EXPLODING THE EDGE:
Inversions into the Urban Landscape

by
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Submitted to the Department of Architecture
in partial fulfillment of the requirements of the degree
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ABSTRACT

This thesis explores the relationship between building and green space in a dense urban environment in order to create a humane contemplative experience of individual and collective memory. The urban environment has the potential to inform a new attitude for open space which incorporates the building as a landscape element and weaves natural and architectural elements together physically and metaphorically. The building and the open space are inversions of each other while referencing the district around them, the cultural landscape. As a result, the form of the built urban context has the potential to define the urban edge along which everyday activity occurs while providing a place of refuge and protection for those who seek an occasional mental and physical retreat.

The design, a small-scale public garden for Boston’s Chinatown, references the urban Chinese landscape garden in order to reinforce the identity of this historic ethnic neighborhood within the downtown landscape of Boston. Two buildings — housing a tea house, restaurant, and information center — explore the zones of edge conditions between the outdoor and indoor spaces. Within the stratified realm of inhabitation, edge transitions between garden and architecture can establish new reference planes. By exploiting (and, perhaps, exploding) the edge between open space and building, the design process will treat the building as a landscape in itself as well as a landscape element in relationship to the garden.

Thesis Supervisor: Julie Moir Messervy
Title: Lecturer in Landscape Architecture
Dedication

A truly rewarding academic exploration results not only from the impetus of the explorer, but also from those who provide direction, focus, and alternative routes along the journey. This exploration has been the result of timely advice, support, and criticism from several people to whom I owe my deepest gratitude:

To Julie Moir Messervy, for enthusiastically sharing your knowledge of landscapes with me and for providing constant supportive guidance.

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Over the years, my passion for travelling has allowed me to immerse myself in a number of cities around the world. When I visit a city, associations and comparisons with other urban centers constantly educate me about city form and its physical and social conditions. I find myself excited by the movement, change of scales, diverse population, order vs. chaos, and even danger of the city, sometimes to the point where I overwhelm myself trying to see, hear, and touch all the textures of urban life.

During these moments of weariness, I look for relief in the bustle, a search for the quiet outdoor oasis amidst the clamour; I look for a place that contrasts the intense activity of the city with the repose that one generally seeks out in the countryside or inside one's own flat. I seek a place which identifies itself as a focus for the individual as well as the collective, a place from which I can assess myself as well as the world around me. These places range from the architectural to the natural to the marginal: the edge of the Piazza San Marco dusted with winter's morning fog, the canyon between two buildings which filters light down to a small garden, the underside of a bridge along the river Seine.

These urban conditions maintain a dialogue between built and unbuilt, closed and unclosed, space and anti-space. Here, one can explore the subtle evocative qualities of the city: the physical, the sensory and the metaphysical. Furthermore, the city forms the backdrop for the intimate cognitive events of reflection and contemplation.
1 INTENTIONS

Where do people who know the city go when they seek a place of contemplation, a place of refuge? What makes a place so special that they can return again and again to be renewed in a familiar setting? What is the relationship between the mental and physical journey of discovery of place and discovery of self?

Currently open-air urban spaces exist as isolated pieces which do not advocate physical interaction with the buildings around. The edge between building and land defines a hard threshold between two worlds. I believe more attention needs to be given to the integration of small scale open-air retreats within the built urban framework in order to create nodes of relief in the dense cityscape. The urban environment has the potential to inform a new attitude for open space which incorporates the building as a landscape element and weaves natural and architectural elements together physically and metaphorically. The building and the open space are inversions of each other while referencing the district around them, the cultural landscape. As a result, the form of the built urban context has the potential to define the urban edge along which everyday activity occurs while providing a place of refuge and protection for those who seek an occasional mental and physical retreat.

Land becomes landscape when seen by man, revealing the record of his activities on the surface of the earth and his relationship with his environment. The perception of landscape reveals his attitude towards it and generates emotions ranging from distrust and fear to reassurance and delight. These may arise from the view of a real landscape or from the imagery of a poet, painter, or writer.

John Michael Hunter
Land into Landscape
Solitude is not measured by the miles of space that intervene between a man and his fellows.

Henry David Thoreau
Walden

In the countryside, a house, barn, or town is an isolated microcosm of human habitation in a natural expanse. In the city the reverse is true; architecture takes on a monumental scale while the qualities of the countryside are sporadically reduced to pocket parks or infill gardens. These publicly accessible green spaces are precious gems of nature existing in the sprawl of the man-made cityscape. Landscape, in its pure form, does not exist in the city; thus, the urban counterpart is an architectonic one whose principal natural references are the ground and the sky. Plants, water, and materials which serve as metaphors for nature are inserted into the city to enhance park and garden spaces. These elements are subject to climatic conditions created by the surrounding built environment.

This thesis explores the relationship between building and green space in a dense urban environment in order to create a humane contemplative experience of individual and collective memory in what can sometimes be characterized as an inhumane city. The city itself becomes a reference for the design of a place whose natural and built elements are continuous with the physical fabric. The inversion of nature into the city will then develop its own vocabulary based on the particular context of the immediate site.

In this study, the examination of the intimate symbiotic relationship between man and nature in the city relies on a study of the degrees of definition between building and open space as layers of membranes which address the physical and metaphysical dialogue between landscape and cityscape, urban activity and individual solitude, collective memory and individual memory. Thus, the integration of small-scale garden space into the city requires looking at this jewel of greenery as being inserted
into an order of landscape which is quite different from the natural. By re-defining the city as an urban landscape, thus acknowledging the city's own landscape qualities, one can contribute a new layer of meaning on an already complex system of interdependent relationships in order to enrich the process by which one designs a landscape intervention in the city.

In the city, the potential exists for a vertically structured landscape. Thus, within the stratified realm of inhabitation, vertical edge transitions between garden and architecture can establish new reference planes. By exploiting (and, perhaps, exploding) the edge between open space and building, the design process will treat the building as a landscape in itself as well as a landscape element in relationship to the open space. The structure of the landscape will be similarly influenced by the tectonic and urban relationships of the building.

Zones of transition may also be used to relate the internal structure of the place to the structure of the natural or man-made environment.

Christian Norberg-Schulz
Genius Loci

It is necessary, of course, in these confined [urban] spaces, to shift our sense of scale and plan microcosmically. The tiny garden must establish its own scale—its own frame of references—so that in entering it, one enters into a private world, into a man-made sense of isolation and remoteness.

Lawrence Halprin
Cities
2 READING THE CITY AS AN URBAN LANDSCAPE

When one uses the term *landscape*, images of vast natural, usually pastoral, settings come to mind. (Landscape genre painting is responsible for much of the stereotypical images commonly associated with definition of landscape.) Within the realm of natural order, a landscape can be described as *built* and *structured*; planting and geological characteristics preserve an organic organization which strengthens and unifies the natural composition. Purely natural landscape is commonly attributed to what the city is not: a vista of ground, water, flora and fauna, and sky whose compositional nuances have been sculpted according to the laws of Nature. One does not usually associate landscape with a *man-made* structure. Generally, a consciously human attempt to physically re-order or build the landscape gives it a boundary, whether physical or intellectual, and creates a new controlled situation.

Therefore, reading the city as landscape requires qualifying the definition of *landscape* as it pertains to an urban context. The *urban landscape* functions predominantly as a man-made built environment whose physical characteristics emphasize density, verticality, and aggregation. In plan, the form of the urban landscape can be read as a pattern of streets defined by dense volumes of buildings. As a result of its density, this pattern prevents the extensive peripheral views that one commonly associates with the natural landscape. Instead, one expects the city to be plugged up with buildings at every opportunity, reinforcing an identifiable urban topography and axiality of views.

*urban landscape*: n. 1. a section or portion of, pertaining to, or comprising a city or town, usually extensive, that may be seen from a single viewpoint.

1
From the top of the Hancock building, across the Commons, or overlooking the west bank of the Charles River ... from a location removed from the dense innards of the city itself, one can read the larger urban landscape of Boston as a pattern of textures, materials, building and street typologies, and social densities. These vantage points allow people to understand their city in a new way; physically separated from the insulated daily life of their particular neighborhood, they now read their own domain as an integrated part of a larger physical organism. From above, the panorama captures the city as a broad continuous map and leaves the observer with a series of strong extensive cognitive links between different districts. In contrast, at street level, the visual superposition of high-rise buildings—such as the Prudential Center, the Hancock, and the Mass General Tower—flattens the depth and distances between locations. The counterpoint of these orientation landmarks suggests immediate cognitive links to other parts of the city.

However, at street level true ground, the earth’s natural topography, is purposefully hidden or manipulated to accommodate the needs of vehicular and pedestrian activity. Paved streets and sidewalks establish artificial thresholds on the land by creating a territorial relief in the ground plane. Extreme situations occur when excavation for tunnels and depressed highways establish a dominant extensive land form (such as the intersection of the Expressway and Massachusetts Avenue where three layers of ground levels are revealed). In the city, architectural interventions build up the ground artificially, structuring the surface of the landscape to adapt to further urban expansion. In Boston, concrete foundations and land fill pilings are the first layer of the urban archaeology. Thus, urban ground is built, malleable, and pliable, allowing the foundations of the urban landscape to rise or fall regardless of natural geology.
The relationship between the urban ground and the urban landscape is an architectural one. However, social, cultural, and economic factors also manifest themselves visibly in the structure of the built environment. They give the reading of the urban landscape a complexity of multiple interpretations and recognitions. Nevertheless, the rich palette of urban landscape characteristics are inherently imbedded in physical urban forms. In designing quality open space in the city, the city itself can become a direct reference for the structure of the micro-landscape, the garden or pocket park. Thus, the city should be read as an urban landscape not only as a result of the occasional extensive views and spatial relationships, but also as a result of a coherent understanding of the physical organization of the individual districts. The particular characteristics of their immediate site conditions suggest tools by which one can model and design the built open spaces; this method will also inform the structure of the enclosed spaces as well. As a result, the open space can respect and understand its location in relationship to the urban landscape of the city while also providing a retreat from it.

True renewal of places requires a change in our structure of experience and a different paradigm for understanding both the natural land and the built environment.

E.V. Walter

A place has no feelings apart from human experience there. But a place is a location of experience. It evoked and organizes memories, images, feelings, sentiments, meanings, and the work of imagination. The feelings of a place are indeed the mental projections of individuals, but they come from collective experience and they do not happen anywhere else. They belong to the place.

E.V. Walter

Placeways
The 'spirit of the place' drew power from the site's inherent forces and from the cumulative input of human interaction.

Christian Norberg-Schulz
*Genius Loci* p.17
3 THE SITE

In 1875, an enclave of Chinese workers migrated to Boston and settled in the landfill along Washington Street known as South Cove. Prior to the Chinese, the Irish, central European Jews, Italians, and Syrians had developed the site for middle class residents. By the turn of the century, these ethnic groups had left the area as a result of encroachment by the thriving leather and garment industries. The Chinese, however, remained and established a strong foothold in the neighborhood. The predominance of Chinese shops and businesses soon characterized the area as Chinatown.

The Southeast Expressway, built in the 1960's, and the Massachusetts Turnpike, systematically displaced Chinese residents into Castle Square and other parts of the South End. Further encroachment from the Tufts/New England Medical Center resulted in an institutional fortress along Kneeland Street. Sanctioned by the Boston Redevelopment Authority (BRA), the Medical Center took from Chinatown several undeveloped residential parcels by eminent domain. These plots still remain unused.

Despite pressures from city planners, state highways, and the hospitals, Historic Chinatown still asserts itself as a district within the larger organization of the city. The community reflects a closely-knit ethnic background whose identity has been established visually and symbolically in the larger cognitive map of Boston. The immediate block structures consist primarily of commercial shops, restaurants, small grocery stores, bakeries, and beauty salons on the first and second floors. Office space and limited residential apartments are located above. Highly visible bilingual advertisement in red, yellow, and gold, animate the sidewalks.
[The Historic Chinatown Subdistrict] will be reinforced as a unique regional commercial center and a neighborhood common. This regional commercial enclave will be further distinguished by buildings and designs that creatively reflect the cultural heritage of the Asian community and the rich history of the immigrant neighborhood.

Chinatown Community Plan p. 93

The urban design objectives of the Plan include enhancing “a unique neighborhood image that reflects the historic and cultural heritage of Chinatown to establish Chinatown in the downtown landscape. Creative adaptation, representation, and preservation of various historic and cultural motifs in the design and management of buildings, interiors of public spaces, streets and open space is encouraged.”

Chinatown Community Plan p. 97-98.

The shops, predominantly managed by Chinese and other resident Asian groups, cater to the Chinese community. The hours of business fluctuate between 8:30 a.m. to 10 p.m. with the most activity occurring along Beach, Harrison, and Tyler Streets, especially between 11 a.m. and 2 p.m. when local restaurant workers wait for transportation to other locations in Boston. Public activity exists primarily on the sidewalks and along heavily trafficked streets which become further congested on the weekends with pedestrian movement. Given the density of the neighborhood, a lack of open space noticeably contrasts the plethora of office buildings, renovated textile warehouses, and multi-use townhouse apartments.

Several interviews with local community advocates and planners reaffirmed the need for a variety of quality, publicly-accessible, open spaces, “an improved public realm to serve the divergent social and recreational needs of Chinatown’s residents, workers, shoppers, and visitors.” Furthermore, specific BRA/Chinatown planning goals for open space coincide with the intentions of this thesis exploration. Quality open spaces “should provide accessibility, safety, and comfort for Chinatown users. Open space that encourages community use should be created at critical intersections, entry points, and along important paths and streets in Chinatown. These should not be cut off by traffic and should be within close walking distance of the residential and commercial cores in Chinatown.” The objectives of the BRA’s Chinatown Community Plan (1988) aim to strengthen Chinatown’s heritage, reinforce the image of Chinatown as a pedestrian oriented neighborhood, and preserve quality open space in order to provide a safe and healthy environment for residents and visitors. The vision
demands creative “alternative forms of green places throughout the public environment... Plantings and vegetation should not be limited to parks, gardens, playgrounds, or tot lots but extended to the street environment as well as to indoor public places.”

One of the few remaining unbuilt lots in the Historic Chinatown Subdistrict, the 10,000 square foot project site currently accommodates surface parking with pedestrian and vehicular access off of Tyler Street and Harrison Avenue. Proximity to Kneeland and Beach Streets contributes to the constant activity that circulates through and around the site. The high volume of commercial and retail activities in the area suggests that a publicly accessible quality open space will be heavily used throughout the week by local residents and workers as a place to rest, wait for transportation, or meet friends. On the weekends, visitors would benefit similarly, using the garden as an outdoor waiting room given its proximity to the large “dim-sum” restaurants. In an area as commercially and residentially concentrated as Historic Chinatown, an appropriately designed open space should be able to maintain a high level of use throughout the day, especially during the warmer months. Thus, the centering of Historic Chinatown is reinforced through the strengthening of the existing channels of public social interaction.

Neighborhood is a very elusive idea. Intimate space is always restricted, though perhaps broader for working class people than for the well-to-do occupants of suburbia. To the former, intimate space is a segment of the street, a street corner or courtyard. This is the felt neighborhood.

Yi-Fu Tuan
Topophilia p. 223
collage of Zones
4 THE CONTIGUOUS URBAN LANDSCAPE

In the city, every situation is local and general simultaneously. Critical situations occur at the threshold between two neighborhoods where physical and social variables create fluctuating zones of transition. Territories assume expansionist, protectionist or transitory positions. Chinatown's expansionist edge is to the south, while the east, north and west boundaries vary between protectionist and transitory.
The introversion resulting from the contiguous defensive edge relationships of Chinatown supports the premise that the community needs to harbor a place of retreat as well as a place of identification to symbolically establish Chinatown as individual from other districts. Since the contiguous urban landscape currently sets Chinatown off as its own self-referential district, one might argue that a public open space should not compound the sense of introversion for an already clearly identified and concentrated community. Instead, the open space should try to address Chinatown and its relationship to the neighboring districts, encouraging more interaction and integration of Chinatown within the downtown fabric. On the other hand, given Chinatown's forced protectionist boundaries along most of its perimeter, this thesis adopts the position of strengthening and centering the core of Chinatown. The current symbols of the historic core—the Gate, the Lee Family Association building, and the Merchants' Association building—are operative visual ones on a collective level; however, there exists a need for a place where the resident and visitor can educate themselves about Chinatown and related immigrant aspirations while physically orienting themselves within the urban landscape. From that position, one can improve the foundations for a coherent cognitive and physical experience of Chinatown.
Visibility and orientation from within Chinatown and from the adjacent districts, especially from the Mid-town Cultural District, South Station, and the Leather District requires judicious placement of cultural and community landmarks in order to improve the connection between Chinatown and the surrounding areas. By establishing the neighborhood’s symbolic boundaries and centers, planners and designers can reinforce the cohesion of the community as a historic immigrant neighborhood in Boston. For this thesis study, an analysis of the contiguous urban landscape (its physical forms and social and economic nuances) resulted in a better understanding of how to structure the site based on Chinatown’s relationship to its neighbors.

The Historic Chinatown Subdistrict is surrounded by the “Combat Zone”, Downtown Crossing (the shopping area), Park Square (the theater district), the Mass Pike extension and the Washington Street Corridor. Undergoing rapid conversion, these areas are important to the city for further downtown development.

The Combat Zone along lower Washington Street separates Chinatown from any interaction with the Washington Street retail activity. A stigma to the Chinese community, the Zone provides adult entertainment, book stores and paraphernalia shops, and is associated with prostitution and drug dealers. In proximity to Beach Street, the Combat Zone is commonly associated with the Historic Subdistrict in one’s mental map of Boston. From the Essex/ Chinatown “T” station, one must penetrate the Combat Zone first before reaching the threshold of Chinatown. In the future, plans to eliminate the Combat Zone will allow Chinese businesses to occupy lower Washington Street.

It is by knowing where you stand that you grow
able to judge where you are.
Eudora Welty
The streetscape in the Combat Zone and the retail district are generally characterized by 6-8 story brick or stone faced office and retail buildings which align themselves without relief, creating a forceful channel of pedestrian activity through the irregular grid of streets. Most facades reflect 19th and 20th century revival styles with a few non-descript modern retail infill structures. This tight dense experience begins to disintegrate as one moves into the revitalized Theater District. Gaps in the streetscape create deep canyons of space which are generally used for surface parking. Kneeland and Tremont street are congested with vehicular traffic; however, pedestrian activity is concentrated primarily in the evenings. Both Kneeland and Tremont streets have clear views to the South Station tracks and the Boston Common respectively, establishing dominant axes for the larger urban landscape.

To the southwest, the Tufts/New England Medical Center looms as an impenetrable brick fortress, ignoring the surrounding neighborhoods. These buildings symbolize the ubiquitous threat of encroachment on the neighboring Chinatown housing and retail blocks. The Center separates the residential areas of Chinatown from the commercial core, and its non-compromising sheer facade perpetuates a discontinuity along the street edge. Beyond the Center along Kneeland Street, 11 story warehouse/office buildings form the visual wall and threshold between Commercial Chinatown and the residential areas.

The South End meets Chinatown with a mix of commercial buildings, concrete warehouses and unkempt vacant lots, especially along the industrial corridor near the Southeast Expressway. Housing projects and retail outlets are scattered just south of
this area. Given the availability of open land, the expansion of core Chinatown can only reasonably occur south of Kneeland Street along Tyler Street and Harrison Avenue.

The Turnpike separates Chinatown from the Leather District and South Station to the east. A section of 6 story split-level entry office and warehouse buildings, the Leather District has maintained a distinct architectural character in its ornate brickwork which animates the strong formal grid of wide streets. Studios and small office spaces are gaining popularity and will eventually result in the gentrification of the district.

Although it provides an expansive channel of open space, the Turnpike manifests itself as a hard invisible wall due to fast heavy traffic. The Chinatown Gate stands as the symbolic guardian against speeding intruders by visually and physically (by an asphalt berm) sealing off Chinatown from the traffic beyond. A symbol of the historic ethnic neighborhood, the Gate is one of the few immigrant landmarks in Chinatown.

Each surrounding district has its own urban landscape qualities. Topographically, the edges of transition between Chinatown and the contiguous urban landscape occur along Washington Street, Kneeland Street, the Turnpike, and Essex Street. From these edges, the density of buildings as well as the street activity create visual and social forces which focus the community inward, culminating with heavy pedestrian activity along Beach Street, Harrison Avenue and Tyler Street and the individualizing of street facades through varying building silhouettes, window displays and signage.
5 THE SELF-REFERENTIAL URBAN LANDSCAPE OF CHINATOWN

The characterization of the physical elements of Chinatown can be described as a microcosmic urban landscape on its own terms. The spatial experiences which are most dramatic occur at the intersection of streets when multiple views occur. Given the irregular grid pattern, the overlapping of streetscapes due to changes in building heights enhances the anticipation for the next intersection. The exposure of the raw brick backside of buildings exposes the depth of the city block although we can not physically penetrate it. The change in heights of the buildings as one moves along the street creates a rhythm that either catapults one down a tight canyon or distracts one's attention to the collision of competing forms overhead. Horizontal surfaces, from street to sidewalk to the threshold of the storefront, are generally defined by steps which vary with the archaeology of the foundation walls. Penetration into the buildings varies with uses; generally, restaurants, bakeries, and grocery stores attract the most rapid pedestrian activity.

A large city is often known on two levels: one of high abstraction and another of specific experience. At one extreme the city is a symbol or an image (captured in a postcard or slogan) to which one can orient oneself; at the other it is the intimately experienced neighborhood.

Yi-Fu Tuan
Topophilia, p.224
5.1 Topography: the underlying structure of the built environment

The buildings around the site set the tone for the topographic relationships of the project. Along Tyler Street the buildings are consistently 4 stories tall with split-level access from the street to restaurants and shops located both above and below the sidewalk level. During rush hours, restaurants will use the sidewalk as a waiting room (loud speakers call out to waiting parties from under the restaurant’s canopy.)
Dating from the mid 19th century, these Greek revival row houses recall the intimate residential character of turn-of-the-century Chinatown. Flamboyant decorative facade interventions, however, have transformed the first two floors of the Golden Palace Restaurant into a red and gold pseudo-Chinese palace facade which looks directly onto the site. The Lee Family Association building, also decorated with Chinese motifs, stands two stories taller than the row houses; it is visible at the northeast corner of the site. Tyler Street is predominantly pedestrian both on the sidewalks and in the street.
Along Harrison Avenue, across the street from the site, five 4 story buildings create a busy pedestrian edge of bakery shops and grocery stores which display their goods on the sidewalk. They are abruptly abutted by an 11 story brick and masonry building, similar to those on Kneeland Street, which turns the corner onto Beach Street. "Many are loft buildings with high ceilings and large rooms. These buildings were constructed in the late 19th century and at the turn of the 20th century for the burgeoning wholesale and leather industries...designed in various revival styles popular at the time." This building stands like an impenetrable mountain with minimal street level interaction along Harrison Avenue.
The things of the world can not be known except through a knowledge of the places in which they are contained.

Roger Bacon
Pedestrian and vehicular traffic is heavy along Harrison Avenue with busy intersections at Beach and Kneeland Streets. The sidewalks are wider than typical to accommodate heavy pedestrian flow. Beach Street also serves as the main circulation artery for the local community, linking the restaurants and shops from the Chinatown Gate to the edge of the Combat Zone. Like Tyler Street, the activity along Beach is predominantly pedestrian and, as a result of the sealed off Chinatown Gate terminus, much of the street itself is taken over by shoppers and vendors.

A typical street wall defines the hard edge between inside and outside. Minimal physical exchange occurs with an occasional balcony or bay window. However, mandatory regulations established by the BRA require a minimum of 60% visual penetration into first floor retail shops. Advertisement and the display of food and merchandise overlap with casual views into the shops. Beginning two floors above street level, the existing building facades and party walls of brick and concrete are evenly patterned with traditional sash windows. This vertical visual threshold, announced by an awning or sign, defines the domain between public commercial and private residential use.
Within the site, a steep eight story brick party wall with irregularly punched window openings and two clinging exhaust pipes bounds the north side. The remains of the party wall of a four story pitched roof building creates a silhouette at the north west edge of this canyon-like wall. The north-east corner drops off suddenly to a two story level, revealing an even pattern of windows beyond the vertical niche of space. In contrast, the south face of the site contains a cave-like pocket created by the intersec-
tion of three 4 and 6 story brick buildings. The undulation of pitched and flat roofs creates an unusual individualized silhouette. The base of this nook is rarely exposed to natural light; however, the opposing tall brick north wall, continually radiates the sunlight back into the site during the day. Reflected light from the windows on the north face create whorls of light on the opposing brick and concrete walls. Thus the topography and materials on the site give it a virtual sense of being totally exposed to sunlight.
the courtyard

the plaza

the pedestrian street
5.2 Typology: characteristics of the urban block

Regional typologies characteristic of Boston contribute to the contextualization of Chinatown in relationship to the whole city. The site's mid-block condition required not only an examination of the existing edge conditions between enclosed and open, built and natural, but also along the edges between collective activity and individual retreat.

Three mid-block typologies were explored in order to articulate the public/private variables which control various ranges of circulation, entry, exposure to the street, and the types of activities and degree of public intensity envisioned for the site. The courtyard, walled off to both streets, demonstrated the most private condition with specific entry points and a controlled series of spaces. The interior of the site becomes a contained world removed from the exterior street life. The plaza, walled off by a building on one street face creates an easy physical transition for the pedestrian. As an extrusion or extension of the street, the plaza can sustain large gatherings by using the street as its vestibule. The pedestrian street, a thoroughfare for public activity, does not maintain an open-air private domain at street level. A dominant pedestrian movement mimics the activity which currently exists on Beach Street and reduces the opportunity for an enclosed, protected garden.

The design process culminated in a hybrid of all three typologies. Moreover, the qualities engendered in each type organized the site according to the immediate contextual edge conditions. The courtyard garden represents the contemplative place of protected retreat. One of its walls buffers and muffs the activity from Harrison
Avenue while the opposing wall supports the back edge of the plaza-like garden facing Tyler Street. The plaza garden serves as a waiting room for restaurant patrons and provides an easy pedestrian transition from an already heavily traversed street. The pedestrian street type is no longer obvious. However, it has been transformed into a journey through three overlapping garden spaces. The journey and discovery sequence gives the site more depth and a sense of retreat into a different place while loosely preserving the existing circulation through the block.

1  seating  
2  entry  
3  courtyard garden  
4  grove garden  
5  tea house/ Information Center  
6  pocket garden/plaza  
7  restaurant/tea house
By the time the Chinese had settled into the South Cove development in 1875, the area had already been built up by previous immigrant groups and was readapting to the influx of industrial buildings. The Chinese, confronted with a physically predetermined setting, maintained their ethnic social habits by modifying the use of the existing spaces. Today, common public open spaces within the urban landscape—streets, sidewalks, and un-used lots—continue to frame crucial places for the types of social and commercial transactions that one often finds outdoors in similar urban situations in China. Like in China, the outdoor market plays an important role, gathering members of the community to maintain verbal communication while performing daily business transactions. In the warmer months, the sidewalks of Beach Street and Harrison Avenue can become impassable, blocked by produce stands, flower vendors, and local shoppers. Trucks and vans offering fresh meats, flowers, and miscellaneous household goods, often park on these streets as well. Casual rendezvous occur on a stoop or sidewalk corner where peers will generally pass the time of day and exchange news. Chinatown depends on its street activity as a source of information; the street becomes the arena for a variety of social exchanges.

Indoor semi-public places also contribute to the role of Core Chinatown as the hub of the Chinese Community. Chinese pastry shops with informal seating provide places to ‘hang out’ and relax with friends, especially during the colder months. Small restaurants serving Chinese and Vietnamese food have a constant flow of regular clients who know they can sit back and watch television or listen to the radio while eating with friends, as if they were in their own homes. Larger restaurants, especially the “dim sum” palaces, accommodate visitors and residents alike.

In the course of time every section and quarter of the city takes on something of the character and qualities of its inhabitants. Each separate part of the city is inevitably stained with the peculiar sentiments of its population. The effect of this is to convert what was at first a mere geographical expression into a neighborhood, that is to say, a locality with sentiments, traditions, and a history of its own. Within this neighborhood the continuity of the historical processes is somehow maintained. The past imposes itself upon the present, and the life of every locality moves on with a certain momentum of its own.

Robert Park
The facades of these buildings have been modified to reveal the heritage of the Chinese community. Bi-lingual signs, buildings painted auspicious colors (red, yellow, and gold), decorative awnings and balconies with Chinese motifs, and the Chinatown Gateway animate a backdrop which is not found anywhere else in Boston. These elements define a pedestrian market realm superimposed on the original grid of streets. “We are keenly conscious of objects and their intervals between one object and another—the signboards, the merchandise, telephone booths, sidewalk benches and street lamps. They are closely spaced and make us visually aware of the densely populated and overcrowded streetscape—and community—of Chinatown.” In particular, the recessed balcony a rare facade treatment for Boston, dominate the upper stories of several prominent buildings in Chinatown including the Family Association buildings. “This element may be a duplication of practices in Hong Kong, Macao, Canton, and other cities in South China, where the facade of the building is set back at each level and the facade plane is met by a wrought iron balcony ...In Chinatowns, most Chinese association buildings have recessed balconies, which are useful when the interior assembly hall is too crowded during a festival celebration or when there is a street parade.”
Chinatown’s ethnic landscape is rooted in the hybridization of the underlying non-Chinese built environment and the superimposed Chinese decorative vocabulary and functional use of space. This duality of references, common to established ethnic neighborhoods, implies a realm of ambiguity when proposing a design intervention which may affect the public organization of the community. Dell Upton, author of America’s Architectural Roots: Ethnic Groups That Built America, comments: “Large urban ethnic groups evidently built little that was distinctive. [However,] we cannot be too confident in making such assertions. The absence of urban ethnic architectures may be more apparent than real.”

Although the Chinese community did not initially plan the architectural structure of their neighborhood, they have transformed it socially and architecturally into a district of distinct characteristics. Furthermore, Chinatown has a territorial history which has reinforced the boundaries of the neighborhood while strengthening the protected core. Although much of the residential population has moved to the South Cove/South End, Core Chinatown continues to reinforce the vocabulary of its ethnic urban landscape. The way our serial views of Chinatown are linked may cause our minds to mold the chaotic images of Chinatown into a perceived coherent precinct.
6 REINFORCING THE ETHNIC URBAN LANDSCAPE

The distinctive cultural landscape of Chinatown required a thoughtful evaluation of the contextual and historical references for the project. References should instigate an abstraction of ideas and spatial experiences resulting in a transformation, not literal imitations. When interviewing residents and advocates in Chinatown about their ideas of a contemplative open-air place in the city, many chose the traditional urban Chinese landscape garden as an urban reference. This garden type emphasizes the integration of built urban order with natural landscape elements to create a world of its own.

Every Chinese garden contains similar elements and design principles which establish the contemplative setting so precious in a dense built environment. The relationship of the viewing positions, the centers of the garden, the framing of views, and the complexity of the mental and physical journey in a unified and protected world.
coincide with the key elements of a contemplative place—focal point, reference, frame. In order to develop the thesis design as a hybrid of the physical urban landscape and the ethnic landscape, an analysis of the principles behind the urban Chinese landscape garden proved to be an appropriate way to respect the cultural heritage of Chinatown while applying appropriate design concepts for this particular urban area. For the purpose of this thesis exploration, the specific elements important to the conceptualization of the design were extracted, analysed, and then transformed where appropriate. [see Appendix B] The intention is not to imitate the Chinese garden or to recreate it. Through an abstraction of design themes, the investigation reveals the variety of visual and physical zones of transition within the Chinese garden which can aid in establishing a contemplative outdoor experience in the city.

Natural and man-made space are structurally similar as regards directions and boundaries. In both, the distinction between up and down is valid, as well as the concepts of extension and enclosure. ...Natural and man-made space may thus represent each other reciprocally. ...[The man-made forms] do not imitate the analogous natural forms but we have again to ask for common structural properties.

Christian Norberg-Schulz
Genius Loci
6.1 Site and Topography

Given the confined space of a typical garden plot, the masters of Chinese garden design developed techniques to increase one’s perception of space, movement, light, and time. Regardless of the lot size, the design of the Chinese garden depended highly on the existing context. ‘The correct solution of the problem of topography is a constant in Chinese landscape design. Not only are gardens to be set in sites of natural scenic beauty but also they are expected to reveal or summarize the major topographic features present on earth. The latter sense is summed up in the phrase ‘a miniature world formed by itself.’” Referencing the area around it, the urban Chinese garden attempts to articulate positive features of the surrounding conditions, borrowing views from the larger landscape or referencing the surrounding topography. Practicing *feng shui*, a method of placement derived from geomancy, garden designers carefully scrutinized the site before making any decisions.

In laying out the garden, the designer tries to maintain a balance between the ground forms and the water forms. “Old Chinese literature asserted that water constitutes the arteries of the garden, while the hills represent its skeleton and the plants are merely the hair. Digging ponds and piling hills was a common term for garden making.” The source of the water is the first consideration in selecting a suitable site. Multiple sources occur in the larger gardens, usually culminating in a pond or lake. Earth that has been displaced to enlarge a lake or pond will be redistributed to help the water flow downward efficiently. “Hills and water are the essential elements underlying good garden design. Only when these elements are in place should trees, bushes and flowers and the ornamental garden architecture such as pavilions, corridors, bridges,
Water: the generator of life
the mirage of reality
the eye of the garden.

Chung Wah Nan
The Art of Chinese Gardens

enclosing walls and meandering paths be incorporated to compose a picturesque and pleasing garden." The water and land interlock based on two guiding principles: Ju (gathering together of water) and Fen (separation of water). The former is usually used to develop the plentiful supply found in large gardens whereas Fen, used in small gardens, attempts to create a variety of scenes to form a secluded environment within enclosing walls. 16

The shape of the body of water depends on the topography. In small spaces, ribboned shaped ponds and grouped ponds allow for the greatest diversity of spaces, enlarging one's perception of space. Falling water is either used to create a strong compelling focal point or to animate the space with the continual sound of splashing water. The mirroring effect of the water enhances the spaciousness of the garden and does not constrict the overall plan. In small spaces, the water flow will occasionally disappear behind or through a wall in order to imply the depth, continuity, and extension beyond the garden.

The urban context often supplies the designer with the architectural materials for building and detailing the garden. Materials from the region define the palette from which the designer chooses his or her textures and colors. Stones quarried from local mountains, plants from the region, and bricks from the local factory are used for economy as well. Simplicity and thrift were primary considerations. "Even waste materials such as broken tiles and bricks could be used to pave the garden path and broken ceramic bowls and vases were excellent material to inlay the road surface." 17
6.2 design principles

Scenes within the garden are “inseparable elements of a garden which in its entirety is a crystallization of the creative concepts underlying the arts of gardening, painting and architecture.” In the Chinese tradition, each scene has a beginning, middle, and end relating it to the passage of time through movement. The integrated totality of the garden depends on the relationship of the edges of one scene to the next, whether from garden space to garden space or garden space to architecture. In the city, the street is also a scene in the larger context of the garden. Thus, one cannot avoid incorporating the street as the preceding scene to the entry points of the garden.
"The common practice in Chinese gardening is to lay out one scenic area as the principle scene and treat the other smaller ones as its satellites. Thus excellent contrast between them will result." The method of dui-jing, counterpoint using opposing vistas, attempts to create a dynamic response to the landscape. Authors on Chinese garden design agree that the principles for creating spaceousness in a limited area can be divided up into these categories:

- Scale and Proportion
- Concealed Enclosure to attain Boundless Space
- Assembling and Spreading
- Direction and orientation: distance of sight
- Curved, Crooked, and Undulating Layout
- Divided, not Separated: Layers, Sequence, Connection, and Depth
- Borrowed Scenery: Unlimited Viewing
- Hiding and Revealing and Visual Deception
- Contrast and Counterpoint
6.3 Garden Architecture and the Courtyard Typology

It is quite accurate to say that a garden in the Occident is planted but a Chinese garden is built.

Frances Ya-sing Tsu
Landscape Design in Chinese Garden p. 73

In the Chinese tradition, the landscape garden is a balance between forces both natural and man-made. Architecture not only defines the viewing positions but also constitutes the objects being observed. "Architecture serves as a unifying medium in disposing the space of the garden entity. There is no Chinese garden devoid of architecture, and there is no way to eliminate architecture from a typical Chinese garden scene." The scenes of the garden are sometimes overrun with buildings and garden structures which contrast the natural plantings or respond to nature as a metaphor of a landscape element, "a playful transformation of the animal and vegetable kingdom into architectural forms."

The ancient gardening manual, Yuan Zhi, written in the Ming Dynasty by Ji Cheng (1582-1634), provides the best account of the Chinese approach to garden design. The longest chapter of the book discusses architecture, emphasizing the importance of balancing and integrating architecture with open spaces. Furthermore, the edge between open space and building becomes indistinguishable in conceptualizing the garden layout. "The [Yuan Zhi] views the interior of buildings as an integral part of the garden aesthetic. To the Chinese mind the walls of a building do not represent a discontinuity in their garden space but rather an intrinsic and integral element of the global concept of the garden."
edge transition studies
Architecture is the wall between the inside and the outside.

Robert Venturi
The courtyard, in particular, is probably one of the most ubiquitous configurations of the Chinese garden. "In Chinese classical gardens, the courtyard is a mandatory composition designed to create multiple quiet environments through the creation of series of scenes. ... Each courtyard is an independent unit of space yet must link harmoniously with the other features of the garden." The courtyard can accommodate secluded contemplative places; it also serves as transitional space between two architectural complexes. Within the courtyard, garden scenes are developed to address different viewing levels and positions. Nevertheless, one is always aware of the spaces outside the boundaries; the designer plays with the potential transparency of the walls and architecture both physically and virtually. ... hints of tall trees perceptable just over a garden wall, the sound of water flowing from the next scene, a glimpse other garden spaces framed by lattice windows in the shape of geometric figures.

The intention is not to reveal all, not to give one the total understanding of the scenes to come, but instead, to bait one's anticipation for the mysteries beyond. Each courtyard exists not only for itself but also for the sequence of spaces that one must pass through. The courtyard represents both a stopping point through which one meanders, as well as a stepping stone in the journey itself.

The balancing center of a composition can serve two functions: it can emphasize a central theme...and it can also at the same time separate two principal weights, which balance around it either vertically or horizontally.

Rudolf Arnheim
The Power of the Center
6.4 architectural garden elements

Architectural elements play specific roles in preparing one for a particular scene and then choreographing one's movement through it. Entry, stopping point, path, and exit are the main marking elements which are then supported by transitional boundaries along the edge of buildings and between scenes. The garden gateway marks the first threshold. Independent self-contained structures, "these gateways are designed to form an intrinsically grand scene and to be appreciated on their own merits." 25 In China, the circle, an emblem of perfection and heaven, is a common shape for the main entry portal, otherwise known as the moon gate. The size of the opening is proportioned so that one must walk through the center of the moon gate single file, giving the act of entry greater importance. 26 Pavillons and towers act as markers to focus you along a path; they also serve as stopping point from where one can obtain a particularly compelling vista. Bridges and walking galleries connect gardens, building, and scenes. "They divide and unite different scenes by being open and unobtrusive, greatly adding to the depth and sequence of the garden views." 27 Given the confined spaces in which to design, the placement of objects and elements in the urban Chinese garden is always relative to the viewer's vantage point.

Walls—straight, curved, and undulating—create boundaries which divide but do not separate spaces; they are virtual transparent screens, allowing scenes to borrow from each other through openings of varying sizes and densities. As a backdrop for architecture and plants, the wall is painted and occasionally decorated with tiles of different material properties to contrast the surrounding elements or to dematerialize the wall's existence. The white wall is a constant unifying theme, creating a calm
harmony for vibrating shadows and silhouettes. The *glossy wall* reflects natural vegetation and the *opaque wall*, painted a soft blurred grey to blend in with the stones, allows for an unobtrusive boundary. A *mat wall* made of a mesh of reeds blends in with trees and bamboo groves. The “hide- and - reveal” nature of the wall allows the designer to manipulate it as a highly artistic element. “Walls can be found attached to walking galleries, pavilions, or rockeries. In order to blend well into the garden’s naturalistic setting, the ends and joints of walls are hidden by other garden features such as plants or rockery.”

Paving in the garden has a direct correspondence to the paving indoors. The integration of the two surfaces as one continuous element helps to unify the transitions between garden and building and allows the two to interpenetrate. Brick, tile, chinaware or shingle stone chips stamped into well-prepared ground form intricate textures and patterns underfoot. The choice of material can determine the pace at which one traverses the space, the direction of the movement, and the edges of the planted areas. Patterns in the paving can increase or decrease perceived size of the space by playing with geometrical and organic compositions and changing perspectives. Variations of shape, color and orientation of the pieces of a particular material is encouraged in order to enhance the textured surface. Although indoor paving tends to be more decorative that its outdoor counterpart, “it must be designed in the context of the paving used in the garden and treated as a part of the total garden scene.”
6.6 natural garden elements

Natural garden elements are used to reveal the architecture and enhance contrast between materials and shapes. The merit of Chinese planting schemes is the low maintenance they require. "Limiting the use of plants to nature or naturalized species adaptable to regional climates is stressed in order to minimize maintenance work. Naturalized plants keep greater vitality and grow more rapidly into the intended posture of maturity to establish a well-balanced scenic composition." The restriction of planting through the emphasis of a particular indigenous group of species intensifies the garden’s character and individuality.
Plant characteristics—form, color, height, branching and flowering patterns—are used as artistic compositional devices. The interrelationship between species must maintain a visual harmony which balances the scale of the garden. The juxtaposition of plants and walls, trees and architecture, integrates the function of the vegetation through the structuring of views and movement.
The pine, bamboo, plum, sweet-scented osmanthus, peony, Chinese wisteria, and azalea represent the most frequently used and widely recognized Chinese garden trees and shrubs. Bamboo, pine, and plum are symbolically important as the “three friends” because “they do not wither in winter, symbolizing the virtuous person whose uprighteousness is best revealed in time of trouble or when the going is rough.” The preferred herbaceous flowering plants include chrysanthemums, orchids, narcissus, and lotus. Many flowering plants are grown in pots which can be moved indoors during the colder months. This simple idea of plant mobility allows one to appreciate flora all year round. Appendix B lists the plants most frequently used in Chinese gardens and provides alternate substitutes for those species and cultivars which are not hardy in Boston. This catalogue presents the palette for planting schemes as the vegetation changes over time.
7 THE DESIGN

A vocabulary of party walls and foundation walls with infill facades conceptually describes context of the site. This vocabulary, evolving from an examination of the existing structure of the urban fabric as well as a study of the archaeology of Chinatown, informed the organization and structuring of the landscape intervention. Party walls and foundation walls aligned with those of the existing buildings were organized to support different level changes. These walls were then “punched” into; openings cut into the walls allowed for the lateral movement of floor planes to “explode the edge.” Steel columns and glass screen panels could then provide enclosure while allowing an immediate exchange between the garden spaces and the building. Earth was either bermed up to the walls or excavated from between foundations.
Garden walls were then organized to incorporate the open space as part of the building’s vocabulary while referencing the Chinese garden layout. These walls provide a sense of enclosure while allowing visual transparency at critical viewing points through the wall. Views are borrowed from one space to the next both through and over the garden wall. Along the north elevation, a mediating garden wall scales down the size of the 80’ high existing industrial building. This wall also provides a source of water for the garden; the water flows from the wall and is partially distributed down a stream-like channel to Harrison Avenue. The main flow of water culminates in the garden space along Tyler Street.

The sunny north side of the site, which receives the most sunlight, is retained for the main outdoor garden spaces— an enclosed raised courtyard garden off Harrison Avenue and a street-level garden off Tyler Street. The two new buildings, bordering the south side of the site, enlarge the depth of the existing nook to support the shaded grove garden.
organization of party walls & garden walls

party wall
garden wall
view through the wall
move through the wall

ground surfaces
1 brick
2 stone
3 concrete
water

1  water fall
2  pool
3  water runs through the wall

planting

1  gingko
2  trumpet creeper
3  hinoiki cypress
4  cherry and dwarf hinoiki cypress
5  bamboo
6  moss
7  honey locust
8  rhododendrons and hostas
9  boston ivy
10  wisteria
11  stewartia
12  japanese maple
13  magnolia
14  mixed vines and perrenials
As one approaches the garden from the intersection of Beach Street and Harrison Avenue, a large seating area extends from the sidewalk. Enclosed by the shade of a fan-leaved gingko tree, the pedestrian can rest here and watch the street activity while enjoying the smell of the evergreen shrubs behind the stepped brick and tile seating platforms. A slender stream of water flows down a channel in the steps from somewhere inside the garden, culminating in a small well of water.
The seating steps continue to meander along the edge of the sidewalk, eventually turning into the five shallow steps that takes the visitor to the garden's entry. After passing under a low wide canopy, the threshold of the entry space, one is visually directed to the garden's main portal through a progressive series of openings and objects.
A round window at the far wall frames the view of an ornamental tree beyond. As one passes through the ornamental doorway, a covered arcade reinforces the direction of entry; however, the path bends at the far wall to accommodate a flowering cherry tree set between two dwarf hinoki cypress.
Even the final result is likely to be influenced, legitimately, by the viewer’s presence as one of the centers that constitute the architectural experience.

Rudolf Arnheim
The Power of the Center
Along the bend, the material overhead changes from corrugated metal to perforated metal, allowing light to filter down and create patterns on the path. Occasionally, the covering flies freely over the garden wall, creating a dynamic interplay between ground and sky. One can move along this path, sometimes protected overhead, sometimes not to exaggerate the vertical relationship between architectural elements, trees, and the sky. As the path meanders independently of the covering overhead, one experiences an extended journey through space, a result of the sequence of viewing points, changes in materials, and choreographing of elements responding to each other and the viewer in different relationships. The courtyard wall and the canopy play off each other, sometimes accommodating plants between them, other times allowing visitors to glimpse the garden spaces beyond. The journey culminates as one moves through the wall to a viewing position in the garden along Tyler Street. From here, the Golden Palace restaurant, with its extensively decorated gold and red facade, the new tea house building, and a blooming Kwanzan cherry tree become focal points.
pass through the wall
A small pavilion in the courtyard garden sells tea and snacks. People are pleased to
discover this amenity which gives them a pleasant excuse to sit down at the moveable
tables and chairs. Gathering with friends to chat or play checkers, eating a snack or
take-out lunch, or seeking solitude to write a letter, all can be achieved as the sound
of the waterfall muffles the surrounding conversation and street traffic. One can chose
to sit under the shade of a Japanese Stewartia. Its mottled bark provides a beautiful
smooth texture to sit by. 2-3” diameter camellia-like white flowers bloom in July -
August, scenting the garden with a light fragrance.
Others chose to contemplate in the sunlight while watching reflections on the water’s surface. The waterfall, the main focal point, tumbles down from a mediating brick and stone wall built in front of the existing 80’ tall brick party wall. The new wall scales down the garden space while providing a textured surface for the water. It also supports shrubs and bamboos; a dwarf pine arches over the base of the fall. As the water tumbles down onto various extruded surfaces, it frames a large natural rock. Rocks are important sculptural elements in Chinese gardens and require judicious placement. The water flows from the fall to a channeled pool which passes under the pathway and through the garden wall. The channel is paved with deep blue tiles which spill over the edge and blend with the paved stone surface of the courtyard.
From the courtyard, one passes through the garden wall and steps down into the grove garden. A canopy of honey locust trees encloses this shaded nook; however, the yellow and lime green leaves catch the sun above, their undersides glowing and creating a virtual sense of light. Asters and rhododendrons are grouped along the edges of the garden while Virginia Creeper, Japanese Ivy, and the common trumpet creeper (orange-red trumpet shaped flowers in July-September) are arranged on a new wall which extends into the existing nook, providing a lustrous backdrop of foliage. One can sit on the edge of the brick planting bed filled with varieties of Hostas. The ground surface of the grove garden is patterned in brick to match the existing walls.

The building off Harrison Avenue accommodates a tea house on the second floor, a half level above the street. Since the grove garden is elevated from street level, the transition down from the tea house is only a few steps. One can sit on the fixed benches and low walls or on the garden furnishings provided by the tea house. In warm weather, the glass panels of the tea house swing open like shutters to dematerialize the edge between the garden and the building: the garden becomes another room of the building and the tea house level becomes another plane of the garden. A light steel frame stair swings down from the ceiling of the tea house, glass skylight panels slide back, and the visitor now has access to the roof terrace which has been landscaped with potted plants.
In the lower level of this building, the Chinatown Community Information Center provides useful information to visitors and residents about social and economic resources in the community, historic walking maps, restaurant guides, and books relating to the history of the Chinese community in America and the Chinese culture. The grove garden steps down to the Information Center's back wall, allowing plants to be visible from the Center below. A planting trough inside allows the continuity of foliage to penetrate the building.
section through tea house and information center/ grove garden
The grove garden merges with the Tyler street garden as one steps down on the terraced surface following the back of the courtyard wall. The ground material changes from brick to concrete pavers which flow from the concrete sidewalk along Tyler Street. Water from the courtyard garden flows from an arc-shape opening in the wall and runs down the sloping channel of stones. A slightly curved bridge hewn out of rough stone helps the visitor to traverse the stream. The water culminates in a deep pool which passes under two concrete platforms that cantilever over the foundations of the new tea house/restaurant building. Sliding glass panels open the inside of the building to the garden and the continuous platform/floor suggests a continuity between outside and inside all year round.

People sit in the shade of the building on the wide edge of the pool and admire the lotus plants in the water or the flow of plants from the trellised nook in the southeast corner of the site. Fixed benches nestled on the leveled areas of the embankment along the north wall allow people to sit casually among the plants. The latticed windows in the courtyard wall and the dynamic canopy extending freely at different intervals animate the end of the garden from Tyler Street, inviting the pedestrian who passes the site from this street to enter and discover the secrets beyond.
Specific decisions of the edge condition between building and land

The buildings were designed to free the interior spaces from the confines of the party wall. The strict compartmentalization which currently exists in Chinatown prevents buildings from creating a physically dynamic dialogue with open space. Thus, the exploration of the edge resulted in introducing mediating zones of light and landscape in order to give the building a sense of transparency both horizontally and vertically. The two new buildings on the site use the party wall to set up the first structural moves; a column and slab system allows the floor planes to move freely through the party walls and street wall. A light frame glass panel system provides enclosure and can be hung off the columns or the wall. Light steel frame stairs and horizontal bands of glass panels mediate the spaces between the existing buildings and the new floors, allowing light to pass continuously through a shaft in the building. The roof of the building along Tyler Street represents a transformation of a traditional Chinese upturned roof. The eaves are upturned to allow light to penetrate further into the buildings during the colder months. However, since the new garden building faces north, the arcing roof has been pulled away from the building at its peak. This decision allows light to enter the building by reflecting it off of the underside of the corrugated steel ceiling.
In the initial studies, the exterior canopies of the new buildings maintained a continuity along the street edge, reinforcing the existing awning heights and then wrapping into the new buildings to become transformed into walkways and stairs on the second floors. However, their literal translation did not support the intentions of the thesis; therefore, they were transformed and re-introduced as a more integrated spatial component of the building system. The canopy is now a self-stable column and support system which can also transfer its uses to the outdoor architectural garden elements as well.
When you have all the answers about a building before you start building it, your answers are not true. The building gives you answers as it grows and becomes itself.

Louis I. Kahn

Light is the Theme
The overall exploration of a contemplative outdoor retreat in the city required a thorough understanding of:

1) The city as a landscape and the landscape of the city;
2) The Chinese immigrant community in an American city;
3) The relationship of the edge condition at various scales.

The decision to emphasize certain issues over others at different points in the process led to the final design.

A critical self-evaluation is crucial in order to assess the attributes and weaknesses of the exploration. Overall, the understanding of the site, from the micro to the macro scale, and its archaeology focused the design and the process in the right direction. Clarifying the structure of the urban ground provided a foundation for the garden which is rooted in the context of the city. Choosing the appropriate tools by which to simultaneously model the ground forms and the buildings ultimately enhanced the way in which the design was integrated into the existing urban framework. The modeling vocabulary also began to inform the way vegetation could also structure the garden architecturally. Thus, the open space is characterized by an architectural vocabulary and asserts itself as an integrated tangible urban element.

The emphasis on the design's relationship to the Chinese community gave the garden a layer of meaning and significance which makes it unique in Boston and specific to the Chinatown. However, I realize that my interpretation of Chinatown is probably not universal. Therefore, in the beginning of this study I was hesitant to use the Chinese garden as a primary reference. I questioned whether the Chinese garden
actually represented the needs and aspirations of an immigrant community residing in the heart of Boston. It is possible that the community may not have an affinity to the elements and principles of the Chinese landscape garden; as ethnic communities re-root themselves in a different country, their values and spatial images may change to adapt to a new culture. Nevertheless, based on interviews with local Chinese residents and observations of the social machinations of daily life in Chinatown, the decision to emphasize the Chinese garden type is still justified and supported. Furthermore, the principles behind Chinese garden design are compatible with the structure of the urban environment in which Chinatown is located. The design process attempted not to emphasize one set of attitudes over another, but, instead, to create a hybrid of relationships.

The edge exploration has begun to challenge the existing examples of the urban street wall and party wall. Pushing through the walls and setting up an independently stable column and frame system allowed the design to overlap and integrate the zones between indoor and outdoor, building and natural elements. However, a more experienced understanding of structural systems is needed to continue refining the preliminary proposals. Also, a closer study of vertical transitions could have helped the design to reference levels high above ground in order to bring the garden spaces up within the buildings. Thus, the thesis has not ended. This study has been a rewarding extended invitation to continue the reassessment of the meaning of the edge and to explore methods by which to clarify the zones of transition between building and land.
Endnotes

1 This definition is a composite of the definition of *urban* and *landscape*; from *Webster’s Dictionary* ed. 1985.


4 Ibid., p. 107

5 Ibid., p. 98

6 Ibid., p. 51


8 Ibid., p. 30


10 Defined by Dolores Hayden, investigator and environmental designer, territorial history is “the history of a bounded space, with some enforcement of the boundary, used as a way of defining political and economic power. It is the political and temporal complement of a cognitive map; it is an account of both inclusion and exclusion.” *Places*, p. 16

11 *Places*, p. 31


15 Chen, p. 86

16 Chen, p. 87

17 Chen, p. 36

18 Chen, p. 50

19 Chen, p. 49

20 Chen, p. 53

21 Tsu, p. 77


23 Chen, p. 132

24 Chen, p. 121

25 Chen, p. 125

26 Keswick, p. 136

27 Tsu, p. 81

28 Tsu, p. 89

29 Chen, p. 127

30 Tsu, p. 116

31 Chen, p. 143

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Appendix A: The Context of Chinatown
CHINATOWN LAND USE
SUBDISTRICTS

I Historic Chinatown
II Commercial Chinatown
III Residential Chinatown
IV Institution Subdistrict
& Tyler Street Special Study Area
V Turnpike Air Right Subdistrict
VI Chinatown Gateway Subdistrict
CHINATOWN ENTRIES, INTERSECTIONS, AND VISUAL CENTERS

IMPORTANT ENTRIES & INTERSECTIONS

1. Chinatown Gateway East
2. Beach/ La Grange/ Washington
3. Phillip Square
4. Chinatown Crossing
5. Liberty Tree Park
6. Oak/ Washington
7. Kneelan/ Stuart/ Washington
8. Oak/ Harrison

IMPORTANT VISUAL CORRIDORS

Harrison Avenue
Beach Street
Tyler Street
Kingston Street
Boylston- Essex Street
Harvard Street
HISTORIC PATHS AND BUILDINGS IN CHINATOWN

A  Beach Street
B  Oxford Street
C  Ping On Alley
D  Edinboro Street
E  Tyler Street
F  Hudson Street
G  Oak Street

The world may be organized around a set of focal points, or be broken into named regions, or be linked by remembered routes.

Kevin Lynch
Image of the City
EXISTING OPEN SPACES/
OUTDOOR & INDOOR
RECREATION FACILITIES
Critical to Chinatown residents

1  Chinatown Gateway Park
   Extension
2  Chinatown Gateway Park
3  Oxford Street Pocket Park
4  Pagoda Park
5  Tyler/ Tai Tung Sitting Corner
6  Acorn Day Care Center
   Tot Lot
7  Tai Tung Village Courtyard
8  Mass Pike Tower Courtyard
9  Quincy School Terrace
10 Vegetable Garden
11 NEMC Biewend Building
    Entry Plaza
12 NEMC Siebolt Plaza
13 Elliot Norton Park
14 South Cove YMCA
15 Don Bosco School
16 Chinatown Boys and Girls Club
17 Quincy School

Network of public Realm
Appendix B: Analysis of the Key Elements of the Chinese Garden
Buildings and land evolve simultaneously; however, some centers are more important than others.

Water

- pond/lake
- pond and tributary
- links of a stream
- the 'endless' source
centers in a garden layout can occur in a building and in the landscape from two orders: rectilinear: architecture curvilinear: landscape. Where they meet and overlap is distinguished by a hybrid between the two systems.

'insides' must be developed to create 'centers'

buildings around water
buildings control view from island
buildings control view from edge

The water's edge is always meandering to contrast the dominant straight edges of the architecture and garden walls.
common shapes

secondary meandering path on stilts: accommodates plants

opens to scenes
Viewing Points

movement and stopping places

Framing & Borrowing

picture frame: captured as a landscape painting
overlapping frames: increased depth and perspective
lattice/screen: focus on the part within the whole
hide & reveal: diagonality and shifts

concentrated focus
portal
borrowing/counterpoint
pavilions, perches, and viewing positions

traditional window shapes

lattice frame

viewing in plan: can also be applied in section
Walls

Solid Wall: usually a neutral white

Dragon Wall: flexible crown

Mat/Reed Wall: translucent

transformed using different materials, colors, and thicknesses

transformed: "jig jog" vertically

different materials suggest different viewing qualities

screen of shrubs or bamboo

transformed: architectural screen

Screens

shutter door

archway

doctor frame

balcony
shutters swing open to dissolve edge between outside and inside; shutters maintain a continuous ground plane on the first floor
Plants:

Tall trees: favored in small spaces; They occupy the sky, not the land. They lead the eye up, creating a vertical extension of space.

Recognizing tree structures: important in small spaces. Trees are planted in small numbers and are strategically located to create a grove pictorially.

Plants:

2 of the same species: choose different heights

3 of the same species: stagger as grove

protect fragile flowers/ shrubs at the base of rocks, walls, and trees.
Vines are used to:
- partially screen garden elements,
- soften/ hide an unsightly object,
- and decrease the mass of buildings.

Bamboos:
- ideal for screening;
- singular translucent effect.
- Texture and color contrast with other plants.

In plan: balance plants with buildings and open space

Increase depth and perspective by varying sizes and species
Appendix C: Plant List

The following comprehensive list of plants suitable for this thesis design is based on species which are commonly used in traditional Chinese gardens (see Chen's list p. 136-144). These species comprise the palette for the structure of the natural landscape interventions. All plants listed are hardy in Zone 5 (Arnold Arboretum Specifications) under the given urban conditions unless noted. Any particular location, soil or pest problems are included to facilitate future selections of species and cultivars. This list was compiled using The Garden Art of China by Chen Lifang, The Manual of Woody Landscape Plants by Michael A. Dirr, Trees and Shrubs by Derek Fell, and Perrenials by Pamela Harper.

** very hardy in urban conditions
[ ] not generally used in traditional Chinese gardens but has potential suitable merits for this garden

**Grove and Shade trees**

**Evergreen Coniferous Trees**

*Chamaecyparis obtusa*  
Hinoki Falsecypress  
'Pendula': gracefully weeping slender pyramid with strongly pendulous branchlets; prefers moist humid climate and moist, cool, well-drained soil; 50-75'

*Cryptomeria japonica (fortunei, lobbi, yoshimo)*  
Japanese Cryptomeria  
A pyrimidal or conical tree with large pom-poms of foliage, creating a poodle-like effect; needles are bright bluish green; 50-60' by 20-30' wide (Zone 6)

*Pinus bungeana*  
Lacebark Pine  
Pyramidal to pyramidal-oval or rounded, often with many trunks in youth becoming open and picturesque with age; lustrous, bright green needles; bark exfoliates in patches like a plane tree, serviceable in most landscapes; 30-50' by 20-35' (Zone 4)

*P. densiflora*  
Japanese Red Pine  
Shrubby in youth; with age trunks are picturesquely crooked or leaning, branches horizontally spread, broad flat crown; bright green needles; orangish brown scaly bark; 'oculis-draconis; 'pendula' is weeping form, 'Unibraculifera' is a mushroom to umbrella-shaped, cloud-like multi-stemmed variant; 40-60' with similar spread (Zone 4)
**P. parviflora**
Japanese White Pine
Dense conical pyramid when young, developing wide-spreading branches, a flat-topped head; distinct bluish-green needles; handsome, rich brown cones, persisting 6-7 years; graceful; good salt-tolerance; 25-50' with a similar spread at maturity.

**P. thunbergii** **
Japanese black pine
Broadly pyramidal, irregular often picturesque shape in youth and old age, unless properly pruned; dark green needles; severely injured at -15 to -25 degrees F; tolerance to salt spray and wind; 20-40' (to 80') with variable spread; does best in dry, sandy soils.

[Sciadopitys verticillata
Japanese Umbrella Pine
Compact broadly pyramidal tree in youth with a straight stem and horizontal branches spreading in whorls; stiff and twiggy branchlets with leaves crowded at ends; dark green needles; bark develops a rich, reddish brown color and slightly shreddy consistenct; prefers rich, moist, acid soil and protection from hot sun and sweeping wind; slow-growing; 20-30' by 15-20'

[**Taxus cuspidata**
Japanese Yew]
Crown erect or flattened, broad or narrow, of irregular habit with spreading or upright-spreading branches; dark green foliage; on female plants the fleshy, red-coated seeds are ornamental; variety capitata is pyramidal and assumes tree-like proportions; yews are often thought of as small, diminutive foundation plants, but with time they can effectively overgrow a house unless properly pruned; 10-40' with equal or greater spread. (Zone 4)

Deciduous coniferous trees

*Pseudolarix kaempferi*
Golden larch
Broad pyramidal tree with wide-spreading horizontal branches; bright green summer foliage, borne in clusters of 15 to 30 needles which change to golden yellow in the fall, abscising soon thereafter; mature golden to reddish brown cones; bark platy, greyish brown; requires acid, moist, well drained soil; 30-50' by 20-40'

*Taxodium ascendens*
Pond cypress
Narrow-conical or columnar tree with spreading branches; bright green scale-like summer foliage, changing to rich brown in autumn; very adaptable, withstanding wet and dry soils; formal and stately; 70-80' by one-third that in spread (Zone 4)
Evergreen Broad-leaved trees
(No Chinese garden species are hardy in Boston; however, the American Holly *Ilex Opaca* may be substituted if necessary)

Deciduous Broad-leaved Trees

[Cercidiphyllum japonicum **] Katsura tree
Either strongly pyramidal or wide-spreading in habit; new heart-shaped leaves are a beautiful reddish purple, maturing to bluish green, turning yellow to scarlet in fall; bark is brownish and slightly shaggy on old trunks; very pest resistant but requires deep watering; gaining popularity as a street tree. 40-60' with variable spread. (Zone 4)

[Gleditsia triacanthos inermis **] Thornless Honey Locust
Open, irregularly shaped tree with a coarse winter silhouette; fine featherly foliage lets light through; 'Moraine' is wide and spreading; 'Shademaster' is straight-trunked and upright; 'Skyline' is more pyramidal, and 'Sunburst' is chosen for its golden-yellow leaves in the spring and early summer; bark is broken into long longitudinal scaly ridges; 30-70'

Liquidambar (formosana) styraciflua ** (Chinese) Sweet gum
Pyramidal when young, pyramidal-oval to rounded crown at maturity; deep glossy green star-shaped leaves in summer; autumn display of bright orange to deep crimson; hard spiny fruits often stay on through winter; grey-brown corky bark is deeply furrowed with narrow ridges and exudes an aromatic sap; best in moist, acid, well-drained soils (will not grow in dry areas); excellent park or street tree; 'Gumball' is a cute diminutive, multi-stemmed, globose form; 60-75' with a spread two-thirds the height.

Quercus acutissima Sawtooth oak
Dense broad pyramid in youth; varying in old age from oval-rounded to broad-rounded; dark lustrous green summer foliage turning yellow in fall; susceptible to iron chlorosis; 35-45'

[Q. palustris **] Pin oak
Dense pyramidal branching pattern with central leader; lower branches pendulous, upper branches ascending; becomes pyramidal-oval with age; deeply indented dark glossy-green leaves turn dark red in autumn; resists wind damage; susceptible to iron chlorosis 'Sovereign' does not develop weeping lower branches; 60-70' by 25-40'
**Oak (Quercus borealis, Red Oak, & other var.)**

*Pyramidal when young but develops into a round tree; tough and dense, the glossy pintaed leaves turn a rich red in fall; tolerant to salt in the air; tap-rooted; 50-60' by 20-40'*

**Sophora japonica**

*Japanese Pagoda/Scholar Tree

Dense when young, spreading, with a broadly rounded crown at maturity; lustrous medium to dark green summer foliage; creamy white, mildly fragrant flowers in late July through August; bright green fruits chand to yellw and yellow-brown; does well under city conditions; good shade tree; 'Pendula' is weeping form; 50-75' high with similar spread (Zone 4)

**Ulmus parvifolia**

*Chinese Elm

Broad round-topped tree with fine branches and small leaves; dark green summer foliage which may turn yellow or reddish brown in fall; flowers in the fall; bark develops a mottled combination of green, gray, orange and brown areas; 40-50' by 40-50'

**Flowering trees and shrubs**

**Evergreens**

**[Franklinia alatamaha](substitute for camellia japonica)**

*Franklinia or Franklin Tree

Open outline with foliage borne at the extremities of the branches; glossy, medium green summer foliage, rich orange-red in fall; lovely white flowers (yellow stamens) in July through September; capsular fruit; handsome gray fissured bark; requires acid, moist, well-drained soil; 18-25'; quite variable spread

**Magnolia (soulangiana, stellata)**

*Magnolia, Saucer and Star

A sign of spring; wide spreading round shrub or small, low-branched tree that needs wind protection; dark green summer foliage; saucer has large, white-pink-purplish, tulip-shaped flowers which appear before the leaves and turn into small cucumber-shaped fruits in the fall; artistic branching and grey bark pleasing in winter; 20-30' with variable spread; the star has fragrant, double petaled pink/white 3” diam. flowers; dense thick shrub or small tree; 15-20' by 10-15’; both are air pollution tolerant

**Rhododendron (Ghent, Exbury, Knapp Hill)**

*Azalea

Upright, relatively bushy, most varietied are deciduous; medium green summer foliage and yellow, orange, red fall colors; flowers range from creams, yellows, and near whites to pink,
rose, orange and red; borne 2 to 3" in diam. clusters in mid to late May; extremely floriferous brilliant color; need rich, acid soils and deep watering; will not survive in dry sandy soils; Most varieties thrive in shade; 6-10'

[Stewartia sinensis (substitute for camellia japonica)  Chinese Stewartia]
Small ornamental flowering tree with attractive, large, white, camellia-like flowers appearing in early summer; trunk has flaking bark, creating a mottled effect with smooth gray, green, and brown patches; 20' high with a 15' spread at maturity; prefers moist, acid, humus-rich soil in a sunny location

[S. pseudocamellia  Japanese Stewartia]
Large shrub or small tree with spreading branches and a bushy habit; foliage is a handsome dark green in summer, changing to beautiful orange and scarlet in fall; bark exfoliates similarly as S. sinensis; white, 2-3" diameter flowers in July-August; requires moist acid soils, high in organic matter; superior specimen or shrub border plant; 20-35' average

Deciduous

[Amelanchier arborea  Downy Serviceberry, Shadberry, Juneberry, Sarvis-tree]
Multi-stemmed shrub or low-branched small tree with a round crown; foliage is grayish when emerging, changes to medium green in summer, yellow apricot orange, and dull, deep, rusty red in fall; grayish bark streaked with slight longitudinal fissures; soft-textured, white flowers in April; bloomy, red to purplish black, sweetish fruits in June; adaptable to varied soils and climates; 15-25' spread is variable but often of equal height (Zone 4)

[A. laevis  Allegheny Serviceberry]
Closely allied to A. arborea but differing by virtue of the bronze purple color of the unfolding leaves and their lack of hairs; 15-25' by same (Zone 4)

Chionanthus retusus (praecox)  Chinese Fringetree
Multi-stemmed large shrub of rounded proportions; lustrous leathery dark-green summer foliage; white fleecy flowers in May-June; black-blue fruits; ridged greyish brown bark; 15-25' and as wide.
**Hamamelis Mollis** Chinese Witch-hazel
Native to central China; a wide-spreading shrub that needs occasional pruning to keep it compact; one of the first plants to flower in Boston; Fragrant yellow and bronze flower clusters appear on the leafless branches between January and mid-March, often while snow is still on the ground; medium green summer foliage turns to brilliant yellow in fall; very tough and vigorous; good for shrub borders and accents winter landscape; all witch-hazels tolerate shade well and adapt to extremes of soil and pH conditions; 20-25’ by 20-25’ (Zone 4)

**H. japonica** Japanese Witch-hazel
Large flattish, wide-spreading shrub with lovely four petaled, yellow-red flowers which emerge in January and February; medium green leaves may turn yellow, orange and red in fall; 15-20’

**H. vernalis** Vernal Witch-hazel
Smallest of the witch-hazels, developing into a dense, rounded, relatively neat appearing shrub; similar foliage to mollis; yellow to red flowers emit a pungent fragrance and occur from late January through February; works well as screeens, barriers, and in groups; 6-10’ by the same.

**Hibiscus syriacus** Rose of Sharon/ Shrub Althea
Native to China; usually erectly branched; summer foliage is a deep green, holding late or developing a poor yellow in fall; flowers vary from white to red to purple, single or double, in solids or combinations and are borne mid-summer into September; needs good soil and adequate water; 8-12’ by 6-10’

**Koelreuteria Paniculata** Paniced Goldrain Tree
densely foliaged foiliaged tree of regular rounded outline, sparingly branched, the branched spreading and ascending; foliage is purplish red when unfolding, rich green in summer; bark is a rich brown with prominent orangish lenticels, developing ridged and furrowed character in maturity; flowers are bright yellow, July, and showy; fruit is a papery three-valved capsule; withstands drought, heat, wind, and alkaline soils; 30-40’ by same.

**Prunus Sargentii** Sargent Cherry
Ascending branches develop into a rounded crown at maturity; new leaves are reddish, changing to lustrous dark green in summer and finally bronze or red in fall; lustrous reddish or mahogany brown bark; flowers are single pink, 1 to 1 1/2” across and occur in late April to early May;
purple-black drupe fruit; tolerant of adverse conditions; 'Columnaris' is narrow upright form; best of the large cherries for ornamental use; 40-50' (Zone 4)

*Prunus* *serrula*  
A small vigorous tree growing to 30'; glistening polished, reddish-brown, mahogany-like bark.

*Prunus* *serrulata* 'Kwanzan'  
Kwanzan Oriental Cherry  
Vase-shaped habit with rounded or flat topped crown; new reddish-tinged foliage eventually changes to lustrous, dark green in summer and finally yellow to bronze in fall; flowers are double, pink, late April to early May and freely borne; not long-lived tree but the most cold-hardy; 20-25'

*Prunus* *subhirtella*  
Higan Cherry  
Basically rounded; 'Autumnalis' is a semi-double form, sporadically flowering in fall, remaining flowers opening in spring; 'Pendula' has pink flowers before the leaves in April with lustrous green foliage in the summer; good summer and winter habit; 'Yae-shidare-higan' is a pink double-flowered tree, 20-40' with a 15-30' spread.

*Sophora Japonica pendula*  
Chinese scholar tree (weeping)  
see under deciduous broad-leaved trees

*Syringa* *varieties*  
Lilac  
The lilac has no autumn color, needs regular pruning, and need protection from auto pollution; also, they contract mildew.

*Syringa* *meyeri*  
Meyer Lilac  
Small dense broad-mounded shrub; dark green leaves with orbicular shape and undulating margins; flowers are pinkish purple, fragrant, early to mid-May and may remain for tow weeks; shrub is literally masked by the flowers; mildew free; 4-8' high and 1 1/2 times that in spread (Zone 4)

*Syringa* *reticulata*  
Japanese tree lilac  
Large shrub or small tree with stiff spreading branches, developing an oval to rounded crown; dark green summer foliage; creamy white flowers are borne in 6-12" long panicles in June; handsome reddish brown bark; not as susceptible to insects and diseases as common lilac and one of the easiest to culture; 20-30' by 15-25' (Zone 4)
[**Crataegus viridis** 'Winter king']  Winter King Hawthorn

Broad "V" branching structure; rounded in outline; very few, if any, thorns; lustrous, medium green foliage; white flowers, dull red, persistent fruit; young stems are a bloomy green, older branches grayish to orangish brown, developing a scaly constitution; excellent specimen hawthorn; 20-35' high (Zone 4)

**Fruit trees**

**Evergreens**

*Ilex crenata* (substitute for *I. cornuta*—Chinese Holly)  Japanese Holly

Multi-stemmed with round habit and tight growth; leaves vary according to variety (about 200 varieties exist)—usually small, shiny and jade green, either oblong or rounded; inconspicuous white flowers; female produces small, black berries; prefers acid soil, either sandy or loam, in sun or partial shade; excessive heat encourages spider mites; easy care foundation plant and hedge; 4-9' average height with equal spread.

**Deciduous**

*Chaenomeles speciosa* (substitute for *C. sinensis*)  Flowering Quince

Forms a mounded thicket of twiggy branches covered early spring with white, pink, orange, and red blossoms, even before leaves are fully opened; in fall, the leaves have no coloring and drop early, but sometimes the attractive, yellow, astringent fruits persist on the branches into winter; flexible soil conditions, needs sunny location; 6-8' high.

*Malus species**  Crab Apple

About thirty species and hundreds of hybrids produce many varieties of white, pink or carmine-red flowers often followed by yellow, orange, or red ornamental fruits that persist on the trees after the leaves have fallen; in addition to the rounded, spreading forms so popular as lawn highlights, there are also upright and weeping varieties; all species bear large fruits which can be troublesome in highly trafficked areas; when selecting varieties, consideration should be given to disease resistance to scab, cedar apple rust, fireblight and mildew; recommended species—*m. x atrosanguinea* (Carmine) [15 by 15-20'], *m. baccata* (siberian), *m. 'dorthea'* [25 by 25'], *m. floribunda* (Japanese Flowering) [20 by 25'], *m. hupehensis* (Tea) [20 to 25'], *m. sargent* II [8 by 12']; not particular about soil although a humus-rich soil is preferred; needs sun and good air circulation.
Prunus varieties (substitute for Prunus persica—Peach) Cherry

The genus Prunus includes over 400 species of almonds, apricots, cherries, peaches and plums, mostly native to China and Japan, plus hundreds more hybrids; trees are valued for their early spring blossoms and many provide spectacular fall color; in most cases, the flowering display occurs slightly ahead of the leaves in early spring; some varieties produce decorative small fruits. Recommended—P. glandulosa (flowering almond) shrublike multistemmed plants produce pink ('Rosea plena') or white ('Alba plena') powderpuff flowers without fruits late April to early May [4-5' by the same], P. mandshurica (Manchurian Apricot) rounded shrub or small tree with delicate white blossoms, tinted pink, followed in summer by golden yellow fruits (fruit quality is excellent—sweet and juicy), P. subhirtella (Higan Cherry) 'pendula' is a popular weeping form with graceful arching branches that present a curtain of delicate pink blossoms that bloom at the same time as forsythia and daffodils [40' by 40'], P. sargentii columnaris (Sargent's Cherry) one of the longest lived flowering cherries and the best choice for shade in a cloud of pale pink single flowers in late April to early May—shining reddish-brown bark is also decorative [50 by 50'] tolerant of adverse conditions, P. serrula 'Kwanzan' (Kwanzan Oriental Cherry) vase shaped habit :beautiful smooth reddish-brown bark with clusters of white flowers in late April to early May, usually hidden by leaves in the spring [25' tall].

Pyrus calleryana ‘Bradford’** Bradford Callery Pear
(substitute for P. pyrifolia—peach)
Conical tree with glossy, dark green foliage that turns to brilliant reddish purple fall colors; covered with a blizzard of snow-white flowers in late April to early May; excellent street tree or screen and tolerant of city conditions but needs full sun; 'Aristocrat' is an open form with more horizontal branches; 'Chancellor' is a conical form with distinctly ascending branches; 30-50' with variable spread, does well in containers.

Leafy trees
Evergreens

Buxus sempervirens Chinese littleleaf box
Dense, multibranched shrub of rounded or broad outline, holding its foliage to the ground; dark green foliage throughout the year; 15-20' high with equal or greater spread.

Ilex crenata (substitute for I. cornuta—Chinese Holly) Japanese Holly
see under evergreen fruit trees
Deciduous

Ligustrum x vicaryi  
(substitute for L. lucidum—glossy privet)
Dense haystack to rounded shrub with yellow foliage throughout the growing season, especially when located in full sun; widely used for color accent; 6-8' high.

Acer griseum  
Paperbark maple
Oval to round outline; new foliage purplish, changing to dark green and finally russet red in fall; bark is a beautiful cinnamon or red-brown and exfoliates in papers sheets; adaptable but difficult to propagate; 20-30' with spread of one-half of, or equal to, height.

A. japonicum  
Fullmoon maple
Shrubby bushy maple with vivid yellow, orange-red fall coloration; requires considerable cultural attention; 20-30' high but usu. smaller with equal spread.

A. maximowiczianum  
Nikko Maple
Lovely, slow-growing, vase-shaped, round-headed, small tree; unusual trifoliate leaves emerge bronze, change to medium green and finally glorious and spectacular yellow, brilliant red and purple in fall; bark is a smooth gray-brown; 20-30' high by the same.

A. palmatum  
Japanese Maple
Tends towards a rounded to broad-rounded character; often the branches assume a layered effect similar to Cornus florida (Flowering Dogwood); summer foliage may be green, red, pruple, or variegated and is of unique shape; fall colors range from yellow to red; bark is essentially smooth, gray, showing slight vertical fissures; requires acid, moist, well-drained soils and protection from drying winds; variety dissectum possesses finely cut foliage and is usually mounded in outline, 8-10'; species grows 15-25' with equal or greater spread.

A. tegmentosum  
Manchu-striped Maple
One of the snaked-barked maples; handsome small tree of obviate outline; bark is greenish, broken by vertical whitish fissures; 15-25' (Zone 4)

A. truncatum  
Purpleblow Maple
Small round headed tree of neat outline with regular branching pattern; young foliage is reddish purple, eventually dark glossy green and finally yellow-orange-red in fall; 20-30' with spread slightly less than, or equal to, height.
**Gingko biloba** (choose male variety only)** gingko
Usually pyramidal in outline when young; in old age becomes wide-spreading with large, massive, picturesque branches; main, upright branches are positioned low on the trunk, secondary branches spread outward, usually weeping at the tips; medium green fan-shaped leaves turn golden yellow in fall; irregular outline, medium fast growth, deep rooted, long lived; prefers deep sandy soil or loam, either alkaline or acid; dislikes moist soil; tolerates salt spray and pollution; ‘Fastigata’ is a beautiful upright form – good street tree; ‘Autumn Gold’ is a spreading form with exceptional fall color; 50-80’ with a 25-40’ spread.

**Liquidambar styraciflua** (taiwaniensis)  
(see under Deciduous Broad-Leafed Trees)

*Euonymus Alatus*  
Burning Bush
Though seen mostly as a mounded shaped shrub or hedge 4-6’ high, plants will develop into an impressive small tree up to 20’ high; medium to dark green summer foliage has brillant red fall coloring; tolerates poor soil; turns deeper fall color in full sun but also effective in partial shade.

**Vines and Climbers**

**Evergreens**

*Lonicera japonica*  
trumpet honey suckle
Semi-evergreen flowering vine which grows to 30’, twining up supports (chain link, trellis, arbors) or over the ground; trumpet-shaped white and yellow flowers, with a sweet fragrance that carries a long distance; a heavy bloom occurs in early summer, blooms continue sparsely into fall; L. sempervirens has scarlet-red flowers with yellow throats and not fragrant.

*Hydrangea anomala subsp. petiolaris*  
climbing hydrangea
Climbs by root-like holdfasts, needing limited or no support; develops in more than one plane and gives depth to the structure it covers; dark green, glossy sumer foliage; rich brown bark develops an exfoliating shaggy characteristic; 6-10’ diameter, flat-topped inflorescence with sterile white flowers and fertile inner flowers; proliferates in rich, well-drained moist soil; the best vine with an unlimited ability to climb – good especially for covering large buildings.

*Rosea Wichuriana*  
Memorial Rose
(substitute for *Rosa banksiae*—bank’s rose)
Semi- evergreen procumbent shrubwith long green canes trailing over the ground and rooting; lustrous, dark green foliage; pure white, single 2” diam. flowers in June and July; red fruit
matures in Sept.-October; good ground cover, esp. on banks, cuts, and fills; ease of culture and freedom from pests; 8-16' climber if supported.

deciduous

**Campsis radicans** (substitute for *C. grandiflora*)

Common trumpet creeper

Rampant-growing, clinging, twining vine; bright green, pest resistant foliage similar to wisteria; orange-red, trumpet-shaped flowers from July-September; gaunt winter habit; will grow under any conditions; 30-50' by 6-8' wide—limited only by the size of the structure it grows on; sun or partial shade; needs heavy pruning and strong, sturdy support. (Zone 4)

**Parthenocissus quinquefolia**  
**Virginia Creeper/ Woodbine**

5-8 branch tendrils, each ending in adhesive like tips; requires no support, can cement itself to any structure; deep green summer foliage, changing to yellow, purple and red in fall—one of the first plants to show fall color; bluish black fruits in Sept.-October; tough low-maintenance vine for walls, trellises, rock piles; not fussy about soils, full sun or partial shade; 30-50' avg. (Zone 3)

**P. ticuspidata**  
**Japanese Creeper/Boston Ivy**

same as above, except leaves are simple and three-lobed (Zone 4)

**Wisteria floribunda**  
**Japanese Wisteria**

(substitute for *w. sinensis—Chinese Wisteria*)

Perhaps the most beautiful of all flowering vines; stout, climbing by twining stems developing twisted woody trunks; requires considerable support that is not of wood; dark green summer foliage; violet or violet-blue flowers are borne in slender, 8-20" racemes in May; requires considerable cultural care; *W. sinensis* is similar but has fewer leaflets and the flowers open simultaneously; grows 30' or more with support. (Zone 4)
Bamboos

Bamboos are woody evergreen members of the grass family, and though dwarf kinds suitable as ground covers are available, bamboos mostly form tall canes topped with willowy leaves. Some are clump-forming and stay within bounds; others are running, using vigorous underground rhizomes to spread in all directions. Bamboos grow in most soils except heavy clay and waterlogged soils. All need full sun and tolerate high humidity and heat.

A. variegata
dwarf white-striped bamboo
Grows a low mounded clump of striped green and white leaves, 3-4’ high; fine shrub for tubs and mixed shrub borders.

P. aureosulcata **
yellow grove bamboo
Beautiful green canes striped golden yellows; forms runner type clumps and is best used as a grove; grows to 30’ tall hardy, though tops may be damaged by freezing.

Phyllostachys chysaureosulcata
P. nigra
black bamboo
P. pubescens
moso bamboo
pleioblastus augustifolius
Japanese dwarf striped
sasa bamboo

Herbaceous flowering plants

Aster tataricus
Tatarian aster
7’ stems rise over clumps of leaves shaped like canoe paddles; loose sprays of large, blue daisies top the stems in Sept.-October; grows in extreme soils and spreads rapidly; plants stand upright unless in moist and rich soil.

A. x fricartii (substitute for a. tartaticus)
aster
Best of all asters, needs protection from evergreen boughs; lavender blue flowers bloom in summer and continues till hard frost; stems tumble and colors show best in light shade.

chrysanthemum

Dianthus barbatus (substitute for caryophyllus)
carnation
Usually biennial; ‘White beauty’ and ‘Scarlet beauty’ are self-descriptive; coral pink ‘Newport Pink’ is most common cultivar; ragged clumps of bright green, glossy leaves, surmounted by stout stems bearing large domes or flattened heads of massed, 1” wide mildly-
fragrant flowers; requires richer, moister soil, in sun or light afternoon shade. Frequent division recommended.

*Paeonia mlokosewitschii* peony
Herbaceous peonies (tree peonies are 4' tall shrubs with a gaunt woody framework) die to the ground in winter; this cultivar grows 2' tall with single, yellow flowers. Peony hybrids come in a wide range of colors, occasionally two-toned. Flowers average 4-6" in diameter with five different forms; By choosing a mixture of early, mid-season, and late-blooming kinds, the garden will bloom for about 6 weeks; no one kind flowers for more than a week but foliage is also attractive—needs full sun; cold-hardy but benefit from winter protection in areas without snow-cover where temperatures fall below -20 degrees F.

*Rhododendron* rhododendrons
This is such a diverse species that it deserves a book in itself; PJM, Catawba, Wilson and Carolina are suitable for Boston and withstand pollution well.

*Rosa rugosa* (substitute for *R. chinensis*—China rose) Rugosa Rose
Plants are especially tolerant to salt spray; lustrous dark green textured leaves with reddish-purple 3-4" flowers produced continuously all summer long followed by large, decorative, dark red rose hips; not fussy about soil; good as low informal hedge or ground cover for difficult sites; 6' by 6'.

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Image of a garden scene with traditional Chinese structures and foliage.
The 12 Key Flowering Ornaments Used In Nearly Every Chinese Garden

SPRING

*Cymbidium sinense* dark-purple cymbidium
Famed for its delicate odor and attractive leaves and flowers.

*Narcissus tazetta orientalis* Polyanthus narcissus
Other hardy species available: N. asturiensis: very small trumpet daffodil with golden yellow 1” long flowers in early spring (3-5”); N. bulbocodium (hoop petticoat daffodil): rush-like leaves, flowers yellow, with enlarging conical trumpet up to to 2” long, diminutive from late winter (9”); N. cyclamineus: flowers nodding with narrow 2” long trumpet (6-8”) best in moist soil in sun or partial shade; N. peoticus: flowers white to 3” across with very short cup fringed in red, late spring (16-18”); N. pseudo-narcissus (Lent lily, wild daffodil): flowers yellow, trumpet 2-3” long in early spring (6-12”)

*Paeonia suffruticosa* tree peony
Symbolizes riches and honour; see under herbaceous flowering plants

*Prunus mume* Japanese Apricot
Symbolizes the strong-willed and noble-minded; other previously mentioned varieties of prunus are hardy

SUMMER

*Dianthus chinensis* Chinese pink carnation
substitute: *D. barbatus* — see under herbaceous flowering plants

*Gladiolus gardavensis* (not hardy) gladiolus

*R. chinensis* China Rose
substitute: *Rosa rugosa* (Rugosa rose). see under herbaceous flowering plants

AUTUMN

*Nelumbo nucivera* Chinese water lily, lotus
Symbolizes purity. Most exotic of all water-garden plants; produces huge aromatic 12” wide pink, rose, yellow, or white flowers that open from elegantly pointed buds in mid to late summer atop 3-8’ stems; silvery blue-green parasol shaped leaves, 1-3’ in diam. float on the water or flare out 3-6’ above the surface; unless planted in large ponds, lotuses should be confined to
containers; they will only survive in winter outdoors if their roots do not freeze; plants do best in full sun and for good bloom require water temperature of 60-70 degrees F.

**WINTER**

*Camellia reticulata*  
net-viened camellia  
substitute: *stewartia sinensis*  
Camellias and rhododendron symbolize the season and the mountain scene in springtime; see under flowering trees and shrubs/evergreens

*Chimonanthus praecox* (not hardy)  
Wintersweet

*Chrysanthemum*

Herbaceous perrenials with daisy flowers; likes moist fertile soils.

*Rhododendron*  
snow azalea  
see under herbaceous flowering plants
Bibliography


Interviews:

