

Tomorrow is Here: New Haven and the Modern Movement

The New Haven Preservation Trust

Report prepared by Rachel D. Carley
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Tomorrow is Here: New Haven and the Modern Movement

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Introduction

Supported by a survey and planning grant from the History Division of the Connecticut Commission on Culture & Tourism, this overview of modern architecture and planning in New Haven is the first phase of a comprehensive project sponsored by the New Haven Preservation Trust. The intent is to investigate how and why the city became the center for one of the country's most aggressive modern building programs of the post-World War II era, attracting a roster of internationally recognized architects and firms considered to be among the greatest leaders of the modernist movement.

Although the architectural heritage of this city includes fine examples of early 20th-century contemporary design predating the war, the New Haven story relates most directly to the urban renewal years of the 1950s to 1970s and their dramatic reshaping of the city skyline during that period. Here, as elsewhere, redevelopment advanced under the influence of a socially progressive movement rooted in Bauhaus-inspired ideas that represented a correlating break from the historically based traditions of previous eras.

Due in part to concerns over poverty and housing needs brought about by the Depression, the first serious thinking about rebuilding the city on a modernist model emerged around the onset of World War II. At the time, apprehensions over the effect of suburban growth on traffic and the downtown business economy were rapidly rising. The year 1941 can be considered a pivotal date, since that was when the city commissioned its first modernist master plan from Maurice Emil Henri Rotival, a French-born planner and Yale professor influenced by Le Corbusier. It was also in 1941 that Yale University, soon to be one of New England's leading campus patrons of the moderns, hired the architect Philip L. Goodwin to design Yale's first modern building. Two years earlier, Goodwin had collaborated with Edward Durell Stone on the 1939 Museum of Modern Art in New York. The Yale project, an addition to the art gallery, was eventually taken over by Louis I. Kahn, but the initial Goodwin commission represented an important break with the Beaux-Arts tradition and a commitment to the avant-garde.

The political and business skills of Richard C. Lee, the mayor of New Haven from 1954 to 1970, had a significant impact on the effort to reinvigorate a dying manufacturing town and make it one of the country's "first slumless cities."

By mid-century the plan was garnering national recognition for its sweep and modern vision. No other American city was quite so consumed. When urban renewal funds became available in the 1950s, New Haven stood first in line to receive massive infusions of state and federal aid (five dollars for every dollar spent locally), and the city became the country's leader in

per capita appropriations of public funds. Dollars poured in for highway construction, school building, neighborhood revitalization, and downtown business development. By 1971 urban renewal had affected one-third of New Haven's land area—or approximately 2,400 acres—and one-half of its population.

But the sheer scope of the redevelopment program is only part of a story played out in a locale already set apart from other renewal centers of similar size, such as Trenton, New Jersey or Buffalo, New York, by its Puritan roots, colonial layout, and a powerful ivy-league presence. New Haven was different: its program bolder and its political administration exceptionally astute. The forces for redevelopment coalesced in the right place (a coastal location at the interchange of two major highways) at the right time (an era of rising automobile travel and failing city centers).

As New Haven and Yale sought out high-profile designers, the skyline gained monumental buildings conceptualized by the likes of Paul Rudolph, Marcel Breuer, Gordon Bunshaft, Kevin Roche, John Dinkeloo, Eero Saarinen, Edward Larrabee Barnes, and Louis Kahn (the latter a pioneer in public housing design) added to the remarkable list of architects who worked closely on renewal plans for New Haven's blighted inner-city neighborhoods. Many well-known local talents—including E. Carleton Granbery; Herbert S. Newman; and the firms of Douglas Orr, deCossy, Winder and Associates as well as Carlin, Pozzi and Millard—also fell under the modern influence, and frequently worked in association with the nationally recognized names.

The significance of Yale's role in cultivating modern designers revolved largely around the Department of Architecture, located within the former School of Art and Architecture, where forwarding the modernist agenda was as much an intellectual process as anything else. Previously, in the late 1920s, the school had established an innovative "visiting critics program" in order to expose its students to a wide range of contemporary points of view and also provide advanced students the opportunity to work with leading architects. The program helped to emancipate the visual art schools from a period of pre-war doldrums by attracting a cycle of personalities and egos responsible for turning the design departments into an animated forum for the exchange of ideas. When Oscar Niemeyer, the Brazilian modernist originally selected to be the first visiting critic in architecture, had to decline the invitation because of visa problems, Louis Kahn arrived in 1947 to fill that role.¹

For institution and city alike, modernism was the design canon for and of the era. As defined by Eero Saarinen, the "three pillars" of modern architecture—functional integrity, structural honesty, and truth to the times—were equally relevant to Yale's academics and New Haven's city planners. In the classroom and in practice the movement's proponents shared a faith

in the ability of modern architecture to fulfill the needs of complex building programs. Above all, they understood the capacity of a building to convey an image. A. Whitney Griswold, the Yale president who hired Saarinen as campus design consultant and led the university through much of its modernist period, put it succinctly: “A great university should look at architecture as a way of expressing itself. It can do this only by choosing to use the very best architects of its generation, men who see history as a continuous stream, not a stagnant pool.”²

It would be difficult to imagine that any city administration with the staff and budget Mayor Richard Lee was able to assemble could revert to a pre-war design sensibility in order to shape the building program Lee imagined for New Haven. Modernist architecture and planning principles resonated because they demonstrated a commitment to the new and better, or, more precisely, to *betterment*.

That belief, intrinsic to Bauhaus and Corbusien theory, is what made the movement an ideology rather than a style. Both in the U.S. and abroad—where the modernist approach infused reconstruction efforts with particular hope for the future in the aftermath of World War II—the renewal of destroyed or decayed urban centers went beyond the physical improvement of the built environment. Reduced to essentials and stripped of meaningless ornament, modern architecture was “good” architecture. It would raise people out of the culture of poverty, just as rearranging the messy layers of the past into a superior geometry of order and cleanliness could ensure a better life. Urban plans dictated by function and practical purpose acknowledged the efficiency believed fundamental to a progressive, machine-age society and promised its citizens would be well and fairly housed, with access to schools, medical care, and public transportation.

From the perspective of modernism, negating history was a necessary part of the process of being true to the times. Razing old neighborhoods provided the apparent means to vanquish slums and revive failing business cores. Technical advances and systemized assembly-line production enabled economic structural innovations, while high-speed roadways and large-scale buildings with simplified shapes offered visual proof of progress that anyone could grasp.

Architects energized by the era’s Utopian spirit readily adopted the lessons of function and formal clarity taught by modernism in the effort to liberate architecture from its historical bonds. Buildings everywhere rose on the Corbusien columns, or “*pilotis*,” designed to lift buildings off the ground so the landscape could penetrate the structural mass. Glass curtain walls provided a functional distinction between skeleton and skin and freed exterior walls of their traditional load-bearing responsibilities. The open floor plan forever redefined interior layouts.

As the modern movement departed from the optimum lightness of the early “International Style” phased toward the weightier, “brutalist” expressions associated with Paul Rudolph and his

followers, designers working both in and outside of the political and academic arenas considered so influential in New Haven experimented with an ever-widening and intriguing range of post-War, industrial-age materials: tinted glass, oxidized metal, distressed concrete, machine-polished brick. Even while stripping buildings of “useless” surface ornament, architects found room for individuality. Like any design movement, modernism yielded the banal along with its moments of brilliance. New Haven has both, and everything in between, and there will never be consensus about which is which. The vast scope of urban renewal, the sheer range of projects and the mix of personalities peculiar to the New Haven story, however, have left a modern legacy as rich and varied as that of any American city to rebuild after World War II—and one surely worthy of critical analysis and documentation.

Part One. Past as Prologue

New Haven, never a city easily defined or categorized, began its life as a nonconformist even before most of Connecticut existed to establish a norm. Founded in 1638 as a theocracy by puritan merchants in search of a profitable trading site, the town was a bible commonwealth with commercial aspirations. With no legal claim to their plantation under English law, the colonists



The nine-square plan, from a 1748 copy of 1641 Brockett Map. Courtesy of the New Haven Museum and Historical Society.

purchased the land from the natives and established a settlement—under the leadership of John Davenport, an Oxford-educated preacher, and Theophilus Eaton, a London merchant—that was independent of any colonial jurisdiction. Within a few years the founders had persuaded the neighboring plantations of Guilford and Milford to join them as part of the New Haven Colony, which maintained its autonomy until it was included, at great resistance, with the territory granted by England under the Charter of

1662 to the Connecticut Colony.

The core settlement of New Haven was situated on a broad plain located within the protective embrace of rugged ridges of trap rock (East and West Rocks in New Haven and Mill Rock in Hamden). The site abutted the Long Island Sound to the south and was bordered on the east and west by three rivers (the West, Mill, and Quinnipiac). These waterways powered mills and provided inland transportation routes. Before the dredging and landfill that later altered the coastal configuration, the settlement stood very nearly on the shore: the name “Long Wharf”

derives from the periodic extension of the main shipping pier, built ca. 1682 and early known as Union Wharf, over the mud flats into deeper harbor waters.

New Haven's symmetrical plan of nine equal squares of 25 acres each—eight squares arranged around an open marketplace/common with a meetinghouse at its center—was surveyed by John Brockett and laid out in 1641. As the nucleus of New Haven the nine-square grid is the city's symbolic and geographic heart, and has continued to be a shaping force on its urban character. Indeed, no significant example of the many schemes advanced in the city's long pursuit of urban order has failed to acknowledge or include the New Haven Green, which has been recognized as a national historic landmark (the highest historic designation in the country).³

The concept of the meetinghouse green as town square was the norm in early Connecticut and Massachusetts settlements. The compelling geometry of the New Haven model, however, was unique among the New England colonies and has inspired much speculation over origins rooted in a complex and ancient ancestry. The grid-and-plaza plan represents the essence of order and containment, and served as the foundation for Greek city-states, Roman military camps, and colonial outposts throughout the world. It was the basis for Vitruvius's classical ideal, reincarnated as the civilized model of Renaissance urban planning, and, on the higher plane of biblical context, represented the prophet Ezekiel's ideal image of Jerusalem reborn.⁴

With the eastern orientation of its meetinghouse, the Old Testament symbolism of the plan has been much debated in connection to Davenport's New Haven ("then came he unto the gate which looketh toward the east . . ." from Ezekiel, 40). In designing the 17th-century plantation as a square, New Haven founders set the corners of the settlement roughly, though not precisely, at the four cardinal compass points. No one knows for certain whether the corner direction had particular meaning, but the orientation made it possible to angle the geometric plot to advantage between the two bordering creeks.

The 17th-century attempt to establish New Haven as a mercantile empire proved a false first step. But the settlement found its bearings as an agricultural community, and in 1718 became the new location for Yale when the college erected its first New Haven building at the green's southwest corner. The Milford highway route, established by 1639, crossed the West River into the settlement at what is now the intersection of Davenport, Congress, and Columbus Avenues. During the colonial era, the city grew slowly and did not extend much beyond the original nine squares, with the exception of some moderate expansion in the area of present-day Water Street.

The excellent harbor positioned New Haven well during a more prosperous era of New England packet trade in the late 1700s. In 1784, the same year both cities were incorporated, New Haven and Hartford became the joint capital of the new state of Connecticut. By the late 1700s a

network of roads extended from New Haven's nine-square city center to points west, north, and east. The Derby Turnpike, chartered in 1798, established Chapel Street as a main cross-town thoroughfare, and the only highway to run from east to west through the center at a straight shot. As farmers pushed into the outlying lands, separate settlements eventually broke off and incorporated as new towns—Hamden, West Haven, East Haven, North Haven, and Woodbridge—to form a ring of future suburbs just outside the reconfigured city borders.

Maritime commerce with the British and French West Indies continued to flourish until cut short by the 1807 Embargo Act and the War of 1812. But during the 1800s, New Haven built its own diversified industrial economy, producing firearms, leather and shoes, clocks, hardware, carriages, and other commodities.⁵ The first of the downtown neighborhoods to grow up in relation to the maritime trades was “Newtowne” on the east side of East Creek, where the 1825 layout of a new residential district, Wooster Square, coincided with plans for the short-lived (1825–39) Farmington Canal project. The canal provided an inland freight route from New Haven to the affluent upper Connecticut River Valley via Northampton in Massachusetts, and strengthened New Haven's position as a distribution point for trade goods. Related commercial activity encouraged the development of the southeast, or so-called “ninth square,” as the city's most densely built financial and commercial district of the era. Even though a fire in 1830 destroyed some 30 of the harbor warehouses and commercial buildings at waterside, the subsequent arrival of train service in 1839 and 1847 and its associated rail yards secured for the city a prominent hold in a regional trading market supported by rail freight.⁶

Manufacturing sustained the economy into the 20th century, and the related growth of the immigrant labor pool helped to swell the population from 108,000 in 1900 to 160,500 in 1940, an increase of more than one-third. The role of New Haven factories in meeting the demand for supplies and munitions created by World War I continued with a robust World War II defense industry.

The City Beautiful

The physical expansion associated with economic growth in New Haven conformed to the pattern of industrializing cities in the Northeast. The streetcar developments that made two-family houses such a defining characteristic of New Haven's early 20th-century streetscape represented the first major stages of suburbanization, which exerted a gradual outward pull on the population. In the downtown industrial areas, European immigrants, followed by African Americans migrating from the south as agricultural jobs disappeared, shaped and reshaped the demographics of the older

neighborhoods. Both immigrant and African American workers tended to congregate near factories and other major employers.

Around the turn of the 19th century, an intense period of downtown building occurred in an effort to bring outdated structures up to modern standards and relieve congestion. The era's most significant urban planning initiatives included building parks, designing a campus at Yale, and privately backed civic improvement projects. Edgewood Avenue and Edgewood Park, for example, are part of an extensive park system designed ca. 1885-95 for New Haven by Donald Grant Mitchell, a New Haven Renaissance man of many interests and talents, widely admired in his own time as an essayist, rural philosopher and landscape designer. Although Mitchell's park scheme was never brought to complete fruition, in concept alone it constituted a noteworthy effort to meld recreational green space, available to all sectors of the public, into an urban setting.⁷

Edgewood Avenue originated as a genteel, tree-lined *allée*, and its role as an ordering element within the urban setting foreshadowed two significant Beaux-Arts plans of the early 1900s: a monumental, landscaped city entrance in 1910 to link the train station at the southeast corner of the grid with the center of New Haven, and a master campus design for Yale in 1919. The entrance scheme was part of a comprehensive, detailed master plan prepared for the New Haven Civic Improvement Committee in 1910 by Cass Gilbert and Frederick Law Olmsted Jr.⁸ The committee, formed three years earlier with New Haven attorney George Dudley Seymour as its secretary and leading voice, was the local advocate for the City Beautiful movement. This national design trend promoted responsible planning, largely in the form of elegant, axial Beaux-



City entrance plan, 1910, Cass Gilbert and Frederick Law Olmsted, Jr., designers. Courtesy of the New Haven City Plan Commission.

Arts schemes, in response to the shapelessness and grit brought on by American's rapid urban expansion in the industrial era.

The City Beautiful influence in New Haven was responsible for a series of new formal public buildings embellished with traditional columns and pediments that reinforced the role of the green as a civic center by organizing the space into a composition of classical dignity. One example was the 1908 New Haven Free Public Library on Elm Street commissioned by the Civic Improvement Committee from Cass Gilbert, one of the era's great architects of Beaux-Arts civic monuments. Gilbert also served as architect for both the 1910 city entrance plan (in collaboration with Frederick Law Olmsted, Jr.) and a new train station in 1918.

The Olmsted/Gilbert commission report is best known for its design of a formal entry from the main transportation hub near the harbor into the city center: a grand, tree-lined avenue linking the plaza at the train depot to the green at Temple Street. This entry scheme, however, was only a small part of a much more expansive study for the entire city, which in fact constituted New Haven's first true master plan for development. Presented as a broad essay on progressive civic values, the plan was based on significant research, taking into account population statistics and addressing problems of unchecked growth and traffic congestion, notably on Church and Chapel Streets. On page after page, the authors presented suggestions for a revised general street system and other improvements contoured to the attributes of East and West Rocks, the harbor topography, outlying neighborhoods, and the central green.

Proposed recommendations addressed problems with the city sewer system and care of the Elm City's famous shade trees. The growing visual blight of trolley car lines, telegraph wires, and advertising signs was cited as a serious issue. Like those planners who followed, Gilbert and Olmsted identified improved transportation as one of the "modern city's most vital concerns." Their recommendations for the "heart of the city" included a proposal to widen Temple Street and another to build a subway to carry the main lines of local and suburban traffic below grade. Additional road widening and extensions, playgrounds, pleasure drives, a system of shoreline parks, and two major circuits (inner and outer) of parkways and parkland augmented their suggestions.

In 1919 Francis P. Garvan, a Yale alumnus and benefactor, commissioned John Russell Pope to design a plan for the Yale University campus. Pope's proposal addressed some of the same issues identified by Gilbert and Olmsted, but on a more localized scale. Pope recommended linking development on the recently acquired Prospect Hill to the main campus south of Grove Street, and provided a monumental campus entrance at Temple Street.⁹ The plan also established strong cross-campus axes, called for a mixture of courtyards and open space, and proposed

collegiate buildings designed in the Gothic Revival style that had been introduced at Yale a few years earlier by James Gamble Rogers with his 1917 Memorial Quadrangle and Harkness Tower.

Had these two schemes for city and campus been executed, they would have provided the formal planning foundation for future expansion and, perhaps, a more cohesive relationship between the Yale campus and its urban boundaries. The lack of adequate support from the city for the Olmsted/Gilbert project, however, left that master plan on the drawing board, and the original Pope plan for the Yale campus, rejected by Yale's governing board, was carried out as a shadow of its initial intention. In 1921 a subsequent, revised Yale campus plan, drawn up by Rogers in the role of consulting architect for the university, preserved the intersecting routes of the interior green known as the "Cross Campus," but eliminated the connecting axes and public spaces that were essential to linking the two sides of Grove Street. Because Yale had long attracted criticism for its perceived insularity as an island of privilege, Rogers actually did attempt to frame his recommendations with the interests of the city in mind.

The New York Times, reporting on a 1922 conference at which Rogers publicly presented his plan, described the architect's proposal that the "university and city unite in planning their buildings, streets and landscapes with a view to making New Haven a college city somewhat of the Oxford or Cambridge type." Rogers declared that it was of "vital importance" to consider new campus buildings in relation to the entire city plan. This occasion, claimed the paper, was probably the first general meeting between both university and municipal representatives to outline future policies.¹⁰ In the final revision, Pope's proposed link from the main campus to Prospect Hill was nevertheless lost, and the composition of intimate quadrangle and courtyards ensembles defining the Yale landscape reinforced a cloistered aspect that nags the image of the university to this day.

Part Two. The City Reacts: Redevelopment and the Early Years

The failure of the New Haven Civic Improvement Committee to obtain the necessary political support for its Olmsted/Gilbert master plan—the first to address traffic and environmental concerns for the city as a whole—derived in part from the absence of a formal planning body to deal with land-use regulations in the town. New Haven administrators were nonetheless starting to tackle issues related to rapid growth, albeit in piecemeal fashion, and by the early 1900s the city had created a Board of Health and Building Inspector's Office.

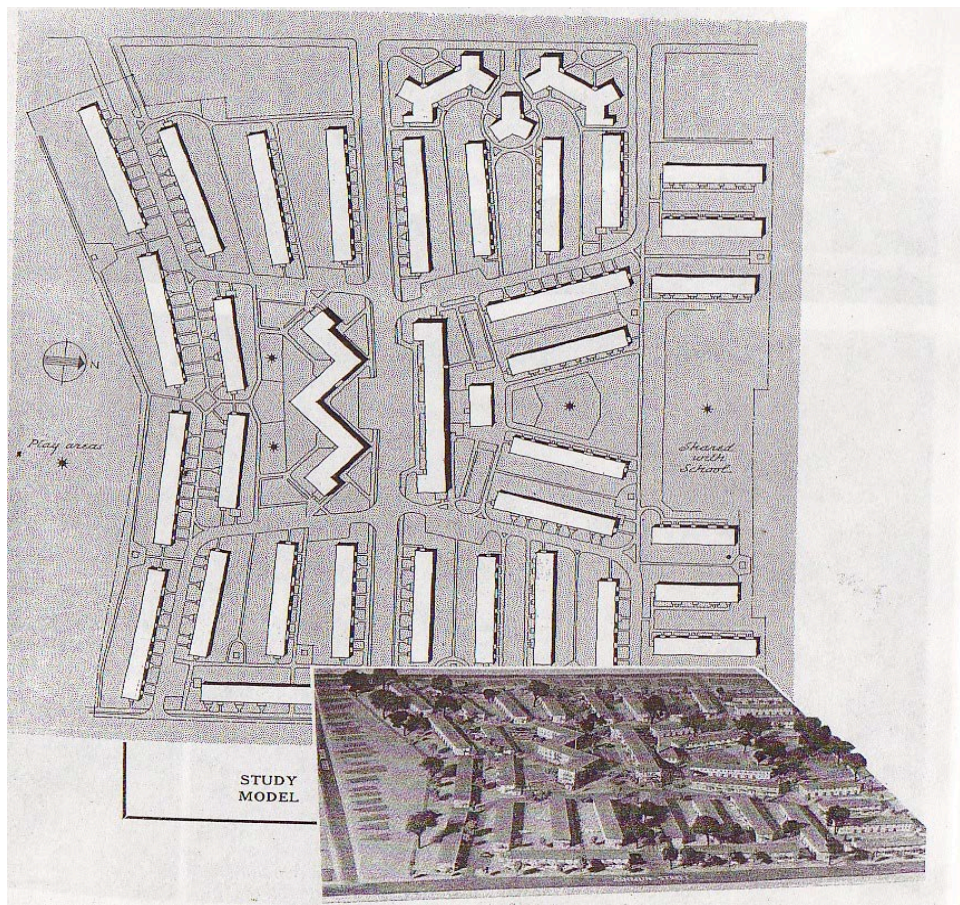
Established by a special act of the state legislature in 1913, the New Haven City Plan Commission was one of the first city planning agencies in the country. In connection with the enactment of comprehensive zoning, in 1923–24 New Haven called for a city-sponsored urban planning study, the “Regional Plan for New Haven.” Prepared by a New York consultant (the Technical Advisory Corporation), the report mapped a complicated schematic of outer roadways designed to divert auto traffic away from the downtown. The consultant believed the city had reached a population plateau and would not significantly continue to grow. That report was shelved, and during the Depression the city abolished its one fulltime city planner position, whose primary concern had been zoning enforcement.¹¹

Even before the Depression, certain facets of the manufacturing economy had been following a downward slide. With the advent of the automobile, carriage making, the city's longtime major manufacturing base, failed. Competition from the railroads, which now carried the majority of higher-value freight, had also cut deeply into coastal commerce, thereby diminishing New Haven's importance as a port. However, production of military goods, clocks, rubber, and the like expanded and drew a steady work force to the city. Between 1890 and 1920 the population had increased at its fastest pace to date. Immigrants from Ireland, Southern Italy, and Eastern Europe and African Americans migrating from the American South accounted for most of that growth. Following World War II, Hispanics from Puerto Rico and migrants from the South constituted the largest immigrant influx into the city.

In 1932 New Haven confronted a budget crisis as local banks refused to continue making loans to the city. As of that year the Yale building program, still under the stewardship of James Gamble Rogers, was responsible for roughly half of the city's new construction.¹² Around the same time, awareness of social welfare problems fostered by the Depression helped to focus national attention on substandard housing conditions, a priority of the Franklin D. Roosevelt

administration. One year after the federal government passed the Wallace-Steagall Housing Act establishing the United States Housing Administration, the Housing Authority of New Haven (HANH) was created in 1938. Government loans were now available to local authorities for neighborhood redevelopment, thereby linking low-income housing directly to the elimination of slums.¹³

Within months, the HANH had started work on the first of three public housing projects designed between 1939 and 1941: Elm Haven in Dixwell, Farnham Courts in Wooster Square, and Quinnipiac Terrace in Fair Haven.¹⁴ One of the earliest designs of its kind in the country, Elm Haven also represented the city's initial endeavor at slum removal. Requiring significant



Plan for Elm Haven (1939-41), Douglas Orr and R. W. Foote Associates, architects. From *Pencil Points: An Illustrated Monthly Journal for the Drafting Room*, July 1942.

demolition and street reconfiguration, the plan created a largely self-contained neighborhood of two-story apartment units arranged around enclosed lawns, with connecting footpaths and parking bays on the outskirts of a run-down area located northwest of the Grove Street Cemetery and adjacent to the Yale campus. City planners envisioned this “modern utopia” as an alternative to

some of the poorest housing in the city.

By the early 1940s these three public projects accommodated a large portion of the work force employed in New Haven's material plants and thus became instrumental in easing the war-related housing shortage. Farnham Court and Elm Haven expanded with high rises in the 1950s and 1960s. Additional housing initiatives of the period included a pilot program between 1942 and 1943 launched under the chairmanship of Dr. Charles Winslow, a professor of public health at Yale, to assess housing quality in the city. The program was updated by the City Plan Commission at the behest of the HANH in 1948 and served as a national model following World War II.¹⁵

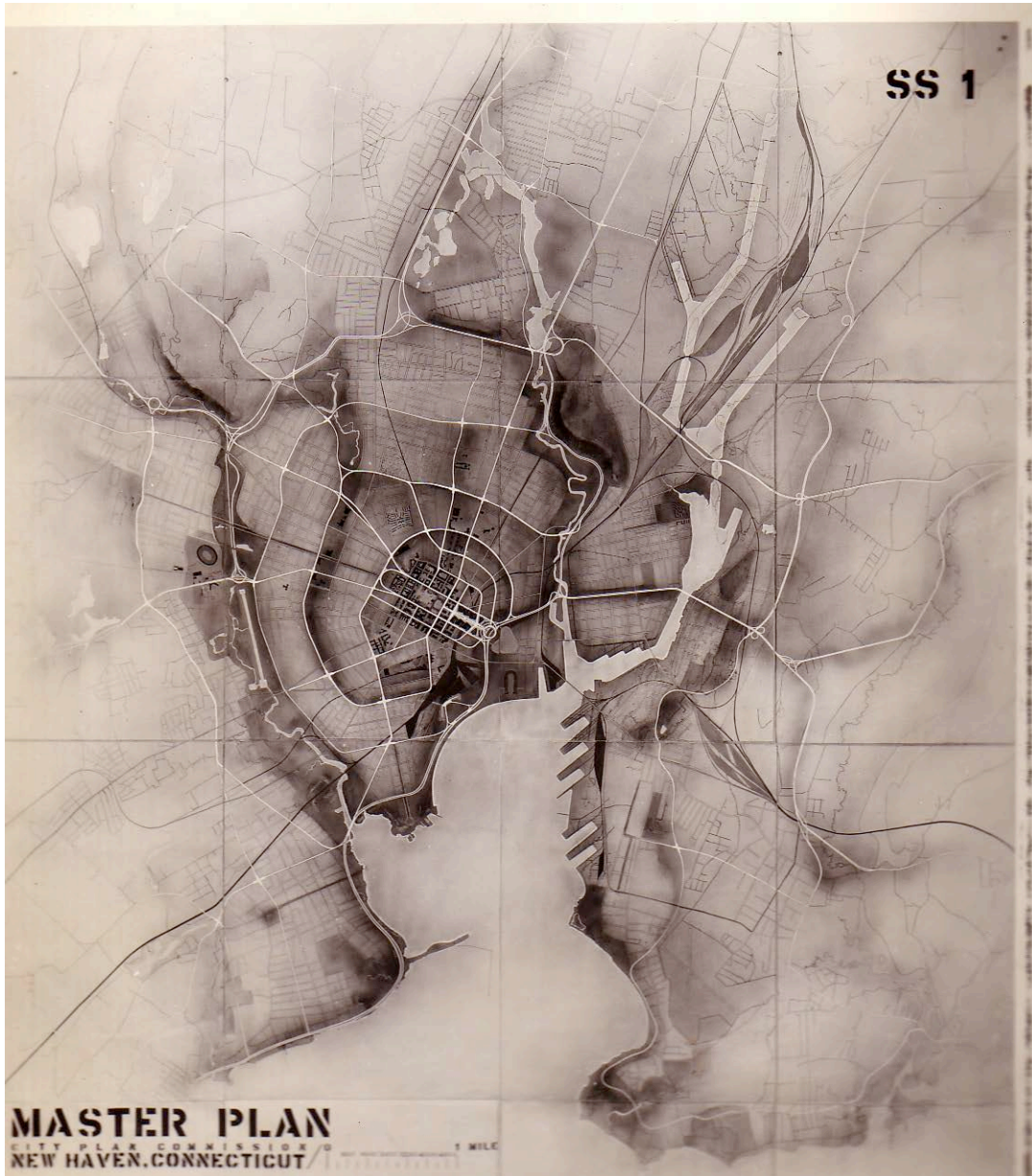
Tomorrow is Here

World War II brought with it a gradual reallocation of manufacturing jobs away from skilled labor, which translated as lower wages. The related decline in shipping plunged New Haven's manufacturing base below the national average and behind even that of cities with comparable demographics, such as Buffalo, New York; Trenton, New Jersey; and nearby Bridgeport, Connecticut. As the industrial base altered, middle-income residents departed inner-city neighborhoods, leaving behind a deteriorating infrastructure and deepening pockets of poverty. As early as 1900 four distinct slum areas had formed: Dixwell (primarily African American), the New Township (Italian), Oak Street (early known as "Morocco Street"), and the Hill (primarily eastern European and Jewish).¹⁶

Even at the start of the war, city officials recognized that the outward expansion pattern foreshadowed serious consequences for downtown business stability. In the early 1940s an initial effort to address long-range planning and the traffic issues related to this concern began under the administration of Mayor John W. Murphy (1932–46), who inaugurated the public housing programs during his first term.

In late 1941, Murphy brought together a coalition of experts into a kind of "urban think tank" headed by Maurice E. H. Rotival, in association with two professors of planning at Yale, Maynard W. Meyer and George A. Dudley. Rotival, a French-born engineer, was a proponent of modernist planning theory and had previously worked on city plans for Algiers, Baghdad, and Caracas. Rotival's New Haven committee, which also included a staff architect and occasional architecture students from Yale, focused on mapping, data research (including population density, housing age, playground location and traffic flow), and interviews with industry leaders, bank presidents, and factory and retail workers.

In a novel approach for the time, the group concentrated their research into a six-month *charrette* with a fixed deadline. The intent was to produce a fundamental scheme without spending the years of laborious investigation often invested in conducting the drawn-out planning



Map of New Haven Traffic arteries, Maurice Rotival. From *Outline of Master Plan Principles*, 1942. Courtesy of the New Haven City Plan Commission.

processes then being pursued by other cities. The resulting master plan, handed over to the mayor in January 1942, outlined the committee's basic recommendations for addressing economic development, population density, and traffic circulation. It was to serve as the foundation for the city's development plans over the next decades.¹⁷

This so-called “Rotival plan” made four basic recommendations: reorganization of the downtown to protect the capital investment in the central business area; recognition of the waterfront as a potential asset for commerce and recreation; creation of an industrial district with potential for expansion outside of the center without compromising the natural beauty of the city; and rehabilitation of decaying residential areas. In that analysis, the Rotival plan echoed many of the core concerns of the 1910 Olmsted/Gilbert report. While three decades separated the two master plans, many of the fundamental challenges confronting the city were little changed. In anticipating increased automobile traffic and suburban growth, for example, the 1910 Olmsted/Gilbert plan had been the first to suggest bypass arteries and shoreline roads on both sides of the harbor—an idea later co-opted by Rotival.

Like their predecessors, the New Haven planners of the 1940s identified efficient traffic flow and a functioning transportation hub as areas of primary concern. To that end, the Rotival group proposed a system of belt roadways similar to the network laid out by Gilbert and Olmsted. It was, in fact, Olmsted’s father, Frederick Law Olmsted, Sr., who first coined the term when he introduced the “parkway” concept to America.

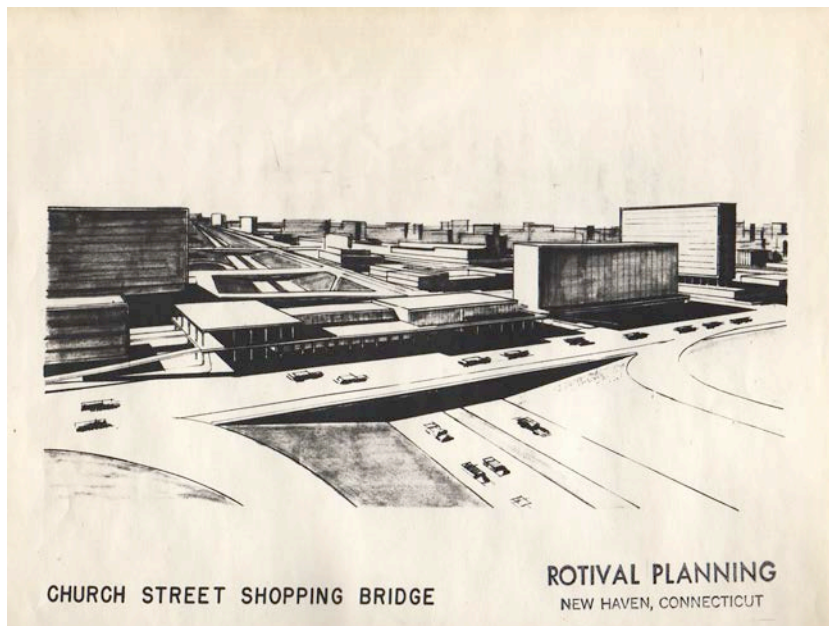
At least two major differences separated the plans, however. One was the vast complex of parks proposed for the 1910 plan, and the other the intervening invention of the high-speed highway. The all-important traffic component of the Rotival plan was intended to rejuvenate the city through a combination of the parkways, “fast-traffic” arteries separating truck and passenger vehicles, and a series of secondary roads connecting to regional and interstate routes. A highway affording passengers a constant view of the sea and a connecting highway bypass directly *into* the city were deemed essential features.

While both city plans were *modern* for their respective times, the Rotival plan was *modernist* in allowing for radical intervention in the form of the massive highways and large-scale demolition. Whereas Gilbert and Olmsted had suggested a sensitive interweaving of greenery and monumental civic buildings—inserting their landscaped boulevard from the train station as a gracious urban threshold wholly in the Beaux-Arts tradition—the Rotival plan reflected the influence of Le Corbusier, the Swiss-born architect and Utopian theorist.

By the 1920s Le Corbusier (born Charles-Édouard Jeanneret-Gris) had published his groundbreaking proclamation, *Vers une architecture* (1923), and was playing an influential role in moving urban planning theory away from the pleasing, humanly scaled garden-city plans that had preceded to the ideas embodied by his famous Utopian plans on paper. Notably, *La ville contemporaine* (1922) and the *Plan voisin de Paris* (1925) called for demolition of the historic

cityscape and rebuilding in the spirit of mass production, using an efficient street grid and buildings ordered into “pure prisms” of concrete, glass, and steel.

In at least one incarnation, Rotival’s ideas for New Haven included a downtown Corbusien “superblock,” with a high-rise tower set in a linear park in the heart of a new business district proposed for the Oak Street area. More to the point, the basics outlined in his report followed the reductive Corbusien theoretical model in its “scientific” approach to achieving the urban ideal by segregating commerce and industry, creating neighborhood “units,” and driving high-speed traffic lanes through the heart of the city.



Proposed Oak Street design, ca. 1942, Maurice Rotival. Courtesy of the New Haven City Plan Commission.

Rotival’s maps and diagrams are particularly revealing for their detached abstractness. Interestingly, Rotival had flown under the famous airman, General Billy Mitchell, during World War I, and the experience of seeing cities from the sky seemed to have allowed him to pull

back from the distracting minutia at hand. This true “bird’s-eye view” may have contributed to the sense that the elements of his New Haven plans were so over scaled that they appeared only to fall into correct perspective with the help of aerial photography. Rotival’s design for the downtown Oak Street area is sufficiently disembodied to have been applied to any city if, as in New Haven, the right number of blocks were swept clean of buildings. In his New Haven schematics, details of the city blocks tend to recede behind a web of traffic arteries circling the city, delineating only its main sections and radiating with disarming vagueness into the distance. Occasionally in the City Plan versions, an airplane or helicopter hovers significantly in the corner.

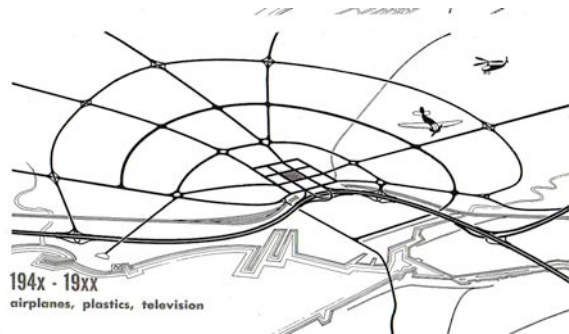
Framed at the onset of World War II, the New Haven master plan was clearly understood to be essential to peacetime planning as the war’s end neared.¹⁸ In 1944 Mayor Murphy’s City Plan Commission published a brochure entitled “Tomorrow is Here.” The pamphlet laid out the Rotival concepts point for point, summarizing an agenda of improved traffic flow and new

streets, bridges, and parking facilities. The brochure also discussed ideas for a larger airport, and a harbor front developed for both shipping and recreation that included playgrounds. Incentives for developing schools and colleges as well as a new city hall and auditorium were also detailed.

Stressing the need to plan for the “coming periods of demobilization and peace,” city officials returned to a strong central business area as a priority. The pamphlet noted the rise of automobile travel and the related move to the suburbs—even the potential impact of air travel—in making the city’s case for a cohesive planning effort that addressed post-war growth.

Among the chief complaints within New Haven were the 30,000 cars jamming “the same old streets.” City Hall predicted that following the war congestion would be so bad that cars would be unable to move. The much anticipated Wilbur Cross Parkway, claimed the City Plan Commission, could not relieve the problem because the majority of vehicles approaching New Haven wished to *enter* the city rather than to bypass it. Good planning would make it easy to drive both into and through the downtown.

“Now the nine squares are losing their power as a center,” the editors asserted. With the Rotival plan supporting its cause, the city advocated a direct attack on the evil, outwardly moving forces of suburbanization. It was essential to bring businesses and residents back to a reinforced metropolitan center with a preserved New Haven Green enhanced by a compact shopping center nearby.¹⁹



Proposed traffic arteries, New Haven, ca. 1941. From “Tomorrow is Here.” Courtesy of the New Haven City Plan Commission, 1942.

The Commission also cited an alarmingly high percentage of deteriorating housing stock, much of it located in run-down areas. Of 44,000 dwelling units, 5,700 lacked private baths. New construction had been trending downwards since 1926, and between 1932 and 1939, reportedly more houses were demolished than were built. The city faulted the old New Haven neighborhoods for mixing industry, business and residence. The new “neighborhood units” would benefit from a combination of houses and apartment buildings with their own schools and community buildings, playgrounds and shopping centers, and revamped streets, looped and closed off to prevent through traffic.

To bring these ideas to fruition, the City Plan Commission recommended revised zoning laws designed to “direct and protect redevelopment,” as well as a legal mechanism to encourage private acquisition of land for redevelopment. In addition, city planners advocated adjusting tax

laws to stimulate redevelopment and suggested coordination of the various building programs of municipal departments into one long-range plan.

By the Boot Straps: The Lee and Logue Years

By the mid-1940s the stage was thus set for massive urban redevelopment. The movement gathered further momentum under the administration of William Celentano (1946–54), responsible for establishing the New Haven Redevelopment Agency (NHRA) during his first year in office in 1946. Because it was authorized to acquire real property through “purchase,



Oak Street redevelopment project area prior to demolition, ca. 1950. Courtesy of the New Haven City Plan Commission.

exchange, gift or by eminent domain, the NHRA was endowed with broad authority for improving deteriorated sections of the city.”²⁰

Moving forward depended on several factors, including the harbor dredging required for creating a viable port and finalization of the Connecticut Turnpike and I-91 routes. Pivotal legislation came in the form of the 1949 Housing Act’s declaration that every American deserves a “decent home and a suitable living environment.” This legislation provided for funding programs directly related to urban housing. Title I financed slum clearance under urban redevelopment (later renamed “urban renewal”) programs; Title II increased authorization for

Federal Housing Administration (FHA) mortgage insurance; and Title III committed the federal government to building 810,000 new public housing units across the nation.

The 1949 Housing Act played an especially important role in New Haven, becoming a central plank in the 1953 mayoral campaign platform of Richard C. Lee, the Democratic reform candidate whose administration spanned eight consecutive terms. Lee acted quickly to move forward on the urban renewal groundwork laid by the previous administrations.¹⁹ With timing already in his favor, the mayor's unique ability to marshal public support for renewal efforts and to funnel state and federal monies into the NHRA made him one of the most powerful forces for redevelopment in the country.

A particularly capable staff also contributed to the effectiveness of a man described by urban historian Douglas Rae as "a genius in budgeting and organization." According to Rae, Lee hired "the smartest and most arrogant people who had ever served in the management of so modest an American city as New Haven."²¹ Chief among them was the New Haven attorney, Edward J. Logue, who had received his undergraduate and law degrees from Yale. He was a prominent figure in both the New Haven and Yale communities, and was married to the daughter of William DeVane, a Yale College dean active in a committee of university associates who had supported Lee's mayoral campaign.

Richard Lee and Edward Logue saw federally financed urban renewal as the future of New Haven, and together they launched a program that would radically transform the city's physical and cultural landscape. Lee immediately tapped Logue to direct the New Haven Redevelopment Agency (NHRA), and gave him responsibility for coordinating the agency's activities with the City Plan Commission, the Parking Authority and Traffic Engineer, and the Bureau of Sanitation, which enforced the housing code.

Mayor Lee knew that the successful execution of his plan relied on the cultivation of public opinion and support from the business community. In 1954 he established his public relations arm, the Citizens Action Commission (CAC) to help reunify the dispersed downtown business elite of previous generations and to put a professional "public face" on his renewal campaign.

The CAC was based on a St. Louis model known as "Civic Progress, Inc.," but the New Haven version differed in that it had official status, a paid director with a \$30,000 budget, and a broader membership of labor leaders, public officials, businessmen, and educators. Carl G. Freese, president of the Connecticut Savings Bank, served as chairman of the CAC. One of its two vice chairmen, A. Whitney Griswold, president of Yale University from 1950 to 1963, represented a prestigious link to the university. The second vice chairman, Merritt D. Vanderbilt,

was president of a local company, Greist Manufacturing.

Interaction with Yale was important. As others had before him, Lee recognized it as the leading institutional citizen of New Haven and he acknowledged a “unity of interests.” Following the lead of previous mayors, the mayor drew on the university’s reservoir of resources. In the early 1950s Yale President Griswold, an important mentor to Lee, reinforced ties by appointing a New Haven lawyer and graduate of Yale University and Yale Law School, Morris Tyler, as the university’s liaison to the NHRA. Other faculty members served on the city’s unpaid boards and in political office. William Miller, professor of the Divinity School, for example, was elected to the Board of Aldermen in the 1960s. Law School dean Louis Pollack served on the New Haven school board, while Herbert Kauffman, political science department chairman, headed both the City Plan Commission and the New Haven Housing Authority.

Equally significant, Mayor Lee cannily perceived the advantage of pursuing high-visibility, even extreme, architectural design. For all the political, financial, and administrative effort occurring behind the scenes, the new buildings were what put the tangible face on redevelopment. “It is not only functionally excellent, but it is eye catching,” Lee once asserted in response to criticism of Paul Rudolph’s huge and undulating Temple Street Parking Garage, a keystone of the downtown Oak and Church Street redevelopment efforts of the 1950s. “It is completely different from any building anywhere.”

Mayor Lee’s desire to bring the leading designers of the era to New Haven put the city on a competitive par with Yale, where from the 1950s to the 1970s President Griswold and his successor, Kingman Brewster Jr., president of Yale from 1963 to 1977, championed the moderns. It also positioned the city as a patron of culture, earning national press and acclaim in the process of showcasing the work of the country’s design and planning luminaries.

For Mayor Lee, as for other urban leaders of the day, the modern movement represented a holistic solution to poverty and moral injustice by addressing residential neighborhoods and city centers, and by eradicating the old, decaying buildings symbolic of a dying city. Lee once referred to his urban renewal program as a “bootstrap operation” that enabled him to lift New Haven up after its years of neglect. Near the end of his life he related a story about a chance encounter with a poverty-stricken family living in unspeakable conditions in the former Morocco Street district, to become the heart of the Oak Street renewal project. “The house had no central heating, it had no water, it had nothing, nothing, nothing,” he recalled. “It was alive with cockroaches and rats.” The experience, Lee said, shook him to the core. Thereafter urban renewal became for him both an intensely personal cause as well as a political commitment: part grand ambition, part altruism.²²

Part Three. Radical Intervention: Downtown Redevelopment and the Oak Street Connector

By the mid 1950s, the New Haven Redevelopment Authority had targeted four basic components for redevelopment: traffic circulation, downtown business development, industrial and harbor development in the Long Wharf area, and neighborhood renewal in several areas identified around the city. Following the recommendations of the 1941–42 master plan and its 1953 “Short Approach” revision drafted by Maurice Rotival with the City Plan director Norris Andrews, traffic planning concentrated on finalizing locations for the Connecticut Turnpike and I-91 (opened in 1966 as an expressway to Hartford), and proposed the relocation of Route 1 closer to the harbor.²³



Oak Street Connector, ca. 1959. Courtesy of the New Haven City Plan Commission.

In quick succession the city drafted redevelopment plans, beginning with Oak, Church, and State Streets, and the Wooster Square area, among others. Roughly half the funding for the ventures (developed with varying degrees of speed and efficiency) was to come from the federal government and city agencies and half from private investors.

The first major downtown projects to be undertaken were the Oak Street and Church Street endeavors. The Oak Street plans provided for clearance of a 42-acre slum district southwest of the New Haven Green and insertion of the state-funded Oak Street Connector, imagined as “an avenue of modern architecture from one end of the city to the other.” By the summer of 1952, the Federal Housing Authority (FHA) had pledged \$4 million in mortgage insurance for a 16-story apartment house to be put up by University Towers on Oak Street land.²⁴ The first commercial buildings included were a new 500,000 square-foot administrative building for Southern New England Telephone (SNET) designed by the office of Douglas Orr and erected between 1957 and 1959, and a medical building by Westcott & Mapes, built from 1962 to 1963.²⁵ Plans for the privately financed apartments and for the SNET offices and its 600-car employee parking lot required the clearance of five blocks between Oak and George Streets.

Linked directly to the construction of I-91 and the Connecticut Turnpike, the Oak Street Connector highway (later renamed the Richard C. Lee Connector) served as both a physical and symbolic manifestation of Rotival’s concept of a central “traffic net,” the necessary catalyst for community development. Lee’s successful bid to convince the state highway department to finance the link as the backbone of the Oak Street project rested on that argument. Running west at Water Street from the Turnpike, the project was adopted in 1955, and the Connector opened in 1958.

Although the Dixwell project at 293 acres was technically larger, Oak Street had the most visible impact of the early projects due to the scale of demolition involved and the sheer power of the imagery of the highway cutting a 300-foot-wide path through the downtown like a speedway to the future. According to initial reports, the construction required demolition of 184 buildings, primarily on commercial and industrial blocks. Badly deteriorated housing was torn away. City officials put the combined value of the demolished structures at \$4.6 million, estimating that tax revenue from redevelopment would compensate for the losses to the grand list.

The expressway doomed a movie distribution center in the Meadow Street area known as “film row.” Ten national studio exchanges had been located there, many of them occupying the 1923 Kilfeather Building, a seven-story structure of brick and limestone so substantial that it took three months to tear down. The Yale nurses’ dormitory on Park Street, a synagogue, and four small churches were also demolished. Among the other Oak Street casualties were the city bathhouse, and Welcome Hall where immigrants to the city traditionally received their first greeting to New Haven.²⁶

Clearance proceeded apace and in May 1957 the city invited the public to attend what it billed as the “biggest auction ever held in New Haven.” The NHRA was offering three blocks of

the Oak Street area “covered with the rubble of old tenements, decrepit shops and dirty factories” at a minimum price of \$700,000. The bidders included several real estate developers as well as Yale, which had been cultivated by the city as one of the necessary private investors for its renewal projects. Facing a severe housing shortage, Yale was shopping for real estate at the time, and Morris Tyler, the Yale liaison named by A. Whitney Griswold to the NHRA a few years earlier, had received the go-ahead from his Subcommittee on Housing for the Alumni Council. In the end, a New York-Boston syndicate, Presidential Realty, outbid Yale. Presidential had originally impressed city officials with design plans by the Massachusetts architect Hugh Stubbins, Jr., but these were later scrapped, and planned retail uses were subsequently separated from the proposed residential complexes.²⁷

A few days after the 1957 auction groundbreaking ceremonies took place for the SNET Company building, with Senator Prescott Bush, a 1917 Yale graduate, invited as guest of honor. As a member of the Senate Banking and Currency Committee, Bush had oversight for the federal urban renewal programs and promoted them heavily in Connecticut.

Backing up to the Oak Street Connector, the new telephone building symbolized the turning point for a prominent section of the renewal area. In 1941 the City Plan Commission had secured funding for the Rotival plan under the leadership of SNET executive Angus Fraser, and the company’s commitment to the Oak Street project yielded the first modern office building in downtown New Haven. Public response had been positive, and the building’s architect, Douglas W. Orr, acknowledged the responsibility of creating a significant addition to the skyline.

The nine-story structure certainly measured up in statistics. Occupying a five-acre site between College Street Extension and York Street, the building held 400,000 square feet of office space and ran roughly the length and width of a football field. At a cost exceeding \$12 million, the SNET building ranked as the most expensive project constructed in the city since the 1927



Former Southern New England Telephone Office Building (1957–59), Douglas Orr and R. W. Foote Associates, architects. Photo looking north.

Sterling Memorial Library, designed for Yale by James Gamble Rogers. According to local papers it was the second largest office structure in the state.²⁸

Orr was a versatile architect who had pleased clients with a range of work in the Beaux-Arts and Colonial Revival styles before the war. With his associate R. W. Foote,

he had designed Dixwell's Elm Haven pre-war public housing project, a series of low-rise brick-faced structures with steel casements and other Art Moderne overtones. The new SNET building, the telephone company's fourth in New Haven, made a distinct contrast to the office's design for the earlier SNET headquarters located at 227 Church Street. Built in 1937 and also designed by R. W. Foote, it was one of the city's finest Art Deco towers (since converted to luxury apartments).

The new SNET structure, incorporating limestone corners and metal-panel window walls, is most interesting for the use of the blue-green porcelainized stainless steel exterior panels, specified for low maintenance in the New England climate. The metal sheathing was designed to hold the vertical channels for window washing scaffolds necessary because the windows were fixed shut to maximize air conditioning. The lightweight metal walls, used together with cellular metal floors, also offered savings in construction costs by reducing building time.²⁹

Despite these innovations, the SNET building loomed rather bland and featureless over its highway setting. Architects in the Orr office called it the Green Giant. Newspaper accounts commented more on the size than the design, and Mayor Lee reportedly hated the building. The architects admitted that the basic program was dictated by the floor-plan requirements of office cubicles and machinery housed inside; the massing, never resolved, is ponderous at best. A few years later Orr's office, working in association with Philip Johnson, more successfully relieved the visual weight of the nearby Yale Laboratory of Epidemiology and Public Health, designed between 1964 and 1965. The six-story laboratory section, faced in limestone, rises over a partially excavated two-story podium base enclosed in glass to serve as the building's office space. A rhythmic series of piers, vaguely evoking Art Deco setbacks, breaks up the two long facades.

Church Street Redevelopment

Contemporaneous with the SNET venture, plans unfolded for a commercial/retail shopping center connected to the Church Street scheme. That project got underway in 1957 after the federal government approved \$39 million in funding (\$13 million in grants and the rest in loans), and required gutting a three-block tract contained by Temple and Church Streets, stretching north/south between the Connector and the New Haven Green.

It was becoming clear to everyone involved that for all its efficiency, the Oak Street Connector was severing communication between the green and points south. Reconstruction of this substantial chunk of real estate with stores, offices, and parking was meant to tie the green back to the Connector. The city's redevelopment team believed that establishing a strong retail

base at the southeast corner would complement the Yale buildings on the green's west side and City Hall on the east side. (City Hall was later targeted for a dramatic overhaul under a controversial plan designed in the early 1960s by I.M. Pei as part of the State Street redevelopment.)

Occupying the desirable “front block,” the retail complex known as Chapel Square rose at the expense of the Gamble-Desmond Building, a fabulous French Second Empire-style department store building that had fronted the New Haven Green since 1871. Chapel Square ultimately comprised a 19-story hotel, shopping mall, and office tower, along with two department stores, Macy's and Malley's, a parking garage, and glass-enclosed bridge connectors.



Architect's model, Chapel Square project, ca. 1957. Courtesy of the New Haven City Plan Commission.

Roger L. Stevens, a Broadway producer and real estate magnate involved with part of the project, lobbied for a complex with grand scale, rather than a shopping center cobbled together into a network of shops and businesses on small parcels. The varied components of the commercial mix reflected the personal input of Lathrop Douglass, the pioneer shopping-mall architect and urban planner responsible for most of the front block. The basic idea was to entice shoppers and businesses downtown by providing ample parking and easy and interesting pedestrian access to, and through, the department stores.

According to Douglass, “glamorous” hotels, office buildings, and other support facilities (medical centers for example) were essential to the success of any central business district. Retail stores and restaurants alone, he believed, could not survive in the bid to draw in consumers from the suburbs.

Douglass's design incorporated a 14-story office tower fronting the green with a two-level, partially excavated mall featuring a central “fountain plaza” planted with 40-foot trees. The two-story retail base, spanning the entire block between Church and Crown Streets, formed a platform for the office tower he planned, as well as a hotel designed by William Tabler. Although the ground-floor shops faced the street, most customers entered them from the mall. This “Shoppers Arcade” also provided access to the hotel.

Design concepts for the department stores and the garage to the south unfolded in an odyssey of revisions. In the late 1950s, the architect Paul Rudolph worked on concept schemes while serving as chairman of the Yale architecture department. The project moved haltingly



The Progress Pavilion, ca. 1960. Courtesy of the City Plan Commission. In June 1960 volunteers convened to build the Progress Pavilion at the corner of Church and Chapel Streets. The temporary structure housed models of the Church and Wooster Square redevelopment projects, along with rotating exhibits to keep people aware of “the changing face of New Haven.”

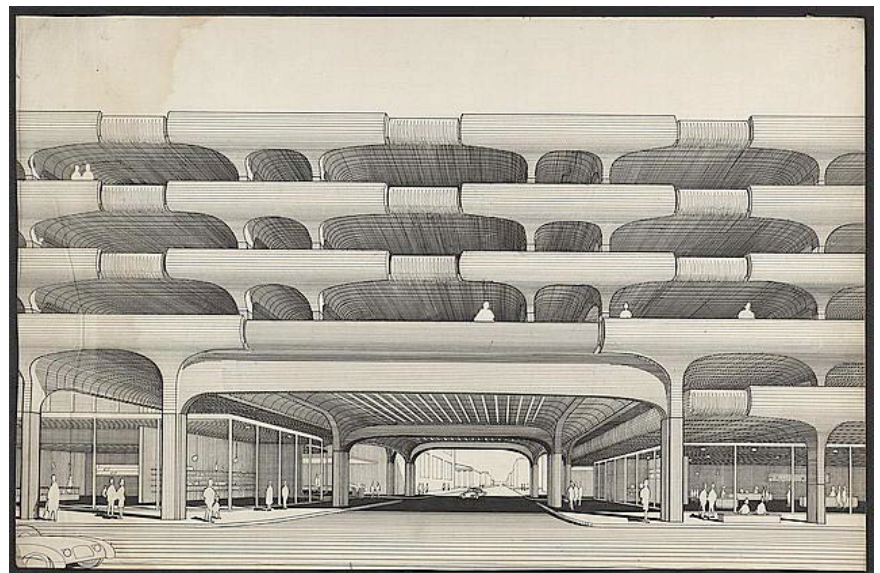
forward, and when the design was finally set in stone in 1962 many of Rudolph’s original ideas, including spanning the Connector with the hotel and garage, were either gone or significantly altered.³⁰

The garage component, always a keystone, was the first to get underway. Financed by the New Haven Parking Authority, the city fixed the site for the facility on Temple Street. Construction started in early 1961, well before the remainder of the complex came together (Malley’s opened in 1962, Macy’s in 1964, and the mall in 1967).

Penetrated at its center by George Street, the 176-foot-long structure provided 11 staggered levels of parking above and

below grade and stretched the full distance of the two-block length of Church and Temple Streets. During interviews Rudolph acknowledged the challenge of integrating this tremendous mass of concrete with the surrounding

buildings. In exploiting the sculptural potential of the material, he wanted the structure to read as a unified entity rather than as a line of receding and projecting parts. The reinforced concrete forms undulate down the blockfronts in a pattern of arched openings, paired columns, and bullnose copings, which cantilever at the upper levels of the building ends. Despite the apparent



Perspective rendering, Temple Street Garage, ca. 1958, Paul Rudolph, architect. Courtesy of the Prints and Photographs Division, Library of Congress.

visual heft, the long facades open into three-dimensional concrete lattice. Long concrete “legs” ease over a lightweight complex of glass boxes designed to hold 40,000 square feet of retail space at sidewalk level behind a sleek line of glass window walls. According to the architect, the interplay of curves, ramps, and bridges expressed a “running mobility.” It was, he declared, an architectural design intended for the automobile, not man.

The New Haven architect Herbert S. Newman, who studied with Paul Rudolph at Yale, thinks Rudolph saw the building in terms of a celebration of the storage of cars. “It’s actually a very romantic structure,” says Newman. Rudolph asserted that in the modern age, parking facilities required precisely this kind of new, dynamic form. “Most parking garages look like office buildings with glass, he explained. “I wanted to make it look like it belonged to the automobile and its movement.”³¹ Rudolph strived for eloquence in his handling of concrete and steel, materials he believed capable of different expressions in the language of a new technology. Artists and architects had to translate the vocabulary for the current times, said Rudolph. In the process, they inevitably departed from the norm, often with shocking results. The means justified the end: the building’s ultimate honesty of form and structure. “[Man] will eventually recognize that which is truly valid,” assured Rudolph, “once he gets over the shock.”³²

Rudolph intended for the garage to be built over the Oak Street Connector and always saw it in relation to that highway rather than to the secondary streets around it. He hoped the building would one day be expanded south to connect to the highway, which the architect regarded as the true approach to the city. In perspective, the garage design is quite elegant. But moving the building into the tighter scale of the interior streets made it more difficult from the pedestrian viewpoint to take in the structure in its entirety—and to see the mass from the vantage necessary to perceive the sensuality of form that is apparent on paper.

Lathrop Douglass argued that one of the chief advantages suburban shopping centers held over downtown locations was their ready supply of grade-level parking. Rudolph’s multi-level alternative offered an innovative urban solution that was never matched in imagination or visual power by any of its New Haven successors, including the nearby Crown Street Parking Garage designed by Granbery, Cash and Associates in 1970. Douglass was right about the value of a downtown parking space: outlasting the mall and both department stores, the Temple Street Garage is one of the few remnants of the Church Street Redevelopment still largely intact and used for its original purpose.³³

The Craving for Bigness

Modern buildings have been criticized for their lack of context, but in truth the expanse of highway and the prodigious proportions of the Temple Street Garage, the SNET telephone offices, and other new commissions going up in the area related directly to the environment. The highway *was* the context. In January 1956 *The New Haven Register* reported that the ten-lane highway, incorporating six main lanes and four two-lane service roads, was to be one of the



Knights of Columbus Headquarters (1967–69), Kevin Roche John Dinkeloo and Associates, architects.

world’s widest systems. Demolition of the old streetscape had produced the requisite clean palette, enabling work to proceed from the ground up; the sheer size of the new road demanded structures that could compete. Large buildings also seemed to satisfy the “craving for bigness” attributed to the American passion for highway travel. The prime consideration was not how each building looked from the sidewalk, but rather how it would be viewed from cars passing by.

“Ours is a society prone to big shapes, big scale,” said Kevin Roche of his 320-foot Knights of Columbus (KOC) tower designed for

the Connector’s North Frontage Road by the Roche-Dinkeloo office between 1967 and 1969. “It may seem out of scale with other structures in the city, but you can’t put a small building near a superhighway.” The firm had already proved that very point with the 1962–64 Richard C. Lee High School, a gargantuan slab of concrete in the Hill section on nearby Church Street South.

As the first true downtown skyscraper in New Haven, the Knights of Columbus building was both figuratively and literally above all about image. When Mayor Lee presented plans for the \$8 million tower at a Hotel Taft press conference in 1965, he proclaimed it to be “fashioned for the 21st century.” The tower (originally planned for 26 stories but later reduced to 23) was to hold offices for about 1,000 Knights of Columbus employees. A bank provided a commercial anchor at the mezzanine level.

The new tower rose on its four corner shafts above the Oak Street Connector as a burly brown colossus designed to project an image of power and stability for the Knights, a fraternal society of the Catholic Church founded in New Haven in 1882. According to the Supreme

Knight, the new building symbolized progress as “a living acknowledgment of all the labors, all the sacrifices...of all our Brother Knights...”³⁴

City officials suggested that the Knights use the firm of Kevin Roche John Dinkeloo and Associates (Roche-Dinkeloo) as architects for the building following their work on the mayor’s namesake, Lee High School. In hiring the first big-name modernist firm to work in the showcase Oak Street area, the partnership was a publicity-smart choice for the city. Roche and Dinkeloo were both veterans of the firm of Eero Saarinen (who was known for varying his style according to the demands of the project) in Bloomfield Hills, Michigan, where Roche had been a principal associate. Upon Saarinen’s death in 1961, the Hamden office of Roche and Dinkeloo completed all of his major projects then in the works, including the St. Louis Arch, the TWA Terminal at JFK International Airport in New York, Dulles International Airport outside Washington, D.C., the John Deere and Company Headquarters in Moline, Illinois, and the CBS Headquarters in New



Louis’s Lunch being moved to its current location on Crown Street, ca. 1974. The Knights of Columbus tower looms in the background. Courtesy of the New Haven Museum and Historical Society.

York.

The enormous columns essential to the profile of the KOC tower, originally designed to hold stairs, ducts, and plumbing, were part of the architects’ solution to a location problem. The site, bounded by Church, George, and Oak Streets, was too small to accommodate a building with the utilities concentrated in a central core as was typically used in Manhattan skyscrapers at the time. The proportions made it

impossible to put offices on the outside and still observe the limits of the floor-to-lot-area ratio.

Roche rejected the idea of isolating services in a separate, attached structure (as Mies Van der Rohe had done in Manhattan’s 1954–58 Seagram Building) to avoid orienting the KOC building in any one direction. As an alternative, bridging the silos of the New Haven building with wide-flange steel girders permitted the designers to fulfill the Knights’ request for an open plan. Separating the services into the corner silos released the 30-foot-square shaft at the center of the building for use as an airy clear-span office space encased in plate glass.

The tile-clad concrete columns, poured using a continuous slipform technique adapted from grain-silo construction, shouldered the building’s 35,000-ton weight in balanced loads and delivered the powerful symmetry the architects wanted. An oxidation process previously tested in 1963 at Roche-Dinkeloo’s Ford Foundation Building in New York achieved the dark reddish-brown patina, designed to prevent corrosion. Mindful of the tower’s size and visual effect, the

builders added one final touch: nighttime illumination for the enjoyment of passing motorists — also meant to warn aircraft from passing too close (!).

By the late 1960s plans were progressing for the KOC building's neighbor, the New Haven Veterans Coliseum, another building designed by Roche-Dinkeloo, and erected between 1969 and 1972. The Coliseum's size was of such consequence that the editors of a 1974 feature published in *Architectural Forum* about the project felt compelled to begin and end their article with caption blocks jammed full of statistics. The measurements were impressive—height: 560 feet; width: 454 feet; columns: 6 x 29 feet; clear span: 84 feet. The exhibition area offered 30,000 square feet and the seating capacity was equally generous at 9,000 for hockey, 20,200 for basketball, and 11,500 for a center stage or boxing.

Crouching a full story over the road under its lid of multiple parking levels, the Coliseum was hailed as the missing piece in the new mix of retail and business activity in downtown New Haven. When the sports arena-cum-expo center-cum-parking lot (with room for 2,400 cars) opened in 1972 after a decade of deliberating and planning, this “amusement magnet” was considered to be the capstone of the central business redevelopment. Richard Lee declared it a “big brawny building,” suited to demonstrating “the strength and skill of athletes . . . with no attempt to conceal its purpose.”³⁵

Mayor Lee was determined to put the arena downtown, and considered the built-in parking lot a key to averting jam-ups on the streets during events. Placing the garage on top of the arena and integrating it into the clear-span truss system specified for the open arena spaces below was considered an ingenious approach on a site where the high water table precluded an underground lot. Street-level shops originally included in the design were never built.

Ironically, it was the parking facility that would ultimately contribute to the structure's undoing. By 1987 the roof level had deteriorated so badly that city officials began to ponder the wisdom of tearing down the entire building. Drivers, in turn, found the space eerie and felt stranded if they were leaving the arena building to walk somewhere else.

For the most part, the architects of the Oak Street Connector buildings were not concerned with creating pedestrian-friendly structures, and monumental towers like the Knights of Columbus Building thus appeared cool and remote from the sidewalk vantage. Reserved for the building occupants, intimate, landscaped spaces often turned inward, as in the “secret” garden of William deCossy's 1965 Community Services Building where the New York landscape firm of Zion and Breen created a lushly planted courtyard and waterfall.

In designing the Crawford Manor Apartments Paul Rudolph specifically addressed the challenge of making the tower, built between 1965 and 1967, an effective piece of architecture

when seen from either far away *or* near at hand. From the highway, the 14-story structure was, according to Rudolph, “a stalk, a landmark.” The vertical ribbing and alternating balconies made a striking impression from a distance. Close to, the projections and Rudolph’s signature texturing (here achieved with ribbed concrete blocks specifically devised for this project) calibrated the scale while creating movement and shadow to catch the interest of passersby.

Crawford Manor was the first high-rise building for the elderly in New Haven, and Rudolph planned it with particular care. Specifications called for the maximum possible number of windows, short, well-lit hallways, and intentionally irregular apartment layouts. The units ranged in size from efficiencies to two bedrooms. The architect credited Frank Lloyd Wright’s Fallingwater as providing the inspiration for the opposing thrust of the balconies, which were key to creating exterior dimension. According to *Progressive Architecture*, the residents loved the building, and Rudolph had apparently been “able to grasp the more brutal components of city living—concrete, cars and sky-high balconies—and turn them into positive, workable advantages.”³⁶

Church Street South

Work on Crawford Manor was still underway when, after failing to attract investors to a proposed light-industry commercial park for the area southeast of the Oak Street Connector, Mayor Lee confirmed a change of program with a 1965 announcement. The city was ready to start a \$15 million dollar housing plan that called for a mix of low- and high-rise public housing, in conjunction with renaming the Church Street Extension as “Church Street South.” The new facilities would fill the area south of the Knights of Columbus Tower and opposite the Lee High School in the old Third Ward section known as the Hill, a neighborhood identified with a long history of immigrant residents.

Here, from another derelict district, would rise a planned community of apartments for families and the elderly linked by pedestrian walks and served by playgrounds, local markets, and a variety of family-oriented amenities, including daycare facilities and a laundromat. The district would gain a new K-4 primary school, and plans were also announced for creating a park on the north side of Columbus Avenue.

Mayor Lee had the added pleasure of unveiling plans for Church Street South by naming its eminent master planner: the German-born modernist Ludwig Mies van der Rohe. Mies delivered a conceptual plan, but in 1967 the former Bauhaus director announced his withdrawal, citing the city’s decision to drop the elementary school. But the differences reportedly ran much

deeper. In distilling his buildings to elegant essentials, Mies—famous author of the dictum, “Less is more”—relied on craftsmanship and material to express structural purity of form. The budget restraints of New Haven’s building program may have significantly contributed to his reaching a breaking point.

Charles Moore was named as Mies’s successor. The planning phase remained fraught as it continued under Moore’s direction, and the project required 32 more site plans and agency reviews before a final program was set. Among its other problems, the Moore design lost many of its early components, including a *Ponte Vecchio*-like bridge of shops and apartments, because it was subject to FHA cuts.

As built, however, the project was still noteworthy for Moore’s attempt to shape a cohesive and vital neighborhood under considerable funding constraints. At the north end stood Tower One, a private moderate-income housing project for the elderly opened in 1971 and sponsored by the New Haven Jewish Community Council Housing Corporation. Designed as a “neighborhood in the sky,” the building included a communal dining room, library, and beauty salon. The remainder of the housing consisted of moderate-income apartments intended for the



Model for Church Street South, ca. 1968, Charles Moore, architect. Courtesy of the New Haven City Plan Commission.

Junior Chamber of Commerce (designed with Herbert S. Newman), and turnkey apartments for the housing authority.

As Moore’s plan progressed, the contrast with the original Mies concept revealed urban planning philosophy at an interesting crossroads. When he resigned from the project in 1967, Mies was 80 years old and near the end of his career (he died two years later). Moore, at 42, was the newly

named dean of the Yale School of Architecture and Design, and his star was quickly rising.

The model for the unrealized Church Street South plan by Mies shows an axial plan with spare, box-like structures raised on *pilotis* and gathered into isolated groups reminiscent of his ensembles designed for the Institute of Technology in Chicago a decade earlier. Moore tried for a more varied and dense arrangement by grouping low-rise clusters around small greens and courtyards and using a pedestrian way as the main organizing element. But in the end Moore’s version also suffered from cost cutting. When the developer substituted cheaper concrete block

for the pre-cast panels specified by the architect, critics castigated the “barracks-like” effect. A remedial paint job intended to improve the look generated even more negative feedback. Moore’s bold shapes, supergraphics, and neighborhood groupings, however, foreshadowed the sense of color and the consideration for scale and human context that would become so important to the postmodern sensibility and ultimately play out in projects like Monterey Place, Dixwell’s most recent housing effort designed in the New Urbanism model and completed by the Housing Authority and the City under the Hope VI program in 2005.

Part Four. Long Wharf: Industrial Park of the Motor Age

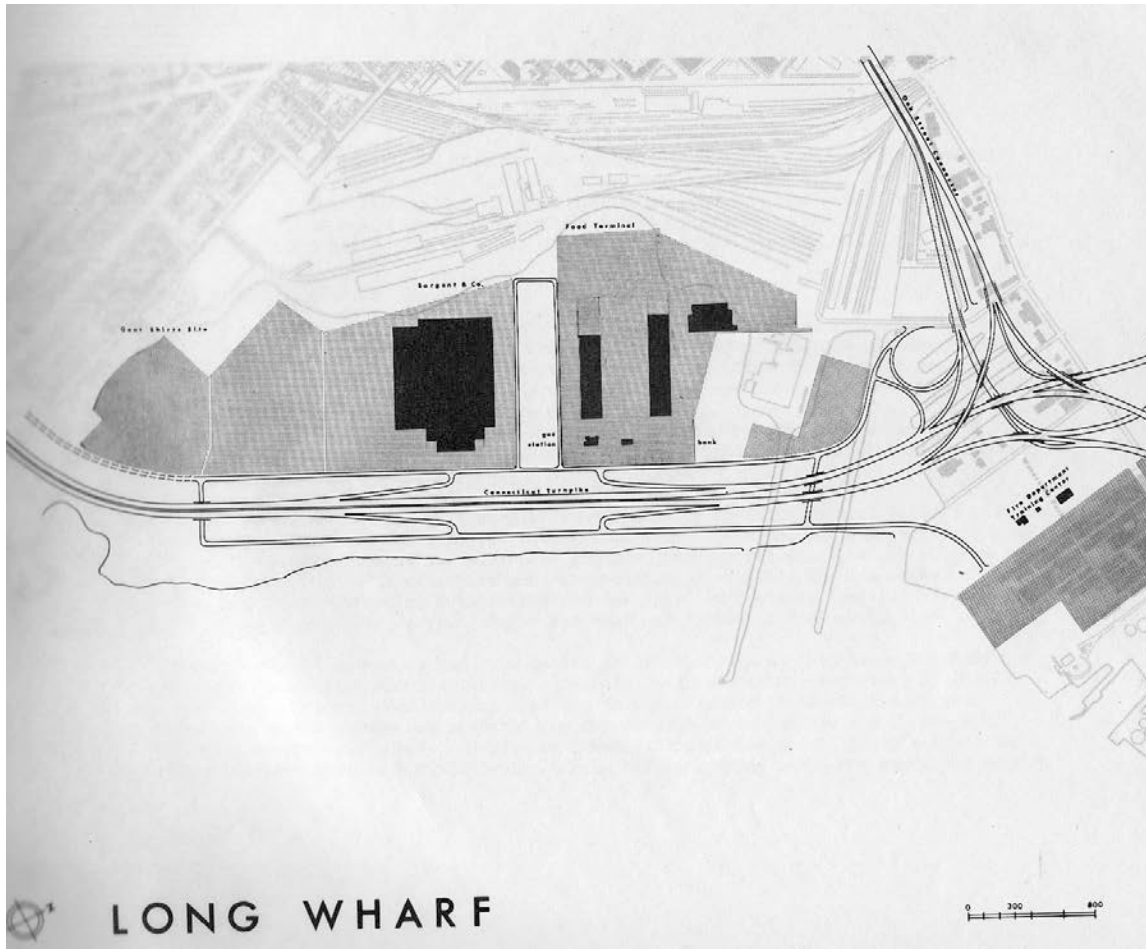
By the time Richard Lee and Edward Logue set their sights on the western shore of the harbor for a new industrial/corporate park, only traces remained of the maritime center that had thrived in that vicinity between the Revolution and the War of 1812. In the early 1800s the district, packed with commercial houses, was alive with the sounds and smells associated with the various enterprises supporting the city's major export trade, involved in supplying butter, grain, produce, livestock, and lumber to the British and French West Indies. Few signs of this colorful history remained by the 1950s. Yet even if they had existed, such signs would most likely have been lost on city administrators bent on making the area near the intersection of major highway projects a modern entrance into a modern city.

Long Wharf, a joint venture of the city and state, represents the only non-federally funded renewal project launched under the Richard Lee administration. The proposal for a terminal market area supplied with refrigeration units, market stalls, and ample parking was suggested during the Murphy administration with the idea of removing businesses from old 19th-century warehouses crammed into a network of narrow streets and relocating them into an efficient wholesale regional distribution center for southern New England. The city believed a single-use district would support new and expanding firms with centralized utilities and direct access to transportation. Aided by exclusive zoning, industry could then develop and grow as necessary.

Several years prior to the development of Church Street South, the City Plan Commission had targeted the blocks south of Congress Avenue and west of South Orange Street to be a consolidated market district. The idea to relocate New Haven's market district to the Long Wharf area on the west side of the harbor emerged in 1948, when officials recognized that the landfill produced by a federal dredging project would make a well-situated building site.

The final redevelopment plan for Long Wharf coalesced in 1958, following the passage of Public Act 8, which provided state funding for non-residential renewal projects. The Citizens Action Commission was instrumental in advancing the project by undertaking the site and cost studies and fighting for the required new legislation. Spurred on in part by the proposed relocation of a major New Haven hardware manufacturer and distributor, Sargent and Company, Edward Logue initially failed to secure a federal urban renewal grant for a new Sargent factory, but later lobbied hard for the legislation by attaching it to the redevelopment proposal for Wooster Square. New Haven eventually received more than one half of the state appropriation, much of which went toward site reclamation and stabilization at Long Wharf.³⁷

The project began with two keystone investments in place: a 52-acre regional food distribution center financed by a private consortium of produce dealers adjacent to a railroad freight depot, and a new \$4 million Sargent plant located in the heart of the district.³⁸ The site where the old Sargent factory had stood on nearby Water Street to the northeast would be bought by the city, cleared, and finally re-sold as a prime industrial site of 23 acres with rail, highway, and deep-water access. Thirty-three acres between the turnpike and the harbor were also set aside for a harbor-front park.



Plan for the Long Wharf redevelopment project, ca. 1958. Courtesy of the New Haven City Plan Commission.

Despite a proposal to enhance the waterfront with an esplanade, marina, heliport, and deep-water cargo terminal, the area west of the Connecticut Turnpike received priority over the waterfront on the east side of the highway. The commissions for the two flagship projects went to established local architects. The Sargent plant (1964–66) was designed by the Douglas Orr office (known as Orr, DeCossy, Winder and Associates as of 1963) in association with Pederson &

Tilney. The firm of Granbery, Cash and Associates served as architects for the warehouse complex, to contain the food terminals and the Long Wharf Theater.

The Granbery firm had been established in the mid-1940s by two couples—E. Carleton and Diana Granbery and Robert T. and Jean Coolidge—whose partnership had originated as one of the first modernist firms in New Haven specializing in contemporary house design.³⁹ By the mid-1960s, Carleton Granbery was involved in housing projects for the elderly, including Katherine Harvey Terrace at Liberty and Columbus Avenue, and the Winslow-Celentano Apartments in Wooster Square.

The Long Wharf plan located the Granbery-designed food warehouses on the back side of the development tract in order to provide access to the freight depot, while the property on the highway was divided into building parcels for the new industrial plants. Positioning the parking lots and freight area to the west created a stage for an expanding line of plants facing eastward and oriented to the turnpike. There the corporate lineup soon consisted of Sargent and Company, 1964–66; the Armstrong Rubber Company, 1968–70 by Marcel Breuer Associates; C. W. Blakeslee & Sons, 1968–70 by Orr, deCossy, Winder and Associates; and Gant Shirtmakers, 1969–71 by the Associated Construction and Engineering Company.⁴⁰

From the turnpike size mattered, and the architects knew the impact would be in the impression, not the details. The building exteriors emphasized strong profiles to create a chain of abstract shapes intended for maximum drive-by effect. The corporate program suited the utilitarian design aesthetic associated with modernism as well as the range of technologically advanced materials increasingly available to builders and architects who experimented with their effects.

William deCossy, the Douglas Orr partner responsible for the Sargent building, said he had tailored the one-story curtain-wall structure faced in tinted glass and chrome to “economical assembly-line production.” The look of that building was long, low, and lean, while the Blakeslee building, also by the Orr office, stood solid and opaque. A manufacturer of pre-stressed concrete—the logical material of choice for the company’s new headquarters—C. W. Blakeslee & Sons supplied the concrete and also served as the project’s builder. Begun in 1968, the two-phase program called for both a 71,000 square-foot headquarters on two levels, and an adjoining 90,000 square-foot industrial/commercial center for long-term lease, to open about a year later. Combining equipment and administrative operations under the same roof, the main level accommodated a 35,000-square-foot clear-span zone devoted to equipment maintenance and shops, and 14,000 square feet of office space flanked by interior courts and gardens. Another 22,000 square feet of office space on the second floor afforded views of the harbor.



South facade, detail, former Armstrong Rubber Company Headquarters (1968–70), Marcel Breuer and Robert Gatje, architects.

Even before the second building was added, the original section by itself had a massive and weighty presence that looked effective from the roadside. The highway elevation presented a true front for the building in that it gave the rear industrial quarters, constituting the bulk of the plant, a sleek corporate facade. Rounded corners and deeply recessed plate-glass windows exploited a streamlining effect enhanced through the plasticity of the creamy poured concrete. The new

quarters were everything the haphazard collection of sheds and barns Blakeslee had previously occupied on and around Waverly Street never could have been. Clean and functional, the building allowed the firm to project an image of professionalism and corporate efficiency. Like the Sargent firm, C. W. Blakeslee, founded in 1844, claimed a long, proud run as a New Haven manufacturer. The deep commitment by both companies to their Long Wharf building projects also symbolized success for the city in the venture.

Of all the new Long Wharf buildings, the Armstrong Rubber Company headquarters, designed by Marcel Breuer and his partner Robert Gatje, had the highest profile. Breuer got the job from Armstrong executives at the recommendation of Mayor Lee, who mandated the involvement of a “name” architect as part of the agreement to sell the property. Other firms competed, but a lower bid and his recent on time and under budget completion of an office building for the U.S. Department of Housing and Urban Development (HUD) in Washington, D.C. helped Breuer secure the contract.⁴¹

The design program for the 200,000 square-foot Armstrong Rubber building derived from a clear separation of functions. The two-story base housed research and development labs for making automobile and airplane tires, and a five-story tower above contained the corporate headquarters. Breuer, known for his fascination with concrete, manipulated the material with more imagination and vigor than had Orr on the Blakeslee plant. But Breuer also had the advantage of a number of his own models to follow, including the 1968 HUD building, one of the first federal buildings to be erected with pre-cast concrete and one of many to rely on a modular approach.

For the New Haven project, the Breuer office devised a combination of poured-in-place concrete and pre-cast panels fabricated as a curtain wall. Hanging the steel-framed office block from cantilevered steel trusses encased in concrete made it possible to suspend the Armstrong

tower, unsupported from below, over a 17-foot-high cushion of open air space so that it appeared to hover above its podium base. Although it has since been truncated, the podium originally extended west into what is now the parking lot for the nearby Ikea home store, so that the building struck a strong asymmetrical posture. Vast lawns (later paved over) enhanced the effect of an abstractly sculptural structure floating over a sea of green.

Breuer respected concrete because it was so inherently functional in contrast to other materials such as steel, which typically required the application of additional materials *to* it. He appreciated the ruggedness of concrete and the “directness” of its expression and he liked that he could coax out, in function, design, and tactile quality, the most from what was essentially a low-budget building fabric.

The repetition of concrete modules in Breuer’s designs was sometimes criticized as being monotonous and bland. But from the perspective of the 1960s, their application, in combination with the “hanging” tower configuration, provided Long Wharf with a blockbuster office building. During the day, the concrete faceting created a play of natural light and shadow



Sargent and Company Headquarters (1964–66), Orr, deCossy Winder and Associates and Pederson & Tilney, architects. Photo looking northwest.

(Breuer’s signature *chiaroscuro*), while at night mercury vapor floodlights (the equivalent of 12,500 100-watt household light bulbs) lit the headquarters like a national monument.

Located at the north end of the line, Armstrong led the corporate plants in their march along the turnpike, paying homage to the American version of Le

Corbusier’s ideal “linear city” in which single-use districts—planned from scratch, efficient, neat—spread out along the nation’s thruways.

At the height of its development in the 1960s, the Long Wharf district was often described as a “threshold” to New Haven, suggesting that the area made a visually powerful entry to the city, or that it was best absorbed and appreciated as a collective speed graphic on the way to somewhere else. As a modern corporate park, however, Long Wharf was also a destination in itself. With an economy of design and material, the new buildings not only integrated factory and

warehouse space, but also melded the basic utilitarian uses with offices, boardrooms, and conference halls to provide one-stop shopping for client, executive, and worker alike.



Former Armstrong Rubber Company Headquarters (1968-70) and temporary car lots, ca. 1970, Marcel Breuer and Robert Gatje, architects. Courtesy of the New Haven Museum and Historical Society.

Creative layouts dealt effectively with the massive square footage of these buildings and provided innovative amenities. An early design (never executed) by Herbert S. Newman for Gant Shirtmakers, for example, included a reflecting pool, plaza, and a circular garden outside the employee cafeteria for “visual relief.” To connect the administrative departments in a line from one end of the 250,000-square-foot building to the other, the architect also proposed an indoor “street” lit by a clerestory monitor.⁴²

When Newman won a citation in 1968 from *Progressive Architecture* for the Gant scheme, he was praised for acknowledging the building’s industrial purpose rather than turning away from it. Perhaps. In truth, Long Wharf (food warehouses excepted) did not appear overtly “industrial,” especially along the tree-lined access road known as Sargent Drive where cars had to slow down to the local speed limit, and the broad lawns and sidewalks imparted something of a suburban feel. Employees of these plants could arrive by car, enter via a parking lot, eat their lunches in a cafeteria, and never have to leave the building until their workday was over. It was a new image for industry: clean, high tech, and middle class. By definition the modern industrial

park had become a sealed environment born of the automobile age and defined by the changing post-war concept of corporate workplace sanitized of urban grit.

Part Five. Housing, Schools and Neighborhood Renewal

If any project could symbolize the hope for innovation and progress in New Haven's urban renewal it was Wooster Square, in 1957 the first of the city's neighborhood areas to receive federal funds. The Wooster Square scheme not only provided for new housing, a school and community center, five small city-owned parking lots, and a variety of parks, but also stood out as one of the earliest urban renewal districts in the country to consider rehabilitating historic buildings.

Beginning in the 1950s, the progress of the city's neighborhood renewal plans, including Wooster Square, was subject to numerous converging factors. Of particular importance in shaping the city's immediate future were federal housing legislation, a comprehensive New Haven school-building program, and a shift in city policy towards project-specific community renewal after the adoption of a new master plan in 1957.⁴³

The 1954 Amended Housing Act, a key influence in housing policy, was the first federal legislation of its kind to advocate for rehabilitation as a primary tool for urban renewal. This shifted the national focus away from radical clearance programs like the one that had flattened Oak Street. Communities receiving federal renewal funds were now required to adopt and enforce codes and establish relocation and other efforts intended to stop the further spread of blight.

By 1954 New Haven had identified a number of areas for renewal, and a sequence of projects moved forward as funding and the other necessary pieces fell into place. Wooster Square was underway by 1958. The next year the city adopted the "Middle Ground Program" in the bid to target Newhallville, Dwight, Fair Haven, and the Hill sections for renewal. Massive demolition had already occurred in the Hill despite a more general move to selective rehabilitation advocated by City Plan director Norris Andrews. Approval for the Dixwell plan came in 1960.

By 1964, a decade after the amended housing act, some 2,000 structures containing close to 4,470 dwelling units had been built or rehabilitated throughout the city. Finalized in 1968 (although never fully realized), the Fair Haven renewal plan was the last major neighborhood project. It called for \$20 million in public investment, including 400 units of subsidized housing, a waterfront park, and a bridge (later abandoned) for the Quinnipiac River. Among the key factors in moving housing community projects forward was the federal Model Cities Program. Enacted under the Lyndon Johnson administration, this HUD initiative selected renewal areas for federal funds as the first step of a five-year plan to improve physical, social, and economic conditions in "large, blighted" neighborhoods.⁴⁴

New Haven's decision to move forward with a school-building program related in part to a provision of the federal urban renewal legislation, Section 112. The law provided an incentive for investment in schools as part of a city's share in renewal costs. Even without the financial motivation, school building and urban renewal made compatible partners in neighborhood



Schematic for the Conte Community School, ca. 1959, Skidmore, Owings & Merrill, architects. Courtesy of the New Haven City Plan Commission.

development. A new school symbolized a commitment to a given neighborhood, and many facilities strengthened that image by serving a dual role as a community center.

The New Haven school-building program grew out of recommendations compiled by Cyril G. Sargent, the director of the Harvard's Graduate School of Education and consultant to New Haven's Department of Education. Adopted by the Board

of Aldermen in 1961, the Sargent Report called for the construction of 15 new elementary and mid-grade facilities. A capital improvement expansion program announced in 1968 provided funds for vocational facilities, including expansions for the Wilbur Cross and Hillhouse High Schools by architects Schilling and Goldbecker, and additions by Roche-Dinkeloo to that firm's Lee High School.⁴⁵

While the program continued into the 1970s, the major thrust occurred under the Richard Lee administration, which oversaw 11 of the 15 projects as part of a total \$17.8 million budget. Six buildings had been completed or were underway by 1967 when the Board of Education named Edward Larrabee Barnes, Earl P. Carlin, John Johansen, and Louis I. Kahn as architects for the remaining projects.

Edward Larrabee Barnes was chosen to be the architect for the two Hooker area schools in 1967 and the East Rock Community School in 1972. As part of the Hill Redevelopment, the city hired Louis I. Kahn to design a site plan for a mix of low-, moderate-, and middle-income housing. Because a new middle school, Hill 5-8, was incomplete when Kahn died in 1974, plans were scaled down; the firm of William F. Pederson and Associates finished the work in 1976 with the essentials of the Kahn design preserved.

Some of these projects represented joint efforts between local firms and better-known modernists, assigned by the city in an advisory capacity. Among such collaborations was the 14-room Timothy Dwight School designed between 1910 and 1917 by the office of Eliot Noyes as a replacement for an outdated facility on Edgewood Avenue, in association with Schilling and Goldbecker, who had been responsible for the design of a number of New Haven schools. Charles H. Brewer, Jr., another local architect, also undertook several projects, including the Clarence F. Rogers School on Wilmot Road.

During this period experiments with floor plans and materials yielded a new generation of public-school design. The Dwight School offered a classroom wall system of staggered pre-cast concrete panels alternating with rectangles of translucent glass designed to filter street noise and minimize outside distractions while maximizing natural light.

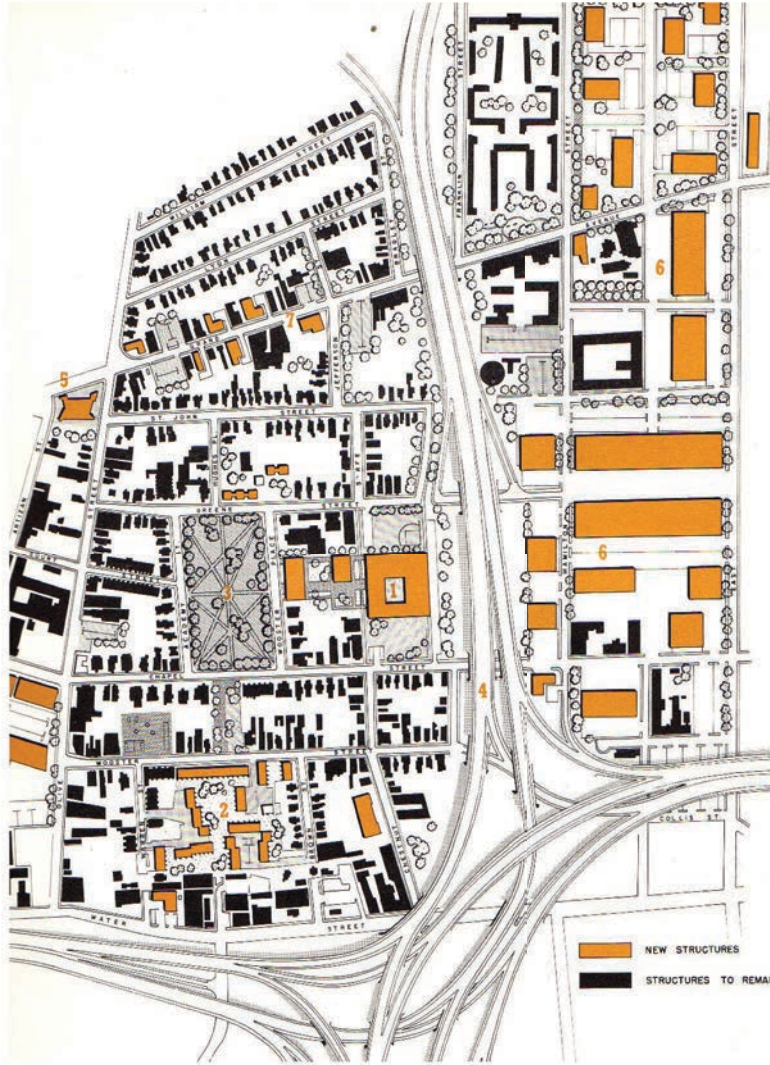
William Mileto's 1966 North Quinnipiac Elementary School featured an elevated kindergarten and sunken areas for small-group instruction. The 1971 Clarence F. Rogers School and the 1972 Hill Central K-4 School by Carlin and Pozzi counted among the first open-plan schools in Connecticut. The Hill project grouped classrooms into multi-purpose pods, open to reconfiguration with portable partitions for "team teaching." Fair Haven's gain was the Christopher Columbus School (torn down in 2007) on Blatchley Avenue. Designed by the firm of Davis Cochran Miller Baerman Noyes with Victor Christ-Janer, this heavily massed concrete structure was credited for its neat use of geometric forms and fenestration arrangements to encourage optimum conditions of natural sun and shade.

Case Studies: Wooster Square and Dixwell

Wooster Square

Although the NHRA also had its eye on other areas in the early 1950s, wrangling over the location of I-91 called attention to the deteriorating district east of the rail tracks where the 1825 Wooster Square had been laid out roughly in the center of the area now bounded by Grand and Water Streets to the north and south, State Street to the west, and I-91 on the east. The final route of the north-south highway separated Wooster Square from Franklin, Hamilton, Wallace, and East Streets. Residential and neighborhood improvements concentrated to the west of the highway, while the proposed industrialization took place in the eastern precinct. There, initial plans included clearing slums for about 30 new industrial sites.

Bordered by Wooster Place and Chapel, Academy, and Greene Streets, Wooster Square's namesake plaza forms the core of a district characterized by Civil War-era villas and Victorian townhouses, which create cohesive rows through much of the district. The historic ambience of the square contributes to a character distinctly lacking from other neighborhoods such as Dixwell, where the Redevelopment Authority was compelled to create new plazas.



Proposed redevelopment plan for Wooster Square, ca. 1956. Courtesy of the New Haven City Plan Commission.

Reflecting the influence of the 1954 Amended Housing Act, the selective approach to redevelopment in Wooster Square emphasized the rehabilitation of older buildings rather than bulldozing and rebuilding. The renewal effort paid off in publicity, earning much attention, including an article in *The New York Times*, for the decision to rejuvenate a group of 19th-century

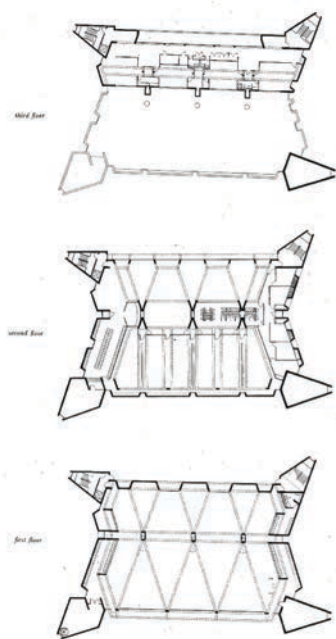
row houses fronting Court Street. Most people had tended to regard the dilapidated buildings as a nasty “skid row.” With landscaping and cul-de-sac parking, however, the restored Court Street townhouses, their ornate Italianate cornices intact, emerged as an attractive “neighborhood within a neighborhood.” Their 19th-century character newly enhanced and appreciated, the Court Street houses and Wooster Square’s six-acre plaza became the nucleus of the city’s first local historic district, designated in 1970.⁴⁶

For the most part, the city limited teardowns in Wooster Square to substandard housing (without bathrooms, for example) located in the smaller commercial areas identified for renewal.⁴⁷ An old school north of Wooster Square was also razed to make way for the Greene Street Town Houses, designed by William Mileto and built between 1963 and 1964. Another low-rise housing project, Columbus Mall, by Carlin, Pozzi and Millard, went up to the south between 1962 and 1964.

Firehouse and School

Two additional “keystone” projects that distinguished the Wooster Square renewal were the 1961–62 Central Fire Headquarters, designed by Carlin, Pozzi and Millard, and the Conte

Community School by architects Skidmore, Owings & Merrill (SOM). From the start, the city envisioned the new fire station as a “gateway” to Wooster Square. Robert A.M. Stern, current dean of the School of Architecture at Yale, asserted in a 1965 issue of the Yale architectural journal *Perspecta* that the office of Earl P. Carlin could claim one of the few true architectural successes of Mayor Lee’s redevelopment program in having delivered bold “urbanistic” designs that bucked a general homogenizing trend.⁴⁸ The site for their fire headquarters occupies a prominent spot at the intersection of Grand and Olive Streets, facing Artizan Street at the point where traffic crosses from State Street east over the rail tracks. The new station was to house New Haven’s fire headquarters as well as three fire-fighting companies, and it was the declared intent



Plan, Central Fire Headquarters, Carlin, Pozzi, Millard architects. From *Progressive Architecture*, January 1961.

of the city to make it a distinctive building.

The project followed the firm's first commission for a fire station, Engine No. 5 on Woodward Avenue. Peter Millard, a partner in the Carlin office, believed the Woodward Avenue station had fallen short of a completely integrated mechanical program, and the firm made a pointed effort to resolve the piping and other mechanics in their Wooster Square design. As a physical and symbolic entry to the Wooster Square area, the new headquarters had to be impressive in appearance yet complement the old and new buildings in the vicinity. It also needed to function efficiently as an administrative headquarters. The complex design program not only accommodated the equipment and truck bays, but also a bunkroom and offices. The station angles into an oddly shaped site with a fortress-like plan marked by a trapezoidal tower at each corner, including a 60-foot spire facing west at the point of entry to the district. The small turrets hold lockers, stairs, and elevators, and the taller west tower conceals a vertical hose-drying apparatus. The angled walls, faceted towers, and alternating cornice line (crenellation for the 20th century) help to scale the building to a setting of townhouses and storefronts so that it manages to be both monumental and accessible.

Context also played a role on the east side of Wooster Square, where the sensitive insertion of the Conte Community School (K-8) suggests that the designers understood the square's inherent sense of place to be an asset. Gordon Bunshaft and Skidmore, Owings & Merrill, the project architects, honored both the height and setbacks of the adjacent structures in arranging the school as a cluster of two-story buildings. Contemporary press hailed the city's selection of SOM for the school as evidence of its commitment to high-quality design.

In 1980 the school became the Conte West Hills Magnet School, and a recent addition/renovation by Herbert S. Newman has oriented the main entrance to Chapel Street. The courtyard, however, still invites entry from Wooster Place.

In fulfilling its other intended role as a community center, the Conte Community School brought together in its tightly rendered courtyard complex a set of facilities unknown in the previous generation of school building and still innovative for the early 1960s. In addition to the classrooms and auditoriums, the school offered clubrooms, exhibit space, a senior citizens' center, a teen lounge, a nursery school, and a swimming pool. The reading room doubled as the local branch library and the playground became a recreational center for people of all ages.

Dixwell

Set by 1960, the Dixwell project was intent on raising the city's "newest neighborhood" on the rubble of what it regarded as one of its worst slums. In 1964 *The New Haven Register* stated the goal succinctly: "total obliteration of the ghetto image" for the district located roughly in the triangle between Dixwell Avenue and Goffe Street, west of Elm Haven.

Dixwell was New Haven's first test of the Section 112 provision of the federal urban renewal legislation allowing for costs associated with the building projects of such nonprofit institutions as hospitals and schools to count as non-cash contributions toward the city's required total share. After gerrymandering the borders of the redevelopment area, the city was able to use the \$3 million revenue from a 1954 sale to Yale of land containing the city's two aging high schools and a vocational school—the future Tower Parkway site of Yale University's Morse and Stiles Colleges—to defray its share of net renewal costs in Dixwell.⁴⁹

Presumably to gain cachet from the area's proximity to Yale, the city granted it the new name of "University Park Dixwell." The NHRA also renamed a rehabilitated stretch of 19th-century rowhouses on Henry Street "University Row," likening them to the "fine town houses of Philadelphia and Georgetown." A civic center set opposite a new shopping plaza containing stores and a branch library anchored the renewal area on Dixwell Avenue, the district's commercial spine. Funding ran out before a planned skywalk that would have provided a space age looking pedestrian span over the avenue could be built.



Dixwell Congregational Church (1968), John Johansen, architect. Photo looking east.

In promoting Dixwell as a showcase for community involvement, the city brought together a broad coalition of participants. Support extended beyond city offices to include non-profit social agencies, dedicated church congregations and even private individuals like Fred Smith, a prominent New Haven physician who sponsored a namesake housing project designed by Gilbert Switzer at One Dixwell Plaza.

At the core of the civic center was the Dixwell Community House, the new headquarters



Dixwell Community House (1969), Herbert S. Newman and Edward E. Cherry, architects. Photo looking east. The plaza was intended to be flooded for ice skating

for “Q House,” a community service group founded in 1923 to provide free consultation on health, education, and jobs. Designed by Herbert S. Newman and Edward E. Cherry and built between 1969 and 1970, the building offered facilities for meetings, nursery and daycare, teens, and senior citizens.⁵⁰

In the view of both the city and the sponsors, the success of Dixwell’s renewal rested specifically on interracial development. The city launched a campaign to “sell” University Park

Dixwell to the white community by hiring a professional public relations specialist to promote its flagship housing project, the 1965 Florence Virtue Houses, a cluster of 20 two-story townhouse complexes built of striated concrete block and set on a nine-acre site between Goffe Street and Dixwell Avenue. The Dixwell Avenue United Church of Christ was the first of two neighborhood churches to support housing initiatives with its sponsorship of the townhouses, conceived as a cooperative arrangement in which apartments were offered for a down payment and monthly charges of \$87 to \$125 for one- to four-bedroom units.⁵¹

A force of stability for the district, the Dixwell Avenue United Church of Christ, founded on Temple Street in 1820, is one of the country’s oldest African American Congregational Churches with a rich history of involvement in the underground railroad, the abolitionist movement, and the fight to open public schools to African American children. Located in Dixwell since 1887 the congregation, including a small percentage of whites, had reached beyond its membership to become an important part of the community’s social fabric. Among its many affiliates were a missionary society devoted to improving race relations, a men’s club, a ladies aid society, the Boy Scouts, and the Campfire Girls.

The church's support of the Virtue Houses, which were being marketed to a white clientele, exemplified its commitment to promoting community stability by bringing more racial diversity to the area. Both the townhouse complex and the congregation's own new church building begun in 1964 on the north side of the Community Center are the work of John Johansen. The New Canaan architect, who had studied with Marcel Breuer and Walter Gropius at Harvard (and who married Gropius's daughter), served as an adjunct professor of architecture at Yale between 1955 and 1960, but never designed a building for the campus. His work in New Haven was limited to his Dixwell projects, and also included the 1964–68 Helene W. Grant Elementary School adjacent to the townhouses, designed in partnership with Caproni Associates.

With John Dinkeloo's First Presbyterian Church on Whitney Avenue, Johansen's



Pews, Dixwell Congregational Church (1964–70), John Johansen, architect.

Dixwell church is one of only two in the city designed by a major modernist. For Dixwell, Johansen delivered an avant-garde, multi-level complex of glass and textured concrete, dropped below grade behind a moat and radiating in sections from a central tower. Like the Central Fire Headquarters (both have slotted wall windows) the

church, dedicated in 1970, echoes in scale and massing Eero Saarinen's Morse and Stiles Colleges at Yale. Indeed, all three projects share a similar sensibility.



Bell tower, Helene W. Grant Elementary School (1964–68), Caproni Associates and John Johansen, architects.

Johansen is an eclectic designer who approaches each commission according to its unique dictates, and the Dixwell Church was no exception. Entering the building requires crossing the moat on bridges, and begins as an adventure that ends in a sanctuary of light and texture. For the nearby church-sponsored townhouses (now much altered), the architect devised a random plan on two newly created drives, Orchard Place and Winter Street. Equipped with garbage disposals and other amenities, each unit had a private entrance, patio, and off-street parking.

According to the city, the arrangement of small groups angled along the cul-de-sacs evoked a pleasant

residential neighborhood “with every advantage of the city close by.” In effect, it formed a mini-suburb within city bounds. The small-scale feel of the adjacent elementary school, complete with a bell tower—a modern nod to the old village schoolhouse—was meant to enhance this sense of neighborhood.

Part Six. Yale and the Moderns

By the 1950s the design world knew John Johansen as one of the so-called “Harvard Five,” a tightly knit group of Walter Gropius protégés who migrated from the Harvard Graduate School of Design to New Canaan, Connecticut after World War II. The other members included Philip Johnson, Marcel Breuer, Eliot Noyes, and Landis Gores. Of the five, all but Gores and Johansen became involved with Yale buildings.

Yale’s role as the leading institutional patron of modern architecture from the 1950s to the 1970s certainly derived from the combined influences of timing and strong presidential leadership. During this period, a coterie of the modernist movement’s most respected proponents came from far and wide to serve as lecturers, jurists, teachers, and visiting critics in Yale classrooms and studios. Their input made contemporary design currents the focus of an intellectual debate that extended the theory discussed in the studio to actual practice in the field. Recalling his years as an adjunct professor, John Johansen has commented on how the same sort of animated interchange enjoyed early on by the Harvard Five in New Canaan continued at Yale. He credits the university’s vibrancy as an incubator of modernism to the wide range of critics enlisted under the leadership of Paul Rudolph in the interest of representing “violently varied” points of view.⁵²

The story of modern architecture at Yale begins with a modernist addition to the university’s art gallery on Chapel Street. In 1941 the gallery had been gifted the collection of the Société Anonyme, an art association founded in 1920 by Katherine Dreier, Man Ray, and Marcel Duchamp.⁵³ Plans for a modern extension date to the same year, when Philip Goodwin, a Yale graduate, was hired for the project. Two years earlier Goodwin had achieved a triumph in the museum community with his International-style Museum of Modern Art (MoMA) in New York City, which he designed with Edward Durell Stone.

At the time Goodwin was hired, the gallery’s new director, Theodore Sizer, advocated mothballing an existing expansion design to include the gallery by Egerton Swartwout (the architect for the original 1928 Beaux-Arts building) in favor of a more avant-garde approach. The decision to employ Goodwin not only reflected the changing tide in design philosophy, but also signaled a procedural shift for the gallery. Convinced of the need for a new perspective, the senior policy-making body for Yale, the Yale Corporation, engaged Goodwin to expand the art gallery building to York Street.

Philip Goodwin's relationship with Yale lasted for ten years as the project lurched at a glacial pace through changes in the administrative guard, rifts within the building committee, and the museum's shifting emphasis between collections and teaching. Before resigning perfunctorily in 1951, Goodwin produced three schemes for a modern wing. The addition encompassed flexible galleries, support services, and, at one point, a 2,000-square-foot bomb-proof storage shelter for the artworks. If executed, the extension would have been the first work of International Style design in New Haven.⁵⁴

The Yale School of Fine Arts, which then housed the Department of Architecture, was also poised for change in the late 1940s. Once the architect Everett V. Meeks, who had founded the architecture department in 1916 as a bastion of Beaux-Arts tradition, was no longer dean of the school, the department was reorganized. The visiting critics program began with Louis I. Kahn's participation and took off in 1948 under Charles H. Sawyer, successor to Meeks. An impressive lineup of visitors, including Paul Schweikher, Wallace Harrison, Richard Bennett, and Edward Durell Stone (senior critic in residence) followed. The artist Josef Albers, architect Serge Chermayeff, and the philosopher Paul Weiss were also part of a purposely selected eclectic group who encouraged an intellectual and humanist debate among teachers and students.

Around this time students, trustees, and alumni, aware of the shadow cast by the Harvard modernism scene, began to agitate for a break from the formal Beaux-Arts teaching model. The turning point came in 1950 with Dean Sawyer's appointment (at Kahn's urging) of Philadelphia architect George Howe as head of the architecture department. Early on in his career, Howe had transitioned out of a Beaux-Arts background into modernism to form a partnership with the Swiss modernist William Lescaze in 1929. By 1940, Howe joined Louis Kahn (an early supporter of housing issues) in Philadelphia where the first modernist housing project in America was located. Together they developed a philosophical approach to public housing.⁵⁵

At Howe's recommendation, Kahn returned to Yale in 1951 to take over the gallery commission where Goodwin had left off—despite Goodwin's recommendation of Philip Johnson for the job. Kahn worked on the project with department chair George Howe in association with Douglas Orr.⁵⁶

Under the directorship of the new university president A. Whitney Griswold (who served in that position from 1950 to 1963), Kahn changed the design focus to accommodate the building's redefined role as teaching adjunct to the art, architecture, and art history departments. The expansion program was to provide seminar rooms and offices while delivering a gallery design flexible enough to allow the building to revert to sole use as a museum should the departments eventually move elsewhere, as it did in later years.

The final Kahn design emerged as a four-story loft building divided into two symmetrical sections flanking a core of mechanics. In concept the courtyard, recessed connector, and the open plan, an homage to the MoMA model, preserved some of the essential ideas from the Goodwin proposals. Yet it was Kahn's innovative structural device—a tetrahedral braced-beam system—that permitted him to create unbroken 40-foot spans for the two main sections and eliminate permanent partitions from the gallery interiors and the drafting rooms.⁵⁷ In a building celebrated for its organic volumes, the spaces melted into a quiet geometry of order and reason. Wire mesh and concrete polished to an elegant patina made a provocative but ultimately appropriate backdrop for the sanctuary-like interiors where the architect liberated the raw beauty of the industrial materials and blatantly left ductwork and mechanicals open to view. It was a quintessential expression of form following function.

The Griswold Legacy

The Kahn art gallery was a fitting inaugural for A. Whitney Griswold, the father of modern architecture at Yale who shepherded the institution through 26 new building commissions. Griswold's passion for architecture related to his belief in individual expression as fundamental to the educational experience. Throughout his 13 years at the university, he cultivated a climate of intellectual curiosity and regarded modern design as an extension of the same creative freedom he fostered among students and faculty. During his presidency three leading modernists chaired the Department of Architecture: George Howe (1948–53), Paul Schweikher (1953–56), and Paul Rudolph (1958–65). The School of Art and Architecture was made a graduate professional school in 1959 and as the years went on, a succession of well-known modernist names garnered university commissions.

President Griswold began his presidency acutely aware of the need to strengthen the sciences in an age of nuclear proliferation. Much of the early building program he undertook with Douglas Orr's office, beginning with the 1953 Tandem Accelerator Laboratory, related directly to that effort. Two other examples included the 1955 Josiah Willard Gibbs Laboratory, designed with Paul Schweikher, and the 1958 Dunham Laboratory Annex, by the office of Douglas Orr.⁵⁸

Griswold's design direction was not without its detractors. The benign-looking Dunham annex addition, a five-story glass curtain-wall design reminiscent of Orr's SNET building, was much criticized for its construction at the expense of the 1836 Joseph Sheffield House: the Greek Revival landmark designed by Ithiel Town was demolished by Yale to make room for the lab. A lean and quiet slab of green glass, reinforced concrete, and marble, the horizontally massed Gibbs

Laboratory incorporated a flat-slab structure and a roof parapet intended for outdoor experiments. A 12' x 20' laboratory module dictated the column spacing in an approach similar to that used by Orr's office in some of the Yale medical complex buildings.

The Gibbs lab is perhaps most notable for the way the architects lowered it slightly off the summit of Science Hill on a north-south axis. In relationship with two preexisting laboratories (Sloane and Sterling), the building framed a courtyard space, which cued Philip Johnson's placement for the Kline Biology Tower in the early 1960s.⁵⁹

Historians and critics alike have remarked on Yale's lost chance for shaping a cohesive design for the splendid undeveloped site of the former Hillhouse estate, Sachem's Wood, located at the head of Hillhouse Avenue and bordered roughly by Prospect Street and Whitney Avenue. The university acquired the property in 1910 but no comprehensive scheme was ever fully detailed or implemented. The latest campus plan, designed by Douglas Orr and Eero Saarinen in 1958, had come to naught.

The designs for Philip Johnson's Kline complex emerged at the end of a long growth process begun with the Collegiate Gothic science facilities erected in the Pierson-Sage Square between 1912 and 1932. The evolution of the area under Yale ownership also involved the purchase and conversion of several private residences for administrative use. Losses due to demolition include the Sheffield mansion and the Sachem's Wood estate house, razed in 1942. The Kline Geology Building (1962–63) and the Kline Biology Tower (1964–66) represented Johnson's effort to bring the disorder of Science Hill into focus.

A vertical landmark in a classically organized courtyard composition, the high-rise Kline Biology Tower is significant as one of the earliest campus buildings to strongly foreshadow postmodernism in its departure from the strict dictates of form follows function. The tower has



Detail, east façade, Kline Biology Tower (1966), Philip Johnson, architect. Photo looking north.

been cited as the first post-war high-rise to suggest historicist references, notably with its taut, abstracted colonnades, corner setbacks, and Romanesque half cylinders channeling the facades. The plaza "portico" and repetitive articulation of the brickwork are reminiscent of Louis Sullivan's 1894 Guaranty Building in Buffalo, New York. Walls and columns of solid brick allude to a substantial masonry construction, whereas in truth a steel frame supports the structure.⁶⁰ The Knights of Columbus Building, completed about three years after the Kline Biology design, made a highly visible and intriguing downtown counterpoint to Johnson's Science Hill tower with

its deep brown coloring and tile-clad cylinders. On the Knights building, however, Roche-Dinkeloo left the steel girders exposed.

The Kline projects coincided with President Griswold's opportunity to accelerate his building plan after a major 1960 capital campaign earmarked a substantial portion of the fundraising for new construction. The campus expansion plans bloomed into a giant architectural competition—except there was no single prize and everyone got a commission. By the early 1960s, Johnson, Saarinen, Rudolph, and Gordon Bunshaft of Skidmore, Owings & Merrill constituted for Yale a kind of new “old boys” club. Its members were responsible for awarding Griswold his most provocative and newsworthy works to date, and each was as individual and iconic as its designer.

If Griswold prized individuality, he certainly found it in Eero Saarinen, who was at the top of his game when he came to Yale in 1958. Two years earlier the Finnish-born architect had appeared on the cover of *Time Magazine*, and his portfolio already comprised works as strikingly diverse as the Jefferson National Expansion Memorial and Gateway Arch (1948–67) in St. Louis, Missouri; the General Motors Technical Center in Detroit, Michigan (1948–56); and the Kresge Auditorium and Chapel at the Massachusetts Institute of Technology in Cambridge, Massachusetts (1950–55). Saarinen began a promising string of projects at Yale with his famous David S. Ingalls Hockey Rink, known as the Yale Whale, followed by the first new residential colleges at the university in 30 years, Morse and Stiles, a student housing project, and the Yale Co-op. One can only imagine what else he might have produced had he not suddenly died of a brain tumor in 1961 before most of his work for the campus was completed.

The 1958 Ingalls Rink was the first truly audacious structure produced for Yale under Griswold's stewardship of the campus building program. By spanning 270 feet with his cable-supported roof ridge of reinforced concrete, Saarinen created a gravity-defying backbone to shape a curvilinear silhouette so sensational that it is recognized the world over. To accommodate its sunken arena, the building settles into a bowl-shaped site, which was shored up with excavated soil in much the same process used to create the 1912 Yale Bowl.⁶¹ Saarinen had originally sketched the rink with its ends pressed to the ground but ultimately decided to lift them over the recessed grade, thus creating the “tail” to establish a more monumental entrance. The oval plan integral to the program of organic spaces encouraged excellent sight lines from the seats.

The potential for creativity and technological exploration Saarinen saw in each project resulted in buildings of highly expressive and individualistic character, and the Yale Whale was no exception. It was Saarinen's hope that every design be “graceful” and “dynamic,” and many would agree the Ingalls Rink is both.⁶² The building was provocative, intriguing, and inevitably

controversial. Although the architect came to the project at the recommendation of a member of the Yale Corporation oversight building committee, the group was soon expressing dismay over the high budget (it was reported that Griswold never asked what a building was going to cost) and missed deadlines. Moreover, the biomorphic lines of the rink made it a startling presence in its neighborhood setting amid the wood-frame buildings on Sachem and Prospect Streets, and some



Tapered pedestal, Beinecke Rare Book and Manuscript Library (1960–63), Skidmore, Owings and Merrill, architects. Photo looking east. A stabile by Alexander Calder stands in the plaza.

judged the sports facility to be a misfit.

“Lack of context” was a favorite grievance of modernism’s detractors and Griswold’s determination to give the architects working at Yale absolute free rein may have reinforced a perception of architectural isolationism. In explaining his building philosophy, the university president once said he adhered to two rules only for new structures: the design should first fulfill its stated purpose with the utmost efficiency, and second come as close to “the ideals for a building

of its kind as the architectural genius of its era is capable of bringing it.”⁶³ Such confidence tended to breed iconoclastic monuments with a contrarian attitude, and they predictably garnered both praise and censure. Gordon Bunshaft’s Beinecke Rare Book and Manuscript Library, for example, essentially turns its back to the street; to enter it requires entering a courtyard and circumnavigating to the building’s inner, opposite side.

Another project with mixed reviews, the 1969–70 Becton Laboratory and Applied Science Center, was the first building completed under the presidency of Kingman Brewster, Jr. Some regard Brewster as an equally enthusiastic and perhaps even more sophisticated architectural patron than Whitney Griswold had been. Under Brewster’s administration, the Yale School of Architecture formally divided off from the School of Art and Architecture in 1972.

Interested in moving forward on a comprehensive campus plan, Brewster also appointed Edward Larrabee Barnes, a well-known product of Gropius’s Harvard graduate design program (who had recently designed Brewster’s kitchen), to serve as chief architectural advisor and consulting architect to the university. Barnes, in turn, brought in Herbert S. Newman. Another modernist of rising reputation, Newman had studied architecture in the 1950s at Yale under Louis Kahn, Paul Rudolph, and Josef Albers and was emerging from a five-year term in the New York office of I.M. Pei. Charged with framing new campus planning guidelines for Brewster, the two consulting architects recommended preserving the density of the north/south campus and the continued use of towers to punctuate the skyline in a manner similar to the town’s early church

spires. Their plan also eliminated a previously proposed ring road and backyard parking lots and provided for perimeter garages and subterranean designs and connectors. They themselves followed that approach in their own work, as reflected in Barnes's sub-grade addition to Sterling Memorial Library, Newman's underground lecture hall behind the art gallery, and the 1968 Yale University Parking Lot on Science Hill, designed by Barnes and Newman together, with a landscape scheme by Zion and Breen.

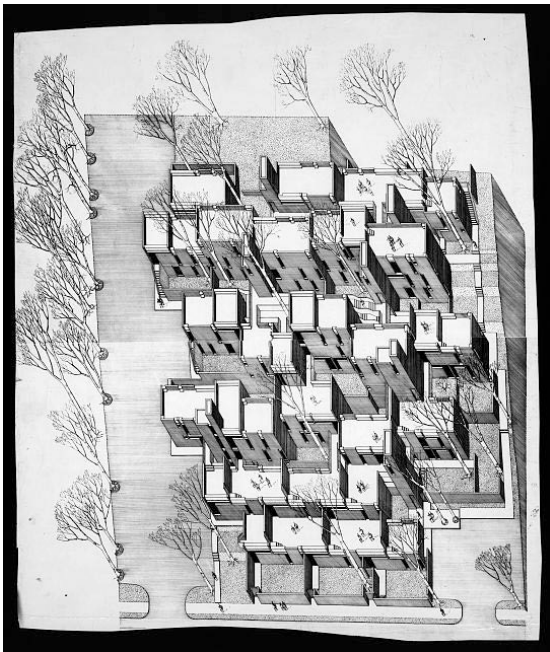
Connecting to other buildings by means of underground passages, the Becton Laboratory project by Marcel Breuer should have been Kingman Brewster's triumph, yet Herbert Newman recalls how people balked at the sheer mass of the building and criticized it for rising at the expense of two ornate buildings by the Victorian architect Josiah C. Cady. Newman, who served on an architectural advisory committee for Mayor Lee's Citizens Action Commission, recalls how hard that committee fought to have the structure lowered by several stories and to save some of Prospect Street. "We wanted Becton to respect Strathcona," he says, referring to Sheffield-Sterling-Strathcona Hall, the 1931 engineering complex situated with its main section at the corner of Prospect and Grove Streets. Breuer was furious at the opposition, since he believed that his building program had resolved the problems of a disorganized site.

Debate raged on, occasionally engendering poor reviews from within the Yale community despite the backing of Brewster. According to *The New Haven Register*, the Yale architectural historian Vincent Scully, also a CAC member, derided the Breuer building as "one long prolonged stutter, a folded-paper façade too high, too long, too meaninglessly articulated, too thin, too superficial, too pretentious ..."⁶⁴ Nor did Scully think much of Gordon Bunshaft's Beinecke Rare Book and Manuscript Library, famously described by the historian as perching on its tapered feet like a gigantic modernist table radio. Many others have also taken issue with the bare plaza, sterilized of the Beaux-Arts trimmings that provide scale and detail to its neighboring buildings.

Gordon Bunshaft had reportedly won the attention of Yale with his work for Skidmore, Owings & Merrill on the Conte Community School in Wooster Square. His first project for the university in 1960 was a sleek steel-and-glass International Style computer center on Schem Street that was donated by the Watson family of I.B.M. The marble-clad, steel-frame Beinecke Library, occupying its courtyard in Hewitt Quad adjacent to the University Commons and Woolsey Hall (designed in 1901–02 by Carrère and Hastings) made a far bolder, and exceedingly original statement. Fronting the library, a sunken court and sculptures by Isamu Noguchi create a spare composition of shape and shadow evoking the unsettling world of a painting by Giorgio de Chirico. A vertical stabile sculpture by Alexander Calder stands nearby.

In its purity, the other worldly space seems to acknowledge only the silent library, which hangs provocatively over its pyramidal pedestals with a visual weight that does make you wonder about the wisdom of passing under a thousand-ton lid of stone to get inside. But whatever one may think of the setting, it would be difficult not to respond to the extraordinary central “court,” where 180,000 books are ordered into the perfect, protected geometry of a glass column. (Look, but don’t touch.) Although the stone wall panels were supposed to be made of onyx, the Algerian quarry to have supplied the material was shut down in the early 1960s due to the French-Algerian War. Instead, the client settled for striated Vermont marble, shaved to an impossibly thin 1¼ inches so that sunlight might soak through. The hushed, sacred glow of the minimalist interior seems appropriate for a building charged with housing a Gutenberg Bible and other equally precious contents.

Representing the first major building effort on campus since the James Gamble Rogers



Isometric rendering, Yale Married Students Housing, ca. 1959, Paul Rudolph, architect. Courtesy of the Prints and Photographs Division, Library of Congress.

years of the 1920s and 1930s, the modernist campaign at Yale also produced the first new colleges built in three decades: Samuel Morse and Ezra Stiles. Designed by Eero Saarinen, they were erected on the high school site on Tower Parkway purchased by Yale in 1954 from the city.

The colleges were Saarinen’s second project for Yale and provided a study in contrasts with his flamboyant Ingalls Rink. For one thing, with the colleges he was on a tighter budget. For another, on Tower Parkway Saarinen made an effort to fit the complex into its urban and college setting by playing off the scale and variety of the neighboring buildings

and towers. He floated balloons to correctly achieve his views and focal points, and invented a chunky mix of concrete and red stone for the walls. On the parkway side a low, irregular line of dorms curves Stonehenge-like around a setback to echo the bend of the roadway opposite and open up the perspective of the Payne Whitney Gymnasium’s tower to the north.

At a break in the wall, stairs rise to an enclosed court and then drop again over the subterranean common kitchen into a walled city, supposedly inspired by a Tuscan hill town.

Saarinen even sank the buildings down behind a moat, a feature echoed in John Johansen's design for the Dixwell Congregational Church and possibly derived from Rogers's earlier Yale college designs.

Grounded to a site designed by the modernist landscape architect Dan Kiley, the structures fit comfortably into the cityscape in a way that the more monumental and idiosyncratic



Stiles and Morse Colleges (1960), Eero Saarinen, architect. Photo looking north.

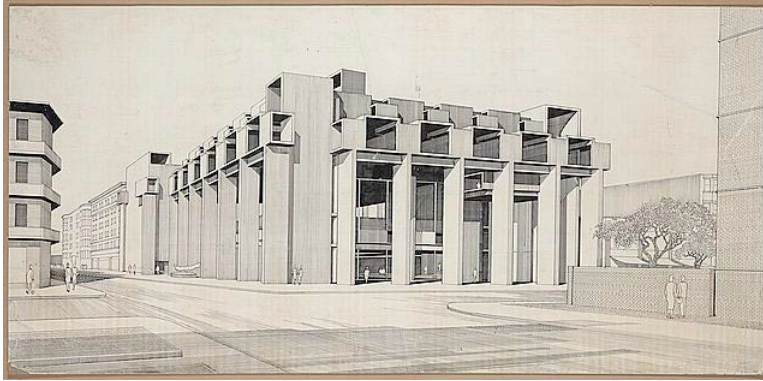
projects were not as likely to do. The architect Cesar Pelli has pronounced the urban design sensibility of the project "absolutely fantastic." The colleges were not, however, considered a unanimous success. Pelli, a member of Eero Saarinen's firm who took over the

college project when Saarinen died in 1961, also commented on the problems of an experimental floor layout for dorm and common rooms. "From the beginning, I think his plans for Morse and Stiles were questionable," Pelli said in a 2006 interview. Yet Pelli also credits the layout as a significant attempt by Saarinen to capture the carefree spirit of a time in undergraduate years when "people are still dreaming about life and living in a slightly unreal world."⁶⁵

Paul Rudolph and the Art and Architecture Building

Among those within the Yale community to find fault with the Morse and Stiles designs were Vincent Scully, who also cited the dorm layouts, and the architecture department's director, Paul Rudolph, once overheard sniping that the colleges resembled sets from *Ivanhoe*. Interestingly, the Saarinen design was not entirely dissimilar in concept from Rudolph's own composition for a 1960–61 housing complex for married graduate students. The low-rise, medium-density project on Mansfield Street melded apartment units, courtyards, terraces, and narrow alleys into a village-like arrangement in a deliberate anti-high-rise approach.

Rudolph assumed directorship of the architecture department in 1958 and his relationship with Yale was complex from the start. Among other projects, Rudolph was assigned the thankless task of remodeling Kahn’s art gallery addition. He replaced Kahn’s famous floating “pogo”



Preliminary rendering, Art and Architecture Building, ca. 1958, Paul Rudolph, architect. Courtesy of the Prints and Photographs Division, Library of Congress. The corner pier of the carefully sited building is set on line with Chapel Street so that it is visible all the way from the New Haven Green—thus reaffirming the Chapel Street axis of the nine-square plan.

panels with fixed partitions and instituted other changes that partially obscured the exposed concrete walls and nuanced lighting effects. (The galleries were restored to Kahn’s original design in 2006 by Polshek Partnership Architects.)

The story of Rudolph’s own Art and Architecture (A&A) Building (1958–61) follows a fascinating, if tortured path, beginning with its commission early in his chairmanship of the Architecture Department. That itself may have been a bad omen, for in hiring Rudolph as the architect, the client and designer were essentially one and the same. Rudolph faced the added pressure of establishing a suitable expression at a time when his department, then part of the School of Art and Architecture, was trying to rebuild its reputation after a period of chaos culminating in the resignation of Paul Schweikher.

The A&A Building, originally scheduled to open in 1963, was intended to provide a single headquarters for the art, architecture, graphic design, and urban planning programs. Until that point, those various departments had been scattered throughout the art gallery and other locations. Among Rudolph’s qualifications was the arts center he had designed in 1955 for Wellesley College, his first major institutional commission. For that project Rudolph had produced a refined design in brick, but he had recently become fascinated by robust forms and the manipulation of concrete for texture and plastic effect. In New Haven he explored these new ideas in his 1959 Temple Street Garage, and would experiment further in his Crawford Manor design (1962).

After his unhappy experience with the gallery renovation, Rudolph was concerned about his reputation and legacy, and he agonized over the details of the numerous redesigns for the A&A Building requested by the Yale Corporation. Fire codes precluded his original plan for a

seven-story atrium and the design finally morphed into a three-dimensional warp and weft of concrete, woven into an Escher-like composition of interlocking spaces.

The results, suggestive of Rudolph's interest in stage set design, were both dazzling and bizarre. A powerful presence on its corner site, the school stood its ground with a belligerent thrust of concrete piers and distressed surfaces: "brute force glorified," according to Vincent Scully.⁶⁶ Within its 36 staggered levels, ceiling heights ranged from 7 to as much as 30 feet. Orange carpeting covered the floors, rope cargo netting served as curtains, and plaster casts of classical sculpture made an unexpected appearance as decorative accessories. Much has been written about the abrasive interior and exterior surfaces of the concrete walls, ribbed with the exposed imprints of their casting forms and subjected to a final smashing of hammers. Few people seemed to know quite what to make of it. On one notable encounter, Vincent Scully recalled, Philip Johnson emerged from one of the confounding concrete nooks asking, "Where in God's name am I?"

If there was any consensus of opinion on the design—and there never really was—it was that it marked a decisive move away from the light, volumetric geometry of early modernism toward the later "brutalist" phase of the movement. The people actually using the building may have been its sharpest, most reliable detractors. The art students complained because their oversized canvases wouldn't fit inside and argued that the urban planning school got the best



Oak-paneled Galleries and concrete stair silo, Yale British Center for the Arts (1973), Louis I. Kahn, architect. Kahn said he wanted museum goers to feel like they were spending time in a comfortable home. At the British art center he used natural lighting, filtered into the top two levels, and the warm wood finishes to enhance that effect.

north light. The architecture students immediately partitioned the open studios. At the dedication ceremony of the A&A Building, British critic Nikolaus Pevsner seemed to formalize criticism by startling his audience with a lecture on the role of function. The remarks were interpreted by many who heard them as a thinly veiled criticism of Rudolph's emphasis on form at function's expense.

Although the School of Art and Architecture design also earned many accolades, the controversy affected its architect deeply. In 1965 Rudolph left Yale. To his death, he would never publicly discuss the A&A project. The building seemed to become a symbol of general campus unease. At the height of a period of national unrest in 1969, drafting projects on

the third floor erupted in a bonfire (possibly arson by disgruntled students, but never proven as such) and caused considerable damage. The building staggered through a sequence of renovations before the current, thoroughly conceived design program fell into place. In a restoration completed in 2008 by Gwathmey Siegel & Associates of New York, the school has become part of a larger project incorporating an art history center to the north and an arts library designed to bridge both buildings.

Turmoil on Campus

In 1969 the modernist epoch at Yale circled back to Louis Kahn in the form of a commission for the Yale Center for British Art (originally known as the Paul Mellon Center for British Art and British Studies) on the south side of Chapel Street, to face the Yale Art Gallery on the opposite, north side. Kahn died in 1974 while the project was underway. The firm of Pellecchia and Myers completed the building posthumously, but the design is essentially Kahn's. The architect had been dismayed by the university's move to remodel his Yale Art Gallery addition, where his open-span design had proved open to compromise. Kahn moved to preempt the same possibility in the British art building by devising a repetitive 20-foot-square grid upon which the concrete framework was entirely dependent. Outside, the building is impeccably tailored in matte steel panels and reflecting glass. Inside, a coffered skylight system filters daylight into the two interior courts and upper galleries.

Once plans for the British Art Center were underway, Mayor Lee announced the project jointly with Yale President Kingman Brewster, claiming that the museum would add a "new dimension of elegance" to the city. Anger rose, however, over the potential loss of tax revenue from a commercial site. Amid the growing student hostility toward the continued campus expansion, Yale agreed to reserve the ground-floor level of the Paul Mellon Center for retail space.⁶⁷

But the tenor of the times was changing. Set against the scrim of war protests and the Black Panther trials, Charles W. Moore's leadership of the architecture school from 1965 to 1970 paralleled one of the most turbulent and politicized periods in campus history. The campus and its buildings offered an inevitable staging ground for protest. Students drove a hearse around the Beinecke Library courtyard. The artist Claes Oldenburg proposed an oversized cigarette for the Noguchi court—it could, according to Scully, serve as an ideal ashtray for the giant table radio adjacent. On May 1, 1970, someone detonated an explosive device in the Ingalls Rink during events related to the trial of Black Panther Bobby Seale. And then there was that mysterious fire

at the A&A Building. . .

New buildings became targets for the expression discontent. The initial proposal for Edward Larrabee Barnes's underground Sterling Memorial Library addition, which included cutting 16 skylights into the Cross Campus lawn, drew particular antagonism from the student body. Barnes tried to resolve the problem by devising an alternative scheme of light wells and courtyards. Yet despite these efforts, the Cross Campus Library (reincarnated in 2007 as the Bass Library) nevertheless seemed eternally cast in gloom. Its roof began to leak soon after the reading room opened in 1971. Interestingly, a recent article in the *Yale Alumni Magazine* (January/February 2008) reporting on the just-completed redesign by Thomas Beeby, a former dean of the Yale School of Architecture, maintains that Barnes was a well-regarded architect "despite" the project. Yet the original minimalist design also had its admirers, and reaction today to the loss of the Cross Campus library by alumni who remember studying there is mixed.⁶⁸ It is a sign of the times that Beeby's firm, Hammond Beeby Rupert Ainge, used traditional stone, brick, and wood to replace Barnes's original program of plastic, drywall, and aluminum. The 2007 plan also pays homage to James Gamble Rogers' 1927 design of Sterling Library by introducing decoration and historical references such as shallow vaulted ceilings not used by Barnes.

Charles Moore, who had served as a teaching assistant for Kahn at Princeton, arrived at Yale in 1965 and left in 1970. During that time he opened his own practice in New Haven, and became involved in the Church Street South project after Mies van der Rohe's defection. Moore's tenure is noteworthy for bringing community issues into the classroom and the attempt to teach architecture as an instrument of activism and social change. His Yale Building Program, founded in 1967, sent first-year students into the field to design a structure for a community-based client, while also serving as a model for design-build teaching programs nationwide.⁶⁹

Moore's pioneering postmodernist designs were infused with a trademark eccentricity and the quirks of history, rearranged in a vocabulary for the present and expressed in non-traditional materials like neon and plastic. His city housing projects, including the Junior Chamber of Commerce project with its pedestrian streets and balconies, and his 1974–75 design for the Robert T. Wolfe apartments represented early steps at reducing scale and establishing context. The Wolfe building, an elderly housing project in the Hill Section, rejected the high-rise model in favor of a low-rise building limited to between five and eight stories in height.

From the 1970s into the 1990s, Moore and his various design partnerships contributed many buildings to the New Haven cityscape, both on and off campus. During the architect's deanship at the architecture school, Yale commissions increasingly favored postmodernist architects, due in part to Moore's influence and in part to the overall philosophical shift in

architectural theory. The downtown Yale medical complex has grown into a village of its own, complete with skywalks. Recent additions include the works by designers as current and recognizable in this day as were the modernists of the previous generation, including the Boyer Center for Molecular Medicine (1991, Cesar Pelli & Associates), the Anlyan Center for Medical Research and Education (2003, Venturi, Scott Brown and Associates), and the Yale Psychiatric Institute (Gehry Partners, 1989–90).

Part Seven. What Hath We Wrought? Redevelopment and its Aftermath

By the late 1960s the bloom of the modernist revolution had worn off and the redevelopment programs initiated under Mayor Richard Lee would soon come to the end of their powerful and often destructive run. When the economy slowed into a recession, New Haven's energy-dependent industries succumbed to inflation, labor problems, high oil prices, and foreign competition. The manufacturing base of local neighborhoods suffered the loss of mainstays such as United States Steel and the National Folding Box Company. The latter establishment, founded in 1891 and a major employer for Polish, Irish, and Italian workers in Fair Haven, had by 1940 become the largest cardboard box maker in the world. It closed in 1975. The New Haven works of U.S. Steel shut down in the late 1970s, and the Olin Corporation, which had bought out the Winchester Repeating Arms in 1930, folded in the early 1980s.

As federal funds evaporated, pending renewal projects were curtailed or dropped altogether amid preservation concerns and a growing awareness of the failure by urban renewal plans to vanquish the social ills generated by poverty and racism. Between the mid-1950s and 1969 the redevelopment effort resulted in the demolition of some 5,000 low-income housing units in an attempt to improve living conditions. Clearing neighborhoods didn't so much remove slums as relocate the poorest residents, at that time shifting them to deteriorating districts like Fair Haven and Newhallville. Between 1956 and 1968 the New Haven Redevelopment Authority formally resituated about 7,000 households; however, because many more citizens moved on their own, the real number has been estimated at closer to 21,000.

Grass-roots advocacy coalesced in 1961 when Margaret Flint founded the New Haven Preservation Trust. This event occurred in connection with the ultimately successful effort to prevent Yale's proposed demolition of the 1849 James Dwight Dana House, designed by New Haven's gifted and prolific Victorian master, Henry Austin.

In 1966 the Citizens' Action Commission had formed its architectural review committee amid concerns over invasive demolition projects in Fair Haven and the Hill section, as well as the planned government center component of the State Street redevelopment. The State Street project represented the period's last major push for redevelopment. The city's costliest proposal at \$43 million, the venture was intended as the final link in the downtown business rejuvenation. Although in the planning stages since the mid-1950s, the project wasn't finalized until 1968. As originally conceived, the plan specified reconstruction of almost all the area contained in the three easternmost squares of the nine-square city center. Also included was a redesigned civic center on the New Haven Green, and a cultural component consisting of the 1969 Neighborhood Music

School by Charles Brewer, Jr., a new facility for the 1972 Creative Arts Workshop (Orr, deCossy, Winder and Associates), and the Audubon Arts Center, ca. 1973–75.⁷⁰

The facet involving State Street concerned the project’s namesake, a three-lane city byway lined with small shops and discount stores. According to the renewal plans, a rundown length of the street was to be replaced by a six-story garage stretching a full half mile without interruption along its east side. The area of State Street located next to the rail tracks would be expanded with three new lanes of highway to produce a six-lane roadway planned as a connector



State Street redevelopment project area, 1959. Courtesy of the New Haven Museum and Historical Society.

to I-91 and Route 34 and as a link to an inner ring road.

Nearby Wooster Square residents, among others, vehemently opposed the scheme. Many saw it as yet another project geared to the convenience of out-of-towners driving into the city at the expense of the people already living there. They hated the idea of a parking lot as a kind of “Great Wall of China” closing

off the eastern neighborhoods from the downtown. Like some other later renewal efforts, the State Street project was only partially executed. The necessary infusion of cash from the private sector failed to materialize, and the work slowed to a near halt—but not, unfortunately, before most of the planned demolition had already taken place. The proposed redevelopment sites gaped, dreary and defeated, the ultimate emblems of unfilled promise. Soon filled with cars, much of lower State Street was reincarnated as a giant string of “temporary” parking lots.

Bogged down for years, the government-center part of the scheme blew up over key components proposed by I.M. Pei, who initially held a \$50,000 contract with the city to provide a general plan for the State Street redevelopment. The controversy focused on Pei’s concept for a modernist superblock to dominate the east side of the green. The design required demolition of the 1861 City Hall, one of Henry Austin’s most prominent High Victorian Gothic landmarks. Only the clock-tower façade was to be saved, with the idea of “pasting it” into a new office block planned for the green’s northeast corner. Another edifice, the Palladium Building, a pre-Civil War office building owned by the NHRA, was also earmarked for demolition in order to make way for a tunnel-access road to State Street.

Dwarfing the nearby Chapel Street mall and every other building on the green, a gargantuan office tower would rise on the requisite *pilotis* in a plaza to the south. The civic overhaul also prescribed a new public library and threatened demolition of the 1871 courthouse designed by David R. Brown and the 1913 Beaux-Arts post office by James Gamble Rogers.

But redevelopment, it seemed, had finally taken one step too close to the historic green. In a 1967 report denouncing the Pei plan the chamber's urban renewal committee, headed by New Haven architect Bruce Arneil, joined federal judges and the New Haven Preservation Trust in urging the city to save the post office building and renovate it as a federal district court. The committee's loyalties were divided, however. Members lobbied for the total teardown of the threatened Victorian City Hall in favor of a new, larger, modern replacement "built to incorporate the requirements of an efficient and effective city government." The chamber also wanted a government center that would be *taller* than the planned six stories suggested by Pei, to be accessed by underground parking.⁷¹ By summer 1967 a series of amendments had enlarged the initial scope of work and brought Pei's fee to \$85,000, partly to cover his costs for exploring alternate plans in order to retain the post office. The debates continued, Pei finally left, and the proposed revisions dragged on. In the final outcome, Paul Rudolph succeeded I.M. Pei as government-center designer, followed by Herbert S. Newman and Partners.

Newman's office completed the City Hall renovation in 1993. The Newman design preserved the 1861 City Hall façade and extended it to the north with a six-story annex conceived as an abstracted version of the Austin building. The mayor's offices regained their original

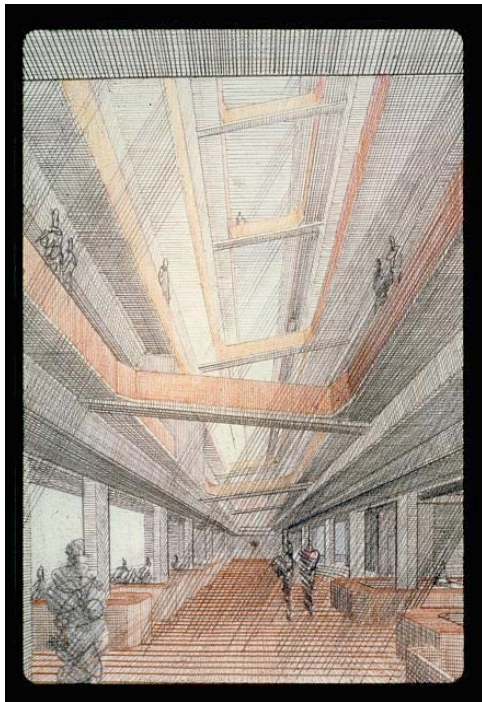


Rendering for the proposed Government Center on the New Haven Green, ca. 1970, Paul Rudolph architect. Courtesy of the Prints and Photographs Division, Library of Congress. The New Haven Savings Bank tower at the northeast corner was ultimately scaled down by the architects, William F. Pederson and Associates, in response to pressure from preservationists.

location overlooking the green. The central four-story stair hall was reconstructed, along with its original cast-iron staircase, skylight, and vaulted ceiling.

Troubled Years

During the early years, New Haven's modern buildings generally fared well in the popular and professional press. By the time the State Street controversies erupted the local papers were becoming anti-renewal and grass-roots opposition was slowly swelling. In 1965 architect Bradford S. Tilney, a partner in the firm of Pedersen & Tilney, raised the question of whether a citizen's group with statutory power was needed to promote responsible design. He was leery of introducing too much regulation into the process, yet felt the time was right for an authoritative



Perspective rendering, New Haven Government Center, ca. 1968, Paul Rudolph, architect. Courtesy of the Prints and Photographs Division, Library of Congress.

evaluation of the city's "architectural renaissance" and the methods used to achieve it.⁷² A year later the mayor's Citizens Action Commission formed its architectural review committee with Charles Moore, Herbert Newman, and Vincent Scully among its members. The committee dispersed when the CAC was dissolved at the end of Lee's administration in 1969, but Scully, an avowed modernist in the 1950s, carried on as a critic of the New Haven urban renewal programs and some of Yale's own building policies.

Until this time, the national design magazine *Progressive Architecture (P/A)* had contributed to the generally positive architectural press generated by New Haven's modernist works in both the urban renewal and Yale arenas. But in 1968 the magazine seemed to reverse opinion by

using the city as a case study to probe the relationship of urban renewal to street violence. In chilling detail, the editors chronicled hour-by-hour, five days in the life of a city under siege. The account of fire bombs, tear gas, police violence, and arrests during the summer of 1967 began with the shooting of a Puerto Rican man by a white business owner in the Hill section, and ended with a gala in honor of Mayor Lee's nomination for an eighth term—only hours after a multi-day state of emergency had ended and the curfew had been lifted.

The article reported on the sharp distrust of the city government, voiced by many New Haven citizens as well as former employees of the redevelopment agency and City Plan Commission. To that point, the *P/A* editors raised the question of whether urban renewal was the *cause* of the events in New Haven and of similar outbreaks, including the Watts (Los Angeles) and Chicago riots of the same period.⁷³

The intensity of local events in the course of those few turbulent days also focused attention on the discrepancy between the money poured into national urban redevelopment initiatives and the success of anti-poverty programs. New Haven had committed \$237 million to new construction since 1953, but the investment appeared in many cases to result in the deepening entrenchment of ghetto conditions, and the related disenfranchisement of minorities who were segregated into the inner city as whites left for the suburbs.

In the *P/A* analysis, white elected officials repeatedly legislated improvements for minorities, while the minorities themselves felt systematically excluded from the quality of housing, schools, and jobs available to others. Civil rights and anti-poverty programs were perceived by African Americans as helpful only to the black middleclass, who nevertheless continued to live in segregated pockets. Low-income and welfare clients of all colors were relegated to the lowest rent districts.⁷⁴

The 1967 upheavals and the State Street preservation imbroglios were symptomatic of a social and economic decline that began to force the reconsideration of urban planning approaches amid slowly changing attitudes about industrial development, housing, and downtown renewal. As a result, housing efforts were redirected toward the rehabilitation of older row houses and other buildings, often sold to low-income families by means of low-interest mortgages. Innovative concepts embraced a townhouse and/or garden-apartment approach for new complexes that were clustered in small groups, set next to parks or playgrounds, opened up with private balconies, and accessed by individual entries. Developments tended to scale down in size: Sheffield Manor, for example, a Division Street complex designed in 1969 by Alden Berman Associates, was conceived as an accordion line of two- and three-story townhouses units ranging from one-bedroom studios to four-bedroom apartments.

Projects like Harmony House and Canterbury Gardens, two low- and moderate-income projects on Sherman Avenue, also exemplified the new model. The co-op arrangements, designed by the Philadelphia architect Louis Sauer, were based on the results of a “user-need” survey of prospective tenants intended to tailor subsidized housing to the wants and requirements of the occupants. In the 1970s the city used variants of the same approach for some 15 new housing developments.

In more experimental arenas, new projects included the city's first solar-heated apartments, a five-unit HUD-financed complex designed in 1978 by Howard Phillips and Frank Chapman on Irving Street; a 1972 polyurethane foam housing prototype called "Environ A;" and the idiosyncratic public housing complex known as "Oriental Masonic Gardens," a West Rock project designed by Paul Rudolph in 1968.

The Environ A experiment was notable in part for receiving support from the First Church of Christ, one of many religious institutions becoming involved in public housing. The project grew out of research conducted by a group of Yale art and architecture students exploring the potential use of spray foam in public housing applications. The anticipated market for pre-fabricated pod units manufactured for nationwide shipping never materialized, but the Environ A foam prototype, designed by Valerie Batorewicz, survives on Laurel Road in the Westville section of New Haven.⁷⁵



Old-fashioned box raising at Oriental Masonic Gardens, 1968, Paul Rudolph, architect. Courtesy of the Prints and Photographs Division, Library of Congress.

The Paul Rudolph housing development in the West Rock area was named for the Prince Hall Masons, the project's non-profit, African American sponsors. The complex consisted of 148 pre-fabricated apartments pin-wheeled around central utility cores. Each unit was made up of 12-foot-wide modules trucked from the factory with wiring, plumbing, finishes, and plywood ceiling vaults pre-installed. Rudolph asserted that his goal was to escape the "box-like uniformity" of the housing norm. He may have succeeded, but

the project only survived its low-budget construction by about a decade before the apartments were torn down by HUD and replaced with Westville Manor.

By the 1970s the increasingly unsettled climate of private and public development was forcing the city to reinvent plans for Long Wharf and the central business area. In the early 1970s, under the administration of Mayor Bartholomew Guida, the city worked with a private developer to design the northeast area of the Long Wharf district, including the old Water Street site vacated by Sargent in the early 1960s. The initial scheme for "Long Wharf Harborside" envisioned a man-made island, marina, apartments, a park, and promenade. The developer also planned shipping facilities on the east side of the Turnpike. Some of the original firms had vacated Long

Wharf by the 1980s and new enterprises moved in. Jackson Newspapers, for example, occupied the former Gant Shirtmakers plant in 1981. As the city tried to find money to breathe new life and tax revenues into the district, plans for a wholesale-industrial district also got underway in the Wooster Square area, where Union Street was extended. The Long Wharf Maritime Center building, a postmodern design by the firm of Clark Tribble Harris and Li, with Robert Wendler, dates from 1986.

Meanwhile, the downtown retail and entertainment districts floundered. By 1980 urban renewal funds were dried up. City officials commissioned a planning report from the Rouse Company, a Maryland-based planning firm known for such innovative marketplace developments as Boston's Faneuil Hall. A few years later the city subsidized a Rouse-designed revitalization project for the Chapel Square Mall; its success was relatively short lived. Malley's, one of the department store anchors of the retail complex to the south, closed in 1981. As of 1987 the space was still without a tenant. That same year a mayoral task force recommended demolition of the nearby Coliseum garage and possibly the entire sports arena.

One by one other major retailers went under during the economic downturn of the early 1990s. A bankrupt Macy's closed its New Haven store in 1990. The British home furnishings retailer, Conran's, one of the premium Chapel Square merchants installed during the Rouse period, ceased operating in 1992. Both Malley and Macy quarters were later razed and the site is presently targeted to become the consolidated urban campus for the Gateway Community College. Other parts of the original mall have been converted to apartments.

New Directions: Preservation and Adaptive Reuse

When New Haven created an Historic District Commission in 1970 with the establishment of the first local historic district in the city, citizens at last obtained some real power to regulate changes to historic buildings. Although federal renewal programs were already subject by law to public debate, in New Haven hearings were generally perceived of as exercises in futility, and sometimes took place after the enabling legislation had already passed and contractors were in place. Citizens often felt helpless in the face of projects overseen by a handful of city administrators but affecting thousands of residents and business owners.⁷⁶

Retaining the façade of Henry Austin's Victorian City Hall in the Government Center design had occurred at the expense of the rest of the building, including the fabulous interior staircase (later reconstructed in the Herbert Newman design). Nevertheless, the compromise did pave the way for new thinking with respect to future projects involving adaptive reuse. One

notable example was the Audubon Street Arts Center, which incorporated two 19th-century townhouses remodeled by Gilbert Switzer for retail and office use. The project also provided for the conversion of the 1896 Temple Mishkan Israel into a theatre and arts center. Designed by the architect Charles Brewer in 1971 for gifted high school students to study dance, drama, music, and the visual arts, the facility was reportedly the first of its kind in Connecticut.

The new construction component of the project, the McQueeney Apartments (ca. 1973),



Rendering and photo montage, Ninth Square, looking west, 1995, Herbert S. Newman and Partners, architects. Courtesy of Herbert S. Newman and Partners.

stacked 150 apartments for the elderly above central offices for the housing authority headquarters and ground-level retailers. This was the housing authority's first foray into a mixed-tenant project. The competition-winning design by Frank Chapman with the Franklin Construction Company featured an unusual "lift-slab" technique in which the slabs for floor and roof were poured on the ground.

Separated only by sealant, the slabs were then lifted in sequence from

their pile and secured to pre-established columns in a kind of modernist house raising.⁷⁷

In another adaptive reuse project, Edward Larrabee Barnes linked four very eclectic existing structures to create a new precinct in 1980 for the Yale School of Organization and Management. To integrate the various buildings—two Italianate villas, a turn-of-the-century carriage house, and Gordon Bunshaft's 1961 Watson Center—Barnes inserted two roughly symmetrical wings and then organized the entire composition around a minimalist courtyard.

Initiated in the late 1980s, the Ninth Square renewal process, is particularly reflective of a decisive change in attitude toward the urban streetscape in the context of New Haven planning. In this limited partnership project the architectural firms of Smith Edwards and Herbert S. Newman rehabilitated virtually all of the three- to four-story buildings in a three-block area within the Ninth Square National Register Historic District. Low-rise infill buildings added to the mix of apartments (reserved for low- to moderate-income tenants) and retail businesses. The designers restored paving, curbs, sidewalks, and lighting, and two new garages were created in the "mercantile" style of the district.

Dixwell's Monterey Place, built in 2003 by Bruce Heyl/Fletcher Thompson with Russell



200 Fountain Street (1963), Gilbert Switzer, architect. Photo looking southwest.

Scott Steedle & Capone, is together with a project for Quinnipiac Terrace the city's newest and most significant venture into public housing. Funding came through Hope VI, a 1992 federal program created to demolish and rejuvenate the nation's most distressed housing projects. Ironically, among the buildings torn down was New Haven's first housing project, Elm Haven, in order to make way for a neighborhood of

freestanding mixed-income housing designed in the New Haven vernacular.

What Now? Legacy in Peril

In 1965 a columnist from *The New Haven Register* commenting on the phenomenon of modern building in the city offered a blanket endorsement for the Yale and the NHRA projects, maintaining that the "private, unofficial" approach had allowed both clients to exercise design control, even if only in an unofficial capacity. He blamed any undistinguished buildings (the article cited the 1957 SNET offices as an example) on private developers. The real problem, the writer claimed, was the lack of some sort of incentive "equivalent to the incentive provided by an overall vision of an institution, to become interested in the merits of architecture."⁷⁸

From today's perspective, to draw such a line of distinction seems to be impossibly simplistic, even if the effects of redevelopment hadn't been so far reaching. Never articulated by the reporter, the "vision" he mentioned has been questioned and re-questioned ad infinitum over the years in regard to its wisdom and effectiveness. Moreover, to assess the impact of modernism on the city solely in terms of Yale and Richard Lee's urban renewal effort overlooked the contribution, good, bad, and otherwise of the countless architects and builders who channeled the influence of national and local sources into all kinds of buildings on all kinds of streetscapes everywhere in the city. The nationwide proliferation of now-familiar forms and materials—the concrete block, the flat roof, the glass window wall, the recessed balcony—was the outcome of a natural cross-pollination that occurred as the vocabulary of modernism was co-opted and translated in endless variations before its final, inevitable entry into the mainstream. The Le Corbusier *pilotis*, perpetually reincarnated, reappear in buildings as disparate as Breuer's Becton laboratories, the new Campus Center at Albertus Magnus College designed in 1970 by Polak and

Sullivan, and Gilbert Switzer’s modest apartment buildings of the early 1960s angled on mini “superblocks” at 200 and 226 Fountain Street in Westville.

Distressed concrete, the Paul Rudolf signature surface, appears and reappears, transposed from Rudolf’s own Crawford Manor and the Yale Art and Architecture Building to William deCossy’s Community Services Building, the U.S. Postal Service Building, and the Dixwell Community House, designed by Newman and Cherry, to name just a few. In 1971 Long Wharf’s Albie Booth Memorial Boys Club (by Davis Cochran Miller Baerman Noyes) borrowed from Charles Moore’s super graphics for its indoor pool. The pierced screen of concrete block fronting the Yale Press Building by E. Carleton Granbery on York Street surely owes a debt to Edward Durell Stone, and there is no question that the 1970 Howard Johnson Motor Lodge (now La Quinta Inn and Suites) on Sargent Drive lifted its recessed window panels straight from the neighboring Armstrong headquarters designed by Breuer.

On campuses with insufficient budgets to allow for headline architecture in the 1960s and 1970s, “modernism” often translated as the license to strip buildings down to essentials in the form of simple lines and inexpensive, no-frills materials. But even these structures could rise to the occasion. Designed to capture panoramic views of West Rock by Carl Blanchard, Jr. in 1970, Connecticut Hall, a new food services building at Southern Connecticut State College, featured large expanses of glass set between textured concrete fins. Folding walls divided the 3,000-square foot open plan of the Albertus Magus Campus Center—distant cousins to Kahn’s pogo panels, but related nevertheless.

Business owners, too, regarded “new” as a marketing tool. It’s not hard to understand why in 1966 the owners of Jet Cleaners, a 50-year-old family business on State Street, opted for a steel-and-glass box when they commissioned a new facility from architect Vicente A. Amore (who happened to be a relative). Jet customers knew they would be getting services that lived up to the name when they entered the ultra-modern premises where speed and efficiency (not to mention one-hour service) were the key to good business. The designers of Lucibello’s Bakery at Grand and Olive Streets or the Firestone Garage at Chapel and Union Streets might have said the same.

In New Haven as elsewhere, this collective urban streetscape of the recent past, with all its greatness, ordinariness, and imperfections, is part of an inheritance now entangling historians and critics in a debate about the wisdom and merits of its preservation. Driving in downtown New Haven remains a challenge, and in their enthusiasm for introducing high-speed traffic arteries, post-war planners never adequately considered the impact of noise and pollution. In the past few years, publicity over threats to two icons of Richard Lee’s urban renewal program—Roche-

Dinkeloo's New Haven Veterans Memorial Coliseum and Marcel Breuer's Armstrong Rubber Company (later Pirelli) Headquarters, now owned by the Swedish retailer Ikea, highlighted the complex issues associated with saving buildings to achieve the respect usually accorded with age. In 1987, when New Haven officials first proposed the demolition of the Coliseum, the building had only been open for 15 years, a shockingly short amount of time for the rooftop garage to already need \$20 million dollars' worth of repairs. The building was finally taken down in January 2007.

The rapid physical deterioration of the Coliseum represented one of the many issues responsible for giving modern buildings, so often associated with maintenance problems, a bad name. The rise of postmodernism coincided with the downfall of urban renewal for a reason. The motivation to acknowledge history and the vernacular, to reference place, and to reintroduce ornament and familiar forms offered an alternative to the perceived coldness of modern buildings when people most wanted that choice. The earlier emphasis on function made modern buildings seem disconnected and raw, and the movement as a whole suffered from the arrogance associated with neighborhood-gutting renewal programs such as the ones forwarded by Richard Lee's urban-renewal machine. By the 1960s major figures in the urban planning and design fields, notably the urban historian Jane Jacobs and architect Robert Venturi, were becoming influential advocates in a humanistic counter movement.

If New Haven's 17th-century settlers were in fact laying out an "ideal city," it was an expectation impossible to fulfill. In its spread and complexity, post-war development was the next step in an evolution already moving steadily away from the grand simplicity of the original urban order. Nearly a century has passed since John Russell Pope, and later Cass Gilbert and Frederick Law Olmsted, Jr., set out their respective master plans for campus and city. Vincent Scully maintains that the university has yet to achieve the hoped-for unification with its urban context.

The Olmsted/Gilbert plan in particular seems a lost opportunity in its impulse to establish recognizable urban portals and clear traffic patterns, to integrate green spaces and vistas, and to embrace pedestrian life. Redevelopment has come and gone, yet all of these elements are even more important now than they ever were. The words "urban planning" suggest a unified long-range overview, yet few, if any, of the major modernist works in New Haven resulted from a comprehensive plan in terms of design relationship.

Paul Rudolph once commented on the natural tendency for modernist architecture to "build isolated buildings."⁷⁹ Yale president A. Whitney Griswold fostered precisely that climate of individuality on campus by regarding each commission as an opportunity for unique expression. In the idealistic 1950s phase of his building campaign, the Yale environment, as any

good educational institution should, tolerated experimentation and even failure. The disparity of the results, however, makes Yale's campus modernism all the harder to assess as a body. And, as the historian Richard Brownlee has rightly pointed out, great buildings are not necessarily *good* buildings.

In many ways, Richard Lee's redevelopment approach was equally idealistic when he made a virtue of committing to slum clearance and anti-poverty programs. For Lee the moment could not have been more right for modernism, a socially conscious movement advanced as an agent of change. In the needy post-war years, modern urban planning concepts promised an answer to poverty, housing needs, crumbling infrastructures, and all the other problems confronting inner cities left behind as the byproducts of suburbanization. Yet Lee's belief that the bulldozer approach—fast, quantifiable results—was critical to winning the backing of the New Haven business community arguably proved to be a negative achievement. Whereas the Olmsted/Gilbert plan honored the importance of history in the greater urban continuum, America's invasive urban renewal policies sanctioned its loss. The architecture synonymous with redevelopment now symbolizes its failures.

The recent fight over the Armstrong/Pirelli Headquarters underscores the ambiguities in advocating for the preservation of buildings produced by a movement so openly contemptuous of the past. Ironically, the center of the controversy was *parking* (proving, perhaps, that the more things change, the more they stay the same). Ikea, recently in search of adequate space, left the now empty main building standing, but tore down most of the two-story plinth extending to the west. The city, in turn, re-zoned land formerly designated as open space so the store could have a larger parking lot. In another word: compromise.

Yet now that modernism has *become* the past, preservation has legs to stand on. To recognize the urban renewal era in New Haven is to acknowledge an important and profoundly life-altering episode in the city's history. That modern buildings suffer from guilt by association only complicates the collective legacy.

Endnotes

Introduction

¹ Patricia Cummings Loud, *The Art Museums of Louis I. Kahn*, (Durham, NC: Duke University Press, 1989), 52.

² Walter McQuade, “The Building Years of a Yale Man,” *The Architectural Forum* (June 1963), 87-90.

Part One. Past as Prologue

³ The New Haven Green Historic District was granted National Historic Landmark status in 1970. The designation is an official recognition by the federal government of a property’s national significance, and honors locations considered important to all Americans because of their exceptional qualities that contribute to an understanding of the national heritage.

⁴ One of many theories relating to the use of the grid layout in New Haven points to a precedent of 17th-century British outposts established on grid plans in Ireland. In North America, grid layouts were later used in several settlements, not all of them English, including Philadelphia (1682), Detroit (1701), New Orleans (1718), and Savannah (1733).

⁵ See Preston Maynard, *Carriages and Clocks, Corsets and Locks: The Rise and Fall of an Industrial City—New Haven, CT* (University Press of New England, 2004).

⁶ The New Haven and Hartford Railroad laid down the first rail line along the Mill River in 1839, and the New York line followed. The Farmington Canal was drained in 1840 and rail tracks were laid along the bed. One branch of the New York line ran west and the other north up to Northampton.

⁷ Working with fellow New Haven residents in the effort to beautify the west end, Mitchell donated the designs and some of his own property for the Edgewood projects, which bear the same name as his former country house on Forest Road.

⁸ *Report of the New Haven Civic Improvement Commission by Cass Gilbert and Frederick Law Olmsted to the New Haven Civic Improvement Committee* (New Haven, December, 1910). Note that the consultants constituted the “*Commission*,” which was differentiated from their client, the New Haven Civic Improvement *Committee*. Officers of the Committee included Rollin S. Woodruff, Chairman; George Dudley Seymour, Secretary; and Henry H. Townshend, Assistant Secretary and Treasurer. The study was funded by about 100 committee members.

⁹ John Russell Pope published his proposal under the title *University Architecture: Yale University General Plan for its Future Building* in 1919.

¹⁰ “Yale and New Haven to Build Together,” *The New York Times*, January 25, 1922.

Part Two. Redevelopment and the Early Years

¹¹ Sherman Hasbrouck, “Transformation: A Summary of New Haven’s Development Program” (Yale: Masters Thesis, Urban Studies Program, 1965), 7.77

¹² Urban historian G. William Domhoff has written extensively about the city’s budget problems in relation to Yale, and argues that they were compounded by Yale’s removal of a significant amount of property from

the tax rolls in the 1920s and 1930s. See G. William Domhoff, *Who Really Rules?: New Haven and Community Power Reexamined* (New Brunswick: Limited Transaction Books, 1978).

¹³ To avoid undermining real estate and home-construction interests, the Wallace-Steagall Housing Act required that the number of new public housing units not exceed the number of substandard dwellings removed from the local housing supply. In this way the federal housing program attempted to improve quality without inflating the market.

¹⁴ Following construction of Elm Haven in Dixwell, the HANH continued as the leading developer of new units in New Haven, including moderate-income projects at McConaughy Terrace, Brookside, and Rockview in the western reaches of town.

¹⁵ Hasbrouck, "Transformation," 7. Funded by the American Public Health Association, the survey focused on the city's poorest neighborhoods.

¹⁶ Elizabeth Mills Brown, *New Haven: A Guide to Architecture and Urban Design* (New Haven and London: Yale University Press, 1976), 16.

¹⁷ The 1941–42 master plan was the basis for a number of subsequent proposals, including the "Short Approach Master Plan" of 1953, which focused on transportation issues.

¹⁸ Maynard Meyer, city plan engineer, and Maurice Rotival, city planning consultant, are both listed as members of the commission, but were on leave of absence with the armed forces.

¹⁹ The city's argument for revitalization of the central business district rested primarily on the number of jobs the area supplied (12,000) and the taxes it generated (20% of the total city property tax on only 1½% of the taxpaying area). A similar case was offered for strengthening industry, which supplied another 20% of city taxes. According to the city, similar plans were then being developed in other urban areas "on a paying basis."

²⁰ The NHRA was established under an act of the General Assembly, and the members were to serve without pay. It was determined that if the City Plan Commission and the NHRA identified a section of the city for potential rehabilitation, the agencies could hold public hearings to assess opinion and proceed after gaining consent of the Board of Aldermen.

²¹ See Douglas Rae, "Inventing Dick Lee" and "Extraordinary Politics" in *City: Urbanism and its End* (New Haven and London: Yale University Press, 2003), 287-360.

²² See *Yale Alumni Magazine* (May 1966) for comments by Lee concerning urban renewal. His remarks concerning the Oak Street slum are quoted in Rae, 303.

Part Three. Radical Intervention: Oak Street and Downtown Development

²³ In 1948, under director Charles Downe, the City Plan Commission explored several plans for the repositioning of Route 1 by the harbor and proposing industrial development in the area.

²⁴ "Oak Street Housing Criticized as Poor Approach," *The New Haven Register* (August 19, 1952). State Rep. Charles Tomasino criticized the city's emphasis on high-rent projects (the future University, Madison, and Crown Court Towers) at a time when New Haven had a glut of luxury units and a need for "housing accommodation for the average worker and his family." The city, however, rejected public housing for the area because the land was too valuable.

²⁵ Under the Title I urban renewal program, the city secured a \$2.5 million federal loan-and-grant package in 1956 for its downtown business renewal plan, projected to have a net cost of \$3.8 million.

²⁶ “Big Project Proposed in Area of Connector,” *The New Haven Register*, December 2, 1956. The city proposed a \$1.3 million private capital investment in retail office buildings; displaced businesses would be offered occupancy. The four religious institutions forced to relocate reportedly declined an offer for one of the parcels due to its awkward shape and inaccessibility to parishioners.

²⁷ See Hasbrouck, “Transformation,” for a discussion.

²⁸ *The New Haven Register*, October 25, 1959. (No mention of what the tallest building was.)

²⁹ *Ibid.* The article cited Douglas Orr as architect of the SNET project, but by this time Orr had delegated work to other architects in the office.

³⁰ See Hasbrouck, “Transformation,” for a detailed description of the Church Street Redevelopment. Among the roadblocks were several lawsuits and some financial setbacks encountered by the developer Roger L. Stevens, who stopped work on the Malley’s Department Store midway through the project. The Malley’s construction resumed only after Yale stepped in with a \$4.5 million loan to Stevens.

³¹ See “A Parking Garage for 1500 Cars,” *Architectural Record* (March 1962), 152 and “New Haven is Becoming a Model City—Architecturally,” *The New Haven Register*, January 6, 1963.

³² *The New Haven Register*, January 6, 1963.

³³ Before its closing, the Chapel Square Mall was renovated by the Rouse Company in the 1980s. The office tower has been reconfigured as apartments and the mall roof removed to create a courtyard. The department stores have been torn down.

³⁴ Neil Hogan, “A Building that Looks Up and Ahead,” *The New Haven Register*, Supplement, January 1967.

³⁵ See “Rush Hour at Rink Side,” *The Architectural Forum* (March 1974).

³⁶ “The Elderly,” *Progressive Architecture* (May 1967), 124-129.

Part Four. Long Wharf: Industrial Park for the Automobile Age

³⁷ Under Public Act 8, the appropriations required a 50% match for net project costs from the cities receiving the state funds. The New Haven project was early beset by financial problems, and the city revealed a \$2.7 million budget gap. Redevelopment authorities miscalculated the cost of the fill contract and value of the old Sargent factory site on Water Street by half. The Public Act 8 financing program was later abandoned when the federal government broadened funding to cover non-residential programs.

³⁸ The state funding enabled the city to provide the food cooperative an affordable long-term loan to invest in the property and build warehouses.

³⁹ Diana Granbery attended the Harvard Graduate School of Design; Carleton Granbery and Robert Coolidge were on the faculty in the architecture school at Yale in the 1940s when the firm was designing modern houses in the New Haven area.

⁴⁰ Future, non-industrial additions to the west side of the Long Wharf district included the Albie Booth Memorial Boys Club (1971, Davis, Cochran Miller Baerman Noyes); the Community Health Care Center Plan Building (1970, Bruce Porter Arneil); and the Howard Johnson Motor Lodge and Restaurant, Sargent Drive (1970–71, Singerland, Boos & Takas).

⁴¹ See Isabelle Hyman, *Marcel Breuer, Architect: The Career and the Buildings* (New York: Harry N. Abrams, 2001), for a catalogue raisonné of Breuer projects.

⁴² During the initial design process, the Gant Corporation was sold to a new parent company, the Sarah Lee Corporation. Newman's scheme for the plant was not the final design to be executed.

Part Five. Housing, Schools and Neighborhood Renewal

⁴³ In 1957 the City Plan Commission consolidated prior plans concerning land use and community facilities into a master plan later known as the "Workable Program," which replaced the "Short Approach" and emphasized neighborhood-specific renewal that continued throughout the 1960s.

⁴⁴ The Model Cities Program focused on improved housing for all income levels, education, job training, and health services as part of an effort to coordinate the federal monies with state, city, and private funding. The idea was to involve the community in a multi-faceted approach. The projects were to serve as "model cities" for other locales facing similar problems.

⁴⁵ Schilling and Goldbecker designed Wilbur Cross and Hillhouse High Schools using identical plans in the mid-1950s after the Tower Parkway land containing the city high schools was sold to Yale. The functional designs predated the innovations explored by the modernists during the Sargent years.

⁴⁶ For the Court Street project, homeowners initially used savings and private loans for financing. The city provided construction advice and contributed the landscaping and the cul-de-sac parking. When officials were unable to convince residents of this former "skid row" area to participate by compelling them to meet the minimum housing codes, the city exercised its power to possess the property by eminent domain. The city ultimately bought 15 of the 27 houses. As of 1965, FHA-backed loans counted for only a small fraction (about 3 %) of the investment.

⁴⁷ Hasbrouck, "Transformations," 3.

⁴⁸ Robert A.M. Stern, "The Office of Earl P. Carlin," *Perspecta* 9 (1965), 183-98.

⁴⁹ Under a ruling in state courts, the sale counted as a non-cash federal credit for Yale's investment in buying and clearing the parcel, even though the site was used for the university's new Stiles and Morse Colleges. The credits were more often granted for public improvements, such as schools, roads and sewers. Federal regulations required that cities pay one-third of the net costs, but because Connecticut legislation provided for state payment of half the city share, it reduced the New Haven commitment to one-sixth. The \$3 million credit thus generated \$18 million worth of federal funding. See Hasbrouck, 52.

⁵⁰ Among the "Q House" initiatives were the Black Coalition, programs for unwed mothers, teenage work crews, and the study of nutritional problems in poor communities. The funding for the new building derived from a variety of sources, including a \$407,000 HUD grant and a \$165,000 grant from the State Department of Community Affairs. The city invested \$74,000. The "Q House" share of \$91,000 was part of \$140,000 paid by the NHRA for the organization's old headquarters.

⁵¹ The St. Martin de Porres Roman Catholic Church followed with a townhouse project proposed for a site next to the parochial school. Involvement in the redevelopment also represented a first venture by two storefront congregations—the Beulah Heights First Pentecostal and Trinity Temple Church of Christ in God—in planning and building their own houses of worship.

Part Six. Yale and the Moderns

⁵² See John M. Johansen, *A Life in the Continuum of Modern Architecture* (Milan: l'Arca Edizioni, 1995). Johansen's own juries included Bob Engman, head of the Sculpture Department, Josef Albers of the Art

Department and, for “moral authority,” a theology professor. Discussions often overflowed back to someone’s house in New Canaan, Connecticut with Louis Kahn “pounding out on piano endlessly elaborate compositions of his own.”

⁵³ Dreier moved to Milford, CT, in 1946 and continued to add to the collection.

⁵⁴ Susan B. Matheson and Elise K. Kenney, “Prologue to Kahn: The Philip Goodwin Design in *Yale University Art Gallery Bulletin* (2000), 93. See this essay for a full account of the Goodwin’s interaction with Yale, and descriptions and illustrations of his plans.

⁵⁵ The first public housing project in America was the 1933 Carl Mackley Houses, designed for the Full Fashioned Hosiery Workers Union in Philadelphia by Oscar Stonorov (1905–70) and Alfred Kastner (1900–75). The Architectural Research Group (ARG), organized in that city in the early 1930s by Louis Kahn, was deeply involved in social issues and mass housing solutions.

⁵⁶ Philip Johnson, then director of the architecture department at MoMA, was known at the time primarily for his residential work. See Robert A.M. Stern, *George Howe: Toward a Modern American Architecture* (New Haven, CT: Yale University, 1975), for a detailed discussion of Howe’s involvement. In 1949, as one of his first Yale projects, Douglas Orr remodeled a carriage house into a chapel (later remodeled as Donaldson Commons). His office served as associate architects with Kahn on the art gallery addition; staff member Henry Pfisterer, also a member of the Yale architecture faculty, acted as chief structural engineer.

⁵⁷ *Ibid.*, 100-101.

⁵⁸ Douglas Orr’s large body of work for the university (not all is extant) also included the Bingham Oceanographic Laboratory, the Yale-New Haven Hospital, and his collaboration with Philip Johnson on the 1965 Laboratory of Epidemiology and Public Health, among many other works.

⁵⁹ Saarinen’s plan for Science Hill had called for a summit location and east/west axis for the Gibbs Laboratory, which would have smothered the summit and blocked the view to East Rock. See Vincent Scully, “Modern Architecture at Yale: A Memoir,” *Yale in New Haven: Architecture and Urbanism* (New Haven: Yale University Press, 2004), 306.

⁶⁰ See Patrick Pinnell, *The Campus Guide: Yale University* (New York: Princeton Architectural Press, 1999) and Vincent Scully’s “Modern Architecture at Yale, a Memoir” and *American Architecture and Urbanism*, rev. ed. (New York: Henry Holt, 1988) for a discussion of the Kline Tower’s derivative historicist references and reduction of mass to surface embellishment. Pinnell cites a reference to the 13th-century Sainte Cécile Cathedral in Albi, France.

⁶¹ See Pinnell, *The Campus Guide*.

⁶² See Mark Allen Branch, “Eero Saarinen’s Turn: The Rediscovery of a Great Modernist Architect,” *Yale Alumni Magazine* (September/October 2006), 44-53, for a discussion of the rink and the revived interest in Saarinen’s work.

⁶³ Alfred Whitney Griswold in *New Architecture in New Haven*, Don Metz and Yuji Noga, eds. (Cambridge: M.I.T. Press, 1966).

⁶⁴ *The New Haven Register*, September 7, 1969. See also Brown, “New Haven: A Guide,” 152, for remarks about the building and site.

⁶⁵ Branch, *Yale Alumni Magazine* (September/October), 2006.

⁶⁶ See Scully, Vincent, et al. *Yale in New Haven: Architecture and Urbanism*.

⁶⁷ Patricia Cummings Loud, *The Art Museums of Louis I. Kahn* (Durham, NC: Duke University Press, 174.

⁶⁸ See Mark Alden Branch, “This is CCL?,” *Yale Alumni Magazine*, January/February 2008, as well as on-line comments at the *Yale Alumni Magazine* web site.

⁶⁹ In 1972 the School of Architecture became a separate school and during Charles Moore’s tenure, the Department of Architecture began offering a master’s degree as its primary professional degree. Moore’s status changed accordingly from department chairman to dean, making him the first dean of the school.

Part Seven. What Hath We Wrought? Redevelopment and its Aftermath

⁷⁰ CAW was to move from its basement quarters in the Temple Mishkan Israel at Audubon and Orange Streets.

⁷¹ The Chamber of Commerce urban renewal committee also included architects Carl Blanchard Jr., Edward Cherry and Carleton Granbery. There was much debate over the construction of additional office towers, desired for “balance,” and the number of floors necessary to make the buildings sound real estate investments as high-rise rental space.

⁷² See “A Committee to Promote Responsible Design,” *The New Haven Register*, January 20, 1965.

⁷³ “P/A Observer, Urban Planning and Urban Revolt: A Case Study,” *Progressive Architecture* (January, 1968), 134-156.

⁷⁴ In 1960s New Haven, the low-income areas were not exclusively African American and tended to be more racially mixed than in larger cities. For example, the population of Dixwell and the Hill was predominantly African American and Puerto Rican by the late 1960s, yet the areas also contained areas of contiguous all-black and all-white blocks. See “P/A Observer, Urban Planning and Urban Revolt: A Case Study,” *Progressive Architecture* (January, 1968), 134-156.

⁷⁵ In addition to supporting research for the experimental foam technology, the First Church of Christ (Center Church on the Green) invested \$12,000 in a housing rehabilitation program on Congress Avenue as part of a commitment to public housing and social welfare interests in the city. Valerie Batorewicz’s Branford, CT, company, Housing Systems Associates, also designed a second version of the foam house, known as Environ I.

⁷⁶ In response to objections over State Street plans, the NHRA claimed preparations had already gone too far to legally stop them—even though neither the garage nor the expanded highway section, initiated by the City Plan Department in 1963, was as yet designed. See “P/A Observer, Urban Planning and Urban Revolt: A Case Study,” *Progressive Architecture* (January 1968).

⁷⁷ The lift-slab process, deemed unique by local papers, permitted pre-installation of mechanicals and eliminated the majority of formwork required in conventional slab pouring. A system of steel tension cables, also pre-inserted, allowed the slabs to be placed at greater intervals.

⁷⁸ Jon Owen, “A Committee to Promote Responsible Design?” *The New Haven Register*, January 20, 1965.

⁷⁹ “New Haven is Becoming a Model City—Architecturally,” *The New Haven Register*, January 6, 1963.

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Philip Johnson: papers, drawings, project records.

Library of Congress, Prints and Photographs Division

Paul Rudolph: photographs, drawings.

New Haven City Plan Commission, Library

Redevelopment reports, plans, scrapbooks, photographs.

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E. Carleton Granbery: drawings, plans.
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William Francis Pederson: drawings, plans.

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Images of Historical New Haven
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Marcel Breuer: papers, project records, correspondence.

Syracuse University, Special Collections:

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University of Arkansas Libraries, Special Collections

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Yale University Art Gallery Photograph Collection: photographs of installations, construction, events.

Yale University Art Gallery Publications Collection: bulletins, exhibition catalogues.

Yale University Scrapbooks: clippings, memorabilia.

Yale University Library, Manuscripts and Archives

Louis I. Kahn Collection: publications on or by Kahn; photographs.

Richard C. Lee: papers.

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James Gamble Rogers Collection: plans, project files, correspondence, photographs.

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Biographical Dates

Josef Albers	1888–76
Henry Austin	1804–91
Edward Larrabee Barnes	1915–2004
Valerie Batorewicz	1936–83
Richard Bennett	1907–96
Marcel Breuer	1902–81
Kingman Brewster, Jr.	1919–81
John Brockett	1609–90
Denise Scott Brown	1931–
Gordon Bunshaft	1909–90
Prescott Bush	1895–1972
Josiah C. Cady	1837–1919
Serge Chermayeff	1900–96
Edward E. Cherry	1926–
Le Corbusier (Charles Édouard Jeanneret-Gris)	1887-1965
John Davenport	1597–1670
William DeVane	1898–1965
John Dinkeloo	1918–81
Lathrop Douglass	1907–81
Katherine Dreier	1877–1968
Marcel Duchamp	1887–1968
George A. Dudley	1914–2005

Theophilus Eaton	1590–1658
Francis P. Garvan	1875–1937
Cass Gilbert	1859–1945
Philip L. Goodwin	1885–1958
E. Carleton Granbery	1913–98
A. Whitney Griswold	1906–63
Walter Gropius	1883–1969
Wallace K. Harrison	1895–1991
George Howe	1886–1955
John Johansen	1916–
Philip Johnson	1906–2005
Louis I. Kahn	1901–74
Dan Kiley	1912–2004
Richard C. Lee	1916–2003
William Lescaze	1896–1969
Edward J. Logue	1921–2000
Donald Grant Mitchell	1822–1908
Charles W. Moore	1925–93
Herbert S. Newman	1934–
Oscar Niemeyer	1907–
Isamu Noguchi	1904–88
Eliot Noyes	1910–77
Claes Oldenburg	1929–
Frederick Law Olmsted, Jr.	1870–1957
Douglas W. Orr	1892–1966
I. M. Pei	1917–
Cesar Pelli	1926–
Nikolaus Pevsner	1902–83
Louis Pollack	1922–
John Russell Pope	1874–1937
Man Ray	1890–1976
Kevin Roche	1922–
James Gamble Rogers	1867–1947
Maurice E.H. Rotival	1892–1980
Paul Rudolph	1918–97
Eero Saarinen	1910–61
Louis Sauer	1928–
Charles H. Sawyer	1906–2005
Paul Schweikher	1903–97
Vincent Scully	1920–
Bobby Seale	1936–
George Dudley Seymour	1859–1945
Theodore Sizer	1892–1967
Fred Smith	1902–79
Robert A.M. Stern	1939–
Roger L. Stevens	1911–98
Edward Durell Stone	1902–78
Hugh Stubbins, Jr.	1912–2006
Egerton Swartwout	1870–1943

Ithiel Town	1784–1844
Ludwig Mies Van der Rohe	1886–1969
Robert Venturi	1925–
Paul Weiss	1901–2002

Acronyms

CAC	Citizens Action Commission
FHA	Federal Housing Authority
HANH	Housing Authority of New Haven
HUD	Department of Housing and Urban Development
KOC	Knights of Columbus
NHCIC	New Haven Civic Improvement Committee
NHHA	New Haven Housing Authority
NHRA	New Haven Redevelopment Agency
SNET	Southern New England Telephone
SOM	Skidmore, Owings & Merrill