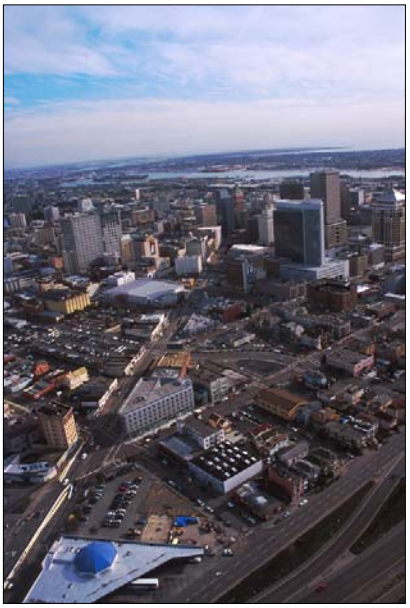
Working Paper 2003-01

REBUILDING THE URBAN STRUCTURE OF THE INNER CITY
A Strategy for the Repair of Downtown Oakland, California

Peter Bosselmann and Stefan Pellegrini



Institute of Urban and Regional Development
University of California at Berkeley

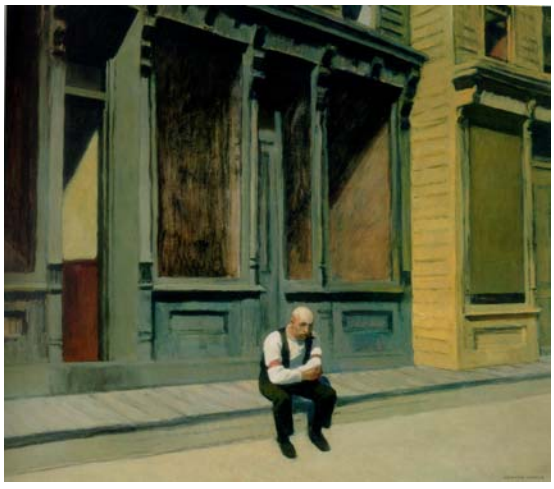
REBUILDING THE URBAN STRUCTURE OF THE INNER CITY
A Strategy for the Repair of Downtown Oakland, California

American cities have struggled to maintain the centrality of their downtown areas. As retail and office uses have continued to move into suburban areas and outlying regions, many local governments—especially of smaller and mid-size cities—have all but given up on the prospect of replacing the commercial vitality once found in many city centers. The ability to attract a permanent residential population, lured by good regional access, has become a necessary prerequisite for attracting new commercial uses back to the inner city.

Downtown Oakland has experienced significant loss in population and retail commerce over the course of the past fifty years. In January of 1999, Jerry Brown took office as Mayor of Oakland and in his inaugural speech he promised to bring 10,000 new residents to the downtown area of his city. The announcement received nationwide attention. For city officials in the San Francisco Bay Area the announcement echoed what other cities were attempting to do as well. San Jose, for example, has made major efforts to bring a residential population back into its urban core as its role in the regional hi-tech economy has become increasingly more central. San Francisco's well-known housing shortage has resulted in a number of new, inner-city neighborhoods, even in former industrial areas. But San Francisco never lost as many downtown residents as other American cities. Its inner-city neighborhoods have remained attractive to many, and in the case of Chinatown, the Mission District and the Tenderloin, have continued to accommodate a population of the less mobile, the elderly, and immigrants who could not easily find homes elsewhere.

The Oakland Mayor's election promise was not simply a proposal to bring back a population that left a long time ago, or to bring back physical compactness where the urban fabric had been fragmented for a long time. Clearly, repairing the inner city to the social and physical conditions similar to what existed in the first half of the 20th century is not possible or even desirable. People left the inner city for many reasons. A visit to an art gallery might be useful; look at the faces that an Edward Hopper painted or a Karl Stieglitz photographed. We frequently see expressions of alienation, phobia, even despair, and only sometimes personal triumph, mastery of and curiosity about city life.

Attracting people to live in the inner city thus requires the invention of new models that draw creatively on present-day conditions. Although past redevelopment models have recognized the need for reinvention, they have often resulted in housing that was too uniform and too institutional in character. They lacked true diversity and thus were never perceived as a viable alternative to other choices. A new model identifies places of vitality and carefully adds new development in order to strengthen the qualities that have survived. At the same time, a new model recognizes the opportunity for new development to improve and repair elements of the public realm, such as streets, squares, and the waterfront. Such a model requires a strategy; it cannot be accomplished by making individual development decisions in an ad-hoc fashion.



Edward Hopper, Sunday Morning, *1953, New York Metropolitan Museum of Art.*

On first reading, such a new model does not sound too different from the mandate that has guided redevelopment for the last half century. It seeks to bring new investment to the abandoned and desolate places of the city. Here however, the emphasis is on *repair* of the inner city through relatively small increments of development in a manner that best avoids any further fragmentation of existing social and physical conditions. A proposal to build housing for 10,000 new residents equals a volume of approximately 6 million square feet of floor-space. The anticipation of such a considerable amount of building activity creates a momentum that could further erode what is left of downtown Oakland's existing social and physical conditions, especially if the remnants of downtown neighborhoods are perceived as particularly marginal by those who take responsibility for the proposed redevelopment efforts.

Therefore, in this essay we have used downtown Oakland to demonstrate an urban design strategy that starts with the history of the city's urban form and its physical patterns. It identifies the areas of vitality and the elements of the public realm that might be repaired if new development is directed and coordinated. An important aspect of this essay is to explain what is implied when abstract terms are used, like "urban vitality," "urban repair," or "incremental development." These terms express professional values that require clear communication to the future and existing residents of the inner city. At the same time, this essay continues a tradition that identifies the need to balance the forces of competition with a need for cooperation. This tradition, one of the fundamental functions of city government, has emerged as a counter force to the worst effects of the industrial revolution. Then and now, city design professionals have seen it as their professional challenge to tame and cultivate what we now call "market forces" in a constant effort to protect the weaker elements of the city: **culture, people and nature**.[1] In the inner city these three elements will remain weak because market forces will only selectively address such concerns.

Andre Devambez, La Charge*,* 1902.

CITY CULTURE

City culture includes the traditional cultural *activities* that cities like Oakland established, such as an award-winning art museum, or supported, such as jazz music. Because these activities depend upon a strong physical and social environment to survive and flourish, the definition of city culture must furthermore encompass the physical and social environment that fosters the growth and development of such activities, and the manner in which decisions about improvements are made and executed. But we can only speak of city-culture when these cognitions, feelings, and behavior are shared in a consensual way.[2] In the case of Oakland, a publicly adopted document guiding physical development decisions exists because law requires such a document, but residents of Oakland know little about how this document is used to guide the many individual decisions into something that contributes to a larger whole. As in many other cities, development decisions are thus made ad-hoc. The general absence of new investment in downtown Oakland has further contributed to this dilemma: when developers do indeed show interest, new projects are invariably perceived as better than no change, regardless of their potential contribution to city culture.

A city designer might start interpreting city culture by planting seeds of an educational nature. Among the members of the planning staff and among politicians little is known about the history of Oakland's urban form. Given the fact that Oakland's history is limited to 150 years, its morphology is quickly explained. Not everybody will draw the same conclusions from historic maps; however, when subsequent actions are indeed taken, they will be made with knowledge of the city's past.

History

The Swiss engineer Julius G. Kellersberger laid out Oakland's street pattern in 1852. Kellersberger was born on February 9, 1821, near Baden in Switzerland. He came to New York in 1847 where he worked as a surveyor on Central Park. We hear of him in the context of Central Park from Frederick Law Olmsted, who, upon return from Europe in late 1859, found construction of the park progressing at great speed but excessively over budget. A State Senate Committee had brought in the Swiss engineer to evaluate the work in detail, and he attested to its high quality and excellence in overall organization. "Much better than any other public work in the United States," Herr Kellersberger reported.[3] Olmsted does not give the first name of the Engineer, but Julius Kellersberger it was, who briefly worked on Central Park upon arrival in New York and prior to settling in Galveston, Texas. News of the California gold brought him and his wife, Caroline, to San Francisco. In California he made a name for himself as surveyor responsible for the Humboldt Meridian, a survey of the northern portion of the new State towards the Oregon border, and the Mount Diablo Meridian, a survey from the Central Valley to the Coast. Prior to taking on these federal commissions, three New York investors—E. Adams, H. W. Carpentier and A. J. Moon—hired him in 1852 to lay out the new city of Oakland at the mouth of the San Antonio Creek and Contra Costa Bayou.[4]

Kellersberger selected a rise of the land for the center of the new town. Standing on this hill only 40 feet above sea level, the site must have evoked the feeling of an island surrounded by water and tidal marshes. An existing road, now San Pablo Avenue, reached this hill from the north across a narrow land bridge between two low-lying wetlands. The old road continued across the mouth of the tidal estuary, now Lake Merritt, towards the San Jose Mission. Across from the mount and the estuary the hills rose steeply. The site was well chosen for a new town, for it had everything one could wish for: trees as building material growing between the hills in the valleys, fresh water, plenty of fish in the bayou and grazing land on the hills. The estuary provided a natural harbor directly opposite of San Francisco;

At left, the Oakland peninsula in the mid-19th century.

goods and people passed through in both directions. Aesthetically, the place must have been of exceptional beauty and comfort. There are very few cities in this world, especially at sea level, with as temperate a climate as Oakland.

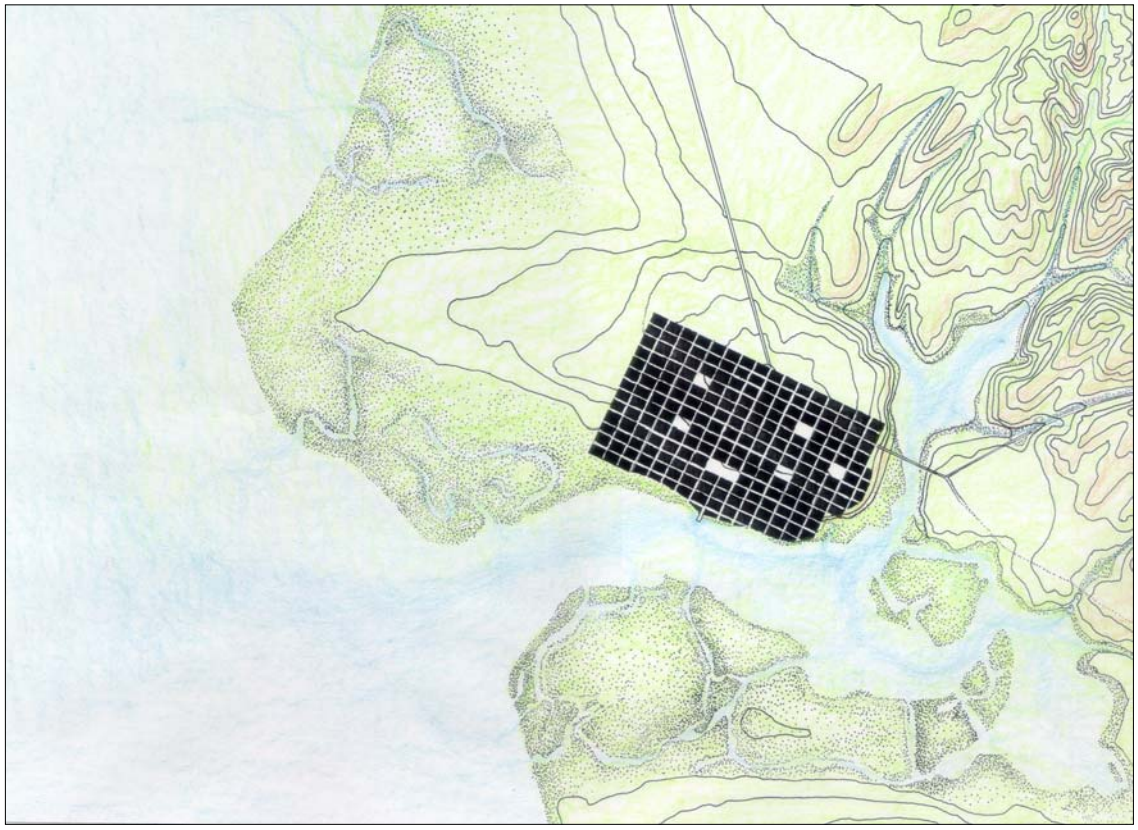
Right there, at the center point of that rise, Kellersberger laid out a street 100 feet wide at an angle of 20 degrees east of north, and ran it down the slope towards the bayou to a landing place. The street became Broadway and to both sides Kellersberger staked out 8 parallel streets and gave them names like Webster, Castro, Clay and Harrison. Starting at the water's edge, he ran 14 numbered streets perpendicular to these streets, creating a grid of 224 city blocks measuring 300 by 200 feet each. He designated seven blocks as public open spaces and arranged them symmetrically across the grid. Two of them together, centered on Broadway between 4th and 5th Streets, were intended to become the town center. Four were evenly distributed to serve each of the four city quadrants as neighborhood squares. The seventh he named after his wife, Caroline, and placed it by itself near the eastern edge of town.

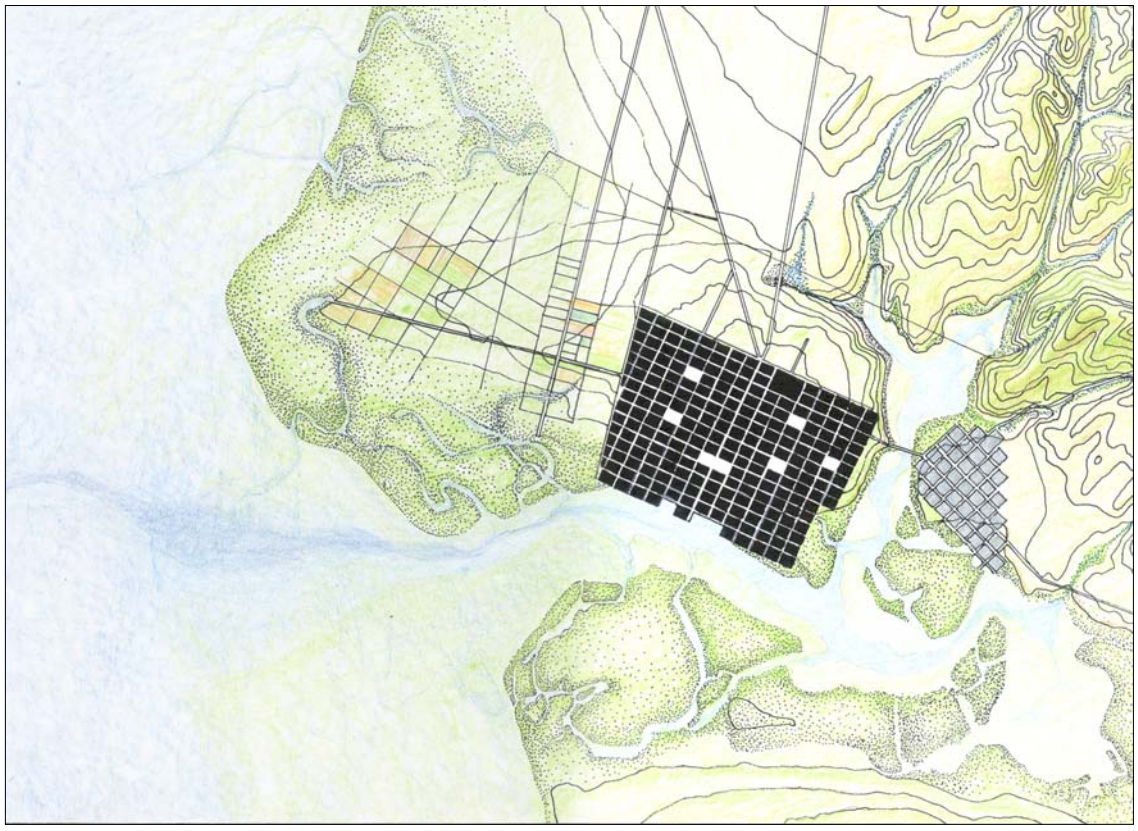
Each block was divided into 28 lots, 16 on the narrow side of each block and 12 lots on the long side. The buildable land totaled 325.5 acres, and if one family had settled every single one of the 3,276 lots, the density of the city would have been approximately 10 units per acre. The blocks were settled from the waterfront upwards; most blocks along the estuary required extensive pilings to lift structures above the high tide or flood level.

We know the city grew rapidly. Kellersberger was soon appointed City Engineer and in 1854 was officially elected to that position. In 1857, just before he left the Bay Area to return east, he revised his Oakland design and introduced a new diagonal street, Market Street. It connected the Embarcadero at Bush Street directly to the San Pablo Highway. Such a new street and the erasure of one whole row of city blocks were only possible because apparently the western flank of the city had not been settled. Market Street became necessary as a route for freight traffic that could now avoid the climb up the hill to 14th Street, but still reach the highway directly from the Wharf and on level ground. Market Street also defined Oakland's westerly expansion centered on 7th and 8th Streets. For Kellersberger, the western expansion of Oakland apparently held greater promise than the northern expansion. In his mind, Market Street, like its counterpart in San Francisco, would become the city's main divider, and people of Oakland would refer to the city's two parts as "West of Market" and "East of Market." The revised map also introduced Telegraph Avenue as a continuation of Broadway. Near the foot of Telegraph and 14th Street, Kellersberger combined four of the regular blocks and designated them for the use of California College. That institution would move up Telegraph to Berkeley as the University of California in the late 1860s. Across the narrow mouth of the Estuary another extension to Oakland appeared on Kellersberger's revised map, called Brooklyn. The two settlements were linked by a bridge at 12th Street.

In 1857, Kellersberger went back to Galveston, and after the brief consultation on Central Park where he met Olmsted, he surveyed land in Mexico for the Tehunantepec Railroad, the first to cross the continent from the Gulf to the Pacific. With the outbreak of the Civil War in 1861, he enlisted in the Confederate Army for a celebrated career as a military engineer. He died in 1900, back in Switzerland, after 49 years in America.[5]

The street pattern of Oakland is not unusual for the design of a new town in the western United States.[6] It follows a formal pattern of regular blocks and lots that is able to appropriately and efficiently accommodate the needs of a growing city, including expansion. The creativity of the surveyor came to the foreground not in the specific design of the physical street pattern itself, but rather in the imposition of a regular street pattern onto an existing topography. In the case of Oakland, Kellersberger did what most surveyors would have done in a long town-planning tradition that dates back to pre-Roman times. However, this tradition was not without its limitations.





Above, Kellersberger's 1852 Survey; Below, modified map from 1857. Note alignment of Market Street and platting of Brooklyn (now East Oakland) across the estuary.

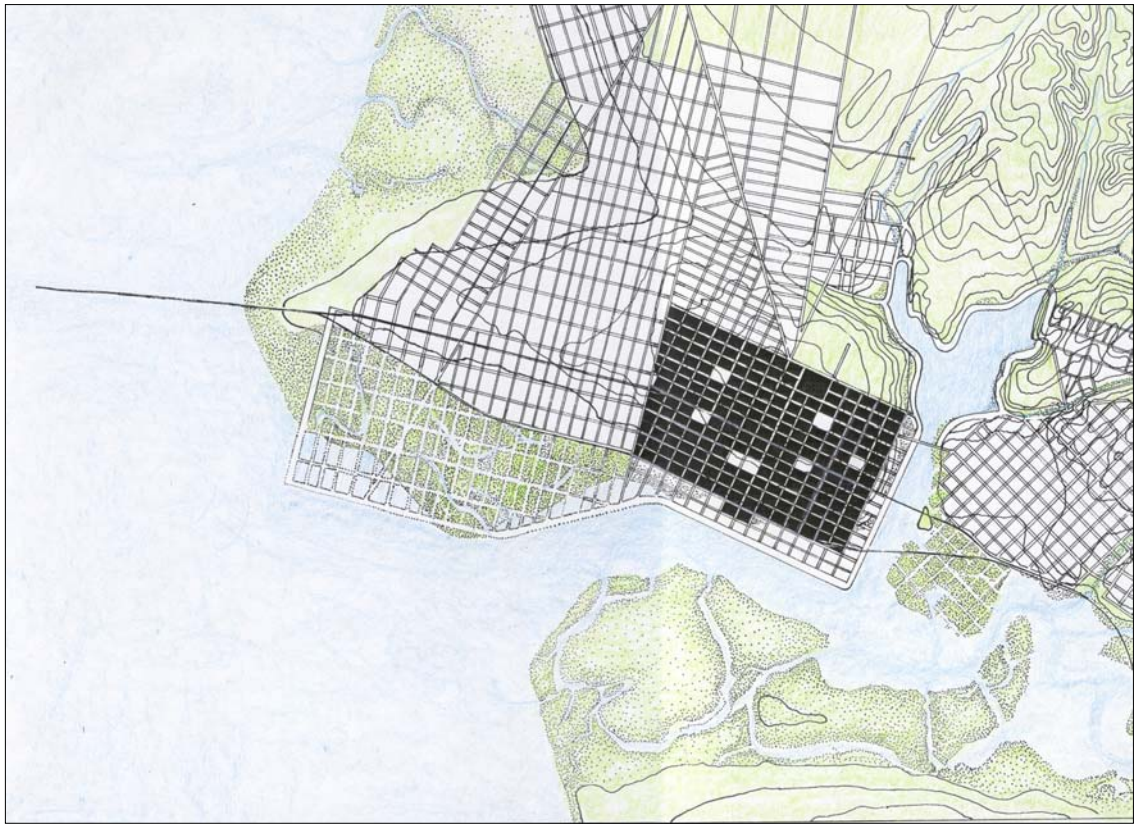
The 1850s and 1860s were formative years for the San Francisco Bay Area. Not all people who had rushed out to search for gold wanted to leave; many wanted to civilize the place and make it their home. As Oakland grew, the limitations of Kellersberger's tradition must have become increasingly more apparent—for the formal pattern of blocks and lots that allowed for fast and efficient development also invariably allowed for overcrowding and the rise of conflicting uses, often far away from the seven open squares Kellersberger had designated in his original survey. In addition, Oakland had to clarify its three edges along the San Antonio Creek and Estuary, as Kellersberger had simply run his blocks and streets against the water without defining the city's edge.

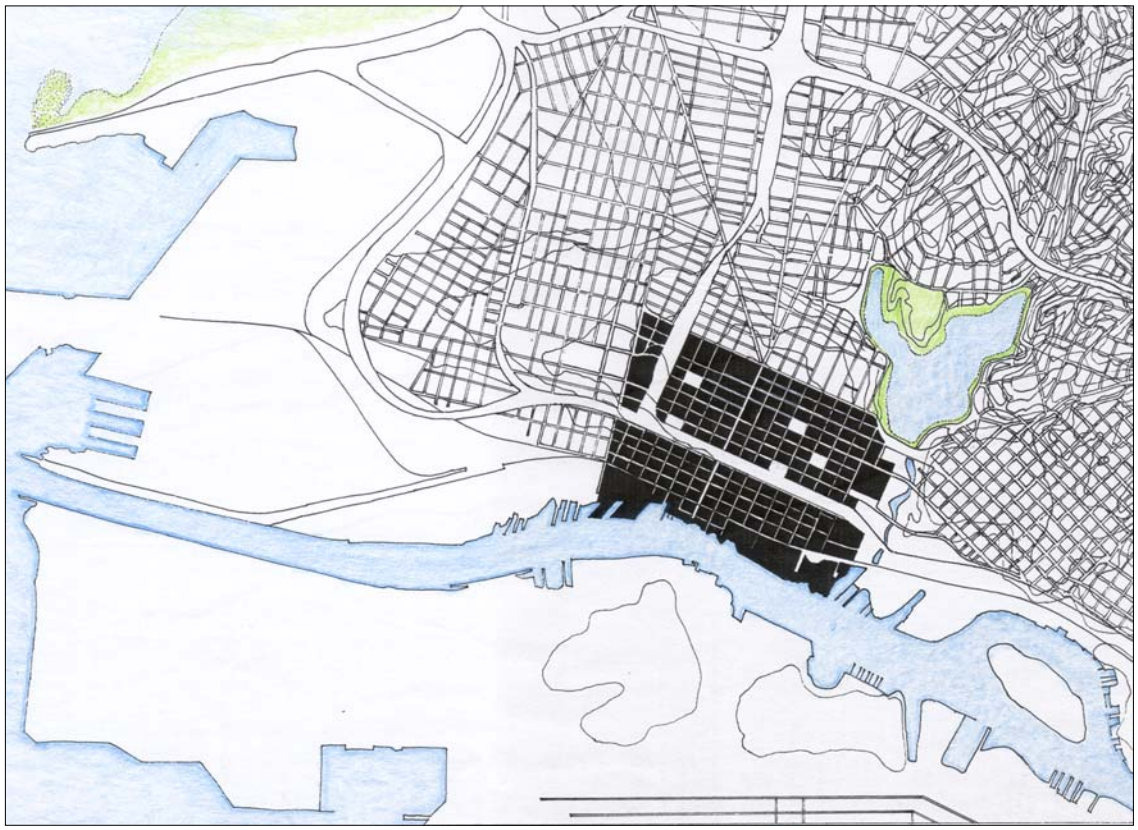
Soon Frederick Law Olmsted would change the tradition of town planning and begin work, following a strikingly different design ethic—one not based on the explicit aesthetic rules determined by design traditions that draw solely from the past. Rather, Olmsted developed a concept in response to first-hand observations of the landscape. His art combined functional organization, city planning, landscaping, and gardening in response to the natural landscape. He came out to California in 1863 to manage the Mariposa Gold Mine at Bear Valley. During the two-year stay, he continued his profession in the design for the California College on a site at the foot of the Oakland Hills (not the final site chosen for the Berkeley campus). Near there he designed the Mountain View Cemetery. He also urged the City of San Francisco to consider a large Central Park.

Olmsted did not work on the design of Oakland, but one might imagine that an Olmsted-inspired design could have created a unity or wholeness that combined the city blocks and streets with the natural waterfront, ensuring an accessible and permanent place of nature for the residents of Oakland. The opportunity to create a continuous urban promenade along the city's water edges was indeed apparently recognized, but to Oakland's great detriment never fully implemented. A survey by W. Bordman from 1883 shows such a new street that, if built, would have been spectacular. This new street started as Lake Shore Boulevard on Lake Merritt's eastern shore, circled the entire lake, introduced a complete new line of blocks east of Fallon Street, turned at a 90 degree angle and completed the edge that Water Street occasionally formed along the inner harbor. At Castro Street, it turned again to follow the shoreline, of what must have been tidal marsh but is now the container terminal, and connected north to the foot of the Wharf at 7th Street. This new street would have given Oakland a clearly delineated edge to build along.

The Bordman survey showed Oakland in nearly completed form. Except for the subdivision in the hills, all level land—and even tidal land—was platted into 4 or 5 different grid patterns. Broadway continued in a straight line towards the Oakland Hills. This required filling a portion of the marsh west of Lake Merritt. (Incidentally, it was in this section of downtown Oakland where most structural damage would occur after the 1989 Loma Prieta Earthquake.) On the more pragmatic side, the Bordman survey accommodated two competing railroads. A long wharf was built at the end of 7th Street in West Oakland; from there ferries took passengers and cargo to San Francisco. This new wharf made the inner harbor at the foot of Broadway less important, opening it up for new uses such as the proposed promenade.

The motivation for writing this essay was triggered when the last of the five morphological maps emerged from the drawing board. It became obvious how severely the original concept of Oakland's physical form has been truncated during the last 45 years. First, in 1955, the city was separated from its waterfront by the elevated Nimitz Freeway (I-880). Second, and as recently as the early 1980s, the wide trench of the submerged Interstate 980 severed the connection between Central and West Oakland. Third, and still ongoing, the process of urban renewal has encouraged super blocks and abandoned major sections of the historic grid. Within the Kellersberger grid, the city intentionally lost 10,000 linear feet of street frontage due to block consolidation and the associated vacating of streets as public rights-of-way. Producing these maps, we could not help wondering whether knowledge of the city's history would have changed the routing of freeways and the course of Urban Renewal in the 50s and 60s.





Above, 1884 Bordman Survey. Note waterfront promenade extending from harbor to modern-day Lake Merritt. Below, Oakland today.

A Strategy for Urban Repair

The production of the maps does not lead us to advocate a repair of the original platting of the land. That is not possible; the *process* of making the historic maps, however, does lead to the discovery of design opportunities. For example, housing development can be directed to create a comprehensive design for the shoreline along the inner harbor and the Lake Merritt Channel. As part of the map study, a total of five such major elements of Oakland's urban form are easily identified, and in the vicinity of these elements new development can be directed to repair the civic places of Oakland.

The **Main Streets** converge at the geographic center of the city. Broadway, San Pablo Avenue and Telegraph Avenue connect Oakland to its surrounding communities; at one time they had evolved into the city's principal commercial streets, today they have been largely abandoned. Until recently, the city has pursued large-scale retailers to locate behind some of the ornate, but empty facades. There is little hope that department stores will return; smaller retailers might locate here, but they will only follow a new residential population. The many vacant sites provide opportunities for in-fill housing in direct proximity to transit. New housing here will make street improvements possible and provide street-level retail an excellent chance to provide services to residents and downtown office workers alike.

The **14th Street Corridor** connects the downtown core to the lake. New buildings along tree-lined sidewalks should make this street a civic promenade. The street invites downtown office workers to stroll to the lake and employees of the county courthouse to walk to the transit station. 14th Street also functions as the Main Street for the Gold Coast neighborhood.

The **Residential Squares** are an element of Oakland's historic town pattern. The design of **Lafayette Square** was recently improved and the success of this improvement should serve as sufficient evidence that the repair of the other residential squares is possible. **Lincoln Square** has been used as a schoolyard for many years, but it is open to the public and could be designed in a much more civic manner. **Madison Square** in the eastern portion of downtown is one block away from the former **Caroline Square**. Once upgraded and surrounded by new homes, the square would be used more intensively. Finally, **Jefferson Square** and **Harrison Square** have been neglected because of their proximity to the elevated freeway. A long-term commitment is necessary because structures alongside the freeway will be crucial to repair the civic quality of these squares and shelter them from the noise of adjacent freeway traffic.

The design potential of Oakland's **Waterfront** along the inner harbor and the Lake Merritt Channel was first demonstrated by the Bordman survey of 1884. A comprehensive design is necessary that ties together a number of disjointed developments. It is still possible at this stage of Oakland's history to coordinate all future housing projects in the vicinity of the water edge and design a magnificent urban waterfront promenade.

Finally, the **Grand Avenue Linear Green-way** could repair the currently fragmented conditions north of the Kaiser Center. Such a green-way would continue Grand Avenue's handsome design north of Lake Merritt and carry it through to San Pablo Avenue across Broadway and Telegraph Avenue. Enough vacant land is available to build high-density residential development including high-rise towers in selected locations near the Kaiser Center. There is also enough room for a new school and a large open space adjacent to the linear green-way; this school could be organized as one of the new Charter Schools the Mayor wants to establish. It would serve the new downtown population and the adjacent neighborhoods north of the lake.

The proclamation of such "design principles" does much to understand the potential opportunities that lie within the physical form of the city. However, diagrams will remain diagrams without a deeper investigation into the other forces that shape Oakland.

Illustration of guiding principles for five priority areas in Downtown Oakland, clockwise from above left: the reinforcement of Downtown's major streets - Broadway, Telegraph, and San Pablo; the 14th Street Corridor; the reconstruction of Kellersberger's five neighborhood squares; the Estuary and Channel Waterfront; and the Grand Avenue Boulevard linking I-980 and Downtown to Lake Merritt.

PEOPLE

The residents that are expected to move into the inner city are, in all likelihood, children of the suburbs. That is where many have grown up, and if they are still young, that is where they might return to raise their own families. If they are in the middle of their lives or older, they will make comparisons and carefully weigh the advantages of suburban living with living in the inner city. At the turn of the previous century, when people migrated in large numbers from the countyside to live in cities, there was little opportunity to return to their places of origin. Today there is. However, plenty of evidence in evolutionary and cultural historical theory supports two divergent views: some people at one or more stages in their lives will find life in the inner city stimulating, fulfilling, and an expression of self. Others will not easily tolerate the confinement of limited space, diverse crowds, and the lack of consumer choice that is alternatively available in suburban shopping environments.

These limitations begin with seemingly trivial things like the dimensions of household appliances that require space, or the size and quantity of a long list of products designed to make residents in suburban homes virtually independent from frequent shopping. In addition, technological advances in information linkages and personal entertainment have allowed people to remotely access the centers of news and thrills. Family vans and sport-utility vehicles are an excellent example of a trend that has fulfilled people's expectations for comfort when it comes to personal mobility and access. But mobility for many, coming from many remote locations, has created the congestion that makes alternative locations like the inner city attractive for many long distance commuters.

It is questionable if the original meaning of urbanity is still widely shared among potential urban dwellers. Originally, the word did not describe a place, but a population of the city (as opposed to the province). Urbane people were sophisticated, understanding of the world, tolerant to strangers, open minded and eager to discuss the events of the day in public places, such as coffee houses on tree-lined boulevards. It is easy to understand why tourists seek "urbanity," but the consideration needed for others with diverse ethnic and cultural backgrounds and tolerance for people of all ages, might go beyond the civil virtues that can reasonably be expected from members of our individualistic society. The creation of new urban neighborhoods thus does not guarantee urbanity; the everyday tools of modern society, such as private automobiles, will continue to give many the opportunity to live removed from social diversity.

All these arguments have been heard before. They erect a formidable wall around the problem that can prevent city designers from acting all together.

Two views of 20th-century urbanity in Oakland, as seen by Dorothea Lange: 10th Street Market; Street Corner, *1942.*

A modern vision of Downtown Oakland "urbanity."

Life in the inner city can be attractive to the young and some of the old. The young will be the pioneers; in Oakland they have already taken over industrial lofts and converted them to live-work spaces, causing small, informal residential pockets to emerge. The Mayor himself has made his home in one of the converted structures. Developers have noticed the trend and have created new loft structures at a larger scale. Even prior to the Mayor's announcement, private developers had developed loft structures on several city blocks in the former industrial area near the inner harbor. These buildings are expensive hybrids, somewhat closer to commercial workspace than typical residential space as directed by the building and planning codes. Although "live-work" lofts do contribute to the housing stock, they are not necessary examples of general utility because not all rooms have access to daylight and units typically have no private open space.

To build housing of general utility is much more difficult; a strategy has to be developed before middle-aged couples, most elderly, and certainly families would consider moving downtown. These social groups need an opportunity to make a "home," and not just a place to dwell for a while. Even in the form of "stacked homes," housing has to offer private realms to a much greater extent than is available in the residual inner-city fabric that has survived urban renewal and freeway building.

Since the beginning of evolutionary history, humans have established habitats at the edge of bright sunlight, either the edge of a forest, or the edge of a rock formation. The need to *look out*, or better yet, *step out* from under a cover into bright light, is a profound condition for human well-being. It is the basis for many planning laws that came into being in response to the cave-like tenements of the inner city. Much attention has to be given to private open space as a direct extension of people's homes. But success in the creation of a home for a small group of people like a family, or a middle-income, middle-aged couple depends on many qualities that start with the dwelling and extend to virtually everything within some proximity of the home. Anyone responsible for children will agree that small children can only venture outdoors into inner city streets if accompanied by a grown-up. Most families will also be extremely concerned about access to local and regional services, including good schools, proximity to nature, and good regional transportation, ideally by private car.

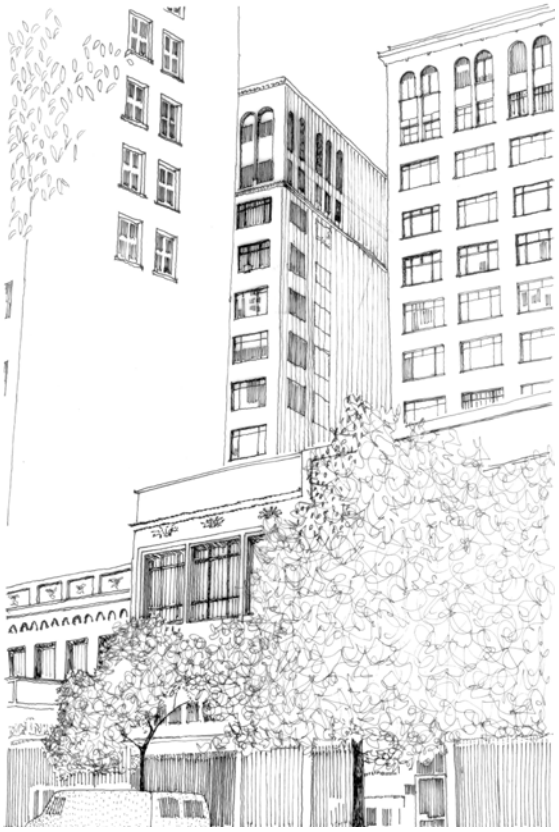
It is necessary to start the discussion about the needs and values of prospective downtown residents with some thoughts about the cost of housing and its **affordability.** We will not go too deeply into land economics, but focus on the human values associated with **urbanity, centrality, density, housing types** and **mix of activities.** It was, of course, the high cost of housing in the larger San Francisco Bay Area that opened a window of opportunity to bring 10,000 new residents to downtown Oakland. In 1999 when the Mayor made his announcement, the cost of even a modest single-family home in a marginal neighborhood approached $400,000 in neighboring communities.

Affordability

The Bay Area's regional housing shortage made it necessary to look at opportunities for housing in areas where few people with medium to higher income would have searched in the past. A study[7] that compared a range of hypothetical housing types and building configurations in five downtown Oakland locations revealed that an average two-bedroom, 1150-square-feet flat would cost $279,000 in early 2000; a typical couple interested in living in Oakland was in need of $19,300 for a down payment and a yearly income of $95,000. The discrepancy between people's salaries and the cost of housing is a well-known Bay Area phenomenon. Employers try to alleviate this discrepancy, simply as a necessity of doing business and to hold on to qualified workers who could not meet such conditions. In our example, mortgage guarantees reduced the down payment to $5,600 and the yearly qualifying salary to $80,000 for the aforementioned typical couple. In fact, the cost of housing in the Bay Area has made many large companies subsidize interest rates through in-house loan programs; some have even entered into ground leases to reduce the land cost or have purchased land outright.

The high cost of housing elsewhere favored downtown Oakland and throughout the year 2000 there was sufficient interest: 1,000 housing units were under construction priced to sell at $255/square foot, or $2.50/square foot for rental units. A year earlier the city had invited proposals for five city-owned parcels and spontaneously received offers from several developers; two projects totaling 180 units were approved very quickly. Indeed, the city was expecting an additional 3,600 units; if they had been built, the Mayor would have indeed reached his goal. In early 2001, however, the economy of the region slowed significantly. Substantial layoffs and failures, first in the internet and multimedia industries and then among computer hardware producers, made developers and lenders more cautious.

Common belief has it that at times of economic slowdown better opportunities exist to plan ahead more thoroughly. This is a sympathetic, but limited truth. Development will proceed at a much slower pace; however, there is time to do more outreach and better define the kind of housing that should be built and how it should be phased. The effort to make the inner city attractive for a residential population remains worthy of support for a whole range of obvious reasons. Housing, transportation advocates, environmental groups interested in using land more efficiently, and downtown business owners will continue to support the effort.



Left: new loft housing in the Jack London Square neighborhood under construction in late 2000. Right: urbanity in downtown Oakland often translates to a complex jumble of buildings at a variety of densities.

Urbanity

Urbanity is a concept that fascinates designers. They claim to know what it takes to create it, but can they be certain that prospective residents will like much urbanity most of the time? Designers rarely use the term to describe a population, but rather a place. For them, a city with urbanity is compact and dense, and has many services and activities in close proximity to one another.

Presently, Oakland is not without urbanity; one of the city's unique experiences is to sit in a busy restaurant where world-class jazz is performed late in the evenings. Periodically and seemingly without warning, the restaurant's big windows are filled with the view and sounds of a large passenger train traveling through the middle of the street. A few blocks further south, in the early morning hours a person on a stroll might stumble upon the hustle and bustle of a wholesale fruit and vegetable market. Restaurant owners and retailers come to pick up boxes of produce, an activity once common to the center of most cities but made invisible by moving to the outskirts of cities a long time ago.

These activities, once commonplace in American cities, are in many ways "leftovers" of a 19th century urbanity. Today they take place in the immediate vicinity of new upscale loft housing. The train operation and the wholesale market may not be robust enough to remain in their locations much longer, but these are nonetheless experiences that a designer would associate with the specific urbanity of Oakland.

This unique character manifests itself in a variety of ways in Oakland. The streets of the Gold Coast, a neighborhood near Lake Merritt, have a more stable urbanity, both in the cultural and physical sense of the word. A multicultural community has held out here for some time in appreciation of the beautiful Lake Merritt setting. Chinatown in Oakland is smaller than in San Francisco, but walking on its sidewalks is a step into a different world. On weekends, customers from the entire region come to shop. Chinatown is the main place of retail services for downtown residents, present and future. One of Kellersberger's original neighborhood squares, Lafayette Park, has recently been redesigned. It has become an important asset for the population of Old Oakland. Children and old people flock in good numbers to the one-and-a-half-acre block. Not far from there, an old-fashioned housewive's market has recently been upgraded inside an art deco structure and combined with housing units for a small co-housing community with shared facilities.

Admittedly these "cells" of urbanity are modest when compared to what designers think about when they refer to the handful of "truly urban places" of the world. But a designer can work with these places and add to them; there is clearly something there upon which to build.

Centrality

Centrality in Oakland is synonymous with transportation. The regional and local transit providers serve downtown very well. A group of people can live together and commute from here to schools or places of employment in virtually all parts of the Bay Area. From a public economics perspective, the centrality of Oakland's location is not sufficiently exploited. But the center of Oakland as a transportation hub is only a geographic centrality; related yet different is the importance of its location in the region. Oakland never had much centrality and lost what it had to shopping malls and office parks in once rural and now suburban Walnut Creek, Concord and Bishop Ranch. It is doubtful that Oakland could have its own city region ever again in the sense that Jane Jacobs defines it in *Cities and the Wealth of Nations.*[8] The city is part of an extensive supply region in support of San Francisco and the South Bay. The new federal and state office buildings in downtown Oakland were indeed built with the intent of giving the city more centrality; lawyers and brokers have subsequently opened branch offices, but not at the expense of San Francisco. Local politicians might still aspire to a downtown with centrality. For them, downtown Oakland, as a set of inner city neighborhoods, might require a lowering of expectations.

Oakland's Chinatown, however, will hold on to its centrality in the region. It is located in the center of the inner city and surrounded by remnants of existing neighborhoods. That makes it possible for many people to walk to shops and restaurants. With few changes to the existing retail and services, Chinatown can function as the equivalent of several conventional downtown grocery stores.

Density

Density**,** when related to livability, is not sufficiently understood even by city designers. Homes per acre or people per acre do not correlate directly or indirectly with the quantity and quality of human interaction and social contacts. There is likely to be a range of density with good social conditions and this range of density has to satisfy many other concerns, such as the need for privacy, light and greenery, access, open space and parking. In addition to physical and social density, designers know about visual, or perceived density. The term implies that physical density can be willfully manipulated to appear generally lower than actual.[9] Research shows that Bay Area residents have a higher tolerance for multifamily densities if such living arrangements are combined with related services, such as transportation, neighborhood open space and neighborhood retail. A sample of 160 individuals from 8 Bay Area communities, when interviewed, clearly understood and accepted densities higher than 24 units/acre because they are more easily associated with services than densities below that threshold.[10]

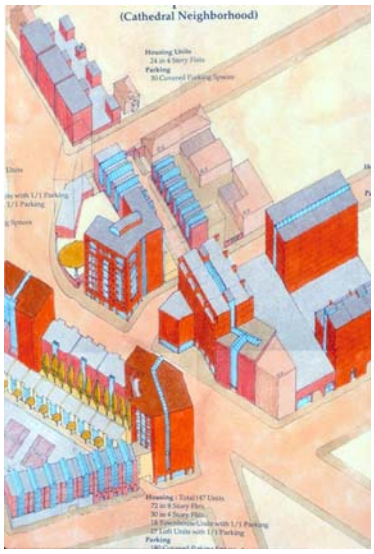
In Oakland, the number of new residents necessary to revitalize downtown was arbitrarily chosen. When the Mayor announced the number of 10,000 new residents, this number was not in any way related to the amount of available land. In order to determine the anticipated range of density, a recently completed development of 100 units on a typical Kellersberger block of 1.5 acres provided the prototype. Four floors of flats combined with a row of town houses, built over a partially submerged parking podium with some retail on

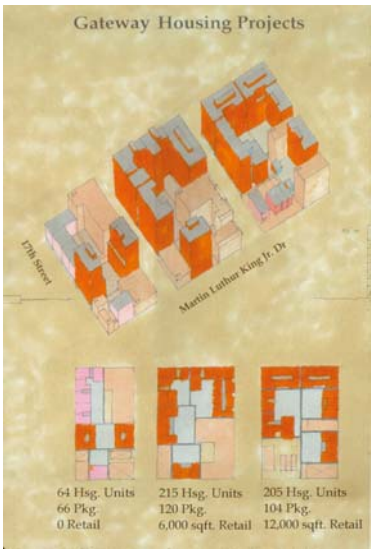
Left: diagrammatic model of Oakland displays initial implication of the Mayor's proposal. Possible new developments are illustrated at a variety of densities neccessary to accommodate 10,000 new residents. At right, city officials discuss the future of Downtown Oakland.

one of the four block frontages, yielded a density of 68 units per acre. When this density was applied to all the available sites in downtown Oakland, only somewhat more than half the units necessary for 10,000 new residents could be accommodated; clearly some sites had to be built to higher densities. The best way to explain the implication of the Mayor's proposal was to lay out a large room-size map of downtown Oakland and cover empty lots with building types, color-coded by density. The distribution of new buildings on this map revealed clusters of new housing, and when seen in this way, city planning staff, politicians, and members of the community could weigh the opportunities and difficulties associated with each location. A study was made to develop prototypical solutions for each cluster and in each case an attempt was made to make the new housing strengthen remnants of the existing activities.

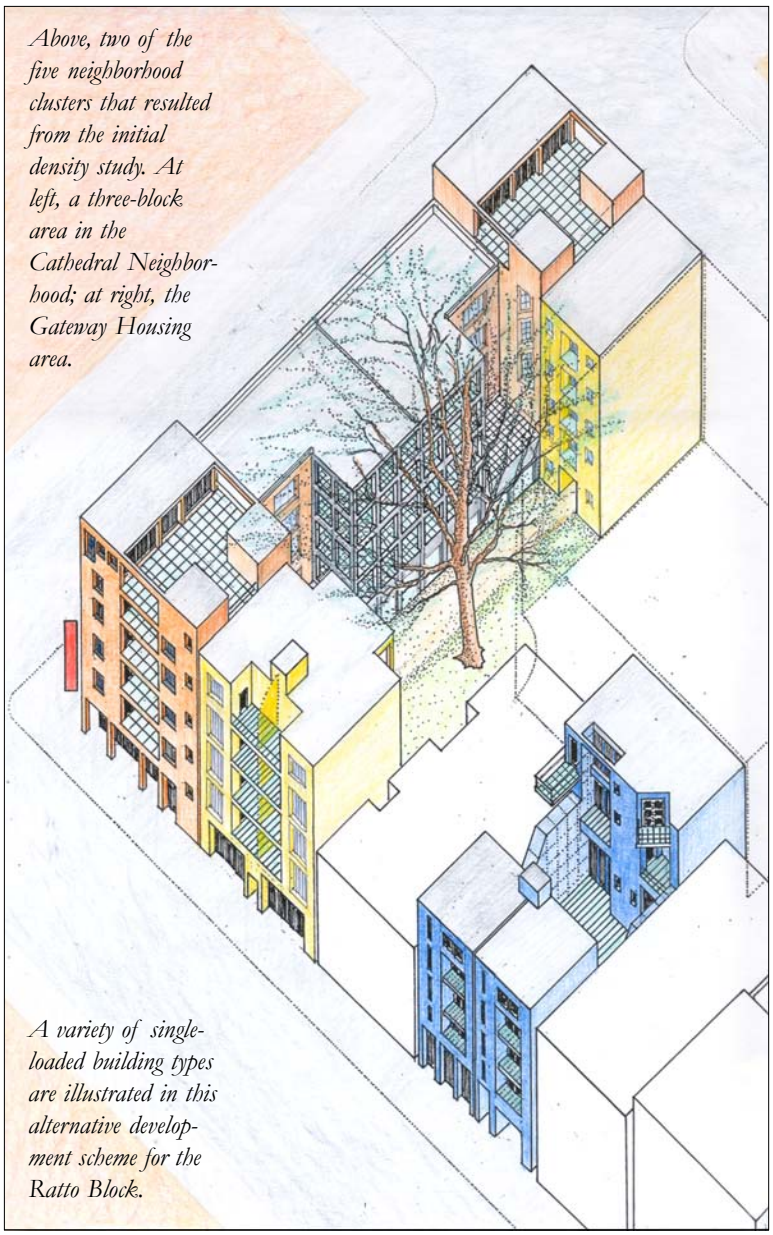
Housing Types

Housing types for inner city living are currently not well developed. The choices are limited and do not compare favorably with single-family homes of comparable size. The predominant type is the double-loaded corridor building with apartments on both sides of a central corridor, two separate sets of communal stairs to reach floors above the second level and a shared elevator for buildings with four or more floors. This type is cost-efficient because it can be constructed on a parking podium of similar dimensions. As a building type, however, it presents significant shortcomings: windows open to only one side of the building; thus natural light and cross ventilation is limited. Any housing unit with more than one bedroom ought to have an orientation to natural light from two directions, a requirement in European and in most Asian countries. This type is referred to as "single-loaded" and best done with two or more units accessible from a shared landing. In a hypothetical development scenario in the Old Town section, the single-loaded building type with four or five floors over retail reached a density of 80 units per acre. Each unit has windows to two sides of each building and a sizeable terrace or loggia open to sun, air and views.

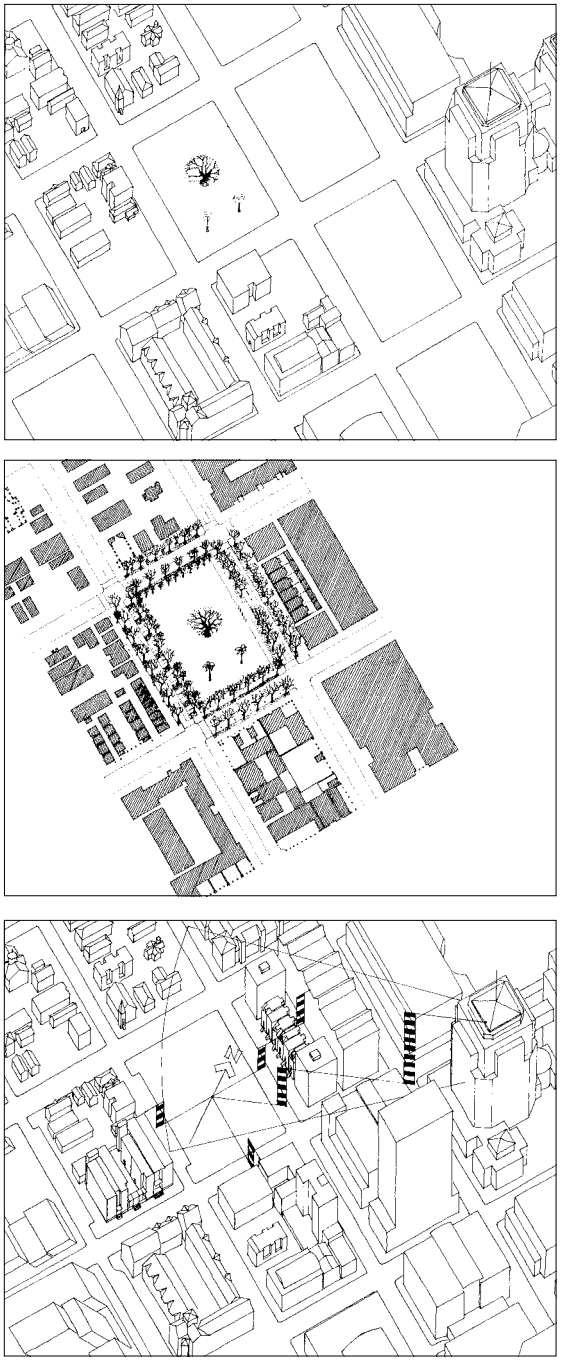




Above, two of the five neighborhood clusters that resulted from the initial density study. At left, a three-block area in the Cathedral Neighborhood; at right, the Gateway Housing area.



A variety of single-loaded building types are illustrated in this alternative development scheme for the Ratto Block.



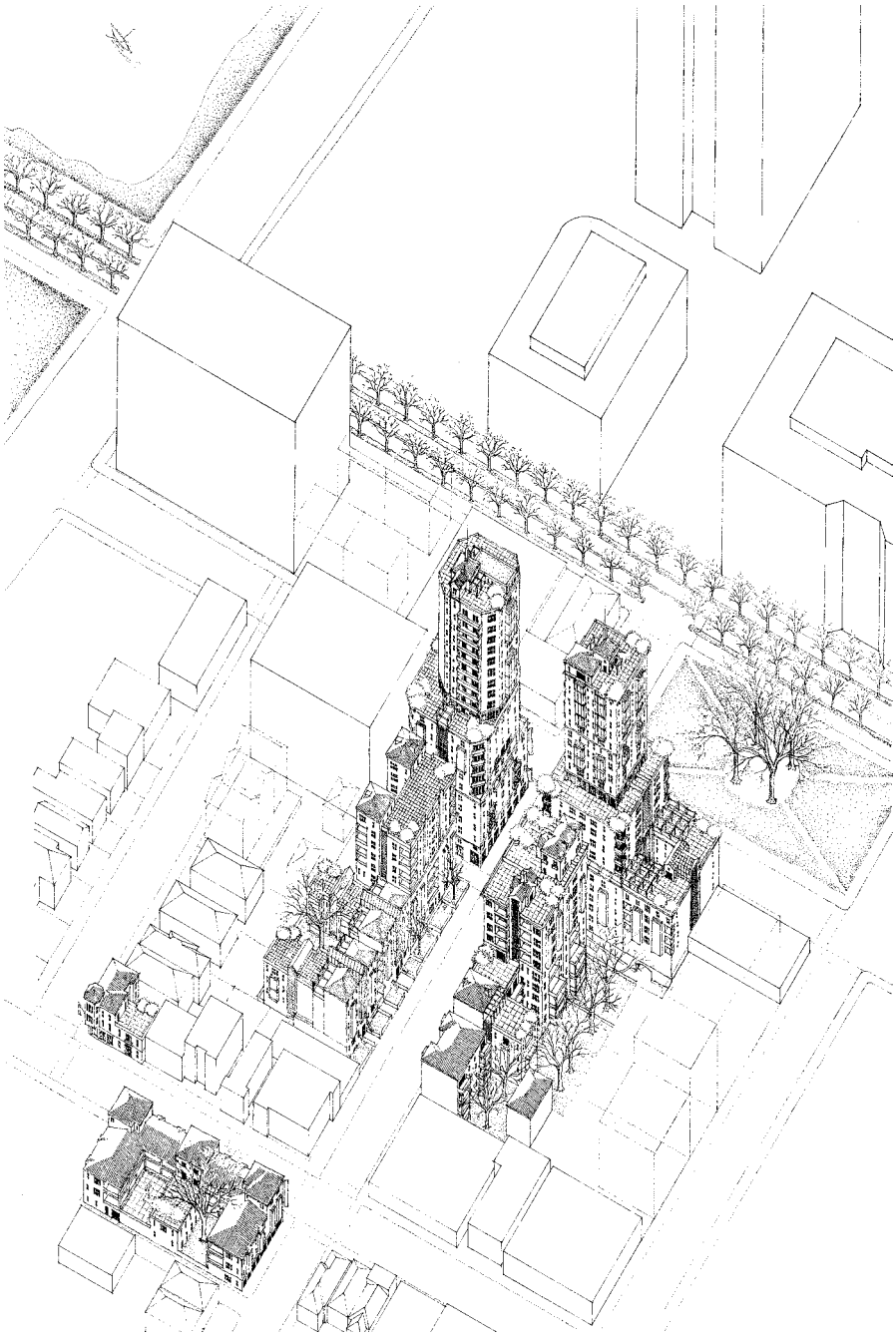
Repair of the Lafayette Park Quarter, top to bottom: axonometric of existing conditions; proposed site plan (drawn in the tradition of Giambattista Nolli) illustrating new infill townhouses lining the square; diagram illustrating proposed building heights to optimize sunlight exposure on the park.

Row houses combine some of the advantages of single-family living with the assets of inner city locations. They do not necessarily result in low densities: small, single-family row houses with a setback from the street and a private rear yard can reach 20 units per acre, while three-story townhouses in rows can be built at densities of up to 50 units per acre. Only sixty percent of a given lot is covered by structures, allowing sufficient land area on each lot to remain available for back yards and private gardens. The density is low enough to accommodate required car parking in the footprint of each row house structure. Row housing, with its frequent entrances, fine-grain texture, and clearly identifiable typology is in many ways best associated with urban living in American cities. Using row housing to line a significant public space, as shown here surrounding Lafayette Park, the idea of an urban quarter might easily return to the consciousness of downtown residents. Many doors and windows open to the square, ensuring a sufficient population will have a stake in keeping Lafayette Park maintained and safe. The new housing thus contributes to the repair of the public realm.

High-rise towers will be a necessary component of Oakland's new downtown program; however, their appropriate placement within the existing city will require careful consideration. Countless proposals for high-rise towers in the past have sparked confrontation and controversy due primarily to their drastic contrast to immediate surroundings. High-rise towers must also accommodate higher numbers of parking spaces and thus are prone to large building footprints with potentially continuous and uninteresting facades at the pedestrian level. Strategic concentrations of high-rise buildings near existing large uses, such as the Kaiser Center in the Lake Merritt Office District, however, can take advantage of a concentrated employment center while providing new residents with visual access to the lake. Their large footprints can become useful in locating larger-scaled retail uses, such as supermarkets or department stores, at accessible corner locations; these uses will invariably become necessary with an influx of new residents. Conceived as part of a larger

neighborhood, the new towers would form only a part of a series of proposed interventions to the Valdez District, creating a pattern of building types that attempts to respond with consideration to an existing mix of uses. Although the illustrated buildings do not exceed twenty stories in height, their design suggests a series of changes in setbacks and unit typologies as they ascend, ensuring an equitable access to sun, light, and air for future residents.

Together with mid-rise buildings, high-rise towers, due to their construction typology, have great promise in providing a substantial choice of unit types within one building. A typical ten-story building illustrates walk-up units at the ground level with immediate access to rear yards that have avoided excessively large parking podiums; one might imagine these lower units most appropriate for young families and elderly couples. Upper floors might combine bay windows and balconies to provide residential flats most appropriate for young professionals or those searching for a more urban lifestyle; while the upper floors, with ample terrace space, might again be appropriate for larger units requiring open spaces for families.



Repair of the Valdez Quarter proposes a variety of building types that relate sensitively to existing conditions in order to contribute approximately 1,100 new units to the neighborhood. The potential civic link between Lake Merritt and Downtown is maximized by creating a new urban boulevard along Grand Avenue.

A Mixture of Activities

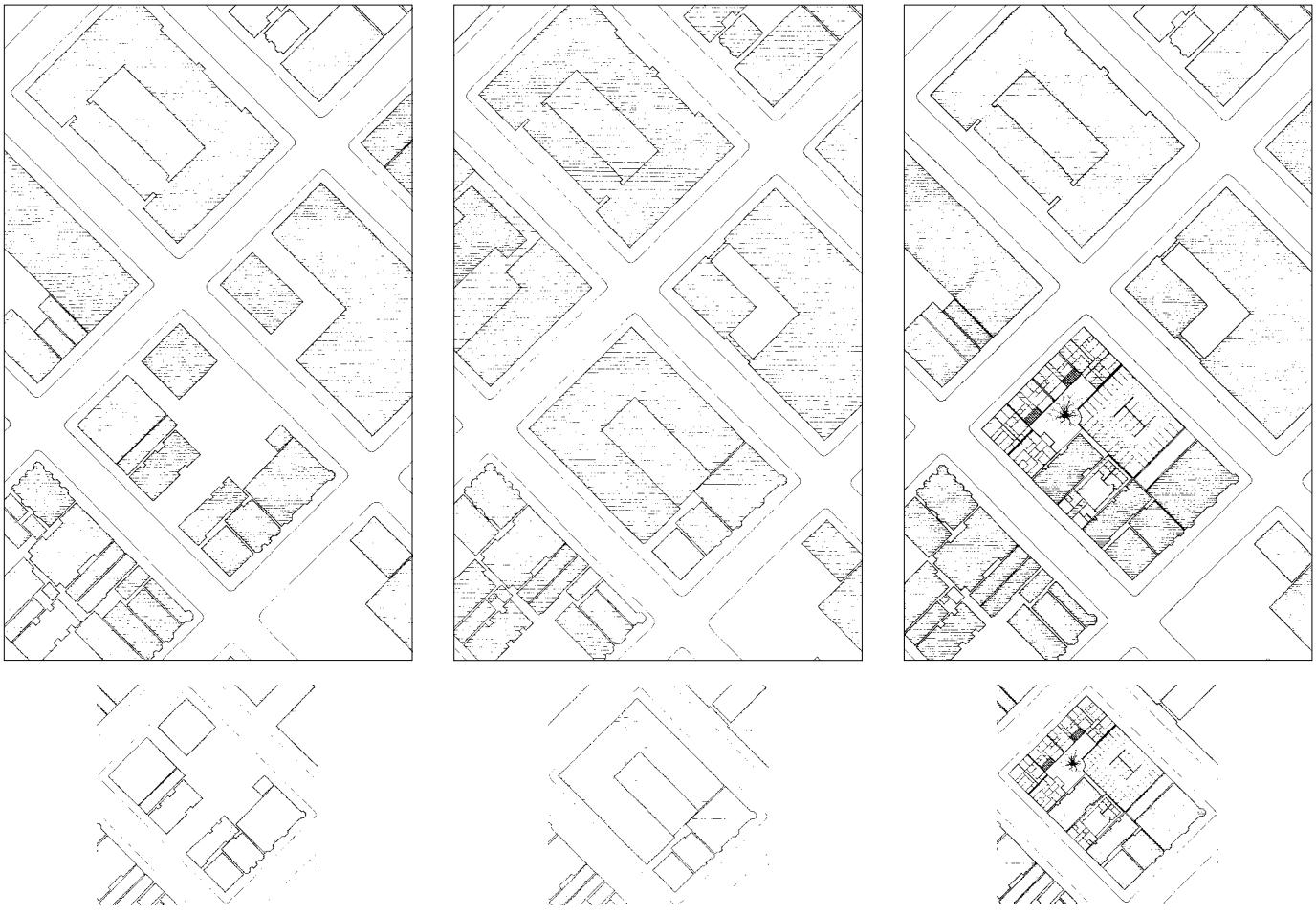
A mixture of activities is expected in downtown locations, but without special consideration the diversity of small-scale commercial activities can easily disappear. The challenge is to sustain those activities that will be an asset to the future population. Take for example, the Ratto block in the Old Town area of downtown Oakland. Currently the block contains ten separate properties: starting with the northeastern corner, the building contains a locally famous Italian delicatessen, a restaurant at ground level, and professional offices on two upper floors that used to be a hotel. The next building in clockwise direction has a small, but upscale lunch restaurant and similar small offices on upper floors. The building on the southeastern corner, also once a hotel, contains a rooming house with retail and a restaurant at the ground level. Around the corner is a former industrial building converted by the owner of the Italian delicatessen into a residential loft where he himself resides; next follows a vacant lot where an earlier 1951 map shows two single-family homes. The empty lot is followed by another rooming house with a small Chinese lunch counter at the ground floor. Next to it the Salvation Army now occupies the block's southwestern corner. There used to be a service station at this corner in the 1950s, followed by another empty lot, again occupied by a single-family home on the 1951 map. The northwestern corner has a wholesale meat market. The circle is completed by a parking lot in the rear of the Italian delicatessen. The block currently holds ten separate properties and 13 separate uses, not counting vacant lots.

A preliminary conceptual plan by the Redevelopment Agency would reduce the number of properties from ten to four and the number of uses from thirteen to nine. It would eliminate the residential loft, one rooming house, the Chinese lunch counter, the Salvation Army and the wholesale meat market in the name of new development.

Morphology of the Old Town area, below left to right: original 1852 Kellersberger platting; 1912 building footprint map; 1951 building footprint map illustrating effects of urban renewal. The Ratto Block has been isolated from the diagram and is shown at bottom.

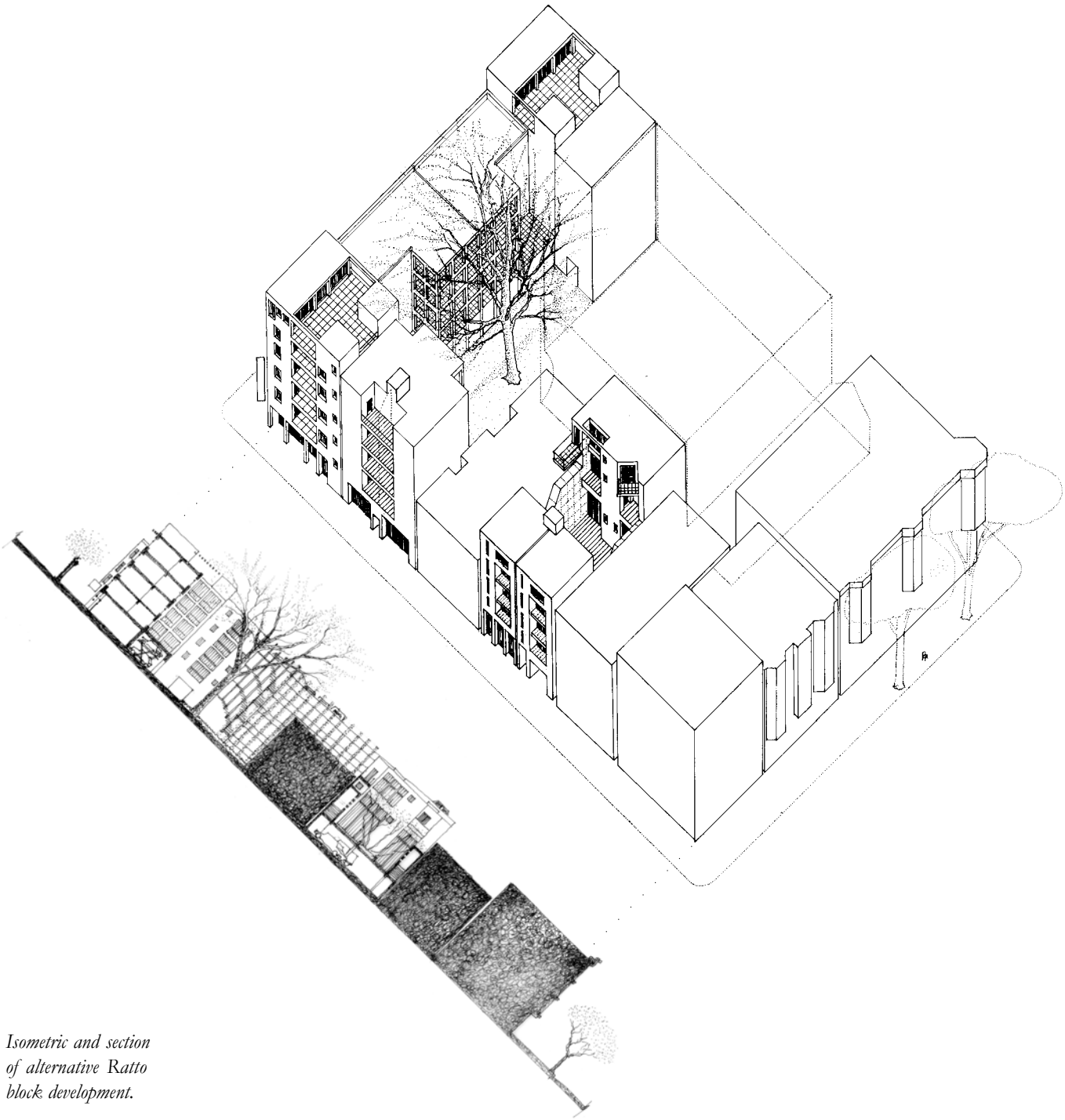
An alternative plan would reduce the number of separate properties from ten to eight while increasing the number of uses to 15. The same plan would also follow an approach that attempts to strengthen the existing activities in the surrounding city blocks. For example, the plan would start with the construction of a garage on the parking lot behind the Italian delicatessen and across the street from the newly upgraded Housewive's Market, now located inside the historic Swans Market. Although little off-street parking was required for the Market Hall because of the structure's historic preservation status, additional customer parking will become necessary when more of the currently vacant land is developed. The garage, holding 275 cars on 6 levels, could feasibly incorporate retail space on the ground floor across the street from the Market Hall. An identically dimensioned garage structure in San Francisco's North Beach holds an alternative use, the neighborhood police station. The garage would serve customers of the Italian delicatessen, the Market Hall and the restaurants in the area. It could also serve the parking needs of the residents that would live in the adjacent new 44-unit housing development on the western side of the block. The multiple use of the garage frees the housing developer from building an expensive podium with 44 separate parking spaces for the residents. Although many developers might be reluctant to build housing without the inclusion of *in situ* parking, the close proximity to such a diversity of uses will invariably reduce the new residents' dependence upon their cars. Both developments benefit: the garage would have permanent stalls for residents at night when the garage is less utilized. The land area not covered by the residential structure can subsequently be used to plant trees in a courtyard where they might grow to a substantial size. A single, majestic tree is drawn here in the illustration; it would significantly influence the character of the flats that surround it. Looking out of their windows, residents would have the sense of living inside a big tree. It is not possible to create such visual character on top of a parking podium.

Below, left to right: existing conditions in the Old Town area; proposed Redevelopment plan illustrating consolidation of properties; alternative development plan.



In addition, the alternative proposal for the Ratto block would not eliminate the Chinese lunch counter nor the rooming house above. Adjacent to it, on the empty lot, the plan would create two structures with 12 smaller units including four lofts.

The two proposals differ with regard to mix of use, but they also differ with regard to scale and grain of future development. The alternative proposal is more sympathetic to the historic context; it creates higher quality living quarters with a range of densities and greater interest along sidewalks. Most importantly, the alternative proposal does not displace existing residents and it does not contribute to further fragmentation of the existing building fabric. Rather, it attempts to repair the fabric with new buildings of a slightly larger scale.

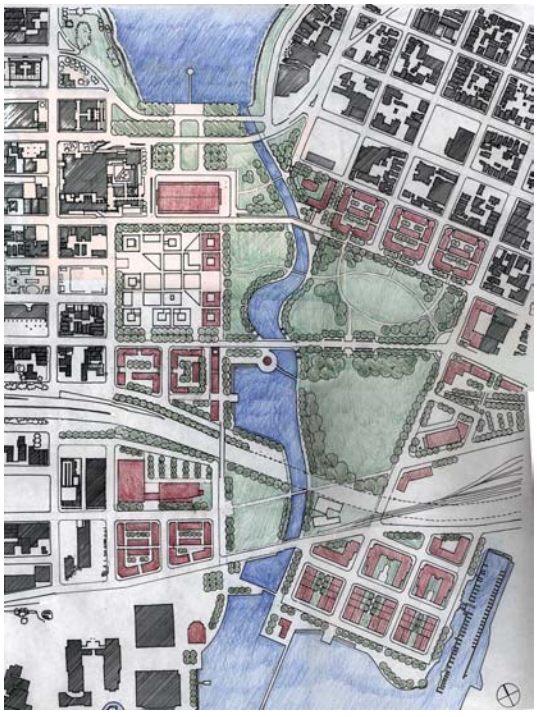


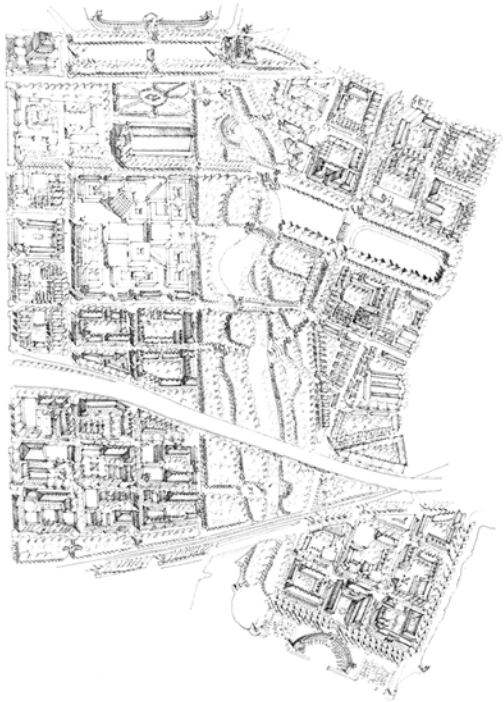
Isometric and section of alternative Ratto block development.

NATURE

The relationship between cities and nature is changing. Cities can no longer be understood as opposites of nature. Early city maps, like Kellersberger's design of Oakland, show the contrast between nature and the city with great clarity. As settlements grew more and more into nature, however, cities have become increasingly a component of a constructed nature. This concept is not without its contradictions and thus not easily embraced by everyone; moreover, there is no denying that this concept of the "city as nature" is not without imposing design challenges. Consider, for example, the current demand for office buildings that are naturally ventilated and lit, a major departure from past practice. People in cities with a hot climate have grown to understand the need to arrange allowable building heights in a manner that does not block prevailing cool air breezes, for example from water to land. Or, in cities with strong winds, planning officials have realized the importance of enacting laws that direct tall building configurations to behave in the face of a strong wind much in the same way that a gradually rising terrain might direct a wind upwards without violent disturbance.[11] Whether it is in the planting of trees to increase air-quality, or in the reduction of rain-water that gets channeled into drains by removing concrete and asphalt wherever possible, these design responses do not occur unless they are designed and directed on a citywide basis. These measures deal positively with the forces of nature while satisfying the needs and values of existing and future populations.

In Oakland, the proposal to build a new inner city ballpark in the former estuary—literally on top of the channel that connects Lake Merritt and the Inner Harbor—brought up the age-old question of how Oakland should relate to the former estuary to which it owes its existence. Enough remains of the estuary to deal with it constructively as a body of water connected both to its source in the hills as well as to the tidal action of the Bay; admittedly, this is a challenge. An extensive redesign of the estuary could never restore the original, natural conditions. However, something of high quality can easily be imagined: it would not be the appropriate site for a large ballpark and the necessary parking lots, but instead a significant open-space resource with a diversity of recreational uses.





Several design alternatives addressing the unification of the Kellersberger and Brooklyn grids and the environmental mitigation of the Channel were proposed during a Fall 2001 Urban Design Studio. Student proposals, from left to right: J.C.S. Huang, T. Greenan.

A redesign of the estuary might also constructively address the intersection of Oakland's historic Kellersberger and Brooklyn (now East Oakland) grids. Most importantly, the design would necessarily address the current environmental state of Lake Merritt, which is maintained artificially as a lake only with a constant removal of plant material below the waterline. Functioning instead as a natural, tidal marsh, Lake Merritt could potentially act as a cleaning filter for the runoff waters of the Oakland Hills as well as the polluted seawaters of the Inner Harbor, all made visible in the modest, and yet constant, rhythms of the tide. A new design that deals with nature in the city *and* heightens the experience of natural processes will require the invention of a new aesthetic.

Additional urban design alternatives from the Fall 2000 Urban Design Studio, clockwise from top left: K. Irani, D. Davis, S. Pellegrini, R. Vargas-Hidalgo.

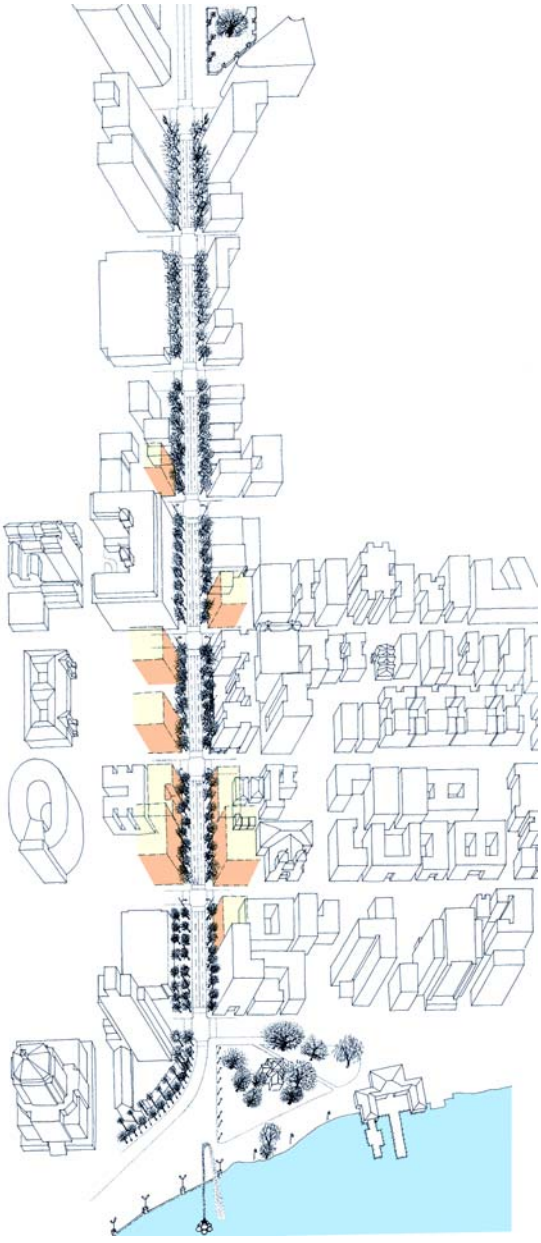
Building a New Urban Structure That Avoids Further Fragmentation

The traditional urban renewal models of land assembly, clearance and redistribution no longer work in the current effort to revitalize the inner city. We were surprised to learn how much credibility this old model still had in Oakland. In order to make potential development on vacant parcels more efficient, the Redevelopment Agency staff is still ready to condemn existing homes on adjacent properties that are perceived as marginal. Ideally, the agency would like to develop no less than a full city block; even existing street rights-of-way that are not necessary for vehicular circulation can still be closed.

A new model of urban renewal would protect existing residential properties. The model would also protect the existing parcel structure, because it offers sufficient opportunities for projects at different scales. After decades of land assembly and consolidation associated with urban renewal, very few small parcels in the inner city remain. The small-scale development of these small parcels that are available, however, can provide the downtown area with a necessary fine grain that will invariably reduce the inevitable, institutional quality of the downtown area. Small parcels are associated with frequent entrances, architectural diversity and variety in the otherwise coarser grain of the urban fabric. Most importantly, smaller parcels can offer a richer and more diverse pedestrian experience. There is nothing as important to the pedestrians of the inner city as attractive and well-functioning sidewalks.

Downtown Oakland has many residential structures of a quality that is perceived as marginal by the staff of the Redevelopment Agency, and they have the power to condemn and use imminent domain to remove such structures. Many of these structures serve as residential hotels that house the elderly. Others are old Victorian townhouses once typical of central Oakland; even some clusters have survived. The current effort to build new housing should not remove what urban renewal did not already demolish; this form of public intervention would be counterproductive to the creation of the new inner city. There is sufficient room in downtown Oakland to accommodate 10 thousand—and more—new residents at a variety of building scales and densities.

Implementation of a policy that protects existing housing has local support. It will surely be argued that absentee landlords might benefit from added value resulting from the upgrading of neighboring properties; however, over time much of the added value will be reinvested in the upgrading of structures that are currently considered "marginal." The Mayor, when asked



At left, aerial view of 14th Street illustrating potential infill sites along new Boulevard, extending from City Center (above) to Lake Merritt (below).

publicly how his proposal to house 10 thousand new residents would help people of moderate income, countered that downtown Oakland currently provided enough housing for moderate-income groups; what it did not have was market-rate housing. Clearly, the Mayor will continue to be challenged on what he means by "enough," especially if the existing housing for moderate-income residents is threatened.

The call to move back into the inner city comes at a time when city culture is not at its best. Collectively as a society, we have done more to dismantle the civic nature of cities than to foster a tradition of living together in central locations. The individual, regardless of income or social status has thus become isolated from urban places, losing membership in city society. This is a global phenomenon. For the French sociologist Alain Touraine, the question is of a high political priority; shall we accept the fragmentation of the city and society, or shall we try to invent a new kind of wholeness?[12] For design and planning professionals, it is important to understand that the responsibility for creating a new wholeness does not only rest with them. It takes more than physical structures to invent a new wholeness. But theirs is a special skill that allows others to imagine what life in the city could be like.

A vision of a new Oakland: neighborhood street in the Valdez district.

Acknowledgments

The Oakland project discussed here began in late 1999 as work commissioned by the City of Oakland. Shunji Suzuki helped in the modeling of various density scenarios and area-specific clusters. Hiro Sasaki helped with a focus on neighborhood improvement strategies. The work was coordinated with detailed development of housing types by Dan Solomon and John Ellis, cost estimates by Charles Pankow Builders, and development strategies by Robert Charles Lesser &Co. The second phase of the work was directed by Harrison Fraker and presented in a report to the City of Oakland on February 10, 2000. Work from the third phase of the Oakland project was generated by the following students: Kristine Agardi, David Davis, Trent Greenan, Justin C.S. Huang, Khushru Irani, Ashish Karode, Stefan Pellegrini and Roxana Vargas-Hidalgo. Their designs of the Lake Merritt Channel area are included here. All other illustrations unless otherwise noted have been produced by the authors.

Notes

1 We have borrowed this argument from Thomas Sieverts, a German town planner and his book *Zwischenstadt, zwischen Ort und Welt, Raum und Zeit, Stadt und Land*. Bauwelt Fundamente 118, Vieweg & Sohn , Braunscweig/Wiesbaden 1998.

2 See Irwin Altman, Martin M. Chemers, *Culture and Environment*, Cambridge University Press, 1984.

3 Witold Rybczynski, *A Clearing in the Distance, Frederick Law Olmsted and America in the 19th Century*, New York, Simon & Schuster, 1999, Touchstone Edition, p.184.

4 *A Swiss as Surveyor and City Planner in California, 1851–1857*, California State Historical Quarterly, March 1968.

5 Julius G. Kellersberger, *Erlebnisse Eines Schweizerischen Ingenieurs in Kalifornien, Mexico und Texas zur Zeit des Americanischen Bürgerkrieges*, Zürich, Juchli & Beck, 1897.

6 John W. Reps, *The Making of Urban America: A History of City Planning in the United States*, Princeton, NJ: Princeton University Press, 1965.

7 UC Berkeley/ Downtown Oakland Housing Program, 10 February 2000. Solomon Architecture-Peter Bosselmann Urban Design-Robert Charles Lesser & Co.-Charles Pankow Builders.

8 Jane Jacobs, *Cities and The Wealth of Nations: Principles of Economic Life*, New York, Vintage Books, 1985.

9 Amos Rappaport, *Perception of Density*, Environment and Behavior 7, no.2 (June 1975). Also William Michelson, *Environmental Choice, Human Behavior, and Residential Satisfaction*, New York: Oxford University Press, 1977.

10 Peter Bosselmann, *Representation of Places*, chapter 8, Berkeley: University of California Press, 1998. The chapter reports on research done by Robert Cervero and Peter Bosselmann: *An Evaluation of the Market Potential for Transit-Oriented Development Using Visual Simulation Techniques*, Institute of Urban and Regional Development, University of California at Berkeley, Monograph No. 47, 1994.

11 Peter Bosselmann et al., *Urban Form and Climate*, Journal of the American Planning Association 20, 1995.

12 Alain Touraine: *Die Stadt - Ein überholter Entwurf* (The City - An Outdated Design), Monatzeitschrift für Kommunalpolitik, Bonn, March 1996.