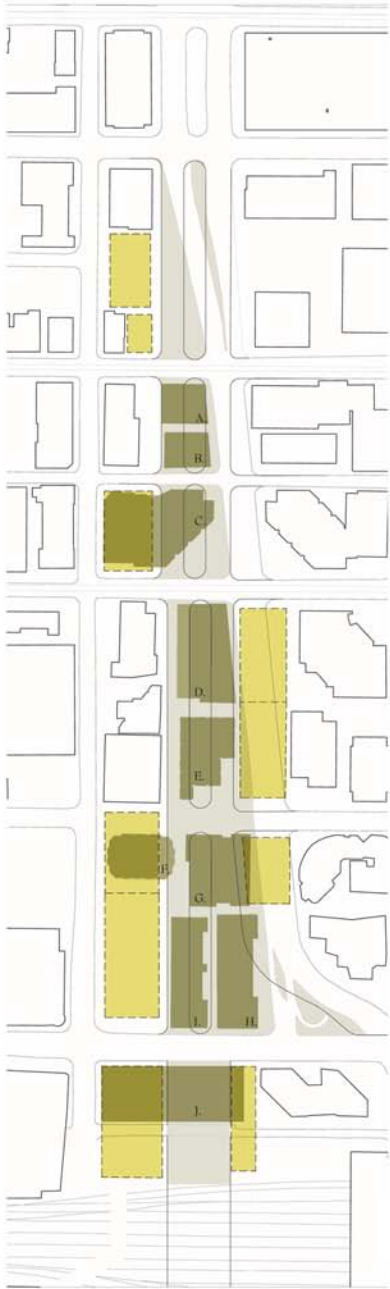
-Yellow represents new structures

-Grey signifies area to become roadway.

Far Right: Fig 3.33 Buildings to be
demolished

The largest physical move in this proposal is the demolition of ten commercial office buildings to continue University Avenue straight with a consistent width. This provides an unobstructed view and continuity of the avenue. Rather than simply petering off, the consistent street provides a greater connection to the sky and draws one's attention southwards towards the water. It unifies this condition to the the gateway of the African War monument at Queen Street. It allows the energy derived from the water to flow northwards and energy from the city to be brought to the waterfront. Other benefits include the increased profile of St. Andrew's Presbyterian Church.

Most of the commercial office buildings were designed and constructed with a thirty year (or less) life span in mind. As amortization approaches, an organized plan of demolition can be utilized. Large, regular shaped parcels of land become available for investment and development. The central location of these sites and their proximity to entertainment venues and the financial district provide a great opportunity for invigorating University with a greater street life. With the recent construction of the Four Season's Centre, and the planned construction of a hotel (*Shangri-La*), there is opportunity to include living and entertainment amongst office space. With an increasing assortment of uses and amenities, the financial district does not have to be abandoned during evenings and weekends. Rather, it becomes a vibrant part of a narrative where a struggle of opposing forces come together to create a synergy.



0 50 Scale 1:5000



viii) Chakra 2: *Svadhithana*

Fig 3.34 plan of Magnolia Bridge over tracks and pedestrian mall area.

- 1. Magnolia Bridge (see fig 3.37 for detailed plan)
- 2. New Building: mid rise, mixed use. Commercial opens onto bridge.
- 3. Connection tube from station to convention centre
- 4. Railway tracks below
- 5. Raised crosswalk
- 6. Pedestrian mall
- 7. Gardiner Expressway on-ramp.



Svadhithana, Sweetness

The challenge of the second chakra is to let go, flow, move and yield. *Movement and change stimulate consciousness. They stir the watery essence of feelings that flow through the body.* (109, Judith)

The railway tracks can be understood as an exciting piece of the city, or a major obstruction. To address the issue of the berm that is a visual and physical block from the waterfront to the rest of the city, a bridge is proposed that traverses the tracks.

Ideas of movement, pleasure and sensation directs the form of the bridge. Ramps and steps encourage exploration with stores and restaurants opening onto patios. A signal of the spring, an explosion of magnolia blossoms draw people out and onto the bridge. On the south side, a green slope embeds itself on the bridge seasonally becoming a tobogganing hill.

A mid-rise mixed-use development occurs south of the railway tracks. At this point, University Avenue becomes a pedestrian mall with the medians continuing as parks and places for people searching for shade, a place to rest, and water. During off hours, the street can be opened up for some limited vehicular traffic.

Facing page:
Fig 3.36 1:500 detailed plan,
Magnolia Bridge

1. Ramp (maintenance vehicle and wheelchair access)
 2. Patio
 3. New structure, mixed use, mid-rise
 4. Link to Union Station
 5. Link to convention centre
 6. Magnolia Planting
 7. Reflecting Pond (skating in winter)
 8. Railway Tracks below
 9. Green hill (tobogganing hill in winter)
- > represents view

Fig 3.35 View along Bridge, magnolia blooming in spring



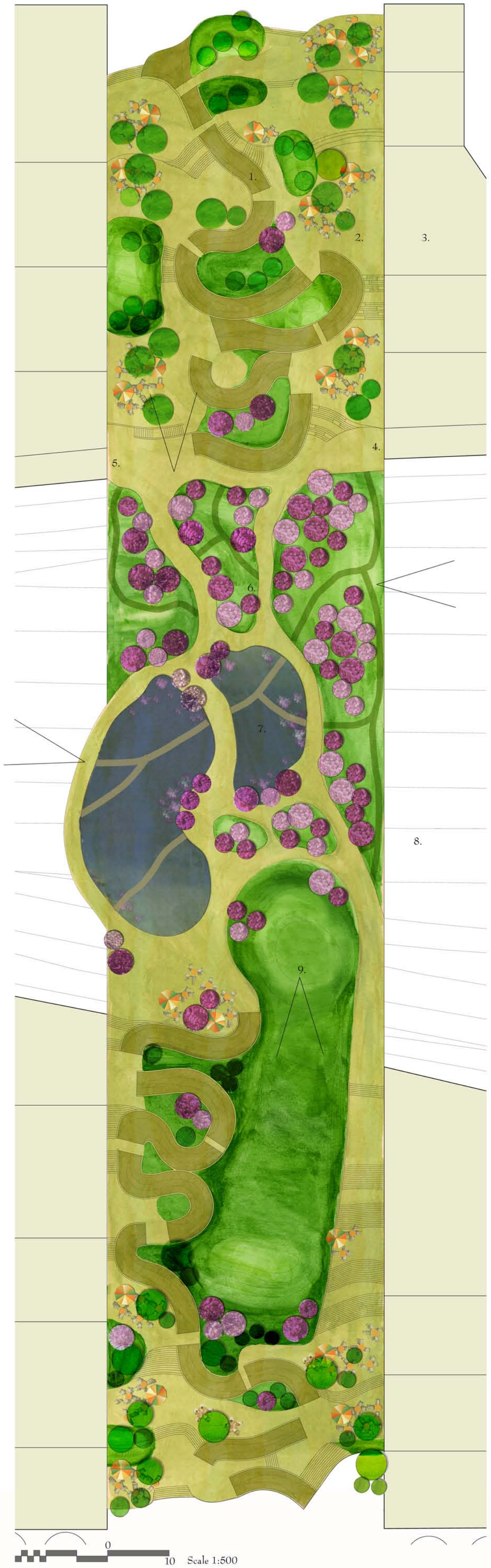


Fig 3.37 Sectional perspective through pedestrian mall, looking southwards towards the Gardiner Expressway

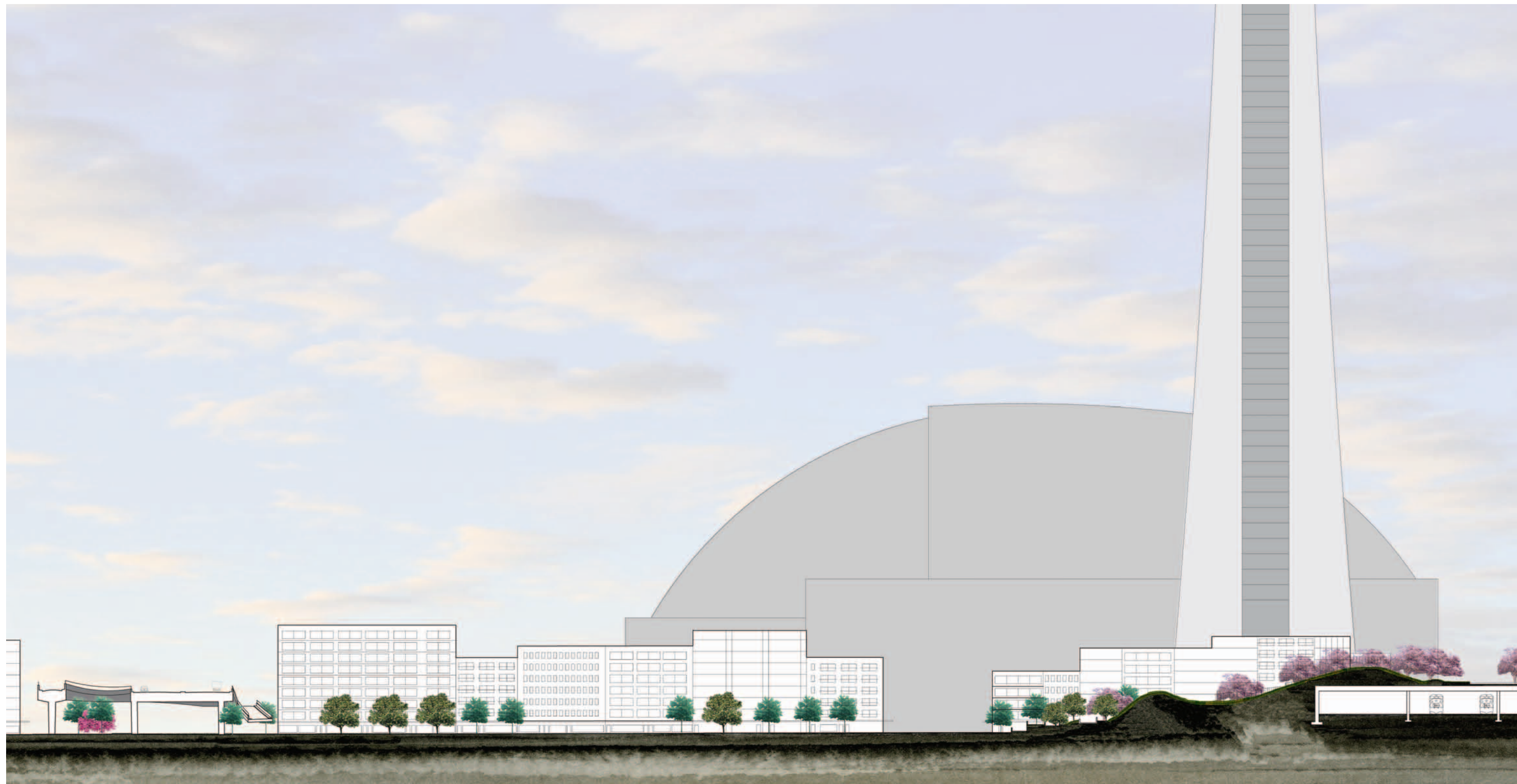


Fig 3.38 View along Pedestrian Mall





Fig 3.39 Detailed section through University Avenue from Magnolia Bridge to waterfront





Muladhara, Root

Situated at the base of the spine, the first chakra is the foundation for the entire chakra system... The foundation contains the temple's energy by defining its scope, edges, and boundaries. It defines a place, as a basic context of all that happens to us. It gives us a ground, a home, an anchor point for our experience.

-Anodea Judith, Eastern Body, Western Mind p57-58

Lake Ontario becomes the root of this proposal. The ultimate goal is to connect Toronto with this positive force, beginning with an urban project along University Avenue. The Gardiner Expressway is often described as a major hindrance to connecting the waterfront to the city, however, a number of its issues can be ameliorated with simple adjustments. For the pedestrian, it provides no physical barrier to the elevated highway can be much improved through some cosmetic adjustments such as plantings and repairs. With the pedestrian mall approaching the Gardiner, the paving pattern continues across Lakeshore Boulevard signifying that the pedestrian nature of the mall continues towards the water. Traffic lights that provide ample crossing time across Lakeshore will be an important factor for success.

Upon crossing Queen's Quay Boulevard, a public market is created with the pattern of double row trees continuing. A new building (7.) provides structure to the market space and a sculpture garden marks the entryway to the market.

An infinity pool spills water into the lake and undulating steps from the boardwalk slowly enter the water. At this location, swimming pool is surrounded by the lake. The root of the city becomes the moment where people may engage the water.

Fig 3.41 Sectional perspective looking southwards through waterfront market.

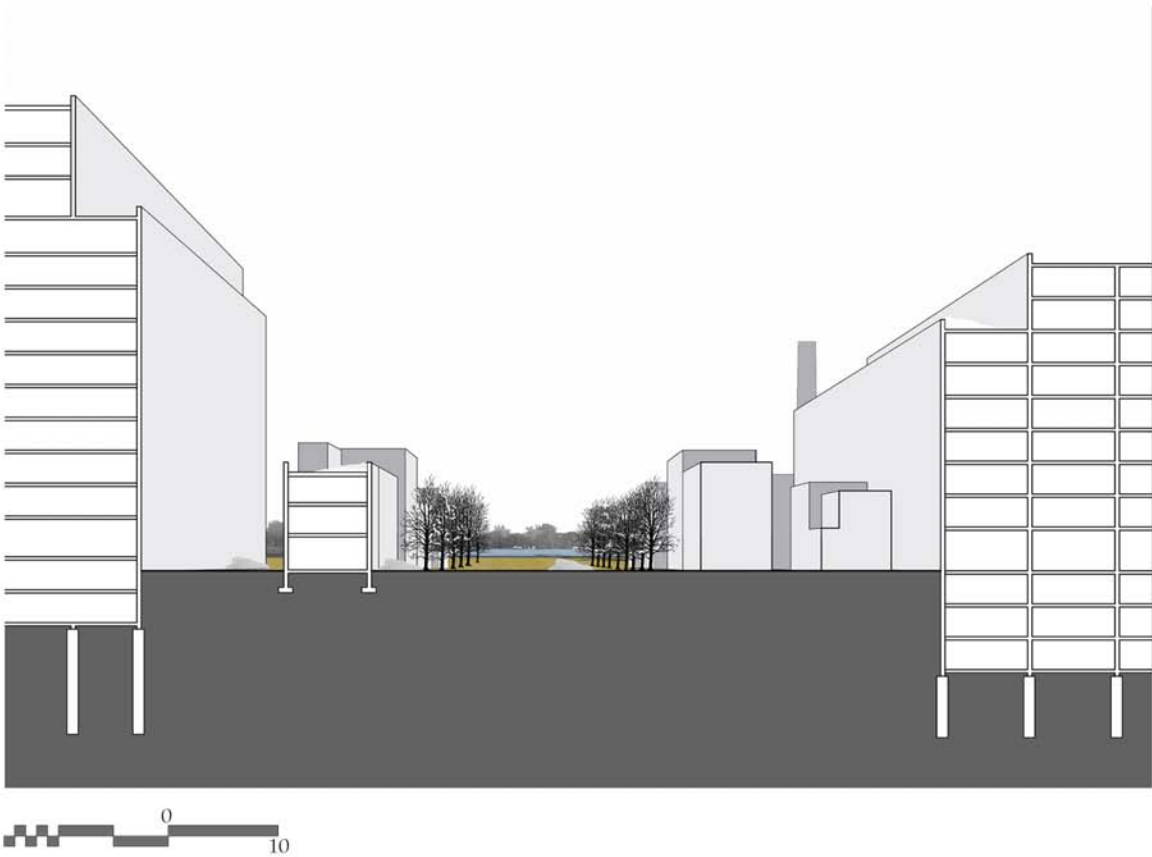


Fig 3.42 stepping into the water

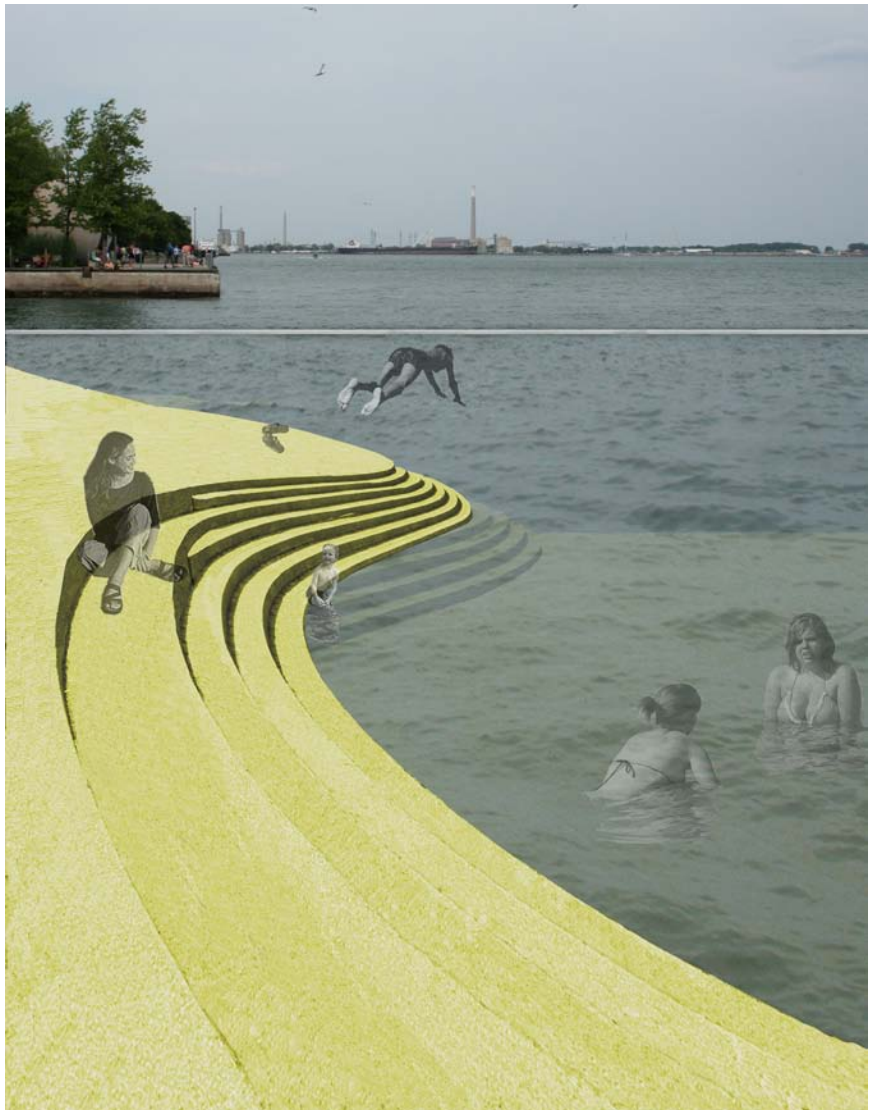


Fig 3.43 Floating in Lake Ontario



CONCLUSION

Campbell: People claim the land by creating sacred sites, by mythologizing the animals and plants - they invest land with spiritual powers. It becomes like a temple, a place for meditation.

Moyers: and the purpose of that?

Campbell: To claim the land. To turn the land where they lived into a place of spiritual relevance...

Moyers: Where are the sacred places today?

Campbell: They don't exist. There are a few historical spots where people may go to think about something important that happened there. For example, we may go visit the Holy Land, because that's the land of our religious origins. But every land should be holy land. One should find the symbol in the landscape itself of the energies of the life there. That's what all early traditions do. They sanctify their own landscape.... but the spiritual symbolization of our own civilization is basically lost to us.

The sanctification of the landscape by pre-modern cultures described by Campbell is engaged in this thesis through revisiting the developing conceptions of the human body. The body is a natural source for guidance as it has consistently been a central metaphor for the built world. Today, the conception of body is returning to one that respects an energetic or spiritual element. Meanwhile, at the urban scale, there is an acknowledgment that unbridled rationalism has its limitations and urbanists are struggling for a model that brings a sense of wholeness of place in addition to functional and aesthetic success.

With the reinvigorated interest in urbanism in the city of Toronto,

there is a tremendous opportunity to apply these ideas to the main civic boulevard, University Avenue. The approach outlined in this thesis recognizes the existence of the rational, formal and material world as a valid component of the city but it also recognizes the need for another level of consideration. This process is not a rejection of contemporary urbanist ideas but is a recognition reflecting the change in the conception of body, that there may be another plane of experience in the urban landscape.

The principles of urbanism derived from this approach reflect the innate desire to connect to the city and landscape in a profound way. This link can be found through the understanding of place as a part of a greater network of meaning. A major feature with this approach is the creation of symbol and narrative in the landscape. This proposal utilizes the *chakra* system and its role as the conjunction of the physical, psychological and spiritual body for people to relate to the urban fabric.

Another major principle derived from this process is designing for the connection to the cycles of the natural world. Physiologically, people need this relationship for optimal health and well being. Beyond this, natural rhythms such as the seasons represent a meaningful cycle of life, death, and rebirth that relates to the greater narrative of the physical and energetic body. Simple adjustments for street trees, the medians and park spaces allow for this relationship in an urban context. University Avenue, due to its generous section, gardens, parks and open space can provide this link for the downtown core with special seasonal occasions such as an explosion of fall leaves or spring blossoms.

One can also see the importance of weaving the urban fabric with places of major spiritual consequence. For example, in Toronto, there is opportunity for Lake Ontario to infuse the entire city with a sense of place and energy. Connection to the water from the rest

of the city needs to become a priority as currently undeveloped land is slated for high-rise condominium development from the railway tracks towards the water. Efforts must be made for the urban infrastructure that could impede the flow to become a positive element in the journey. Infrastructure that is habitable such as the magnolia bridge, is such an example where an element that once impeded travel becomes itself a destination and a meaningful part of the narrative.

There is an increasing recognition that there are elements within the human body that are explained beyond the physical and mechanical realm. Meanwhile, the human body has been a consistent element from which the built world has been conceived. This thesis proposes that through engaging this body, University Avenue not only has the opportunity to take its place as the central civic boulevard of Toronto, but also within the contemporary understanding of the body. Le Corbusier famously stated: “*BIOLOGY! the great new word for architecture and planning.*” Over half a century later, biology has changed and can inspire architecture and planning at another level.

APPENDIX A:
SUGGESTED PLANTING

APPENDIX A

Chart of suggested planting

CHAKRA 1		LATIN	COMMON
	SHRUBS	<i>Ilex verticillata</i>	Common Winterberry
			Witch Hazel 'ruby glow'
			Red Twig Dogwood
	TREE	<i>Acer saccharum</i>	Sugar Maple
		<i>Quercus rubra</i>	Red Oak
		<i>Cercis canadensis</i>	Eastern Redbud
		<i>Platanus x acerifolia</i>	London Planetree
	FLOWERS		Red Tulips
			Daylily 'pardon me'
		<i>Persicaria amplexicaulis</i> 'Firetail'	Mountain Fleece Flower 'firetail'
CHAKRA 2			
	SHRUBS	<i>Magnolia x soulangiana</i>	Magnolia (Saucer)
		<i>Magnolia stellata</i>	Magnolia (Star)
	TREE	<i>Acer buergeranum</i>	Trident Maple
		<i>Prunus maackii</i>	Amur Chokecherry sugar maple
	FLOWERS		Tangerine Gem Marigold
			Butterfly Milkweed
			Daylily/Tiger lily
	OTHER		Trumpet Creeper
			Kinnikinnick
CHAKRA 3			
	SHRUBS		Forsythia
			Witch hazel
			Yellow twig dogwood
			Lilac
	TREE		
	street tree	<i>Ginkgo Biloba</i>	Ginko (Maidenhair Tree)
		<i>Gleditsia triacanthos var. inermis</i>	Honeylocust
		<i>Acer nigrum, Acer saccharum</i>	Black maple or sugar maple
		<i>Cercidiphyllum japonicum</i>	Katsuratree
	FLOWERS		Dafodils, Tulips
			Heleniums
			Gas plant
	OTHER		
CHAKRA 4			
	TREE		
	street tree	<i>Ginkgo Biloba</i>	Ginko (Maidenhair Tree)
		<i>Castanea mollissima</i>	Chesnut (American or Chinese)
	FLOWERS		
			Lavender
	OTHER		Licorice
			Lambs Ear
			Holly
	herbs		Calendula
			Clover, Alfalfa
CHAKRA 5			
	SHRUBS		Roses
	TREE	<i>Populus tremuloides</i>	Quaking (Trembling) aspen
		<i>Pinus Strobus</i>	Eastern White Pine
	street tree	<i>cornus florida</i>	flowering dogwood
		<i>Zelkova serrata</i>	Japanese Zelkova
	FLOWERS		Blue Asters
			Dickson's Gold
			Sunflowers
			Honey suckle
CHAKRA 6			
	TREE	<i>Alix babylonica</i>	Weeping Willow
	street tree	<i>Quercus imbricaria</i>	Shingle Oak
		<i>prunus subhirtella</i>	Higan cherry
	FLOWERS		Trilliums
		<i>Baptista Australis</i>	Blue False Indigo
CHAKRA 7			
	SHRUBS		Lilac
	TREE	<i>Quercus rubra</i>	Red Oak
	street tree	<i>Fagus sylvatica</i>	European Beech
		<i>Pyrus calleryana</i>	Bradford or Chanticleer Pear
		<i>Fraxinus americana</i>	Autumn Purple Ash
	FLOWERS		Northern Blue Violet
			Tulip (violet and orange)
		<i>trilium grandiflorum</i>	White trillium
			Nodding trillium
			yellow flowers (complementary)

HEIGHT/SPREAD	DESCRIPTION/COMMENTS
	winter interest
	winter interest
	winter interest
h 60-75' s40-50'	firey colours in the fall
h60-70' s40-50'	Brigh fall red
h 20-30' s25-35'	pink spring flowers
	spring red
	spring red
	blooms in late summer season
h20-30'	explosion of flowers during spring, numerous cultivars
h15-20' s10-15'	
h25-35' s25-35'	Displays a nice red or orange fall color (later than maples), flowers in spring
h35-45'	
	orange, smells lemony
	attracts butterflies, blooms in summer
	blooms in summer
	attracts hummingbirds, long summer blooming
	ground cover
	spring blooms
	winter interest
	winter interest
h50-80' s:variable	historically used for heath. Use male only, fruits smell bad
h30-70' s30-70'	yellow in the fall, light speckled shade, get thornless variety!
h 60-75' s40-50'	yellow in the fall
h40-60' s:variable	smells really nice, like cakes
	late summer, fall bloom
	smelly spring and summer bloom
	complementary colour: purple
h50-80' s:variable	historically used for heath. Use male only, fruits smell bad
h40-60' s: 40-60'	histoic for site, University was once lined by flowering chestnuts. Some already planted as street trees.
	herbal remedy
	at first used as a band-aid (http://www.cnn.com/HEALTH/9508/herbs/index.html)
	red and green in winter
	said to encourage healing, fight infections (http://www.gardenguides.com/plants/info/herbs/herb.asp)
	nitrogen fixing (heals soil)
	song birds
h40-50' s 20-30'	leaves tremble, vibrate
h50-80' s20-40'	whistles during winter
h30-40' s>30-40'	spring blossoms
h50-80' s50-80'	vase shaped nice fall colour
	attracts song birds
	attracts song birds
h30-40' s30-40'	
h50-60' s>50-60'	leaves persist into winter
h20-40' s>15-30'	
	scattered through the woods
	spring blooming, hardy, native, legume
	sweet smells, spring blooms encircle entryway
h60-70' s40-50'	Brigh fall red
h50-60' s35-45'	
h30-50' s20-35'	beautiful white flowers in spring
h50-70' s35-50'	purple leaves in fall, salt tolerant, fast growing lots of pest issues. Plant towards park on double rows (not on st side)
	Fall blooms
	ontario's official flower

APPENDIX A

Chakra 1, Muladhara: Plants



Tulips



Daylily 'Pardon Me'



Eastern Redbud



Mountain Fleece
Flower-tail



Red Twig Dogwood



Red Oak



Sugar Maple, Fall



Red Twig Dogwood



Witch Hazel 'Ruby Glow'



Common Winterberry

Chakra 2, Svadhisthana: Plants



Magnolia



Tiger Lily



Trumpet Creeper



Tangerine Gem Marigold



Butterfly Milkweed



Trident Maple



Amur Chokecherry

APPENDIX A

Chakra 3, Manipura: Plants



Forsythia



Tulips



Dafodils



Gas Plant



Heleniums



Witch Hazel



Yellow Twig Dogwood



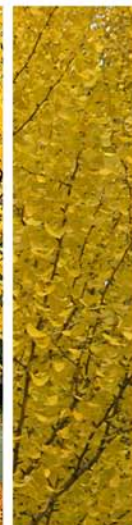
Katsura Tree



Honey Locust



Black Maple



Ginko

Chakra 4, Anahata: Plants



Alfalfa



Clover



Lamb's Ear



Lavender



Calendula



Dogwood



Ginkgo



Chestnut

APPENDIX A

Chakra 5, Vissudha: Plants



Rose



Blue Aster



Veronica



Dickson's Gold



Honey Suckle



Sunflower



Trembling Aspen



Flowering Dogwood



Japanese Zelkova



Chakra 6, Ajna: Plants



Weeping Willow



Desert Indigo



Blue False Indigo



Trillium



Cherry Trees



Shingle Oak

APPENDIX A
 Chakra 7, Sahasrara: Plants



Red Oak



Trillium



Lilacs



Bradford Pear



Northern Blue Violet



Tulips



Autumn Purple Ash

List of images: Plants document Appendix A

Chakra 7

Red oak

1. <http://www.eiu.edu/~egarden/images/index.htm>
2. <http://www.eiu.edu/~egarden/images/index.htm>
3. http://www.flickr.com/photo_zoom.gne?id=290682414&size=l
4. <http://www.eiu.edu/~egarden/images/index.htm>

Street Trees

1. Autumn Purple Ash <http://www.winona.edu/publications/treebook/images/Purple-Ash-2529.jpg>
2. Bradford pear tree spring http://www.flickr.com/photo_zoom.gne?id=367214797&size=o
3. Bradford Pear tree Fall http://www.flickr.com/photo_zoom.gne?id=287313808&size=l

Flowers

1. trilliums http://www.flickr.com/photo_zoom.gne?id=151365641&size=l
2. http://www.flickr.com/photo_zoom.gne?id=139908322&size=m
3. <http://www.peppermintcottage.com/Impasto%20Trillium%20Heaven.jpg>
4. http://www.northpeel.com/br/sideroads_or/editions/spring05/story/story/2774859p-3212653c.html
5. <http://www.virtualblueridge.com/photojournal/2005/05/images/large/9-005.jpg>
6. lilac http://www.flickr.com/photo_zoom.gne?id=153345488&size=o
7. northern blue violet <http://www.ouellette001.com/vivre/images/V9909940528121024.JPG>
8. tulips <http://www.pbase.com/hjsteed/image/43503323>

Chakra 6

Weeping Willow

1. <http://photos.case.edu/photo/882.jpg>
2. http://www.flickr.com/photo_zoom.gne?id=185028321&size=o
3. <http://www.english-country-garden.com/a/i/trees/weeping-willow-5.jpg>

Street trees:

1. cherry: http://www.flickr.com/photo_zoom.gne?id=141357725&size=l
2. cherry: http://www.flickr.com/photo_zoom.gne?id=143358213&size=o
3. Shingle Oak: http://www.plantations.cornell.edu/collections/arboretum/urban/images/JG_loop/Quercus_Imbricaria.jpg

Plants/Shrubs:

1. false indigo flower http://pics.davesgarden.com/pics/hczone6_2002-05-23_837.jpg
2. false indigo flower <http://www.ca.uky.edu/HLA/Dunwell/baptisia10deepblue2PCweb.jpg>
3. desert false indigo http://flickr.com/photo_zoom.gne?id=165812691&size=l

Chakra 5

Park:

1. Trembling aspen in summer: <http://www.herbarium.lsu.edu/stinger/GFG000564.jpg>
2. Trembling aspen in fall: http://www.csus.edu/org/geographyclub/Gallery/Biogeography_Fieldtrip_10-2004/pages/quaking%20aspen.htm
3. honey suckle <http://www.desotostatepark.com/photogallery/wildflowers/bush%20honeysuckle.jpg>
4. blue astor <http://www.colorado.edu/humres/images/random/hl85-01.jpg>
5. blue aster 2 http://www.flickr.com/photo_zoom.gne?id=158611640&size=l
6. dickson's gold http://www.em.ca/garden/campanula_garganica_dicksons_gold2.JPG
7. veronica spicata <http://www.mountainvalleygrowers.com/verspicatablue.htm>
8. sunflowers <http://thomashawk.com/hello/209/1017/1024/Sunflowers.jpg>
9. roses <http://www.desotostatepark.com/photogallery/wildflowers/bush%20honeysuckle.jpg>

Street trees:

1. Japanese Zelkova: <http://www.flickr.com/photos/ophis/59339391/>
2. Japanese Zelkova (fall) http://www.ces.ncsu.edu/johnston/homehort2/zelkova_serrata.jpg
3. flowering dogwood http://www.litzsinger.org/weblog/archives/Cornus_florida.jpg

Chakra 4

1. ginko fall http://www.flickr.com/photo_zoom.gne?id=61186865&context=photostream&size=l
2. ginko summer http://www.flickr.com/photo_zoom.gne?id=219535695&size=o
3. chestnut tree <http://www.capecodphotoalbum.com/hctree.jpg>
4. lavender <http://i1.trekearth.com/photos/3756/lavender.jpg>
5. lambs ear http://www.ramblingrose.com/garden/2004_09_lambs_ear.jpg
6. holly http://www.flickr.com/photo_zoom.gne?id=73485440&size=o
7. calendula <http://www.art.net/studios/hackers/strata/flowers/calendula-close.JPG>
8. alfalfa http://www.noble.org/Press_Release/Lignin/Alfalfa.JPG
9. clover http://www.flickr.com/photo_zoom.gne?id=366503197&size=l
- 10.

Chakra 3

1. forsythia <http://www.capecodphotoalbum.com/hctree.jpg>
2. katsura tree <http://www.capecodphotoalbum.com/hctree.jpg>
3. katsura green <http://www.s-araki.com/IMG0013.jpg>
4. honeylocust <http://www.treesonthemove.com/images/treeImages/40.gif>
5. maple http://flickr.com/photo_zoom.gne?id=274174355&size=l
6. tulips http://flickr.com/photo_zoom.gne?id=149951736&size=o

7. daffodils http://flickr.com/photo_zoom.gne?id=197275408&size=o
8. gas plant <http://www.greenbeam.com/features/images/dictamnus2.jpeg>
9. heleniums http://www.flickr.com/photo_zoom.gne?id=74240140&size=o
10. yellow dogwood <http://www.lancasterfarms.com/images/12345609874.gif>
11. witch hazel http://www.flickr.com/photo_zoom.gne?id=377834148&size=l
12. lilacs <http://paperstreetcycling.com/sweetpea/wp-content/uploads/lilacs.JPG>

Chakra 2

1. trident maple green <http://www.hrt.msu.edu/ash.alt/CD/ash%20alt/trident%20maple%202.jpg>
2. trident maple red <http://www.hrt.msu.edu/ash.alt/CD/ash%20alt/Acerrub3.jpg>
3. amur chokecherry <http://oregonstate.edu/dept/ldplants/prma3.htm>
4. amur chokecherry spring <http://www.plymouth.edu/fsb/landscap/Amur-Chokecherry1.JPG>
5. magnolia http://www.flickr.com/photo_zoom.gne?id=10741239&size=o
6. magnolia whole http://www.flickr.com/photo_zoom.gne?id=158167363&size=l
7. magnolia tree <http://www.hort.purdue.edu/ext/senior/ornament/images/large/magnoliatree.jpg>
8. magnolia winter http://www.flickr.com/photo_zoom.gne?id=363203644&context=photostream&size=o
- 9.
10. butterfly milkweed <http://ontariowildflowers.com/main/species.php?id=83>
11. trumpet creeper http://flickr.com/photo_zoom.gne?id=218175554&size=o
12. trumpet creeper 2 http://www.flickr.com/photo_zoom.gne?id=113840770&size=o
13. tangerine gem marigold http://www.territorial-seed.com/stores/1/images/Product_Images/fl2947.jpg
14. tiger lily http://flickr.com/photo_zoom.gne?id=163898303&size=l

Chakra 1

1. Sugar maple <http://www.dred.state.nh.us/nhnursery/seedlings/sugarmaple/smapplefall.jpg>
2. Red Oak http://www.eiu.edu/~egarden/images/campus_trees/summer/26_2015.JPG
3. eastern redbud http://flickr.com/photo_zoom.gne?id=122877859&size=l
4. eastern redbud http://flickr.com/photos/night_heron/129192748/
5. tulips <http://www.stttelkom.ac.id/helpdesk/download/wallpaper/Red%20Tulips.jpg>
6. red twig dogwood http://www.flickr.com/photo_zoom.gne?id=364911840&size=l
7. red twig dogwood (summer) <http://www.geocities.com/earthinspace2002/redtwigdogwood.jpg>
8. witch hazel ruby glow <http://www.gartendatenbank.de/pflanzen/hamamelis/img/027.jpg>

9. common winterberry http://media.hgtv.com/HGTV/newsletter/garden-ing_newsletter/vol_013/Winterberry.jpg
10. red day lily http://www.flickr.com/photo_zoom.gne?id=133661054&size=l
11. mountain fleece flower <http://www.robsplants.com/plants/PolygAmphe.php>

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