RUPTURING THE TERRAIN VAGUE

CONTENTS

"We can try to locate a kind of enjoyment of place by including things that weren't considered previously, which are frequently accidental, and inventing strategies of improvement, the poetics of situations; we can evaluate completely random elements and declare that we're dealing with a geography: "It's beautiful, I am going to reveal it to you. ..." This is an aesthetics of revelation, a way of taking a piece of the world and saying, "I'm appropriating this, and I'm giving it back to you for your appreciation in a different way."

Rupturing the terrain vague

Introduction

This thesis started with the above statement made by Jean Nouvel in conversation with Jean Baudrillard on the metamorphosis of architecture. This project set out as both a manifestation of the above philosophy, using it as an approach towards making architecture, and as an exploration to test whether architecture can really achieve this – to create a human appreciation of what is, of what is not plainly seen and of existing in space and in a built world which exists with respect to a geological layer applied to all cities across the earth. In this thesis, architecture is explored as a tool for revelation; specifically of existing situations and scenarios in the built world which are overlooked or unappreciated.

This thesis research expands upon and questions earlier investigations into the relationship between experience and architecture undertaken in my undergraduate studies. Maurice Merleau Ponty wrote that the task of architecture is to 'show how the world touches us'. This rearlier research looked at architecture as a means to structure and integrate all of human experience, where the body is the locus of perception, thought and consciousness (Pallasmaa 2006:28).

This inquiry was focused in the urban environment. The project studies the urban *terrain vague*, a term first used by architect Ignasi de Sola-Morales to describe strange urban spaces which are internal to the city but exist outside the effective circuits and productive structures of that urban system. These are the abandoned, seemingly forgotten spaces in an urban environment. The evocative potential of the *terrain vague* can be understood in the relationship between an absence of precise boundaries, a sense of ambiguity, and the possibility of what could exist there (Sola Morales 1995:120). In this project, the *terrain vague* is explored through an investigation of a specific urban territory in Cape Town, beneath the N2 eastern Boulevard at the crossing with the railway tracks.

which formed as a 'leftover' urban space in the development process of the Foreshore and the highway infrastructure but is a site with extra-ordinary spatial and experiential qualities. Possibility and expectation are contained in the distinctive qualities of the site and its blurred limits in relation to the productive city.

The concept of a rupture is applied to the site as a means to occupy the *terrain vague* in a way that maintains its sense of ambiguity and possibility and acknowledges the delicacy of this specific site situation. Rupture recognises difference and otherness in urban space and has the potential to intensify, lengthen and prolong inconsistencies. This happens along two lines of inquiry. The first is a programmatic rupture, where a foreign activity is introduced to the site which brings a new energy to that territory and must interact with the *terrain vague*. The second is a surface rupture which is explored in the design development, where the intention is that the intervention engages with the *terrain vague* without destroying it.

It is the intention of this document to illustrate the experimental nature of the design process in this project. It set out with an urban situation or geography and no clear intention of how to intervene in it. It is a process which explores a given situation and tests a number of thoughtful scenarios, at various levels or stages of design. Often, decisions made were helpful in uncovering misguided paths in the design process as well as confirming and opening up other paths. It is this process that is 'a part of a becoming that is hidden to us' (Nouvel 2002:19) and it is a process which revealed conditions and opportunities for siting, spatiality, activity and materiality in the design of an architectural intervention on the proposed site.

SITE

'And it rained all night and washed the filth away
Down New York air-conditioned drains
Oh, the click click clack of the heavy black trains
A million engines in neutral

The tick tock tick of a ticking time bomb
Fifty feet of concrete underground
One little leak becomes a lake
Says the tiny voice in my earpiece
So I give in to the rhythm
The click click clack
I'm too wasted to fight back
Tick tack goes the pendulum on the old grandfather clock

I can see you
But I can never reach you'

Thom Yorke

Site

And It Rained All Night

This introduction was first written for the theory document generated earlier in the year. It is a view into an early attempt at representing and understanding the site.

The title *And It Rained All Night* references a song by Thom Yorke. In music and lyrics, it reflects the space of the *terrain vague*. It also embodies the character of a specific site of the terrain vague which is the site of investigation for this thesis, located along a periphery of Cape Town.

Both the structure of the music and the lyrical composition build up a rhythm. The music is layered. These layers do not build up into a linear narrative of climaxes and plateaus. Rather it seems to form a continuous, changing body which articulates the non-hierarchical rhythm of the *terrain vague*. It is an assemblage of multiplicities. Rhythms conjoin. The line of the drums will meet with that of the bass and together an augmented rhythm progresses. Then the drums will stop - and perhaps pick up later, offset slightly from the layering of vocals. But the nuances exposed in these subtle changes, in the juxtaposition of rhythms, are a subliminal and powerful quality of both this song and the *terrain vague*.

Lyrically, words are carefully constructed - with consideration for their sound and their relation to neighbouring words – to compose another, different oscillation. *'The click click clack of the heavy black trains'* evokes a rhythm in the repetition of words and in the use of words which refer to sounds, but also have a distinct, even hard, sound themselves when said out loud. Like sites of terrain vague, this is a textured language.

The phrase *'I can see you / But I can never reach you'*, speaks of the marginality of *terrain vague*. It locates the space of the terrain vague outside of the flows and rhythms of the everyday, easily accessible and ordered, city.


TOWN

Site

Description

The site is located in the east Foreshore, beneath the N2 eastern Boulevard highways as they cross over the railway tracks into the Foreshore.
The Culemborg Goods Yard lies directly east of the site. This land is owned by Transnet and is being used to service the Harbour, facilitating storage and industrial activities. A storage warehouse for theatre and film sets is also located on this land. At the boundary between the two sites are the ruins of a building once used by the South African Railways as staff amenities, which formed part of a continuous built boundary or gateway into the Culemborg Goods Yard. Most of these buildings have been demolished to make way for new developments.
Old Marine Drive runs along the South of the site. This road currently connects the industrial railway areas of the East Foreshore with the central city and Foreshore. This road was formerly used as a service road by the South African Railways. It is still a relatively quiet road in terms of general city traffic. The railway tracks run along Old Marine Drive, both to the south of the site. Car dealerships are located to the West and North of the site, with a large portion of the site area being used for parking.
There are four highway bridges over the site. The two inner bridges increase in volume over the site and continue to form the N2 Eastern Boulevarde. The two outer bridges compress over the site and form the on- and off- ramps which link into the city's road network at the crossing of Oswald Pirow Drive and Herzog Boulevard.

Further out, but within a 500 m radius of the site, the train station and the civic centre lie to the north west.

Site

A site of *terrain vague*

The theory document generated earlier in the year served as a study of urban *terrain vague*. The site was then located in this body of research and explored as a territory of the *terrain vague* in Cape Town.

An etymological dissection of the term *terrain vague* fleshes out a significant depth in its meaning and lends gravity to the term as it is used in discussion of the site. *Terrain* is a French term with a similar meaning to the English *land*, but with a greater urban connotation. It has come to denote an extension of the precisely defined ground of the constructed city. In French, the word also refers to greater and perhaps less precisely limited urban territories, connected with a physical portion of land in its potentially exploitable or buildable state, but which already possesses some definition to which we are external (Sola-Morales 1995:119). The term *terrain* in English has come to signify more natural territory, with agricultural or geological qualities. This is perhaps significant in making a connection between urban territories which move and develop in a manner similar to the processes and qualities of natural territories.

Vague is a French term which has its origins in Latin and in German. The German word *woge* refers to a sea swell and suggests qualities of motion, fluctuation, oscillation and flow. The French word *vague* has two latin roots, namely *vacuus* and *vagus*. The first, *vacuus*, means 'vacuum' or 'vacant' in English. This describes physical qualities of emptiness, the unoccupied, but also refers to that which is 'free, available or unengaged'. These last three attributes allude to a latent potentiality in this physical space, an expectation of

motion. Furthermore, the French *vague* is derived from the Latin term *vagus*, which in both French and English gives 'indeterminate, imprecise, blurred, uncertain'. Thus, the French term *vague* simultaneously signifies 'wave', 'vacant' and 'indeterminate' and suggests motion, potential and ambiguity.

In experimenting with ways of representing the site which communicated the ambiguity and evocative potential of the space, I took series of photographs of the site at intervals throughout the year. The photographs were taken on different types of film with a HOLGA CFN analogue camera. The Holga is an inexpensive and simple plastic camera, with two light settings, four focusing modes and two shutter speeds. The film has to be wound forward manually, which allows for shots to be layered over each other within the same frame.

The *terrain vague* of the contemporary city is characterised by forms of absence. This space lacks any form of scripted activity. It is space without a deterministic order which aligns it to the effective city. It is a space internal to a city yet oustide to the flows of everyday use by the general public. Ignasi de Sola-Morales writes that,

"The relationship between the absence of use, of activity, and the sense of freedom, of expectancy, is fundamental to understanding the evocative potential of the city's terrains vagues." (1995:120)

It is also outside of the bounds of scripted territories, in ambiguous space, that creative and new appropriations of space can be generated.

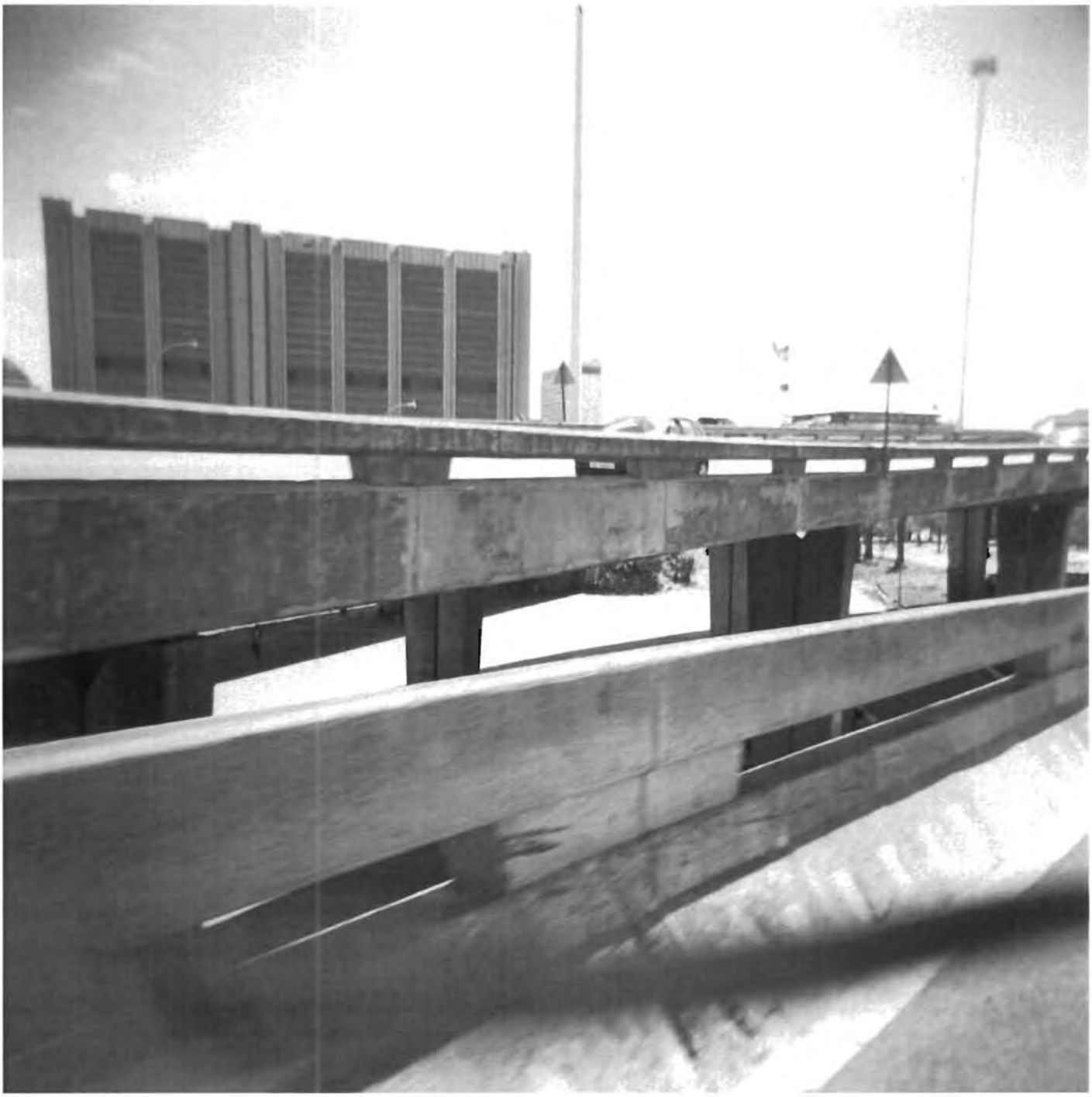
The first series of photographs was taken in March 2011 using Ilford medium format black and white film. The film was processed using the standard C41 method of processing. Single frames have been exposed multiple times.

Photograph of the site with a view towards the north. This photograph is taken from a position at which the qualities of light and dark, solid and void, volume, sound and texture are particularly powerful.

Access road to the site which runs along the boundary of the Culemborg Goods Yard and behind the motor city. The site can only be accessed from the city by two roads. This route connects from Oswald Pirow to the site via a series of one way roads.

The same route, with a view in the direction of the harbour (towards the north).

Photograph taken from the onramp to the N2, just off Oswald Pirow Drive. This is a view into the site from the north. It shows people walking along the recently constructued BRT route which runs through the site.



The site seen between the barriers of the highway.

This series of photographs was taken in May 2011 with Kodak Porta medium format colour film. The fim was cross-processed.

When the film was removed from the camera for processing, it was not wound tightly enough and light leaked onto some of the frames, over-exposing parts of it. The photographs taken later on the spool of film were the ones least tightly wound and so have more light leaking into them.

On site facing south with a view towards the railway tracks

Photograph taken along the south boundary of the site facing towards the north. It illustrates the opening which forms between the outermost highway ramp in the east (which compresses over the site to connect with Oswald Pirow Dr.) and the two major highway ramps (which continue over the site). The contrast between light and dark is significant.

The boundary building of the Culemborg Goods Yard which currently stands empty.

This image is made up of two photographs taken over each other on one frame. They are two similar shots taken of roughly the same area - the transition from the gap between the two main highways and the outer compressing ramp (west, next to the motor city), to the space beneath the two main highways.

Multiple views of-, towards- and from the east boundary of the site (the boundary adjacent to the Goods Yard).

Photographs which overlays on-site graffiti with a view of the site fro the north.

Railway tracks which run along the south boundary of the site.

Site

Site as a geography

'The landscape of the earth is like a skin or veil, wrapping the earth in its different guises. Cities are like skins of this skin: second skins. Architecture uses the skin of the earth, it makes it habitable'. Urban Flotsam (2001:)
Like the first skin, cities are plastic environments (Bunschoten 2001) which are subject to change and motion.

The *terrain vague* is something generated by a mutable city.

A city is made up of variably formed matters and evolving configurations of elements, of different strata and speeds, rates of flow, of lines of articulation and lines of development. It consists of and generates strata and territories, and includes as much in its development movements that obliterate stratification and territorialisation (Deleuze, Guattari 1987:3-4). The city is an assemblage of interdependent and overlapping entities. There are a multitude of relationships inherent in an urban system which are in oscillation and govern the structure of this assemblage.

The city as a form of urban entropy is grounded in a complex temporality. The reading of urban space cannot be disconnected from time. In a city, spatiality is measured in time. The fabric of the city reflects an interplay of various temporal systems as manifested in the different forms of spatial presence (Benjamin 2010:40).

Terrain vague emerges from the mechanics, rhythms and undulations of a city.

"Through the collision of seemingly autonomous systems emerges an aggregate of buildings and spaces of distinctive traits, an organisation eliciting for the urban dimension other standards of consistency". (Angélil 2001:336)

Top-down forces of urban planning, economy and order act on an urban system. These have a very real and tangible effect on the built environment. The city and the systems which operate with, in and through it in turn affect the conditions which have been imposed upon it, continually creating new and evolving systems or relationships.

Within this mutable system, spaces form which are foreign to the efficiency which unifies the productive city. These are spaces external to the planned activity

and everyday use of a city, seemingly forgotten places. It is residual or abandoned space. This is space found in unincorporated margins, oversights, voids and failed ideologies. The *terrain vague* inhabits the space beneath highways, next to railways, in vacant lots and empty buildings.
What this means for architecture is that intervening in the *terrain vague* is an entry into a particular scenario – a specific set of multiplicities and oscillating relationships governing the spatiality of that territory. Whatever the spatial, metaphysical and socio-economic characteristics of this 'other' space, they have evolved out of a very particular situation.

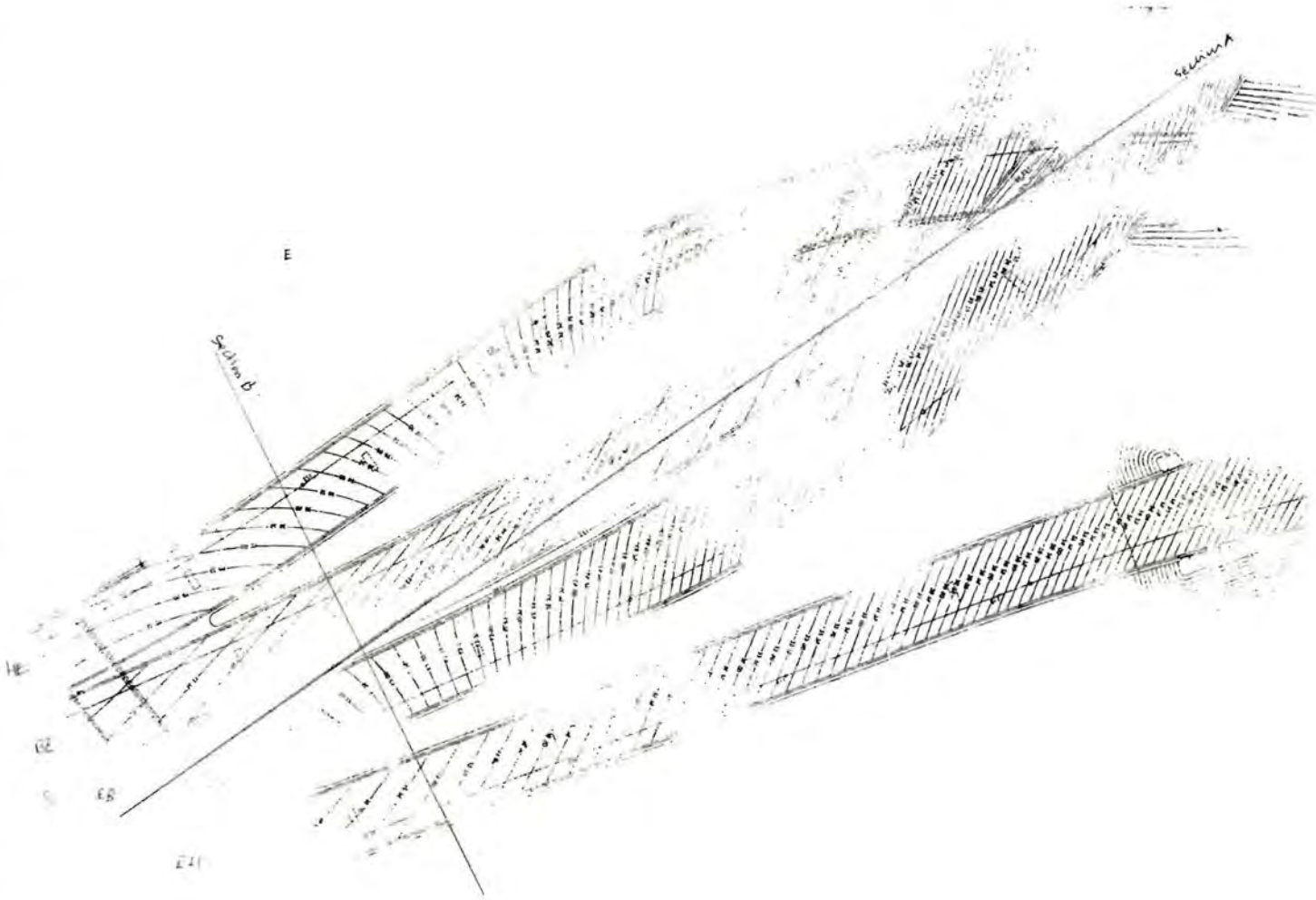
Approaching the site as a geography, or as an assemblage of particular elements and relationships has influenced the process of designing for this site. The design of an architectural intervention in this space has developed out of testing thoughtful scenarios and intentions in the site situation, at various stages in the design process and across a range of scales in the design (from siting and use to materiality and techtonics). These scenarios do not impose an expected result or resolution on the design. This approach tests possibilities in space against the flows and rhythms of the site. Each decision opens up paths for further exploration and writes out paths which did not work, once tested against a multitude of criteria. An example of a condition against which the design had to find expression at a number of scales, was that the architectural intervention should not destroy the delicacy of the terrain vague but enhance it. At a level of spatiality in the design process, a decision was made that the built volume of the intervention should not fill up the volume between the ground plane and the overhead highways to be consistent in the idea of maintaining the qualities of the *terrain vague*. This approach to the site and the design means that this project is a scenario which has meaning and value in this specific situation, and that a number of alternative interventions could have existed in this same space for this time which would all have had a distinct influence on the balance of the site situation.

Drawing a site scenario

(En loge)

Black and white photocopies transfered onto cartridge paper using thinners, pencil drawings overlayed.

The en loge task was the first attempt at drawing out a scenario on the site. These drawings illustrate the existing site situation with a scenario drawn into it, which aims to augment the experience of the site by looking at qualities of space and volume, light and dark, sound and texture.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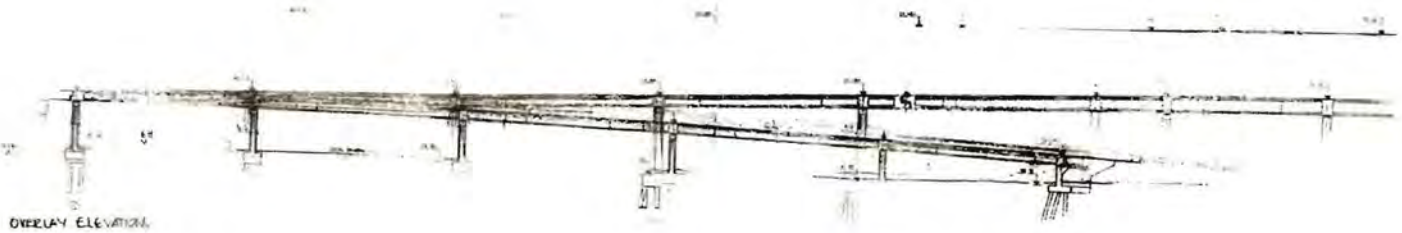
OVERLAY ELEVATION
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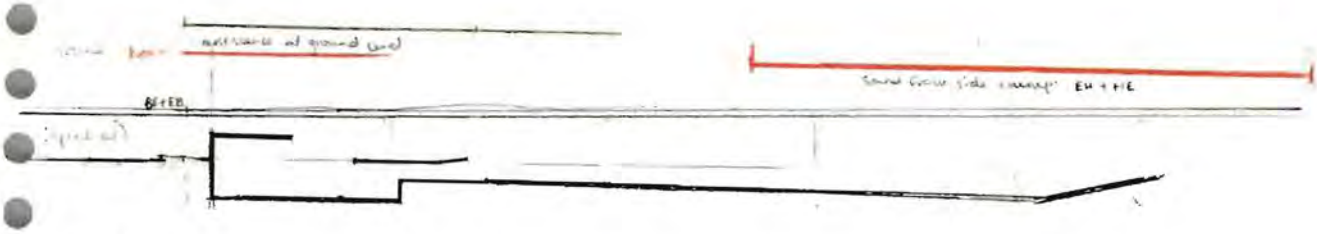
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OVERLAY (SECTION)
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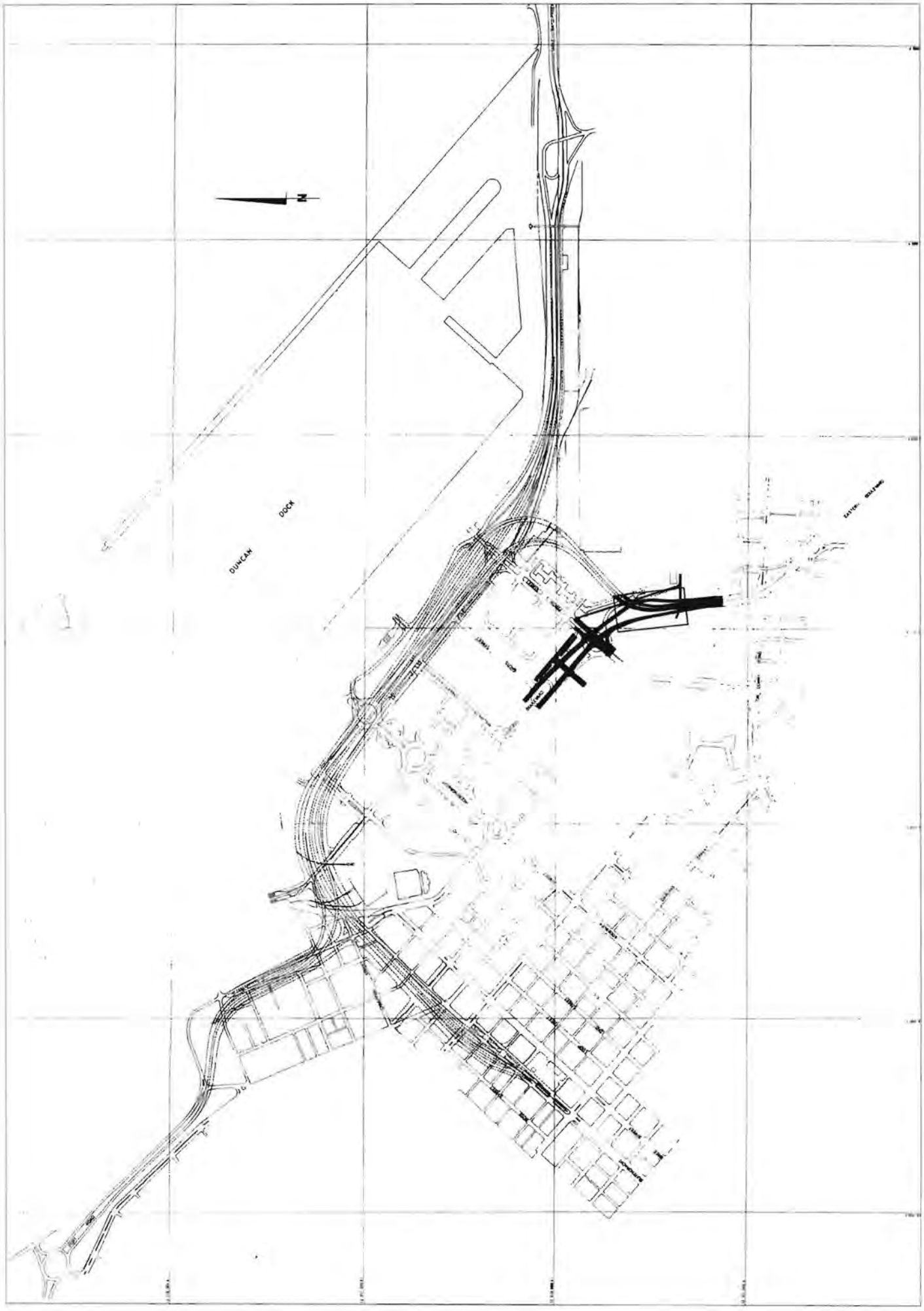


The original locality plan for the highway section under study, taken from the original technical drawings of the highways draughted in the 1970s.

Site

Technical Investigation of the Foreshore Highways

To intervene in the space beneath the highway, I needed to understand the highway system and its structure in detail and build up an accurate account of the highways as they related to the site. The highway system was investigated in a technical study of the site undertaken at the beginning of the year which was documented in a technical report.

Data Collection

At the outset, it was necessary to get hold of the technical drawings of the Foreshore Highways. This proved to be a challenging and time-consuming process.

The Government Engineering Department has records of all the technical documents pertaining to the Foreshore Freeways. The department is, however, under-staffed and unwilling to sift through the records in their vast archives the find the information required for this project. Another factor in deciding to bypass approaching the Municipality first is that this information is caught up in 'official red-tape'. To get access to it requires appeals to officials motivating why access should be granted to this material, guarantees that your project will align with the visions set out by the City of Cape Town for the site in question, and guarantees that the information will be used strictly for the purposes of research and education. This is a drawn-out process which is often unsuccessful.

Initially, I consulted with Brian Richardson from KFD Wilkinson Consulting Engineers. KFD Wilkinson had been involved with the design of a project directly adjacent to the N2 highway, at the site of the Cape Town International Convention Centre. While this was a different section of the Foreshore Highways, it had the same structural system as the section of highways over the site. From the working drawings of this project it was possible to obtain basic information on the structural system of the Foreshore Highways, the type of foundations (and approximate depths for foundations and footing dimensions) and a description of the general soil conditions of the Foreshore reclaimed land and an approximation of the loading that the highway must cater for. The information obtained from KFD Wilkinson gave a basic understanding of highway construction but was not adequate to build up an accurate model of the highways on the site.

Bergstan SA Consulting and Development Engineers is a firm which has been involved in the design and construction of highway/bridge systems in South Africa as well as being involved in the maintenance of the Foreshore Freeways. After speaking with KFD Wilkinson, I approached Colin Miller, an engineer from Bergstan SA, for further information. Due to their previous involvement with The Foreshore Freeways, Bergstan had printed records of the technical drawings

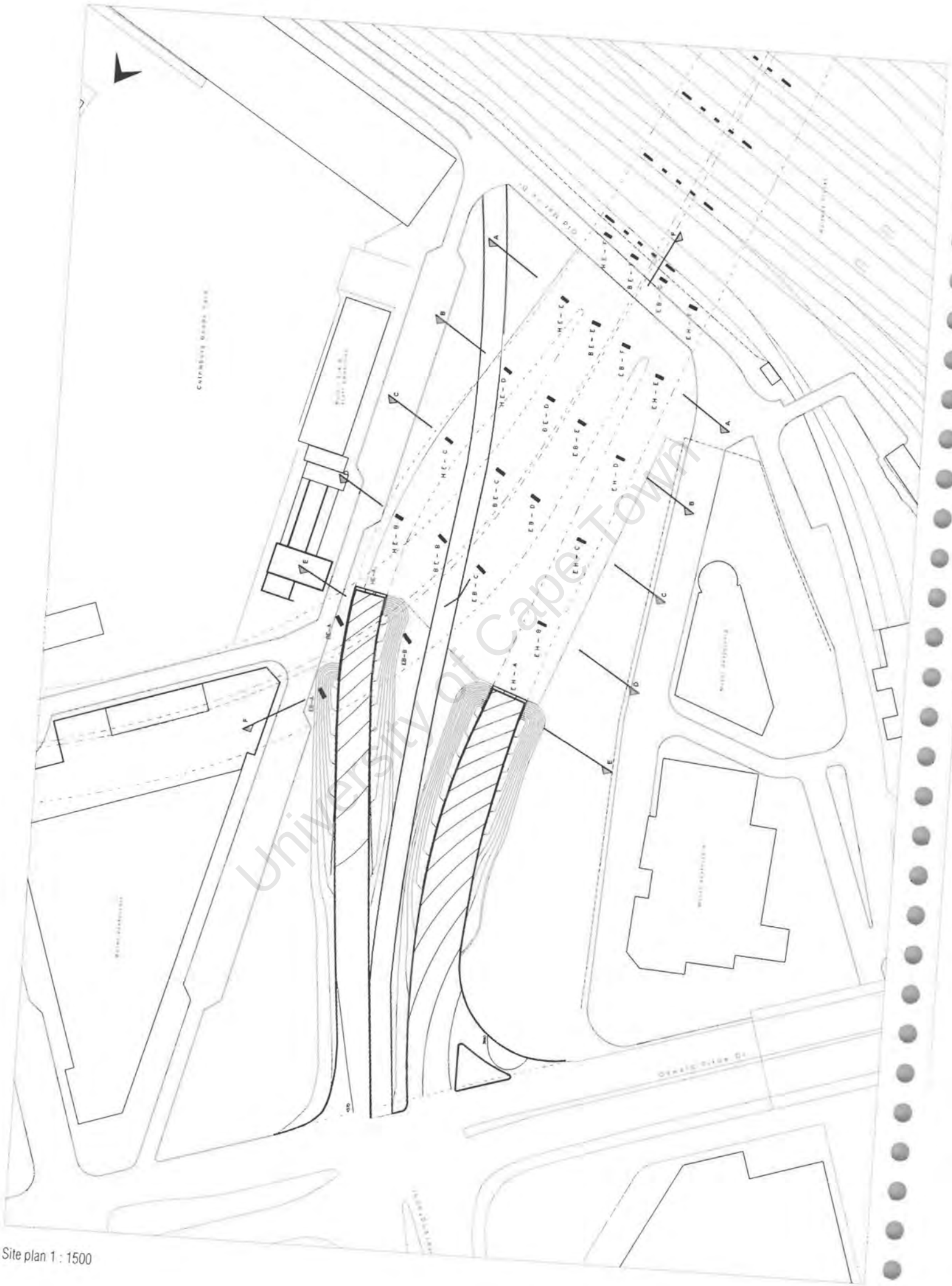
for the whole of the Foreshore Freeways. These documents are kept in an off-site archive. I was not allowed direct access to this archive facility but was able to retrieve the documents relating to the specific portion of the Foreshore highways under investigation (document no.Q70/26) by giving a detailed description of the site and its location to the Bergstan personnel.

These documents were not allowed to leave the Bergstan offices but I was given permission to look through the records and photocopy any relevant information. From these records I was able to compile a 124 page document of the technical drawings of the highways on the site. These drawings were originally prepared for The City of Cape Town (client) by Foreshore Freeway Consultants in the 1970s. The section of highway under investigation in this thesis falls under Contract 1 of the Foreshore Freeways project. The drawings were draughted using the imperial system of measurement (feet and inches) and not in the metric system.

Interpreting the data – Base Drawings

The technical drawings sourced from Bergstan were analysed and used to draw up a set of base drawings (plan and section) of the site and of the highway system (decks, columns and foundations) as they related to the site.

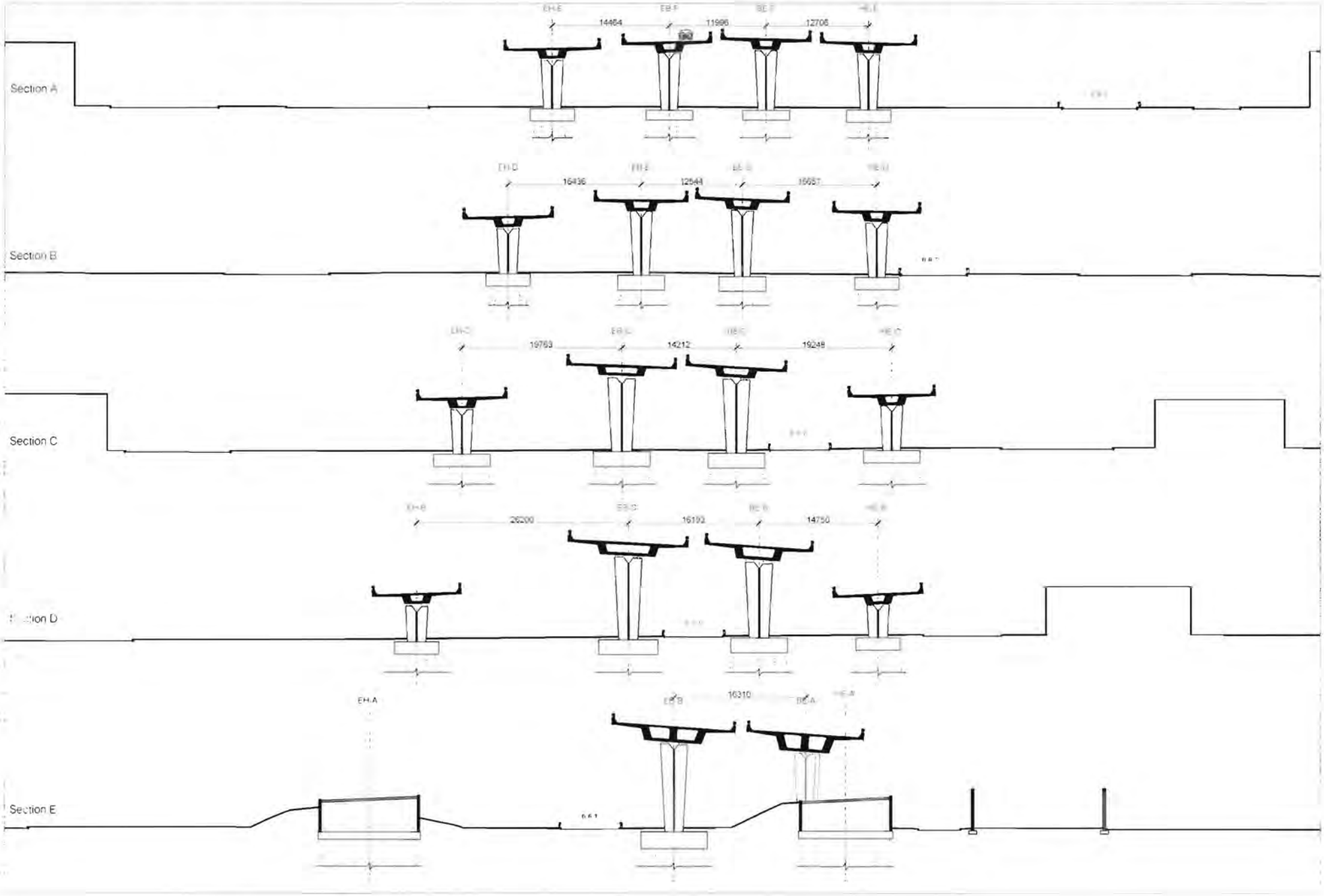
Highway contour plan 1 : 1500



Site plan 1 : 1500

Site sections

not to scale



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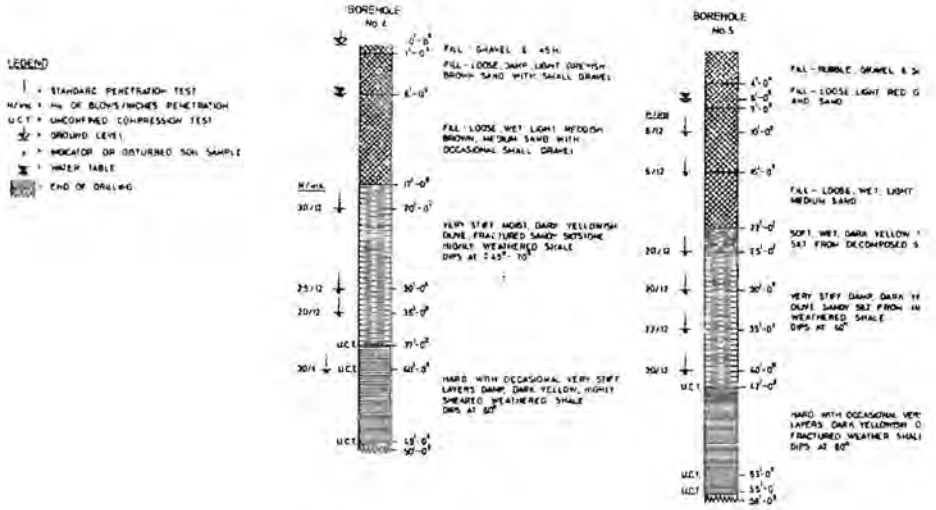

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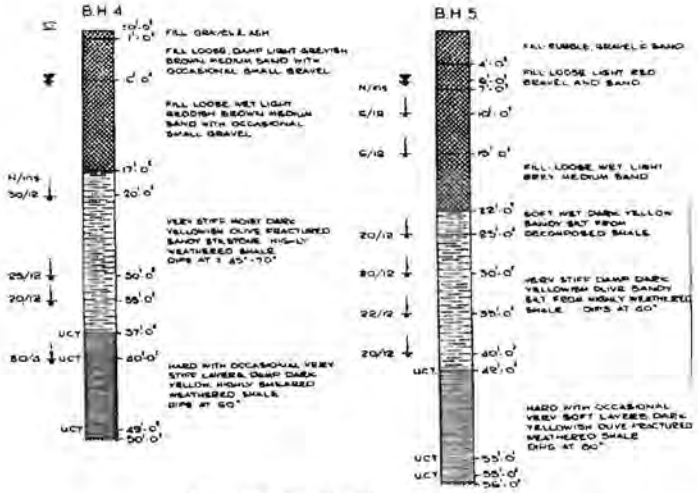

BOREHOLE RESULTS

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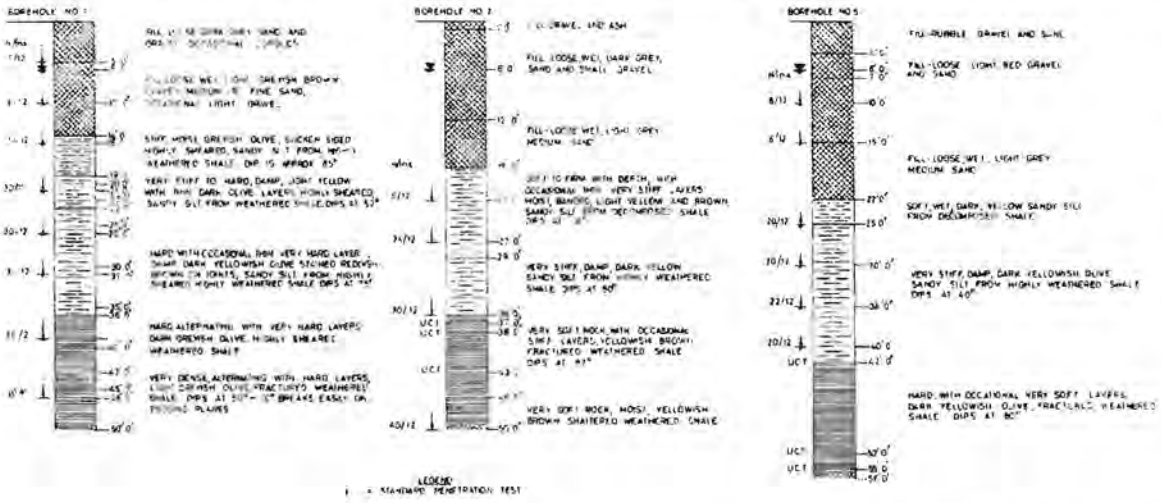

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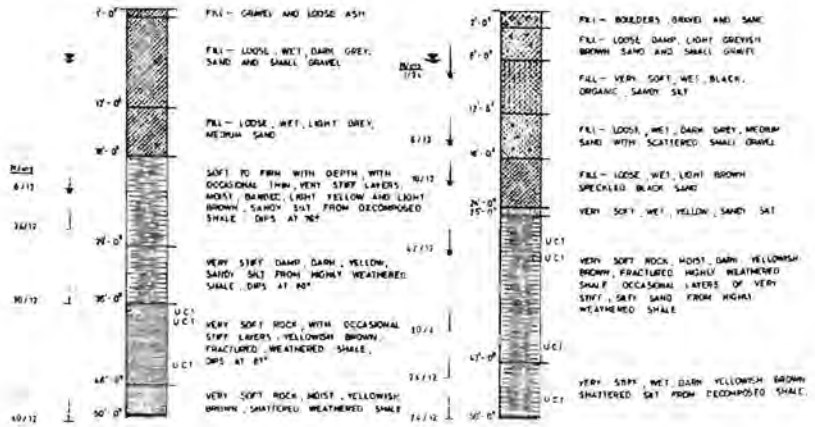
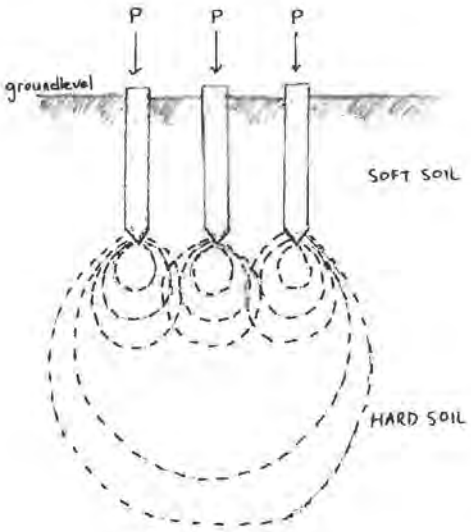
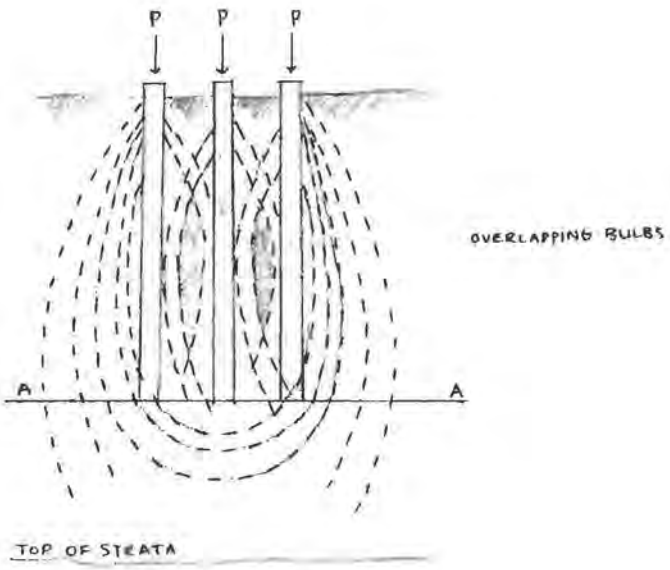




a. Pressure distribution of end-bearing piles



b. Pressure distribution of friction piles

Interpreting the data – Substructure

The site falls on reclaimed land on the Foreshore. The dredging and land-filling for the land reclamation began in 1937 and was completed in 1945. The soil used for the land-fill comprised mostly sandy soil. This area of land also has a very high water table.

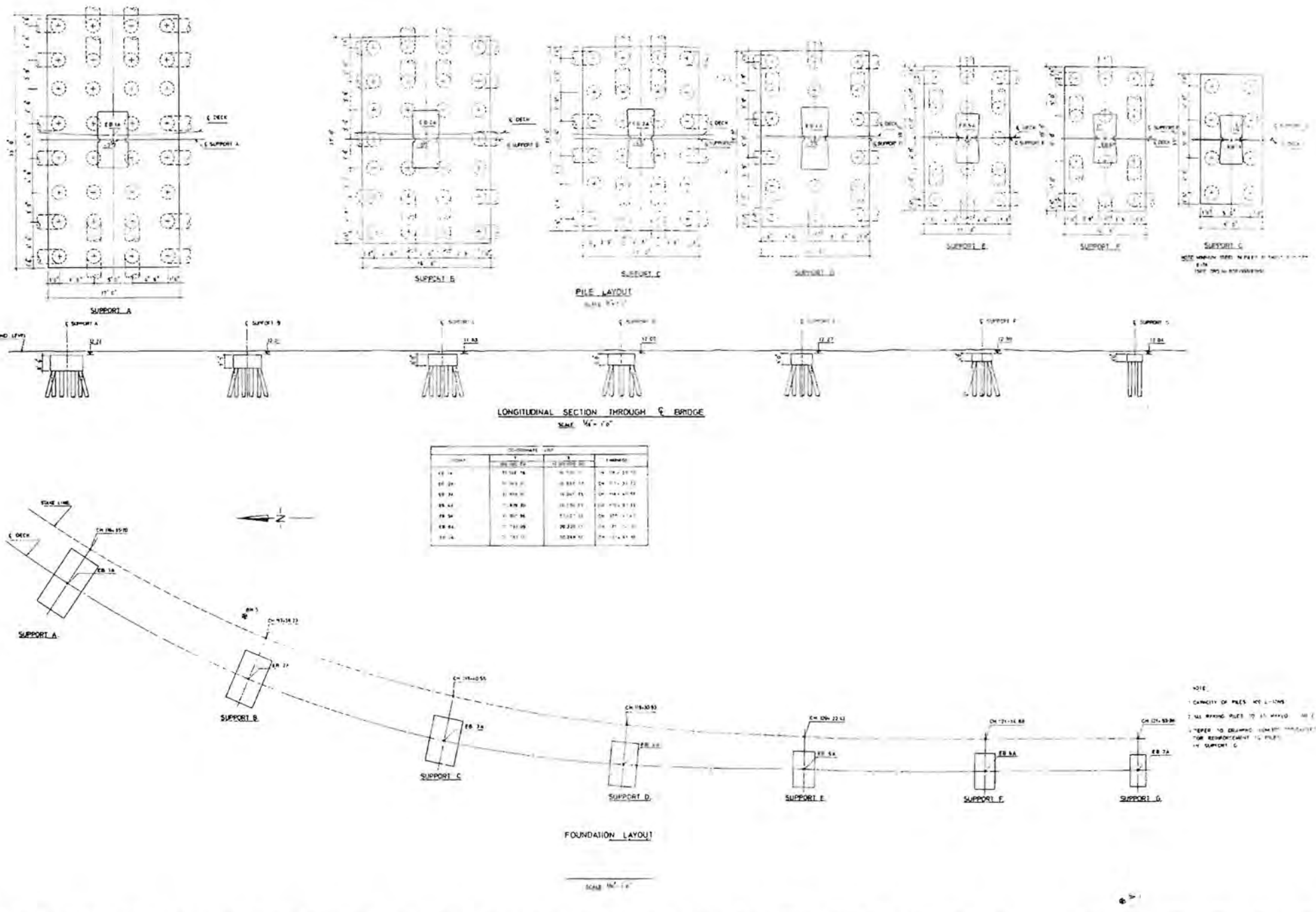
Multiple boreholes were drilled across the site to determine the exact soil profile for the earth beneath each of the four ramps in the highway system. Reading from the borehole test results, it shows that the water table is at a level of 1800mm below natural ground level. The borehole tests also show a detailed soil profile, where hard layers of soil are generally found after a level of about 12m below ground level. Above this point there are various layers of sandy soils. These soil profiles differ slightly beneath each of the ramps and an accurate reading should be taken directly from the borehole results.

The loose, sandy soil has poor bearing capacity and is inadequate in carrying structural loads. This requires the construction of deep foundations to transmit loads further into the earth where there is more competent soil or rock. The N2 Foreshore highways were constructed on raking piles which are driven at an angle to resist inclined forces and the effects of horizontal thrust (caused by cars travelling around bends or vehicles colliding with side barriers). All raking piles in this highway system are specified to be raked at 1 to 4.

The piles used in the foundations for the highway have both shaft and toe resistance. They transfers loads to or through an underlying stratum through friction with the surface area of the shaft (friction pile) as well as transferring loads through the toe to a deeper, more competent stratum (end-bearing pile). The pile capacity is the sum of the ultimate resistance values of both shaft and toe (Rickett et al, 2004:17.52). The pile capacities for the foundations of the supports are 100 L-TONS and 40 L-TONS for the abutments of the ramps.

The challenge with designing for this site was then that an intervention which excavates into the ground would have to accommodate for these soil conditions in its foundation design and waterproofing system, as well as work with the existing substructure of the highways in a way that does not disturb or cause movement in the above highway structure.

Interpreting the data – Superstructure


SUPPORT A
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PILE LAYOUT
LONGITUDINAL SECTION THROUGH ℄ BRIDGE
FOUNDATION LAYOUT

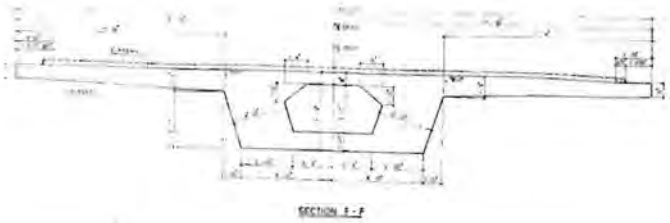
Interpreting the data – Superstructure

The superstructure of the highway was studied as a series of basic components (supports, decks) which all differ in dimensions, inclination and position. These varied segments are brought together as one complex system to form what appears as one simple, ribboning structure.

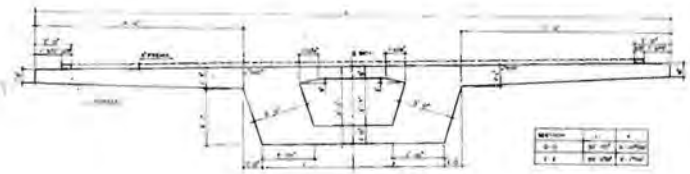
Understanding the highway structure uncovered the nuances of the bridges, which became an important influence in the design of the intervention.

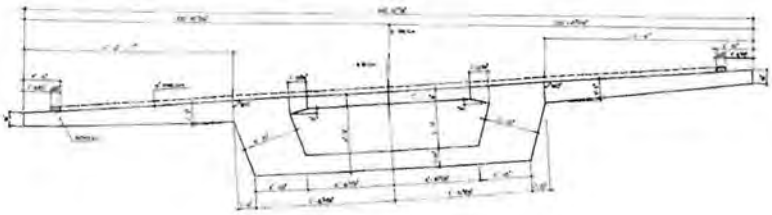
The technical aspects of the superstructure which impacted directy on the design are the water drainage systems of the highway bridges, column spacing and the changing inclination and dimensions of the highway decks.

(1) Deck sections



SECTION E-E





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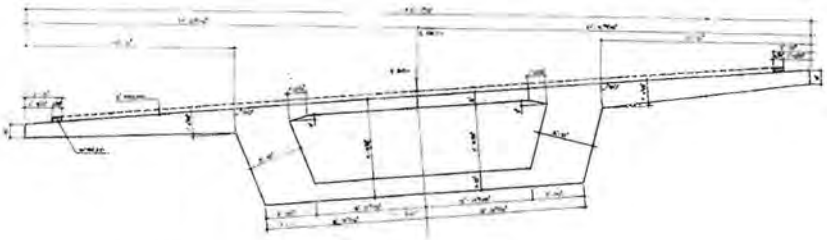
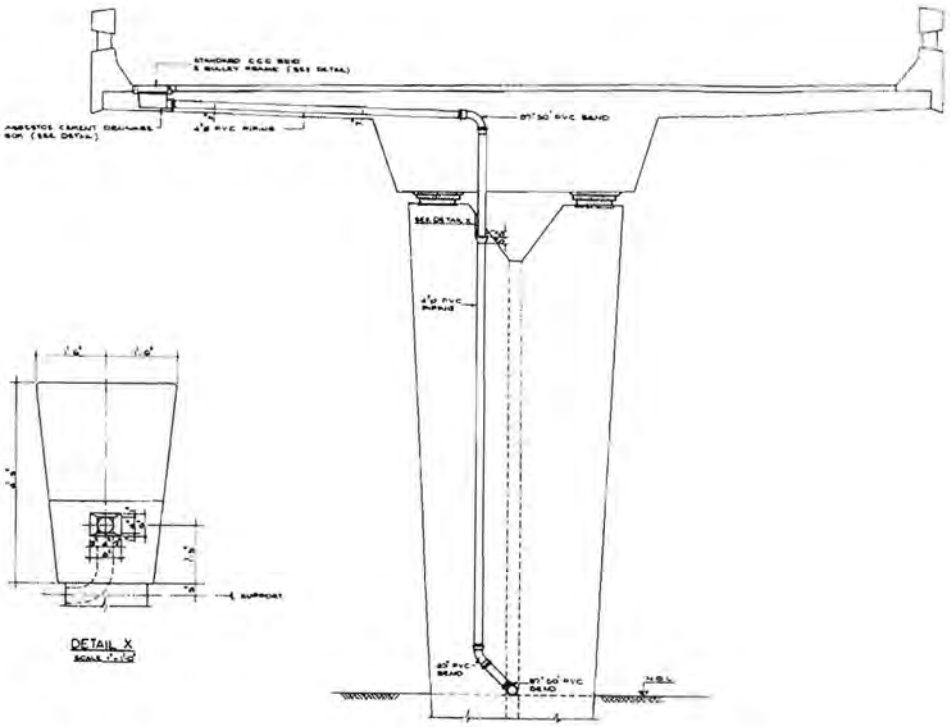


SECTION B-B

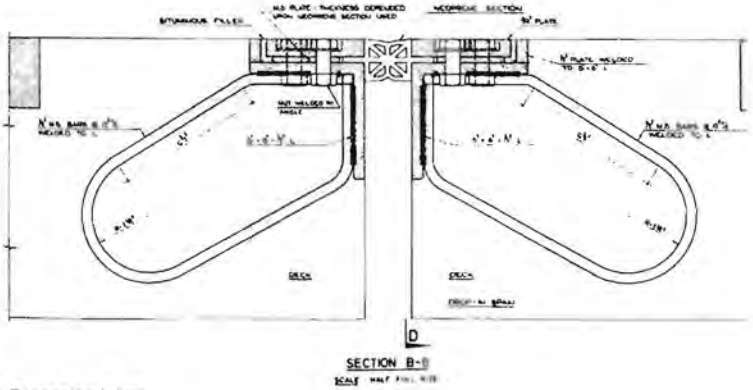
(2) Drainage system

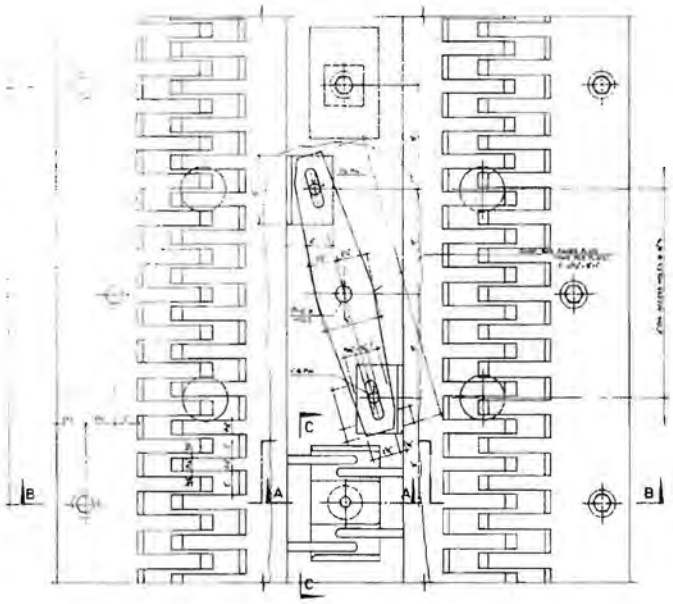


DETAIL X

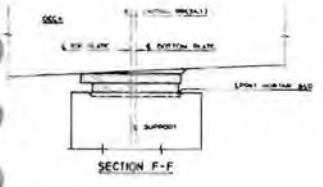
SECTION F-F
SHOWING DRAINAGE

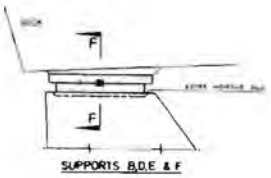
Section through expansion joint at support F





(4) Expansion joints

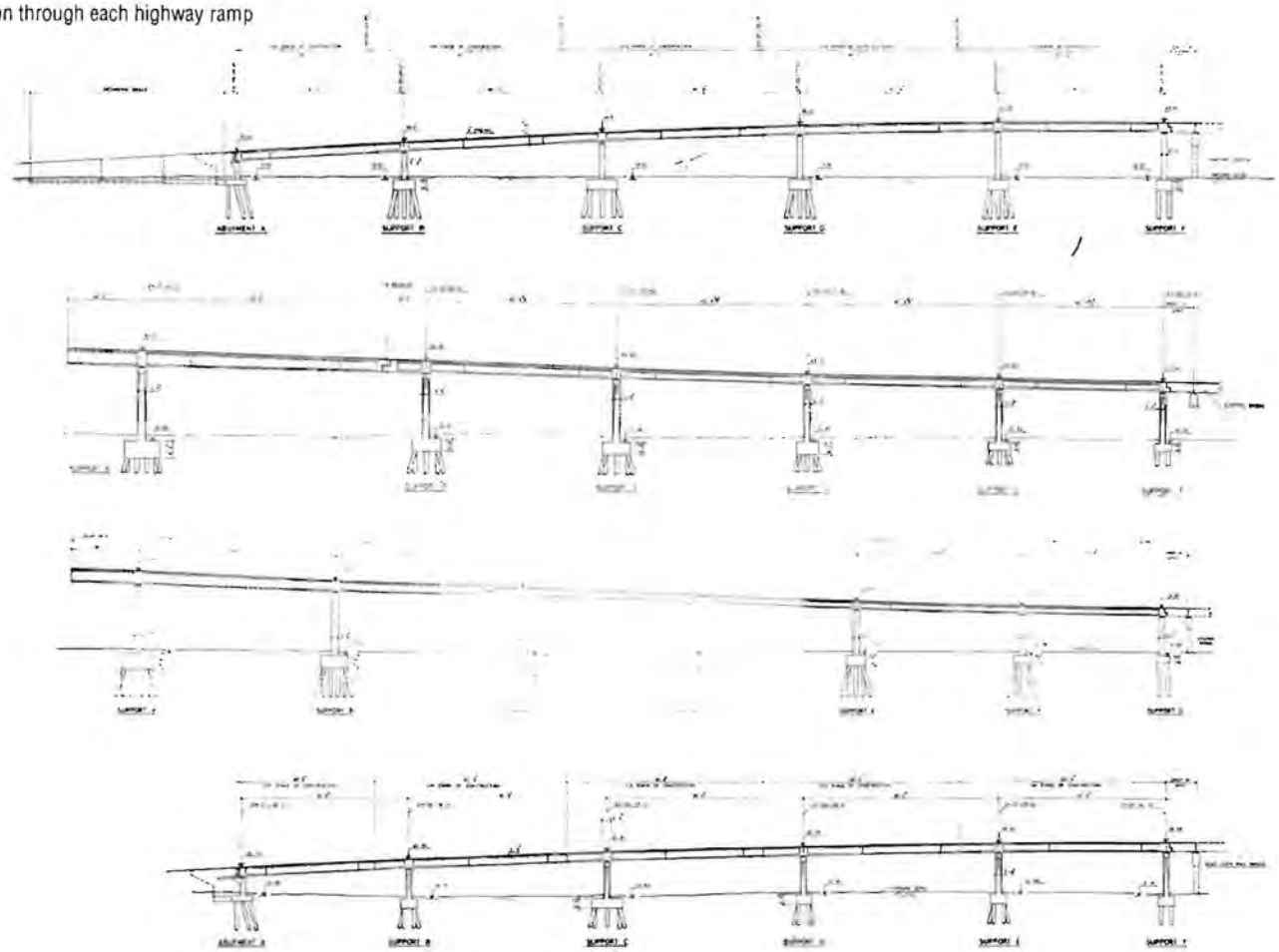




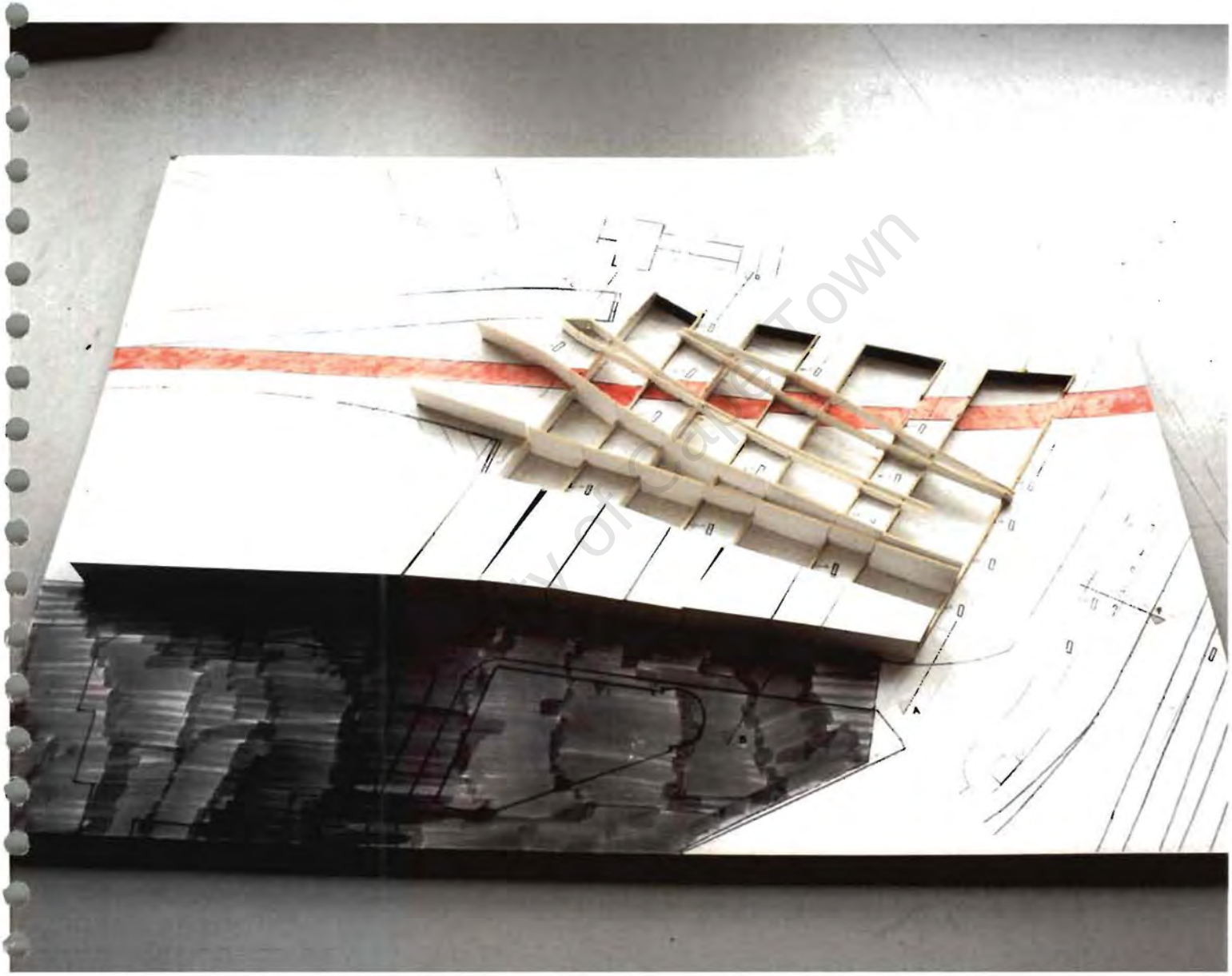
(6) Bearings

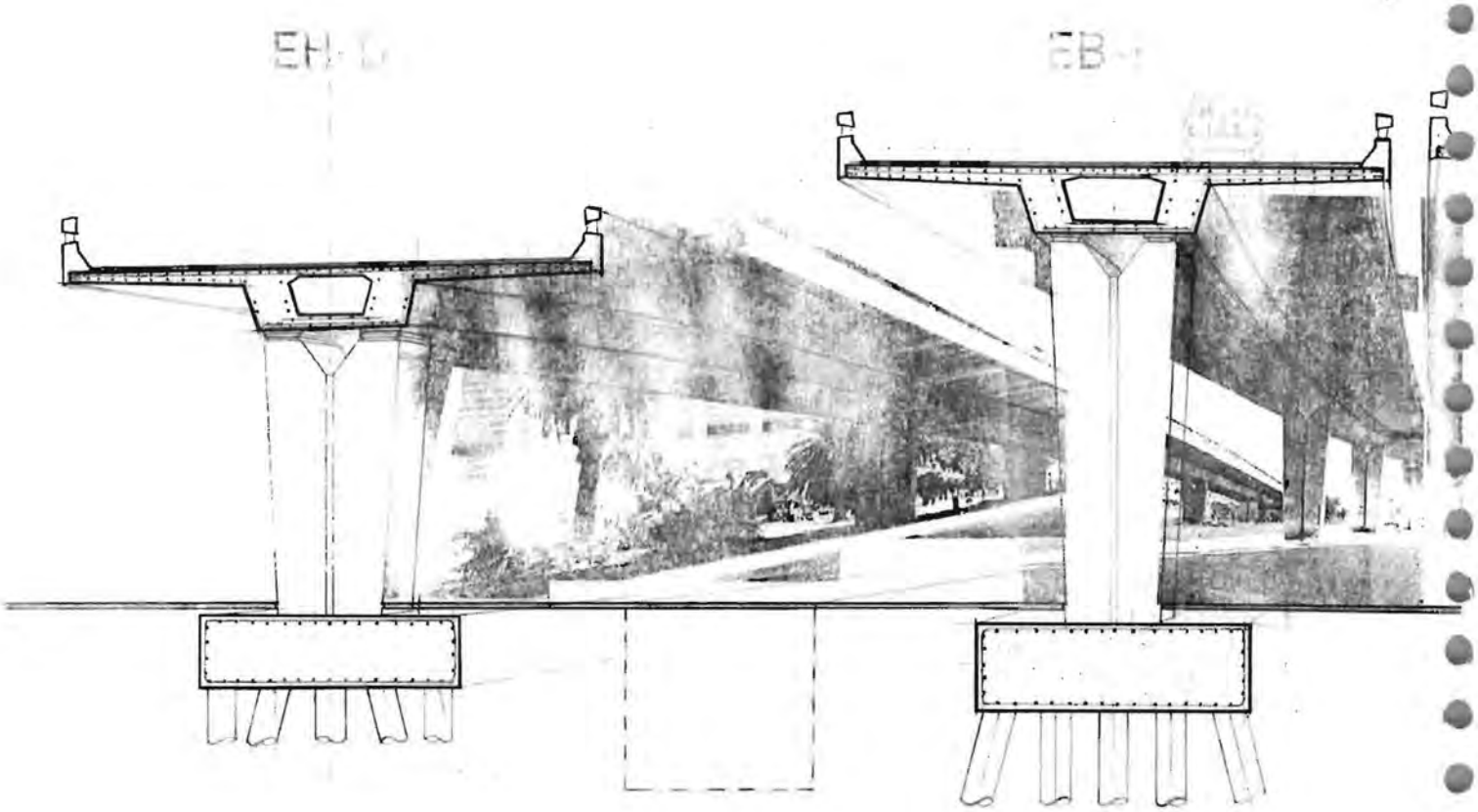
(1-5) Structures which negotiate between the unique segments in the highway structural system.

(8) Cross-section through each highway ramp



Card model which explores the potential and constraints set by the structure of the highway in terms of possibile excavation below ground and built volume above the ground surface.

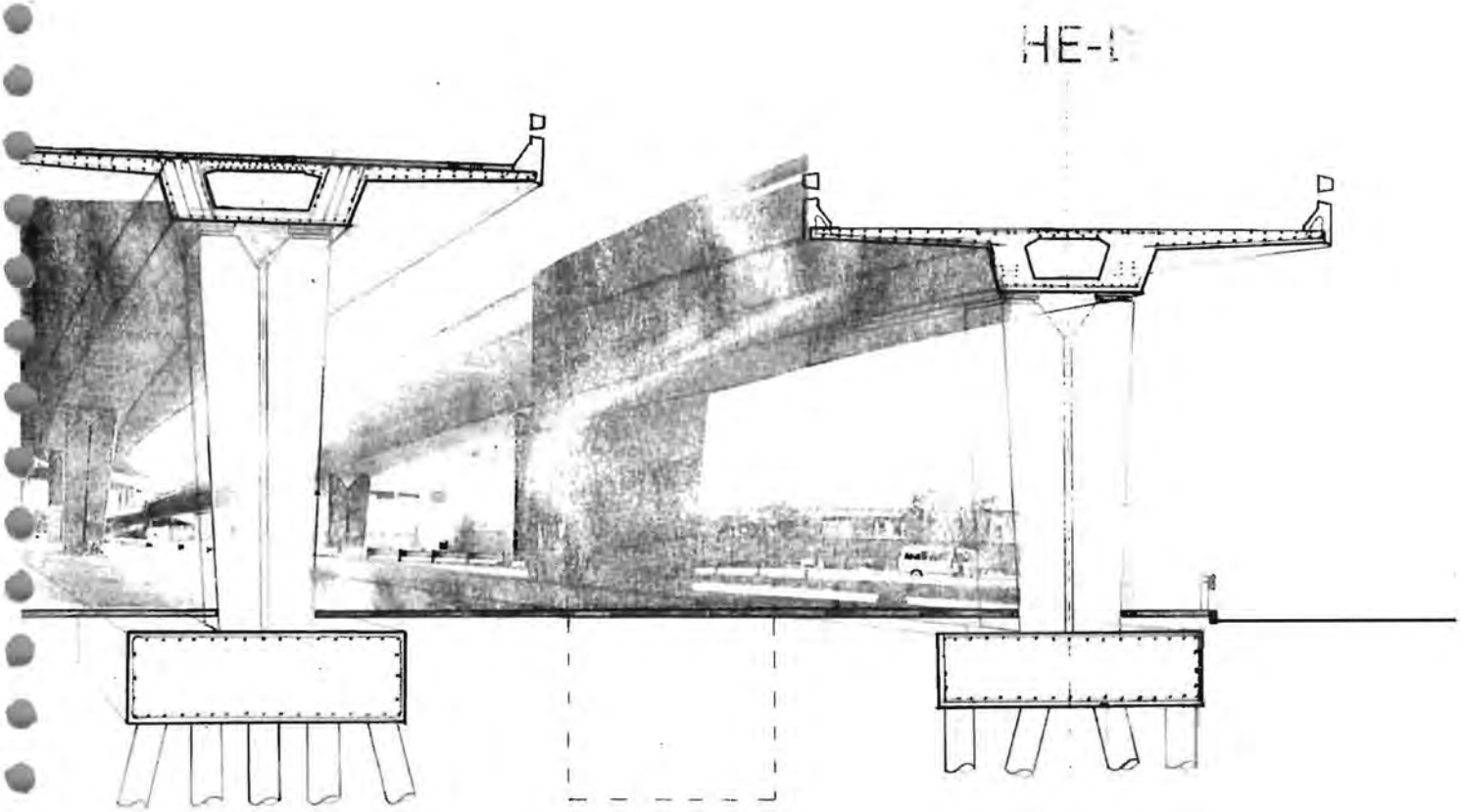




Site Cross-Section
CAD drawing, pencil, transfer by thinners

This drawing was an attempt at illustrating both the technical and evocative qualities of the site as one representation.

section E-E 1:100



SITE - RUPTURE

This section of the document explores the development from site to a strategy for intervening on the site. First, to locate the strategy of this project in a larger discourse I will discuss the arguments which exist around the *terrain vague* and how to intervene there. Rupture will then be introduced as a concept and as an approach to the site. This section will also illustrate the initial stages of the design development of the site rupture.

Site - Rupture

Discourse on the *terrain vague*

When discussing the terrain vague as material, two significant arguments emerge.

In the first, vacant and indeterminate urban space represents unacceptable socioeconomic deterioration. These are spaces which represent the problematics of contemporary social life. It is terrain which falls outside of the productive efficiency of the city and embodies a seemingly unsettling disorder, marked for eradication by top-down urban planning and design initiatives. In approaching these sites of disorder, solutions have often been superficial in that they do not confront the root causes or the motions which formed the space but rather look to aesthetically addressing the site with quick fixes. These are the sites - beneath highways, next to railways, in industrial areas - which are too easily abandoned as lucrative parking lots (Levesque 2001:16) or cosmetic architectural interventions.

On a larger scale, architecture and urban design tend to project onto these vacant spaces the logic of an overriding or unifying principle, which aims at assimilating these spaces into the productive logic of a city. Architecture acts as an organisational structure, a means through which transformation can be achieved – from something that is unproductive into that which is cultivated, from the disorderly to the civilised, the void into the built. The discomfort of disorder, indeterminacy and inefficiency is eliminated when architecture is applied to the site as a rationalising principle.

In the article *Terrain Vague*, Ignasi de Sola-Morales Rubidio describes the transformations introduced by architects on these vacant sites as dissolving a sense of estrangement – reflected in our relationship to and fascination with this strange and disquieting space – into citizenship, into a common identity with the rest of the city fabric and its inhabitants. These are aggressive transformations when the architecture projects a scripted narrative onto the site, disconnected from the network of motions and influences which reflect the reality of that specific urban geography and when the architectural intervention is aimed at levelling inconsistencies in urban space.

Rem Koolhaas' investigation of the relationship between architecture and urban voids offers a discourse with similarities to that of Sola-Morales. In *Imagining Nothingness*, Koolhaas speculates that the grand gestures, the imposing logic – paper diagrams far removed from the sites they are intended for – applied by architects to urban space, originate from a fear of the void, a fear of nothingness. The nothingness present in the metropolitan void unsettles the stability of the urban solid.

Sola-Morales describes the role of the architect as being problematic, in that it imposes limits, order and form, introducing into space the elements of

identity necessary to make it recognisable, identical and universal (Sola-Morales 1995:122). A schism exists between architecture which operates on the side of forms, described by Gilles Deleuze as being distant and favouring the optic or figurative, and the divided individual of the contemporary city who looks for forces instead of forms, for the incorporated instead of the distant, for the haptic instead of the optic, the rhizomatic instead of the figurative (Sola-Morales 1995:123) in their lived experience of the city.

The delicate interplay of architecture and urban void is summed up when Koolhaas writes:

"Where there is nothing, anything is possible. Where there is architecture, nothing (else) is possible (1995:199)."

This statement recognises the latent potential of the terrain vague and, while it refers to the limits which architecture impresses on space and seems to caution against the indiscriminate use of architectural intervention in this type of urban terrain, it does not negate the opportunity that the insertion of architecture into an urban void could effect.

In a second, opposing view; urban void, imprecision of limits and dissonance are celebrated conditions. The terrain vague represents a counterpoint to the imposed order of over-inscribed urban narratives and the dominating influence of consumption on the city.

The work of filmmakers, photographers, writers, poets and artists inhabit the margins of urban space. This is space liberated from a deterministic urban identity and a prevailing homogeneity. Here, is creativity charged with the impetus to preserve the strange and alternate space in its position outside of the continuity of urban space. Sola-Morales likens the ecological struggle of conserving unpolluted environments in nature, mythicised as the unattainable Mother Earth, to contemporary art's reaction to fight for the preservation of these other spaces in the interior of the city (1995:122).

This other space is not subject to the commanding influence of commerce and economic productivity on public space in the city. What exists here is the opportunity for spontaneity, for activity not

accommodated for in urban structures of consumption and order. Unscripted space can be appropriated creatively by any city dweller. Such a freedom translates to human behaviour in space. As a member of society, of a community, our behaviour in space has already been directed. It is physically as possible to scream aloud in a busy public square as in an empty church. Henri Lefebvre describes this as an adherence to spatial codes:

"It is clear, therefore, that a spatial code is not merely a means of reading or interpreting space; rather it is a means of living in that space, of understanding it and producing it." (Lefebvre: 47-48)

Within the terrain vague lies the potential for inhabiting space, for experiencing the city, in new and different ways.

If pursued to its extremities, an approach like this finds its limits in romanticised readings which leave the space untouched, that is, which do not engage with the reality of the site. Terrain vague is generated from the motions of a mutable city. This 'other' space should not be idealised to a point where it becomes disconnected from the, often violent and seemingly negative, forces which have acted upon and shaped the space. It is also important to consider that, in reality, the forms of marginality invited by this leftover space will not always be that of liberation and creativity, but will also include activities which find expression in urban places of seclusion like crime, drug-use, inhabitation by the homeless and the collection of waste.

Site - Rupture

A rupture

My approach to this site of *terrain vague* has been a simultaneous reading of both dialogues, of order and disorder, not only in opposition but as conditions which are interdependent, which manifest a latent tension from which architecture can be generated.

"The contrast is not between the contained and the open, as though the only possible response to a form of restriction or containment would be the elimination of all borders and thus the creation of the purely open." (Benjamin 2010:40)

In *The Terrain Vague as Material – Some Observations*, Luc Levesque introduces a discussion of 'interstitial' space as a means of integrating the seemingly opposing notions of order and disorder which allows for the extra-ordinary conceptual and experiential dimensions of the terrain vague to be explored.

The term *interstice* has come to describe places of 'otherness' (Levesque 2003). Etymologically, the term *interstitial* refers to an in-between condition. Interstitial space deals with inconsistencies. Today, intervention in the contemporary city should not aspire to assimilate residual space with the productive city or try to align it with a predetermined order which is inscribed onto the urban fabric. Intervention in the *terrain vague* should acknowledge the value of operating as the 'other'.

Levesque exposes potential for intervening in the *terrain vague* in considering interstitial space as resurgence of the urban wild (2002). The urban wild refers to the raw environments which expose the contradictions suppressed by society and its composed urban environment, which emerges at the convergence of the city's prefigured order (top down forces) and the appropriations of urbanity (bottom-up motions). This wilderness reflects the forceful projections of infrastructure, grids and zoning onto the urban condition, but also expresses the resilience and creativity of the systems operating within and transforming these impositions. The reality of a raw urban wilderness, which embodies the inconsistency of the urban condition, figures a rich set of parameters from which to design.

If difference is to be acknowledged in the territory of the *terrain vague*, as both an inevitable condition of a mutable urban system and as an opportunity for intensifying the experience of urban space, the notion of *rupture* can be used as an entry point.

'The break is viewed as an intrinsic principle of urbanity and its spatial implications investigated through the manipulation of the architectural form.' (Angélil 2003:337).

Rupture signifies an inconsistency, a break in the coherence of a city. It recognises the differences and conflicts which emerge from and organise urban space. It articulates, lengthens and prolongs lines of difference. It is a concept which pursues incidents of disruption (Lefebvre 1970) and the experience gained in intensifying the discontinuities which surface in a heterogeneous urban system.

Rupture is also a concept which recognises the fluid nature of a city. The city is a system which will continue to expand and change, and is able to smooth over any breaks or discontinuities. The city can be shattered or disrupted and it will emerge again along both new and previous lines of development (Deleuze, Guattari 1987:9). In the same way, the ruptures will move and appear elsewhere in the urban terrain.

When rupture is used as a strategy for creating an intervention for this site it attempts to amplify the inconsistencies of this territory and gives attention to the continuity of the qualities and interrelation of parts which maintain the *terrain vague* of this site in space and time.

Site - Rupture

The development of a site rupture

This chapter illustrates the initial stages in the design development of the site rupture.

Opposite is one of the first conceptual sketches made of what the rupture might be on site.

The space directly above the highway is occupied by cars.

The space below the ground in unoccupied.

The space between the highways and the ground forms the delicate *terrain vague*, a space with extra-ordinary spatial and experiential characteristics.

At this point, my conception of a rupture was that it could be something which would insert a programme into the subterranean space - which does not disturb the critical features and qualities of the terrain vague but layers another meaning onto the site. A programme which draws people to the site. This would be a private space in that it accommodated the rituals of a programme. Then, at certain points, this programme could rupture, bleeding into the space of the terrain vague, drawing private space into the public and bringing the terrain vague into the realm of the city dweller's experience. The rupture lengthens, prolongs, intensifies lines of experience.

This initial idea progressed into the rupture acting in both subterranean and surface level space. The intervention then engages more actively with the spatiality of the terrain vague instead of shying away from it but is still careful to not overpower or destroy it. To remain consistent with this idea, a decision was made that the built volume of the interventiion should not 'fill-up' the volume beneath the highways.

A

Climax of spatial and experiential characteristics of site - light and shade, volume, visual image;

From a position as an observer of the whole
- changing spatiality (rhythm)

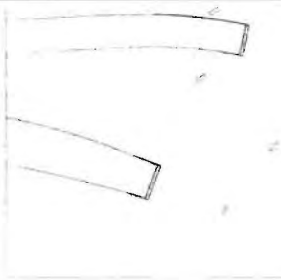
Constraints set by existing structure
superstructure - column grid structure, gap
- compressed volume
substructure - specific parameters for intervention below ground set by foundations

Position immersed in the terrain vague

On the main access road to the site (Old Marine Dr)

Site edge adjacent to train tracks (sound + visual event)

B



NORTH

SOUTH

Constraints set by existing structure
superstructure - overhead bridges open up around this location
substructure - large potential volume for intervention

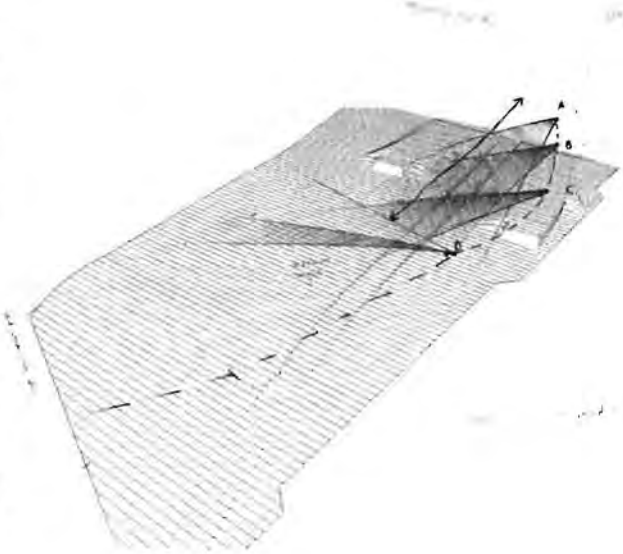
Site edge which connects with the central city
- physical connection to BRT node at the Civic Centre
- THRESHOLD between the city and the terrain vague

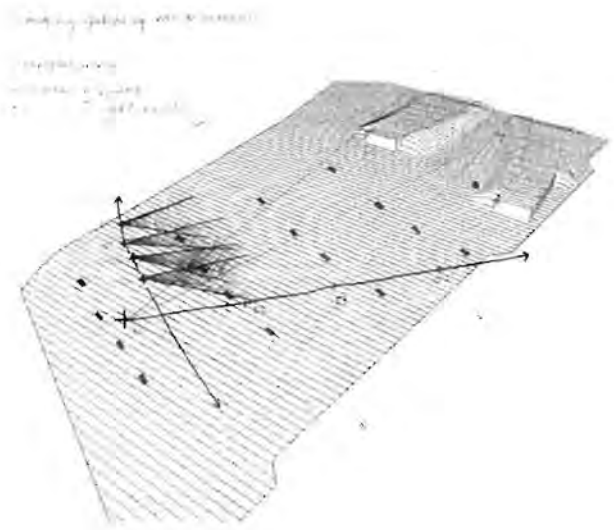
Visual connection with mountain to south

Visual connection to highway entry journey (onramp)

BRT route retained in position - pos + neg

RUPTURES
Hypotheses explored through scenarios





Several basic design decisions and strategies emerged from studying the site.

1. Finding the points of rupture on the site

From studying the site, two points with significant potential were identified.

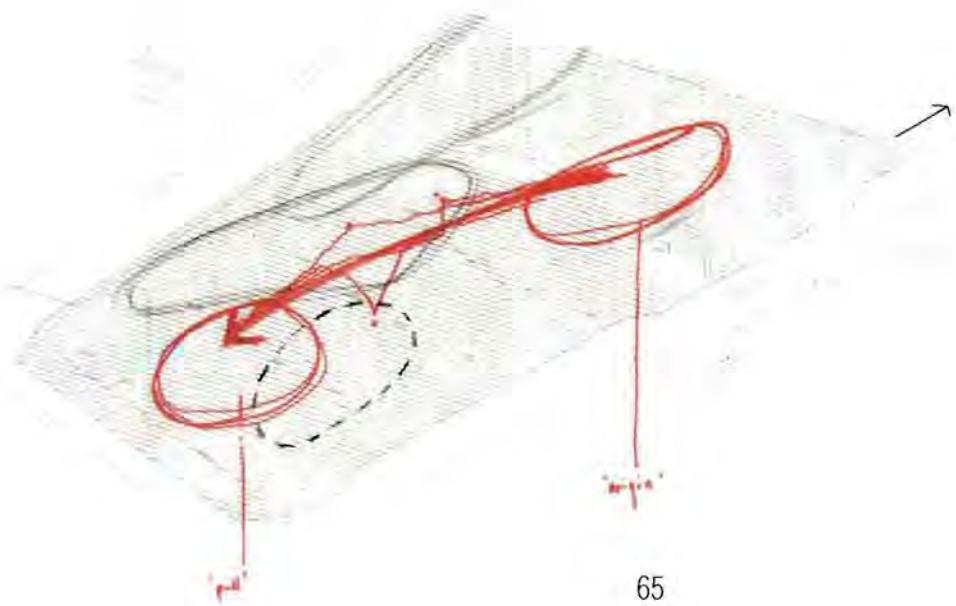
The diagram on the left describes the two points and why they are important.

The diagram above speaks about the change in which the site is experienced and perceived as the observer moves through the space.

2. Public movement and Positions A and B

The diagram below describes each point's significance in relation to the other. Position A is a point at which the site's evoctive qualities are most pronounced. This becomes a draw or pull space. Position B is a space through which the majority of pedestrian movement flows. The overhead highway ramps open up around position B and it can be described as an entry point or origin. The space between these two points is already used as an informal movement route between the central Foreshore (BRT node at the civic centre) and the central city (train station) and the railways. The intervention aims to integrate this movement path into the design. This path brings a flow of people through the site and into contact with the activity which has been inserted on the site. Potential also exists to address the relationship between people and the site, to heighten the experience of the 'forgotten' space.

2



3. The Broader Context

This drawing attempts to show the scale and grain of the intervention on the site as it relates to the broader context of the city.

Site - Rupture

The development of a site rupture

Topographical Studies

A number of topographical studies were done to test how the surface of the ground plane could be manipuated to facilitate a rupture of the site.

The shape of these earlier surface manipulations were based on the site and tried to address issues of:

public movement - experimenting with where pedestrians could move, taking into account pragmatic conditions such as the shortest distance between a location and a desired destination as well as paths which amplified the experience of/with the site.

site constraints - limits set by the highway structure (above and below ground)

key points on site - exploring different spatialities and forms which would reveal and amplify the positions identified as key points on the site according to their roles in relation to each other and to the site as a whole.

The following three drawings illustrate a progression of surface manipulations which overlay onto each other forming a scenario on the site.

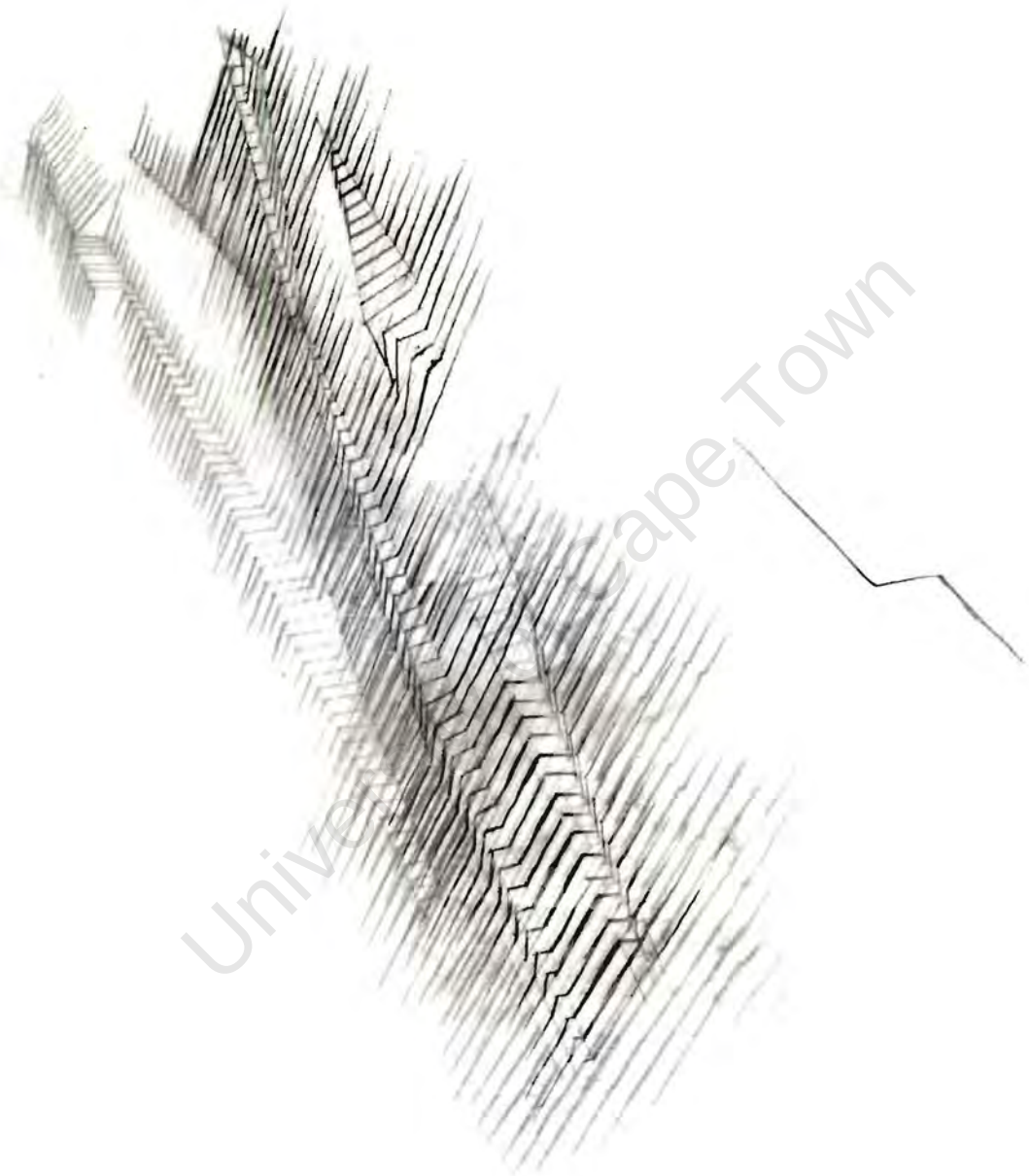
001 position A
potential space to insert activity

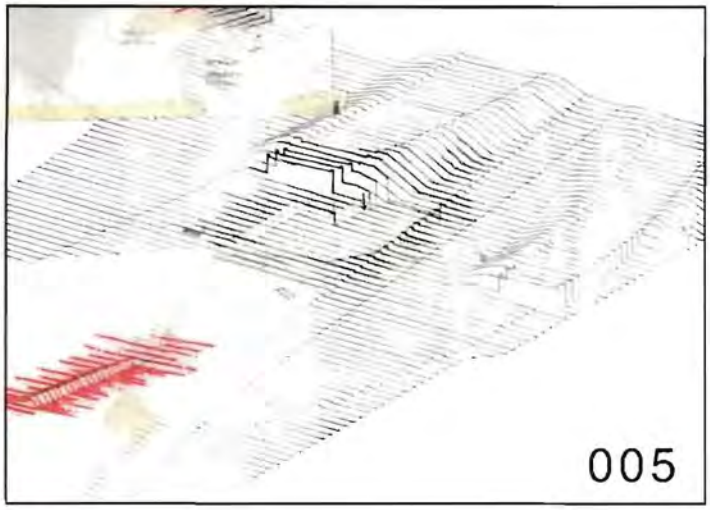
002 position B introduced
potential as a public space which relates to the activity

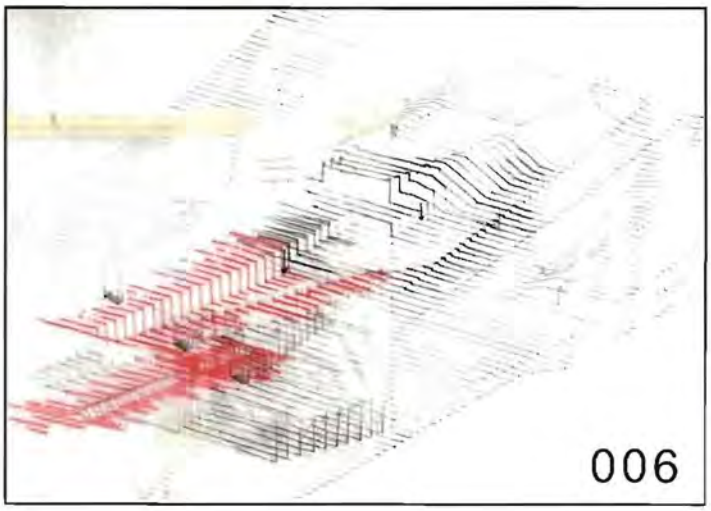
003 smaller 'fissures' are introduced which intervene in the spaces on the site which are restricted because of site constaints from the highway structure.

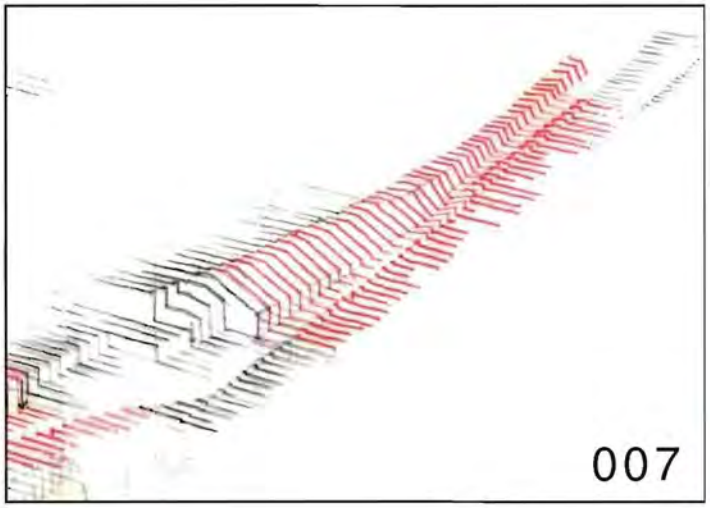
001

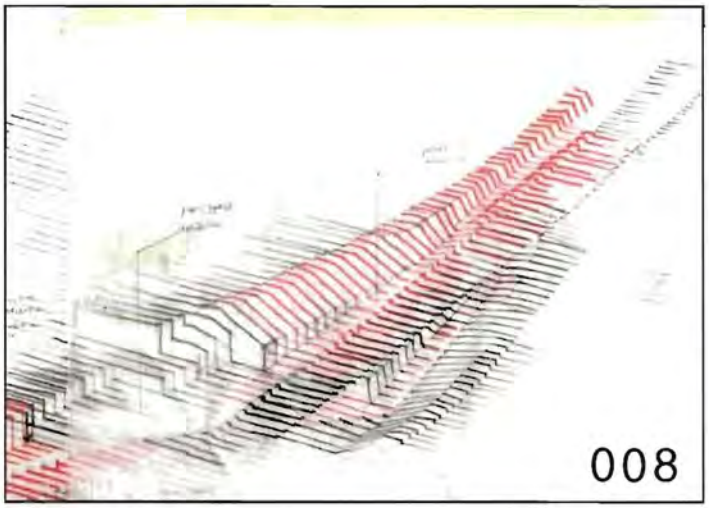
RUPTURES
Hypotheses explored through scenarios





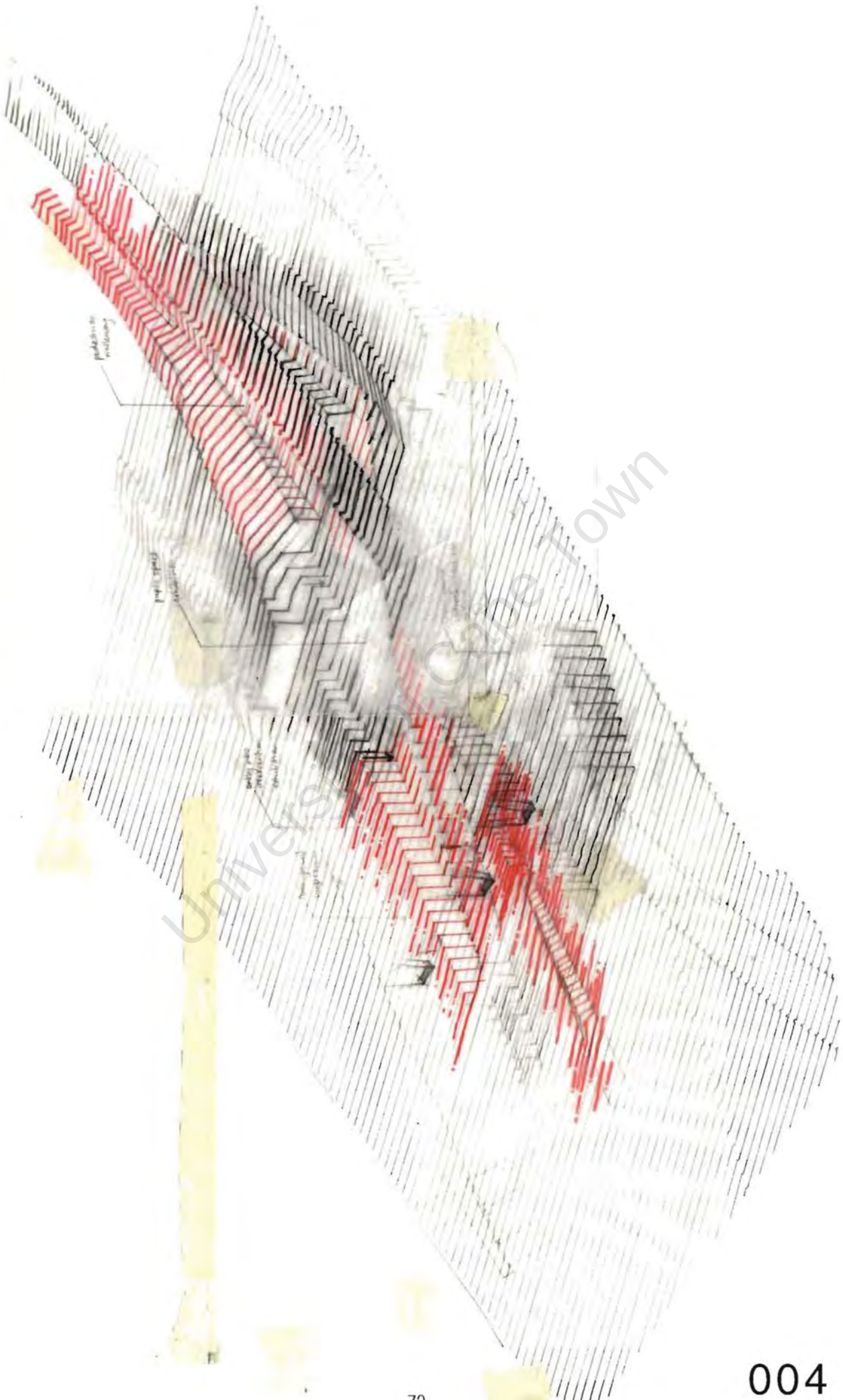






Topographical Studies

These drawings explore the trajectories of the critical nodes (position A and B) on the site. In the context of this design a 'trajectory' refers to the influence of that point as you move away from (or towards) it.



004

TRAJECTORIES
The projected paths of the rupture

SITE - RUPTURE - PROGRAMME

This section will discuss the process of selecting and developing the activity which is inserted into this terrain. It also documents the design development of the site rupture after a programme is introduced.

Site - Rupture - Programme

Developing a site activity

The criteria against which the programme was tested were:

- That it acts as an anchor (permanent energy in the site situation) and generates event (changing energy)
- Should engage with the site without destroying the *terrain vague*
- The programme should be a rupture in relation to the broader site scenario (on a city scale)

The approach to developing a site activity was similar to the way in which the design was generated. Different, thoughtful, scenarios were tested in the site situation. It is a process where the consequences of a scenario are evaluated and the idea is either discarded or refined.

Early on, a decision was made that the programme did not have to have a direct connection with the marginal activities which occur on this site and in other sites of *terrain vague* (like a homeless shelter or a brothel). Those activities find expression in these overlooked spaces precisely because they are 'other' spaces which formed outside of the productive circits of a city as it developed. Because those activities can exist there is not an indication that a programme linked to one of these activities woud be the most suitable or powerful form of intervention for that space. Potential exists to use the space creatively and in a way that facilitates an encounter between the general city and the *terrain vague*.

One of the first ideas explored was relocating the headquarters for the Institute of Architects to this site under the bridges. A strength of this idea was that is draws spatial practitioners to the site who are potentially more inclined to appreciate the site's extra-ordinary spatial qualities. It also gave a lot of freedom in designing a range of experientially driven spaces (like exhibition and meeting places). A significant shortcoming in this scenario was that it drew a very narrow scope of the urban population to the site (architects and people closely related to the field of architecture). It was important that the activity would relate to a greater diversity of urban dwellers and so hopefully have more relevance within the city.

Other art forms were explored as entry points into a programme which enhances the otherness of the site. A programme related to art (like a gallery) was still too insular. Music is an art form which relates to a greater

diversity of people. A recording studio and performance space was a scenario tested through the site. A site under a highway and next to railway tracks is the most unlikely location for a recording studio. While a recording studio in that space is a strong commentry on contrasting two conflicting ideas, which aligns with the action of rupturing; the strict sound isolation requirements for a music studio completely isolates the activity from the site and questions whether this is an activity which could happen anywhere and whether it is then a sufficiently influential intervention for a site of this nature.

The programme selected picks up on the acoustic qualities of the site, recognising sound as a quality which is itself marginalised. It is driven through the process of South African sound artist James Webb. His work often deals with the relationship between the city and sound.

The programme selected picks up on the acoustic qualities of the site. It recognises the particular soundscape (generated by a constant flow of cars on the highway and an intermittent rhythm of the trains passing on the railway tracks). It also acknowledges sound as an 'other' sense and draws on this marginality to enhance the otherness of the site while still inserting a meaningful activity which engages with the *terrain vague*.

The programme has a hybrid nature. It combines a studio / residence for south african sound artist James Webb with an installation or performance space for both his work and the work of other artists. James' work often deals with the relationship between the city and sound where architecture is the condition in which this relationship is explored. The artist's studio is a private activity which brings a permanent energy to the site. This activity begins to bleed into the public realm through a set of installation spaces with varied heirarchies of private-public relationships.

The public realm of the intervention engages with the noise of the site. It amplifies the found site sound and also layers the new sounds of people moving through and interacting with the site onto the existing sound. The artist's studio creates an environment within the noise that is silent, in which completely new sounds can be created and experimented with. The installation space is a mediator between these two spaces, which exists outside, in the space below the highways but also acts as a space in which new sounds can be introduced through the performances and installations. This intervention can be described as a *soundpark*.

James Webb recording the sounds of a dog attacking a human in a protective suit for his latest project to be exhibited in France

Site - Rupture - Programme

James Webb

To design the space in which James works required an understanding of his design and work process.

Certain spatial and programmatic requirements emerged in observing his process and in discussion with him:

- acoustically isolated space for sound recording, playback and editing
- an 'assembly line' for building and testing artworks
- space for rest (for sleeping and as a breather from a work space)

James' work place is a transitional space. It is the space in which sampled material is thought and worked through, after which it is put back into the context it originated from or into a specific context elsewhere. Only half of the artwork happens on site. His studio becomes a 'world within a world' in that it should be able to accommodate all the worlds that he has to work with and bring together in a project. This is the only space common to all of his projects.

Selected projects in colour, from left to right:

SATURDAY NIGHT CAN BE THE LONELIEST PLACE ON EARTH
Space World is a theme park in Yahata Higashi ward, Kitakyushu, Japan. It was created in 1990 by Nippon Steel when the company was downsizing its steel plant in the ward. Space World offers themed rides and attractions that attempt to portray the fascination of the "final frontier," but dwindling audience figures give the park a more desolate atmosphere. This artwork involved an 8-second hack into the Space World parking lot's public address system, interrupting their Muzak with ionospheric transmissions (impulsive signals emitted by lightning strokes relayed live using a VLF receiver) so that Space World could, on a lonely Saturday night, receive an actual message from outer space.

THERE'S NO PLACE CALLED HOME , 2005-
A recurring, worldwide intervention whereby specific foreign birdcalls are broadcast from speakers concealed in local trees, e.g. calls of South African summer birds broadcast from Japanese winter trees.

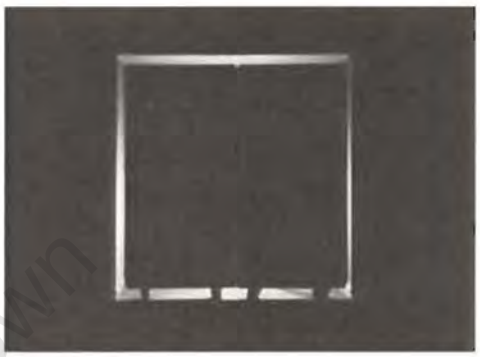
OST, 2009
A recording of Auferstanden aus Ruinen, the anthem of the Deutsche Demokratische Republik, sung a cappella by a lifelong East German resident within the defunct studio hall of the former party radio station in Nalepastrasse, Berlin, August 2009.

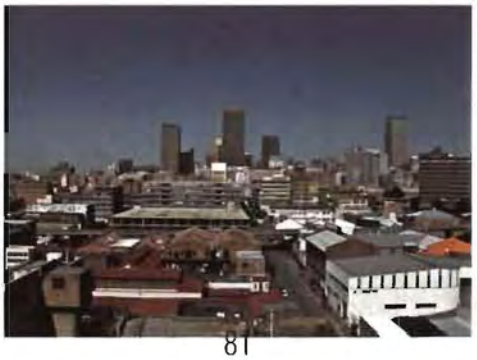
LE MARCHÉ ORIENTAL, 2008
A 2-minute intervention inside Cape Town's disused Oriental Plaza, an Apartheid-era shopping mall designed to control Indian trade. On the 4th day of Ramadan, 2008, Sheikh Mogamat Moerat of District Six's Zeenatul Islam Majid mosque was invited to sing the Adhan (call to prayer) inside the empty remains of the building a few weeks prior to its demolition to make way for luxury apartments.

WA | 2003
An imaginary Japanese DJ named Wa was booked to perform at a large Cape Town party. The artist invented her profile, composed the music she would play and sourced an unknown Korean tourist to learn basic DJ'ing skills and perform as Wa. Her original identity was kept a secret and the gig was advertised to the point where people were talking about Wa as if they owned her (non-existent) albums. Her performance of ear-splitting noise lasted 15 minutes in front of a crowd of over 1500 people. Titled 'Yumei na wa ju go pun,' and loosely translating as '15 minutes of fame,' the gig's highlights were broadcast on national television.

SIREN, 2010
A building is fitted with a powerful air raid siren, wired to a locked button. Only the collector and artist possess keys to the device, and it is contractually only to be used in the event of an 'aerial or ground attack.'[1]

1 All text and images taken from http//:www.theotherjameswebb.com





Site - Rupture - Programme

The development of the site rupture after programme is introduced

This section illustrates points or moments in the design development of the site rupture after the programme was introduced.

The diagram opposite describes interfaces identified and responded to in the design. These are inhabitable thresholds. 'Inhabitable' is a condition that is ever transient and implies the potential act of becoming inhabited.[1]

1 See Cruz, M. and Gage, S (2009). Interaction: Performance and Magic / Inhabitable Interfaces. In *Bartlett Designs: Speculating with Architecture*. London: John Wiley & Sons.

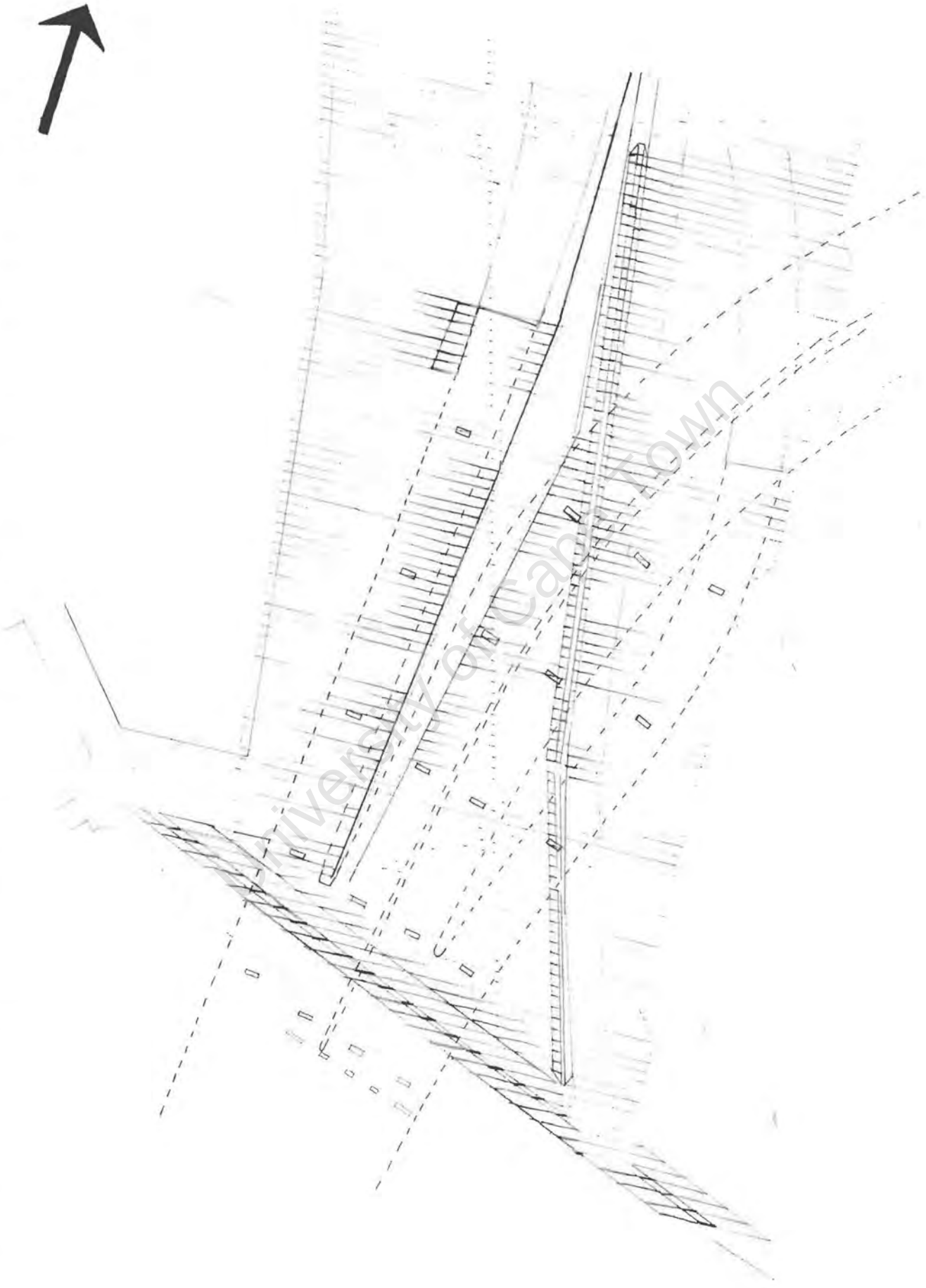
Framed View - Lion's Head

Framed View - Table Mountain

Framed View - Table Mountain

(009) This drawing illustrates how the ground surface responds to the interfaces identified.

Berms were generated along the lines where noise barriers were required. A path for the public space has been carved out. Activity fields sit in between these conditions which have been generated from the topography.



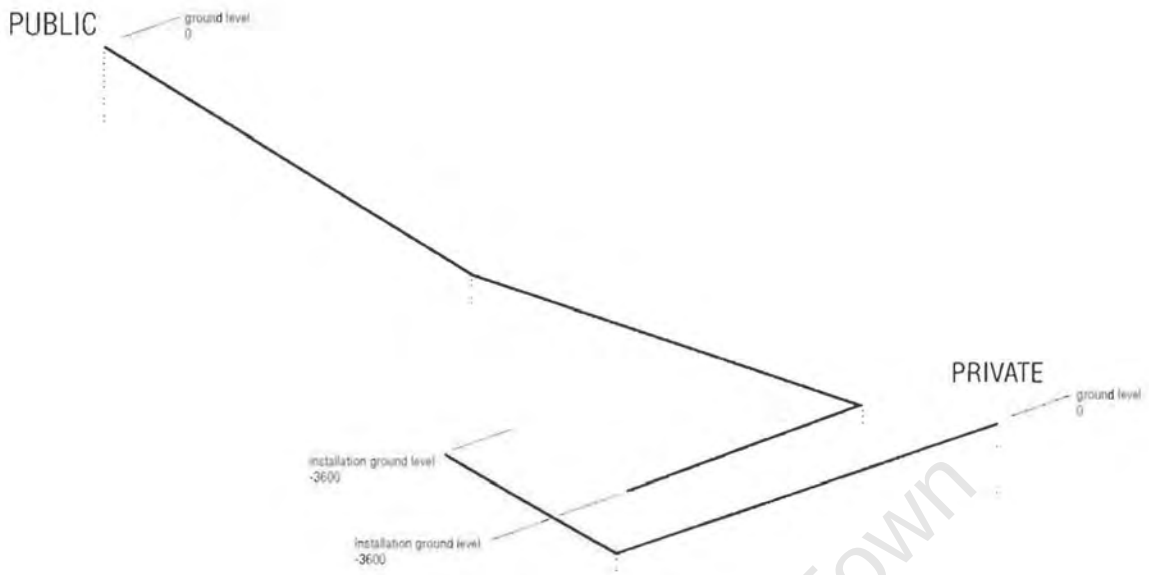
009

(010) This diagram describes the relationship between the private (artist's residence) and public (installation and public movement) spaces and how these activities are organised on the site.

(011) The solid black lines represent movement along paths in space. A surface has been associated to each segment of the site which is related to the programme The path of the black line connects these surfaces.

The line of public movement represented in the diagram is the primary entrance into the installation space. This is intended as a path which descends into the installation space and immerses the observer in the site and in the event. The experiential narrative of this path must be carefully considered and designed.

The activity of the studio has a separate, private narrative which physically connects with the public in the installation space. At the point where the public and private paths move past each other, a visual connection will be established into the assembly line / workshop space (most public of the private spaces).



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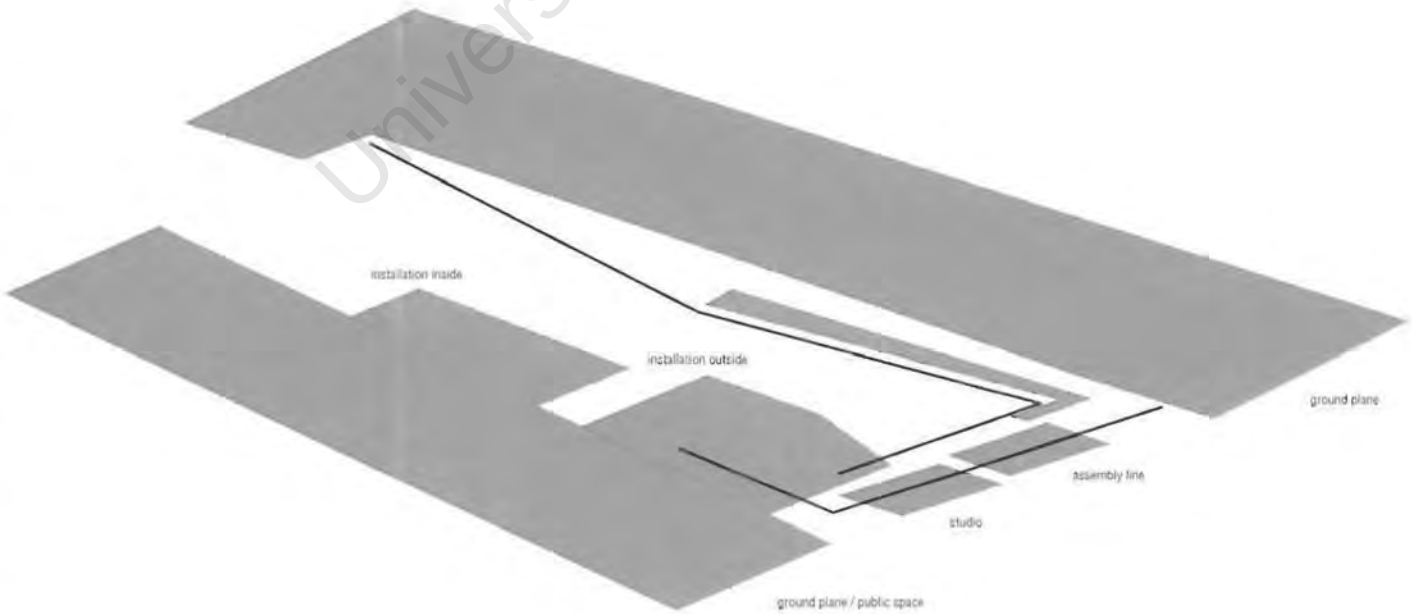
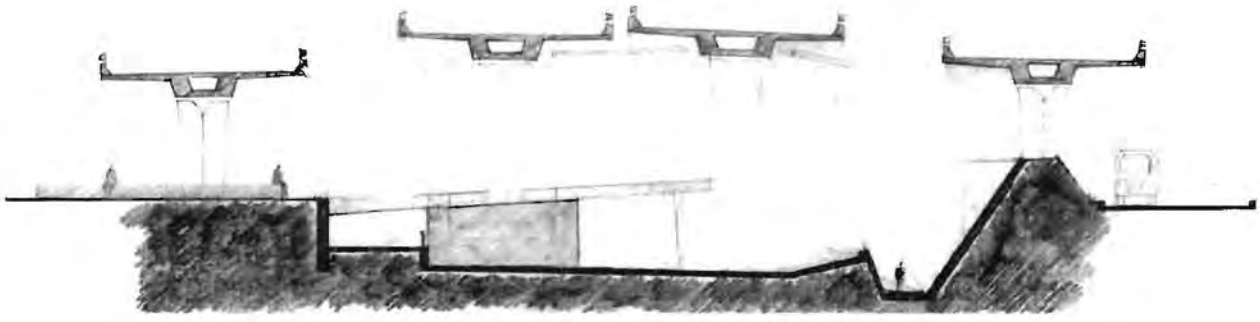


011

012

013



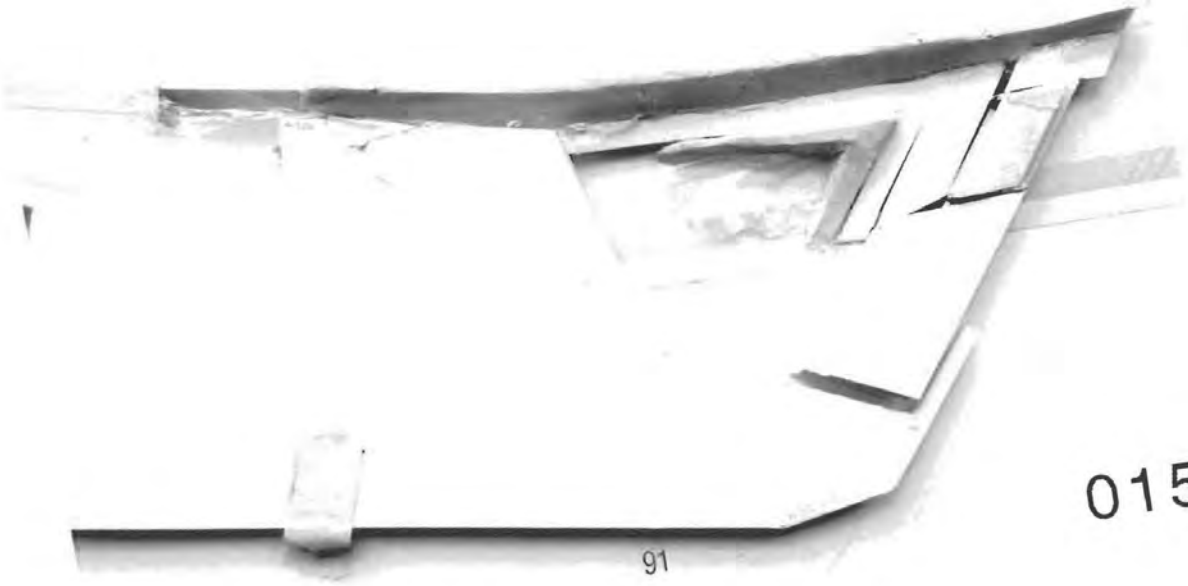
014

(012 - 014) Three sections cut along the length of the path into the installation space. These drawings illustrate the changing spatiality and relationship to the site (especiallly to the highways) as one progresses into the installation.

(013 - 015) A series of clay and triplex models were built during the design development of the ramp entering the installation space which tested alternative spatial sequences and designs.

013

014



015

These drawings by Catrina Stewart (Bartlett School of Architecture) of a stunt school depicts ramps, explosions, and airborne students flying on ankle cables over spun webs of emergency netting. The drawings illustrate events, the the path of the event and the object involved in creating the event.[1]

1 Images sourced from http://www.introducingart.com/Issue%2010/Hypothetically/Bartlett%20Architecture%20of%20Seduction.html

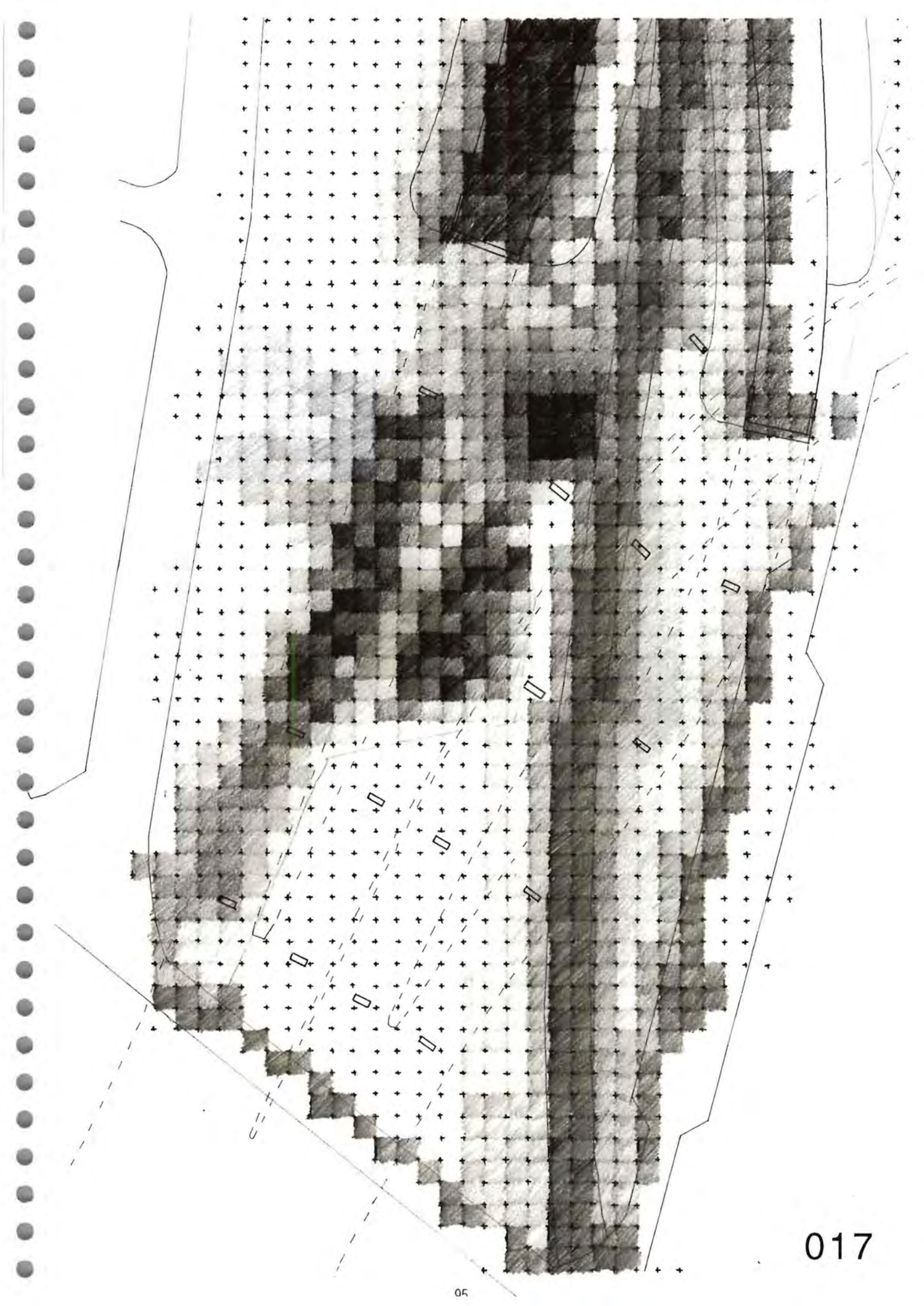
These drawings influenced the way the programmatic activities of the intervention were organised and designed, especially in relation to the public space which forms the 'noisy' component of the design.

Again, the 'noise' of the soundpark was designed by conceptualising scenarios. The object which engages with an action in the intervention is a person who enters the soundpark. The event which happens could be a game of soccer, sitting down to eat lunch, or walking through the space on route to destination. The action becomes an event in the space when people's actions cause a sound effect in the space of the site (a sound effect which relates directly to the volume, solidity, void, texture of the part of the site that that person is occupying and the nature of the activity). The sound event can be quantified in the physical effect that the soud has in terms of reflections. These reflections can be enhanced or dissipated by the architecture of the intervention and by the existing environment (highway) to create different acoustic moments such as echos, a bang, quiet, loud ambient noise, etc.

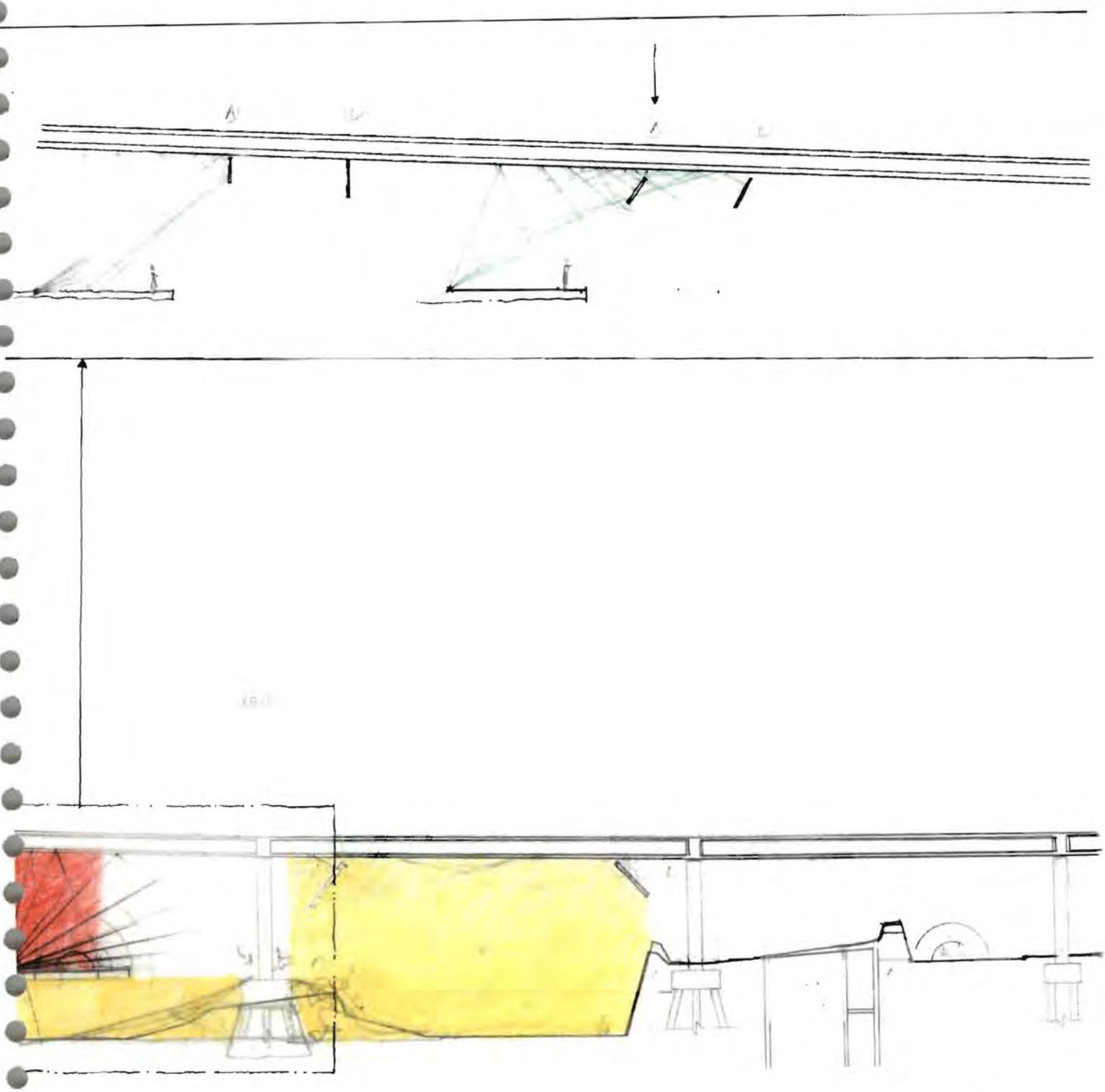
(016-017) Sonic Plans, to be read as one would read a ground plan but it represents the spatiality of the sound on the site.

(016) Sonic plan of ambient sound

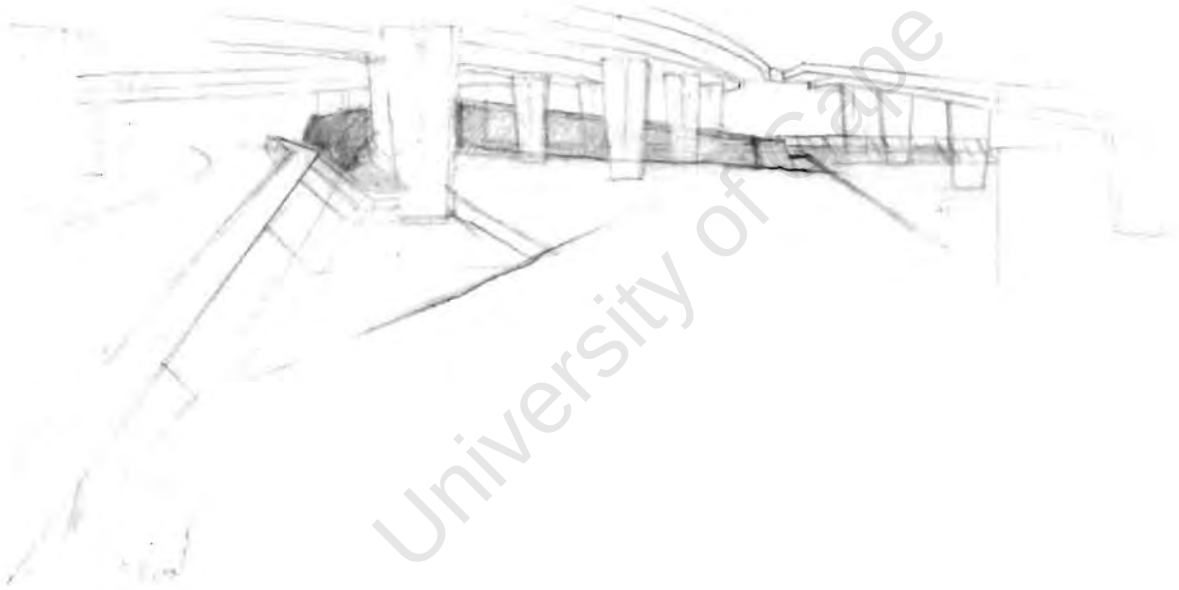
(017) Sonic plan of sound events



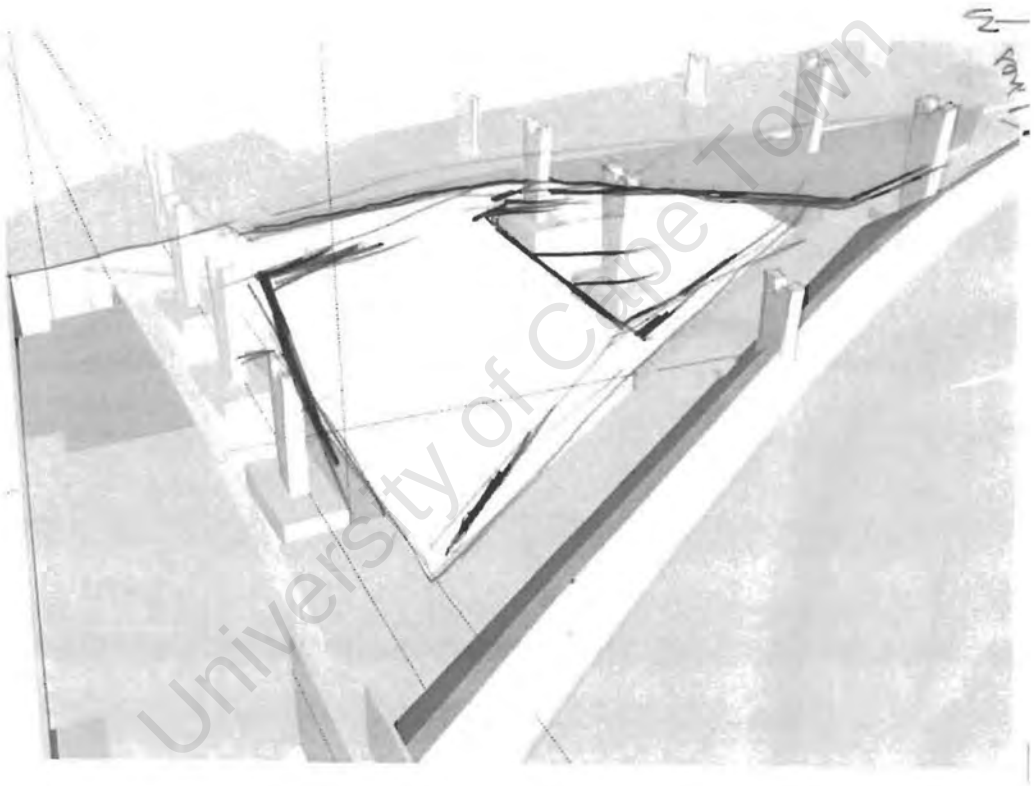
(018) Section along the length of the intervention illustrating the sound environment of the public 'noise' space, the installation space, and the studio.



Section B-B 1:250



design development sketch



design development sketch of the outdoor installation ground surface

SITE - RUPTURE - PROGRAMME - MATERIALITY AND MAKING

This section covers a technical investigation into the making of specific acoustic moments i.e. silence, bang, lound ambient sound, echo, etc.

Site - Rupture - Programme - Materiality and Making

Silence

The artist's studio is a point in the design that requires an acoustically isolated space in which sound will be recorded, played back and edited.

The sound isolation strategy investigated for the studio space was to create two separate skins for the studio - a primary structure or shell which is disconnected from an internal shell.

(019) Mass / Spring / Mass resonant system

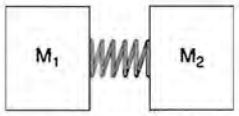
a a resonant system
if the first mass is set in motion, the force exerted on the spring will be resisted by the inertia of the second mass. Above the resonant frequency of the system, the spring will convert sound energy to thermal energy (heat)

b M1 is earthed and becomes of almost infinite impedence. If M2 were set in motion, it would oscillate at its resonant frequency until all the energy dissipated

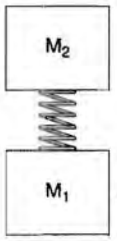
(020) The choice of floating system is dependant on the mass to be floated and the lowest frequency to which isolation is needed.

(021) Triple Isolation Shell with floated walls, ceiling and floor.

(019)



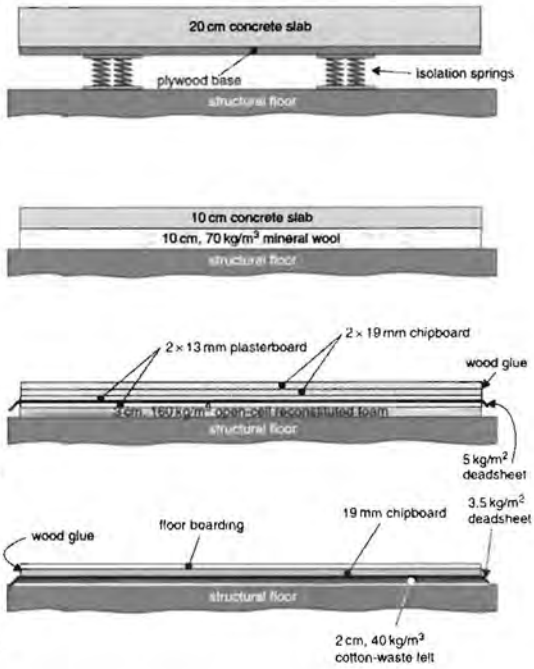
(a) mass-spring-mass



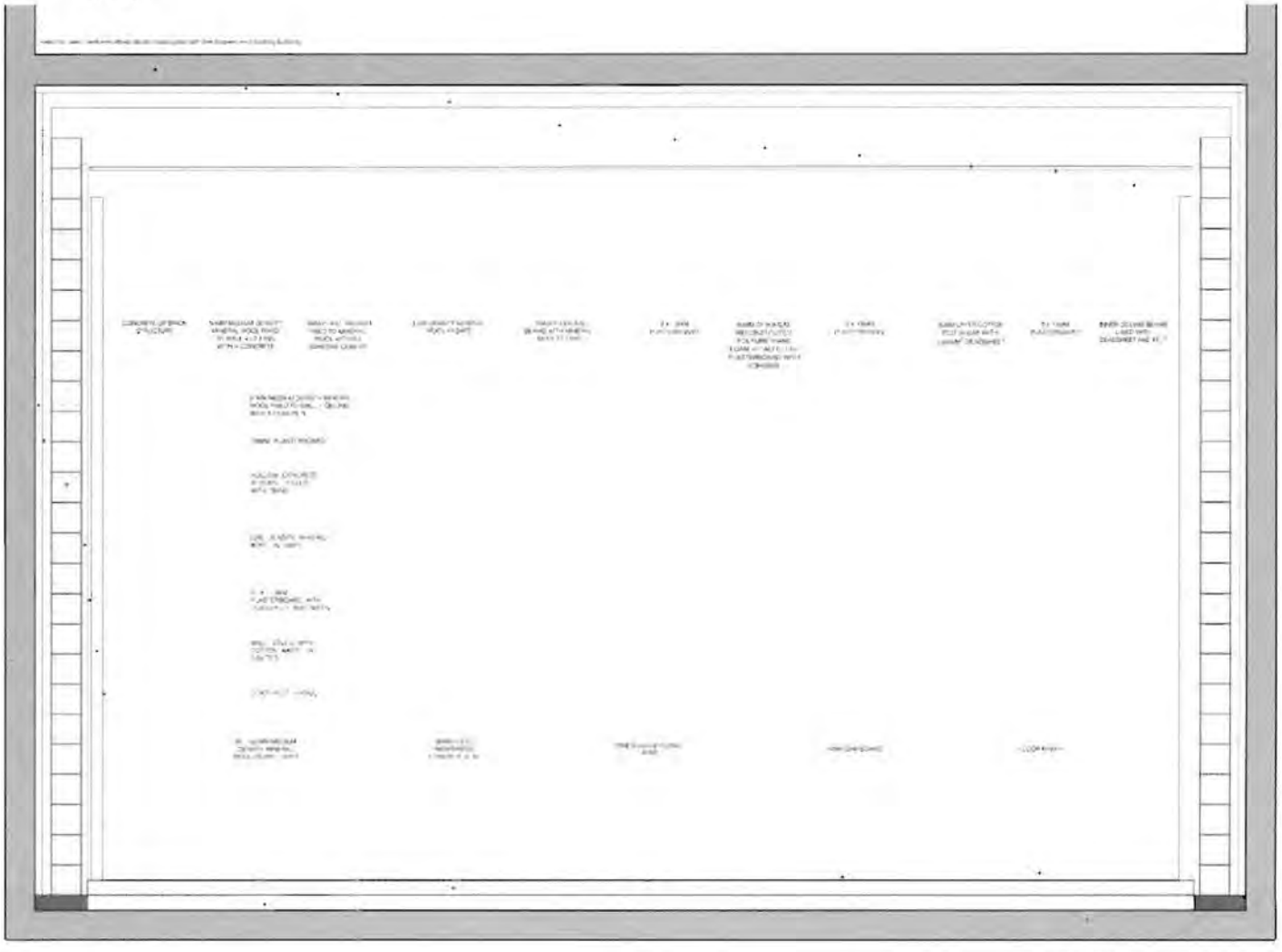
e.g. a solid concrete floor

(b)

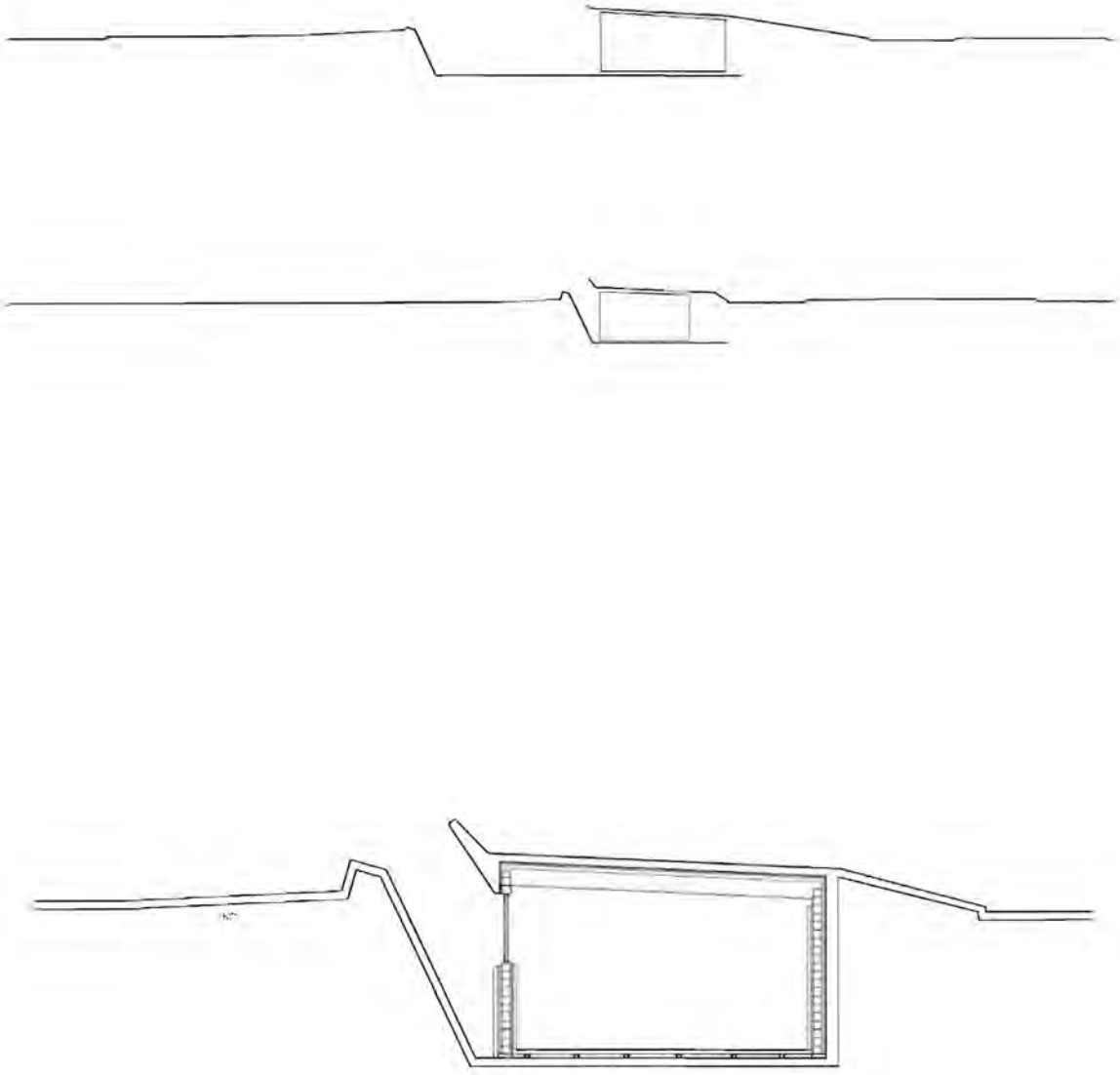
(020)



(021)



(022)



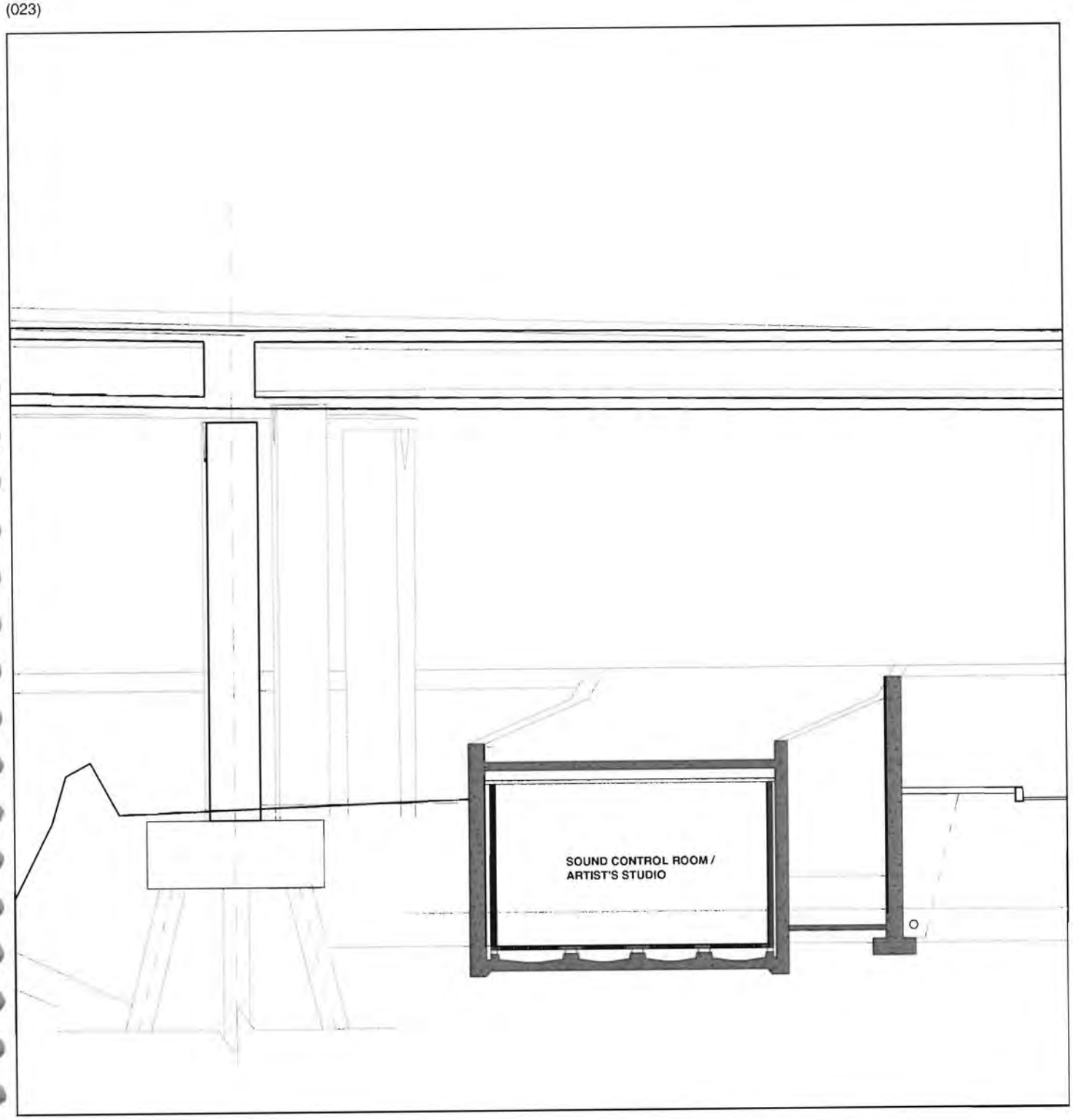
(022) Design development drawings of the studio on site

The studio is partly excavated into the ground. Since the watertable on the site is at 1200mm below ground level, the water pressure and waterproofing of the building were conditions that had to be dealt with in the design.

Common practice in waterproofing of basements is to create two layers to a structure, allowing water to move through the first layer, let it drain away to a sump while the second layer is waterproofed. This system in combination with a double skin sound isolation strategy would mean a triple layer sin for the studio space.

(023) A system was developed which combines the inner shell of the waterproofing system with the inner layer of the sound isolation system to create a double skin system that deals with both water and sound.

(023)



Site - Rupture - Programme - Materiality and Making

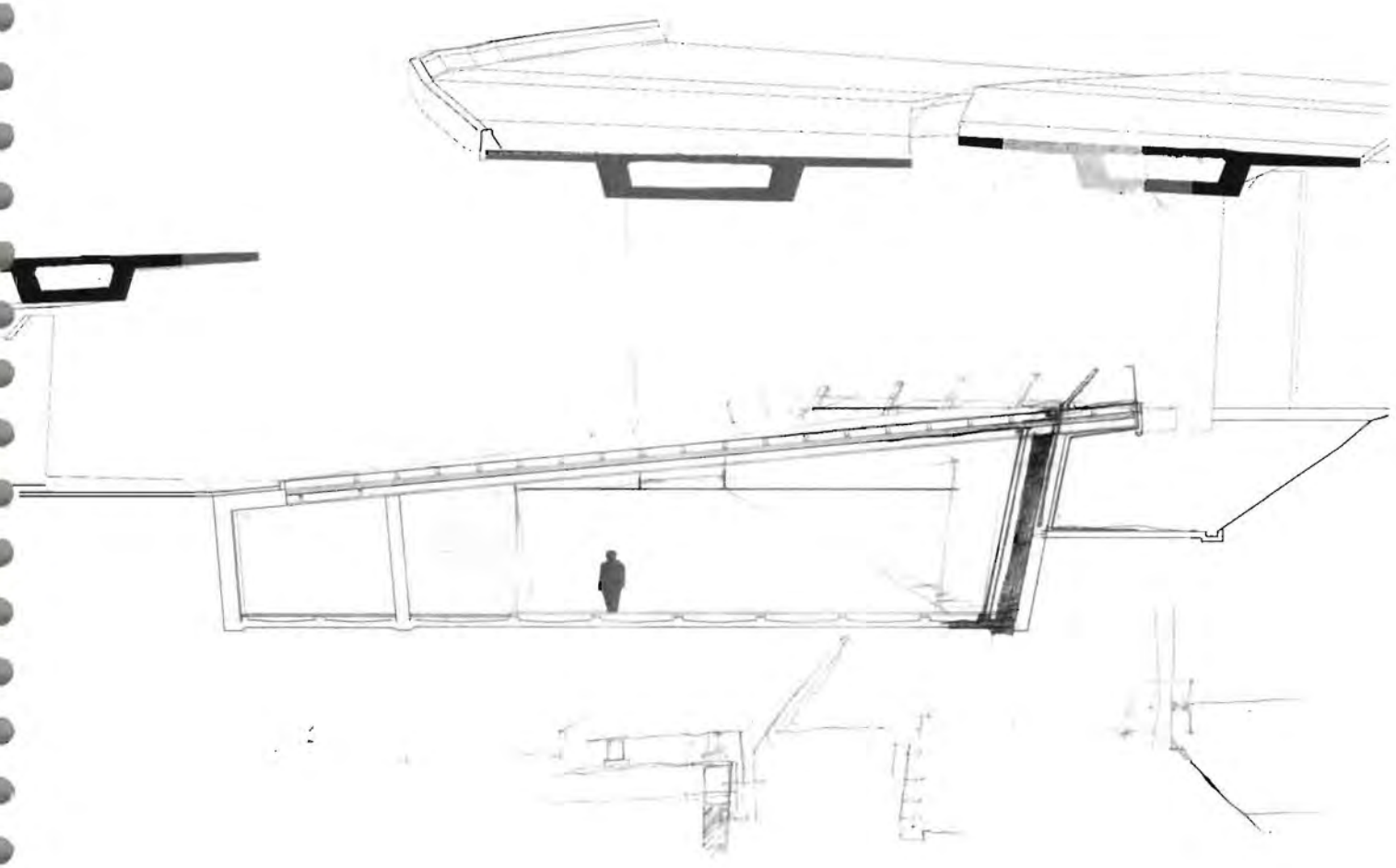
Silence, Bang, Echo / Reflection

The ground topography of the public 'noise' park folds to house a closed / indoor installation space underneath it. The surface of this fold is programmable and accommodates the services and techtonics required to achieve the desired acoustic results.

Public Space (Noise)

(024) The space above the ground belongs to the public and is the space in which noise is generated by people interactincg with the site. The surface of this part of the folding of the ground surface is designed to make noise as people walk on it. Two flat sheets of weathering steel are slot jointed (loose joint) to a support structure made of rectangular hollow steel sections by, which scratch and clang against each other.

(025) 3D model of the structure of the fold system as viewed from the public space to show the techtonic system of the ground surface.



024

025

026

Installation Space

(026) 3D model of the folded surface as it relates to the installation space (under the public space). Sliding rails which extend from a back service / storage room slide out into the installation space. Monitors, microphones, lighting and other equipment can be fixed to the rails from within the service room and then positioned across the folded surface which becomes the ceiling of this room.

This installation space needed to be isolated from the overhead sound. The noise-making ground surface above in built onto a concrete slab. Deep steel I beams separate the upper surface from the lower one. In the space between the slab and the installation ceiling, a foam sound absorption material is used.

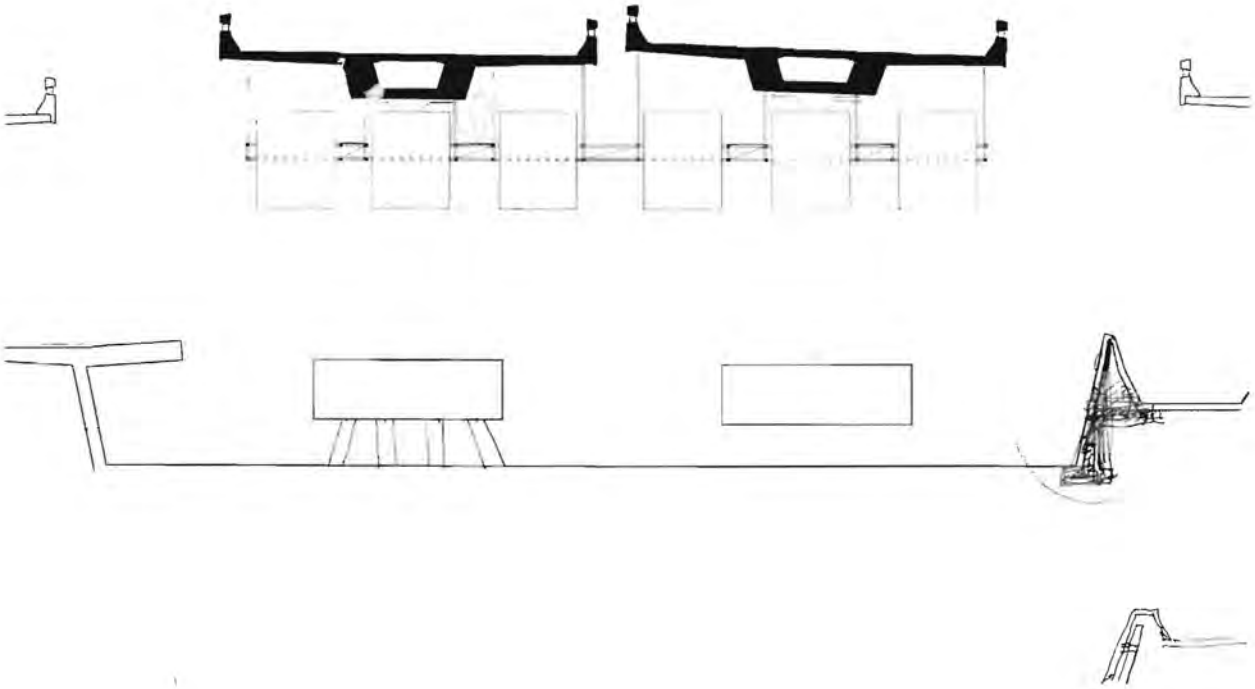
Site - Rupture - Programme - Materiality and Making

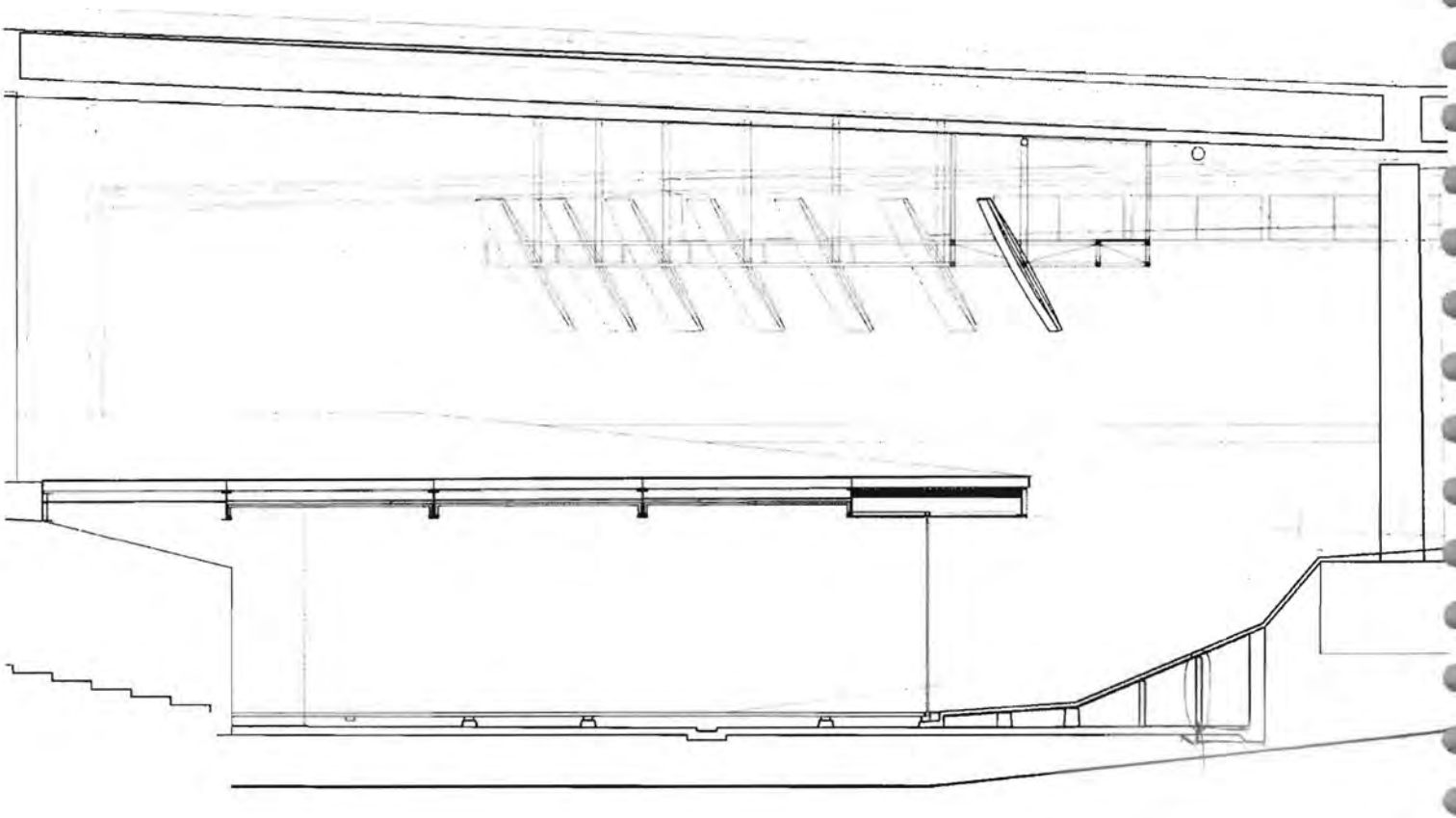
Variable Sound Environment

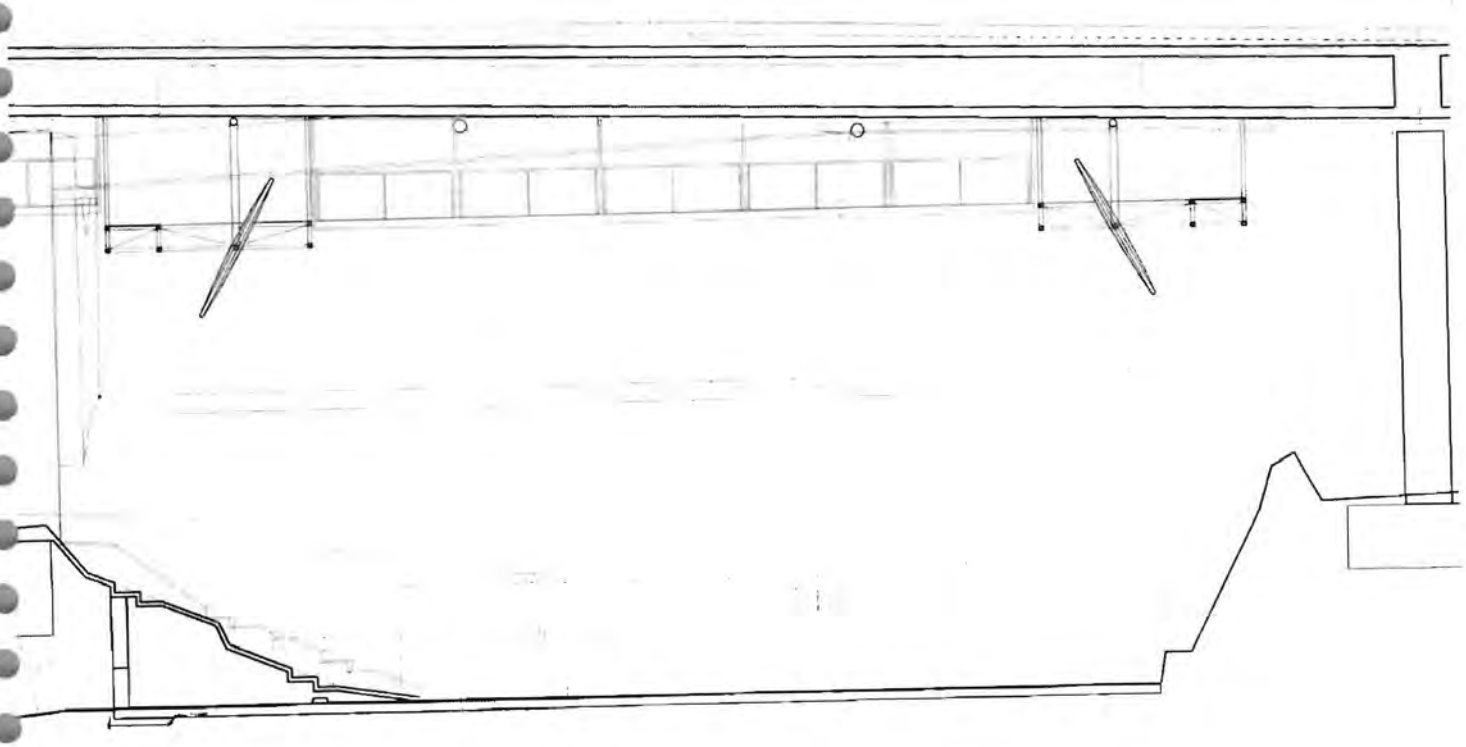
A layer of structure is introduced to the underside of the highways which which manipulates reflections from the open installation space. The acoustic environment of this installation space can be adjusted to suite a particular type of performance. The acoustic environment necessary for a live performance of sound / music (see project *Wa* by James Webb) would be different to the environment necessary for a performance that makes use of a small number of monitors (see project *OST* by James Webb).

The acoustic panels have one reflective side and one absorbent side and can be rotated 360 degrees with a geared pulley system which is managed from a geared control room by either the artist or a technician.

The reflective surface of the panel is made of weathering steel sheet. The absorbent side is constructed of a perforated cork panel over a porous sound absorptive material.







In Conclusion

Rem Koolhaas offers a suggestion of what it is to intervene in the void,

"Imagining Nothingness is:
Pompeii – a city built with the absolute minimum of walls and roof...
The Manhattan Grid – there a century before there was a 'there' there...
Central Park – a void that provoked the cliffs that now define it...
Broadacre City...
The Guggenheim...
Hilberseimer's 'Mid West' with its vast plains of zero-degree architecture...
The Berlin wall..." (1995:202)

At the outset of this project, I could not project to an expected result. My intention was to test whether architecture can be applied to a situation to reveal the potential that exists there. The process uncovered an exploration of a specific space in Cape Town. This project has been an imagining of what might have meaning in the Space benaeth the N2 Highways.

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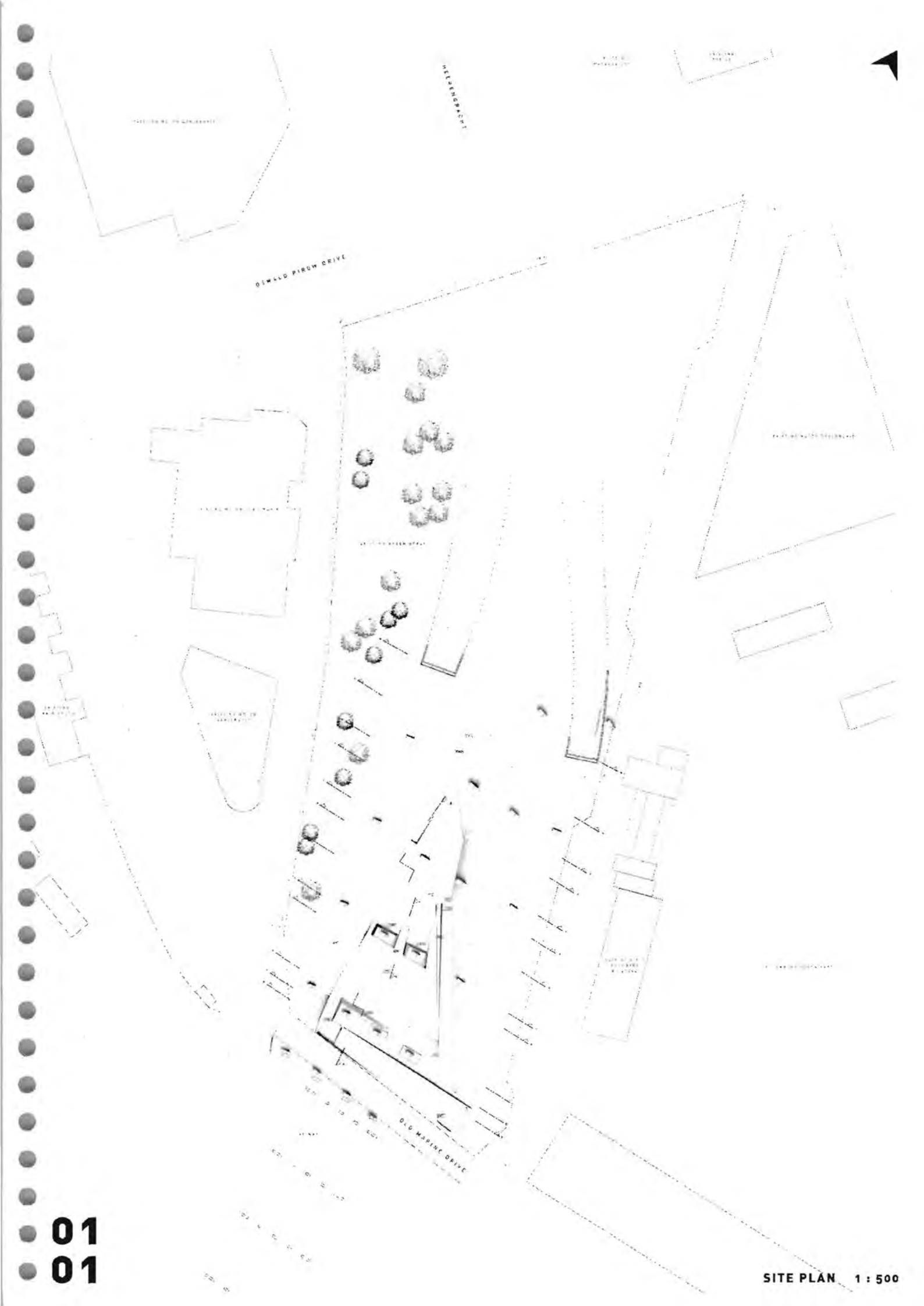
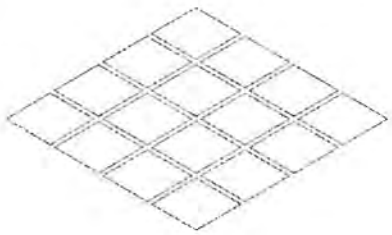
APPENDIX

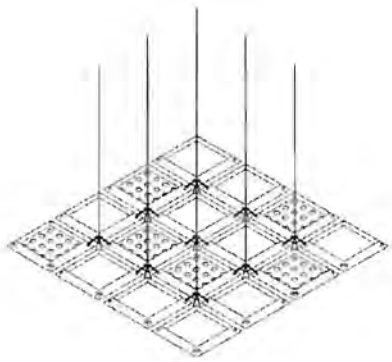
Final presentation drawings; not to scale

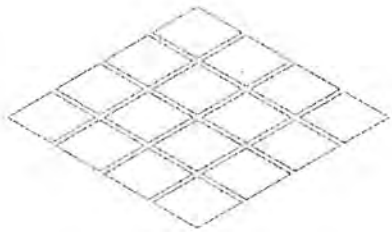


01
01

SITE PLAN 1 : 500

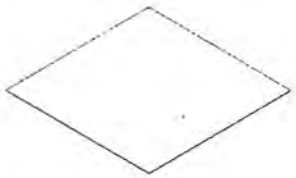


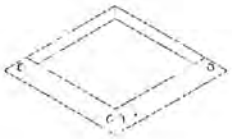




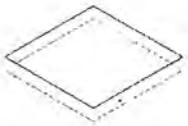
HIGHWAY STRUCTURE PRINCIPLE 1 : 50

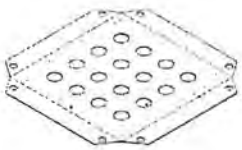
REFLECTIVE PANEL 1 : 20





ABSORPTVE PANEL 1 : 20





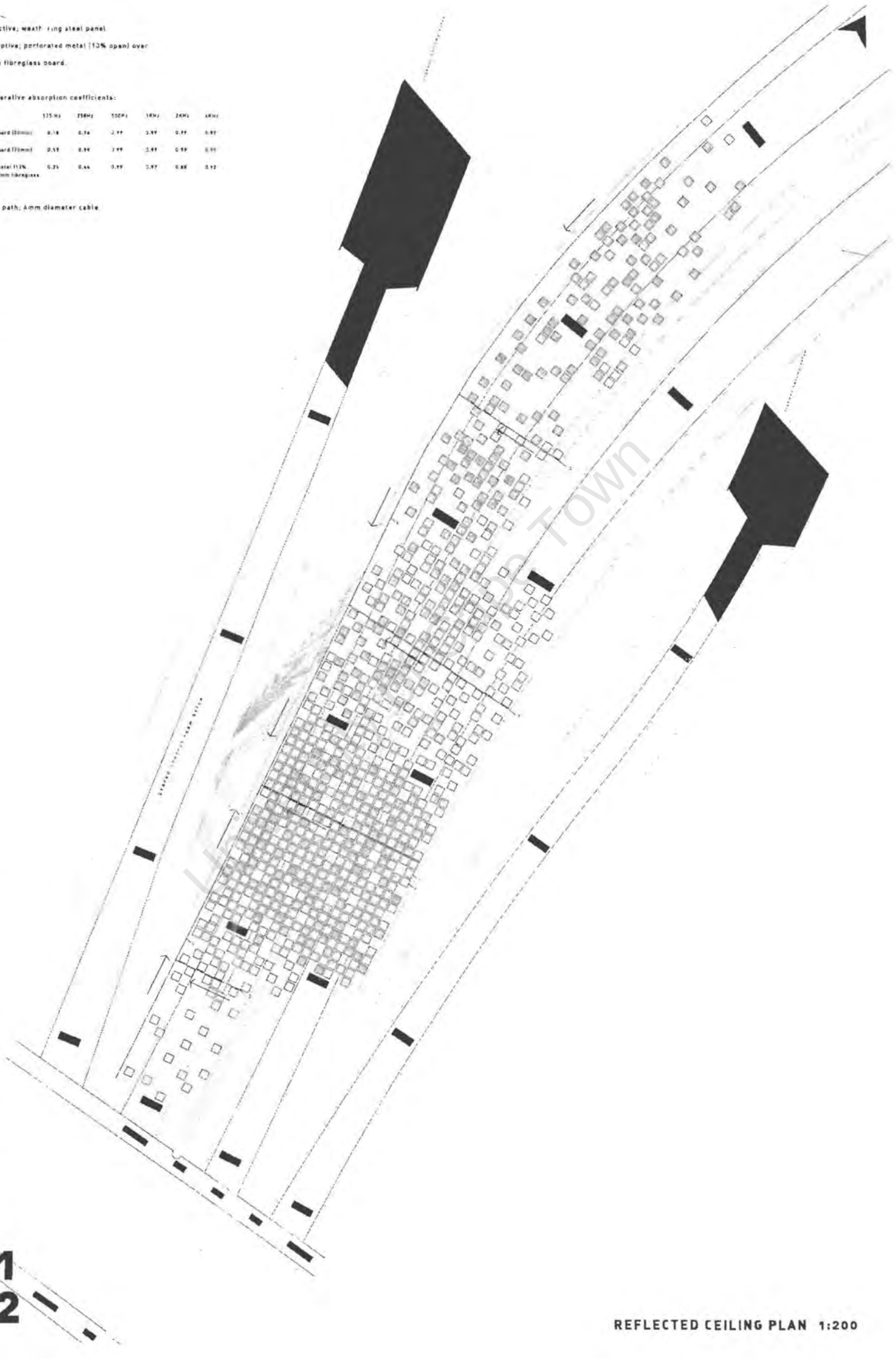
HIGHWAY SURFACE

1. Reflective; weath ring steel panel.
2. Absorptive; perforated metal (13% open) over 75mm fibreglass board.

Comparative absorption coefficients:

	125 Hz	250Hz	500Hz	1KHz	2KHz	4KHz
fibreglass board (50mm)	0.18	0.74	0.99	0.99	0.99	0.99
fibreglass board (75mm)	0.59	0.99	0.99	0.99	0.99	0.99
perforated metal (13% open over 50mm fibreglass board)	0.25	0.44	0.99	0.97	0.88	0.92

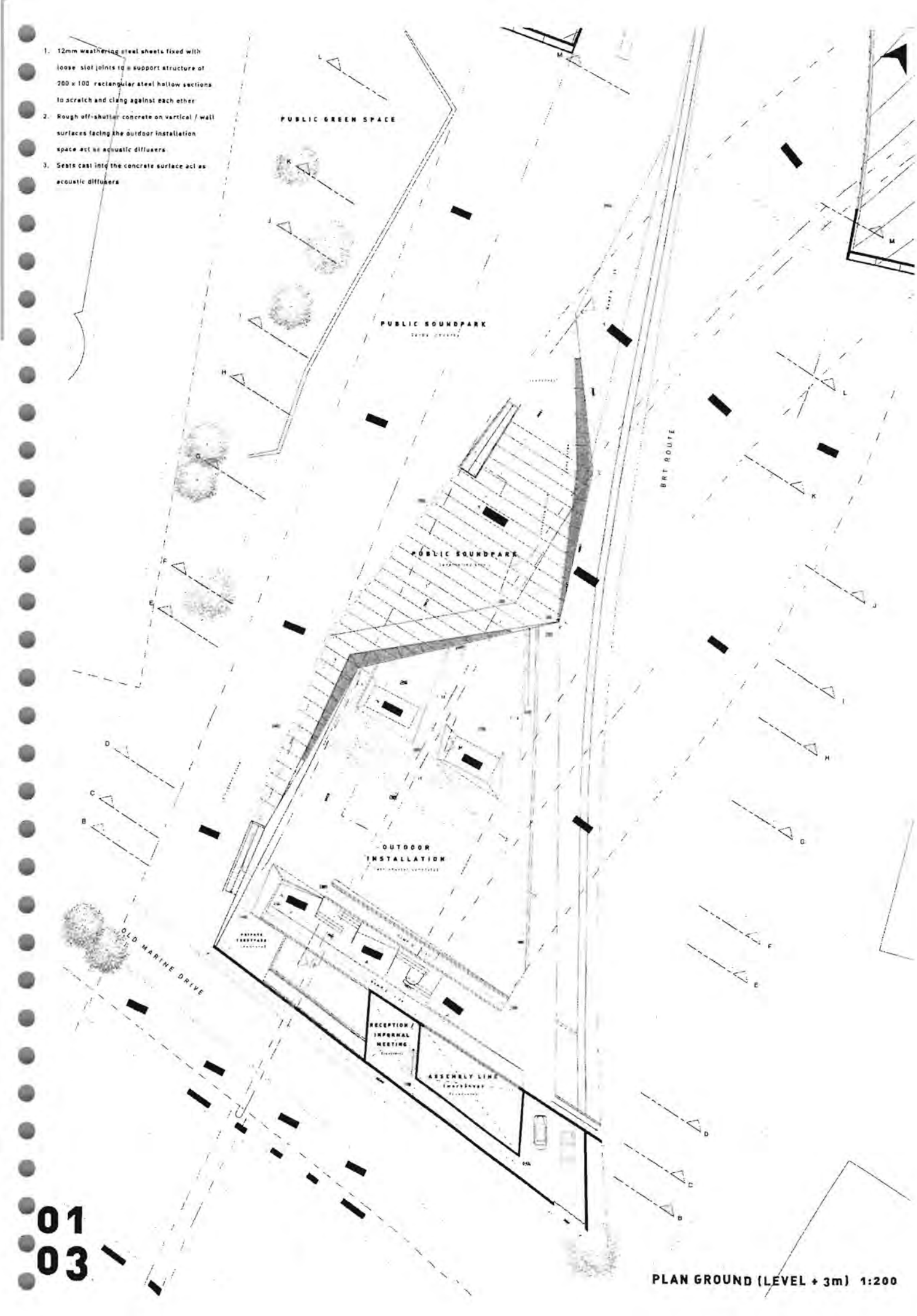
2. Cable path; 4mm diameter cable



01
02

REFLECTED CEILING PLAN 1:200

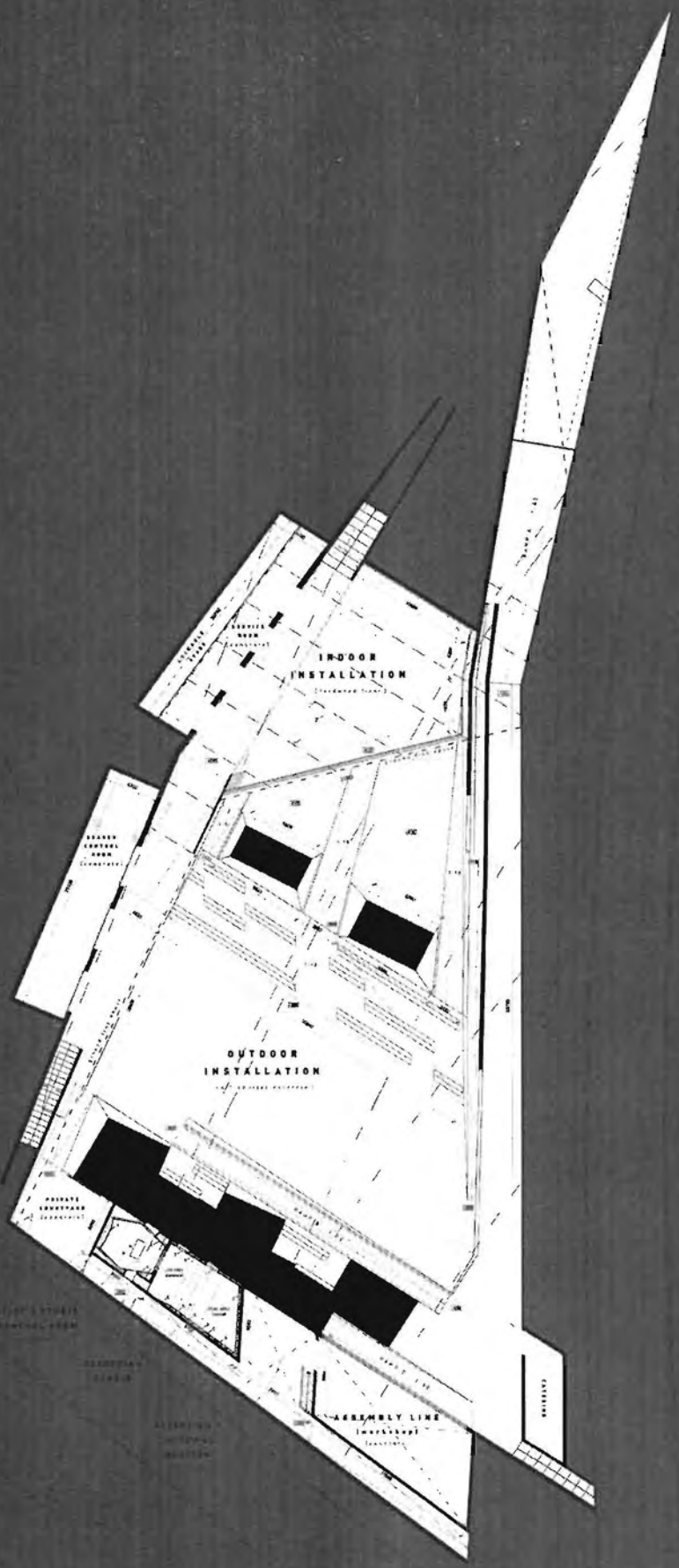
1. 12mm weathering steel sheets fixed with loose slot joints to a support structure of 200 x 100 rectangular steel hollow sections to scratch and clang against each other
2. Rough off-shutter concrete on vertical / wall surfaces facing the outdoor installation space act as acoustic diffusers
3. Seats cast into the concrete surface act as acoustic diffusers



01
03

PLAN GROUND (LEVEL + 3m) 1:200

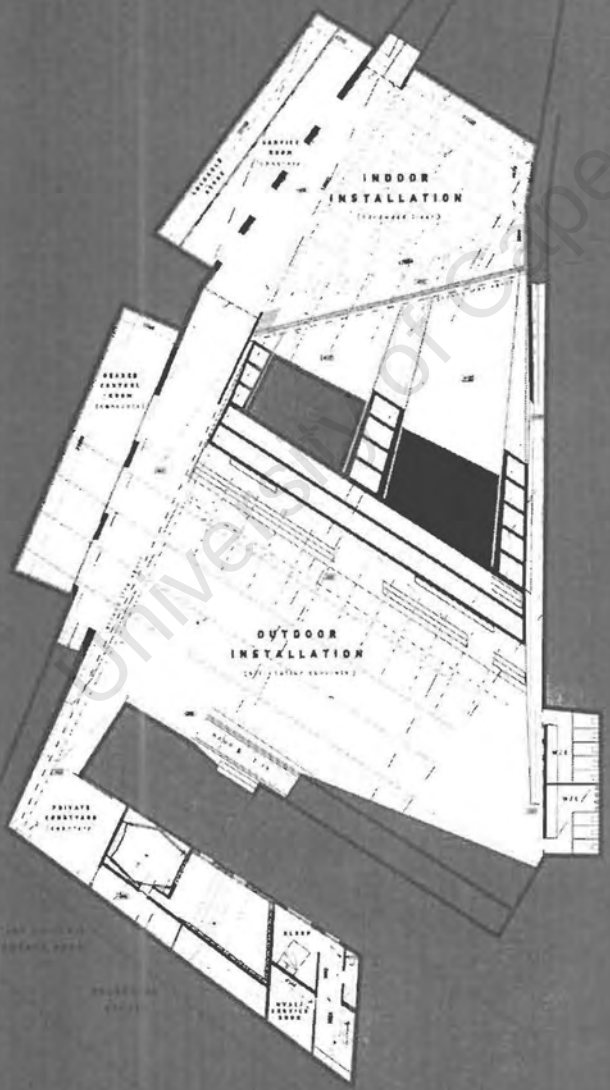
1. 457 X 191 x 98 I-Beam
2. Steel channel carrying a steel sliding rail which extends from the service room
3. Sump
4. Basstrap
5. Augmented basstrap (broadband absorber) Linear glassboard supported by wooden spacers forming an airgap, fixed to plywood membrane reservoir over airgap, which is fixed to the structural concrete wall
6. Hardwood panel reflector
7. Double glazing: 6mm float glass, airgap, 10mm float glass



01
04

PLAN -1 (LEVEL - 1.2m) 1:200

1. Roller shutter door recessed into soffit to be flush with the finished ceiling level
2. 1250 x 2400 hardwood tongue and groove panels
3. Sump
4. Steel channel cast into the floor slab to be flush with the finished floor level, electrical services run along these tracks for installations



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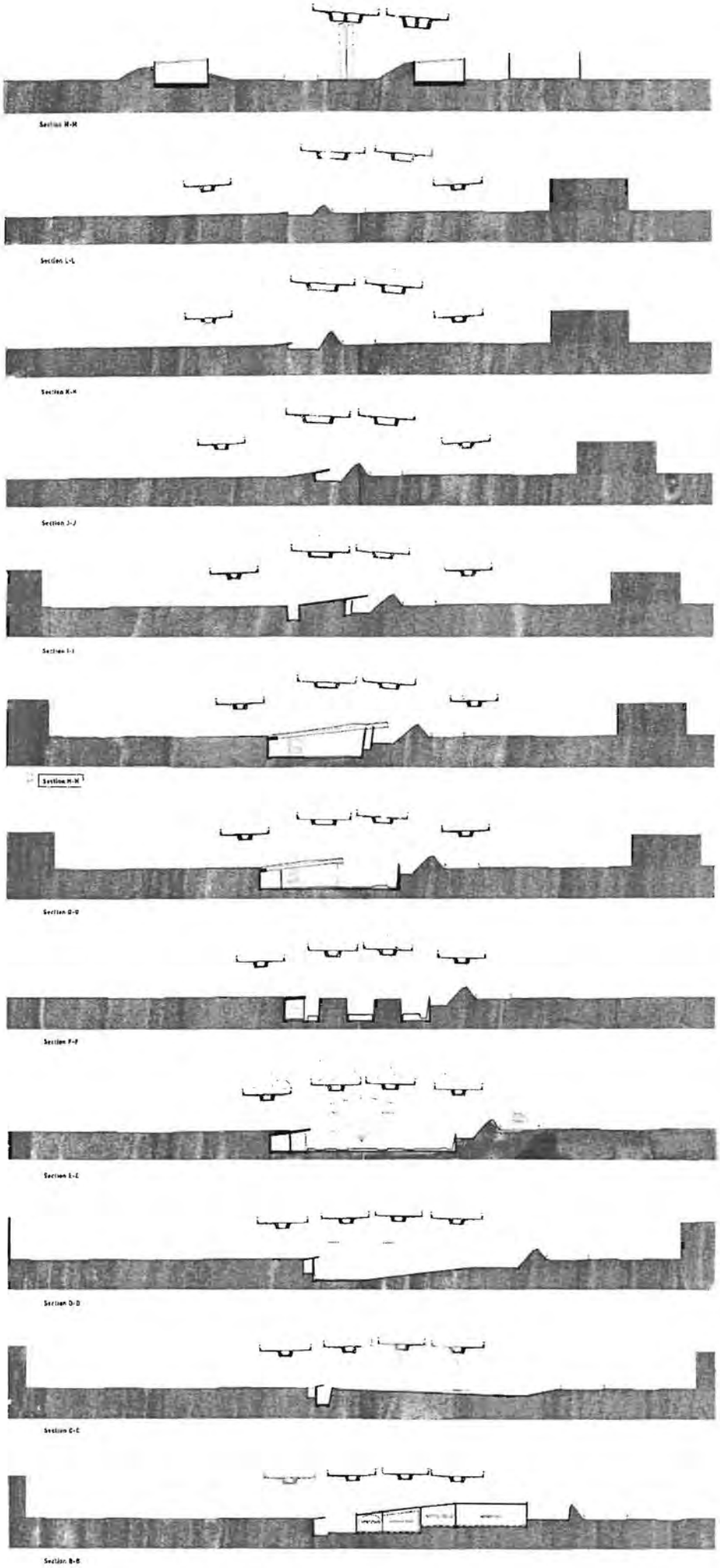
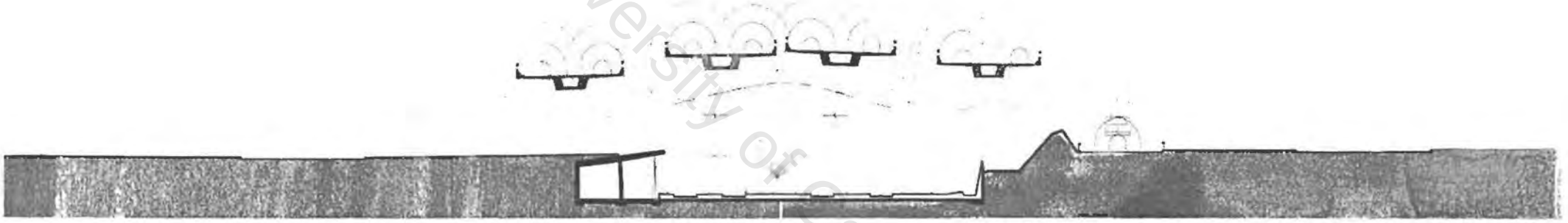
05

PLAN -2 (LEVEL - 3m) 1:200

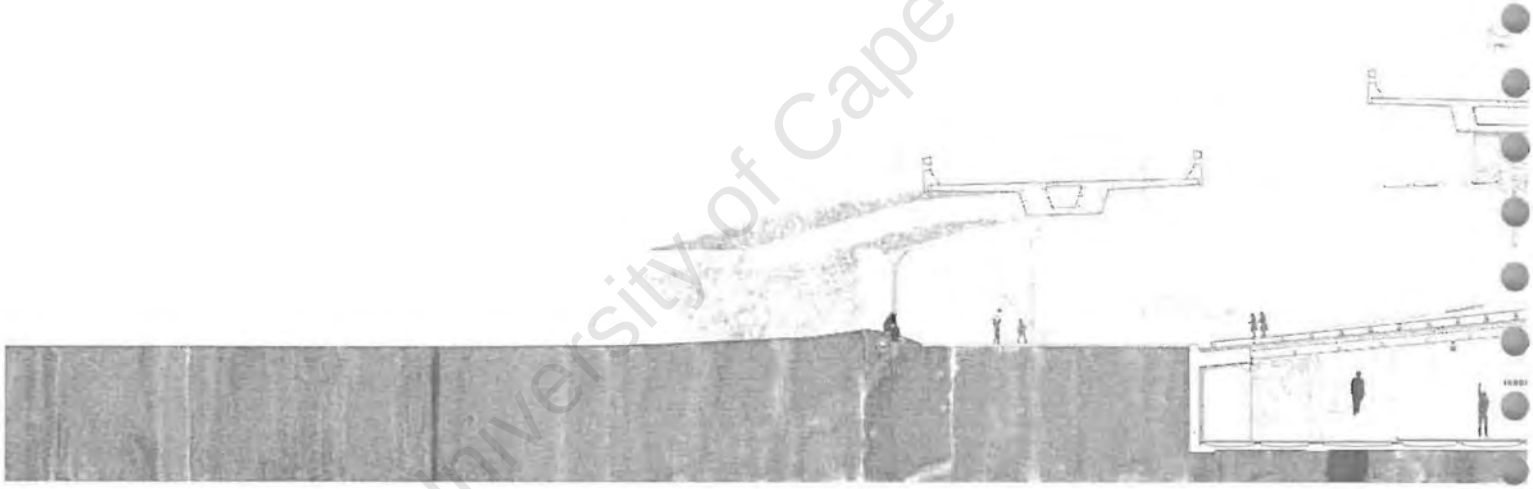


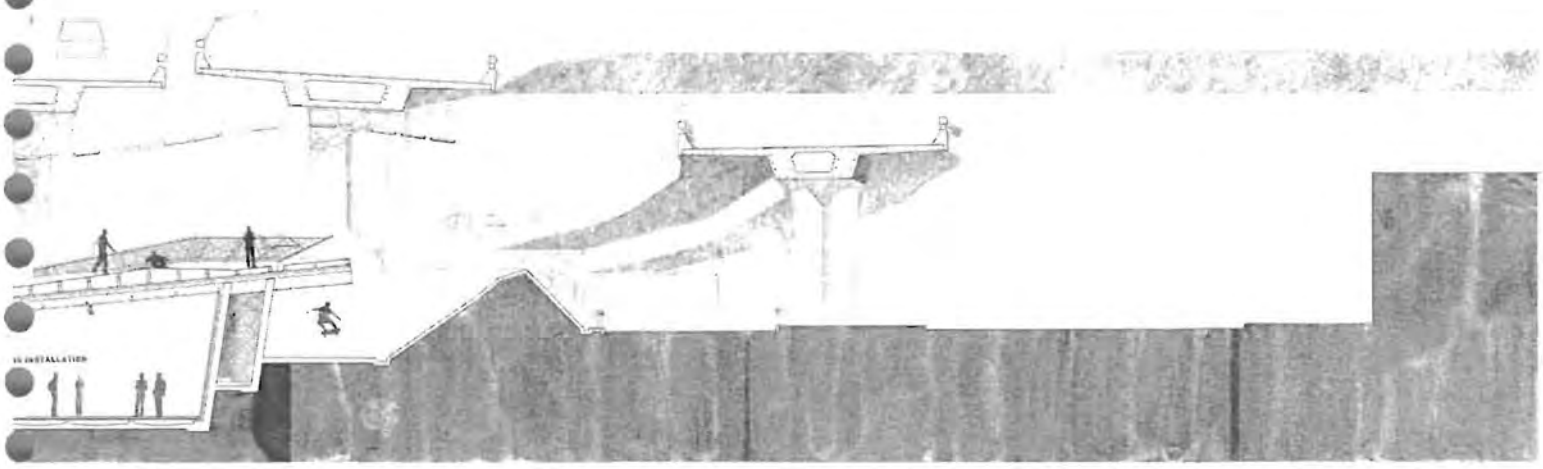
02
01

SITE SECTIONS 1:200

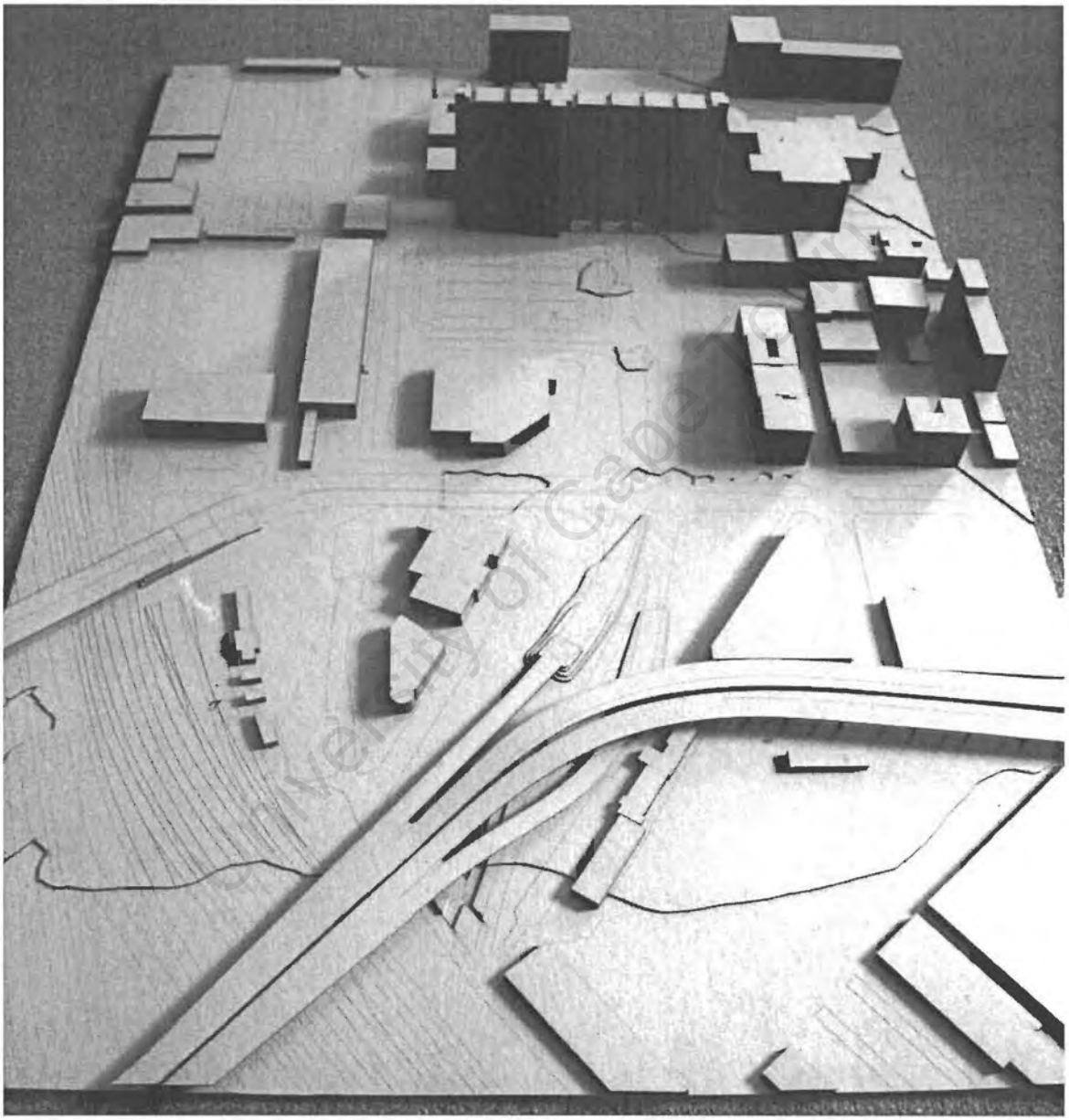


Section E-E

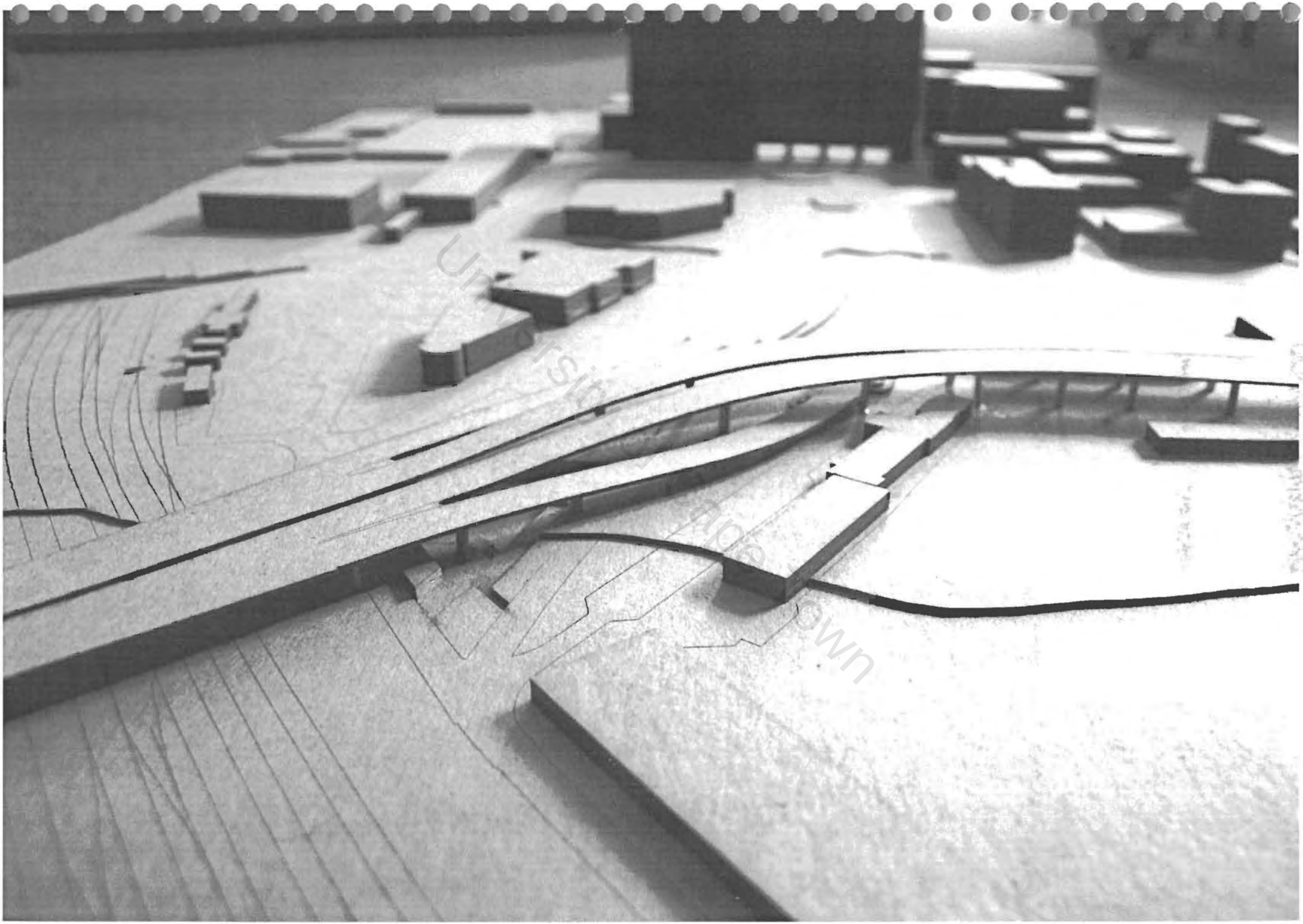


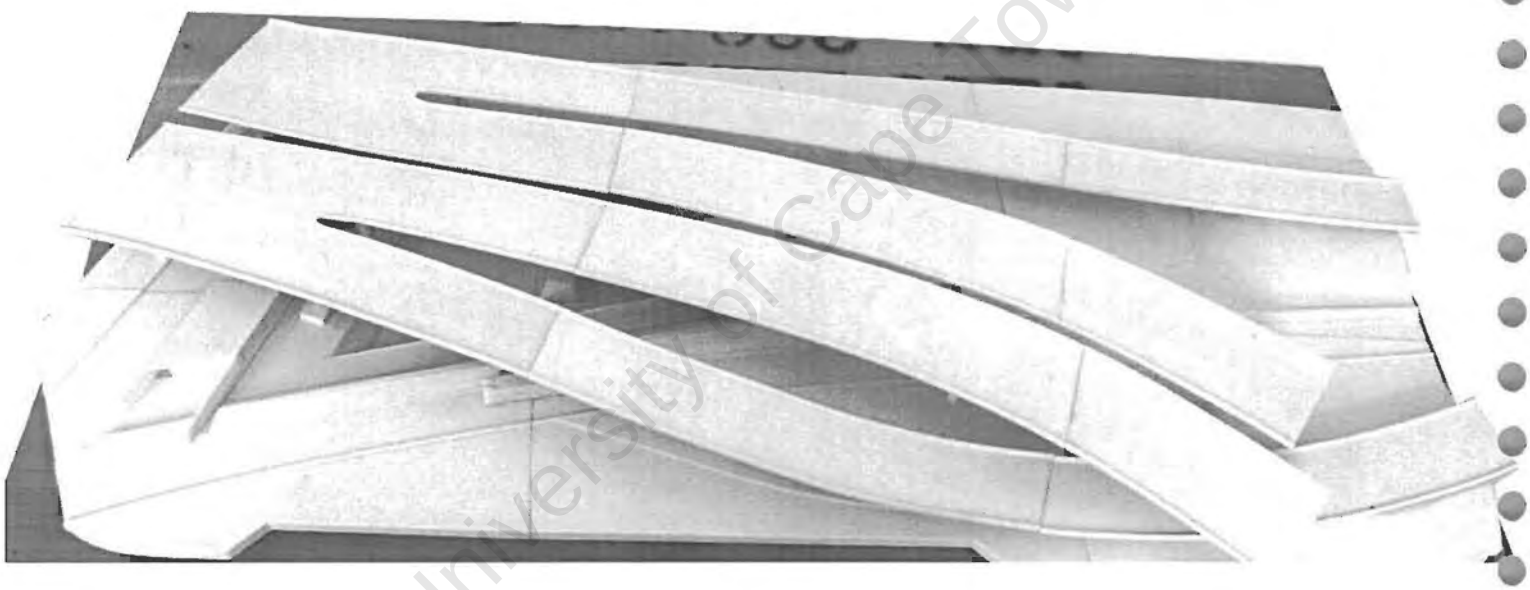


SECTION H-H 1 : 50



Context model 1:1000





Model 1:200