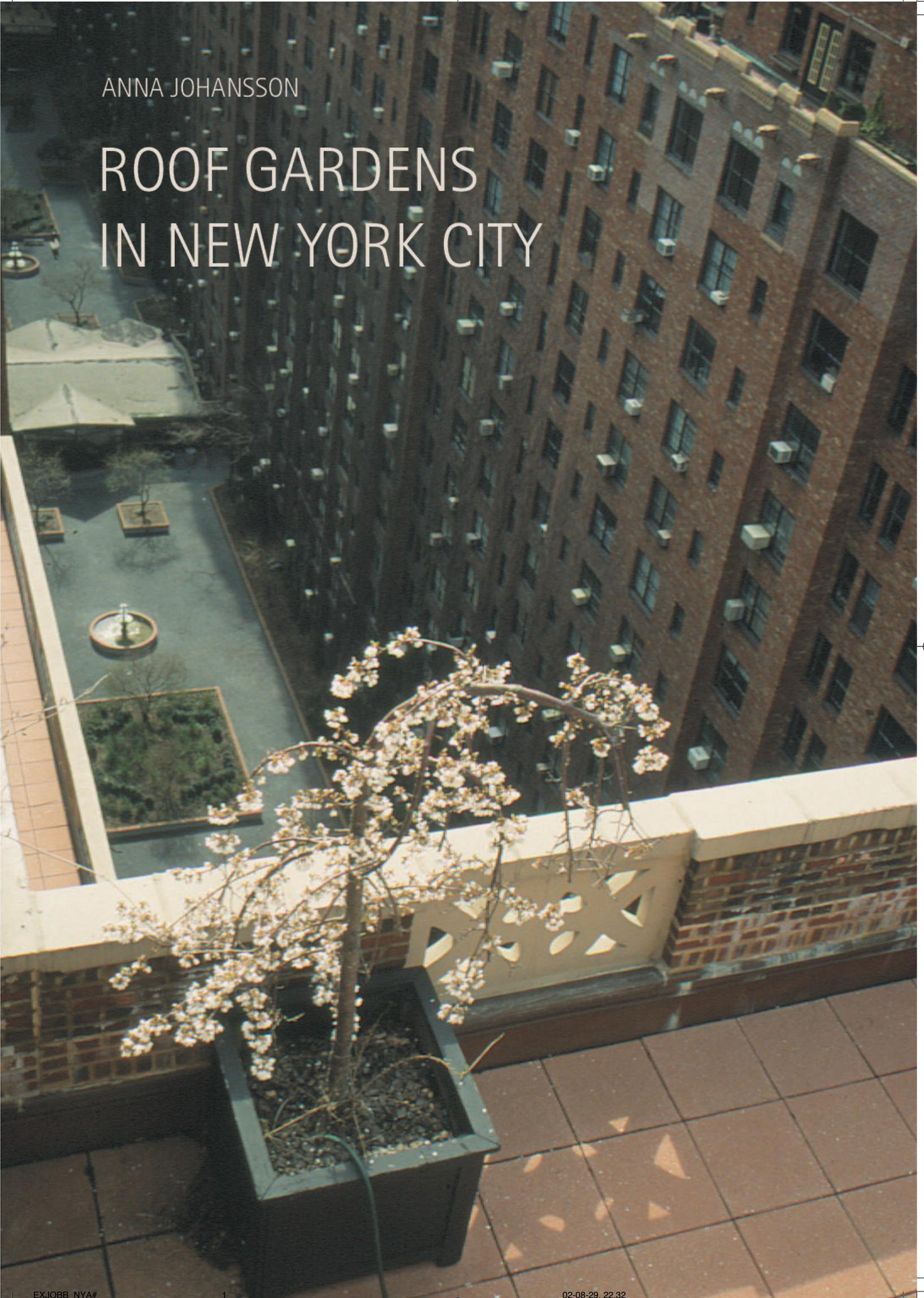




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ROOF GARDENS IN NEW YORK CITY



ABSTRACT

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SUMMARY

This study is about roof gardens in New York City. The purpose of the project was to study the design of roof gardens in a place where these have a long tradition. The central issue was to find and present the gardens and to apply some design ideas on a small roof terrace in Gothenburg, Sweden. My hope was to find traditional landscape architecture proved to be working in the course of time and breathtaking contemporary design ideas to be inspired by. The study was made during a two-month stay in New York City in April and May 2001. All the studied gardens are located on Manhattan. The Gothenburg terrace was designed in Fall 2001. Different kinds of roof gardens are studied: public parks, museum gardens, schoolyards, public plazas, corporate gardens, a healing garden, shared private gardens and one-family residential gardens. Complementary information was searched in literature, in periodicals and on the Internet. The text is divided into two main parts. The first part, called Field Study, is a report from the study of roof gardens on Manhattan, New York City. The design and impression of 39 gardens are each presented in words, and illustrated by photos and a watercolor sketch of the lay out. The second part, called Case Study, is about the roof garden in Gothenburg, Sweden. It is designed with the New York experience in recent mind. This part consists of a short presentation of the present terrace and its owner and my thoughts as well as a plan and description of the proposal. I want to create a modern easily maintained terrace with a romantic touch. The garden has a frame work of whitened oak wood and the plant material has warm colors, a wish of the owner.

SAMMANDRAG

Denna rapport handlar om takträdgårdar i New York. Syftet med projektet var att studera utformningen av takträdgårdar på en plats där sådana har lång tradition. Det centrala var att finna och presentera trädgårdarna och tillämpa några designidéer på en liten takterrass i Göteborg. Min förväntan var att finna traditionell landskapsarkitektur som fungerar i längden och nya, spännande designidéer att bli inspirerad av. Studien gjordes under en två månaders vistelse i New York under april och maj 2001. Samtliga trädgårdar studerades på Manhattan. Den göteborgska takterrassen ritades hösten 2001. Olika typer av takträdgårdar studerades: offentliga parker, museeträdgårdar, skolgårdar, offentliga torg, företagsträdgårdar, en restaurativ trädgård, gemensamma bostadsgårdar och privata enfamiljsträdgårdar. Kompletterande informationsökning gjordes i litteratur, tidskrifter och på Internet. Huvudtexten är skriven i två delar. Den första delen, fältstudien, är en rapport från studien av takträdgårdar på Manhattan. Utformning och intryck av var och en av de 39 trädgårdarna presenteras i ord och illustreras med foton och en akvarellplanskiss. Den andra delen, fallstudien, handlar om takträdgården i Göteborg som ritades efter hemkomsten från New York. Denna del består av en kort presentation av den befintliga terrassen, dess ägare och mina tankar samt plan och beskrivning av den nya trädgården. Målet är en modern och lite romantisk terrass. Trädgårdens stomme är av vitnat ekträ och växtmaterialet har varma färger enligt ägarinnans önskemål.



PREFACE

This is an international degree project in landscape architecture carried out as an independent study in New York City in April and May 2001.

Many thanks to Professor Lee Weintraub and Professor Pär Gustafsson for their supervision in New York and Sweden.

I would also like to thank Kungl. Skogs- och Lantbruksakademien (KSLA), and the International Department of the Swedish University of Agriculture (SLU) who generously provided the economic support needed to make the field study possible.

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INTRODUCTION

I find it fascinating and interesting that it is possible to make gardens and see them flourish in the harsh environment of a rooftop. Gardening meets imagination here.

As a child I saw pictures of the architect and artist Friedensreich Hundertwasser's houses in Vienna where he transformed an ordinary house to a fantastic place where trees stretch their branches out through openings in the organic-shaped façade on the third story. Normality is going through a metamorphosis to fantasy. This was the beginning and the inspiration. And of course I was curious about the city of New York. When I thought of New York I thought of rooftops high up in the sky, but there are a lot of different types of roof gardens.

BACKGROUND

Why should we build roof gardens? My answer is that people need green space and they need private places. In a dense city it is very expensive and often impossible to get hold of land for parks. Instead of tearing down existing buildings, the buildings could be re-used by adding gardens on top of them.

The buildings, for example parking garages, are sometimes below ground level and a park built on top of them looks like an ordinary park. The re-use of old buildings to build new gardens and adding roof gardens in an early stage of the planning of new houses could be a simple way to create more green spaces in the city. It is often technically possible to do so and people's need for green and private spaces would be satisfied.

The cost per square meter roof garden is often higher than for a garden on the ground. Looking at the whole economy a garden on top of a building can still compete since the garden is not the only use of the ground and the cost is shared. The demand for space is so high that all land is used in many different layers. The need for air conditioning and heating of a building would also be reduced.

A roof garden could also increase the value of a building. Some gardens are not even meant for visiting. They can still add values. Roof gardens can bring new esthetic values to a view when surrounded by higher buildings. Higher rents can be taken out for an office space or apartment if it has a great view and in that way roof gardens will be interesting for real estate owners.

For busy people who lack the time to go to a larger green space the roof garden can be a convenient replacement. For elderly or disabled people who can't walk long distances and for small children when their parents lack the time to follow them to the playground, the green space on the roof could be a substitute and enhance the everyday recreation.



Despite these social, economic and esthetic reasons there are still a lot of flat roofs In New York and other cities that do not have roof gardens.

ISSUES AND AIMS

The study focuses on design and has two main issues. One issue is to study what roof gardens look like in New York City. I am studying the design; the esthetics and basic functions. I do not study the laws and legal recommendations for roof gardens, health aspects, economy or construction. I wanted to find traditional landscape architecture proved to be working in the course of time and breathtaking contemporary design ideas to be inspired by.

The other issue is to use the impressions when making a design for a roof garden in an urban part of Sweden. A roof terrace in Gothenburg is chosen for that purpose. In the design I try to mix my impressions from the Field Study with my own design language and my rooftop client's thoughts. The result is presented in the Case Study part of the report.

STRUCTURE

The text of the report is divided into two main parts with separate descriptions of the methods.

In the first part, called Field Study, 39 of the studied gardens are presented. They are grouped into a number of garden-types. The headlines are public parks, museum gardens, schoolyards, public plazas, corporate gardens, healing garden, shared private gardens and private residential gardens.

The second part deals with the garden to be designed. In my grouping this terrace would be a private residential garden. The present site, the owner and her wishes and the designed garden are presented.

HYPOTHESIS

Different reasons to build gardens allow a diverse design. That is, depending on the size, use and location the gardens can look different. More functions and uses could be fitted into a large roof garden to create a varied outdoor space. The type of owner is also important, as is the level of public access. All the gardens in this study are in sites with a high level of urbanity. The way to adapt to the surroundings could be either to keep the high pulse of the city in the garden or plaza or to calm down and create a secluded space.



There are a number of reasons to build a garden. Commercial, public and private interests want places for recreation, work, pastime and amusement. People also need places to wait, rest, watch other people, do sports, play, eat and calm down in a beautiful environment. The expected use gives numerous design possibilities.

The intended use also decides the size of economy and the address of funding. The garden should be designed to take the probable wear and tear depending on the estimated number of people going to visit the garden. Another thing to be kept in mind in the design process is the cost of maintenance. This is an expensive part. Where the cost has to be kept low this often affect the design.

DEFINITIONS

Roof gardens can mean a wide range of different things. People put flower pots on their balconies or on the tar paper of the roof outside their window and hope for the best. Roof gardening can be measured in centimeters or kilometers. In the study I focus on a more permanent type of gardens laid out by professionals. Roof top gardening can also mean urban agriculture, but that is not the issue of this study.

How do I define a roof garden? By a wide definition everything outdoor built on a concrete (in exceptional cases other materials too) understructure and designed to be either visited or viewed, containing plant material or just sculpture, would be a roof garden.

If the gardens are permanently covered with glass they are by definition winter gardens and excluded from my definition of roof gardens.

A lot of roof gardens look like ordinary parks and are situated at ground level. A roof garden can even be below ground level. They are still roof gardens concerning construction. Some of the roof gardens are situated on second or third storey. The under structure imply a different approach to design depending on the supporting capacity of the roof. Parking decks, subway stations or a storehouse for books could be hidden under a garden.

The roof garden does not have to be high up in the air and they do not have to be in an urban setting, but my main interest to begin with was these roof top gardens. Some of the gardens are really what we imagine a roof garden to be namely a green oasis many stories above the noisy street with a great view of the astonishing skyline around.



NEW YORK GARDENS—FIELD STUDY

METHOD

The field study was made through visiting roof gardens of different kinds on Manhattan. There were different ways to find and gain access to the gardens. Some of the gardens are public and no permission is needed though the parks often have opening hours. Most of the roof gardens on top of high buildings are private though.

There was a problem to find a way to enter the gardens. Unfortunately there is no guided "roof garden tour" to buy at the ticket-office. The selection of gardens to study is based on which gardens I actually could get to visit and not on any prime design basis. I still believe that the gardens I have studied are typical for New York City and many enough to draw some conclusions from. I chose to present as many as 39 gardens. This means that the report is an overview and do not contain a deeper analysis of every garden.

Through the landscape architects who have designed the gardens, through the horticulturalist maintaining them or by the owners themselves they were made possible to visit. Sometimes access has been possible by just asking the doorman.

When visiting the gardens I took photographs, Fuji Sensia color slides, to support the memory when I later recall the impressions and also for presenting in the report. I also made notes on the materials used, living and hard, and aspects like irrigation, lighting, location, colors, general impression and in what way the views were considered in the design.

The gardens and their aesthetical and functional aspects are described in words. The gardens are also presented in plan-sketches. The sketches are in no way exact but should still be a help to visualize the design of the gardens. Photos are included for the same purpose.

I searched for literature at the New York Botanical Garden Library and at the General Research Division and Wallace Current Periodicals at The New York Public Library and in book stores.

Some books with general information about roof gardens were found, but none explicitly about New York City roof gardens. They were of use in some cases to locate gardens and find roof garden designers. The Yellow Pages of the New York City phonebook also came in handy at many times.

People, periodicals and websites on the Internet added some information about gardens and garden designers. The originators of public gardens and plazas are often difficult to trace.



ROOF GARDEN LOCATIONS

The studied gardens are spread all over Manhattan. I have placed some of them on a Manhattan map to show their locations. Not all gardens are open to the public.

Joel Schnaper Memorial Garden at Terence Cardinal Cooke Health Care Center.

Lotus Garden.

The Arthur Ross Terrace at the American Museum of Natural History.

Lincoln Towers.

Martin Luther King Jr. Highschool.

Fiorello H. La Guardia school of music, art and performing arts.

Fordham University.

Paramount Plaza.

Bryant Park.

470 west 24th Street/Avenue.

Shared Rooftop.

Annie Leibowitz's Garden.

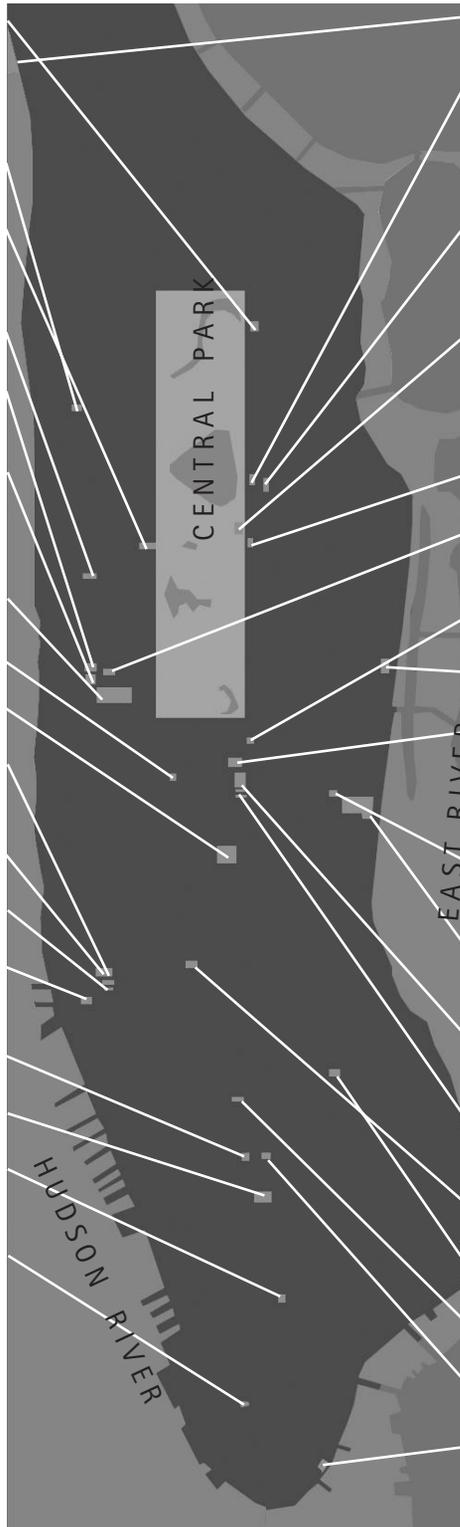
Rooftop Urban Project at Dia Center For the Art.

552 La Guardia Place.

Houston Street.

Jacob Javitz Plaza/Federal Plaza.

Deutsche Bank.



Riverbank state park.

The Samuel J. and Ethel LeFrak Sculpture terrace at the Solomon Guggenheim museum.

A garden behind the Solomon Guggenheim Museum.

The Iris and B. Gerald Cantor Roof Garden at the Metropolitan Museum of Art.

Barrett Residence.

Paul Milstein Plaza at the Juilliard School of Music.

Trump Tower.

Rockefeller University.

The Abby Aldrich Rockefeller Sculpture Garden at the Museum of Modern Art.

One Dag Hammarskjöld Plaza.

United Nations Garden.

Roof Gardens at Rockefeller Center.

Channel Gardens at Rockefeller Center.

Bazin's Studio Garden.

Juchs Residence.

The Sheridan.

Gould Memorial Plaza.

The New York City Vietnam Veteran Memorial's Plaza.



Fig. 1. Map of Manhattan showing the location of some of the studied roof gardens.



PUBLIC PARKS

RIVERBANK STATE PARK



UNITED NATIONS GARDEN



BRYANT PARK



THE SHERIDAN

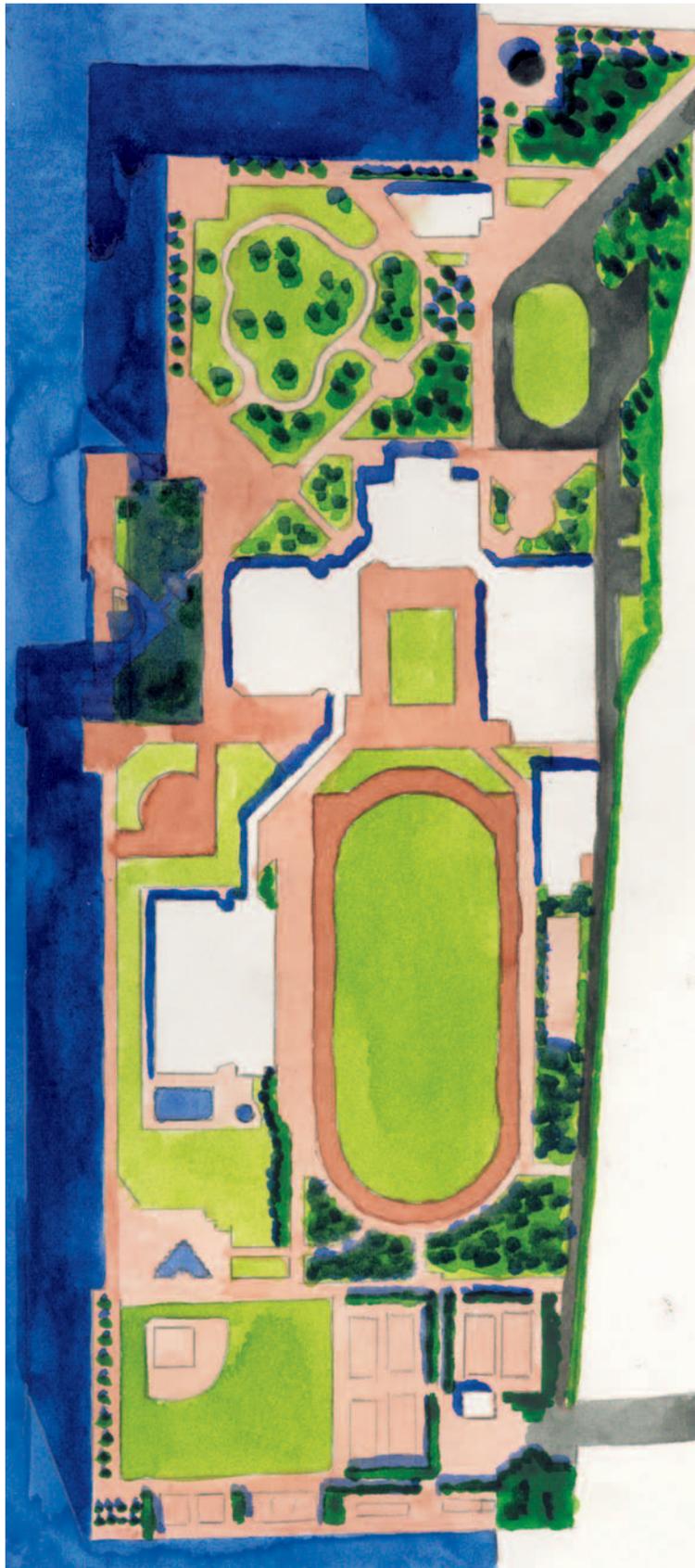


THE LOTUS GARDEN





RIVERBANK STATE PARK



ca 0 ++++++ 200m



Fig. 2. Riverbank State Park, watercolor plan-sketch.





Riverbank State park is a public recreation center on top of a sewage plant at 679 Riverside Drive on North Manhattan overlooking Hudson River . It can be reached by bus, subway or on foot. This area is a part of Harlem and not the wealthiest part of Manhattan. Hispanic and other minorities are over-represented. The park does also have a role as a cultural center and a center for arts (Riverbank State Park:a, 2001).

The park is situated three very high stories over the edge of Hudson River. High concrete vaults at the sides are visible from some points in the garden.

The public parks are in general larger than the other garden-types and Riverbank State Park is the largest of the studied parks. The length of it is almost a kilometer. The park has a large scale planning with drastic differences in altitude and a is a place where there is room for many people. The design is based on fundamental geometric forms and sports and recreation the main issue. Prevailing colors on details are red, green, light blue and black.

The plan is schematic with functions like sports ground and picnic area laid out like pieces of pattern on fabric. It is divided into areas for different functions; swimming pools, running track, football/soccer field, basketball court, tennis court and a skating rink that is used for ice-skating in the winter (Riverbank State Park:b, 2001).

Red pre-cast concrete bricks are laid out in a basket weave pattern and asphalt cover the driveways. The concrete brick match the brick and glazed tile on the buildings. There is maybe a little too much of hard surfaces. Still the bird song and the presence of small beetles, huge flies and larger geese add life to the place. The sound of a lawn mower, airplanes and birds makes the place recognizable. The hard surfaces are a stage on which the life goes on. The place is very normal and unhurried. Lawns, trees and concrete paving make the simple and easy ground.

The park has a simple Post-modern look with no luxuries and is open to the public 6 am till 11 pm everyday. At my visit there were seemingly many visitors for a common weekday during working hours. Most of the visitors were doing sports. Near the North entrance is a carousel that probably only open on weekends but a worn picnic lawn deeper into the park had some visitors. Pop-up irrigation is installed on the lawns to water them when no visitors are there. Stones are put around the planting.

The views over Hudson River and George Washington Bridge from the west side of the park are magnificent. The hight difference between the beachwalk on the upper garden level and the water gives a surreal feeling as the landscape of the park is so plane. My feeling of the place is a little like the beach-walk in Barcelona where you overlook the mediterranean kilometer after kilometer although here the view is a little, twenty meters, from above. The beachwalk is not that interesting itself but the view is, here it is not the Mediterranean but the flat landscape of New Jersey on the other side of the Hudson. Robust furniture of raw



Fig. 3. Lower garden level and stairwell seen from upper level of Riverbank State Park. George Washington Bridge is seen in the back..



concrete and light blue wood are placed along the Riverbank beach-walk. Leaning on the green guard rails along the river you only hear a low sound from the highway passing immediately East of and below the park. Three meter high lampposts are placed along the walkways. Everything seems dimensioned for a larger species.

A goose strolled around, looking like if it was observing the water below. Later I found a sign that said that the breeding geese are "protected by law". I found another goose brooding on eggs in a three times three meter and forty centimeters deep concrete container. A picture of New York City nature! In the planters were also deciduous trees with a conifer under-planting. The ribbed concrete containers for planting built on the site are not poetic but functional. Some trees are anchored to keep from falling on the walkways each with three stays.

There is a red-painted metal rail around the sports ground. Practical elements are scattered; drinking fountains, black garbage bins and light gray cycle stands. In the South part of the park are scorching hot black rubber pavers on the playground.

A lady stepped out of a building shouting; —"So, I'm not the only one! You too love to walk barefoot in the park! I saw you there on the other side and you are still walking barefoot!"

A ladybird, the first of this spring came across. On the running track an old man with sun-hat was walking methodically several rounds. Constantly moving but never hurried.

Plant Material: *Acer*, *Berberis*, *Crataegus*, *Euonymus fortunei var. radicans*, *Fraxinus*, *Gleditsia*, *Hedera helix*, *Hemerocallis*, *Hydrangea*, *Iris*, *Juniperus*, decorative *Malus*, *Muscari botryoides*, *Narcissus pseudonarcissus*, *Papaver*, *Pinus*, *Prunus padus*, *Prunus pennsylvanica*, *Ribes alpinum*, *Rosa*, *Spiraea*, *Taxus*, *Tilia*, *Tulipa* (yellow, red and orange) and *Viburnum farreri*.



UNITED NATIONS GARDEN

The entrance to United Nations plaza is situated on first Avenue and 46th Street. The park is open to the public between a quarter past nine till a quarter to five except in the winter. The average visitor here seems to be a tourist.

The park is approximately hundred meters broad and slightly longer. On threesides highrise building on the blocks around the United Nations surround the garden situated at nearly ground level. The fourth side opens to East River.

At the entrance from the street you walk some steps up to a paved plaza with clipped yew in planters. This place is an elevated plaza and a meeting point for guided groups. Here, the visitor can get a view over large parts of the garden. The large scale structure is built on rectangles, a double row of trees along the first avenue, a central lawn, a broad clipped hedge on the other side of the lawn. In the far end of the garden is a part that looks wild. Sculptures donated to the United Nations are placed around the park. Walking East from the elevated plaza there are steps down to the Cherry walk, the Rose garden and the walk along the river. On the plan the park look strict but experienced it is not. There is so much greenery that softens the straight lines of the pen.

The United Nations plaza is one of the gardens that does not look like a roof garden at a first glance. In the middle is a great lawn that give an open and welcoming impression. The lawn has a circular hedge in the center. When looking inside, a circular hole in the ground becomes visible. Inside are windows giving light to two stories of offices.

In the park there are open spaces and a few places that feels more private. The later feeling occurs when walking in the North part of the garden. Here the canopies of large trees form a roof and the understory seems to have been allowed to grow dynamically. The group of trees look natural.



Fig. 4. From a distance the hedge appear to encircle a little pond.

Fig. 5. The one who follow the sign and do not walk on the grass never get to see this, office space in the underworld



Fig. 6. Flowering Japanese Cherry trees, Equestrian statue and mirroring glass-façades. Immediately to the right is a sunken walkway, we get a glance of the upper part of the lampposts. A wide hedge take up the hight differences.





Fig. 7. Beach-walk with a slightly curving line. Lampposts are leaning towards the river.



Fig. 8. Graphic pattern on the wall hiding away the fresh-air intake. English Ivy as groundcover.



Fig. 9. Plan over United Nations Garden.



ca 0 +50m





The fresh-air inlets have a different level of design to them; some are just functional others are designed in an architectural way to go with the overall concept. Roaring fans for the fresh-air inlet to the multistory car park are reminding of what is behind.

The thickness of the soil layer varies. Where large species, like the cherries, are planted the soil depth could be up to a meter while a lawn could survive on much less. Pop-up sprinklers handle the irrigation of the borders. The beds for the roses rise a little from the ground and have green boarding on the sides.

The color scheme is clean, grass green, darker green and a few additions in color after season. In the Cherry garden the yellow Daffodils create an impression at spring. Later, the pink cascades of the blooming Cherry trees take over and in fall they get a light touch of red and yellow. The Rose garden with its 25 kinds of Roses offers color throughout the growing season.

A broad concrete path along the river looks like an airport runway. Architectonic lampposts seemingly stretching out, reaching for the East River. They seem to have been designed for this site. Sofas and benches are placed along the walk.

The UN plaza is a calm, quiet and contemplative park with a strong feeling of being near the sea. Below is the highway, but the sound of it disappears in the wind. A panoramic view over Queens is seen on the other side of East River. This is a place for thoughts and a manifestation of and for peace.

Plant Material: *Forsytia*, *Hedera helix*, *Narcissus politicus*, *Prunus serrulata* 'Kwanzan', *Ribes alpinum*, *Rosa ssp.*, *Taxus* and *Thuja*.



BRYANT PARK

Bryant Park is a public Park on Avenue of the Americas between the 40th and the busy 42nd Streets on central Manhattan. The garden is situated a few steps up from street level and the surroundings are high rise buildings. The present design of the park was made in 1934 (Pool, 1999:50-53) by Lusby Simpson. There has been a park on this site since 1858 when Crystal Palace, built here, burned down to its grounds (BPRC, 2001).

The park is behind The New York Public Library building. The library has two stories of archives below the park. The archives were added to the library in 1992 and the park was restored the same year by the landscape architects Hanna /Olin Ltd (BPRC, 2001).

Bryant Park, laid out in a symmetrical way, is about a hundred meters broad and slightly longer. The layout is a large central lawn flanked by two double London Plane alleys and long, straight magnificent borders of flowers. There are also less striking flower borders along the Avenue of the Americas. The feeling of this park is also more formal than the feeling of the other studied large public parks.

When entering a park we often look for a certain kind of place, actively or by instinct. In the hot New York summers cooling shade is one of the preferred qualities. The old London Planes provide this. Their canopies are vase shaped since the branches have stretched up towards the light. Planted close together the Planes form a flat roof high above the park.

The flower borders are filled with shrubs, perennials, ferns, bulbs and annuals. The one on the South side of the lawn is planted with more shade tolerant species and on the North with more sun-loving sorts. The plant design there is regularly re-made. New plants are added and others have to go. The plants in the listing are the plants of the season 2001. At my first visit in the park they were rolling out new grass on the lawn. It is replaced regularly when worn out. Orange sandy gravel cover the paths around the lawn and light gray stone is found on steps and other paths.

Situated in a very busy part of the city Bryant Park is a refuge for many people. It is a popular place in which to sit down and have some food. Pavilions on the West side offer drinks and food for take-away, in Bryant Park Grill and Bryant Park Café on the East side the visitor can stay while eating. Monuments are placed around the park. An example is a sculpture of the poet William Cullen Bryant after whom the park has its name. Numerous light, foldable french café chairs and tables in a dark green color are placed around the park and can be moved to a preferred spot by the public. Victorian style lampposts (Pool, 1999:50-53) along the sides of the park give light and add some of the old-time feeling.

Bryant Park is a meeting place for lots of people. In the summers large public events take place here. In one part of the park chess-tables are put up for the public for everyday use.

There are entrances to the park on all four sides via steps. From 42nd street the park is accessible for disabled. Normally there is also an entrance from the subway at the park but this was closed for restoration during my visit. Water fountains, restrooms and payphones are other services. Opening hours are extended in the summer when the park is open 7am till 11pm. The park is frequently visited all day and keep some of the pulse of the city without being stressful.



Fig. 10. A straight path with shading Plane trees in Bryant Park.



Fig. 11. On the great lawn there are plenty of light French-café chairs that the visitor can move to a preferred spot in the garden.

Plant Material: *Abelmoschus*, *Ageratum* 'Blue Horizons', *Alcea rosea*, *Alchemilla mollis* 'Lady's Mantle', *Allium christophi*, *Anemone blanda*, *Alternanthera dentata* 'Rubiginosa', *Armeniicum*, *Asteromoea mongolica*, *Athyrium*, *Baptisia australis*, *Berberis* 'Crimson Pygmy', *Brunneramacrophylla*, *Buddleja davidii* 'Nanho Blue', *Chimodoxa luciliae*, *Cimicifuga racemosa*, *Coleus*, *Coreopsis verticillata* 'Moonbeam', *Cornus alba*



Fig. 12. The watercolor sketch show the plan of Bryant Park. The small dark dots in the middle are the French-café chairs from last page.



ca 0  50m



'Elegantissima', *Crambe cordifolia*, *Dicentra spectabilis*, *Digitalis purpurea* 'Alba', *Digitalis purpurea* 'Foxy', *Echinacea purpurea*, *Hedera helix*, *Helictotricon sempervirens*, *Heliotropium 'Marine'*, *Helleborus foetidus*, *Helleborus orientalis*, *Hemerocallis 'Catherine Woodbury'*, *Hemerocallis 'Ice Carnival'*, *Hemerocallis 'Marion Heiskell'*, *Heuchera 'Palace Purple'*, *Hibiscus*, *Hosta 'August Moon'*, *Hosta sieboldiana 'Elegans'*, *Hosta 'Frances Williams'*, *Hosta 'Krossa Regale'*, *Hosta plantaginea*, *Hydrangea macrophylla 'Variegata'*, *Hydrangea quercifolia*, *Ligularia 'The Rocket'*, *Lilium 'Casablanca'*, *Lilium 'Regale'*, *Lilium 'Trance'*, *Lobelia siphilitica*, *Lysimachia ciliata 'Atropurpurea'*, *Lytbrum 'Mordens Pink'*, *Mahonia aquifolium*, (Japanese painted) *Matteucia*, *Muscari botryoides*, *Narcissus 'Fortune'*, *Narcissus 'Geranium'*, *Narcissus 'Ice Follies'*, *Narcissus 'Peeping Tom'*, *Narcissus 'Spellbinder'*, *Narcissus Tête A Tête'*, *Nepeta mussini 'Dropmore Purple'*, *Nepeta sibirica*, *Nicotiana langsdorffii 'Daylight Sensation'*, *Nicotiana langsdorffii 'Lime'*, *Penstemon digitalis 'Huskers Red'*, *Petunia 'Azure Pearl'*, *Petunia 'Royal Pearls'*, *Phlox paniculata 'Bright Eyes'*, *Pieris japonica*, *Platanus acerifolia*, *Platycodon grandiflorus*, *Polygonatum odoratum 'Variegatum'*, *Prunus cistena*, *Prunus laurocerasus 'Otto Luyken'*, *Pulmonaria sacchenata 'Mrs Moon'*, *Rhododendron 'Boule De Neige'*, *Rodgersia aesculifolia*, *Rosa 'Betty Prior'*, *Rudbeckia nitida 'Herbstonne'*, *Salvia 'Indigo Spires'*, *Salvia 'Van Houttii'*, *Scaevola 'Blue Wonder'*, *Scilla sibirica*, *Spiraea nipponica 'Snow Mound'*, *Spiraea thunbergii*, *Taxus baccata*, *Taxus capitata*, *Thalictrum randebrunianum 'Lavendar Mist'*, *Tulipa 'Pink Impression'*, *Verbena bonariensis* and *Yucca filamentosa 'Gold Sword'*.



THE SHERIDAN

The Sheridan is a twelve story condominium on 40 East 9th Street. On the other side of the street are slightly lower buildings. The garden, probably laid out in the fifties, is a classic Box and Rose garden built on top of a parking garage. The garden is elevated a half story from the street.

The garden entrance is from a covered walkway, a straight path leading from the street to the entrance of the building. This path divide the garden into two. The two gardens are of similar designs. Only the left part seen from the street, of the garden is described. The length of each garden is slightly more than twenty meters.

Strict angularity rules and it does not provide any surprises, you see the whole garden at a first glance. Placed in the center a sundial makes a focal point. The view turns inwards to the center. The space is divided into geometrical patterns. There is a static structure and a straight axis. Large cobbles are laid in a row along the low box hedges and works as a boundary. A brick wall along the street-side of the garden closes off the visual impression of the low traffic of the street. When the garden was visited most of the flowers were not yet in bloom. The color scheme was dominated by green, white and gray colors this season. The garden gives a peaceful impression, it makes a calm place to sit down, wait and eat and provides flowers to look at also from the windows of the building. Classic-style wooden sofas and a concrete bench provide seating.

The plants did not seem to be anchored, but that would not be needed when the garden is built almost at ground level. The plants grow in a free mass of soil . Drip irrigation and pop- up sprinklers provide watering. There are support structures for the climbers made of metal and painted black.

Broad paths covered with yellow and white gravel is one of the main structures in the garden layout. Un-sufficient drainage has lead to establishment of large mats of moss on the paths. The drainage gullies seems to have been placed incorrectly and the thin layer of gravel does not cover the underlying structures. If the depth of the gravel-layer were deeper the garden would probably have been easier to maintain. According to a prospectus for the Sheridan (Engelman & co.) the place is "a structure designed and built to fine architectural standards". This was written some time ago.

Some of the old fruit trees are mutilated rather than pruned and it might be wise to replace them with new ones. Spotlights are placed under the trees in the corners and create interesting shadows when lit. There is also a general lighting on the entrance part. Despite the very formal layout of the garden it has an intimate, private feeling.

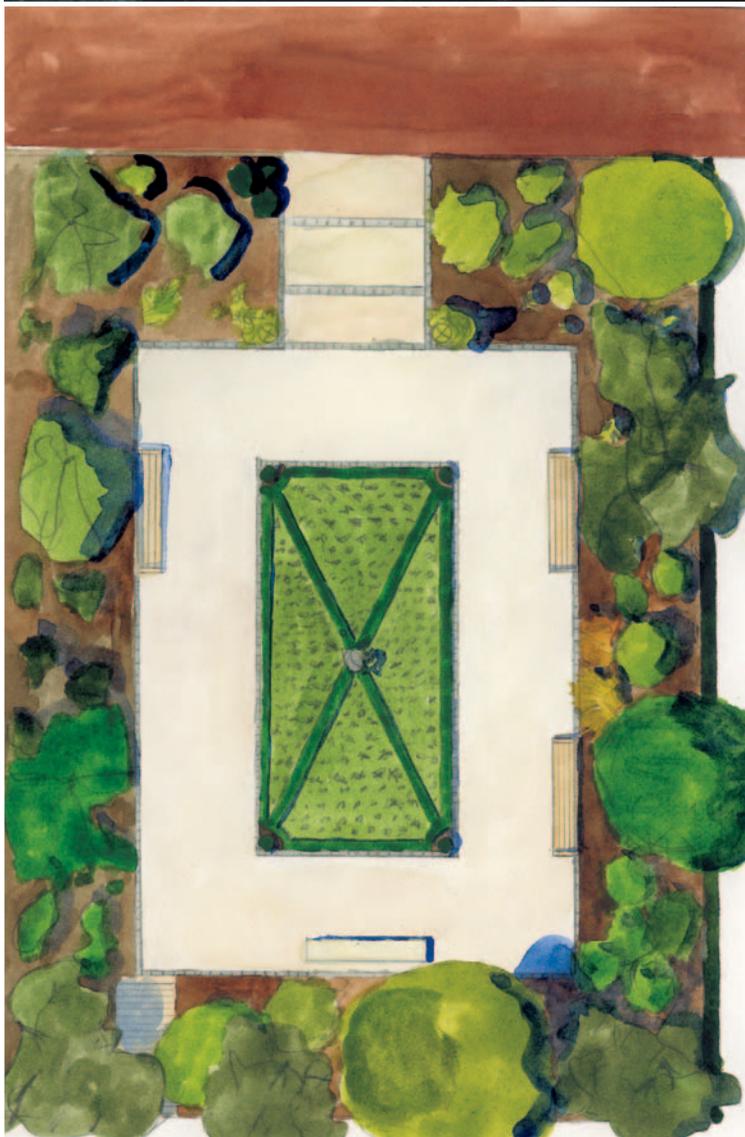
Plant Material: *Aquilegia*, *Astilbe*, *Aucuba japonica*, *Berberis*, *Buxus*, *Chamaecyparis pisifera* 'Filifera', *Carex*, *Dicentra*, *Geranium*, *Hedera helix*, *Heuchera*, *Hydrangea*, *Ilex* 'Golden King', *Ilex*, *Lilium* *ssp.*, *Narcissus*, *Nepeta*, *Paeonia*, *Primula*, *Rhododendron*, *Rosa* *ssp.*, *Skimmia japonica*, *Thuja occidentalis*, *Tulipa*, *Vinca* and *Yucca filamentosa* 'Gold Sword'.



Fig. 13. Photo taken from the entrance, looking East. A sun-dial form a strict focus in the middle although the garden face North.



Fig. 14. The Sheridan garden has a very regular plan. The garden is probably laid out in the fifties and the classic design works on this site.



ca 0-10m





THE LOTUS GARDEN

The Lotus Garden is a Community Garden on West 97th street between Broadway and West End Avenue. In 1983 horticulturalist Carrie Maher and architect Mark Greenwald laid out the plans for the garden (Information paper from the Lotus garden). They were both members of the community (ibid.). The paths are still on the same places but a lot of new plant material is added.

The entrance is from 97th street and the garden is one story up from street level. The size is approximately 700 square meters, the garden is thirty meters long by twentythree meters broad. In the North and the South black iron fences on low walls delimit the garden space. The walls around the garden are covered with climbers. A low fence along the street also has vines climbing on it. Tall lampposts, black cast iron with white glass-globes are placed in a row along the street like a guarding group of soldiers. There are multistory buildings on three sides of the garden and the shade is deep most of the day in the South part of the garden. The trees and shrubs growing in this part are lanky, almost etiolated, beings seeking the light higher up. This cast light on a phenomena that is common in New York —the deep shades and the lack of light that together with turbulent winds make it difficult for plants to develop.

In the back of the garden is a compost area and a tool-shed where each family have their own space. Different objects are replaced all around by the gardeners: an antique-copy putto, a small Japanese style concrete lantern, frog sculptures and baskets with food for the wild birds from last winter. The soil-depth is one meter.

The furniture consists of a large variety of tables chairs and benches. Green and white plastic chairs, a stone bench, a wooden bench and a white cast iron seating group is scattered all around the garden in a messy way.

The maintenance of this garden is on a voluntary basis. 400 community members and 27 families have access to the garden. They are proud of their garden and keen on showing everyone what they have achieved. The gardening families have their own keys and access whenever, during daytime, they want to go there. The irrigation is handled manually and according to the gardeners this is heavy work during the hot summers.

The garden is open to the public some hours a week during the growing season. When I visited the garden three women, a man and a boy were gardening. A small girl and her father, not community members, were watching.

The overall lay out is given structure by an organic plan with winding bark paths. Between the paths are flowering fields. The fields are divided, with invisible borders, between the different gardeners' areas. There are two ponds with gold fish in the North-West corner. The intention when the garden was laid out was to have different themes of the borders like for example a rock garden,



a native plant garden, a herb garden and a silver garden (Lotus Garden Plan). The strict divisions between these types are now gone but all kinds of plants exist. The silvery plants are just a few. Now, when the bushes and trees have grown, the shadows have become deeper. The herb garden has still its wooden dividers and the plants there are growing in triangular fields.

The garden gives a kind of messy impression. There are unfounded uses of material; areas paved with different stones or tree deck on seating areas. The bark chips on the paths is an element that makes the garden somewhat coherent. Many gardeners each with their own opinions have also squeezed in as many sorts of plants as possible. The result is a jungle. The lack of order is in some ways charming. It shows that the community people care for their garden.

Plant Material: *Allium sativum*, *Amelanchier canadensis*, *Amelopsis glandulosa* var. *brevipedunculata*, *Aster*, *Astilbe*, *Artemisia abrotanum*, *Artemisia absinthium*, *Bellis*, *Berberis*, *Borago officinalis*, *Buddleja davidii*, *Chinodoxa*, *Chionanthus* 'Fringentree', *Clematis*, *Cornus*, *Corydalis*, *Corylopsis spicata*, *Crocus*, *Dicentra formosa*, *Digitalis*, *Epimedium yongianum* 'Niveum', *Euonymus*, *Fragaria*, *Fritillaria*, *Galium*, *Geranium*, *Hamamelis virginiana*, *Hedera helix* (white-variegated and green in different shapes), *Heuchera*, *Hosta*, *Hyacinthus orientalis*, *Hydrangea quercifolia*, *Ilex*, *Iris*, *Kerria japonica*, *Kerria japonica* 'Variegata', *Levisticum officinale*, *Malus*, *Mentha*, *Morus*, *Muscari botryoides*, *Narcissus*, *Ocimum basilicum*, *Ophiopogon planiscapus* 'Nigrescens', *Origanum majorama*, *Origanum vulgare* ornamental grasses, *Paeonia suffruticosa*, *Papaver orientale*, *Papaver nudicaule*, *Polysticum*, *Primula*, *Prunus persica*, *Prunus avium*, *Rhododendron*, *Rosa* 'Betty Prior', *Rosa* 'Climbing America', *Rosa* 'Heritage', *Satureja hortensis*, *Saxifraga*, *Scilla*, *Sempervivum*, *Skimmia japonica*, *Tulipa*, *Verbascum bombyciferum*, *Verbena*, *Viburnum carlesii*, *Viburnum prunifolium* 'Blackhawk', *Vinca minor*, *Viola labradorica*, *Viola x wittrockiana*, *Vitis labrusca*, *Weigela*, *Wisteria sinensis* and more perennials, ferns, annuals and bulbs. Some of them are, according to the gardeners, unusual varieties.



MUSEUM GARDENS

ARTHUR ROSS TERRACE AT THE AMERICAN MUSEUM OF NATURAL HISTORY



THE IRIS AND B. GERALD CANTOR ROOF GARDEN AT THE METROPOLITAN MUSEUM OF ART



THE ABBY ALDRICH ROCKEFELLER SCULPTURE GARDEN AT THE MUSEUM OF MODERN ART



THE SAMUEL J. AND ETHEL LEFRAK SCULPTURE TERRACE AT THE SOLOMON GUGGENHEIM MUSEUM



ROOFTOP URBAN PROJECT AT DIA CENTER FOR THE ARTS





ARTHUR ROSS TERRACE AT THE AMERICAN MUSEUM OF NATURAL HISTORY

The Arthur Ross terrace at the American Museum of Natural History is called a "Celestial Garden" (the American Museum of Natural History, 2001). The museum entrance is on Central Park west at the 79th Street and the garden is on the 81st Street side next to Theodore Roosevelt Park.

Under the park is a three storey parking garage (Rose Center Floor Plan, 2001) effectively hidden away.

In 2000 landscape architect Kathryn Gustafson with Landscape Architects Anderson & Ray, Inc. designed the garden (the American Museum of Natural History, 2001).

The garden size is at a rough estimate forty times hundred meters and the garden is surrounded by the museum building on three sides. The fourth side is overlooking Theodore Roosevelt Park. Large-scale design with precious materials and nice detail work is the general impression of this quite large plaza-like roof garden. Some strange details occur though. At the upper plaza the trees are planted below plaza level and the stems come up through holes in the paving. They look like if they hang freely in the air and not planted. It is probably a very stable structure, still it has a fake expression. The 60 times 60 centimeter pavers rest on a metal structure.

The most striking part of the garden is the Rose Center For Earth and Space. The building has a cubic clear glass façade and inside are large scale models of a compact solar system or a model of atoms and quarks and form a strong focus in the back of the garden. This feature create a connection between The Arthur Ross terrace and the other museum gardens, described later in this essay, that are built to display three-dimensional art. The Arthur Ross terrace has more of a recreational use. A place for people to get some fresh air after hours in the museum.

Steel and stone build up the gray color scheme that is connecting the garden visually to the house nearby. A waisthigh brick wall with sand-colored concrete on top with a wooden bar attached to it surrounds the garden. Large benches that seem to have been designed for this site are placed along the north side of the park. The design invites people to stretch out, the benches look huge but generous for one person. All dreams of this ends with "Benches are for sitting only", just one of all directions posted at the park's entrance from the Theodore Roosevelt Park side. The benches are actually designed to seat a whole class of kids.

The color of the wood is connecting the colors of the ground material and the surrounding brick wall. In a year or two the wood will turn silvery gray.

The garden is built in different levels which are connected with a staircase at the North West corner. In the North East, at the glass building, the slightly inclined plane at the upper level joins the lower level. When entering from the museum the garden is accessible for people in wheelchairs.

Along the side of the terrace are lampposts made of steel with light directed up against a white, circular frame indirectly spreading



Fig. 18. The terrace seen from the café with large spheres of Rose center as a backdrop.



Fig. 19. Detail showing the stem of a Pagoda tree coming up through the thin layer of paved floor.

Fig. 20. Generous wooden benches and lunar like space inspired lamp-posts along the outer wall.



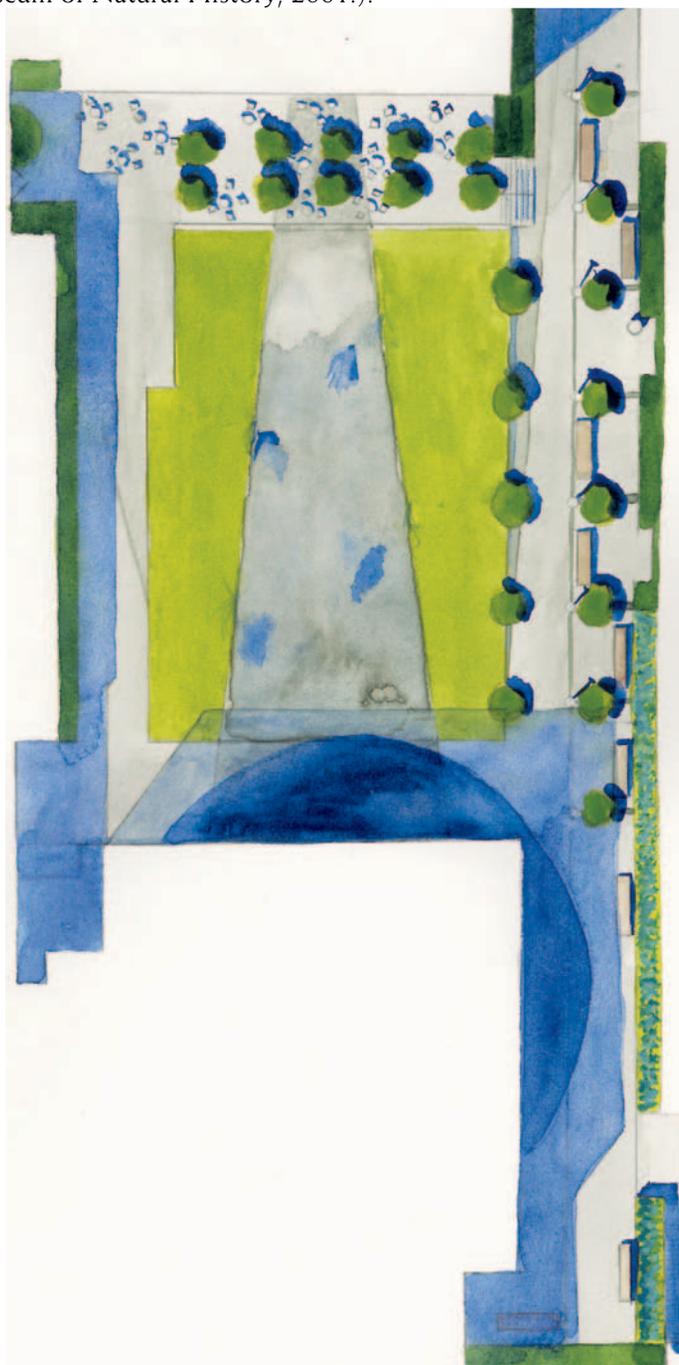


the light. The lampposts are sculptural and connect to the "celestial" themewith their full-moon shapes. Interest and beauty is created nighttime with the lights from the lampposts along the side of the terrace and from the Rose Center as seen from the park below.

Plant Material: Christmas Fern, Bellflower, *Buxus*, *Epimedium younianum* 'Niveum', *Franklinia alatamaha*, *Ginkgo biloba*, *Ilex glabra*, *Kalmia latifolia* 'Olympic Fire', *Nepeta* 'Blue Wonder', *Omphalodes verna*, *Prunus maritima*, *Sophora japonica* 'Regent' and *Viola* (the American Museum of Natural History, 2001.).

Fig. 21. Plan of Arthur Ross Terrace at the American Museum Of Natural History.

ca 0 + + + + + 20m





THE IRIS AND B. GERALD CANTOR
ROOF GARDEN AT
THE METROPOLITAN MUSEUM OF ART



Fig. 22. Joel Shapiro's stylized human figures take the scene on The Metropolitan Museum Of Art this year.

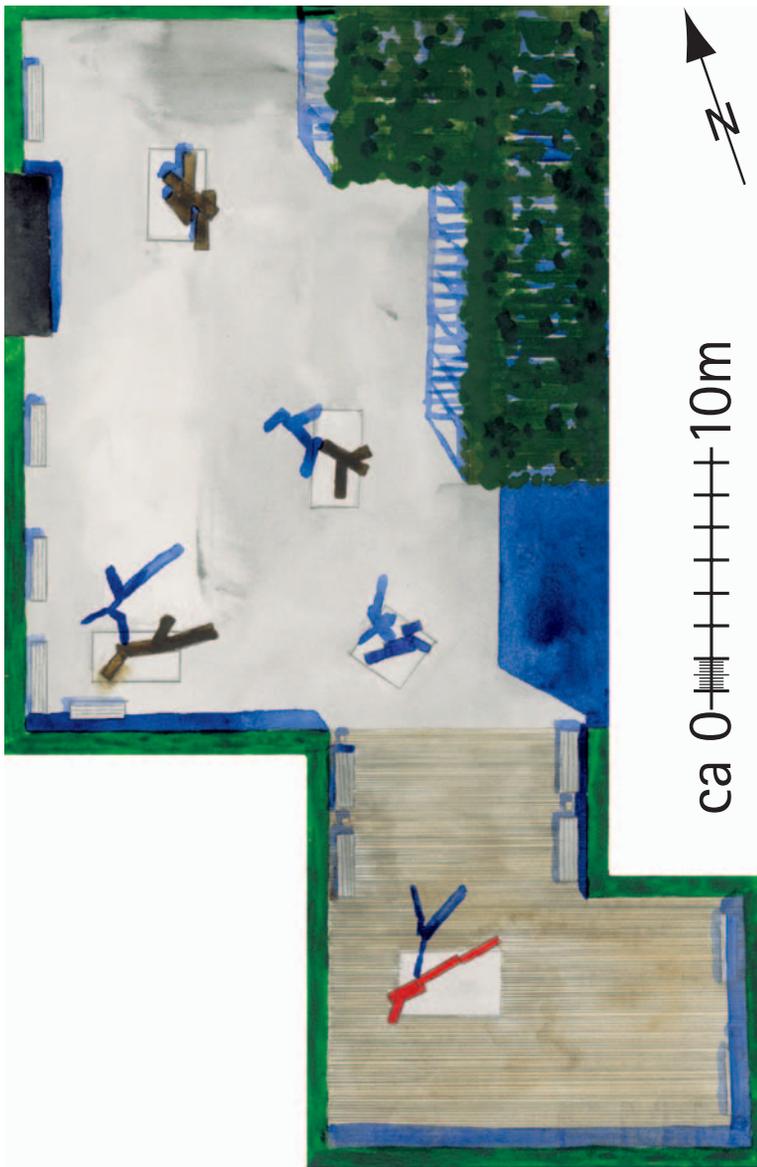


Fig. 23. Plan of The Iris and B. Gerald Cantor Roof Garden at The Metropolitan Museum Of Art.



The Iris and B. Gerald Cantor Roof Garden is situated on top of the Metropolitan Museum on 1000 5th avenue. The garden first opened in 1987. It is designed by Kevin Roche and John Dinkeloo (Moorman, 1988:42).

The terrace is reached by elevator from the first floor. At the entrance there is a wooden espalier painted in a light gray color. The espalier is covered with fragrant wisteria. It feels like a relief to enter the roof after hours in the museum. The sky is present. The garden has an open easy design and the weather affect the mood.

It is not only the view that makes the garden, although the view is great. Central Park on three sides and on the fourth the upper floors of the fancy houses on Upper East Side. There are no elements framing the view on the South and West sides to the park but the museum building on the North and East sides cover the sight entirely. The open view over the park is probably emphasized by this fact.

The roof garden has a horizontal design. There is a granite paving on the major part of the terrace. The South part with a smaller scale has a wooden decking. The size of the garden is approximately 800 square meters (Moorman, 1988:42).

A very few elements are used to create the garden. The border consists of a low wall with clipped Yew in it. The Yew border works as a transition between the hard materials on the terrace and the lush green of the park below. The wall in which the yew is planted is built up by light gray concrete. Shiny metal handles made of round steel are attached to the wall and down-lights are built in to it. The plants are watered automatically.

Benches and sofas are made of teak with the surface left unpainted. The furniture is placed near the walls leaving a large open space in the middle that makes a showroom for sculptures. This season (2001) the roof garden show three-dimensional works of art by the American sculptor Joel Shapiro. The sculptures are cast in aluminum and bronze and some of them are painted in bright colors. The roof garden is open at museum hours, if the weather is fine, from May till October (Metropolitan Museum, 2001).

Plant Material: *Lonicera x. americana*, *Taxus*, yellow *Viola x wittrockiana*, *Wisteria*, a yellow-and-white striped grass and a beautiful plant with *Gardenia*-like leaves and purple flowers.



THE SAMUEL AND ETHEL LEFRAK SCULPTURE TERRACE AT THE SOLOMON GUGGENHEIM MUSEUM

Fig. 25. The Samuel J. And Ethel LeFrak Sculpture Terrace viewed from North East. The Frank Gehry installation work as a roof creating deep shade.



Fig. 26. Plan of The Samuel J. And Ethel LeFrak Sculpture Terrace at The Solomon Guggenheim Museum.





The Solomon Guggenheim Museum on 5th avenue between 88th and 89th street was designed by architect Frank Lloyd Wright and was built in 1956-59. It has a roof terrace on the fifth storey with entrance from the Annex on level five. The terrace is about fifteen meters long. On the floor plan of the museum it is marked "temporary café" (@Guggenheim, 2001:24). The terrace is open to visitors of the museum.

Plants do not seem to have been the main issue when designing, the only plant material is English Ivy that is planted in a wall on the outer side of the terrace. Circular lamps are built into the wall. English Ivy does also cover large areas the same way as the black and reddish gravel cover other surfaces on different levels. The terrace is in itself just a rectangular surface. Around is white painted concrete on the façades and these however create a graphic pattern together with the other mentioned materials.

There is an installation by architect Frank Gehry on the terrace for the current exhibition. From the inside, the steel-frame of I-beams is visible and on the outer side it is clad with sheets of galvanized aluminum. A mirror-table is attached to this central sculpture. Metal tables and chairs in a warm, light gray color fill the rest of the paved area. The furniture creates a noisy sound when moved. The sound is reflected by the surrounding walls and create an annoying air. The paving is not particularly interesting; 60 times 60 centimeter pre-cast concrete with a gravel surface.

The temporary installation by Frank Gehry currently on the terrace is adding a sense of futuristic glare, but is more interesting viewed from a distance than from the terrace. I read an information sign (at the Solomon Guggenheim museum, 2001) that it was originally created as a study of the canopy for the hotel at Marquis de Risqual in Elciege, Spain.

On the terrace there are no other activities than sitting down watching each other and the terrace is too small to walk around on so the main use of the terrace is to get some fresh air. The view is to the North a residential building and to the West the edge of Central Park. Still the terrace leaning on the North side seems a bit off in a negative way.

Plant Material: *Hedera helix*



ROOFTOP URBAN PROJECT AT DIA CENTER FOR THE ARTS

The long time art installation "Rooftop Urban Park Project" was designed by the American artist Dan Graham on the roof of Dia Center For The Arts at 548 west 22nd street in 1997. The museum have four exhibition floors and is higher than most surrounding buildings. The rooftop is open to visitors of the museum. The size of the roof is about twentyfive meters square.

The terrace is paved with re-used dark gray rubber squares sixty by sixty centimeters around the installation. The metal fence around the terrace is painted light gray. Three café-tables and light gray metal chairs cling together in a passage on the terrace. Snacks can be bought in an unpretentious cafeteria behind a "carport" on the roof.

The sculptural installation six decimeters over the roof top floor and is reached by climbing four steps. The installation has a wooden deck. Silvery gray metal beams and nuts and two way mirrored glass build the whole construction. Curiosity forces the visitor to enter. The cube is open upwards and light is reflected in a way that shadows disappear and orientation is lost. The sound also change in a similar way when entering the glass cage. One wall of the middle mirror glass circle opens. In the inner cage the view changes too. In the semi transparency a mirror image of what is behind you is projected before you. The viewer is at the same time a part of the installation as is the case in everyday life in a city, yet, here it is more obvious. Unreality and claustrophobia are the feelings within the sculpture despite the transparency.

The absence of plants and the presence of industry like material make the main impression very urban. A sunny day it gets incredibly hot on the roof. On the South and West is the harbor with its huge metal structures. This is not gardening in a traditional way, but it is an outdoor room. Contemporary garden designers use a lot of new abiotic materials and I think that we as landscape architects should expand our field of vision to get inspiration without as in this case totally give up the plant material.

Plant Material: None



Fig. 27. Rooftop Urban Park Project at Dia Center for the arts. The impressions change when entering the sculpture. Sound and vision are remodelled. The viewer is at the same time a part of the installation.

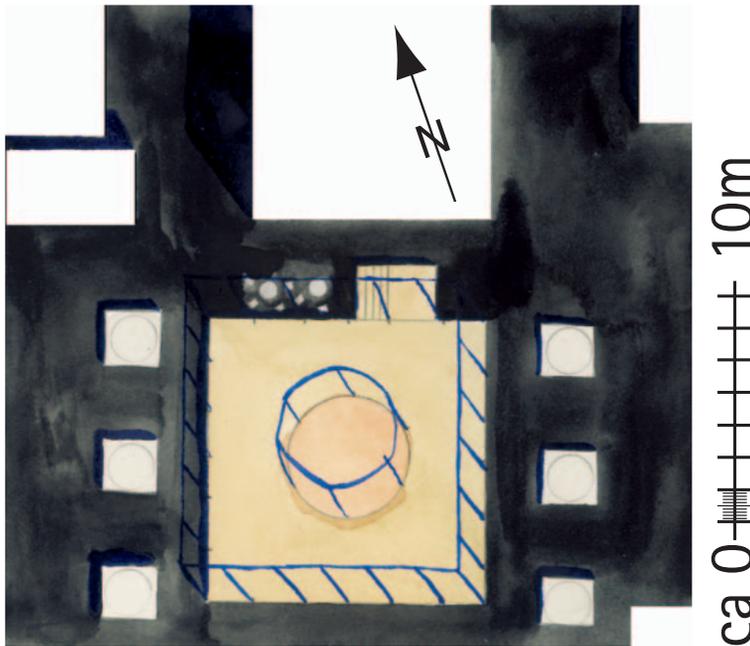


Fig. 28. Plan of The Rooftop on Dia-Center for the arts with the installation forming a center. The small squares around the installation are skylights to the exhibition balls below.



Fig. 29. The inner circle opens.



SCHOOLYARDS

MARTIN LUTHER KING JR. HIGHSCHOOL



FIORIELLO H. LA GUARDIA HIGHSCHOOL
OF MUSIC, ARTS AND PERFORMING ARTS



NYU— LEONARD STERN SCHOOL
OF BUSINESS/GOULD MEMORIAL PLAZA



PAUL MILSTEIN PLAZA
AT THE JUILLIARD SCHOOL OF MUSIC



FORDHAM UNIVERSITY



THE ROCKEFELLER UNIVERSITY





MARTIN LUTHER KING JR. HIGHSCHOOL

Fig. 30. Plan of the school yard at Martin Luther King Jr. High School.



Fig. 31. Red painted concrete seats is the most striking feature at Martin Luther King Jr. High School.





Martin Luther King Jr. High School is a Public Schoolyard on 122 Amsterdam Avenue and 65th street.

The schoolyard is situated half a story over street level and is reached through wide stairs on three sides. The school building rise three stories over the schoolyard. The schoolyard is designed to function in a tough environment and stand the wear originating from the crowding that appear on such a place (Ince, 2001).

The estimated length of the plaza is about forty meters. Glazed brick is used as material on the ground and the dark brown brick has a warm color tone that goes well with rust and red, that are the other main colors on the site.

In the North end of the yard a large rusty-iron sculpture, a Martin Luther King Memorial by William Tarr from 1973 (Americans For the Arts, 2001), is placed. The base of the sculpture contains Martin Luther King quotations. A flagpole stand near the memorial.

Concrete seating groups, painted red, with a planting in the middle, four tulips in each stand in diagonal rows on the yard. The red concrete formations are sculptural and an unlikely feature that makes the plaza less depressing. Wooden benches are attached to the wall along the street, facing the schoolyard.

Four downlights are attached on building that is pointing out over the schoolyard. There are also heavy brown lamp posts on the yard.

The plant material is sparsely used. The wear and tear seems to be the main design point. On the schoolyard there is only one really large planting. The soil in it is dry and the only plants growing there except a few tulips were thistles. The irrigation is non-existing.

Plant Material: *Artemisia*, *Lobelia*, *Narcissus*, *Nepeta*, *Sedum spectabilis* and *Tulipa* (yellow, white and pink)



Large circular concrete planters with one tree in each are distributed along the sides of the garden. One planter had undervegetation and the others were overgrown with weeds. The soil was of the kind that it would have remained in the same shape without its planter —packed sandy clay. There was no water in sight.

Raised planting walls in the middle part did formerly have plantings. Stumps from the cut down shrubs is left in the planters. This might have been meant as renewal of the plants, but these plants will never spring again. The school yard has a warm gray tone, the only color added derives from graffiti.

Downlights three meters up on the wall cast light over the entrance areas. The lamps are made of brown painted sheet metal and form associations with the dreary look of jail yards. It goes without saying that since this is a schoolyard there is also a flagpole with the American flag.

When I visited the garden there were no classes. Maybe more people use the schoolyard on other hours or times of the year. This lack of visitors augmented the sense of a deserted place.

Had there been plants in the planters and students on the ground the impression would have been another since the frame or layout of the grounds is not that bad.

Plant Material: *Euonymus*, *Gleditsia* and *Hedera helix*.

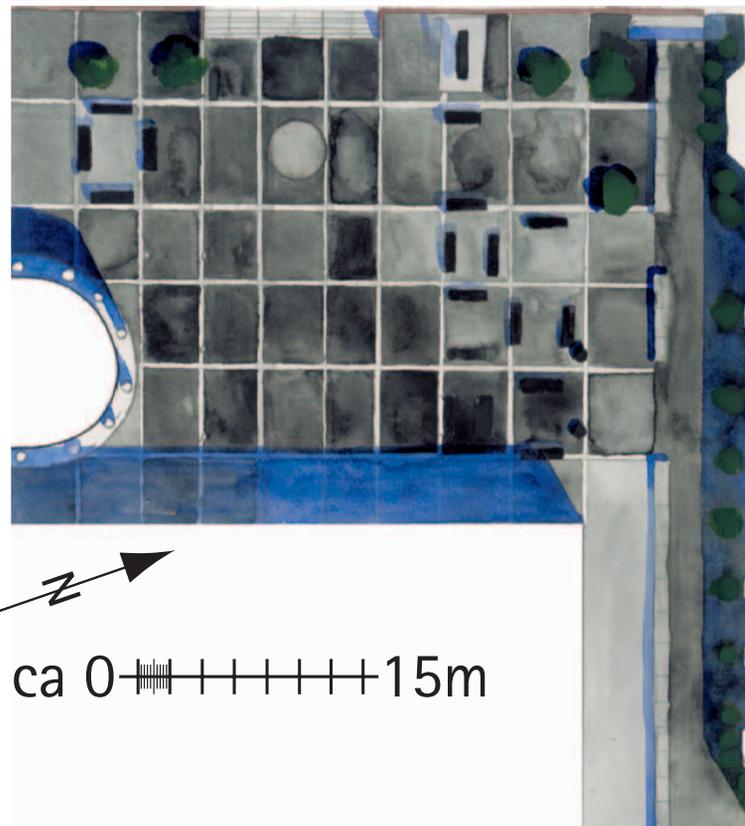


NYU— LEONARD STERN SCHOOL OF BUSINESS/GOULD MEMORIAL PLAZA

Fig. 34. Dogwoods and Geranium in large planters at Gould Memorial Plaza.



Fig. 35. Plan showing Gould Memorial Plaza.



The Gould Memorial Plaza was designed in 1964. The building and plaza is on 44 west 4th street, on the campus of New York University (NYU). The plaza is elevated a few steps from street level. The size of the plaza is forty meters in both directions and the space is defined by university buildings on three sides.

The most obvious on this strict plaza is the paving. The ground material consists of 55 by 55 centimeters concrete slats and smaller 22 by 22 centimeters slats form a rectilinear pattern. Red granite blocks are placed in the intersections.





Black lighting bollards form a larger semicircle around the semicircular entrance to the Stern School of Business.

A large and shiny block of stone with the school's name lit at night is placed close to the entrance of the building. Lamps are built in to the paving.

There is a long red stone wall along the street that define the edge of the plaza and is used for seating. The stairs that take the visitors from the street to the plaza only interrupts the wall once. The average visitor of the plaza is a New York University-student.

Elaborated cast concrete planting containers painted in a warm light gray color contains Dogwood and red pelargoniums.

The sculpture "Seuil Configuration" by Jean Arp has a central position on the plaza and forms a focus. The sculpture has a direction inwards the plaza and upwards.

Concrete benches with visible ballast are placed in a straight row over ventilation gratings for an underlying building.

Black painted metal sofas are placed in groups. There are also litterbins and ashtrays to go with the sofas and benches.

Along the East façade that have a different, darker, character a large number of small conifers of varying shapes are planted in green planters. I would characterize the plaza as a functional but quite uninteresting place still the Jean Arp sculpture and the Dogwoods make it pleasant to look at.

Plant Material: *Cornus kousa*, (red) *Pelargonium x cultorum*, *Taxus* and *Thuja*.



PAUL MILSTEIN PLAZA AT THE JUILLIARD SCHOOL OF MUSIC

Fig. 36. Paul Milstein Plaza seen from North West.



The Paul Milstein Plaza is situated over the 65th street and is reached through an elevator from street level some stories down. The Plaza is a part of Lincoln Center. The grounds were designed by landscape architect Daniel Urban Kiley in the 1960s.

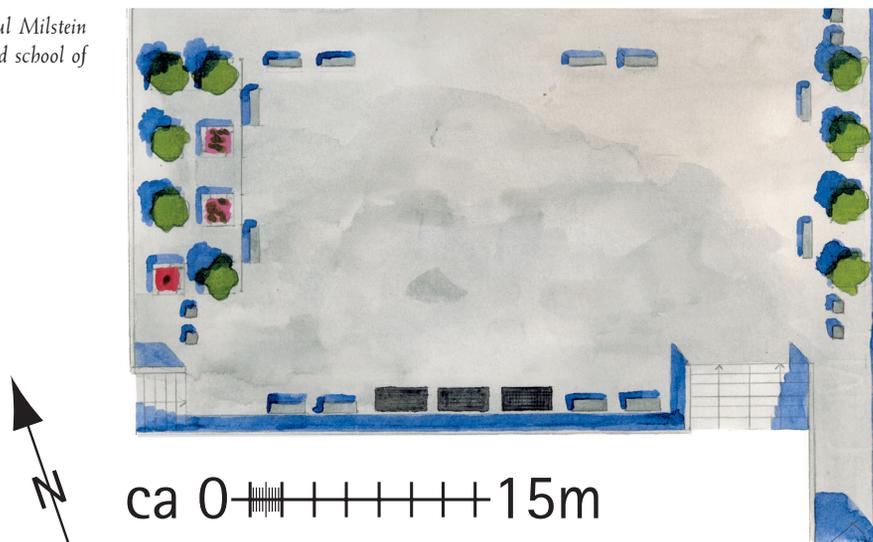
Paul Milstein Plaza is about forty meters long. The Juilliard school of Music is at the North side of the plaza forming a wall. On the opposite side is a low wall and steps down to other parts of Lincoln Center. There are fresh-air inlets to a parking garage on this side. The other two sides have a similar kind of wall, but this time the walls protects from falling down to the street below.

The plaza is paved with pepper and salt colored and a rose colored granite. The same materials are used for the planters. The edges of the planters double as a place to lean. Clipped Azaleas, small Cherry trees and Roses grow in the planters. Shiny granite benches and metal litterbins are placed throughout the plaza. There is a strict angularity.

The role of the plaza is not defined, a plaza outside a school over a road, a thoroughfare for students and an open place, a best room with materials giving associations to public restrooms.

Plant Material: *Rhododendron* (pink), *Prunus* sp.

Fig. 37. Plan of Paul Milstein Plaza at The Juilliard school of Music.





FORDHAM UNIVERSITY

Fordham University is on Columbus Avenue between west 60th and 62nd streets. The garden is built one story up over a parking garage and over the entrance hall to Fordham University. Stairs in the East, West and North sides lead to the garden.

When entering the garden the most striking impression is generous lawns and quite large trees. The garden is approximately fifty meters long. The appearance is very campus-like. An old church on the other side of the street is seen from the garden. This view give the University a closer contact to its Jesuite tradition. In spring the yellow Daffodils welcome the visitor. There is a blue, green and yellow color collection and the paving add a light gray and pale red set of colors.

Large post-modern steel-frame gates and Wisteria clad pergolas of blue metal structures meet at the entrances to the garden. The constructions are painted blue with rust protection paint. Lighting fixtures are attached on the metal structures. General light is provided by lampposts.

Lights pointing upwards at the trees are inset in the ground surface, two on each tree for the larger trees.

A lot of modern sculptures of bronze, iron and steel are placed in the garden. Examples are "Blue Lotus", "Study for 95B" and "95B" by Meryl Paradash. Some of the sculptures are partly painted black. Some are moving in the wind. A small and shallow amphitheatre forms a center, not the geographical center but a focus.

The high buildings around the garden create a large room. People walking between the different buildings cross the garden. The garden can also be viewed from many windows. A terrace for a student cafeteria is located North of the South building. Black gravel, a few decimeters wide strip, is put along the façades of the buildings.

60 centimeters square pre cast concrete paving stones in white, pink and red are laid out in patterns on the ground. Granite rectangles are forming small elevated squares filled with red gravel. Small blue ceramic cubes are sculptural and double as seating. Some of the cubes are fundaments for sculptures.

Benches of blue metal wire net and blue litterbins cast in concrete blocks and goes well with the design concept. These are supplemented with ugly brown litterbins and ashtrays that are probably added later.

One story down at one of the three entrances, still on concrete understructure is a planting with London plane trees and English ivy.

The plantings here are in slightly different levels depending on the needs for soil depth et cetera the plants in question have. This makes the garden a little bit more dynamic. The garden has full irrigation. The garden seems right for its location and has a relaxed feeling.

Plant Material: *Hedera helix*, *Juniperus sabina mas*, *Ligustrum*, *Magnolia*, *Narcissus pseudonarcissus*, ornamental grasses, *Platanus acerifolia*, (red) *Prunus avium*, *Prunus serrulata*, *Spiraea* and *Wisteria*. Perennials.



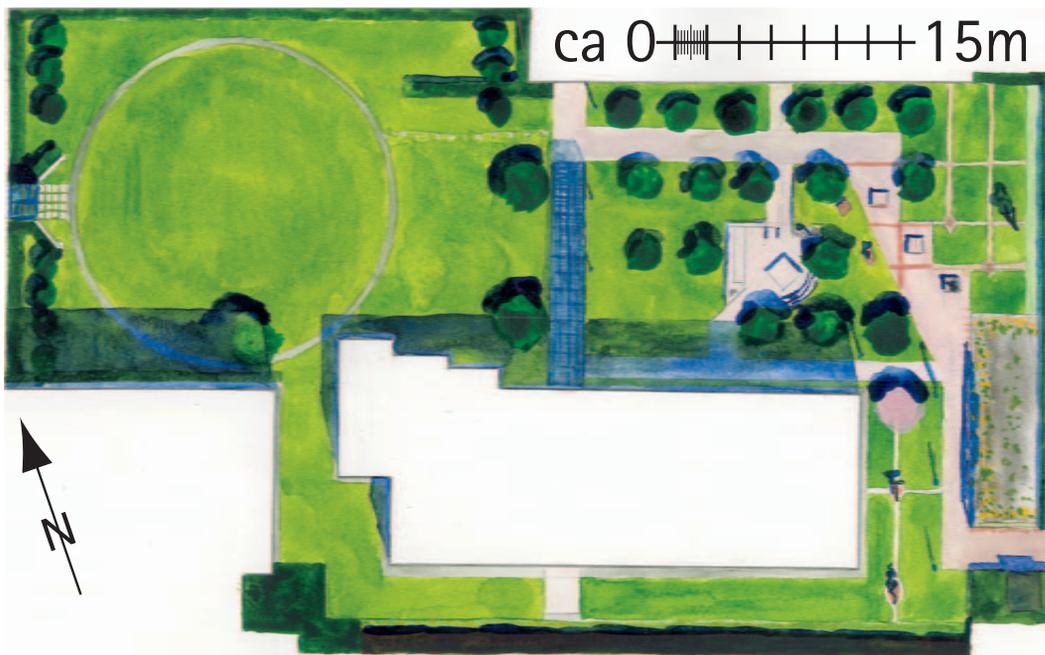
Fig. 38. A small and shallow amphitheater form a center.



Fig. 39. Daffodils, modern sculpture and post-modern steel structures at one of the entrances to Fordham University Campus.



Fig. 40. Plan of Fordham University.





THE ROCKEFELLER UNIVERSITY

The Rockefeller University on 66 York Avenue on Upper East Side has a smaller roof garden part recently added to its garden. It is built approximately ten meters up. The roof garden is in two levels with connecting stairs. The lower part is on top of a parking garage and the upper level over one of the university buildings. Buildings surround the garden but there are entrances from the non-roof garden parts of Rockefeller University on the North West and North East side of the roof garden. The buildings are about four stories high. There are entrances from three of the four surrounding buildings to the garden. The total length of the two garden levels is approximately 35 meters and the width two thirds of the length.

The garden turn its back to East River, still there are openings between the buildings on the South side of the garden where Queensboro Bridge can be seen both from the upper and lower garden level.

The ground is covered with salt and pepper granite paving with stripes of darker gray granite. There are walls built up of the same granite with a rougher surface. Lights are pointed towards the walls from the side to create light and shade effects. The blocks used for the walls have three different colors, the two grays of the paving and a reddish tone. Along the walls is a walk with birches, Wintergreen and a variety of Daffodils. Spotlights are put on some of the trees.

Gray granite curbstones line another, smaller, planting. Smaller and larger grasses of bluish green shades and plants with interesting texture are planted there.

Classical wooden teak sofas and tables in a warm color tone furnish the lower level while prefabricated steel structures and teak benches furnish the upper level. Lights are attached on the sides to show the way in the stairs between the different garden levels.

Pergola like steel structure of shiny metal bars is built to mark the way between the buildings. A light rain shelter roofing of glass and steel is built over the entrance to one of the buildings.

In a corner is a large, 1,5 meters cube, dark gray metal planter with a Lime tree and its drip-irrigation. Two-meter high railings where the height differences to underlying features are large have a second use to support climbers. A rectangular pattern used in the paving, the fence and the support for climbers.

A circular water sculpture of heavy dark gray polished granite encircle a small group of trees. There are lights in the water marking the presence of the water even in the dark.

On the upper level three rows of glass bricks are built into the concrete to let some daylight in to the lobby of the building below. Glass bricks are also used as curbstones at one set of stairs. On the upper level the planters are half a meter deep and painted red. Shiny metal ashtrays and litterbins of good design accompany them. A large sculptural structure built up by metal circles give some shade.

The roof garden seems closed off from the rest of the campus. There are a lot of nice details but in some way it feels like too

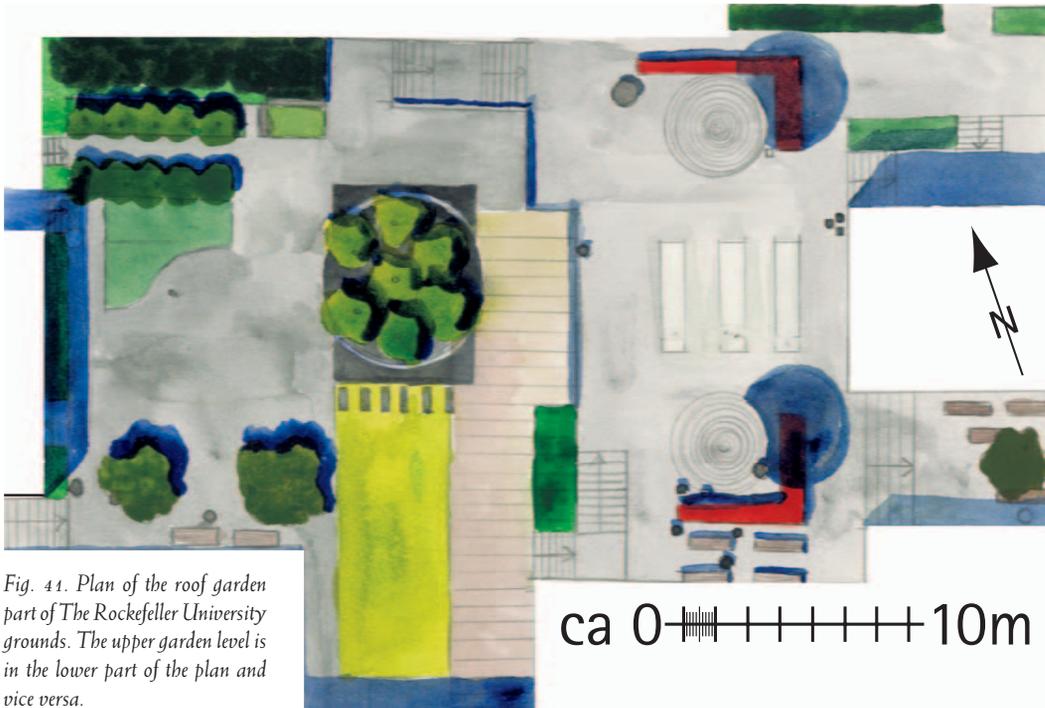


Fig. 41. Plan of the roof garden part of The Rockefeller University grounds. The upper garden level is in the lower part of the plan and vice versa.



Fig. 42. A circular form at the lower level of the garden mark the entrance to one of the surrounding buildings. East River in the back. The sculptural feature above give shade to benches on the upper garden level.



Fig. 43. A glance of the plantings on the lower level.





much is squeezed in. The garden is divided into smaller rooms but would probably appear more pleasing if kept together as one room. The roof garden with its granite paving and geometrical patterns has a much harder character than the surrounding garden. The rest of the campus also have long straight stonepaved paths, but lawns and plenty of old trees soften the impression there. The whole university area is very green and there is a connection visually between the small roof garden part and the large park area. To be allowed to enter the University grounds the visitor has to be authorized.

Plant Material: *Rhododendron*, *Betula utilis*, *Carex*, *Clematis*, *Corydalis lutea*, *Buxus*, *Festuca glauca*, *Ginkgo biloba*, *Hedera*, *Hemerocallis*, *Hydrangea*, *Ilex aquifolium*, *Narcissus politicus*, *Narcissus pseudonarcissus*, ornamental grasses, *Pachysandra terminalis*, *Parthenocissus tricuspidata* on the walls, *Rhododendron*, *Rosa*, *Rubus odoratus*, *Tilia*, *Tulipa*, pyramid shaped *Ulmus* and *Vinca minor*.

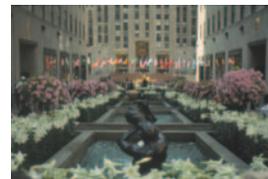


PUBLIC PLAZAS

DEUTSCHE BANK



CHANNEL GARDENS
AT ROCKEFELLER CENTER



PARAMOUNT PLAZA



THE NEW YORK CITY
VIETNAM VETERANS MEMORIAL'S PLAZA



ONE DAG HAMMARSKJÖLD PLAZA



JACOB JAVITS PLAZA/FEDERAL PLAZA





DEUTSCHE BANK

Fig. 44. The plaza is reached through stairs in a circular opening in the plaza floor.

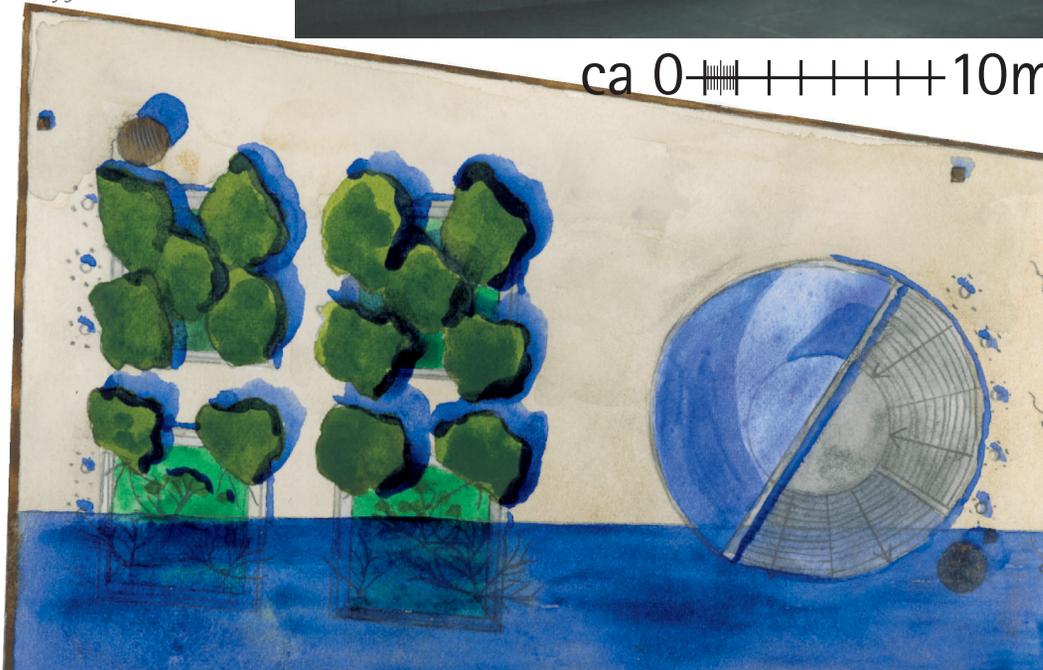


Deutsche Bank on 130 Liberty Street has an interesting entrance. The visitor enters from street level with stairs up through a circular

Fig. 45. Pagoda trees in shared planters at Deutsche Bank.



Fig. 46. Deutsche Bank. Plan of the roof garden.





opening in the plaza floor. On the side of the stairs is a semicircular pool of water and a waterfall. The flooring is cast concrete with visible ballast.

The plaza is one story over street level. The Deutsche Bank building creates a blocking wall along the South side and on the other sides are low brown railings. The total length of the plaza is about thirty meters. Four squares and the entrance circle constitute the main design. In each one of the four large square planters are five trees. The large concrete planters seem to have been cast at the site. The planters are designed with benches all around the outer sides. Dead and living Pagoda trees stand in the planters, their under vegetation, the English Ivy, survive further into the shade. The irrigation doesn't seem to function and there is no sign of weeding.

The whole plaza has a brown color tone. Tables and stools are brown, flagpoles and litterbins have the same material as the ground. The large fresh air inlet pipes are painted brown and the cast concrete has a brownish fade.

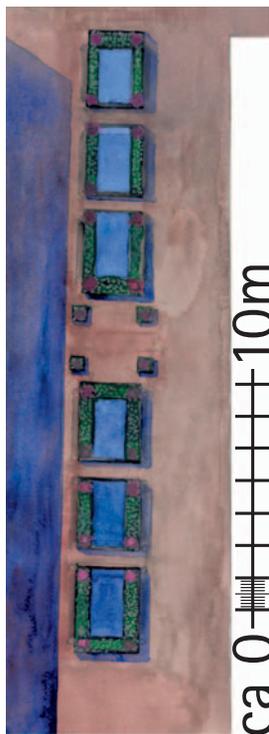
The plaza does not have any precious materials but it has a simple and witty plan and it is positive that it has a kept together color scheme. The brown tone give a warm feeling. When studied, the garden had a magnificent view over the twin towers of World Trade Center.

Plant Material: *Hedera helix* and *Sophora japonica*.



CHANNEL GARDENS AT ROCKEFELLER CENTER

Fig. 47. The Channel Gardens are always dressed up for show-off and commerce, here in White Lilies and pink Azalea.



The Channel Gardens on 5th Avenue between 50th and 51st Streets was designed in the 1930s by architect Ralph Hancock (Pool, 1999:100), Reinhard & Hofmeister, Corbett, Harrison & Mac Murray, Hood & Fouilloux, John Portman and associates (Liu, 2001). The gardens are flanked by the British Empire Building and La Maison Française of Rockefeller Center and these define the space. The distance between the two buildings is about ten meters. Seen from Fifth Avenue the Channel gardens have the Sunken Plaza and the fifty-story General Electric Building as its background. The houses and gardens of the Rockefeller Center were planned and built at the same time and as a whole. You can read about four other roof gardens, on top of buildings at Rockefeller Center, further on in this report. A sign at the Channel gardens says that it and the whole Rockefeller Center is built on the former site of a botanic garden.

The overall layout is on a reddish gray granite paved inclined plane with the highest level at the fifth avenue side. The garden has six rectangular basins or shallow pools in a row. Placed in two groups of three the basins form a "square" in the middle. Metal benches painted in a warm gray tone flank the row of basins and plantings. The edges of the basins are chist color stone and in the

Fig. 48. A plan of the Channel gardens. From above the reddish color of the paving is striking.

Fig. 49. The scene is changing every time the flower creations are remade.





basins are fountain sculptures sea gods riding on fishes and turtles. The glass tile bottoms of the pools are lit from under.

There is a 24 hours a day access to the place. A lot of people passes and some of these stay for a while, seated on the benches. This is a small and very intensely used garden considering the number of people passing every day. The flowers are often changed and new creative designs of flower arrangements enter the scene every other or third week. A lot of money is put in the garden when new designs are made and new planting work is done. The output of these investments is commercial since the Channel gardens are a tourist attraction and a good symbol for Rockefeller center.

The theatrical Channel gardens are always dressed for party and have a floristic appearance like a huge table set for banquet.

Plant Material: on April 23rd 2001 the plants used were rose-colored stem Azaleas and white Lilies but the plants used changes all the time. Next time visited the gardens flowered in deep pink with a dark green leafy background. The change of expression is notable.



PARAMOUNT PLAZA

Fig. 50. Paramount Plaza with its sculptural lampposts.



Paramount Plaza is a small public plaza on the Broadway between 50th and 51st streets. The twenty by twenty meter plaza works as an entrance to the 48 story building behind. Landscape architect Thomas Balsley designed it in 1990 (Cheng, 2001).

The main visual impression derives from the flooring of strict, angular granite paves in two different colors, a dark and a lighter gray. The other major visual impact on the plaza is made by the sculptural steel structures on the sides in which lamps are attached. These light sculptures draw some attention to the otherwise quite boring plaza.

Planters of dark shiny polished stone are placed after a strict orthogonal pattern on the floor. Junipers in the planters are attached to the planters with steel wire. Seating is found along the sides of the small plaza. A cube of brushed steel for commercial purposes is placed on a stone podium in the center.

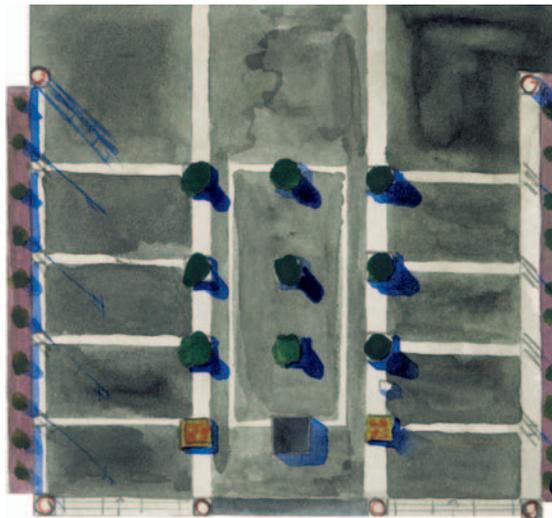
There is a crack between the people stressing in and out of the building and people who just took off from Broadway to sit down for a few minutes to rest in this noisy and stressful passage. The plaza give no rest to the mind but could be a place to sit down and observe people walking on Broadway.

Plant Material: *Calluna*, *Chamaecyparis lawsoniana*, *Juniperus*, *Picea* and *Tulipa*.



Fig. 51. A plan of Paramount Plaza.

ca 0
10m





THE NEW YORK CITY VIETNAM VETERANS MEMORIAL'S PLAZA



Fig. 52. The upper level of the New York City Vietnam Veterans Memorial's Plaza.

The New York City Vietnam Veterans Memorial's Plaza is a public plaza ten to fifteen meters over Old Slip and South Street. There is one entrance to the plaza through stairs from South Street and another through escalator(!) from 55 Water Street. Ugly brown heavy lampposts follow the stairs up to the plaza from South Street. The plaza was designed in 1985 (DGSB, 2001). To the North West and South West sides is a some ten stories high building with walls slightly leaning inwards. The size of the plaza is 7000 square meters (DGSB, 2001).

The large-scale plaza has three levels. They are separate plazas connected visually and with the same materials. The lower, very empty plaza is possibly a place for meetings of the Vietnam Memorial Society and people working at the offices nearby more frequently visit the upper level. The upper level is used by people who bring their lunch pack here to eat and get some fresh air at the same time.

Informal seating is found on the edges of what are probably pools on the lower level. The context is difficult to get here when high walls surround you. Claustrophobia is a feeling that comes up. The absence of water in the pools adds a strange sterile feeling of unreality.

A nicely colored deep brown square and rectangular brick cover the plaza. The brick is laid in circular patterns and this circular or fragmented circles- pattern is visual all over the lower part of the plaza. On the upper level the pattern is instead othogonal but the circular pattern returns at two elevated parts, just a few steps over the upper plaza level. Walls of brick with pre fabricated concrete elements on top enclose the two elevated parts. Concrete and wooden benches are attached to the walls.

The wear and tear since the eighties when the garden was designed has caused the garden to decline a bit. The benches was once painted brown, the paint is now almost gone leaving the wood bare.

Another part of the Vietnam Memorial on ground level, not a roof garden, was on the way to be rebuilt at the time for the visit.

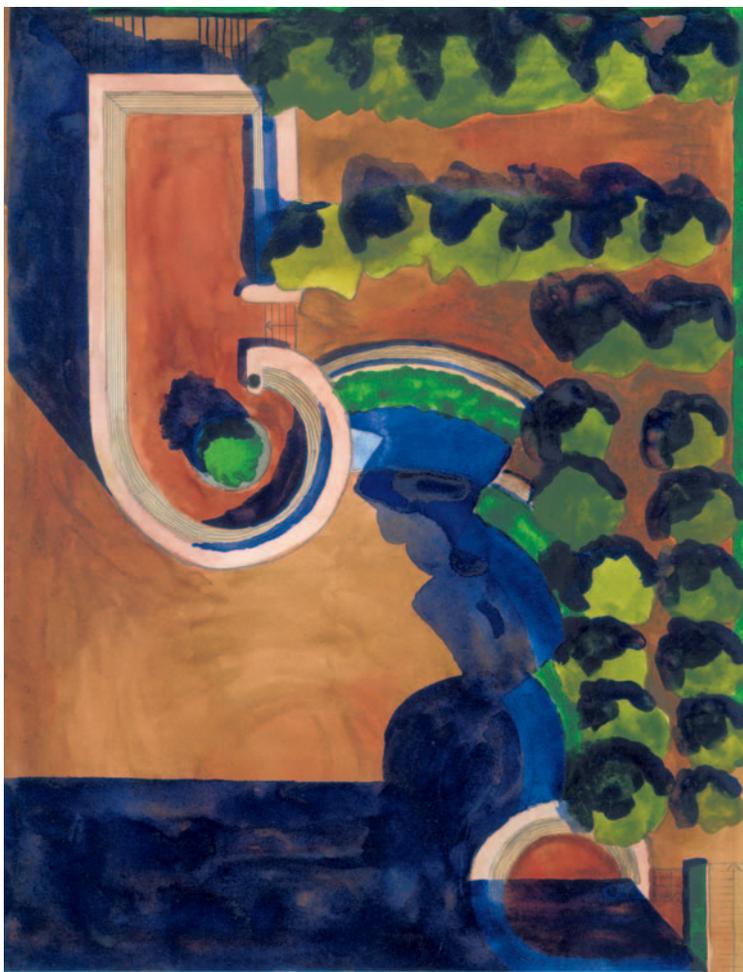
Lime trees are planted in the same level as the upper plaza-floor and have no elevated planters. Along the two sides of the plaza facing streets there are plantings on a few decimeters lower level than the plaza. The planting works as a buffer zone for security. On plaza level is a row of lighting bollards with wires in between. The two features work together



Fig. 53. Plan of The New York City Vietnam Veterans Memorial Plaza. In the lower part of the plan is a claustrophobic, unreal part.



ca 0 ++++++ 20m



to prevent people from falling out when they admire the view over East River.

Where the plaza provide strong feelings, these are more like panic than joy due to the lack of contact with the surroundings on the lower level and the surreal feeling the lack of water give.

Plant Material: *Hedera belix*, *Juniperus Sabina mas*, *Taxus* and *Tilia*.

Fig. 54. The elevated part on the upper level at the New York City Vietnam Veterans Memorial Plaza.





ONE DAG HAMMARSKJÖLD PLAZA



Fig. 55. Magnolias and Pansies open the season at One Dag Hammarskjöld Plaza.

On One Dag Hammarskjöld Plaza is a small plaza one story over street level above a parking garage.

The plaza is in two levels with a planting area in the middle. There are stairs leading up on each side of the planting. The plaza is dark and squeezed in between high rise buildings. The size is about fifteen meters in both directions and the plaza is slightly rectangular in shape.

The predominant visual impression derives from the dark burned brick used for walls and the concrete fake brick used for paving. The paving is cast on the site and has a brick pattern stamped into its surface. On the walls are sandstone colored concrete.



Fig. 56. Plan of the roof garden at One Dag Hammarskjöld Plaza.

ca 0 ++++++ 5m



63





In the back of the garden is a high, double man height, curved brick wall in front of which a waterfall cascade down to a pool. Two waist-height raised beds for planting are in two levels. Five birches reside in the shared planters. Four uplights are pointed at the stem of each birch. Pop up sprinklers are used for irrigation.

Black sheet-metal benches are made to look like cast-iron with naturally colored teak. The litterbins are of the same materials with vertical wood.

An interview with a music artist playing on a black electric guitar took place in front of the waterfall. Two colored men did hide in a corner to smoke. The artist is angry. He yells at his director. Two old ladies rise and leave.

Plant Material: *Astilbe*, *Betula utilis*, *Dicentra spectabilis*, *Galium*, *Hemerocallis*, *Magnolia stellata*, *Narcissus pseudonarcissus*, *Paeonia lactiflora*, *Spiraea*, *Viburnum*, *Vinca minor* and *Viola x wittrockiana*.



JACOB JAVITS PLAZA/FEDERAL PLAZA

Jacob Javits Plaza is at Federal plaza at Worth Street and Lafayette Street and was designed by landscape architect Martha Schwartz (Pool, 1999:66) in 1996.

Behind the plaza are Jacob K Javits Federal building and United States Court of International Trade both more than ten stories high. Flagpoles with Federal and state flags stand in front of the courthouse. The whole plaza is built on top of a garage. The length of the plaza is about fifty meters. Hexagon slats of pre cast concrete cover the plaza floor.

Box is planted on six semispherical hills with automatic irrigation. The plaza was first built with grass on top of the hills (Public Building Service, 2000). There is a smell from the box. Artificial fog is supposed to come up from the top of the hills (Robinson, 1996), but I did not get to see this feature in action. The hills are about the height of a grown up person and add texture, a feeling of green and a sense of space. The box is planted in black plastic to keep weeds away. The plastic material adds a superficial touch with the black glass building behind. You get the feeling of being inside a 3-D model of the reality.

In the comment for the 1998 PBS Citation award the jury compares the plaza with French 17th century "parterres de broderie" (Public Building Service, 2000).

There are plenty of spaces that provide seating. Long wooden benches with concrete elements cast into concrete benches swirl all over the plaza. The concrete is colored in a faint lilac tone, a contrast to the wood. The winding benches are painted in an almost self-glowing green color. The bolts attaching the wood to its concrete under frame gleam like the gazing eyes of an extra-terrestrial.

Black steel wire litterbins and drinking fountains are placed on the plaza. The fountains were initially blue and the litterbins orange (Public Building Service, 2000).

The deep shade and the strong sunlight make contrasts here. General lighting by around seven-meters high thin slender black lampposts that probably have a more important role as sculptures than as lamps. White egg-like bollards in a row along the buildings add another sculptural touch.

Rails and handrails are of black painted round metal. The handlers at the steps curl in the ends like butterfly antennas. The plaza design is weird in a positive way, surprising, interesting and bring some humor to the plaza.

Plant Material: *Buxus sempervirens*.

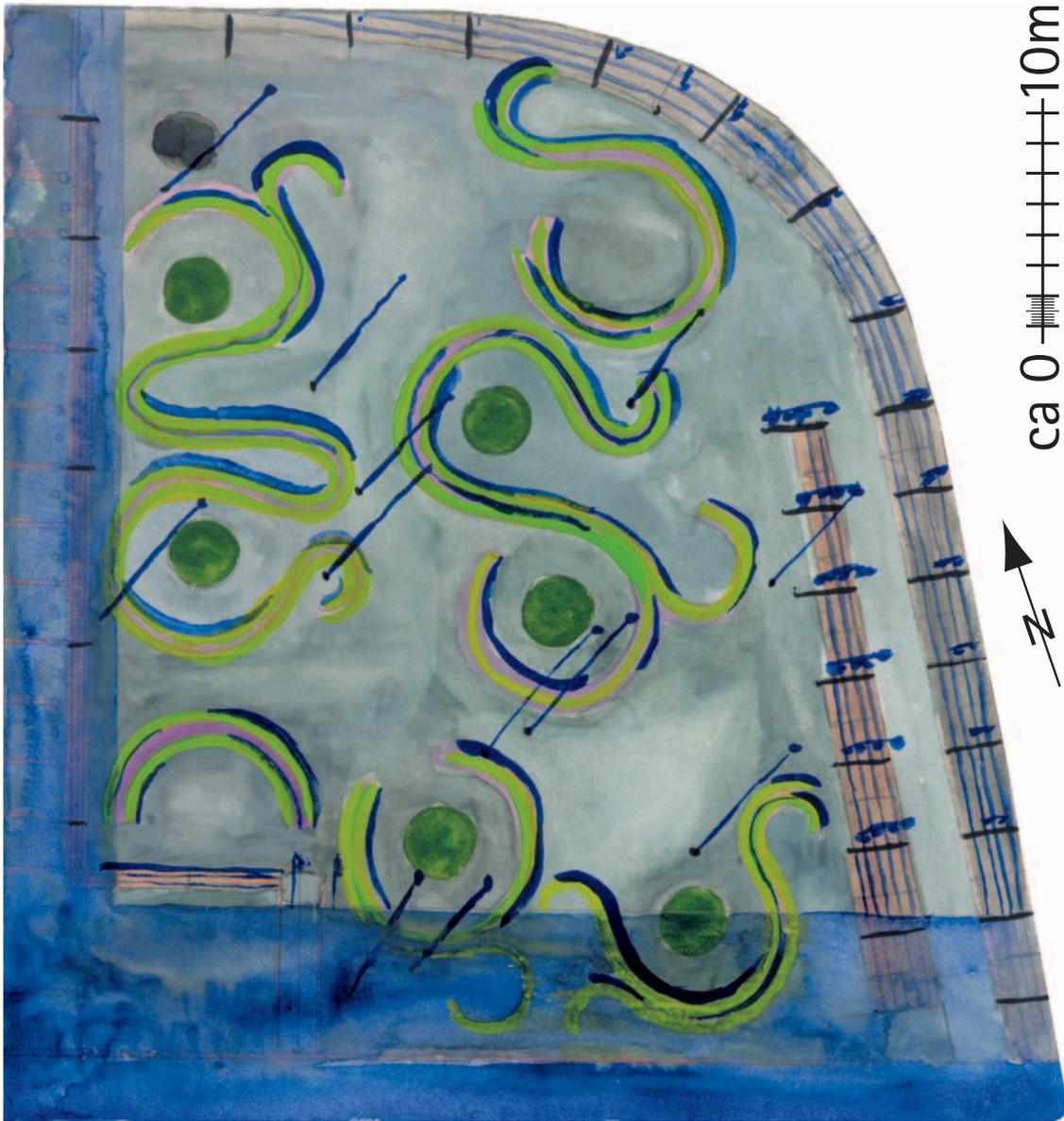


Fig. 57. Plan of Jacob Javits Plaza.

Fig. 58. Swirling benches occupy Jacob Javits Plaza.





CORPORATE GARDENS

TRUMP TOWER



ZEN GARDEN



ROOF GARDENS AT ROCKEFELLER CENTER



DINING GARDEN





TRUMP TOWER

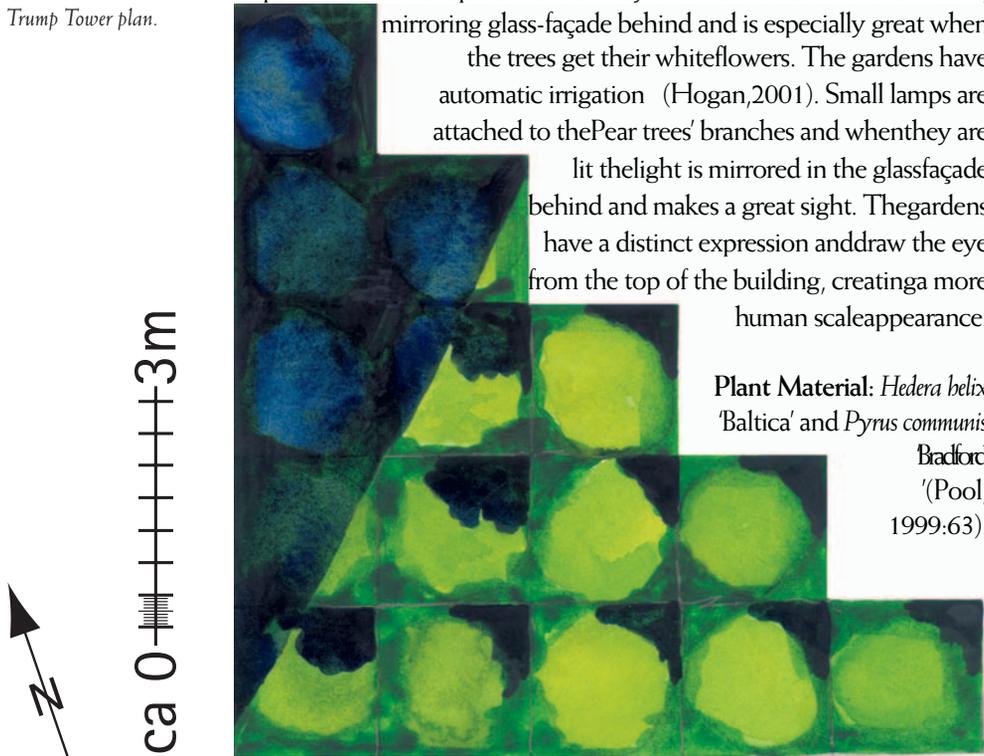
Fig. 59. Trump Tower gardens with Pear trees in bloom.



The Trump Tower on the corner of 56th street and 5th avenue has a number of roof gardens. The public can visit two of them and the presented one can be viewed from a distance. There is also a huge private roof garden on the very top of the building. Landscape architect Thomas Balsley has made the design of all.

The 68 floor Trump Tower building was built in 1979-83 (Tzonis, 1995:218). The site for the garden is a cut off corner and the gardens are an integral part of the architecture. The garden is actually fifteen small gardens each large enough to house a Pear tree. The described gardens are situated just a few stories above street level. Together these fifteen simple gardens create an architectural whole. The garden is not to be visited but seen from a distance it is creating an effective landmark. The impression is a co-operative work by the Pear trees and the dark, mirroring glass-façade behind and is especially great when the trees get their whiteflowers. The gardens have automatic irrigation (Hogan,2001). Small lamps are attached to the Pear trees' branches and when they are lit the light is mirrored in the glassfaçade behind and makes a great sight. The gardens have a distinct expression and draw the eye from the top of the building, creating a more human scale appearance.

Fig. 60. Trump Tower plan.





ZEN GARDEN



Fig. 61. Watercolor view of the corporate zen garden.

The downtown Zen-garden is designed by garden designer Jeff Mendoza to view from office spaces. The design is inspired by the Japanese Ryoan-ji rock garden in Kyoto and there are some similarities in the arranging although the whole garden here can be caught at one glance. The five groups of rocks in the Ryoan-ji garden are here transformed to five trugs with *Pennisetum* and the garden as a whole is built to be extremely light-weight.

The garden has a rectangular form and has a length of less than ten meters. Three rectangular bands of sheet metal divide the rectangle into smaller and smaller rectangles on the same principles as the Russian doll. The outer sheet metal band is close to the wall. The interval between the first and the second band is filled with rounded pebbles. *Sedum* grows between the second and third band. The space in the middle is filled with dark gray gravel. In the inner space is also an arrangement of five boxes with *Pennisetum*. The garden, high up in the air, is surrounded by the building on three sides. The fourth opens to South West and on this side is a larger planter with boxwood and a Japanese weeping pine.

The garden was first designed for another company in 1985. When this company moved out the garden was taken away. The present company took over the office-space and they wanted to



ca 0 + + + + + 3m

Fig. 62. Zen Garden plan.





have the garden back since it was one of the reasons for them to choose the place. The garden was rebuilt, slightly redesigned by the same designer (Monleone, 2001). The represented design is the second design.

Lightweight galvanized railing and shallow galvanized sheet-metal containers are used to keep the garden in place at a low weight. The planter for the *sedum* is ten centimeter deep. This garden is also used as example of a garden with very low maintenance (Harpur 1997:122).

It is agreeable to see the atmosphere that a very small garden can add to a place. Very few elements are used to create the garden but this does not make garden poor rather it feels precisely composed.

Plant Material: *Buxus*, *Pennisetum*, *Pinus* and *Sedum sexangulare*.



Fig. 64. Roof Garden on Palazzo d'Italia.



Fig. 65. Roof Garden on International Building North.



Fig. 66. View with surrounding buildings and a glance of the South three of the four roof gardens at Rockefeller center.





The roof gardens at Rockefeller Center are on the seventh storey of four different buildings on fifth avenue between 49th and 51st Streets. From North the buildings are: International Building North, Palazzo d'Italia, British Empire Building and La Maison Française. These Art Deco buildings were all completed between 1931 and 1935. The gardens were planned at the same time as the buildings and not added later on as in many other cases. The gardens were installed in 1933 (Richardson, 2000:214). Ralph Hancock (Pool, 1999:100) laid out the gardens on the flat roofs. The gardens are all situated at the same height and are experienced as a whole. The gardens are each about fifteen meters wide.

The four gardens are very formal and have black and white stone paves, pools, terra cotta urns, stone walls, clipped Yew- and Boxwood hedges and lawns arranged in classic strict patterns, rectangles and octagons. Two of the gardens, the ones on British Empire Building and La Maison Française, have the same design. The other two are individuals.

The Rockefeller Roof Gardens are well known to the city's inhabitants and the first roof garden mentioned by everyone when I asked people if they knew about any roof garden. The gardens were built more than 70 years ago and they are still experienced with the same fascination.

One opinion about the garden is that it "has an entirely impractical and seemingly unused lawn and herbaceous borders edged with obsessively groomed box hedges" (Taylor, 1999:174). Yes, the garden seem to be well maintained but I believe that the gardens enliven the city view and the formal look is perfect here in the city center. It is an urban creation and a natural part of the buildings. The purpose of the gardens is also fulfilled since they are not built to be visited but to be viewed and they are seen from the many windows of surrounding buildings.

The façades of the buildings and the gardens are lit at night.

Plant Material: (pink, red-leaf) *Begonia*, *Buxus*, *Chamaecyparis obtusa*, *Hemerocallis*, *Pelargonium*, *Iris*, *Rosa* and *Taxus*.

DINING GARDEN

The garden was designed in 2000 by garden designer Jeff Mendoza for a brand building and advertising firm. The garden is used for relaxation and for the company's contacts with their patrons. It is a place to close deals and have a cup of coffee in. The garden is also used in their own advertising, on the company's Internet homepage as a "culture bearer" (I have promised the designing firm not to tell the clients name since this is classified information, so unfortunately there will be a source missing here.).

Ten meters long and five to seven meters wide, the garden is built around a corner of the house as an island on the roof. The loads of the terrace are transported down via the walls of the building so the roof itself does not have to carry the extra weight of the garden.

Around the garden is an almost two meter high Asian inspired latticework fence and gates of warmly colored wood. The fence is built to shut off the garden from people's view but is at the same time blocking the view over the city. The garden is turning its back to the city.

The material on the ground is SoftPave, the same kind of rubber paving that often is used on playgrounds (Kristal, 2001:36). The rubber has a much lower weight than stone. Using rubber paves is also a way to soften the sounds making the place more private.

The borders have a Japanese look with conifers and lightweight "rocks" made of fiberglass. They are used to create a more Japanese feeling without adding any weight (Monteleone, 2001). Plants with interesting leaf-shape, a fine lined work of twigs, moss colors and ferns are used for a woodland feeling. The plants have automatic irrigation. Water plants grow in a trough sunken into the wooden deck at the far end of the small garden.

In the center of the garden is a wooden dining furniture for ten. Rectangle beige parasols over the table keep out the sun. Although this garden is filled with fake it looks very natural.

Plant Material: *Acer palmatum*, ferns, *Hosta*, *Pinus*, *Salix* and *Sedum*.



Fig. 67. Plan of the dining garden.

ca 0-4m



Fig. 68. Dining garden, water-color sketch.



HEALING GARDEN

JOEL SCHNAPER GARDEN AT TERENCE
CARDINAL COOKE HEALTH CARE CENTER





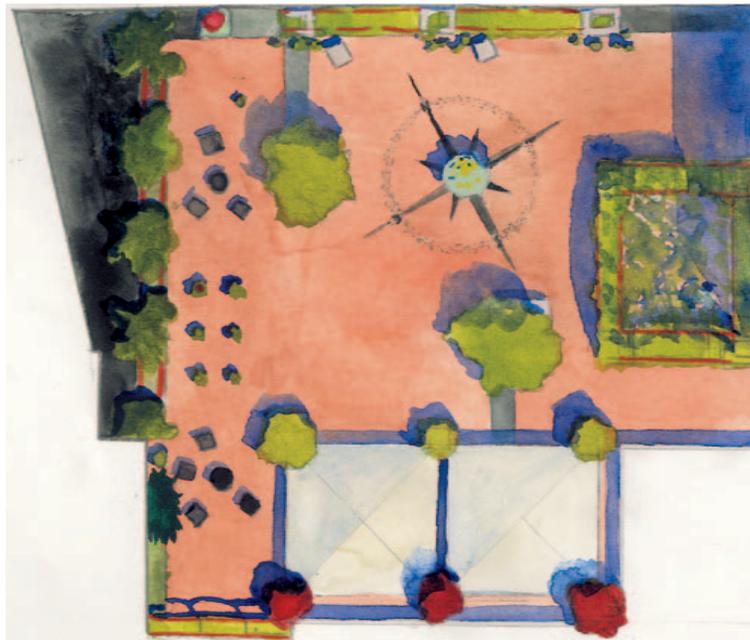
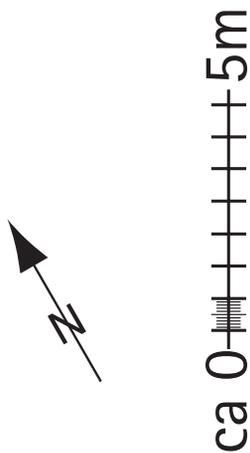
JOEL SCHNAPER GARDEN AT TERENCE CARDINAL COOKE HEALTH CARE CENTER

Joel Schnaper Memorial Garden at Terence Cardinal Cooke Health Care Center on 1249 5th avenue and 106th street is a restorative garden for people with AIDS designed by landscape architect David Kamp (Information brochure from Terence Cardinal Cooke Health Care Center).

The garden was designed in 1996. I never visited the Joel Schnaper garden. Despite a promising brochure that invites visitors, the people at the hospital did not have any time to arrange a visit.

The garden is an inner-yard, measuring about ten times ten meters, on the sixth floor with high surrounding walls on three sides. The walls on the otherwise white house is painted black on the lower floor. On the fourth side is a lower building. A reddish paving cover the floor. A large sundial is painted in black on the floor of the terrace (Pool, 1999:110).

Fig. 69. Joel Schnaper Memorial Garden. Plan.



The garden is designed in a way that the residents should be able to enjoy it. Places for activity, interaction and privacy are important. Light gray lattice screens are put up to form different rooms in the garden and there are tent pavilions to keep out sun and wind (Information brochure from Terence Cardinal Cooke Health Care Center). The garden room is quite small but contains many places to sit sheltered from the sun. The reason for this sun-protection is that the strong medications given to AIDS-patients make their eyes light-sensitive (Cooper, 2000:47). Patients are for the same reason allowed to pick flowers on the terrace to bring to their rooms.



Vines are climbing on bright orange red metal structures. Different designs of wooden benches, metal wire coffee tablegroups and planters in various materials seem to add a personal touch.

The functionality is far more important than the esthetics in this garden, still it seems that the garden have a nice atmosphere. Fragrant plants, vegetables, vines, shrubs, herbs and dwarf fruit trees grow in the garden and the residents can bring their own plants (Pool, 1999:110).

Plant Material: *Brassica, Clematis, Cosmos, Dablia, Helichrysum, Heliotropum, Hibiscus, Jasminum, Lantana, Malus, Solanum, Tagetes, and Wisteria.* Some of the plants are listed in Pool (1999:110) and some are seen on photos (Rainey, 2001).



SHARED PRIVATE GARDENS

400 W43RD STREET



NEW YORK SERVICE CENTER



ROOF GARDEN ON TOP OF RESIDENTIAL BUILDING



LINCOLN TOWERS



HOUSTON STREET





400 W43RD STREET

The garden on 400 west 43rd street is on the third story of a 50-story condominium and two high rise buildings rise from the garden level in the East and West. The whole garden is approximately 100 meters wide and 150 meters long. In the North there is a lower building and in the South a low fence frame to the street below. The entrance is through the building. Elevators take you to the third floor and there are automatic doors to the garden. This would be lovely for disabled people if there had not been three steps to climb to get to the larger part of the garden. An approximate size of the garden is forty by eighty meters.

The garden is only open to residents of the building. Many people share the garden and the basic use is sports. The garden seems designed for functionality rather than esthetics. The largest feature is a huge air hall for sports in the middle of the garden and the whole garden have a sports ground appearance. The air hall block the view but divide the space into several rooms. The rooms are connected physically but not visually. The narrow space on three sides of the tent feels more like leftover space than active planning. On the side facing the street there is however a visual linking, i.e. possible to look out, to the city around, though the view is not the best.

On the South side of the garden is a walk lined with trees planted in round light gray painted wooden planters and gray, robust wooden benches in between. In the West is a more small-scale garden room with a larger variety of plants including annuals and perennials. Here the planters are decorated with white latticework and this looks just a little too sweet with heavy brown buildings and a plastic air hall as a backdrop.

Near the entrance to the garden is a basketball field that could also be used for other sports. There are blue, green and orange markings on the sports field and bright yellow fences that protect children from running in to the play area. Around the sports field are red brick walls with plantings. Benches of brown plastic wood-imitation are built in and attached to the wall. Bollards with built in lighting are placed around the garden for orientation when dark. Practical things like drinking fountains and litterbins are also found around the garden. Down lights from the walls and lampposts all over the roof make the garden fully lit during night time.

There is a traditional playground for rather small children where the play equipment is painted bright blue, yellow and orange. The flooring on this playground is rubber squares. There is also a small playground with sculptures to climb on. A blue plastic mat is the pool in which seal shaped play sculptures reside. The rest of the garden is covered with cast concrete.

Plant Material: *Antirrhinum majus*, *Aquilegia*, *Rhododendron*, *Betula jacquemontii*, *Buddleja davidii*, *Clematis 'Nelly Moser'*, *Cotoneaster*, *Dianthus barbatus*, ferns, *Fritillaria imperialis*, *Foeniculum*, *Gleditsia*, *Hedera helix*,



Fig. 70. Play sculptures to climb on are swimming in a blue plastic "pool".



Fig. 71. A small scale corner in the large garden.

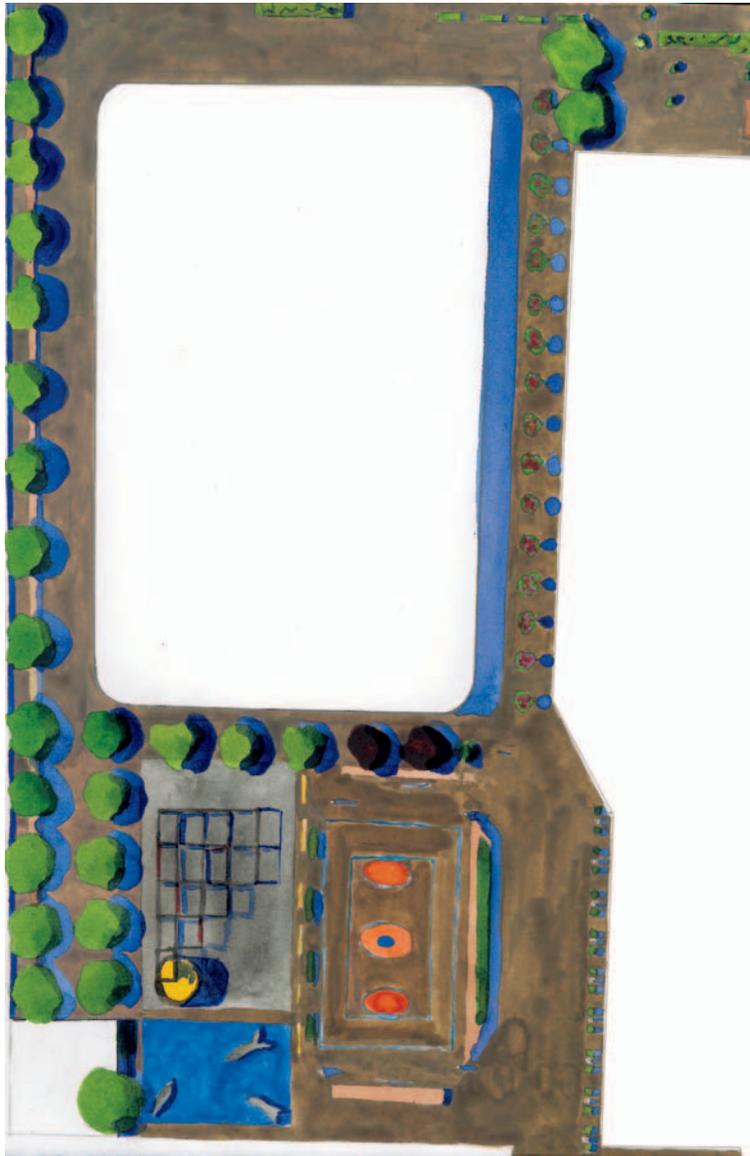


Fig. 72. A huge air-ball and a fifty-story building form a background in the garden at 400 west 43rd street.



Hemerocallis, Hibiscus, Hosta crispula, Hydrangea petiolaris, Hydrangea quercifolia, Hyssopus officinalis, Lobularia maritima, orange Lonicera, red leaf decorative Malus, Muscari botryoides, Narcissus poeticus, Narcissus pseudonarcissus, Parthenocissus quinquefolia, Petunia, Petroselinum crispum, Primula, Prunus avium, Rosa, Saxifraga, Sedum telephium, Senecio bicolor, stem- Roses, Stephanandra incisa crispa, Tulipa, Viola x wittrockiana and Wisteria sinensis.

Fig. 73. the garden at 400 west 43rd street. Plan.



ca 0 ||||| 35m





NEW YORK SERVICE CENTER



Fig. 74. The blinding concrete floor at New York Service Center almost appear convex.

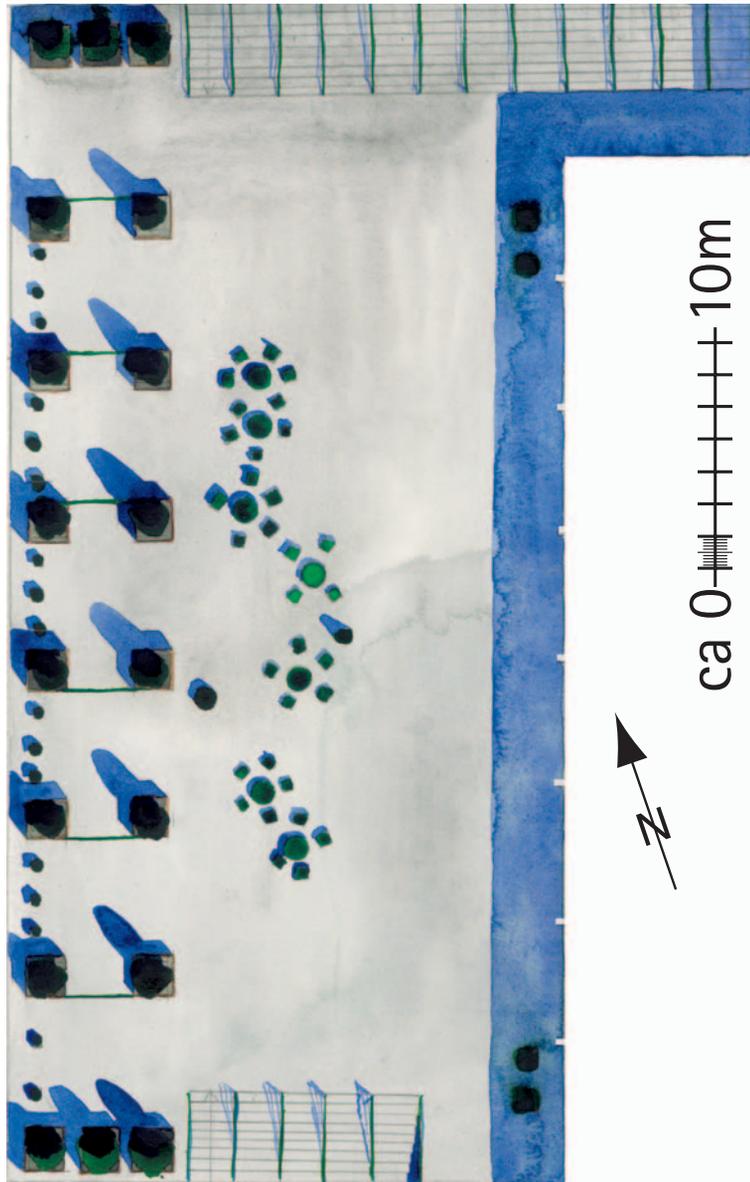


Fig. 75. New York Service Center. Plan.



New York Service center on 9 Avenue between 16th and 17th street is an open and undefined place. Signs with "Private property, Guests only" meet at the stairs up to the garden that is situated on top of a parking space. An approximation of the size is twenty times thirtyfive meters. When entering, the shiny white flat concrete surface is blinding in the sunny weather. Seven seating groups with green painted cast iron chairs and tables are distributed on the open space.

At the East side of the garden is a large building, The New York Service Center. On the street side and parallel to the building is a wooden fence. The garden space is visually affected by the white, heavy building on the East side that has dark blue, circular windows and semicircular entrances.

Since the garden is a half story over street level and the thin metal railings of flat and round steel at the stairs is everything that could block the view at the ends there is no obvious back to lean against. The plaza feels agoraphobically empty, harmless, but like if the next second something evil now hidden will reveal itself.

Large, cubic wooden planting containers in two sizes are placed in pairs. They are linked together by green metal stands for electric wires. In The large planters are Red Cedars, low Junipers and dwarf Pines grow in the smaller planters.

The garden is lit from lamps on the wall of the building. Close to the building two planters with pink flowering Azaleas are placed. The Azaleas look so small, tiny and out of place compared to the abrupt large-scale surroundings.

Plant Material: *Rhododendron, Juniperus, Pinus* and *Thuja*.



ROOF GARDEN ON TOP OF A RESIDENTIAL BUILDING



Fig. 76. Green pipes and small conifers compete with Empire State building. Baby Daffodils represent the spring planting. The terrace has a laid back feeling.

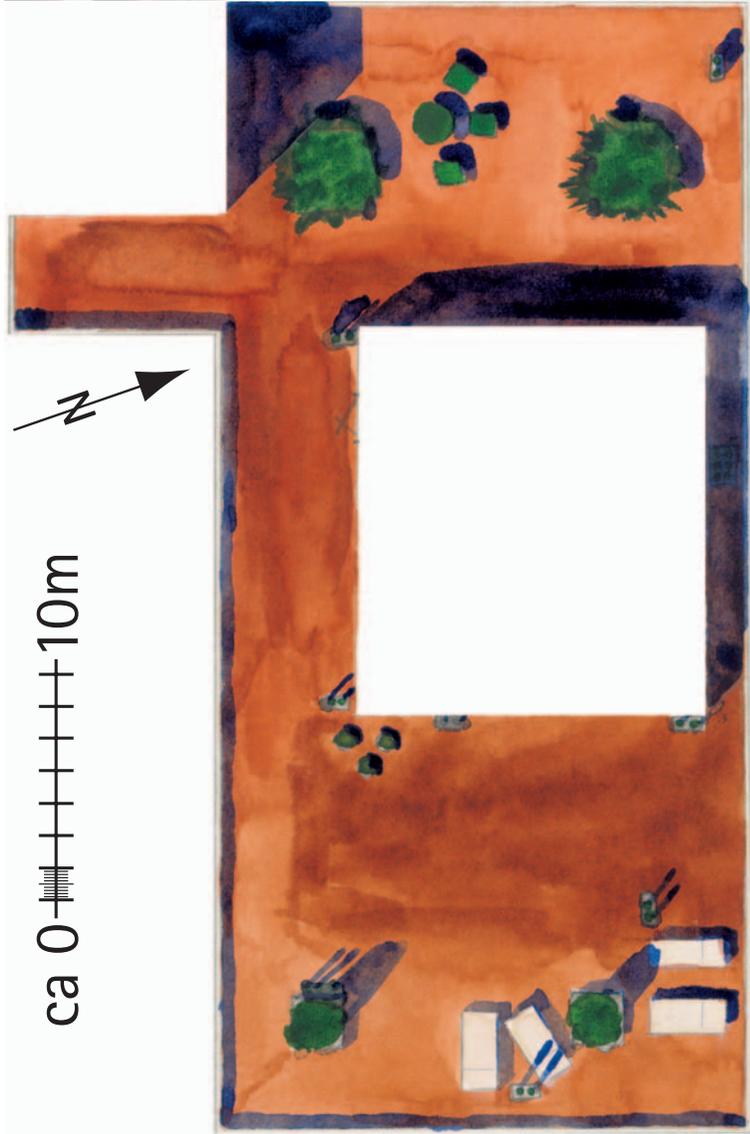


Fig. 77. Watercolor plan of the shared rooftop on 47 west 24th street.



This rooftop is shared by all the tenants of the building on 47 west 24th Street/ 10 Avenue in Chelsea. The approximate extension is twenty by thirty meters.

When the house was built it was the age of steam-ships. The roof was designed as if it was on top of a ship with a wood decking and the fresh air tubes eas to resemble funnels on a large ship (Davies, 2001). Now the fresh-air tubes have been painted green and the floor is tiled.

The glazed brick flooring give the terrace its character. White metal-frame sun-chairs with dark green textile add some to the leisure feeling. The dark green tubes for fresh air-intake still have a sculptural role on the roof. Junipers in large gray wooden planters with vertical plank use the same green color.

Two rooms and a passageway are created as a building in the middle, one story high, divides the space. This makes it possible for more than one group of people to find their own space on the roof. Lamps on the building in the center provide the general lighting. Dark green plastic tables and chairs are in the smaller room. Manual watering of the planters leads to a lot of work in the summer.

The terrace is more than twenty stories up and provides an all around view over the city and the harbor. A lot of other roof gardens can be seen from this one. This is an easy place without luxury but with charm.

Plant Material: *Juniperus* and *Narcissus pseudonarcissus* (dwarf).



LINCOLN TOWERS



Fig. 78. Green foliage and concrete planters at Lincoln Towers.

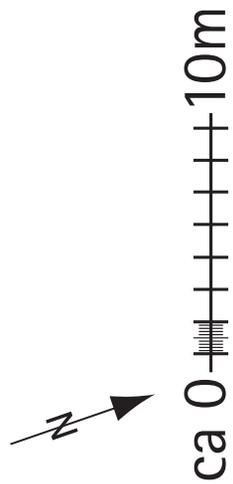


Fig. 79. Lincoln Towers plan.





The garden at Lincoln Towers is a garden shared by the tenants of a Residential area on 150 West End Avenue. On the North side the high residential house creates a wall along the garden. There are only service entrances on this side of the house.

An estimation of the size is twenty times fifty meters. The driveway up to the garden area and the parking lots for the maintenance people has an asphalt surface. There is a garbage area next to the parking.

The soil seems deep enough to keep at least some water but is complemented with a manually laid out water sprinkler.

This is one of the few New York roof gardens I looked at that had a continuous mass of soil. The garden seems to have been laid out as an ordinary garden on the ground. Fruit trees are placed in an orthogonal pattern on a great lawn as if the garden was an orchard on a natural hill and not on top of a parking garage in the city. The probable reason for this angularity has to do with the construction of the supporting concrete structure. The trees are placed over the supporting pillars of the garage. Each tree has a two times two meters concrete planter to grow in. Still a rural look and feeling is created. Benches are placed along some of the fences.

The detailing is not as precise as it could have been and some parts seem to have been left forgotten due to insufficient maintenance or lack of use. These forgotten parts have lost some of its charm. The use of the lawn would, I believe, have increased if the garbage area had been hidden away better.

Plant Material: *Abies, Asarum, Hedera colchica, Hedera helix, Impatiens, Juniperus, Kerria, Magnolia, Malus, Miscanthus, Philadelphus, Picea, Rosa, Thuja, Waldsteinia* and *Weigela*.



HOUSTON STREET



Fig. 80. Houston Street garden seen from East.

On top of a garage on the busy Houston Street at La Guardia Place is a leafy and shady oasis with a continuous mass of soil. On parking garages this is possible since it is less important to prevent leaking here than from a rooftop high in the air. The garden plan has an L-shape and in the "middle" is a residential house. An estimation of the garden size would be twenty times thirty meters. A black cast-iron fence runs along the other sides of the garden. Only residents are allowed inside. On three sides the garden slopes down to the street. Low "walls" of cobbles prevent soil from leaking down the slopes.



Fig. 81. Entrance to the parking garage at Houston Street.

On the Houston Street-side is the entrance to the garage and an area for garbage. The latter is effectively covered by red climbing roses. Groups of shrubs with lush foliage cover some of the level-differences on the edges. Groups of bushes are also placed along the house. A lawn is covering large areas only interrupted by a garden shed and a centrally placed group of bushes and trees. The bushes divide the space and create smaller rooms in the garden. The lawn is a plane with some gentle modulations in the North West part.



A large white lighting globe in the middle of the garden makes a too obvious focus. Heavy brown lampposts are placed along the edges to light up the walkway below the garden.

The furniture is a mix of black cast-iron sofas and benches of different designs, a green metal and wood bench and blue plastic chairs.

The impression is that of a rural grandmother-garden with a large variety of plants. Despite this seemingly wonderful green environment I never saw anyone use the garden.

Plant Material: *Abies*, *Acer palmatum*, *Alcea rosea*, *Allium*, *Aquilegia* (small, red), *Astilbe* (white), *Berberis thunbergii* 'Atropurpurea', *Caragana arborescens*, *Castanea sativa*, *Chrysanthemum leucanthemum*, *Dicentra spectabilis* (pink and white), *Euonymus* 'Emerald 'n' Gold', *Forsytia x intermedia*, *Geranium*, *Ginkgo biloba*, *Gladiolus callianthus*, *Gleditsia triacanthos*, *Hemerocallis*, *Hosta crispula*, *Hosta sieboldiana*, *Iris germanica* (salmon, white, yellow, purple and blue), *Mabonia*, decorative *Malus*, *Narcissus*, *Paeonia*, *Philadelphus*, *Picea*, *Pyrus*, *Rosa ssp.* (climbing roses in red and light and dark pink colors, small double roses in light pink, salmon, yellow and yellow-pink), *Salvia*, *Scabiosa*, *Viola x wittrockiana* (dark red, lilac, light and dark blue) and *Waldsteinia ternata*.

Fig. 82. Houston Street garden plan.



ca 0 ||||| 10m





PRIVATE RESIDENTIAL GARDENS

ANNIE LEIBOWITZ'S GARDEN



BARRETT RESIDENCE

JUCHS RESIDENCE

A GARDEN BEHIND THE GUGGENHEIM

470 WEST 24TH STREET 710TH AVENUE



BAZINET'S STUDIO GARDEN



552 LA GUARDIA PLACE





ANNIE LEIBOWITZ'S GARDEN

Fig. 83. Matching trees in Annie Leibowitz's garden.



This garden was viewed from a distance, from another roof garden in Chelsea. The garden is about twenty stories up in the air on the North side of a residential building. The viewed part is just a few meters wide.

White trees with red buds contrasting had the exact color tone to match perfectly to the dark brick wall behind. The color-tone on the birches is just slightly deeper red in color. On the floor are square, terra cotta colored concrete tiles. Lights on the wall and

Fig. 84. Annie Leibowitz's garden. plan.



in the planters (Davies, 2001) augment the pleasant feeling. Ad-hoc placed chairs are for seating. The terrace looks graphic and poetic

Plant material: White tree with red buds.



BARRETT RESIDENCE

Barrett Residence is on 1016 5th Avenue. The garden is quite small, a few meters wide along the façade on top of the building, the same kind of garden as the one on page 98.

Landscape architect Billie Cohen designed the garden in 2000. I never got the opportunity to visit the garden, but studied the plan, plant lists and photos at the designing landscape architect's office.

There were narrow planting spaces in the garden. The landscape architect has used a lot of climbers in the design. Different plants are added in the summer and the winter season. In the garden is a seating area and place for sun chairs. The bronze color is used on the railings to give character. Full automatic irrigation takes care of the plants during the hot summers.

Plant Material: *Alchemilla mollis*, *Andromeda cavetina*, *Artemisia schmidtiana* 'Silvermound', *Brassica oleracea v acephala*, *Chamaecyparis obtusa* 'Nana', *Cornus kousa*, *Euonymus* 'Green Spire', *Euonymus* 'Manhattan', *Hedera helix*, *Heuchera* 'Purple Palace', double white *Hibiscus*, *Hydrangea macrophylla* 'Blue Lace Cap', *Hydrangea* 'Mariesii variegata', *Hydrangea petiolaris*, *Ilex aquifolium* 'Aureo- Marginata', *Ilex meservae* 'Blue princess' small and large, *Jasminum nitideum*, *Muscari*, *Narcissus* 'Tête a Tête', *Nepeta mussinii*, *Pelargonium x cultorum*, *Rosa* 'Meidland', *Rosmarinus officinalis*, *Spiraea japonica* 'Little Princess', *Styrax obassia*, *Syringa*, *Taxus x media* 'Viridis', *Thymus* and *Viburnum x judii*.

JUCHS RESIDENCE

Juchs residence is a private garden on 130 East 12th Street designed by landscape architect Billie Cohen in 2000. The garden was studied from photos and plans at the designing landscape architect's office and was never visited.

The garden is actually two gardens on different levels connected by a stairway. The appearance of the two gardens differ a lot. The lower level has a Tuscan theme and the upper one is more contemporary with a modern design (Cohen, 2001). Both garden levels have views, but the lower level seem to have a more closed feeling to it and the upper one opens to the sky.

According to the landscape architect, the lower level that is smaller and has a more intimate feeling is designed more according to the owners wish than the upper level is. A sculptural table with a Dalí style clock painting and South American sculpture collected by the owners are at the lower level of the garden.

Steel, sage-greens, beige and white are prevailing colors on the upper level. The garden on top of a roof is framed by a parapet railing. Since there is a weight limit and since the owners have dogs the garden was designed with almost no plants. Instead green colors are used on fabric for the furniture.

The rough Junipers and the ornamental grasses grow in galvanized steel planters with automatic irrigation. The planters are in movable sections for constant access to the roof. A wooden five times fifteen centimeters plank decking cover the floor.

A metal frame supports beige-colored awning for shade. The welded metal-frames are welded to metal-plates on the ground to be dog proof. A pergola and an outdoor kitchen with fridge and grill are also on the upper level. In my opinion the upper garden design is much more successful. The difference between the open contemporary upper garden and the lower pastiche of a tuscan garden is striking.

The importance of waterproofing are expressed in some general notes given on the plan for the garden;

1. No part of the installation shall obstruct or hinder any means of egress to or from any area on the roof.
2. No part of the installation shall penetrate any part of roof membrane, coping or flashing.
3. No part of the installation shall impede flow of water to drains, which shall be kept clean at all times.

Plant Material: Juniperus and grasses.



A GARDEN BEHIND THE GUGGENHEIM

This private garden by Billie Cohen from 2000 is behind the Solomon Guggenheim Museum. This was not visited but studied through plans and photos while drinking tea at Billie Cohen's office on the Bowery.

The garden is situated on top of a five-story townhouse and is used by a private family and sometimes for representation. Predominant are the large, free spaces and the trellises. An already existing wooden deck in the middle of the garden is on a few inches higher level than the rest of the garden. The lower part has a stone-tile-paving. A wooden pergola is giving shade to the seating and dining-area.

Just over two meters high trellises follow the walkway. Low voltage down-lights are attached on the trellises. On the walkway is black metal furniture with a plaited pattern that takes up the pattern on the trellises.

Plexiglas screens on the lowest section along the street are built to prevent kids from falling. Large urns are placed as art in the garden (Shannon, 2001).

This is a quite traditional garden with elements from the English rose-, box- and trellis-garden but dominated by the hard materials. The garden has full irrigation.

Plant Material: *Abelia*, *Amelopsis*, dwarf *Andromeda*, *Buxus*, *Cornus mas*, *Heuchera*, *Ilex*, *Rosa* 'The Fairy' *Rosa* ssp., *Thymus* and *Viburnum carlesii*.



470 WEST 24TH STREET 710TH AVENUE

Fig. 85. An intimate garden room at 470w24st.

Fig. 86. plan of the private garden at 470w24st.



ca 0 + 2.5m



This private terrace on 470w24st and 10th Avenue is in the same building as one of the shared rooftops described earlier in this report. It has a relaxed and small-scale main impression. The terrace is on the second highest floor, some twenty stories up, and is framed by brick walls on the North and West sides.

A warm colored brick façade and the built in balustrade of the same material makes a steady frame to work with. The terrace is about three meters wide and belong to a one-room apartment. The balustrade has light gray openwork latticed stone elements.

The floor is covered with square terra-cotta-colored concrete slabs that go well with the surrounding brick.

Two large planters on each side of the long terrace contain fruit trees. The planters are made of plywood and teak. Three other planters are squeezed to the wall. From these Roses climb on the wall supported by steel-frames attached to the planters. Down lights attached to the steel frames.

The air-condition box almost entirely covering one of the windows is a bothering element in the small garden but my guess is that when the roses are in bloom the place is nevertheless great.

Over the terrace is a round-metal frame system to support white awning that could cover the entire terrace in bad or too sunny weather. An old sculpture in the South East corner is an architectural element made of sandstone collected by the terrace owner. There is also a small group of teak furniture, a table and two chairs, used for the first cup of coffee in the morning.

A number of terra cotta pots contain herbs for cooking.

Plant material: *Alchemilla*, various herbs for cooking, *Malus*, *Narcissus* and *Rosa ssp.*





BAZINET'S STUDIO GARDEN



Fig. 87. Ed Bazinet's studio garden seen from the hot tub in the South West corner.

This private garden on 24th street and 245 7th avenue was designed by landscape architect Madison Cox for the photographer Ed Bazinet in 2000 (Davies, 2001).

The garden on top of the house, approximately 10 stories, can be reached through a service entrance from the roof or from a glass house on the two-story apartment's upper floor. We walked over the tarpaper-clad roof to enter.

The whole garden is about ten times fifteen meters. The main impression derives from the structure that consists of wood decking of whitened hardwood (redwood or cedar). The hardwood is also used for large shared planters, for the fence, for the pergola over the dining place and for a sunken woody hot tub in the South West corner.

The landscape architect is said to prefer a clear sharp structure to achieve a peaceful environment (Richardson, 2000:160) and I believe he succeeded (with his aim) when creating this garden.

The garden has a L-shape. The dining place is in the North East part. A large round teak table with six chairs for dining is placed under a pergola clad with *Wisteria*. There are outdoor cooking facilities next to the table.

When walking further into the garden we pass a glass structure, a skylight that lightens the kitchen below. Behind the skylight are two Peach trees trained to the wall. A small marble and cast-iron table is randomly placed on the side. On our left is a small seating group with metal chairs and a coffee table.

Lamps on the façade give general light. Lamps are also built-in in the wooden walls of the planters. Spotlights in the planter light the pine tree and the birches. This makes the branch-structure visible against the dark sky at night.

The garden is built in two levels. The level difference is justified by creating room for large enough planters for the trees. We reach the upper level through four steps. A gap in the hedge on the West side shows an Indian sculpture. The sculpture is spotlit in the dark. Three sun chairs and table made of teak parade on the

Fig. 88. A gap in the hedge show an Indian sculpture.





upper deck. To the right is a pine and birch planting. To the left is the hot tub that can be used both in summer and winter and a large Lime tree. The Lime tree is attached with three wires to prevent it from falling. Full drip-irrigation provides the plants with water. For the winter of year 2000, 2000 small lamps were attached to the Lime tree and a cone shaped Juniper with small lamps in it was placed on the tree deck.

When the garden was built it was designed to correspond views that do no longer exist. In the South one part of the lattice fence could be lowered to view the free sky. Today large office buildings are blocking the view and the use of this feature has diminished.

The garden gives a very stylish impression.

Plant Material: *Betula nigra* 'Heritage', *Buxus* 'Greenjam', *Hedera* 'Green Mountain', *Ilex crenata*, *Ilex hellerii*, *Juniperus*, *Pinus thunbergii*, trained *Prunus persica*, *Taxus* (hedge), *Tilia*, *Vinca minor* and *Wisteria sinensis*.

Fig. 89. plan of Bazinet's garden.



Fig. 90. Teak sun-chairs, birches and pine.



100

ca 0  5m



552 LA GUARDIA PLACE



The private rooftop garden on 552 La Guardia Place at Bleeker Street is just what I expect a roof garden to be. Landscape architect Nina Kramer designed it in 2000.

The apartment has gardens on two floors. The upper garden is on top of the thirteen storey building and had, when visited, an all around view. The size of this one is about nine times ten meters.

The lower garden is just one and a half meter wide and the premier use is to view it from inside the apartment. This small garden is built with a glance at false perspective to make it look larger than it actually is.

IPE-wood, a very strong South American grown farmed hardwood species, harder than teak (Kramer, 2001) is used for tree decking and furniture. A blue-gray shade is the leading color-tone. Bluestone, a quartzite, of two different colors is used with the wood in different proportions. There was a restriction to the use of wood. Only twenty percent of the area was allowed to be wooden. The city code only allows twentyfive percent of the materials to be flammable. Still the designer succeeded to give the garden a very "woody" look by using two different colors of Bluestone. There is a sense of play with rectangles. In some parts the wood is used alone and in other parts Bluestone is laid with a strip of wood between each piece. In some parts the Bluestone is instead laid with fine black gravel in between.

The upper terrace is built in different levels and there are transitions between inside and outside. One part is an elevated platform and in the middle is a structure built to cover pipes. The wooden structure to cover the pipes of the fresh air inlet in the middle has a pattern that is also found at the entrance of the apartment (Kramer, 2001). In this part Dogwood bushes are planted. Black pebbles are used as groundcover between the

Fig. 91. 552 La Guardia Place rooftop. A view towards South.



Fig. 92. Detail, Blue Stone with wooden stripes.



Fig. 93. Detail, Blue Stone with black sand stripes. Detail of the floor with Blue Stone and Black gravel. The decorative piece of metal in the middle is a handle used to reach structures below the paving.

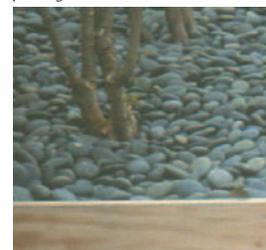


Fig. 94. Dogwood stems, black pebbles and wood.



Fig. 95. The lower garden level is designed with a glance at false perspective to make it look larger than it is.

Dogwoods. Up-lights under the Dogwoods can be directed towards different points. All over the two gardens are a lot of these spotlights.

In the summer season ornamental grasses grow up to create a rhythm in the view. Later the grasses will cover parts of the view that will possibly be more unpleasant. The site has still an all around view (April 2001) but a building under construction will soon block the view over the nearby Washington square park.

Long low wooden planters stretch along the sides of the terrace. The planters have different depth and width. There are no planters in the corners and small outlooks are created there. There is a high grade of detailing in the work. The design on the roof deck works together with the whole design concept of the house and apartment. I imagine that these corners can be secluded spots on the otherwise very open roof in the summer when the plants are higher.

The leaves of the plants are green-, red- and bluish green. The flowers add white, pink and lilac to the color scheme. In the spring the daffodils add yellow. Each plant gets their water from the fully automatic irrigation. The soil is covered with bark chips.





Fig. 96. 552 La guardia plan of lower and upper roof gardens.

Fig. 97. 552 La Guardia Place. View to the North. The landscape architect's daughter with babysitter and mom.





The landscape architect designed the furniture for this site. A dining table and its chairs and sofas can be pushed together to form a block. This is a space-saving and beautiful arrangement. Two other chairs can be pushed together to form a sofa. A bench along the middle structure double as a storage space. Wooden plugs are used for fitting the pieces of wood together.

Loud speakers make it possible to play music and dance on the terrace for the one who dare.

The whole terrace is airy and sober. Nice, low and thin wire-fences that seem translucent from a distance are attached on the sides of the terrace. They are all that hinders the visitors from falling off the roof.

Plant Material: *Ajuga reptans*, *Aster amellus*, *Berberis thunbergii* 'Atropurpurea', *Buddleja davidii*, bulbs, *Cornus*, *Coxinus*, *Lavandula*, *Miscanthus* and other ornamental grasses, *Nepeta*, *Pinus*, *Sedum spurium*, *Styrex japonica* and more.



RESULTS AND THOUGHTS

My thoughts on roof gardens in New York City might be a judgement on circumstantial evidence, still it is an indication on what there is to find. I believed that New York as in the slogan was the "capital of the world" and did expect a more interesting and spectacular design than I found. Theodore Osmundson discuss this lack of brilliant design in the preface of his book '*Roof Gardens: history, design and construction* (1999). He states that since there is a lack of good literature on the subject of roof garden construction the landscape architects have to "reinvent the wheel" over and over again. When this is done there is no time left to design. This book was the only literature I found that dealt with professional construction of roof gardens. The design part in this book was however not very inspiring. Glossy home-magazines was a source and also valuable to me in the way that I got to see a set of different private gardens on photos. The analyzing part does ofcourse not exist in this kind of publications. The private gardens are sometimes less formal than public ones, especially if they are designed by non-professionals.

When I talked to landscape architect Nina Kramer (2001) she confirmed this lack of role models. She told me about when she first started to design the La Guardia Place roof garden. She had never designed a roof garden before and wanted to see garden designs that could serve as a model to her own. She was shown inspiring pictures of New York skylines seen from rooftops but she did not get to see *design* and actual solutions.

The New York skyline with its skyscrapers is famous. In a way the adaptation to such an overwhelming place could be to keep the design simple. Still there are often functions that should be built in. Also in esthetic considerations *simple* should not mean *empty* and emptiness should if it occurs be *chosen* by the designer and not by ignorance or lack of knowledge. Adaptation is also difficult in a city that is constantly changing. You never know what happens on neighboring sites.

A roof garden is a garden built on a concrete structure and sometimes it is difficult to decide where this part affected by limited weight start and ends. A park could for example be partly a roof garden. The fact that there are weight constraints can be hidden or emphasized in the design. On top of high buildings the fact that the garden is high up bring in an extra dimension. In gardens on or near ground level the look does not differ so much from ordinary gardens except in the absence or special arranging of heavy material.

There are a lot of restrictions for roof gardens. Weight limits, waterproofing and fireproofing has to be considered. Constant access to the roof is often needed in case of leakage. This bring about the use of movable containers and do often not allow a free mass of soil. A roof garden has to be planned in detail and there is not the same possibility to create ad-hoc poetic as in a garden on the ground.



I expected more of illusion making and tricks to make small gardens look larger or cheap materials more solid—an art of making a suitable scenery with the available means.

At a private garden it is easier to make a functional and visual interaction between the garden and the building. The private nature of these gardens gives that there are fewer people in the crowd that have to be pleased. The private gardens have a higher level of detailing than public gardens. Generally the plant material is more interesting at private, corporate and residential, gardens.

One reflection I made upon plant material is that the designers often use plants for just one season. In the change of scenery for a new season the plants are replaced. The reason might be that it is difficult to find plants with hardiness for the tough conditions on a roof. Another reason is that people like variation.

The public parks and plazas typically have a more basic and solid construction. Wood and other finer materials are used more in smaller and more private gardens. The rooftop of Dia art center is in a way a public space and still detailed, but it is not a public space without control. In Dia art center we also deal with art that is not built primarily to please.

The pressure put on the garden decide which designs are possible and which are not. I was positively surprised by the fact that very frequently visited gardens, for example Byant Park, can be green and lush and have an interesting choise of plants—if the maintaining is intensive.

An other phenomena among the New York gardens are donations. Installation of many of the public gardens have been possible because of private sponsorship. The one who add the money then often gets to name the garden.

The roof gardening in New York is often container gardening. I have not actively studied roof gardens in Sweden but my impression is that gardens with a free mass of soil is comparatively more common in Sweden than in New York.

There is a roof garden trend in New York (Amato, 2001). In Sweden too we are inspired by the thought of roof gardens. In popular home magazines articles (Gradvall, 2001) about the subject are found.

Which are the reasons to build roof gardens? The reasons stated in the hypothesis chapter in the beginning of this report note what the reasons could be. Are some of the reasons more common then others? Landscape architect Howard Abel (2001) told me about a roof garden for a new Trump tower on 47th street presently under construction. He admits that the driving forces for building roof gardens often are economic, it augments the value of real estate, rather than an expression for humanism, esthetics or environmentalism.



In New York the gardens should be designed by “names”—someone known and famous, bringing some of his or her glare and fame into the garden. Branding is therefore as important to the landscaping designers as marketing is to their clients.

When talking to designers some were very helpful showing me their gardens while others gave the impression of “don’t ask so much, this is classified information”. Everything is private and people do not let strangers into their homes.

Garden designers and landscape architects often establish a contact to one or a few contractors that they work together with in all projects (Cohen, 2001). Another thing is that the maintenance of the gardens often is handled by the designing office (New York Magazine, 2001). This is a way to mould the garden into a more detailed and dynamic design.

A garden on top of a high roof does never get as public as a park on the ground. The placing makes them theft- and vandalism-proof. The roof gardens range from enclosed and secret gardens to large public parks—all of them are needed for different purposes.

One aspect on parks in general stated of Bryant Park Restoration Corporation (2001) is “What city people seek in public spaces are other people, comfort, and care, not seclusion and refuge”. This I believe is correct. The best public spaces in New York are places where the visitor can sit down and watch other people. A place where no one else go could be a dangerous place. The most scary places in the city are these designed to make room for many people when they are empty.

As to the new contemporary design ideas, I did not find as many as expected. The design was quite traditional over all. Many of the studied gardens were designed decades ago but also the new ones showed little of new ideas. I also expected to see more of the traditional type of gardens on top of high buildings. As I described earlier (in the method chapter) these where difficult to get access to.

It would also be interesting to study roof gardens in other cities to see in what ways the design is similar and different.

I hope that there will be more roof gardens in the future and more roof garden literature. I hope that the gardens will be esthetically and functionally better than today and I hope that more people can have access to gardens.



THE GOTHENBURG ROOF GARDEN —CASE STUDY

To show some of the possibilities when making a roof garden I chose to design a small terrace with inspiration from the gardens of New York City. I wanted to find an urban place and found similarities between Gotham City and Gothenburg.

A sunny September-day I found myself sitting in a Gothenburg apartment with roof terrace eating large French meringues and talking roof gardens with the owner. We discussed ideas and possibilities and then I made use of the folding ruler, compass, digital camera and notebook that I had brought.

THE SITE

The site is a terrace on the ninth floor in central Gothenburg. The house was built in 1977. It has a yellow brick façade with details of brown sheet metal. The terrace is visually more affected

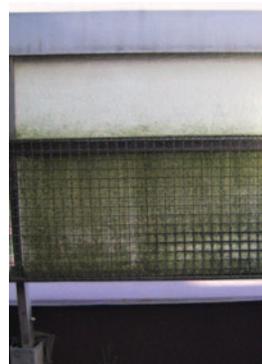


Fig. 98. The terrace before the change. A view towards South with the toolsbed and large windows.



Fig. 99. A view to the North-West.

Fig. 100. Detail. Steel wire railing with White styrofoam plastic.





by the brown sheetmetal than by the yellow brick. A small tool-shed of dark brown painted wood is built on the South side of the terrace.

The terrace measure 2.65 times 6.45 meters. The apartment has large windows, facing the terrace. When seated in the living room the view is magnificent overlooking the old fortlet "Skansen Kronan". The terrace is shut off from other peoples view by sheets of white styrofoam plastic that the last owner put along the rail. The rail consists of plaited metal wire in a metal frame.

To make the garden design correctly some technical aspects has to be considered. The ground cover has to be removable for control and replacement of the under-laying beams. When visited the existing ground cover did consist of concrete tiles, measuring 35 times 35 centimeters, with visible ballast.

Although Gothenburg face the sea, the wind exposure to the terrace is not too rough. The terrace has a west- aspect with the sun coming in the afternoon and staying till sundown.

If the new garden is built it is important to check that the terrace could carry the weight. One way of doing this is to hire a technical engineer for measuring; another is to add less weight than of the materials taken away.

Another thing to keep in mind is that a building permit is needed for some function and exterior changes, like change of material in the railing, and that for a condominium the tenant owners' building society has to agree to the changes.

Existing plant material: Wild stawberries, some *Sedum ewersii*, a Honeysuckle, a half dead Juniper and a lovely climbing Hydrangea. As a curiosity I would like to mention a sweet littlebook that I found in the library of New York Botanic Garden. It is called *Roof Gardening* and was written by Ida Mellen in 1929. In the chapter "Plants One Cannot Grow In A Roof Garden" she categoricly states that neither Hydrangea nor Honeysuckle is possible to grow in a roof garden. In the present Gothenburg garden these two are really the most healthy plants!

THE OWNER

The Owner, a young woman, just moved to the apartment a month before the design process started. She was looking for a turn of the century apartment but saw the potentials of and fell in love with this one. She likes space and open planning, clean functionalism and romanticism combined. She prefers warm colors and is allergic to grass pollen.

The owner would like to be a "periodical gardener", prefers a garden that maintains itself for long periods but allows the owner to go deep into gardening once in a while. Pruning trellised fruit trees or other projects would be exciting she beliefs. Other wishes could be a Fig tree, a Rhododendron and to keep some of the existing Wild Strawberries and two or three kinds of aromatic plants to use in the cooking.

The terrace will be used for dinner-parties, for spending time with friends. Other features she long for is an out-door bed for relaxing and yoga, a cut-glass chandelier hanging in the air and some shelter from the rain!



THE GARDEN –BRAX RESIDENCE

The impression I would like to create in the design sketch for “Brax Residence” is that of a modern, easily maintained terrace with a romantic touch. The garden has a frame work of whitened oak wood and the flowers in it have warm colors, a wish of the owner. The key design elements are strict frames and within these the plants can live their organic life. For people the use is flexible.

The silvery rainforest hardwoods in New York City are brought over the sea to Gothenburg. In the city with a long history in shipping, the wood is transformed to whitened native oak. Whitened oak plank treated with raw linseed oil cover the whole terrace, the flooring, the furniture and the fence. Low voltage downlights are built in to the outer wooden walls.

The façade of the house will in the North end of the terrace be clad with sheets of two millimeter thick rusty iron. In the South end the tool shed and its door will be clad with the same material. The rusty iron is a link to the shipbuilding industry of the city of Gothenburg. It does also have a set of colors that go well with the old dark brown sheet metal façade of the house at the same time as it hopefully bring in a more modern look. Along the East side oak panelling cover the wall to the hight of the underside of the windows in my suggestion, thus linking the façade to the terrace and covering unpleasant parts of the exterior.

The garden should be easy to maintain. The flooring is built in sections to be removable. There are three large planters on the terrace. The planters are divided into sections or multiple container within the planter. This makes the planter easier to move for re-decking of the terrace. This way it will also be possible to add different soil mixes to optimize the conditions for the various plants and fulfil their needs. Each planter has insulation to protect the plants from some of the cold and a water container in the bottom from which the soil gets water. The soil for the *Rhododendron* should be a slightly acidic mix containing a lot of organic material, pure un-degraded peat, while the other plants prefer non-acidic soil with one third of un-degraded peat and the rest being sand or gravel. If weight constraints commands a lower weight some of the gravel could be replaced by ceramic granular like vermiculite or Leca. This granular ceramic does however have the disadvantage of coming up to the surface making the soil form layers instead of an even mix. The soil is decked with a layer of fine bark chips to prevent dry-out of the soil. The bark also prevents weeds and makes a good looking surface with a color somewhere inbetween the rust and the whitened oak color.

The inner planters are made of aluminum. They are constructed to be self watering. This means that the plants get water from a magazine underneath and that it is needed to add water only every other or third week. In the bottom of the planter is a ten centimeter deep layer of granular ceramic, vermiculite or Leca, to allow the soil to drain and creating a water magazine. On top of this is a geotextile that allows a free flow of water but prevent leaking of soil into the water. On top of the geotextile is ofcourse the soil. In the planter there is also a tube with a small floater that is indicating the watertable.

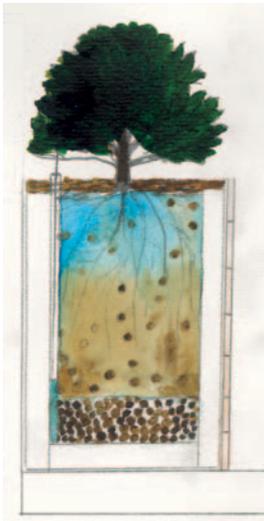


Fig. 101. Detail. The construction of the planters.

Check this to see if watering is needed, it could be lethal to the plants to get too much water. The soil has to be allowed to dry out once in a while to let in some oxygen and prevent drowning.

To protect the plants from too deep frost the containers also have a five centimeter layer of expanded polystyrene styrofoam around the outer sides. Maybe the styrofoam from the present railing could be re-used here.

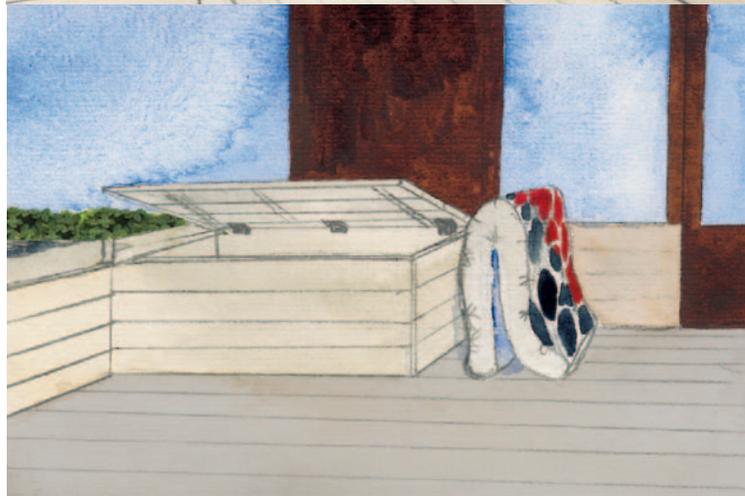
Division of space is extensively made. The North part is sunny and open and the South part a shady framed corner. Large windows of the apartment help to create an interaction between the indoor and the outdoor rooms. Outside the kitchen window are large plantings with Wild Strawberries and Figs.

There are two benches along the wall. These can store stools to use with the table. The benches could be kept clean to use for seating or they can be a place to allow the garden owner to add her own pots. In my planting suggestion I include a few kinds of herbs that can be grown in terra cotta pots like the ones the owner currently use. The herbs could be Basil, Chive, Parsley, Thyme and Rosemary. Some of these do not survive the winters and these

Fig. 102. A view towards the rusty iron-clad toolshed, collage.



Fig. 103. Some of the benches double as storage space.





can be replaced every year with the same or another species. This pot gardening is not a must, but a complementary use of the terrace. A bench along the fence is divided into three sections that individually can be folded out for use. They are attached to the fence and when not used they do not take any place at all. The only thing revealing the presence of benches in the fence when not in use are the hinges.

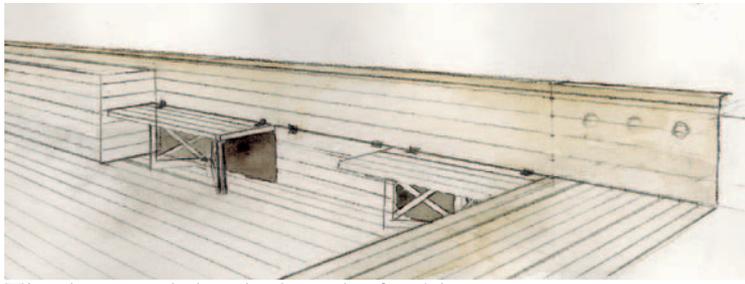


Fig. 104. Detail showing foldable benches attached to the outer wall.

The large solid oak drop leaf table measure 180 times 70 centimeters and can seat eight dinner guests. When a smaller group is invited the table top size can be decreased to 110 times 70 centimeters. When not in use the size is 40 by 70 centimeters.

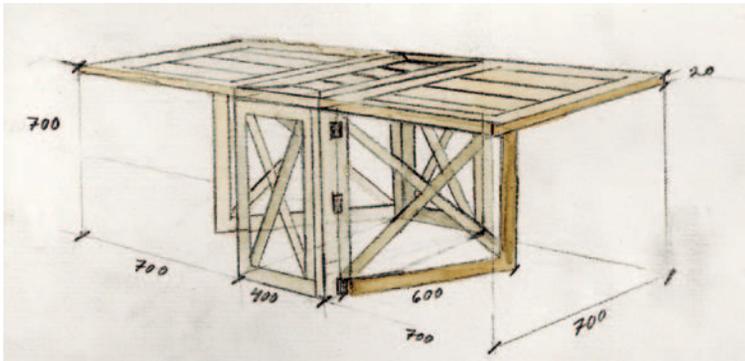


Fig. 105. Detail showing the construction of the drop leaf table.

In the North part is a fifty centimeter elevated part that could be used as an outdoor bed. A Futon mattress will be stored indoors to protect it from rot and added on the oak board when in use. The mattress will have an unbleached linen covering. By choosing pattern on the covering the expression of the terrace can be changed quickly. My suggestion is to choose a large scale graphic



Fig. 106. The yoga corner. Unbleached linen have the same color as the oak-wood.



Fig. 107. A view from inside the appartment. The fortlet "Skansen Kronan" is in the backdrop.



pattern in warm colors on one side and leave the fabric without print on the other side for a more peaceful expression. This to make use of the place both for parties and yoga.

Over the planting close to the outdoor bed is a fiber optic lighting structure. It creates a visual effect similar to the cut-glass chandelier the garden owner fantasizes of. Using fiber optics is a way to avoid some electric installations since the electric parts can be installed indoors and the light is transported through fiberoptics. I suggest that the installation should go behind the rusty wall in the South of the terrace and that the lights should spread over its edge.

Warm colors and White are used for the plants. Since the appartment has large windows facing ther terrace, the terrace will be used all year, —as a view when the weather is too cold.

In early spring White Snowdrops show up. Later Yellow, Orange and Red Tulips take over, some natural and sweet, others manieristicly contorted. In summer Wild Strawberrie flowers and berries, Yellow and Orange Poppies, Yellow and Orange Red Honeysuckle, herbs, and the characteristic leaves of the Fig tree



Fig. 108. Wild strawberries and a large-pattern fabric is adding color.

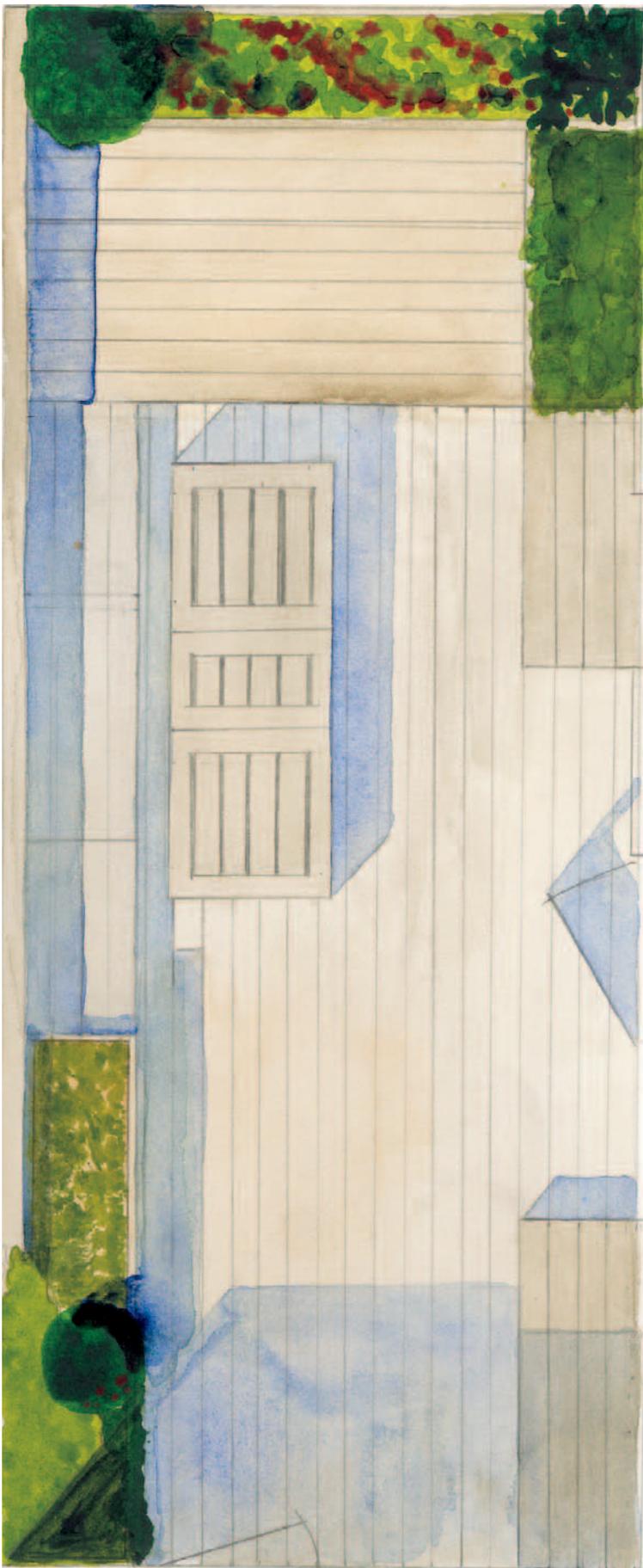


Fig. 109. Watercolor plan showing the new layout of the terrace.

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take over the scene. Honeysuckle grow in the wild in the province around Gothenburg. Here, on the terrace, I have chosen cultivated forms with a warm color-scale instead of the wild. The chosen varieties does not have the strongest scent but will still add a pleasant dimension. A yellowish Green Hop with a leaf shape corresponding to the Fig will grow up to cover the rusty façade. Horizontal metal wires twenty centimeters apart on the North rusty iron-clad façade makes it easier for the vines to grow up on the wall.

A present climbing Hydrangea keeps its place at the tool shed and flower in White. Late summer bring dark Red Clematis flowers. Late autumn add White and Purple Anemonas in front of the rusty façade in the north part of the garden. In the winter Holly with Red berries and English Ivy can be seen from the livingroom inside. Small lamps could be attached to the fine twigs and branches of the plants and to the planters in winter time.

The Azalea and the Fig tree should be covered in the winter and early spring. Some pruning is needed to shape the Holly, the English Ivy, the Hydrangea and the Fig tree. The old growth from last year can be pruned away from the Hop and the Clematis since they flower on new shoots. This prevents the plants from becoming too large.

The Appendix, last in this report, has a plant list and a plan showing where the various plants are supposed to grow.

Plant Material: *Allium schoenoprasianum*, *Anemone japonica* 'Honorine Joubert', *Anemone japonica* 'Pamina', *Clematis viticella* 'Södertälje', *Ficus carica*, *Fragaria vesca* 'Rügen', *Galanthus nivalis*, *Galanthus nivalis* 'Flore Pleno', *Hedera helix*, *Humulus lupulus* 'Aureus', *Hydrangea petiolaris* (existing), *Ilex* 'Blue princess', *Lonicera x brownii* 'Dropmore Scarlet', *Lonicera x tellmanniana*, *Ocimum basilicum*, *Papaver nudicaule*, *Petroselinum crispum*, *Rhododendron irsuta* 'Nana', *Rosmarinus officinalis*, *Thymus serpyllum*, *Tulipa linifolia* 'Apricot Jewel', *Tulipa linifolia* 'Bronze Charm', *Tulipa linifolia* 'Red Gem', *Tulipa vvedenskyi* 'Tangerine Beauty'.



REFERENCES

LITERATURE

- Cooper, Guy and Gordon Taylor, *Gardens for the future: gestures against the wild*, 2000. ISBN 1-58093-063-8
- Harpur, Jerry and David Stevens, *Roof gardens balconies & terraces*, 1997. ISBN 0-8478-2015-7.
- Mellen, Ida, *Roof Gardening*, A.T. De La Mare, New York, 1929.
- Osmundson, Theodore, *Roof Gardens: history, design and construction*, 1999. ISBN 0-3937-3012-3
- Pool, Mary Jane, *Gardens in the city: New York in bloom*, New York, Harry N. Adams Inc., 1999. ISBN 0-8109-4133-3
- Richardson, Tim (consultant editor) et. al. *The Garden Book*, 2000. ISBN 0-7148-3985-X
- Taylor, Gordon and Guy Cooper "*Gardens of Obsession*", 1999. ISBN 0-2978-2373-6
- Tzonis, A. et al, *Architecture in North America since 1960*, 1995. ISBN 0-500-34141-9

PERIODICALS

- Gradvall, Jan and Magnus Länje, *Residence*, "Vidgade vyer", 2001:4.
- Kristal, Marc, *Dwell*, "The oasis upstairs", June 2001. ISSN 1530-5309.
- Moorman, Margaret, *Art News*, "Up on the roof", 1988:6. ISSN 0004-3273

WEBSITES

- Amato, Mia, *Yardscapes*, (10.24.2001).
URL <http://www.gardens.com/story/mia/roofgarden.html>
- the American Museum of Natural History, (10.15.2001).
URL <http://www.amnh.org/rose/specials/terrace/pressrelease.html>
- Americans For the Arts, (10.23. 2001).
URL http://www.artsusa.org/PAN/pubart_tour_description.shtml
- BPRC, Bryant Park Restoration Corporation, *history* (12.10.2001).
URL <http://www.bryantpark.org/html/history.html>
- Cheng, Chak Lam. *Paramount Plaza*, (03.16.2001).
URL <http://www.clr.toronto.edu/cgi-bin/clrdb/VIRTUALLIB/CLIP/clipadd?DB.REPORT=full&DB.RECORD=251.html>
- DGSH, revised 10.03.2001 (10.23.2001) .
URL <http://www.vietvet.org/nycdedi.html>
- Fiorello la Guardia High School of Music, Art and Performing Arts, (10.22.2001).
URL <http://www.laguardiahs.org/.html>
- Ince, Adamma, June 13-19 (10.23.2001).
URL <http://www.villagevoice.com/issues/0124/ince.php>
- Liu, Jacquanline. *Rockefeller Center*, (03.16.2001).
URL <http://www.clr.toronto.edu/cgi-bin/clrdb/VIRTUALLIB/CLIP/clipadd?DB.REPORT=full&DB.RECORD=238.html>



MoMA (25.10.2001).

URL http://www.moma.org/expansion/charette/architects/williams_tsien/

New York Magazine (10.24.2001).

URL http://www.newyorkmag.com/page.cfm?page_id=464

Public Building Service, modified 05.08.2001 (11.21.2001).

URL http://hydra.gsa.gov/pbs/pc/nw_files/98/citation/citaawd.html

Rainey, Reuben, *Healing Landscapes*, (10.24.2001).

URL <http://www.cti.itc.virginia.edu/~rnr/lar520/docs/schnapergarden1.html>

Riverbank State Park: b (10.23.2001)

URL <http://www.sports.yahoo.com/parks/locs/ny/nysprb.html>

Riverbank State Park: a (10.23.2001)

URL <http://www.usparks.about.com/blbestparks-ny.html>

Robinson, Walter, *Federal PlazaPalooza*, 6.13.1996 (10.23.2001).

URL <http://www.artnet.com/magazine/news/endless/endless-june.asp>

Shofuso, *The House in the Museum Garden Series*, (10.25.2001).

URL <http://www.shofuso.org/html/hn/ch2.html>

VERBAL INFORMATION

Abel, Howard, landscape architect, 04.24.2001

Cohen, Billie, landscape architect, 04.2001

Davies, Mark, horticulturalist at Higher Ground Horticulture, 10.04.2001.

Hogan, Kevin G., resident manager at Insignia Residential Group, 04.2001

Kramer, Nina, landscape architect, 25.04.2001.

Monleleone, Robert, landscape architect at J. Mendoza Gardens, 11.04.2001.

Shannon, landscape architect at Billie Cohen's office, 17.04.2001.

OTHER NON-PRINTED MATTER

@ Guggenheim, The guide to the Guggenheim museums, summer 2001

Engelman & co, Prospectus for the Sheridan.

Information paper from the Lotus garden, provided by the community members in Lotus Garden, April 2001.

Information sign at the Solomon Guggenheim museum, 05.18.2001.

Lotus Garden Plan —A letter-size copy of the garden plan with ligneous plants marked, as it was planned in 1983, provided by the community members in Lotus Garden, April 2001.

Metropolitan Museum, Floor Plan brochure, 2001

Rose Center, Floor Plan, 2001.

Terence Cardinal Cooke Health Care Center, Information brochure.

ILLUSTRATIONS

All illustrations are by the author and are made during 2001.

(cover) A small Cherry tree and its surroundings in Chelsea.

Fig. 1. Map showing the location, on Manhattan, of some of the studied roof gardens.

Fig. 2. Riverbank State Park, watercolor plan-sketch.

Fig. 3. Lower garden level and stairwell seen from upper level of Riverbank State Park. George Washington Bridge is seen in the back, photo.

Fig. 4. From a distance the hedge appear to encircle a little pond, photo.

Fig. 5. The one who follow the sign and do not walk on the grass never get to see this; office space in the underworld, photo.

Fig. 6. Flowering Japanese Cherry trees, Equestrian statue and mirroring glass-façades. Immediately to the right is a sunken walkway, we get a glance of the upper part of the lampposts. A wide hedge take up the hight differences, photo.

Fig. 7. Beach-walk with a slightly curving line. Lampposts are leaning towards the river, photo.

Fig. 8. Graphic pattern on the wall hiding away the fresh-air intake. English Ivy as groundcover, photo.

Fig. 9. Plan over United Nations Garden, watercolor.

Fig. 10. A straight path with shading Plane trees in Bryant Park, photo.

Fig. 11. On the great lawn there are plenty of light chairs that the visitor can move to a preferred spot in the garden, photo.

Fig. 12. The watercolor sketch show the plan of Bryant Park. The small dark dots in the middle are the French-café chairs from last page.

Fig. 13. Photo taken from the entrance, looking East. A sun-dial form a strict focus in the middle although the garden face North.

Fig. 14. The Sheridan garden has a very regular plan. The garden is probably laid out in the fifties and the classic design works on this site, watercolor plan.

Fig. 15. A lot of different plants are grown in the garden. The plan shows the curving paths that separate the fields of flowers and bring a healthy touch of order, watercolor.

Fig. 16. One of the community gardeners in action with spring cultivation in Lotus garden, photo.

Fig. 17. Along the street tall lampposts stand up straight. Plastic chairs in a group is just one of many choises for seating, photo.

Fig. 18. The terrace seen from the café with large spheres of Rose center as a backdrop, photo.

Fig. 19. Detail showing the stem of a Pagoda tree coming up through the thin layer of paved floor, photo.

Fig. 20. Generous wooden benches and lunar like space inspired lampposts along the outer wall, photo.



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- Fig. 23. Plan of The Iris and B. Gerald Cantor Roof Garden at The Metropolitan Museum Of Art, watercolor.
- Fig. 24. A plan of what The Abby Aldrich Rockefeller Sculpture Garden at the Museum Of Modern Art usually looks like, watercolor. When visited, the garden was a building site.
- Fig. 25. The Samuel J. And Ethel LeFrak Sculpture Terrace viewed from North East. The Frank Gehry installation work as a roof creating deep shade, photo.
- Fig. 26. Plan of The Samuel J. And Ethel LeFrak Sculpture Terrace at The Solomon Guggenheim Museum, watercolor.
- Fig. 27. Rooftop Urban Park Project at Dia Center for the arts. The impressions change when entering the sculpture. Sound and vision are remodelled. The viewer is at the same time a part of the installation, photo.
- Fig. 28. Plan of The Rooftop on Dia-Center for the arts with the installation forming a center. The small squares around the installation are skylights to the exhibition halls below, watercolor.
- Fig. 29. The inner circle opens, photo.
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- Fig. 31. Red painted concrete seats is the most striking feature at Martin Luther King Jr. High School, photo.
- Fig. 32. Large concrete planters and benches at Fiorello H. La Guardia High School Of Music, Art And Performing Arts, photo.
- Fig. 33. Fiorello H. La Guardia High School Of Music, Art And Performing Arts. Watercolor plan.
- Fig. 34. Dogwoods and Geranium in large planters at Gould Memorial Plaza.
- Fig. 35. Plan showing Gould Memorial Plaza, watercolor.
- Fig. 36. Paul Milstein Plaza seen from North West, photo.
- Fig. 37. Plan of Paul Milstein Plaza at The Juilliard school of Music, watercolor.
- Fig. 38. A small and shallow amphitheater form a center, photo.
- Fig. 39. Daffodils, modern sculpture and post-modern steel structures at one of the entrances to Fordham Campus, photo.
- Fig. 40. Plan of Fordham University, watercolor.
- Fig. 41. Plan of the roof garden part of The Rockefeller University grounds. The upper garden level is in the lower part of the plan and vice versa, watercolor.
- Fig. 42. A circular form at the lower level of the garden marks the entrance to one of the surrounding buildings. East River in the back. The sculptural feature above gives shade to benches on the upper garden level.



- Fig. 43. A glance of the plantings on the lower level, photo.
- Fig. 44. The plaza is reached through stairs in a circular opening in the plaza floor, photo.
- Fig. 45. Pagoda trees in shared planters at Deutsche Bank, photo.
- Fig. 46. Deutsche Bank. Plan of the roof garden, watercolor.
- Fig. 47. The Channel Gardens are always dressed up for show-off and commerce, here in White Lilies and pink Azalea, photo.
- Fig. 48. A plan of the Channel gardens. From above the reddish color of the paving is striking, watercolor.
- Fig. 49. The scene is changing every time the flower creations are remade, photo.
- Fig. 50. Paramount Plaza with its sculptural lampposts.
- Fig. 51. A plan of Paramount Plaza, watercolor.
- Fig. 52. The upper level of the New York City Vietnam Veterans Memorial's Plaza, photo.
- Fig. 53. Plan of The New York City Vietnam Veterans Memorial Plaza. In the lower part of the plan is a claustrophobic, unreal part, watercolor.
- Fig. 54. The elevated part on the upper level at the New York City Vietnam Veterans Memorial Plaza, photo.
- Fig. 55. Magnolias and Pansies open the season at One Dag Hammarskjöld Plaza, photo.
- Fig. 56. Plan of the roof garden at One Dag Hammarskjöld Plaza, watercolor.
- Fig. 57. Plan of Jacob Javits Plaza, watercolor.
- Fig. 58. Swirling benches occupy Jacob Javits Plaza, photo.
- Fig. 59. Trump Tower gardens with Pear trees in bloom, photo.
- Fig. 60. Trump Tower plan, watercolor.
- Fig. 61. Watercolor view of the corporate zen garden.
- Fig. 62. Zen Garden plan, watercolor.
- Fig. 63. Plan of the four roof gardens at Rockefeller center, watercolor.
- Fig. 64. Roof Garden on Palazzo d'Italia, photo.
- Fig. 65. Roof Garden on International Building North, photo.
- Fig. 66. View with surrounding buildings and a glance of the South three of the four roof gardens at Rockefeller center, photo.
- Fig. 67. Plan of the dining garden, watercolor.
- Fig. 68. Dining garden, watercolor sketch.
- Fig. 69. Joel Schnaper Memorial Garden. watercolor plan.
- Fig. 70. Play sculptures to climb on are swimming in a blue plastic "pool", photo.
- Fig. 71. A small scale corner in the large garden, photo.
- Fig. 72. A huge air-hall and a fifty-story building form a background in the garden at 400 west 43rd street, photo.
- Fig. 73. the garden at 400 west 43rd street. watercolor plan.
- Fig. 74. The blinding concrete floor at New York Service Center almost appear convex. photo.



- Fig. 75. New York Service Center. watercolor plan.
- Fig. 76. Green pipes and small conifers compete with Empire State building. Baby Daffodils represent the spring planting. The terrace has a laid back feeling, photo.
- Fig. 77. Watercolor plan of the shared rooftop on 47 west 24th street.
- Fig. 78. Green foliage and concrete planters at Lincoln Towers, photo.
- Fig. 79. Lincoln Towers watercolor plan.
- Fig. 80. Houston Street garden seen from East, photo.
- Fig. 81. Entrance to the parking garage at Houston Street, photo.
- Fig. 82. Houston Street garden plan, watercolor.
- Fig. 83. Matching trees in Annie Leibowitz's garden, photo.
- Fig. 84. Annie Leibowitz's garden. watercolor plan.
- Fig. 85. An intimate garden room at 470w24st, photo.
- Fig. 86. plan of the private garden at 470w24st, watercolor.
- Fig. 87. Ed Bazinet's studio garden seen from the hot tub in the South West corner, photo.
- Fig. 88. A gap in the hedge show an Indian sculpture, photo.
- Fig. 89. plan of Bazinet's garden, watercolor.
- Fig. 90. Teak sun-chairs, birches and pine, photo.
- Fig. 91. 552 La Guardia Place rooftop. A view towards South, photo.
- Fig. 92. Detail, Blue Stone with wooden stripes, photo.
- Fig. 93. Detail, Blue Stone with black sand stripes. Detail of the floor with Blue Stone and Black gravel. The decorative piece of metal in the middle is a handle used to reach structures below the paving, photo.
- Fig. 94. Dogwood stems, black pebbles and wood, photo.
- Fig. 95. The lower garden level is designed with a glance at false perspective to make it look larger than it is, photo.
- Fig. 96. 552 La guardia plan of lower and upper roof gardens, watercolor.
- Fig. 97. 552 La Guardia Place. View to the North. The landscape architect's daughter with babysitter and mom, photo.
- Fig. 98. The terrace before the change. A view towards South with the toolshed and large windows, photo.
- Fig. 99. A view to the North-West, photo.
- Fig. 100. Detail. Steel wire railing with White styrofoam plastic, photo.
- Fig. 101. Detail. The construction of the planters, watercolor.
- Fig. 102. A view towards the toolshed, collage.
- Fig. 103. Some of the benches double as storage space, watercolor.
- Fig. 104. Detail showing foldable benches attached to the wall, watercolor.
- Fig. 105. Detail showing the construction of the drop leaf table, watercolor.



- Fig. 106. The yoga corner. Un-bleached linen have the same color as the oak-wood, collage.
- Fig. 107. A view from inside the apartment. The fortlet "Skansen Kronan" is in the backdrop, collage.
- Fig. 108. Wild strawberries and a large-pattern fabric is adding color, collage.
- Fig. 109. Watercolor plan showing the new layout of the terrace.
- Fig. 110. Plan showing which plants to plant where in the garden. Scale 1:25.

APPENDICES

PLANT LIST

SHRUBS

<u>number</u>	<u>quantity</u>	<u>scientific name</u>
1	1	<i>Ficus carica</i>
(2)	(1)	<i>Hydrangea petiolaris</i> (existing)
3	1	<i>Ilex</i> 'Blue princess'
4	1	<i>Rhododendron irsuta</i> 'Nana'

CLIMBERS & VINES

<u>number</u>	<u>quantity</u>	<u>scientific name</u>
11	1	<i>Clematis viticella</i> 'Södertälje'
12	1	<i>Hedera helix</i>
13	2	<i>Humulus lupulus</i> 'Aureus'
14	1	<i>Lonicera x brownii</i> 'Dropmore Scarlet'
15	1	<i>Lonicera x tellmanniana</i>

PERENNIALS

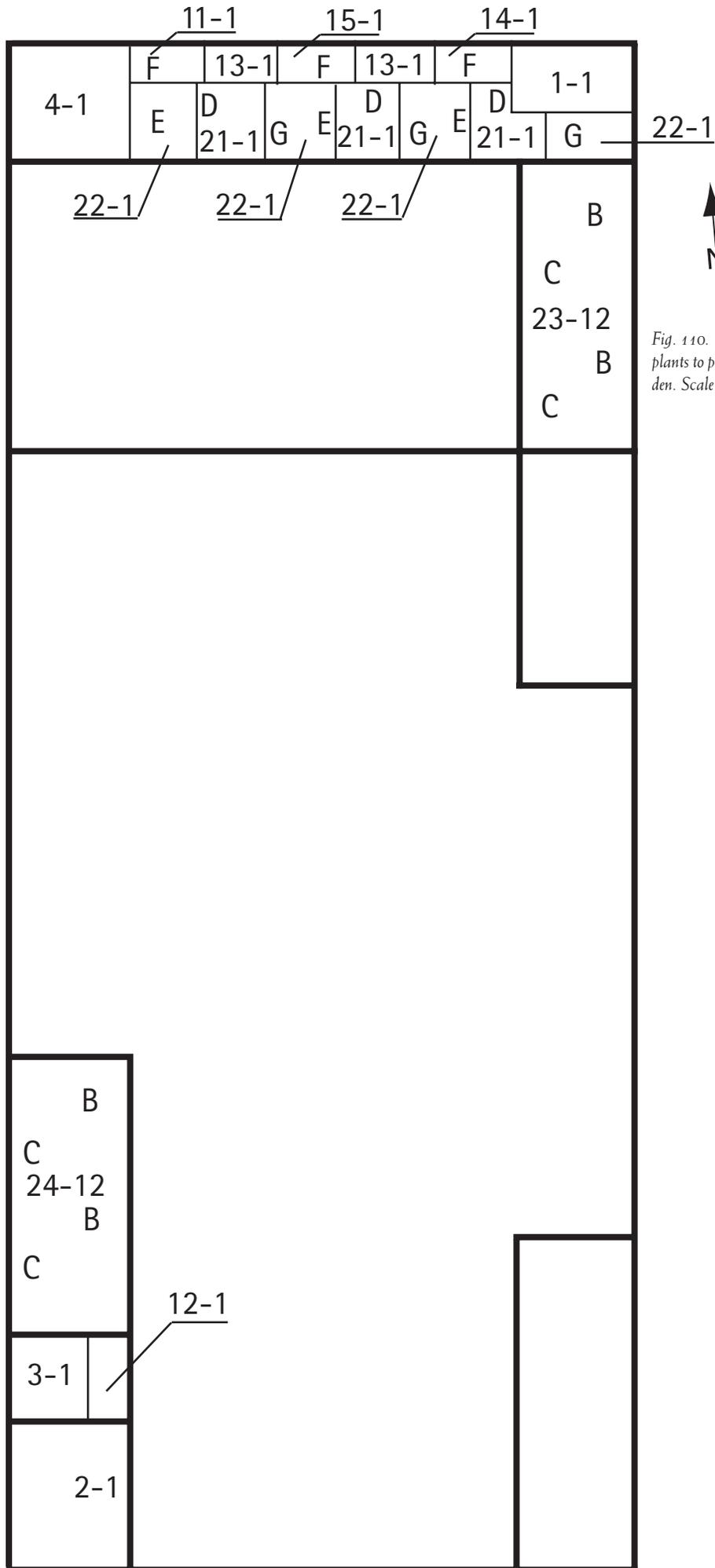
<u>number</u>	<u>quantity</u>	<u>scientific name</u>
21	3	<i>Anemone japonica</i> 'Honorine Joubert'
22	4	<i>Anemone japonica</i> 'Pamina'
23	12	<i>Fragaria vesca</i>
24	12	<i>Papaver nudicaule</i>

ANNUALS/HERBS

<u>number</u>	<u>quantity</u>	<u>scientific name</u>
(31)	1	<i>Ocimum basilicum</i>
(32)	1	<i>Petroselinum crispum</i>
(33)	1	<i>Rosmarinus officinalis</i>
(34)	1	<i>Thymus serpyllum</i>

BULBS

<u>symbol</u>	<u>quantity</u>	<u>scientific name</u>
(A)	1	<i>Allium schoenoprasianum</i>
B	4	<i>Galanthus nivalis</i>
C	4	<i>Galanthus nivalis</i> 'Flore Pleno'
D	3	<i>Tulipa linifolia</i> 'Apricot Jewel'
E	3	<i>Tulipa linifolia</i> 'Bronze Charm'
F	3	<i>Tulipa linifolia</i> 'Red Gem'
G	3	<i>Tulipa vvedenskyi</i> 'Tangerine Beauty'



PLANTING PLAN

Fig. 110. Plan showing which plants to plant where in the garden. Scale 1:25.

