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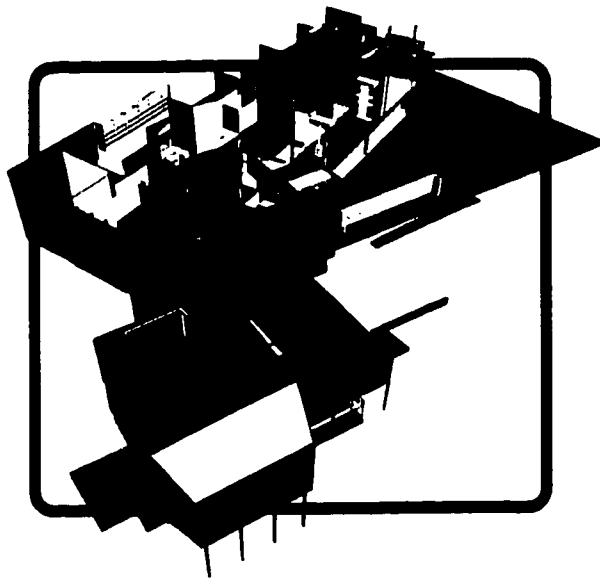
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# abstract

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The following Master's Degree Project for a Technological Research Centre evolves out of the present computer and telecommunications revolution. Fax, email, cell phones, teleconferencing and virtual reality are some of the many forces challenging the traditional organization of our urban world and creating the potential for new ways of designing cities. Architects have generally lamented the appearance of these technologies, seeing them as forces that diminish genuine human interaction in urban environments. In opposition to this prevailing cynicism, the project explores an opportunity to reconsider the nature of a place, and architectural response, being brought about by these new technologies.

The dualistic existence between suburbs and business core in our cities - designed around the opportunities presented by the automobile - is steadily dissolving. No longer tied to specific geographical locations, many businesses are instead moving to regional town centres, industrial parks or even home offices. All too often the resulting places are geographical and private realms separate from the larger concerns of the city. Yet it may be true that other scenarios exist. This project hypothesizes that the technological revolution has afforded us an opportunity to occupy places that would have never been considered in the past.

The program is representative of a building profoundly influenced by the emergent technological world - a Centre for Technological Research and Visualization. Instead of choosing a site in an industrial research park where an unending sameness and separation from the workings of the city are the predominate features, the project proposes to occupy the fragmented interstitial transportation zone and act as a genesis for renewal and reinvention. The project argues occupying this "in between" allows us to be receptive to the fragmented diversity of the surrounding city and, in doing so, create a contextual architecture that makes underlying diversity more apparent and meaningful.

# introduction

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The paper is organized into a series of essays from which the architectural design was generated. The document begins with a discussion of the city and the elements that have traditionally governed its organization. The project site is then analyzed to provide a more thorough understanding of the fragments at play in this interstitial zone of the city.

To gain a greater understanding of the changes being brought to bear on North American cities, and to look at the problems inherent in the typical siting of technological research facilities, the project explores the character of the world's most prominent high tech zone, Silicon Valley. This discussion examines how the design of Silicon Valley and its conception of the city are at work in Calgary within the University Research Park.

With the project site in mind, the paper turns to some philosophical positions as a means of beginning the design process. With these theoretical foundations in place, the project then discusses the Technological Research Centre program and considers how it might be placed on the site to create a more meaningful architectural expression that at once enriches the site and program in question. The final section of the document discusses the architectural intervention and examines its design strategy.

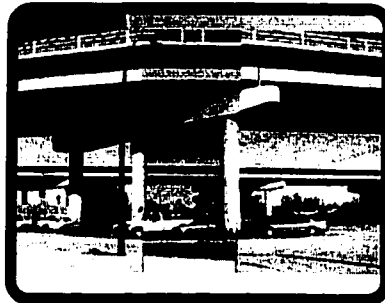


# the in between

Architects [should] develop an 'evolutionary worldview' which recognizes and designs for change and which understands 'building and city not as a commodity, to be consumed and made obsolete, but as a habitat to be rehabilitated, improved and transmitted.'

Nan Ellin *Postmodern Urbanism* pg234

The automobile, seemingly more than any other concern, has defined the nature of our cities. The effects are everywhere: from the dispersion of suburbia to the design of the massive life-support system of transportation infrastructure and the cycle of natural resource exploitation and distribution that support and enable the commuter lifestyle. Or, in direct response to the open road, the commercial strip and its complement of graphic signage and nondescript buildings set back from the roadway to allow for ample parking.



In North America, we became the grand experiment of the machine age by being the first civilization to design our cities around the opportunities and subsequent needs embodied within the automobile. The car has become an integral element in our society and to us as individuals. We can all understand the needs of the middle-aged business executive suffering through his mid-life crisis buying the red sports car to reaffirm his youthfulness, or the baby boomer who is enticed to purchase the latest "sports utility vehicle" with the TV promise of new found freedom and self actualization. There can be no denying the car or the primary desire for mobility it represents.

**Bow Trail Overpass**  
*one of the connections that allow us to pass back and forth between the suburban and urban realms*

In some cities, the automobile and strategies for its movement are so central they can be seen as the "ultimate internal rationale and arbiter."<sup>1</sup> The result, as in Calgary, is a plan containing a single centre (densified to enable efficient economic activities between companies and individuals) with radiating neighbourhoods connected through an elaborate circulatory network. This model was seen as a liberating one, freeing the citizenry from the high-density core and allowing them a more private existence in their own house and parcel of land in a peaceful, park-like subdivision. The suburban promise was of a new way of living - an idealized existence free of the dirt, crime and overcrowding of the city proper.

The roadways, expressways, overpasses and underpasses figure as the central concern that deforms all other needs to their primary ordering.

In support of the suburban lifestyle comes the feeding circulatory network that pays homage to our car culture. As the city grows, there is a concomitant need to takeover and pave extensive amounts of land as city planners continue to seek new ways of allowing the ever-expanding legion of vehicles to move efficiently through the city. As each new subdivision pushes the boundaries further and further, so too, must the feeding circulatory network expand. Cutting through the fabric from place to place, roadways create the extreme barriers between the locations along their delineating edge. In response, communities and buildings set back from these edges, build sound walls and design the periodic pedestrian overpass to facilitate the circulation of the occasional person who is unfortunate enough not to own a car.

The physical area of these roadways is immense, and as they extend from the city core we are left with vast areas covered with very little but asphalt. The result is a series of no-man's-land in between zones that mediate the centre and the boundary. In these places, human occupation, and more precisely, pedestrian activities are low on the hierarchy of importance. The roadways, expressways, overpasses and underpasses figure as the central concern that deforms all other needs to their primary ordering. Buildings and pedestrian pathways seem out of step, invading the remaining land. Areas around the circulatory system deemed by city planners beyond usability are planted with grass and periodically mowed to keep up appearances of respectability. In some cases, these grassy slopes can occupy as much, if not

Bridge & Building  
*in a perilously close juxtaposition*

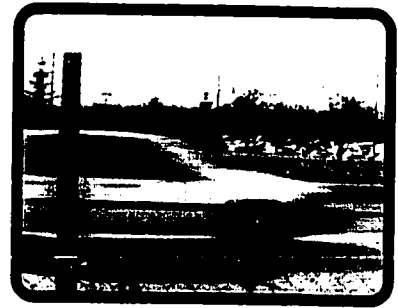


more, land than the roadways themselves. The whole process betrays an inherent disregard for the value of land. Under the flyovers and along the road edges lie vast amounts of dead space (un)consumed without question as the city continues the expansion of its boundaries outwards.

Yet, because of the disregard and utility of purpose that forms the framework of their design, these places reveal an uncompromisingly honest attitude towards the machinations that connect the urban fabric and constructed environment. Behind suburbia and its idealized lifestyle, or the centers of economy and capitalism, lurk these constructed realms. From here the course of objects and events can truly be measured as the city follows through its day to day routines. In our increasingly private world, it has even been argued that it is only along the corridors of movement (our roadways, railways and bicycle paths) that the shared spaces of our cities are found. <sup>2</sup>

The experience of these places is almost inevitably of motion and of being on your way elsewhere – the traveler is removed from the particulars of place and geography as he speeds by in the hermetically sealed space of the automobile. While consumed within the flowing spatial configuration of the open road, the world around us is reduced to a pure visual experience. As objects in our near field of vision approach, they seemingly accelerate as they pass by in a blur. Distant fields of view, on the other hand, remain static and seem more like an image or stage set on which the world around us is displayed. Textures, individual spaces, sounds and other unique features lose their specificity as they blur into the perceived wholeness of image.

In our cars we are simultaneously existing in both public and private realms; at once removed from the particulars of the place around us and yet fully exposed to the view of others. <sup>3</sup> Life on the road is truly a “utopia of transience, a place where everyone is just passing through...a place everywhere and no where, assembled only through constant motion.” <sup>4</sup>



On The Road

*there can be no denying the car or the primary desire for mobility it represents*



The conditions described here are essentially those responsible for the West end of 10<sup>th</sup> Avenue in Southwest Calgary. Here exists an intensification of activity and collision of (passing) events. A byproduct of the planned spaces at the ends of the roadways – where circulation to and from took precedence over the qualities of this place – the site was subsequently relegated urban wasteland and instead zoned for light industry and non-urban commercial activities. In this respect the characteristics of the site are ubiquitous, representing the seemingly natural consequences of any system designed with radiating subdivisions feeding into a single centre. In Calgary, the design becomes further exaggerated by the availability of immense tracks of relatively flat and inexpensive land on to which suburbia can be extended ad nauseam.

Yet the qualities of the 10<sup>th</sup> Avenue site suggest it could be considered more – sharing many characteristics of land that is typically highly valued in cities. The area backs onto the Bow River and the extensive bicycle and pathway system that weaves itself through Calgary's park system. The site is close to many city amenities, such as theatres, housing and commercial developments, as well as having panoramic views of much of the surrounding landscape, including the city skyline. In addition, the site acts as one of the major gateways through which people pass in and out of the downtown core. In the end, however, it would seem this site, whose very utility connects the events and places of our city and day-to-day lives, paradoxically remains largely disconnected from the city itself. This project proposes a new sensibility that reconsiders this fragmented and under utilized transportation corridor and injects into the mix a another set of programs and spaces that attempt to strength the qualities of this in between within the context of the surrounding city. Before considering an intervention, however, we must examine more closely the elements that form the constituent pieces of this place.

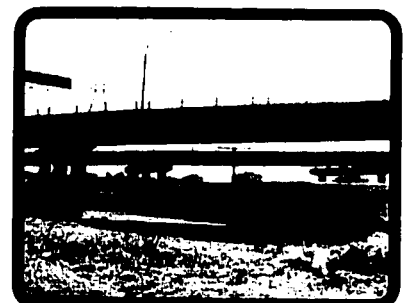
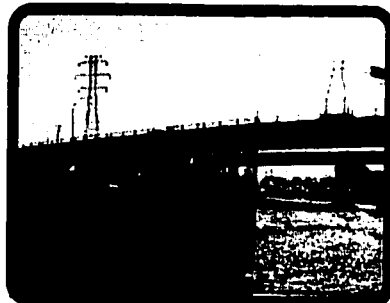


Under Crowchild Trail  
*heavily framed views of those passing through*

In a world where the homogenous space of electronic communications reigns supreme, a regard for marginal industrial sites as a legitimate part of our cultural heritage becomes paradigmatic; these ruins of industry are perhaps the only existing places where the mysterious origins of technology may be revealed.

Alberto Perez-Gomez *Architecture: Technology and Ethics* pg9

The 10<sup>th</sup> Avenue site is a highly articulated place that paradoxically lacks clarity as the intersecting and disparate planning zones collide into one another. It is a place that has no defined centre and in many ways is more simply a convergence of paths to other places. One gains a strong sense of entry as they pass into the area - by driving above on the various overpasses, ramping down under them, or by passing along on the Canadian Pacific Railway. The experience of site is heavily predicated on the motion of the vehicle



The Site  
*the west end of 10th avenue southwest*

traveling through. The permanence of the large concrete bridges is contrasted with the ephemeral nature of the passing car. As one fast-forwards along, the experience of place is reduced as specifics break down into snapshots in time. A typical sequence might follow the entry by curving down under Crowchild Trail, the sudden compression when driving by the warehouses under the massive, elevated bridge forms, followed by the unfolding of space and city - along the long stretch of road that visually terminates on high rise towers in the distant downtown. Then, just as suddenly, the path swings up

from 10<sup>th</sup> Avenue, curving into the mid-to-high density urban housing along 12<sup>th</sup> Avenue. This series of events documents one experience of the site. Yet, because the place exists as a convergence of many paths, different aspects come into focus along other routes.

Driving above the site, on the Bow Trail bridges in or out of the downtown core, one feels as if they are atop a giant concrete island – powerful in its extremely flat and horizontal character. The area between the two bridges is experienced as a large slice cut out of the concrete floor. Moving along the bridges, the traveler is given broad views of the downtown core, the river valley and much of the surrounding city. The area below, no longer perceived as a series of solid forms, is in contrast experienced as a void in the horizontal plane. This void reveals sections of the site below and forces one into specific framed views that are ephemeral by virtue of the pace at which they appear and disappear. (The bridges are devoted entirely to vehicular travel, with nonexistent pedestrian walkways). These bridges run parallel to each other as they move above the site, and then diverge as they enter the downtown at separate points. While together over the site the bridges provide a force that unifies the segregate warehouse forms below, creating the perception of wholeness within their enclosure.

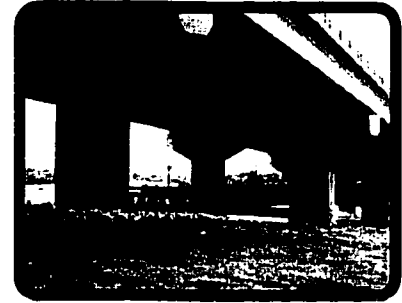
The roof created by the bridges above the site is periodically broken by the tall and slender metal structures carrying electrical and telecommunications signals in and out of the downtown. One can almost sense a cross-section of the histories of industry and economy – from the primary-resource products of early industrialization traveling across the well-worn tracks of the CPR to our present preoccupation with the high tech and global economy that is embodied within the tower wires.

Along the river valley and train tracks, the site once again changes its nature, revealing itself in new ways. In this corridor the bridges lose much of their dominance as they descend back into the ground plane and push off to the downtown. Instead, the bridges act in conjunction with the warehouse volumes to act as wall, blocking most visual and spatial connections – with the exception of limited framed views – to the vehicular traffic moving along 10<sup>th</sup> Avenue. Again, the result is a study in contrasts. The quiet seems almost eerie in relation to the constant hum of traffic and its

Under Bow Trail (Below)  
framed views of the downtown core  
On Crowchild Trail (Bottom)  
panoramic views of the city



associated sounds on the other side. Cars, concrete and asphalt are replaced with grass and trees along the open green space that gently slopes down to the river valley. Cargo trains periodically break the quiet as they pass back and forth across the country. Looking off towards the downtown, you can witness the city as it sets back and separates along this datum – turning its back on the tracks in an apparent attempt to disassociate the CPR from the remainder of Calgary’s urban fabric.



Looking off towards

the downtown,

you can witness the city as it sets back and separates along this datum - turning its back on the tracks in an apparent attempt to disassociate the CPR from the remainder of Calgary’s urban fabric.

#### **the pedestrian experience**

Walking down 10<sup>th</sup> Avenue, we move along a zone of convenience stores, specialty shops and commercial buildings marked by moderate degree of pedestrian activity. Just a few blocks south, the site consists of a mid to high density urban neighbourhood of three to six story apartment buildings interspersed with single family housing. Along 10<sup>th</sup> Avenue the street is wide with numerous cars parked along the edges. As we move westward the nature of the site changes under the Bow Trail overpasses. Here, the scale of the individual becomes dwarfed by the massive overhead engineering. Traffic seems closer and being on the street becomes more uncomfortable, creating the desire to move away from the street edge towards the open space along the CPR tracks. The quiet of this fragmented prairie setting is strange given the intense human and vehicular activity occurring largely unseen around us. Moving down the slope towards the Bow River, we find ourselves in a lush green space along a well-worn pedestrian pathway. Here, when weather is permitting, numerous people are leisurely walking, jogging and cycling along, or heading off to enjoy a play at the Pumphouse Theatre. Further west, the city recently finished construction of a pedestrian bridge that links the site to the Hillhurst/ Kensington areas under Crowchild Trail – providing the only pedestrian river crossing between Edworthy Park in Bowness and 14<sup>th</sup> Street.

Pedestrian Bridge Under Crowchild Trail (Above)  
Under Bow Trail on 10th Avenue (Below)

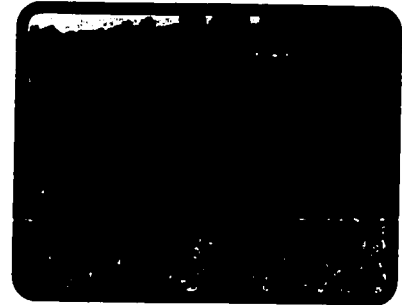


### evolution of place

Thought needs to be given to the evolution of the site and to what the future might hold. The city changes, and with it, the relationships between buildings and places change as new buildings and qualities appear. It is through this process of constant making and remaking that character and diversity develop, as the fabric of the city is created in the layering of time. From the scars and traces of history the site reveals itself while simultaneously pointing to its future potential.

The Pumphouse Theatre represents an extreme example of change. Residing in the open space between 10<sup>th</sup> Avenue and the Bow River, the theatre has transformed a functional setting into a place of social gathering and entertainment. The building is a relict of the City of Calgary Waterworks Department from a time when the city was much smaller and the waterworks were privately run. The abandoned Pumphouse #2, in a dilapidated and run down state, was rehabilitated when the theatre moved in, and is now designated a city heritage building. The site has always been a mixed blessing for the theatre. Being hidden and disjoined from the city, the act of going to the place suggests theatre as a pleasure that runs counter to the mass culture of our society. Yet, with the roadways, CPR and river cutting off the site, people find it difficult to get to and, consequentially, the theatre has no public face to use in promoting itself within the city. East of the theatre, the quality of the site changes drastically. Here, two large car dealerships take over and replace the trees and grass with a sea of cars.

Along 10<sup>th</sup> Avenue the forces of change are bringing a new type of business to the area. The global and high tech economy is being witnessed in the built environment as businesses, freed from specific geographical locations by advances in electronic communications, move their businesses into less expensive commercial realms such as 10<sup>th</sup> Avenue SW in Calgary. Silicon Graphics of Canada – a company specializing in high performance computing systems – along with Nucleus Internet Services, and a digital video company renting offices within the Gunther's Building Supply Warehouse, are a few examples of technological companies who have located themselves within this fragmented work environment. Next to the Pumphouse Theatre, a water treatment research building has also been established.



Along Bow River Pathway (Top)

Canadian Pacific Rail (Below)  
the datum that divides the site

On 10th Avenue (Bottom)





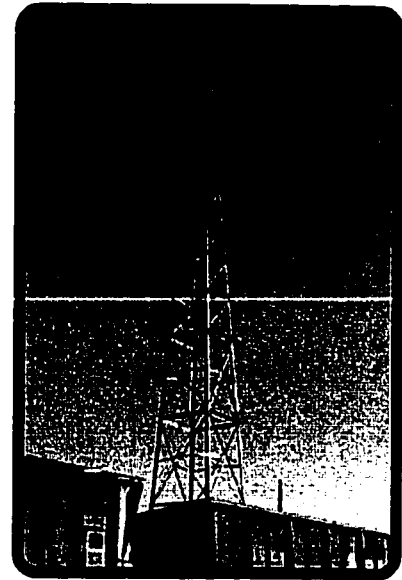
As new companies and people move in along side existing enterprises, the result is a broad ranging and interesting mix of people. The social milieu ranges from people working for building suppliers, to communications companies, or even, to a natural health food store and karate studio. The city's future development plan considers this area a site of future commercial intensification. As the pressure for expansion continues, it would seem the city is reconsidering the notion of the Canadian Pacific Rail tracks as the hard edge that terminates the southern extent of the downtown proper. This is no small feat considering the CPR's long history as a divisive force dividing the city along its edge.

The city's 25-year transportation plan is another force that may bring significant change to the site. The plan proposes a new leg of the Light Rail Transit system to run West down 7<sup>th</sup> Avenue and cut up between the East and West bound lanes of Bow Trail as it moves off into the Southwest of Calgary. The train will move across the West end of 10<sup>th</sup> Avenue on an elevated section, with a stop proposed some 300 meters South.

#### **light and transparency**

Other interesting features of the site, created by its geography and monumental engineering, are the unique qualities of light and transparency. The area sites just elevated from a flood plain, surrounded on two sides by foothills that rise and wrap the South and West faces. At the same time, the immense bridges and their associated earth works further develop the sense of enclosure. (For the car traveler, this sense of enclosure is double: they are at once contained inside the space of the car interior and simultaneously within the bridge-covered valley). Given this enclosure, at certain times in the day, much of the direct sunlight is blocked and the indirect, reflected light becomes predominant. The remaining direct sunlight is experienced as intense, bright slices of light between the contrasting dark shadows.

At night new qualities become apparent. Street lamps, glow from the occasional window, and the headlights of passing cars provide only minimal lighting of the formerly predominate structural forms. Instead, the solid and void relationship inverts, pushing the between void spaces into focus. Much like a computer screen disconnected from the electronic and telecommunications signals that give it life, where the dynamic screen becomes static and our focus moves to the containing box, we are provided an opportunity to appreciate the previously neglected details of the surroundings.



*Above and Below  
a cross section of economy from  
industrial to global*



### why here?

For a company that doesn't do business in a traditional manner, where locating inside the historical commercial core is secondary to having well developed access to advanced telecommunications and so-called virtual communities, what are the prime motivators for locating within the built city? Since we are freed of the expensive square footages offered by the established commercial district, the desire to locate on less costly land becomes paramount. To this end, it would seem the building could go almost anywhere. Critically, the question is do we continue to abandon the city and instead contribute to the disintegrated and segregated amorphous city where values of diversity, collectivity, history and place are no longer deemed important? If we view these as important values, then the project could be conceived as a new opportunity. Freed from established hierarchies and assumptions, we are allowed instead to reconceive the design of our cities and communities within a new paradigm that seeks to reinvent the underdeveloped opportunities presented by the existing urban fabric.

During discussion with the Alberta Research Council, a company of similar means and goals, it was apparent that one of their primary concerns is to establish themselves within the community and develop a public



face within Calgary. They expressed frustration that since most of their work is highly scientific and occurring within private workshops and laboratories, the average citizen of the community is unable to comprehend the tangible benefits they bring to the province and city. Part of this need to relate to the rest of the city is owing to the fact the Alberta Research Council is partially owned by the public and hence has a need to appear open, transparent and accountable to the community at large. This is a similar case for many research and development companies – where costs of running the operation are split between government and industry.



Pumphouse Theatre (Above)  
Kensington/Hillhurst and Bow River (Across)  
Park Pathways (Bottom)



Several other facts became clear during these discussions. Firstly, given the size of this company (whose program is roughly equivalent to the one represented within this project), they will potentially create wide-scale change on any location they move into. This is even more so since, given the degree of human and research resources they represent, smaller companies tend to locate nearby to gain access to those resources. It is also often the case that employees will leave and start up new companies to commercially market the research they pioneered within their former company role. This mitotic relationship is not perceived as a negative one. Instead it is seen as a necessity that further propels the advancement of research and new technologies. It is a common belief held by those who work towards technological innovation that stasis is deadly to creativity and the flow of new ideas. Consequently, people in this field often wish to be located in a community of like-minded professionals where they assume this dynamic research environment can take hold. With this as a goal, it would seem that one possible choice for siting the project would be the University Research Park.

Located west of the University of Calgary, amongst the surrounding suburbia, the park is one of Calgary's predominate zones of technological research and development. The place was born in the likeness and as an attempt to recreate the successes of Silicon Valley; the world's first and arguably most famous high tech zone. The questions related to this project, then, are what are the qualities of this place, and are these qualities ones we wish to develop and progress within our own communities in Calgary? These questions are particularly pertinent given the large size of the project's program, which will bring with it a critical mass able to affect large scale change on the site it is located. The place will potentially be stuck with the moniker "Silicon Valley North."



Water Treatment Research Station (Above)  
behind the Pumphouse Theatre  
Park Pathway (Below)  
lush green space around the Pumphouse



# silicon valley

The new city eradicates genuine particularity in favor of a continuous urban field, a conceptual grid of boundless reach... homes, offices, factories and shopping malls float in a culturing medium, a 'non-place urban realm' that provides the bare functions of the city, while doing away with the vital, not quite disciplined formal and social mix that gives cities life.

Micheal Sorkin Variations on a Theme Park. Introduction pg xii

Silicon Valley is the original technocropolis. It is a strange place where the more disturbing qualities of the emerging "global village" come into focus. Located on formerly agricultural land between Palo Alto and San Jose in Santa Clara County, California, this amorphous zone represents one seemingly successful model for a world that has become profoundly shaped by technology. The valley is home to some of the leading technological innovators, including IBM, Hewlett Packard, Intel and Apple Computers – all of whom develop their products in this former orchard and ship them to the rest of the industrialized world.

The valley owes its existence to Frederick Terman, a Palo Alto native that served as Dean of Stanford's School of Engineering in the 1930s. Terman personally believed that universities must shed their insular nature and strive to build connections between the research work of the university's academics and the "real world" of the commercial and industrial activities of corporate America. Terman envisioned what he called a community of "technological scholars."<sup>5</sup> Such a community he wrote, "is composed of industries using highly sophisticated technologies, together with a strong university that is sensitive to the creative activities of the surrounding industry."<sup>6</sup> The success of Terman's model is evident in the immense "technological garden" that exists today. It should be noted, however, that much of the original garden qualities of Silicon Valley – the working orchards and tracks of agricultural land – have been eliminated or reduced to simple aesthetic planting that no longer contributes in a meaningful way to the region's economy.



Netscape Office (Top)  
Hewlett Packard Head Office (Above)  
*in Silicon Valley signage is the mark that distinguishes one equivalent place from the next*

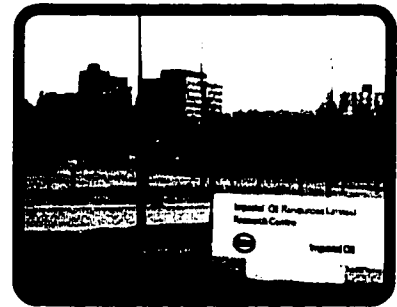
Indeed, many of the qualities that we typically associate with a thriving city seem entirely lost in this post-industrial technological metropolis. As Langdon Winner points out, in Silicon Valley there is no "civic center, with theatres, museums, well-stocked libraries, or sports stadiums that up and coming cities usually boast." In fact, in Silicon Valley there appears to be no centre at all – offering up instead a homogenous landscape of faceless buildings placed in seemingly random order within an enormous industrial research park that is only remarkable in its unending sameness.

This model appeared so attractive that many universities throughout North America attempted to emulate it. These universities, obtaining a section of land next to their campus, invited industry to move in at a modest cost and take advantage of the creative talent pool of university researchers who were dwelling just next door.

The University of Calgary is one example of a campus that tried to recreate the formula of Silicon Valley. The University Research Park takes the model extremely literally, with buildings planted on large lots within a well-treed park setting. As with Silicon Valley, the research park is bereft of centre or sense of place. In fact, even the connection to the university is a tenuous one – with each being quite separate entities held together by mere proximity.

Within the park there seems to be no guiding plan or organizing principles in place at all. The location of each building seems almost arbitrary – all but seasoned users would find it difficult to understand the logic of the place or easily find their way around. The place, devoid of any obvious human activity during the day, magnifies its seeming emptiness at night, with a frightening lack of visible human occupation or adequate street lighting.

Another characteristic shared by both the research park in Calgary and Silicon Valley is the impoverished cultural milieu. Just as each building is placed more or less equally to the next, the universal equivalence extends into the nature of the employees who make the trek to these pure work zones during the day. With the obvious exception of the clerical and janitorial staff, the vast majority of the research park occupants are well-educated scientists and engineers (who also tend to be predominately male).



University Research Park  
recreating the formula of  
Silicon Valley in Calgary

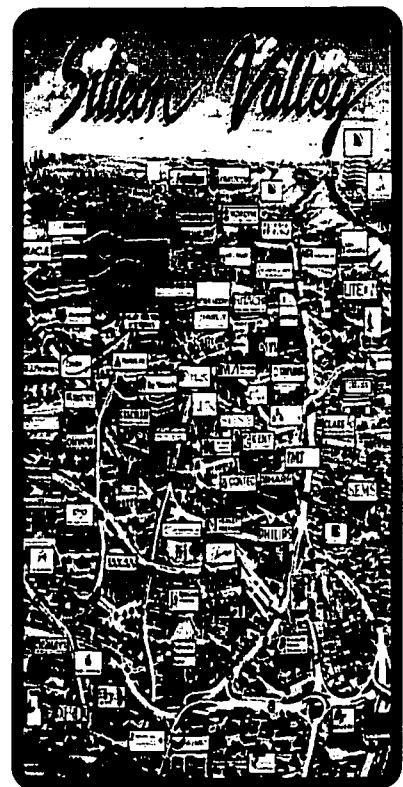
The situation becomes even more disturbing considering the original rationale for the University Research Park was to eliminate the isolation of the University from the community at large. Instead, we are left with two disjoined, yet indifferent, entities not only separated from the city at large, but also from each other. The model represents the complete elimination of any notion of diversity - extending all the way from the individual to the community and city.

Yet probably the most startling aspect of this new paradigm is the complete lack of place for social and public gathering. All spaces are private, contained and hidden within the architecture. There is no attempt on the part of the design to develop public space that might act as an open environment for collective gathering. It would seem that the new city, taking its cues from the suburban lifestyle, continues to push forth the abstraction of our increasingly private lives from the totality of the city.

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A fine line distinguishes the disjunction inherent in the University Research Park from that of the transportation corridors of our city, but it is an important one. The in between circulation zone is an inevitable byproduct of the suburban/ urban model, while the design of the Research Park is a new paradigm that further disintegrates the elements that make up our public realm. The circulation networks are also environments continuously experienced by the inhabitants of the city while the University Research Park is a complete separation from the urban city and is never intended to be experienced as public space.

With these reasons in mind, this project has chosen another more central site for the design. It was felt that given the new opportunities afforded by this type of building and program, we should be exploring new ways these opportunities can be applied to the existing urban fabric. Thus, although the University Research Park represents in some respects a possible site, for the reasons documented here, and with the intention of experimenting with the fragmented urban fabric, the 10<sup>th</sup> Avenue site was decided upon. Before doing so, however, it was useful to look at some theoretical positions that might form the framework for the design process.



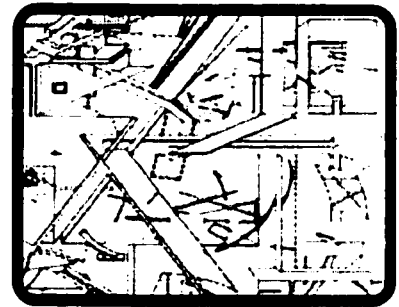
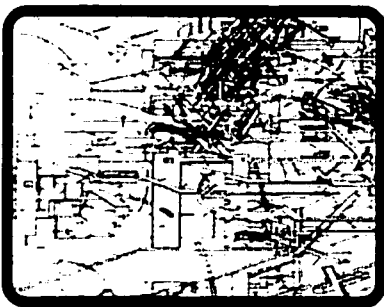
Where Do You Want To Go Today?  
*defining geographical place by  
corporate headquarters*

# fragmentation and the urban collage

A corporate urban landscape, the product of an increasingly corporate society, became the legacy of the modern movement, and through the 1960s and 1970s a critique emerged that the planning and design of the modern city was a blueprint for placelessness, of anonymous impersonal spaces, massive structures and automobile through ways.

Nan Ellin *Postmodern Urbanism* pg4

The responses over the last twenty years to the problems embodied within the modern city have been many and varied. Yet, underlying much of the critical discourse has been a rejection of the specified and isolated relationships that resulted in the rigid separations of events and places within our cities. Throughout Postmodern theories, we see a movement towards a non-authoritarian architecture which proposes, instead, "indeterminism [and] diversity rather than synthesis, complexity rather than simplification



and [looks] to the unrepeatable rather than to the reoccurring, the habitual or the routine."<sup>8</sup>

'Vertical Horizon'  
from *End Space*, Daniel Libeskind, 1980

Deconstructivism, as proposed by Jacques Derrida, challenged the modernist presupposition that form can follow function, and through this process, one can achieve unity. For Derrida, the important consideration is that we live in an "impure world" and he challenged the idea that signifiers and signified are intimately connected. He suggests instead that "signifiers always become signifieds for other signifiers, and visa versa." To this end, there is no "final signified, only infinite metaphorical chains."<sup>9</sup>

Thus it can be argued that Deconstructivism, arising from Derrida's critiques of literature, views collage as the best model for a postmodern discourse. Further, from this belief stems the notion of intertextuality, which acknowledges that the "reading or writing of a text is always affected by other texts and life experiences", it presupposes that "reading is always rereading."<sup>10</sup> Hence, the author (or architect) is not so much concerned with defining particular truths, as he is about allowing a multiplicity of meanings to be perceived based on a reader or users own understandings. However, as Todd Gitlin argues, this can translate into seeing meaning as only a

sentimental attachment where reality has dissolved, and nothing lives but discourses, texts, language games, images, and simulations referring to other discourses, texts, etc.<sup>11</sup>

The task, then, is "reduced to creating fictions because there is nothing else to uncover." Yet, on the other hand, in architecture we may see a chance reconsider buildings and places that had previously seemed fixed and an opportunity to redefine their character.

Applying this philosophy to the city, there exists the potential for deconstruction to prepare the way for the mono-programmatic urban realm evolving into a less defined urban collage where the rigid distinctions between "'work-here,' 'play-there' and 'live-elsewhere' gives way to a 'work-play,' 'live-work,' and 'play-live' heterotopic urban fabric."<sup>12</sup>

Deconstruction prepares the way for the monoprogrammatic urban realm evolving into a less defined urban collage where the rigid distinctions between "'work-here,' 'play-there,' and 'live-elsewhere' gives way to a 'work-play,' 'live-work,' and 'play-live' heterotopic urban fabric."

The common thread that runs throughout much of these architectural and urban theories is the perceived need to reconsider the increasingly fragmented city and in the rejection of authoritarianism, utility and singularity of meaning. From this premise comes a renewed interest in a contextually-based architecture that seeks to critically understand and respond to the specifics of site, program and culture. Through this critical reinterpretation, it is argued, we can begin to redress and counter the universal placelessness that has become a defining feature of contemporary cities and, by extension, our day to day lives.



### architecture of the event

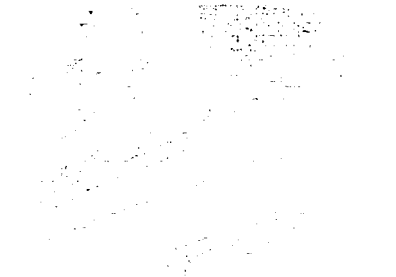
In attempting to create an architecture that is indeterminate and receptive to situational circumstances, we must consider how the program can be utilized to reflect these desires. The creation of space defined more by the activities occurring within or around it is not a new or recent idea, but one with a long history in architecture. In theatre and many public spaces there has always been a commitment to unexpected meetings and events, to role playing, and to notions of seeing and being seen. These are the sorts of places where the activities and events define the quality and perception of the space.

Prominent architect and theorist, Bernard Tschumi, has advanced the notion in recent years. In Tschumi's words,

The static notions of form and function long favored by architectural discourse need to be replaced by attention to the actions that occur inside and around buildings – to movement of bodies, to activities, to aspirations; in short, to the social and political dimensions of architecture.<sup>13</sup>

For Tschumi, this "architecture of the event" is achieved through "disprogramming, crossprogramming and transprogramming."<sup>14</sup> One must begin to combine, overlap and pull apart the formerly static program to create new and unexpected interpretations. Tschumi rejects the functionalist notion of building as object, and instead conceives of architecture in terms of event, movement and space. In these terms, architecture then becomes a catalyst for new and unexpected interpretations of the activities, actions and programs it contains.

These concepts have an obvious desirability in a research environment for it has always been true of research and other creative endeavors that profound breakthroughs often follow long periods of hard work - when sudden moments of inspiration and insight occur. This is a program that is antithetical to the habitual or routine, and the architecture in response must allow and promote the unexpected. For just as the research opposes the status quo and continuously aspires to create change, the architectural space must shift, too, as the activities and events that shape it change.



Event Architecture  
architecture is defined as much by the activities  
around it, as it is by the space it encloses



### creating an urban collage

Webster's Dictionary defines fragment as follows:

1. a part broken away from the whole; broken piece
2. detached, isolated, or incomplete part; disconnected
3. the part that exists of a literary or other work left unfinished.

Fragmentation is not dissimilar from disintegration or disjunction. It is inherently and paradoxically representative of the loss of unity and the annihilation of the formal and monumental spaces and structures that have traditionally defined cities. The fragment by nature is antithetical to homogeneity since its very nature implies difference. Describing the nature of fragmentation in modern culture, Dalibor Vesely contends:

It is an inevitable byproduct of modern knowledge based paradoxically on the idea of mathematical universality, which can only be achieved piece meal, or step by step. The process of fragmentation is thus like an unwanted guest.<sup>15</sup>

To this end, the fragment can be embraced as perhaps the only thing that is still contributing to the formation of particular meanings and is representative of difference. The fragment can be seen in relation to the collage, where upon first viewing, there is a perception of arbitrary chaos and meaninglessness. It isn't until a change of understanding or a new perception is brought about that we can perceive meaning within in the formerly arbitrary field.<sup>16</sup> Thus the act of creating or viewing a collage is always one of discovery. By putting diverse and seemingly contradictory elements in relation to each other we create a different way of thinking and seeing the world which would never have been brought about had it not been for these new and unexpected adjacencies.



10th Avenue Site  
*housing, industry, theatre, vehicular  
transportation and pedestrian paths collide*

In terms of the city, the task is to find the edges of the fragments in the places where they become most evident. Using the differences implied in these places, we may begin to incorporate the fragments within our intervention, creating overlap and transparency, and ultimately create an architecture receptive to the underlying diversity. Here we find a meaningful contextualism in an architecture that binds itself and plays upon differences within the city. Meaning is invested in the architecture by the imposition of these different fields upon one another and thus ultimately creating new fields of perception and individual interpretations.

Applying this further, to the program of the building, there is a search for the intermediary or the in between. The challenge is in finding mediation between site and program, of pushing the boundaries between the two, and ultimately allowing each to contaminate and contain the other. The desired result is an architecture of particularity and multiplicity. An architecture so interwoven in the fabric of the site, that it could exist in no other place, but the place in which it is built.

The question is how can we achieve this contextual architecture in a city stripped of its particular and genuine places? It would seem that we should seek out those zones that maintain differences - the places where the fragmented nature of our cities is most evident. By exploiting the fragmented experiences available within the surrounding city, we can begin to create a contextual architecture that is receptive to the situational, subjective and the different.

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#### **a metaphor for urban intervention**

Many words have been written on the need for architects or architecture to "fix" the city. The metaphor is one of the architect as a surgeon who arrives on the site with his bag of incisors, scalpels, bandages and medicines ready to "repair" the city; returning it to some previous state. Yet the metaphor seems too simplistic. Cities are more complex than that - they are not single, self-modulating organisms that can simply be diagnosed and healed. Nor, obviously, did there ever exist in the city a state of "health" that became ravaged by a determinable illness. Instead, it may be more

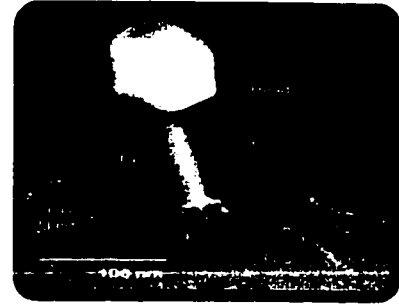
appropriate to think of architecture as a way of creating new potential within the city, or as a chance to improve the existing features of places. An architecture that acts more as a prosthetic enhancement than a medicinal cure.

Weil Arets, In his paper, *A Virological Architecture*, makes an interesting connection between architecture and virology. For Arets, the process of viral infection and reproduction is similar in many respects to architecture that is created with the intention of effecting change in the urban fabric. <sup>17</sup>

The virus integrates itself within the tissue of its host, reengineering the tissue into a slightly different variety that serves its additional needs. Yet, in most cases, the virus is also dependent on the host for its survival and thus has an interest to maintain the host's survival. In terms of architecture, then, the architect is not so much a surgeon as he is a virologist "inasmuch as he recognizes [the] processes in the urban tissue and has learned to manipulate [the] codes to good use." <sup>18</sup>

There are some concerns with the viral narrative. In our society, so consumed with fears of AIDS and other infectious diseases, the viral narrative can create negative imagery. We assume the primary role of a virus is self propagation that eventually creates illness or causes death. Yet, it is also true that scientists have learned to manipulate the viral process to other more productive ends.

Thus perhaps a more appropriate narrative is to think of the virus as a tool, or form of genetic engineering where recombinant DNA is placed within the DNA of the virus. As Weil Arets states, in this way, "the virus acts as a delivery tool, infiltrating the system and delivering new information." <sup>19</sup> The code of the virus is utilized to deliver a new set of instructions that orchestrate renewal and growth. We can learn from this process in architecture and begin to think of our buildings in similar terms - architecture as a set of instructions injected into the urban tissue and designed to guide the processes of growth and repair.



The Virus  
a delivery tool, infiltrating the system and  
injecting a new set of instructions

## program

If the new, mediated world echoed and reinforced our dismantled reality, maybe, just maybe, one should take advantage of such dismantling, and celebrate fragmentation by celebrating the culture of differences...

Bernard Tschumi Event Cities. pg 134

**Hypertext:** An electronically created document providing links and paths connecting blocks of text and/or graphics that branch out and allow the reader to manipulate the document in a nonsequential manner...by giving users multiple paths to follow, hypertext also creates individual readings with no definitive text.

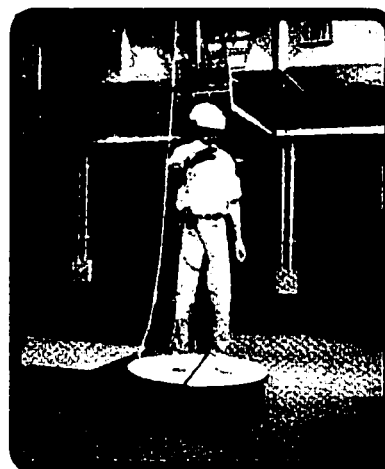
Duncan Brown Zenlux: Architecture and Electronics. pg 21

The program for this project is roughly based on the type of research activities that occur within the Alberta Research Council in Calgary. Gone are the hierarchical and rigidly defined workspaces and roles. Distinctions between workers and management dissolve within a flattened structure where teams of highly educated and skilled employees take up the roles of a previously distinct and remote management. In such an environment, the adversarial roles of labour and management are replaced with humanistic models of "team building."

Gone also are the typical measures of productivity. Within these places, where the emphasis turns towards process and research, an employee's competence cannot be judged by criteria such as the amount of product produced within a given time frame. Instead, success revolves around notions of creativity and problem solving. To this end, the sole measure of productivity is the quality of the research idea - as manifest in the final presentation - at the conclusion of a project.

For these people, who tend to be well educated and highly paid, the nine to five lifestyle does not apply. Such employees will work erratic hours - spending a 12 hour day at the office, or in contrast, working from home while "connecting" to the office by email or through means of electronic conferencing. A defined

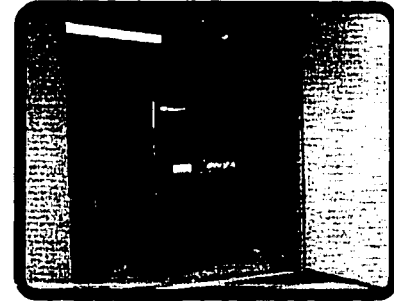
Virtual Reality  
*a place simultaneously  
anywhere and no where*



day at the office is found around the scheduling of project meetings, working sessions, or updates and presentations for clients and fellow employees.

In another divergence from the traditional office building, this work environment does not revolve around the traditional plan where each employee is allotted an office that becomes the personal workspace and defines, to a certain extent, his or her relative level of importance within the organization. Instead, the workspace is more fluid and is defined, in part, by the project process.

With each project, new groups form – assembling people along the basis of their particular skills which relate to the project goals and through their ability to work effectively with other members of the group. In broad terms, the employees can be roughly divided into two categories: scientific researchers and design visualizers. Once a group is selected, they break off and take over a space of the building that becomes the project headquarters.



The High Performance Computer (Above)  
the centre of the communications network  
that wires the building

'Information'  
this research is process orientated with no  
physical product at the end of the day

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The program can be broken down into two distinct, yet interrelated, work environments, as well as support and presentation spaces. The first work environment holds the more fluid or soft spaces that are not rigidly defined within the architecture. These spaces include the project headquarters, individual workstations and the spaces in between which function as important places for informal meeting and brainstorming. This working environment is particularly valuable in that it represents the shared spaces of the building where employees gather.

Embedded within this matrix of soft spaces are those places in the building that have more defined requirements. This second work environment, the hard spaces, also breaks down along the same lines as the employees, with each group having different requirements. For the scientific researchers, the essential requirements are the laboratories that contain the high-end computer workstations on which the research work is generated. The design visualizers, on the other hand, whose work revolves around creating elaborate virtual and 3D computer representations of the research work, the architectural need is akin to that of a design studio. These two distinctive groups find overlap in the electronic network that extends throughout the building. Throughout the course of a project the researchers and designers will tend to meet only sporadically and, instead, communicate most often electronically.

The electronic communications network has a center of its own, which is physically manifest in the high performance computer that connects and powers all the computer systems throughout the building, as well as connecting to the internet, world wide web, and home computers of the employees. The connection here to the site is a natural one – just as the roadways define and order the geographical events, it is becoming increasingly true that the communications network deforms the architecture to fit its technological specifications. The system demands to be flexible and upgradable, and this is typically manifest architecturally by an open plan.

It is important to note that the nature of the work is highly dynamic and changes with a rapid rate so typical of technology. As an example, the projects at any given time may be as diverse as health informatics, computer network simulations, or a technique or device that improves farming efficiency. Yet over several months, the entire research focus of the building can be completely different, as individual researchers come and go and as the clients of the facility evolve.

Obviously, the challenge for the architectural intervention is to find the balance between the needs of an open, flexible and adaptive plan while simultaneously creating spaces for specific functions. Another concern stems directly from the nomadic nature of the workspace, where individuals could potentially



**Crash!**

*a project that might be performed in a technological research and design visualization environment: computer simulation testing the effectiveness of an air bag in a car crash*

feel as if they are endlessly roaming the building and thus never develop a sense of connectedness. Conversely, a design that doesn't promote an open environment will suffer if people and project groups become insular pods that cease to interact with each other. There must be a commitment to the unimpeded flow of ideas and to the unexpected meeting and discussions that are the formative element within a research environment. Communication, it would seem, is the central and overriding concern of the space.

Further, it could be said that the employees of this building represent the revolutionaries of a technological society. The nature of the work strives against the status quo. The company, in itself, embodies the dissatisfaction and unwillingness to accept things as they are. And it is the individual work of the employees - as manifest in technological innovation - which becomes the agent for this perpetual state of change. In the words of Bernard Tschumi, the architecture in response "should encourage such upheavals - 'to design the conditions' rather than to 'condition the design.'"

20

### **The gallery and theatre: the promenade of public space**

One of the ways the company manifests its desire to connect with the public is through a well-developed gallery and display area, which is essentially a repository for previously successful technological innovations and presentations. In some respects these displays can act to counter the growing detachment of a society that feels powerless in the face of technological change and has little understanding of who controls and creates technology and begin, instead, to reconnect people to the origins of new technologies.

**In some respects these displays act to counter the growing detachment of a society that feels powerless in the face of technological change**

The displays also act as a highly specific form of advertising that promotes the organization within the community and sells it to potential clients. To these ends, a portion of the building is given over to displaying the successful innovations that have been developed within the organization. The gallery obviously must be visible, public and accessible to all visitors of the building.



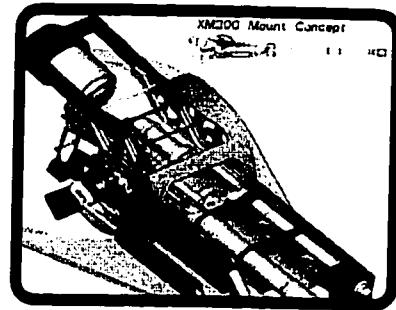
A Virtual Demonstration



The gallery should not be seen solely as a public realm separate from the workspaces, but also as intimately related to the work of the employees and company rituals. Not only do the displays allow the company to boost its successes, but they also connect the employees to the history of the company. The nature of process-orientated work is by virtue about ideas and not products. The displays can provide a sense of how the company's research work is transformed into physical applications within society, and hence invests the process-orientated work with more meaning in the eyes of the employees.

### **The multimedia theatre**

At the completion of a project, the focus of the building moves away from the individual and day to day activities of the workspaces and moves to the theatre for the presentations of the research work. These are times of celebration within the company, and it is during these events that the employees can be expected to gather. The theatre, which may remain empty and unused for long periods of time, comes alive as clients and employees gather to view the work of the project groups. Great effort goes into these presentations, which are intended to be very convincing representations of how the research work will be applied to real world situations. In this respect, the presentations are a highly developed form of advertising on which the success of the research rests. Yet, like all theatre, the intent is also to suspend people in the imaginary realm of what they are viewing. At the completion of the presentations and subsequent discussion period, people spill out of the theatre for a celebration of the work. When in use, the theatre should be seen as the largest and most prominent public space in the building. It should also be mentioned that since other smaller companies in the research community can often not afford their own theatre presentation space, it is can be that a theatre like this would be rented out by a number of different companies.



3D Visualization of a Research Idea

## The program in the site

On one side architecture is violent  
because it resists having to be the victim of its surroundings;  
on the other it can distort those surroundings.

This relationship lends to cunning.

Wiel Arets *El Croquis* No. 85 *An Alabaster Skin* pg 39

This program, with its preponderance of internally focused spaces (computer design studios, laboratories, virtual reality environments, black box theatre, etc.) is an ideal candidate to occupy a realm that is often perceived as too hostile for human activities. These elements can be used in a manner that mitigates the seemingly undesirable characteristics of the site. Yet, there is also an opportunity here to locate the programmatic elements within this interstitial zone in a way that creates new connections across the various fragmented environments that form the constituent pieces of this place.

Or, looking at the situation inversely, there exists opportunities to enhance the program by utilizing the various conditions that are evident in the site. The freeway overpasses, for example, are places that promote a purely visual experience and anything placed in relation to them will have a highly public face. Or for those driving by, these elements may also be used to frame specific views. Underneath these overpasses exists a surreal condition of separation and enclosure that in some respects is analogous to the virtual world of telecommunications - where one has entered another seemingly disembodied space.

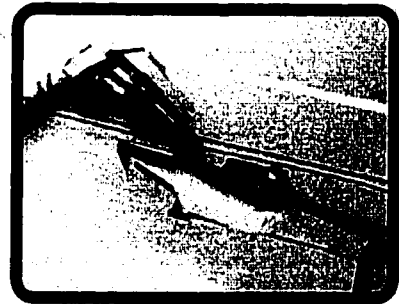
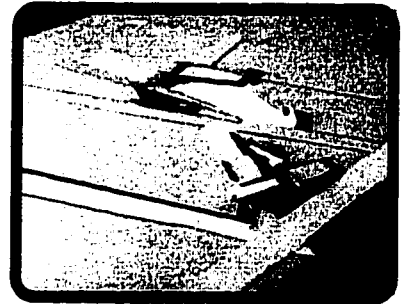
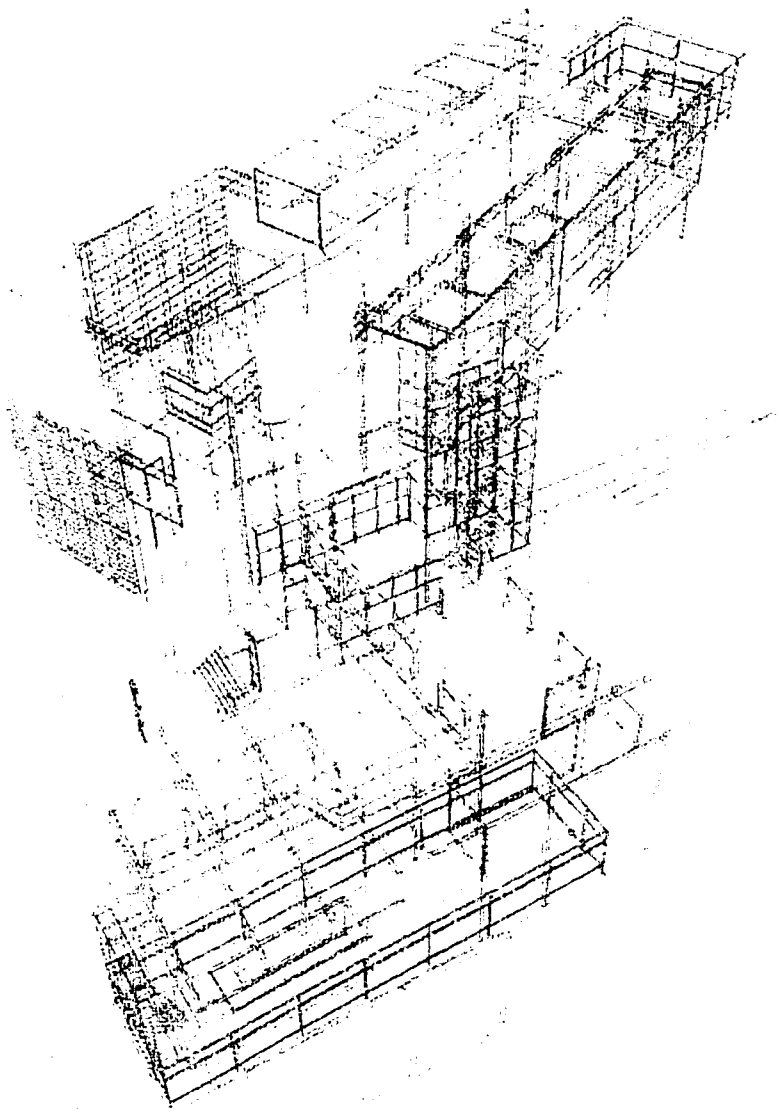
On the other hand, the green space around the Pumphouse Theatre is the type of environment most people find highly desirable. This is the place where employees may wish to spend their time while enjoying their lunch. The intervention must be placed in such a way that makes this space more accessible.

# the design

## The In Between

The Threshold provides the key to the transition and connection between areas with divergent territorial claims and, as a place in its own right, it constitutes, essentially, the spatial condition for the meeting and dialogue between areas of different orders.

Herman Hertzberger Lessons for Students in Architecture. pg 32



Early Model Studies

### **The framework for the design process**

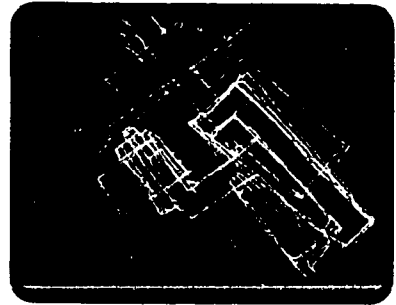
If the proponents of the “global village” and electronic communications are correct in their assertion that geographical place is no longer important in the siting of buildings like technological research facilities, then we should consider the implications. Silicon Valley and the University Research Park suggest one direction that can follow this assumption – low density, park-like settings that are defined by their placeless, a-geographical qualities. However, one of the original justifications for the placement of Silicon Valley and the University Research Park were to put them within physical proximity of universities. If it is true that geographical place is no longer a significant consideration, then the reasons that brought about the Research Park are also now invalid. This paper has argued that in any regard these places represent a degradation of our cities and should be challenged as a model for future development. The hypothesis is that if each place is equivalent to the next, then is it possible to occupy sites that would generally only be considered if place *did not* matter? Further, could we not conceive of this as an opportunity to work with marginal places and strengthen their qualities within the context of the city? By layering a “placeless” building into an existing site, is it possible to take a situation that would have resulted in a placeless and homogenous realm, and instead create a contextual and particular architecture?

By layering a “placeless” building into an existing site,  
is it possible to take a situation that would have resulted in a placeless and  
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and particular architecture?

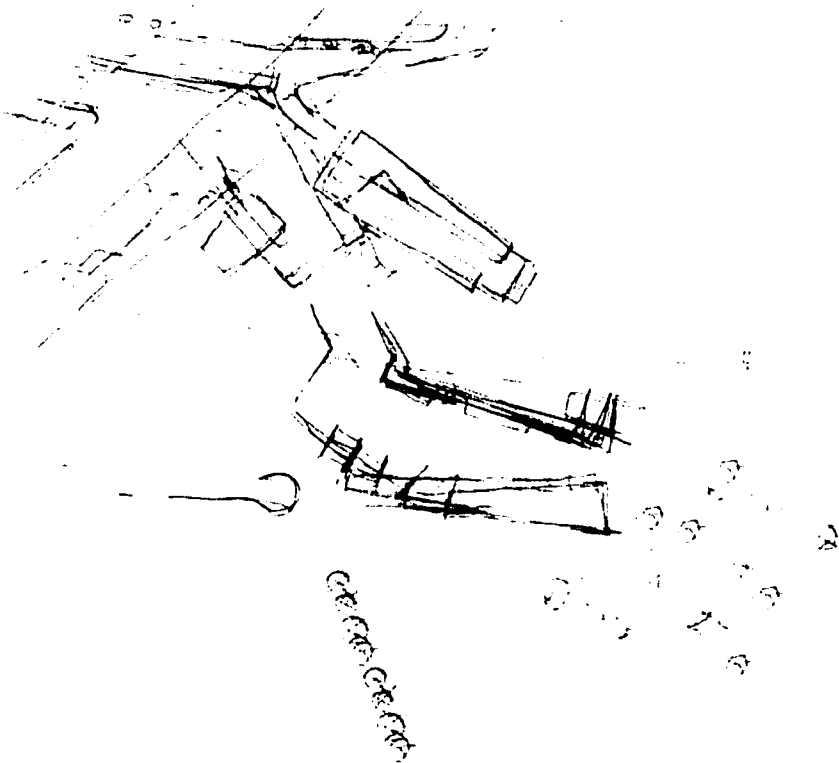
Along the circulation corridors that form the connections throughout the city we find another “placeless” realm (understood by a large part of the city as solely a place one travels through in their car). Yet, because this zone is intimately connected in some respects to the city as a whole, we also find an environment that is a meeting place for the various urban conditions of the city. Here, the green spaces, theatre, industries, commercial zones and housing environments lose the resolution that maintains them as distinct realms in their usual settings. Instead, these edge fragments sit in a juxtaposition that accentuates the differences between them (differences that only become apparent in such a collage). By creating an intervention that incorporates the differences implicit within these fragments, the project attempts to use this diversity as a means of finding contextualism.

In doing so, we promote an architecture that is receptive to situational circumstances – one that by virtue of its location between different fragments promotes the meeting and dialogue of divergent programs, events and places. We achieve, in Bernard Tschumi's terms, an event architecture that challenges the static notion of program and instead juxtaposes it against other programs and places.

Wiel Arets' virus narrative becomes relevant in these terms because we begin to consider how an intervention can be designed in a way that suggests to others a future course that can be followed, and a series of techniques that can be used in occupying such places. The first piece must direct further interventions along a course that adds to the qualities of the site without consuming the other programs and places that created this underlying diversity.

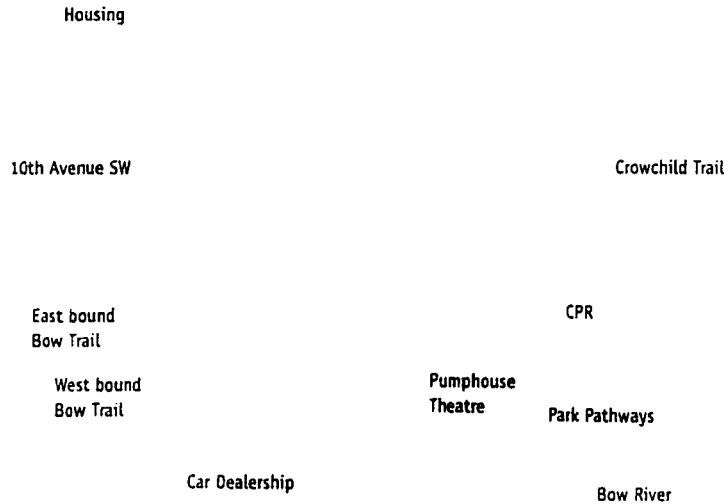


Design and Site Sketches

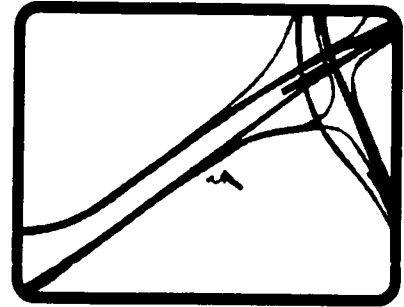


**the design development**

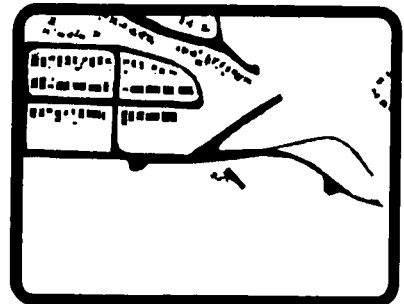
The design began with a site exploration that revealed the lack of substantial pedestrian circulation between the various fragmented zones that exist around the



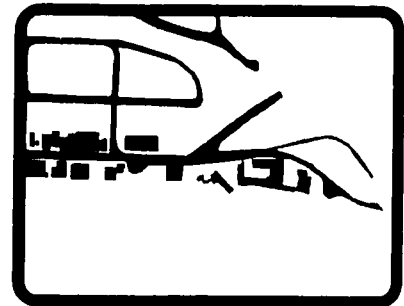
West end of 10<sup>th</sup> Avenue. On this site, the Canadian Pacific Rail line acts as the hard demarcating edge that roughly divides the site into two distinct zones. On one side of the tracks there is the green space and pedestrian pathways that surround the Pumphouse Theatre. On the other is an extremely built up area of transportation infrastructure that creates many of the vehicular connections throughout the city. The big site gesture had to find a way of connecting the green space, pathways and the Pumphouse Theatre to the 10<sup>th</sup> Avenue commercial area and surrounding neighbourhoods. The building attempts to create that connection and, in its own right, occupy the threshold between these zones. By occupying this in between zone, the occupants of this building will dwell simultaneously in both site contexts, in a building that emphasizes the friction between these realms.



Intervention in relation to freeways



Intervention in relation to housing and roadways

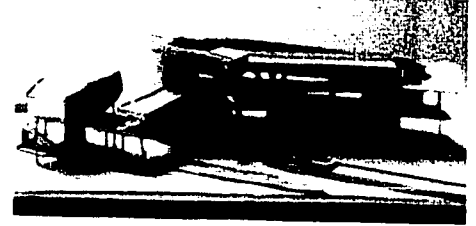


Intervention in relation to 10th avenue and roadways

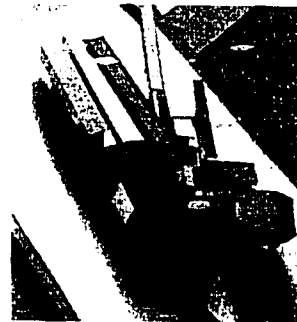


Intervention with pedestrian circulation from 10th Avenue, across the CPR, to Pumphouse theatre and surrounding greenspace

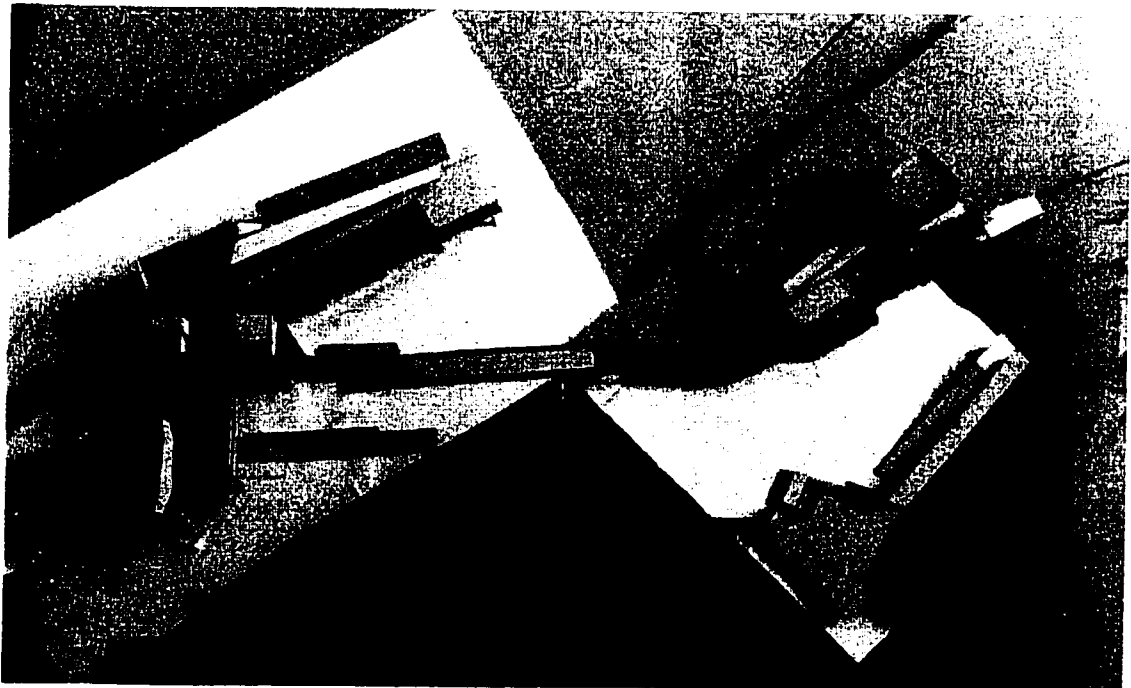
It was felt that creating a pedestrian connection would open up the site, make the Pumphouse more central and accessible as well as creating a strong connection to the other side of the tracks. A pedestrian connection seemed particularly pertinent given the recent construction of a pedestrian bridge under Crowchild Trail (the only pedestrian river crossing between 14<sup>th</sup> Street and Edworthy Park). In this respect the intervention fills a missing link that allows pedestrians to easily circulate from Kensington/ Hillhurst, to the park pathway and the Pumphouse, and into 10<sup>th</sup> Avenue, downtown and the urban neighbourhoods along 12<sup>th</sup> Avenue and beyond.

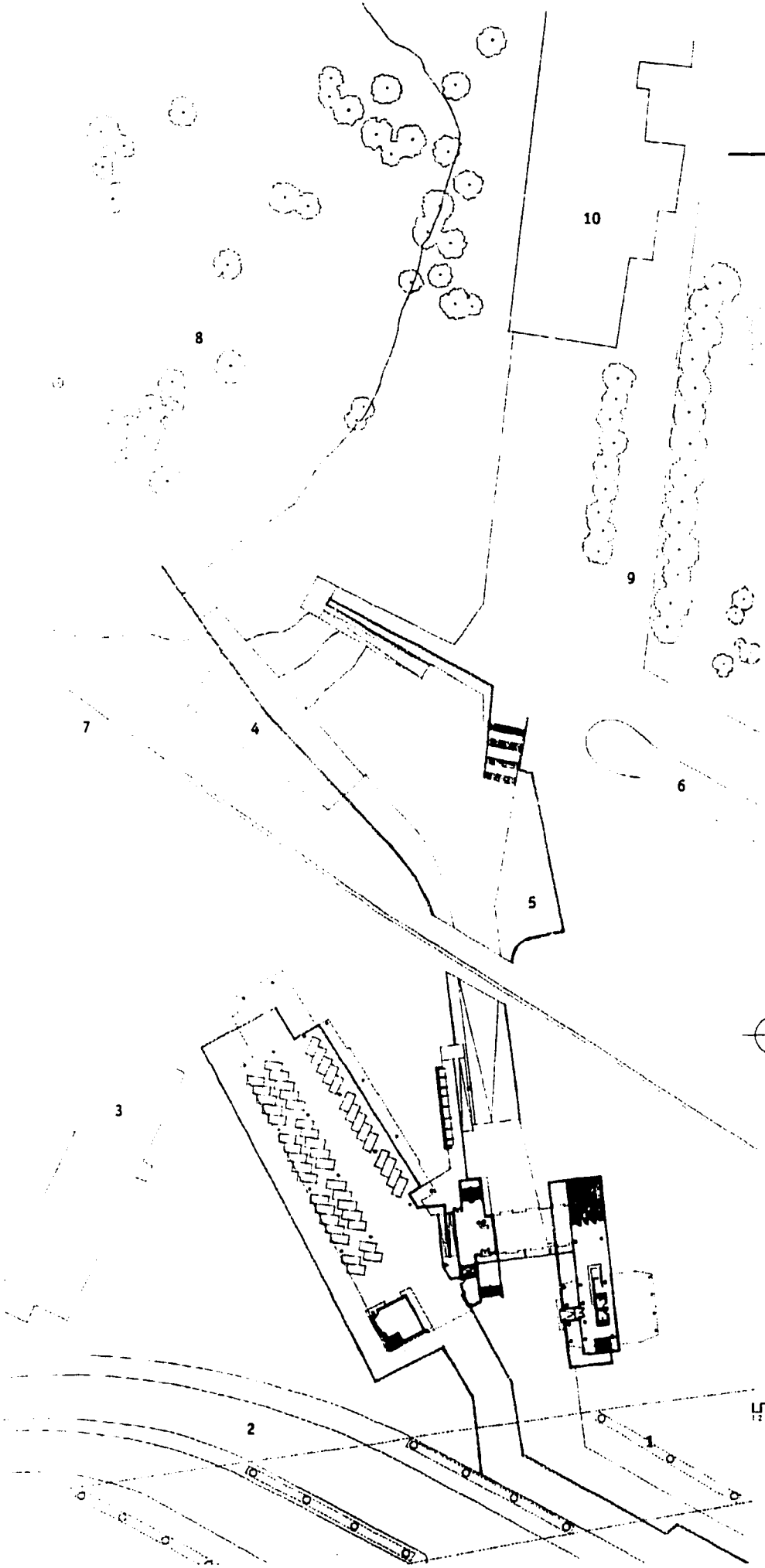


Above and Below: Model studies of Research Building



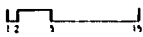
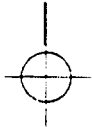
Bottom: Model studies of entire proposed site intervention



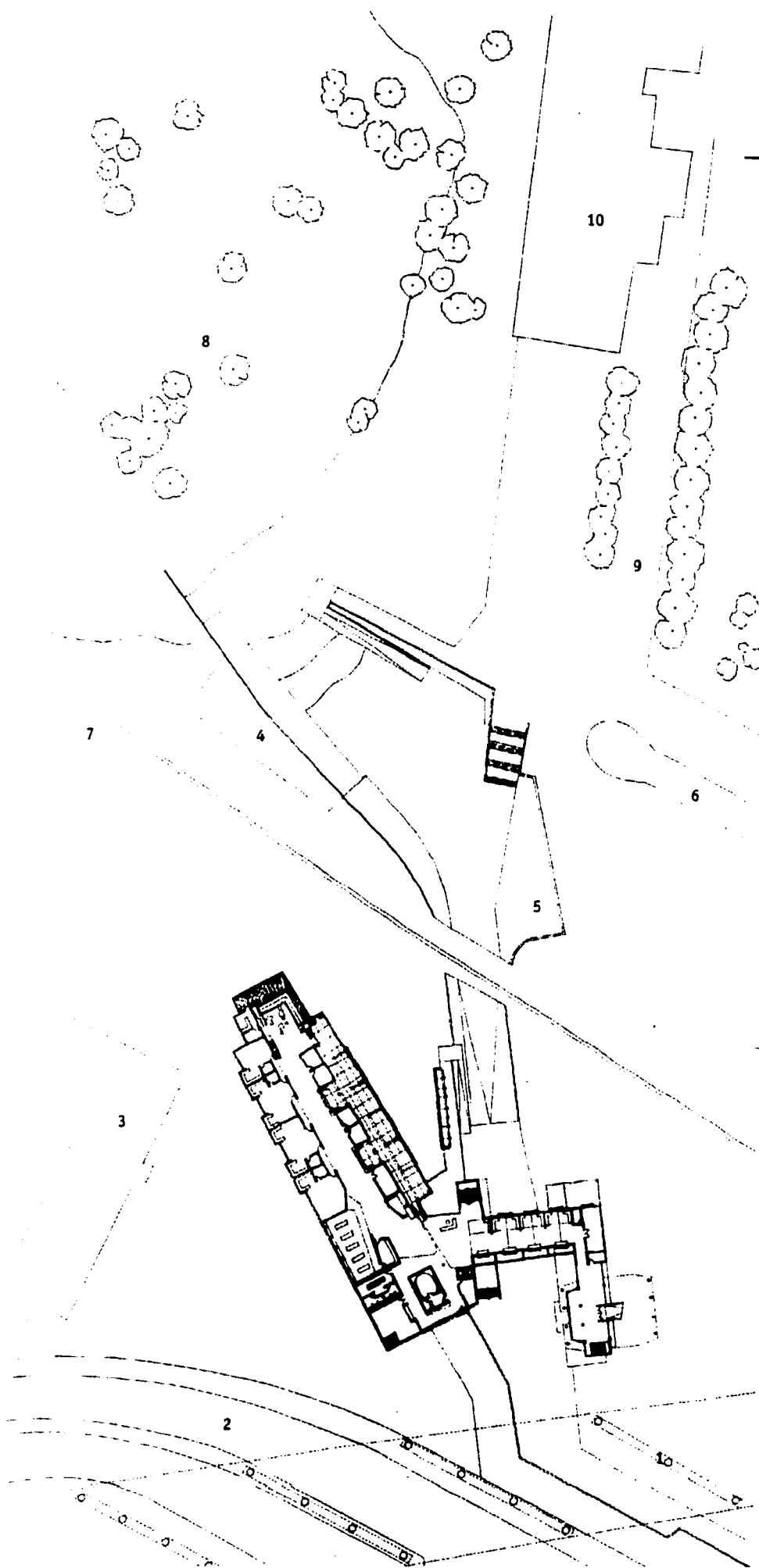


**site level one**

- 1 Bow Trail Overpass Supports
- 2 10th Avenue SW
- 3 Gunther's Building Supplies
- 4 Proposed Community Building
- 5 Potential future building site
- 6 Pumphouse Road
- 7 CPR
- 8 Park
- 9 Route to park pathways & river
- 10 Pumphouse Theatre

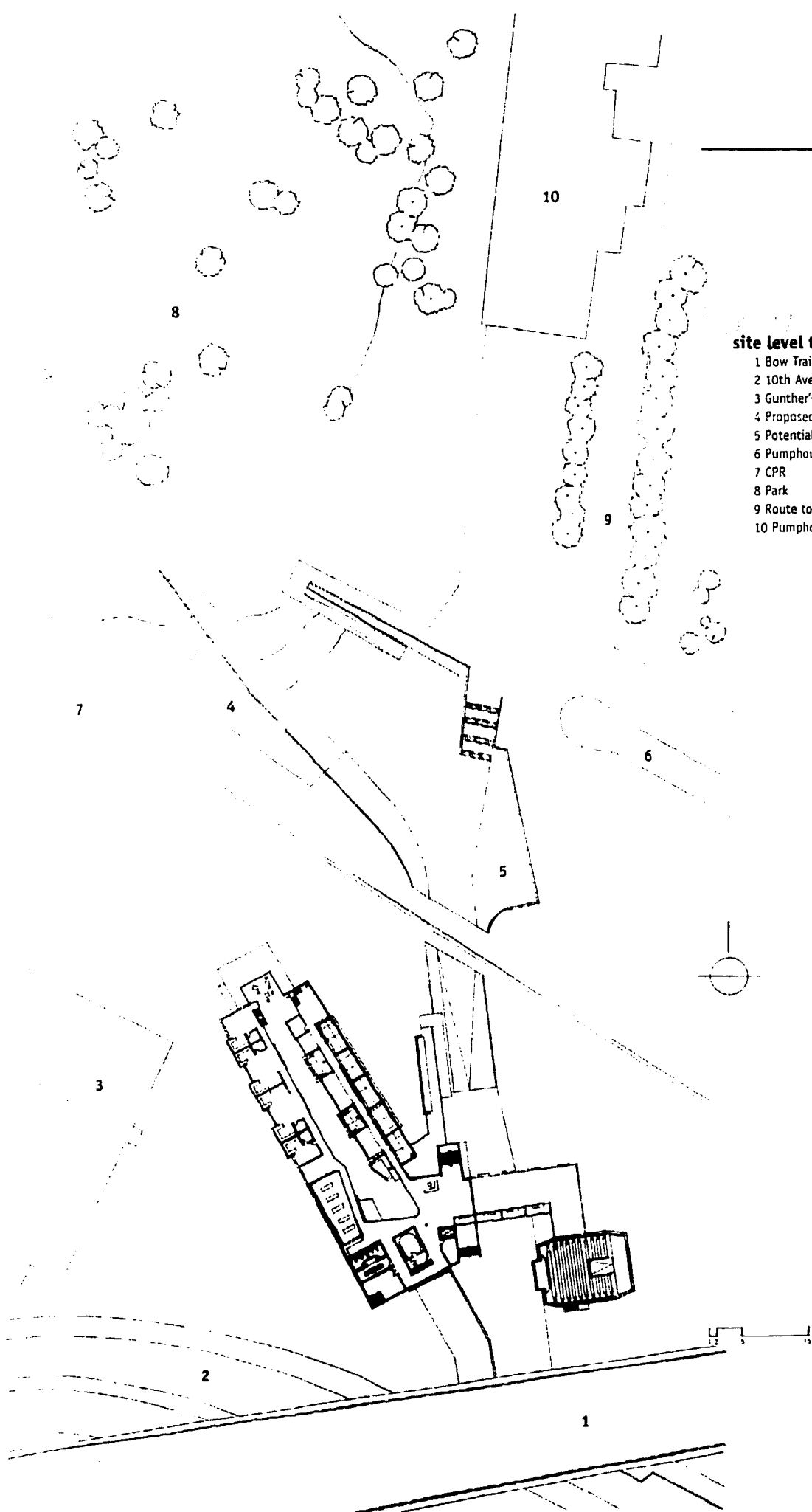






**site level two**

- 1 Bow Trail Overpass Supports
- 2 10th Avenue SW
- 3 Gunther's Building Supplies
- 4 Proposed Community Building
- 5 Potential future building site
- 6 Pumhouse Road
- 7 CPR
- 8 Park
- 9 Route to park pathways & river
- 10 Pumhouse Theatre

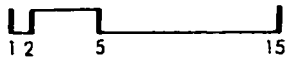
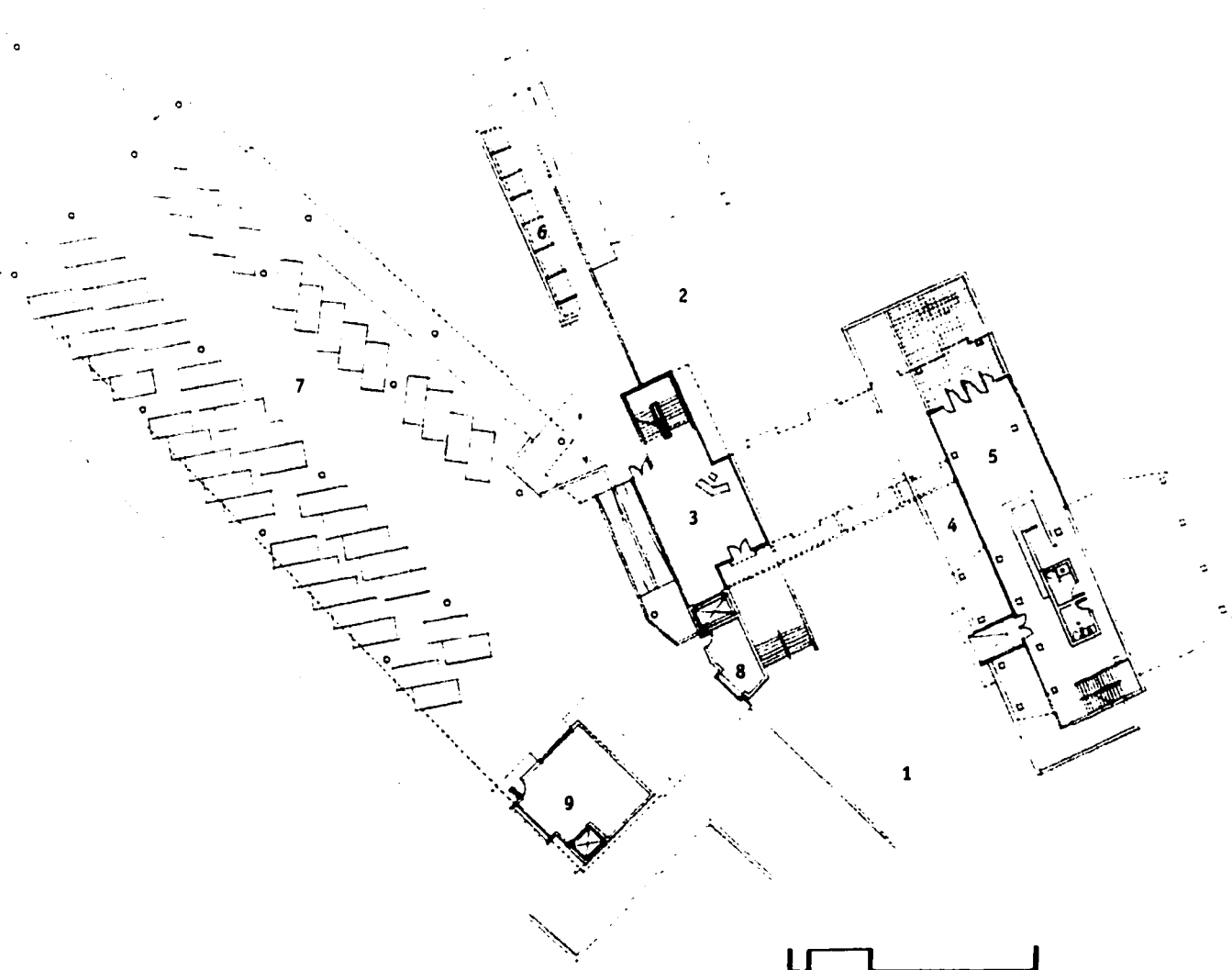
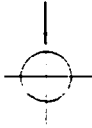


**site level three**

- 1 Bow Trail West Bound Overpass
- 2 10th Avenue SW
- 3 Gunther's Building Supplies
- 4 Proposed Community Building
- 5 Potential future building site
- 6 Pumphouse Road
- 7 CPR
- 8 Park
- 9 Route to park pathways & river
- 10 Pumphouse Theatre

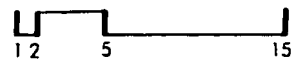
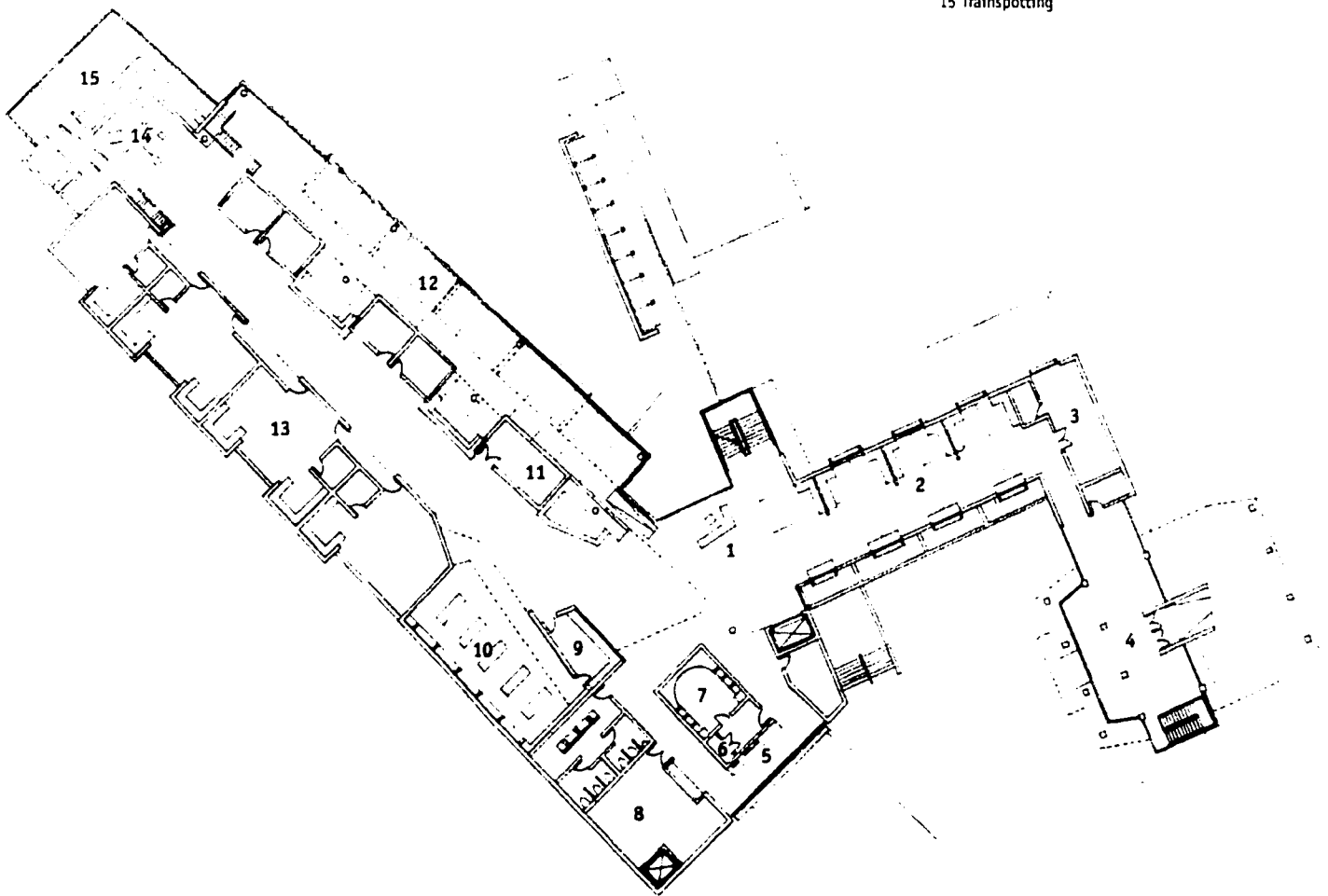
**floor one**

- 1 Pedestrian entry from 10th
- 2 Pedestrian entry from Pumphouse
- 3 Entry Reception
- 4 Pool/ fountain
- 5 Theatre Reception/ Cafe
- 6 Bicycle Rack
- 7 Parking
- 8 Parking Control
- 9 Shipping and Receiving



**floor two**

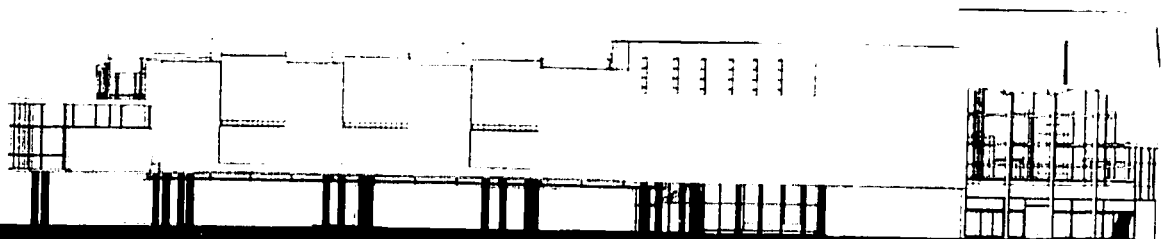
- 1 Reception
- 2 Gallery/Display
- 3 Board Room
- 4 Crush Space
- 5 Cabling Racks
- 6 Server Closet
- 7 Virtual Reality Cave
- 8 Storage
- 9 Computer Support
- 10 Computer Lab
- 11 Project Meeting Room
- 12 Open Studio
- 13 Laboratory
- 14 Cafeteria
- 15 Trainspotting



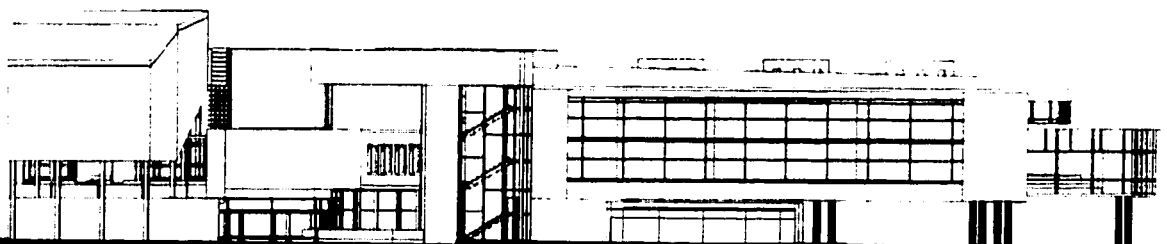


### Elevations

In elevation, the building responds to the various site conditions through the articulation of its parts. Much like the surrounding warehouse volumes on 10th Avenue, the West elevation is a mostly monolithic wall with minimal window openings. The internal computer workstations are expressed by a series of three protrusions that wrap this concrete block face in a metallic skin. As with the other buildings on 10th, shipping and receiving is a public activity that exists at the street edge. For automobiles circulating back and forth along 10th, the building unfolds, revealing sudden views of the theatre, gallery and louvered wall along the South elevation. In contrast, the East elevation, with its transparent curtain wall, allows the employees panoramic views of the river, pumphouse theatre and surrounding greenspace. By having the workspaces raised above the ground level on a series of columns, the views from the workspaces are maintained as trains pass through the site, while simultaneously allowing for a greater visual connection between 10th Avenue and the CPR.



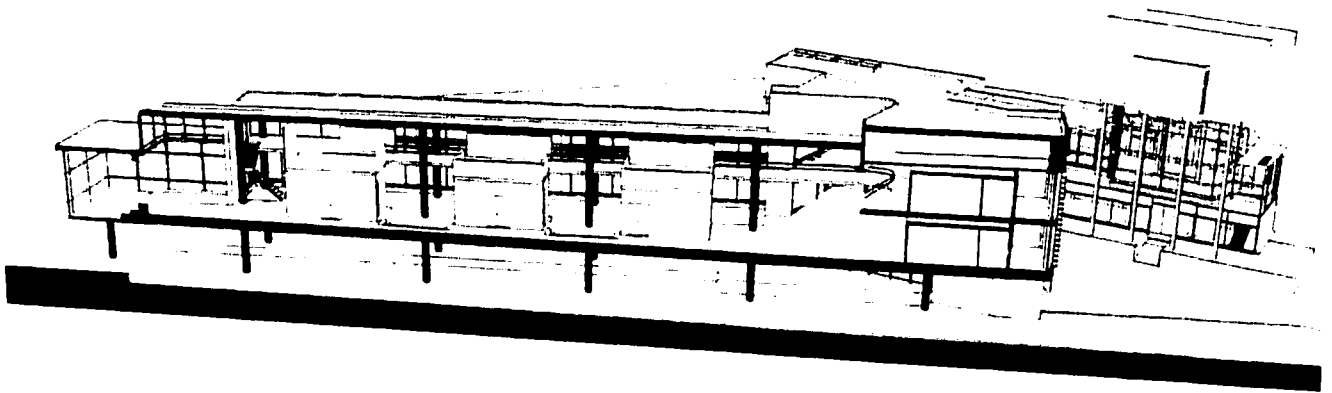
west elevation



east elevation

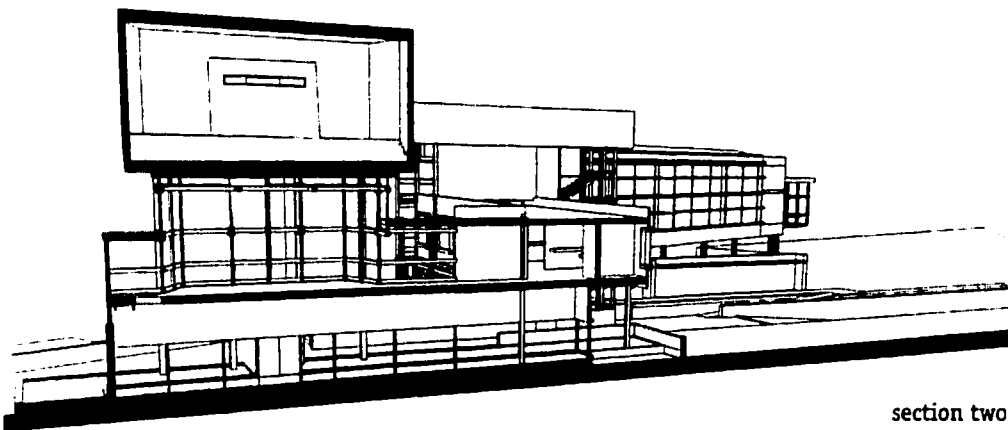


south elevation



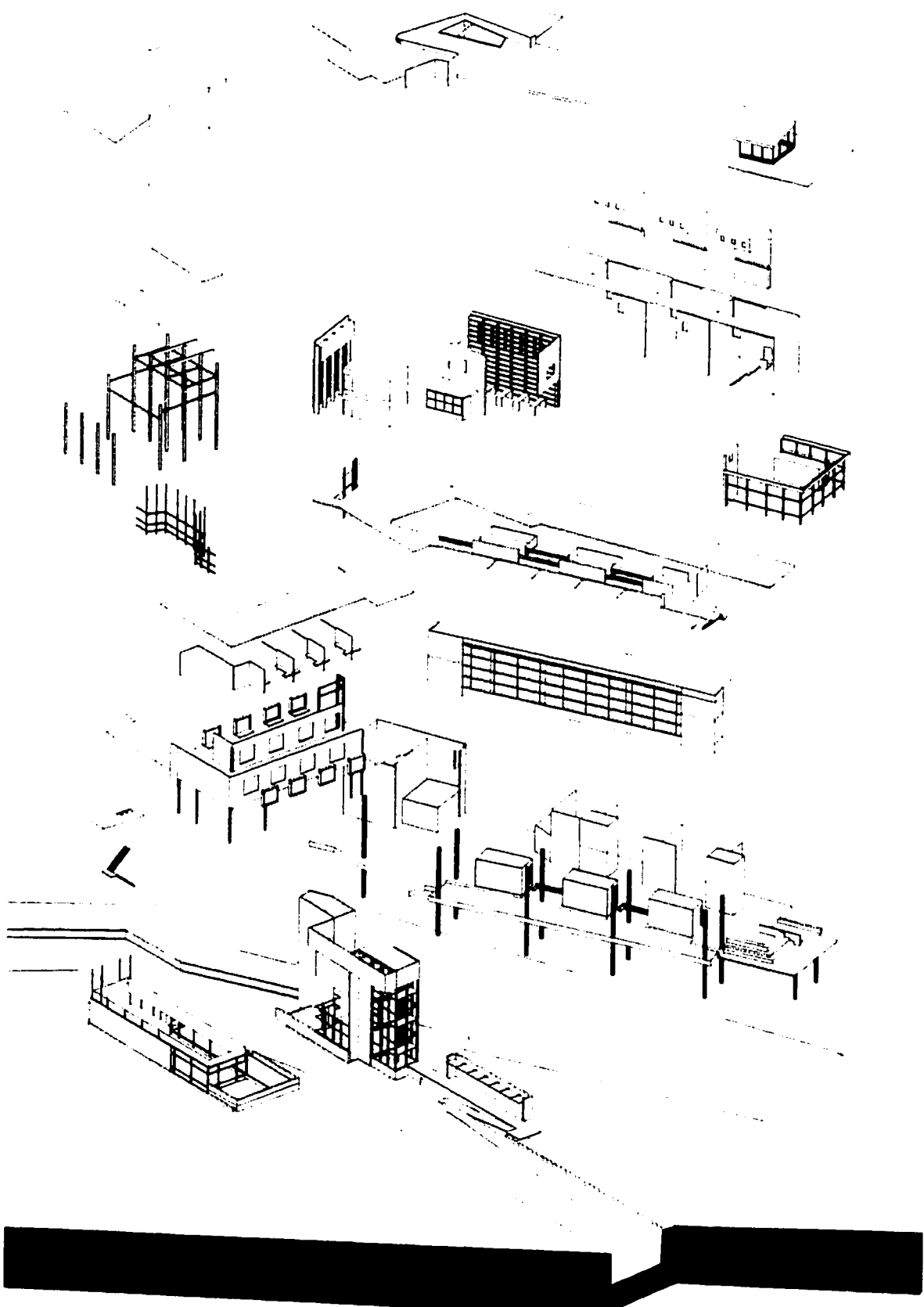
**section one**

*Cutting through the workspaces of the building, this section shows the VR caves terminating the vehicular end of the internal street and the cafeteria space terminating the end towards the pumphouse, CPR and greenspace.*



**section two**

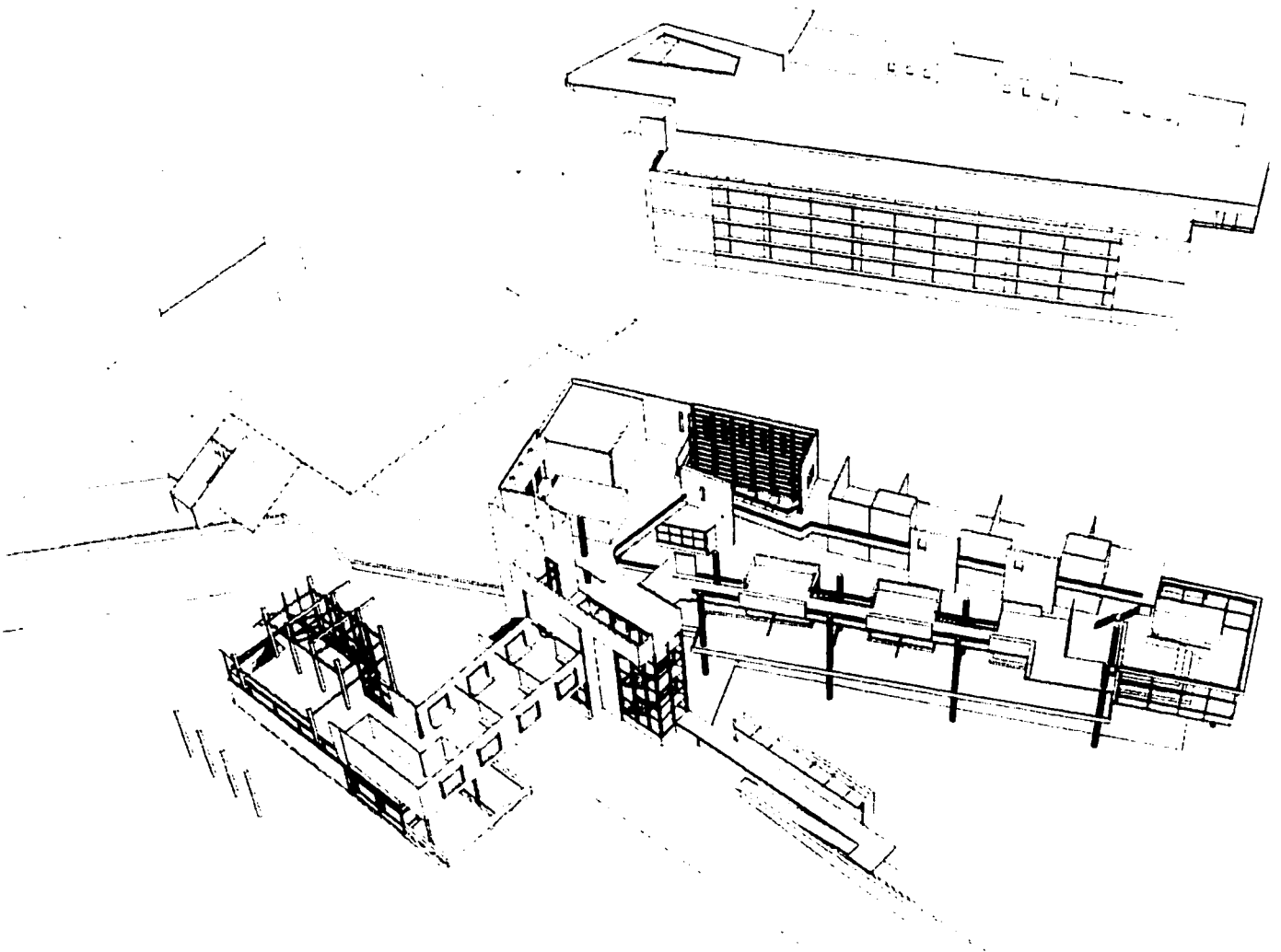
*The section cuts through the theatre, crush and reception spaces. The theatre is a solid mass that is projected up over the reception and crush spaces - hovering at the edge of Bow Trail.*



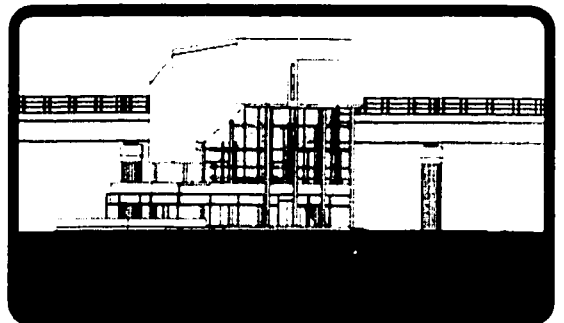
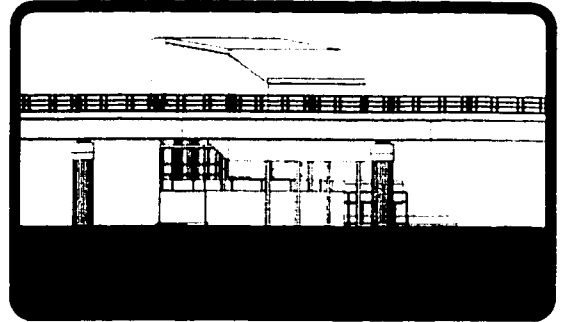


### the pieces

The design consists of three distinct, yet interrelated pieces. The public spaces form the most prominent area and include the gallery, theatre and reception spaces. This series of spaces responds to the visual experiences of those passing by along Bow Trail and 10th Avenue. Also along this edge is the louvered wall with views into the building, revealing the VR boxes and electronic cabling. The second series of spaces are the inward-looking and private work spaces that face off to each other along an interior street. The ends of the internal street terminate into the two distinct site conditions (on the one end the roadways and overpasses; on the other, the green spaces and pumphouse theatre). Cutting through the centre of the building are the pedestrian paths, circulation zones and entry sequence. These spaces form the joint that connects and separates the public and private areas of the building. Circulating through this zone emphasizes the differences between the various site and programmatic conditions.

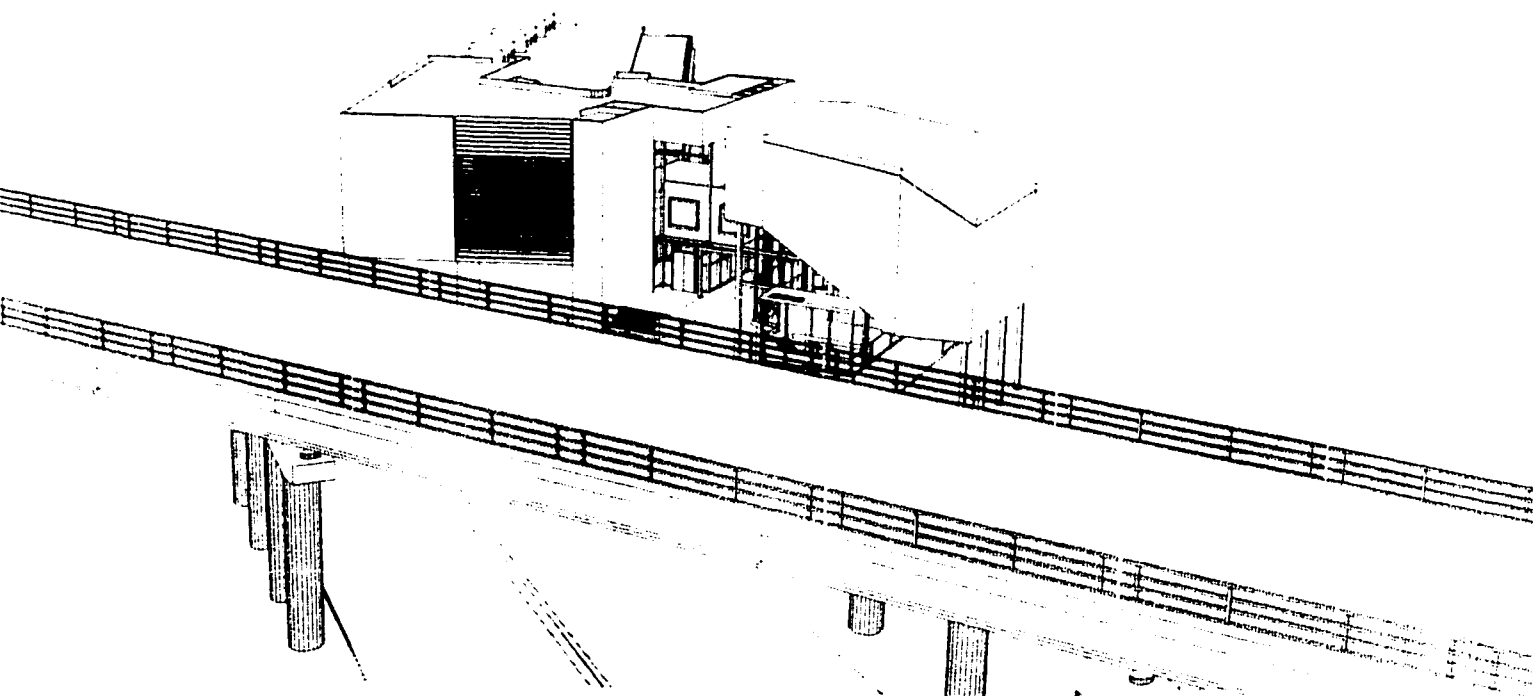


Like the roadways that form such an integral element of the site, the architecture in response develops a continuous condition of entry, exit and transition. The building acts as a gateway between the two prominent zones - compressing into the roadways and expanding into the green space. On the lower level the building sets up a transition by bringing together and separating the pedestrian and automobile circulation. One enters the building between two sets of columns that support the Bow Trail overpass. Along the front of 10<sup>th</sup> Avenue, the vehicular road and pedestrian path run parallel to each other. From here, the building entry forces the two paths to split apart. People arriving by car gradually separate away as they enter under the building behind the solid mass of the elevator shaft beneath the louvered wall that reveals a view into the electronic cabling of the building and the Virtual Reality boxes beyond. The pedestrians, on the other hand, move in front of the elevator shaft under the bridging gallery - where the building creates a condition of expansion as it fans out to capture views of the green space and river beyond.



**Partial elevation studies showing theatre elements in relation to Bow Trail Overpass**

*The theatre functions both as a sculptural object for those circulating through in their cars and as a solid mass that blocks noise and views of Bow Trail from the building workspaces*



The 10<sup>th</sup> Avenue elevation of the building responds to those passing by on Bow Trail, the area directly underneath, and the ground plane in different ways. On the ground plane the building is projected up, hovering over the ground on a series of columns. By being projected up, the building allows a visual connection between the site conditions underneath as well as allowing the mass of the working environment to exist above trains passing by on the CPR tracks. The remainder of the building focuses its mass around the pedestrian path that runs between the entry and café/reception space. Suspended above the ground, the display/ gallery crosses over this pathway, bridging the private workspaces and public gallery and theatre. Windows along the bridge protrude out to emphasize the framing of objects on display within (as well as those viewing them). This bridge sits framed between the two halves of the building and above by the Bow Trail overpass. For those moving towards 10<sup>th</sup> Avenue along the pedestrian path from the Pumphouse Theatre, the bridge and the two halves of the building also frame a section of the Bow Trail overpass and those passing along in their cars.



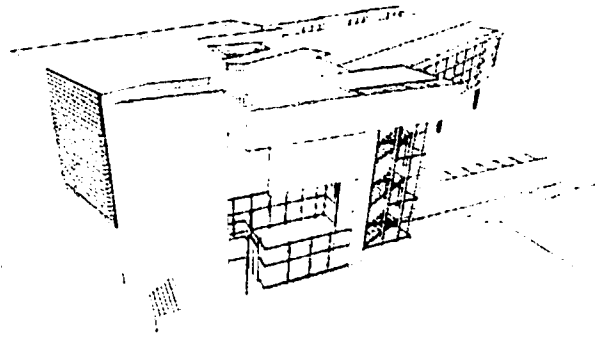
#### Signifier and Signified

*A building that is read by its signage versus one whose internal rationale and programmatic activities can be understood through the articulation of elevations and massing*

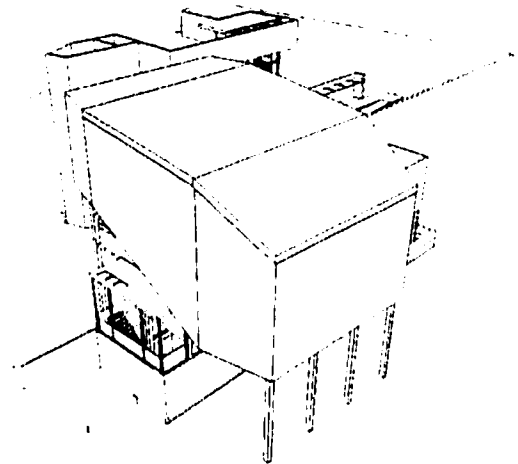


**Perspective of entry under Bow Trail West bound**  
*Framing of the louvered wall that reveals the virtual reality caves and electronic cabling inside*

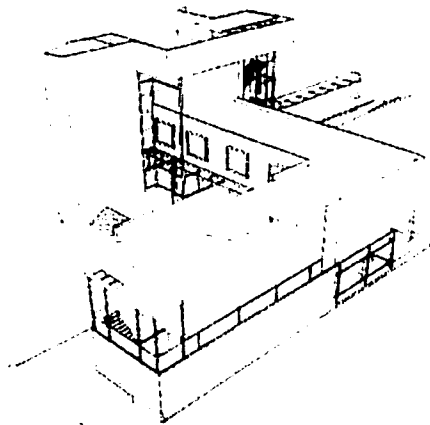
The building also attempts to express through its layout the ritual of the program. The layout emphasizes the promenade of people entering into the building from along the various paths, the employees collecting from their respective workspaces, then crossing over the gallery bridge with its displays of previous innovations and presentations, and finally the gathering of people in the theatre for the presentations of the recent research activity. It was also desirable to have this ritual displayed in the most public of ways – setting up an inversion of seeing and being seen – so that the act of participating in the presentations also became a spectacle for those passing by. When the presentations are ready to begin, the spectators step up the ramp, exit this highly public realm, and enter the solid mass of the hovering theatre object.



*Partial Study: with bridge, theatre and reception cut away*

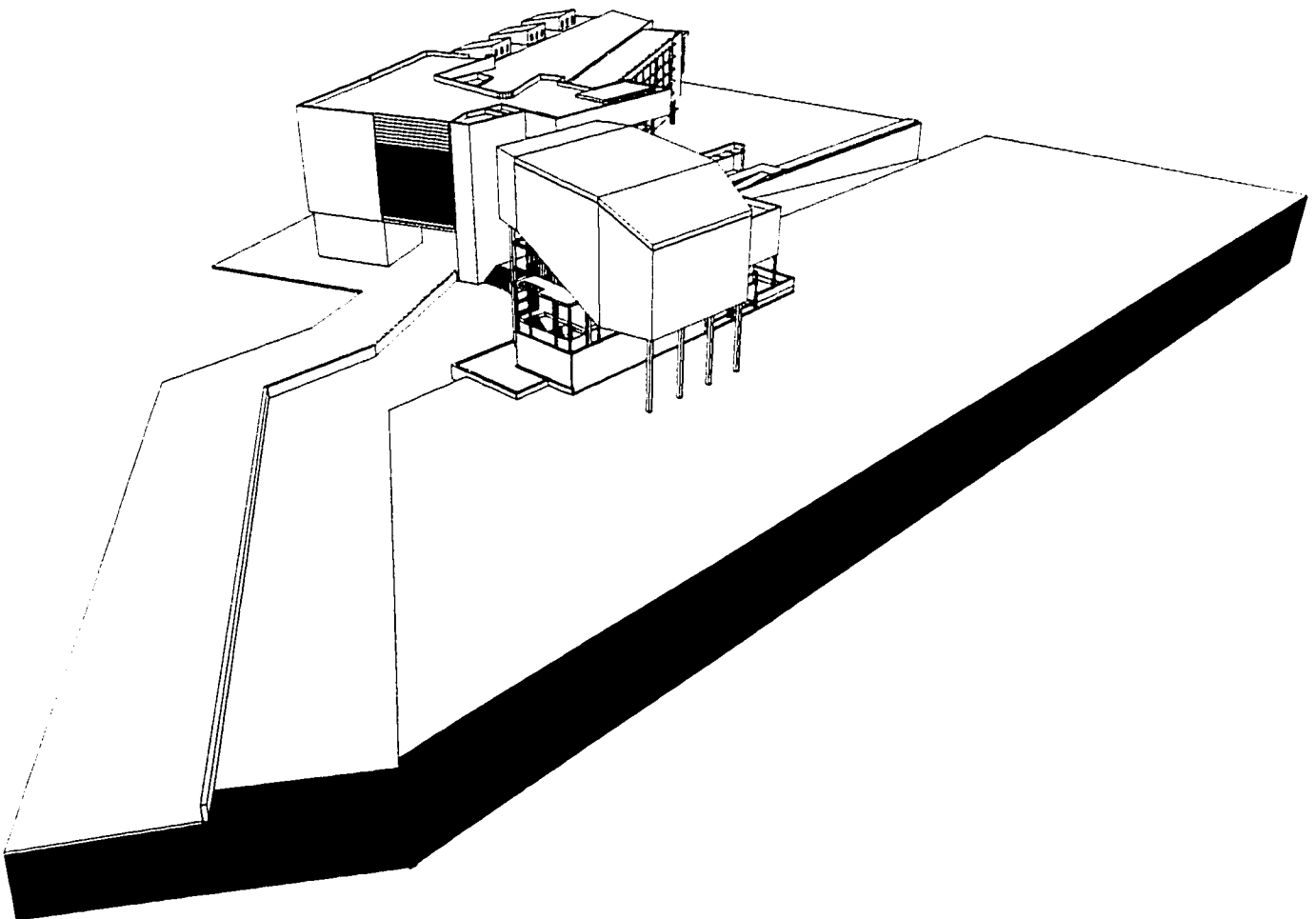


*Partial Study: with building workspaces cut away*



*Partial Study: with workspaces, theatre and crush cut away*

When I started exploring this site, everyone had their own interpretation of its characteristics. One person related how they visited the site with their father as a child to pick up building supplies at Gunther's, an actor talked of the early days at the Pumphouse theatre, and another individual described passing by along Bow Trail on their way to and from work for years, but never having known what was below. I wanted this intervention to add to the richness of these narratives by adding a set of its own. The section of the building that faces Bow Trail attempts to elusively suggest an intriguing tale – I think people would be fascinated by the massive theatre object and wonder what goes on inside. I would also hope that the louvered wall with its brief views of ephemeral figures, the exposed electronic cabling that wires the building, and the black Virtual Reality boxes would excite the imaginations of people passing by. In doing so, it would be desirable that these people would then begin creating their own narratives, speculating on what goes on in this building and, in the end, hopefully making them want to explore and discover what the place is to see if their speculations are true.



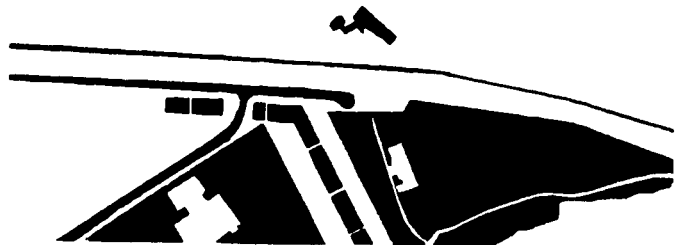
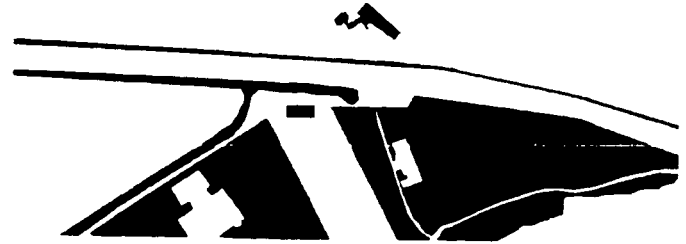
## future growth

### protecting the theatre in the garden

Inevitably, the intervention will create change on the site. This scheme obviously isn't about preservation inasmuch as it is about transformation. As this new community of people evolves and takes root along side existing buildings, each new building must take cues from the initial intervention to deal with the specific problems and opportunities embodied within the site. The initial piece is designed to be flexible enough to allow for an indeterminate future evolution and yet simultaneously suggest directions for future growth on the site. The desire is not to have the other businesses disappear from the site, but to allow a new set of businesses to be added, and in doing so, create a more diverse working environment. By making a link to the Pumphouse Theatre and the Water Research Station, the building will act as a catalyst for growth on the North side of the CPR tracks. This growth will need to address the transition between the Car Dealerships to the East and the park setting of the Pumphouse to the West. The development along this edge would create a boundary condition that terminates the edge of the car dealerships and their asphalt world while simultaneously creating a sense of protection for the park and pathways around the Pumphouse.

### a centre for community

Initial design explorations had the research center split over two buildings divided by the CPR. As the design evolved it became apparent the amount of shared programmatic elements would make this split impractical. It also became obvious that the incursion of the second building into the greenspace might be better visualized as a more communal building. This spot would make an ideal community center/retreat that could be a shared resource for the various businesses in the area. This building could act as a gathering place that might be rented by the commercial and industrial businesses along 10th avenue, the Pumphouse Theatre or by the Technological Research Centre. Such a facility would continue to promote ideas of cross programming while acting as a center of activity for the area.

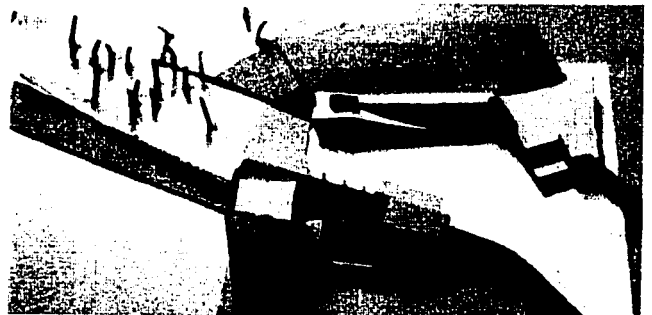


#### Protecting the theatre in the garden

*Creating a transition through a wall of buildings constructed behind the water treatment research center between the car dealerships (to the left) and the pumphouse theatre and greenspace (to the right)*

#### Study model showing how a community center might be placed on the site

*Existing behind the mass of earth to shelter it from the CPR while simultaneously opening up to the surrounding green space*



## conclusion

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Throughout the course of this project the qualities of this site intrigued me. Areas like the site at the end of 10<sup>th</sup> Avenue are some of the most ubiquitous and disregarded spaces that can be found in most every North American city. Generally we never consider these spaces beyond being unattractive byproducts of our suburban and urban worlds. Yet, in many cases there exist qualities that - were it not for the automobile throughways - would be highly desirable and well utilized. Any exploration that considers how these numerous areas could be considered more within the urban world would seem a useful one given the diversity and richness that can be uncovered within them.

Likewise, many architects have tended to dwell solely on the negative effects of computers and telecommunications (forecasting the "end of space", the destruction of the public realm and the creation of an increasingly private world). I believe this project participates in a discussion that considers the technological revolution not solely as a lamentable condition that will inevitably degrade the urban world, but as an opportunity to reconsider established hierarchies and assumptions about city design. Unlike Silicon Valley and the University Research Park, which consume new landscapes and continue the abstraction of the public world, this project proposes to layer into an existing fabric and by doing so enhance the conditions of that fabric and create a more diverse environment that enriches the program. The project, in this regard, becomes an exploration on the use of fragmentation as a means of creating meaningful and contextual architecture.

Programmatically, by occupying this threshold environment I wanted to capture the tension between the natural world and the constructed reality we create. In doing so, it is hoped that the employees would more clearly be able to see the larger context their work is created within, and conversely, allow others in the city to have an understanding of the origins and nature of technological change.

There is a larger discussion that can be held here about cities, placelessness and anonymous spaces. Namely, there are interesting connections to be made between the first urban revolution of this century (the automobile) and what is threatening to create a second revolution of equal proportions (the computer). The parallels between these revolutions are so numerous that it would seem well worth our time to consider them. We should determine whether or not an understanding of these connections could potentially be used to take a proactive position that strives against the fundamentally anti-urban nature of places like Silicon Valley.



# footnotes

- <sup>1</sup> Micheal Sorkin. *Variations on a Theme Park*. See you in Disneyland. P. 212
- <sup>2</sup> Peter Wilson. *Ideal of the City*. Eurolandschaft. P. 106
- <sup>3</sup> Micheal Sorkin. *Variations on a Theme Park*. See you in Disneyland. P. 218
- <sup>4</sup> Ibid. P. 231
- <sup>5</sup> Langdon Winner. *Variations on a Theme Park*. Silicon Valley Mystery House. Pp. 37-38
- <sup>6</sup> Ibid. Pp. 37-38
- <sup>7</sup> Ibid. P. 51
- <sup>8</sup> Nan Ellin. *Postmodern Urbanism*. P. 264
- <sup>9</sup> Ibid. Pp. 254
- <sup>10</sup> Ibid. Pp. 255
- <sup>11</sup> Ibid. Pp. 260
- <sup>12</sup> Ibid. Pp. 258
- <sup>13</sup> Bernard Tschumi. *Architecture and Disjunction*. Pp. 205
- <sup>14</sup> Bernard Tschumi. *Event Cities*. Pp. 13
- <sup>15</sup> Dalibor Vesely. *Ideal of the City*. Architecture and the Ambiguity of the Fragment Pg.111
- <sup>16</sup> Ibid. P. 109
- <sup>17</sup> Weil Arets. *El Croquis*. No 85 A Virological Architecture. P. 39
- <sup>18</sup> Ibid. P. 39
- <sup>19</sup> Ibid. P. 40
- <sup>20</sup> Bernard Tschumi. *Architecture and Disjunction*. P. 6

## Illustration Credits

All illustrations and photographs are by David Goulden with the exception of:

### **Netscape and Hewlett Packard Offices. P. 13.**

from Silicon Valley Tour at <http://ng.netgate.net/~pietro/NerdTour/>  
(Dave Pietromonaco)

### **Silicon Valley Map. P. 14.**

from <http://www.wwebport.com/citygates/sv/svfullview.html>

### **Event Architecture. P. 18.**

from *Architecture and Disjunction*. Bernard Tschumi. P. 99.

### **'Information'. P. 23.**

from *Print: European Design Annual*. (Baumann & Baumann). 1998, P. 112.

### **Virtual Reality and High Performance Computer. Pg 22-23.**

from *Canadian Architect*, July, 1995. (Donald Bellows and Cheryl Bellows). P. 19.

### **Crash Dummy. P.24.**

from Silicon Graphics at <http://www.sgi.com/Fun/free/gallery.html>  
(MacNeal-Schwendler Corporation)

### **A Virtual Demonstration. P. 25.**

from Silicon Graphics at [http://www.sgi.com/Fun/free/CAE\\_93.html](http://www.sgi.com/Fun/free/CAE_93.html)  
(US Army)

### **3D Visualization of a Research Idea. P. 26.**

from University of Illinois at Chicago, Electronic Visualization laboratory  
at <http://evlweb.eecs.uic.edu/EVL/>

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Tschumi, Bernard. *Event Cities*. Cambridge: MIT Press. 1993.