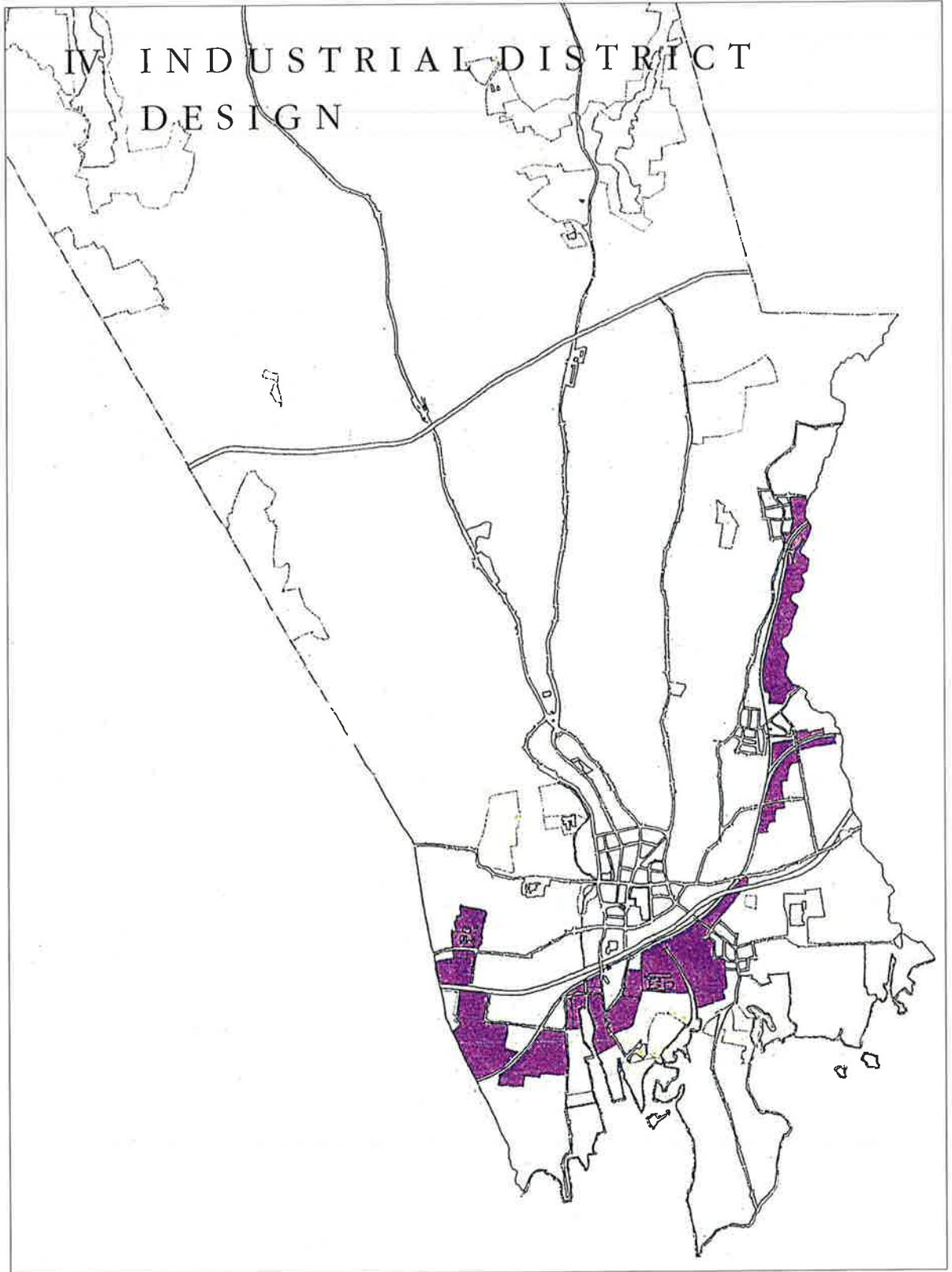


IV INDUSTRIAL DISTRICT
DESIGN



INDUSTRIAL DISTRICT DESIGN

The design of urban industrial districts is generally ignored. This reflects a legacy in modern town planning of trying to isolate manufacturing in segregated precincts or excising industry from the city altogether. These places are discounted as the sinks for any undesirable use. In fact, many other American cities have already discovered that the design of industrial districts is important for a number of reasons:

For one, these places have tremendous economic potential by becoming vibrant mixed-use live-work neighborhoods that attract investment of all kinds—from traditional manufacturing to high-value-added technology-based manufacturing to housing. The 1984 Master Plan Amendment did acknowledge the persistence of messy land-use patterns with houses and factories side-by-side. But policies should go beyond simply stabilizing and managing the messy land use patterns and seek instead to exploit their mixed-use character, recognizing the role design plays in resolving adjacencies between residential and industrial uses.

Second, if properly designed, these mixed-use industrial areas can become physically integrated with the surrounding neighborhood, providing opportunities to complete fractured street networks and make new connections.

Third, by making these places more attractive to new investment in industry, and by helping to stabilize the working neighborhoods that surround them, Stamford's industrial districts remain important facets of Stamford's goals for economic and social diversity.

URBAN MANUFACTURING RECONSIDERED

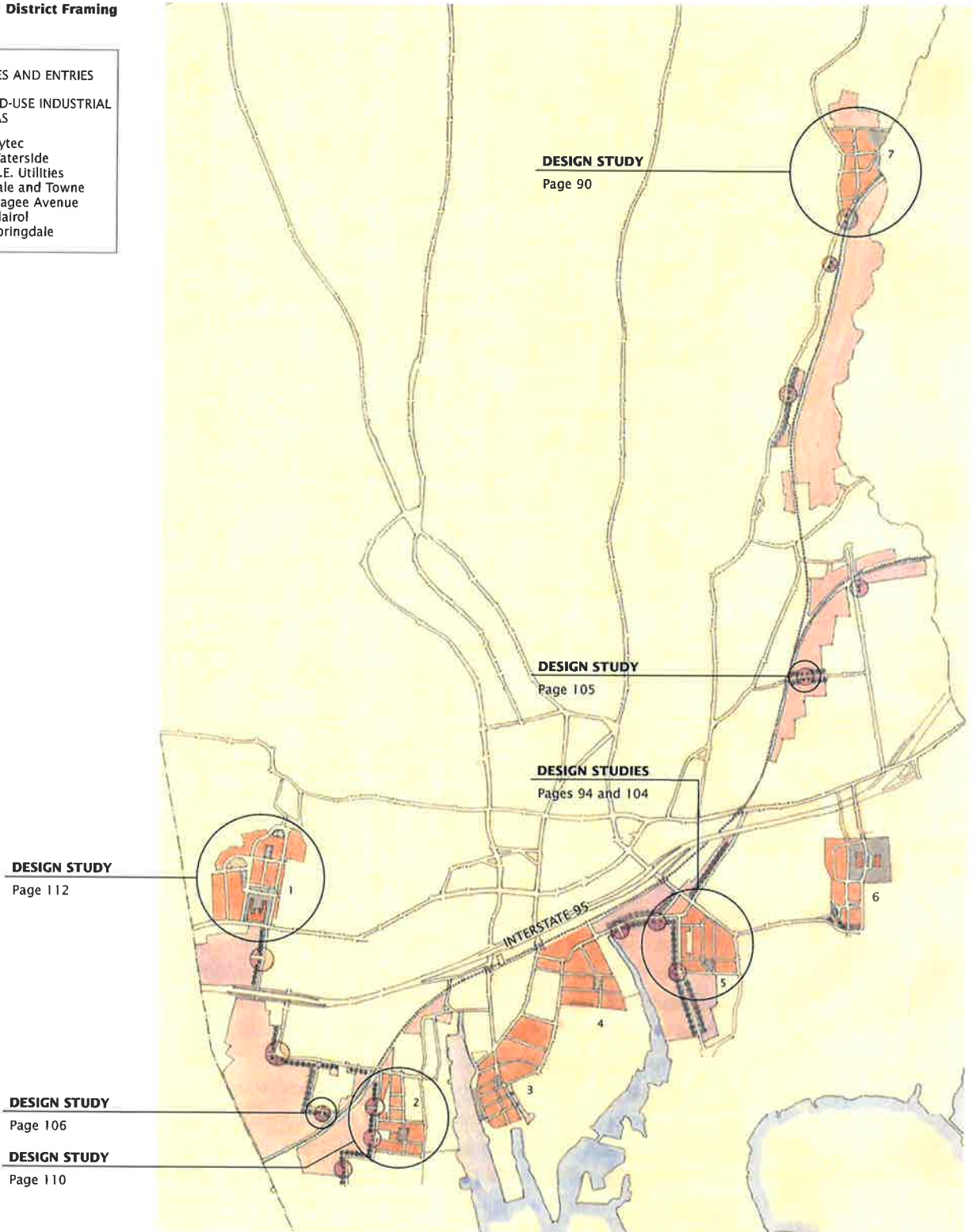
The continued vitality of industrial mixed-use neighborhoods, and the tendency for manufacturers, especially small manufacturers, to thrive as part of the so-called "agglomeration economies" of urban locations, has caused many cities to rethink traditional zoning and planning strategies. The traditional proposition that urban manufacturing should either be uprooted entirely or completely isolated from all other land uses is being questioned. At the same time, changes in technology have enabled a wide variety of manufacturers to



4.01 A typical mixed-use industrial area

4.02 Industrial District Framing Diagram

	EDGES AND ENTRIES
	MIXED-USE INDUSTRIAL AREAS
1.	Cytec
2.	Waterside
3.	N.E. Utilities
4.	Yale and Towne
5.	Magee Avenue
6.	Clairol
7.	Springdale



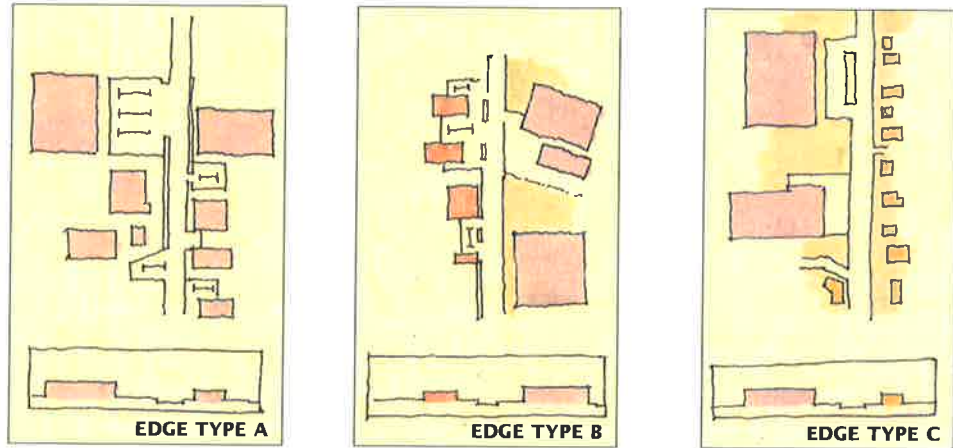
co-locate with commercial and residential uses. Examples are electronic assembly, wood-working and graphics/publishing. All of this suggests a more fine-grained approach to urban manufacturing, including “performance zoning” for mixed-use areas in lieu of conventional use-based zoning. (See discussion in the City-wide Policies Report). From an urban design perspective, the varied geography of Stamford’s industrial districts can be thought of in terms of two models: “edges and entries” and “mixed-use industrial areas”.

EDGES AND ENTRIES

Many of the city’s industrial districts are large areas of consolidated industrial use neatly demised by some element of Stamford geography—a rail line, a highway, or jurisdictional boundary. Because these industrial areas abut residential neighborhoods only along a single edge, the interior organization and workings of the industrial district are not critical to the neighborhood structure. Although there are opportunities for new roadway connections between and through these industrial districts to provide better road access off of neighborhood streets, these are not areas where the adjoining neighborhood street pattern should be extended into the core of these districts. Nevertheless, the design of the edge of the industrial district and the entry to the industrial district is extremely important to the quality of life of the abutting neighborhood.

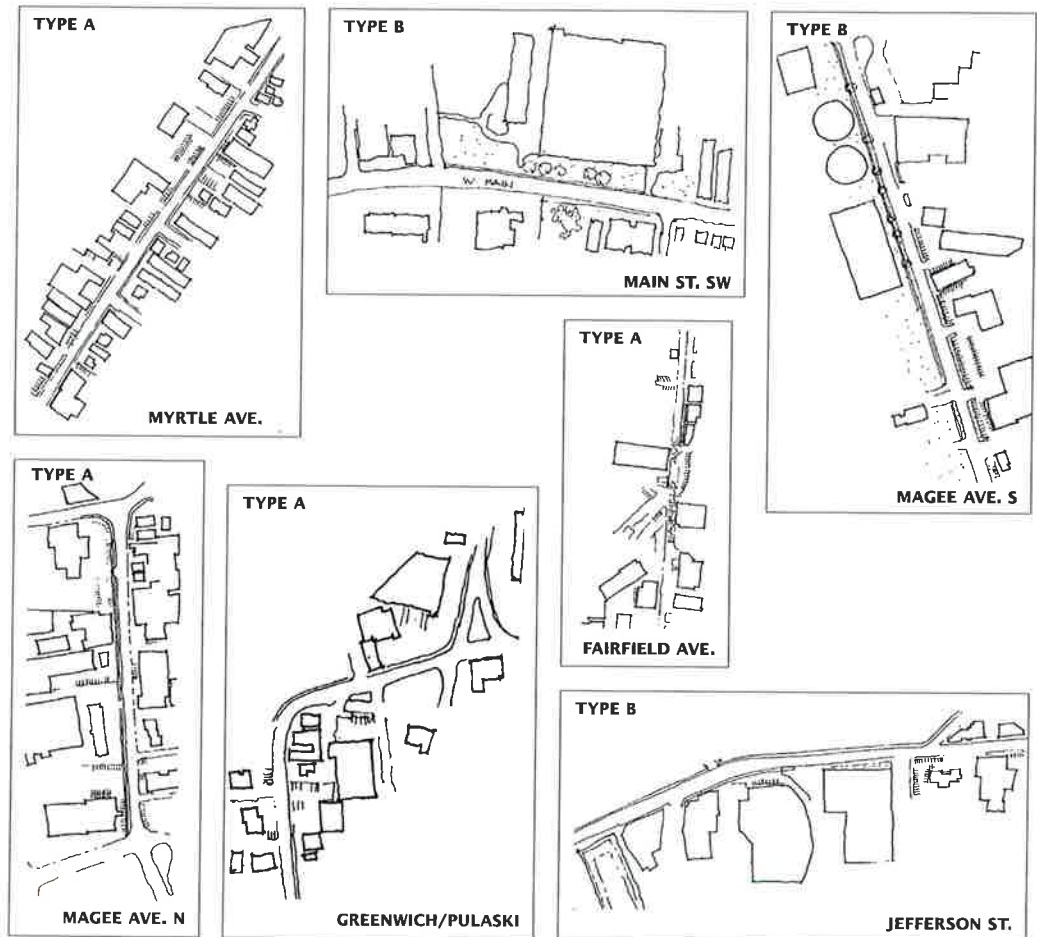
Regardless of how viable or active the businesses within an industrial area may be, the unsightly physical environment—of buildings poorly maintained, sidewalks in disrepair or non-existent—suggests disinvestment. Many of the older buildings have few windows or entrances at the sidewalk, and the buildings are often surrounded by leftover parking, storage or loading areas.

The design studies below suggest ways to make these places visually more appealing and to attract new investment.



4.03 The range of conditions found at the edges of the industrial districts. These can be consolidated into three principal configurations: industrial corridor (A), commercial/industrial corridor (B), and mixed-use edge (C).

4.04 Industrial edges—existing conditions



Types of Industrial Edges

A. Industrial Corridor Here, a variety of small and intermediate scale businesses line both sides of the road. It is a jumble of buildings—there is little that is consistent along the corridor with buildings of different scales, each sited in its own way without regard to its neighbors or the street.

B. Commercial/Industrial Corridor Here, the edges of the district are characterized not only by a change of scale, but of use: commercial buildings on one side of the street confront a large parcel on the opposite side, with one or two large industrial buildings well set back from the street.

C. Mixed-Use Edge In these locations, one side of the road is the residential edge of a neighborhood. The other side is characterized by the same physical disorder and apparent disinvestments described for the industrial corridor.

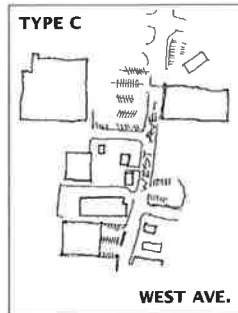
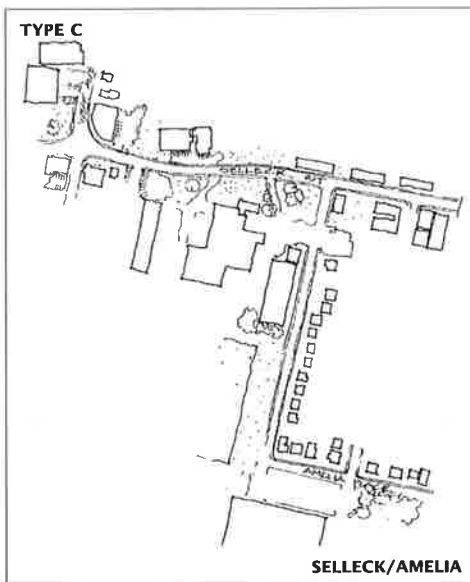
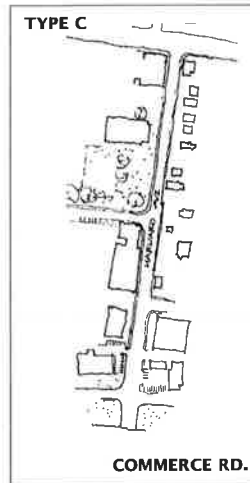
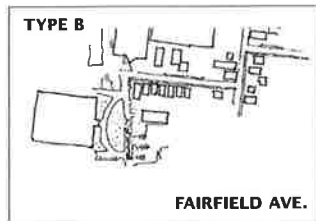
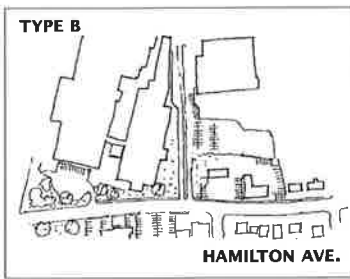
The design studies on the following pages describe a variety of interventions for each of these three typical conditions.

TYPES OF INDUSTRIAL EDGES

A. Industrial Corridor

B. Commercial/Industrial Corridor

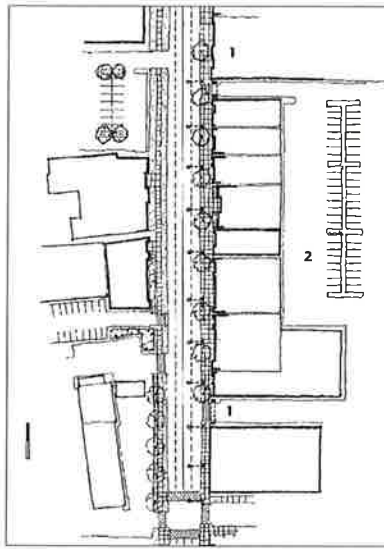
C. Mixed-Use Edge



INDUSTRIAL EDGE A

Industrial Corridor Proposed Conditions

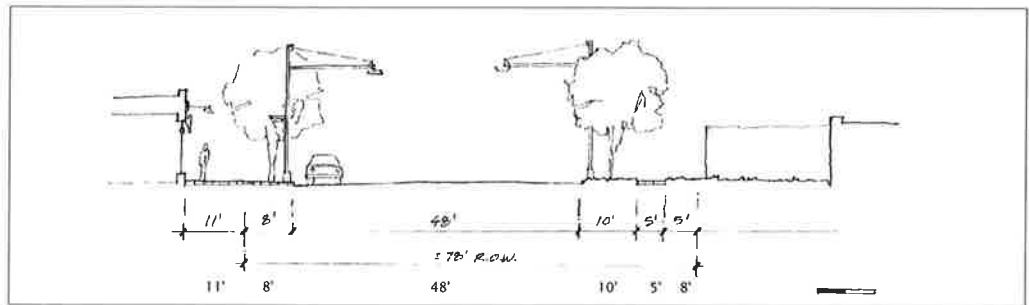
- Completed sidewalks and paving improvements
- Uniform street trees and streetscape elements
- Facade improvements
- Pedestrian improvements at intersections
- Articulated entrances to reorganized interior of the industrial blocks (1)
- Reorganized and landscaped parking areas (2)



4.05 Magee Avenue—proposed conditions



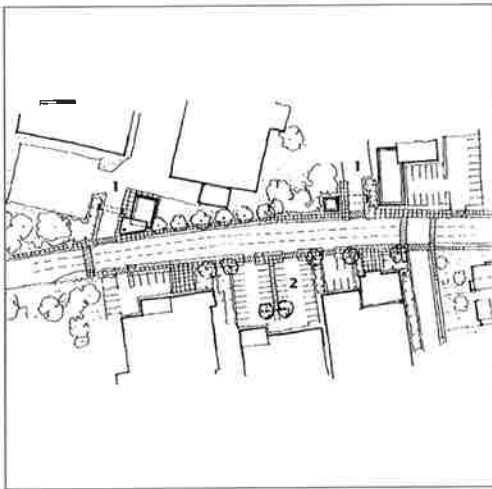
4.06 Magee Avenue—aerial photograph



4.07 Magee Avenue—proposed section



4.08 Magee Avenue



4.09 Hamilton Avenue—proposed conditions

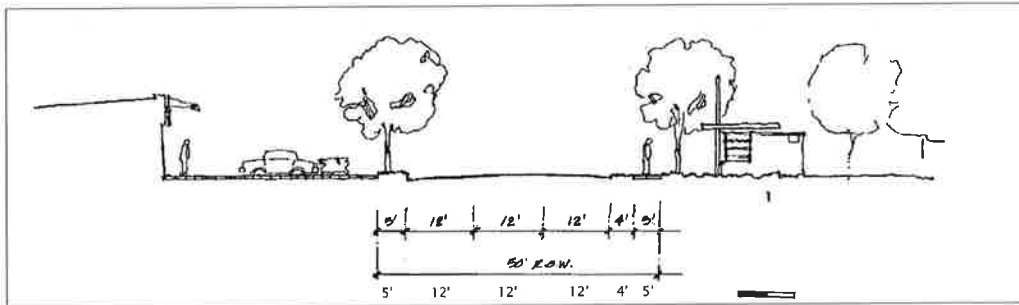


4.10 Hamilton Avenue—aerial photograph

INDUSTRIAL EDGE B

Commercial/Industrial Corridor Proposed Conditions

- Completed sidewalks
- Clearly identified and accessible building entrances (1)
- Uniform landscaping and streetscape
- Reorganized and landscaped parking areas (2)



4.11 Hamilton Avenue—proposed section

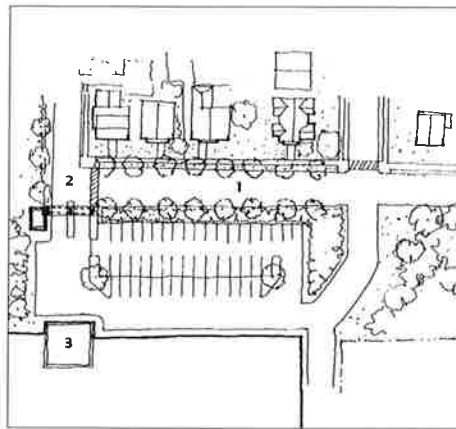


4.12 West Main at edge of Cytec industrial campus

INDUSTRIAL EDGE C

Mixed-Use Edge Proposed Conditions

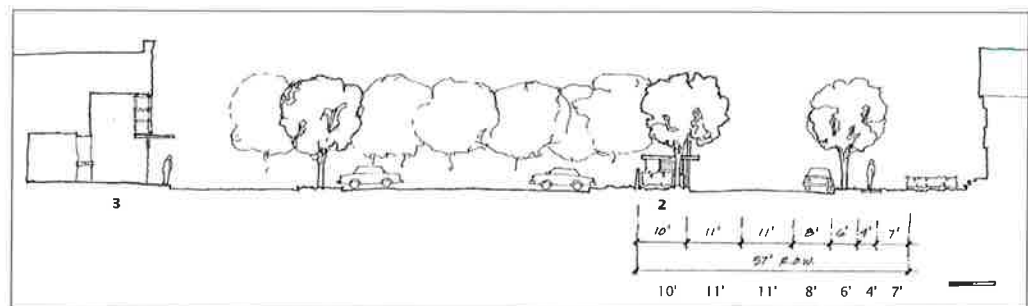
- Completed sidewalks and intersection improvements
- Uniform landscaping and buffering parking lot (1)
- Architectural gateway to industrial property (2)
- Architectural building entry, perhaps created with new floor area allowances (3)



4.13 Amelia Place—proposed conditions



4.14 Amelia Place—aerial photograph



4.15 Amelia Place—proposed section



4.16 Amelia Place—existing conditions

EDGE DESIGN STRATEGIES



4.17



4.18



4.19

4.17 through 4.19 Precedents for edges and entries of industrial areas

- where new or existing buildings are near the sidewalk, promote facade renovations including increased transparency and articulated entrances.
- where buildings with blank walls are set back from the sidewalk, provide a substantial landscape buffer
- new ancillary retail or office space can create a transition from the sidewalk to the blank "industrial box." New construction would be contingent on "pedestrian friendly" design: transparency, high quality materials, a clearly articulated entry.

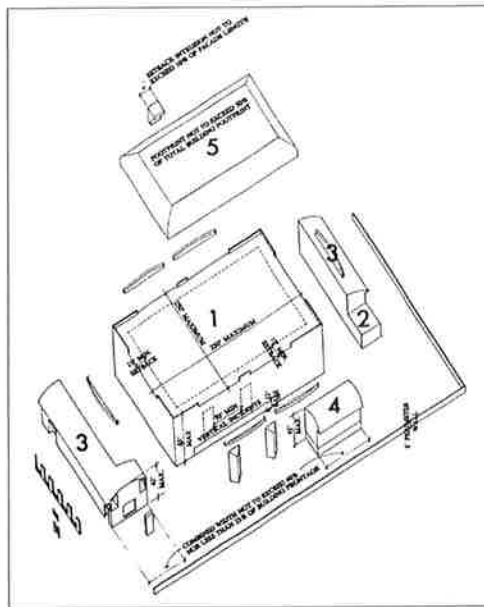
4.20 Design studies for industrial edges (applicable for industrial edge types A, B, or C)

MIXED-USE INDUSTRIAL AREAS



4.21 The Bayer industrial facility in Berkeley, California redesigned as a technology-based mixed-use district with urban amenities.

More challenging than the "edge and entry" conditions are places where industrial districts are surrounded by neighborhoods and where there are messy mixed-use areas, especially at the edges. In these places, there is the potential to extend the surrounding street network into the core of the industrial area, making the industrial and residential areas mutually supportive. These are the more difficult industrial areas to manage, but these are also the industrial areas with the most potential to complete the street network and make new connections within the neighborhood. In combination with a commitment to industrial retention, these can become diverse and vibrant live-work neighborhoods.



4.22

This vision has been successfully implemented in a number of places. One of the most interesting is the Bayer Corporation's biotechnology research and production facilities in Berkeley, California. A number of strategies were used to transform this older industrial area into an attractive place for high-value-added research and development. First, rather than creating a closed precinct, an integrated network of streets and open spaces was created which informed a comprehensive strategy for landscape, streetscape and building façade improvements. The second major strategy was to modify and transform some of the existing industrial buildings. The designers accepted the practical, programmatic necessity of the factory "box" with its high ceilings and simple facades with few windows. Then they modified, tamed and transformed the box by cutting in new

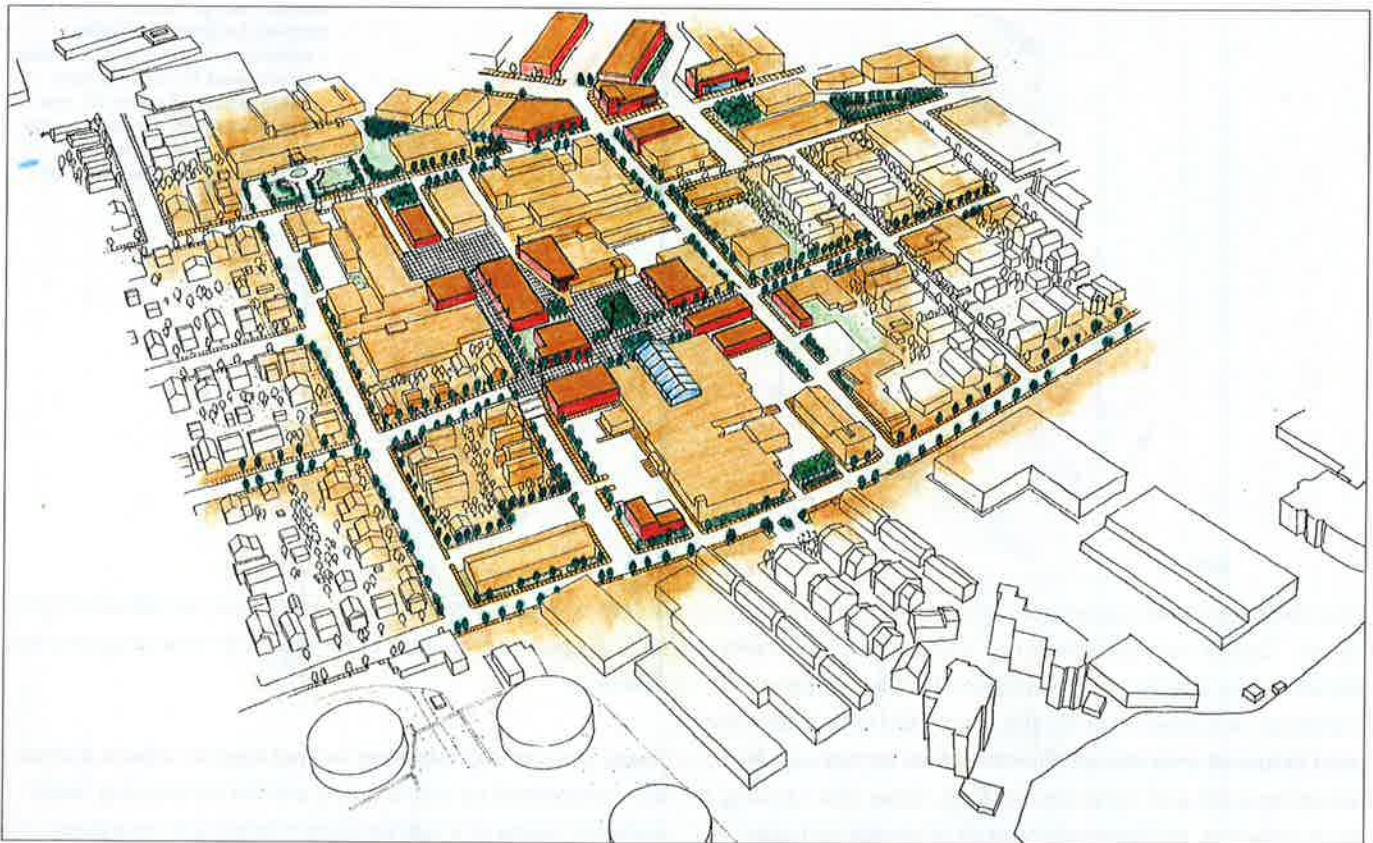
openings or clipping on new elements such as industrial lights and canopies or even building additions for new programmatic elements.

These kinds of improvements will not happen without a proactive commitment by both the City and the surrounding neighborhood. Some of it can be accomplished with incentives. Floor area bonuses could be granted in return for meeting some of the urban design goals, particularly if a new addition to the building creates a better edge at a boundary with a residential district. For example, an ancillary front office space, or even a retail outlet for the product, might be allowed if the addition has a well-designed façade, entry and sidewalk plan (see figure 4.20, page 107). Various tax abatements may also be necessary.

At the Bayer Corporation's biotechnology research and production facilities (Berkeley, California) the factory "box" was transformed by making new openings and clipping on new program spaces and architectural elements. Zoning bonuses could promote these kinds of improvements.



4.23 In the Waterside area, houses and factories coexist.



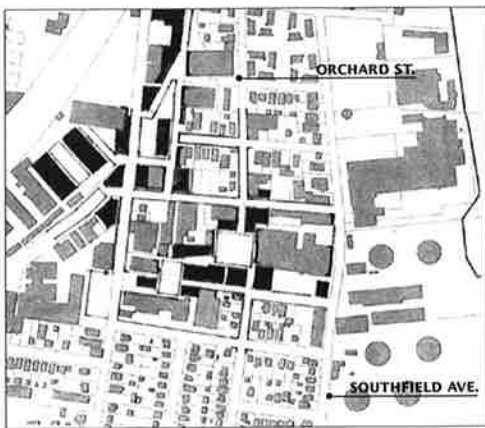
4.24 Aerial perspective of Waterside industrial district redesigned as mixed-use industrial district integrated with the surrounding neighborhood. (Darker colors indicate redevelopment concepts).

A variety of interventions would enhance the appearance and function of industrial properties. The irregular leftover spaces used for parking, loading and storage could be consolidated and rationalized. Some of the new spaces could be dedicated to shared parking and loading operations. Consolidation of these manufacturing-related activities would help manage small truck traffic within the district, minimizing conflicts with nearby residential uses. Other new spaces could become shared plazas with landscaping.

MIXED-USE INDUSTRIAL NEIGHBORHOOD

Proposed Conditions

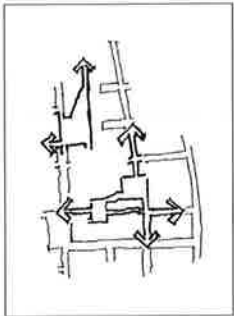
- Create a new network of open spaces (fig. 4.28) with linkages to the neighborhood (4.27)
- Conserve and rationalize left-over parking, loading and storage areas



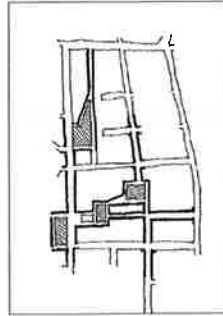
4.25 Waterside—existing and potential new buildings



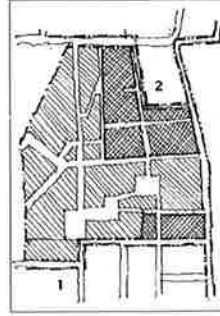
4.26 Waterside—aerial photograph



4.27 New neighborhood connections



4.28 New open space network

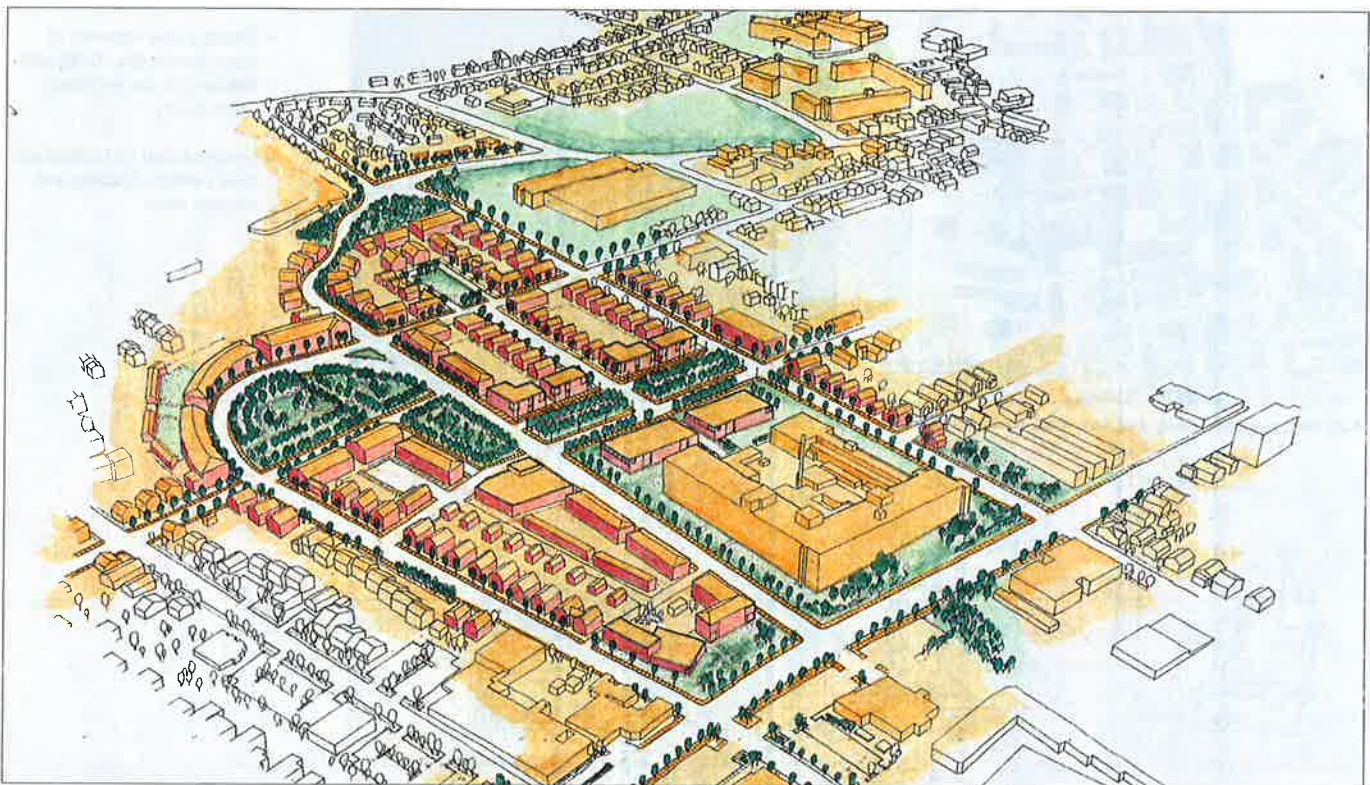


4.29 Development concepts
 1. Industrial area
 2. Mixed-use area

These spaces are not only a shared amenity for the industrial workers, but can become part of a new open space network linking the manufacturing district to the surrounding street network. Gateways to these spaces will give the district a new, positive identity. Pedestrian circulation to the neighborhood will be improved. Over time, improved appearance and performance will help attract more investment. The long-term vision is one in which this becomes a “flex district,” an incubator for a variety of small, high value added manufacturers. This case study, in the Waterside industrial area, illustrates how the principles might play out in Stamford.



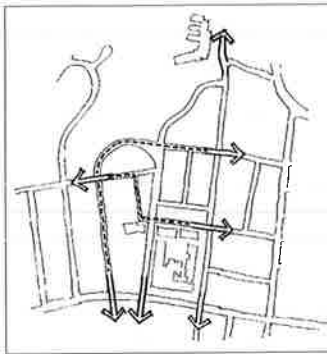
4.30 and 4.31 Photos of existing older buildings



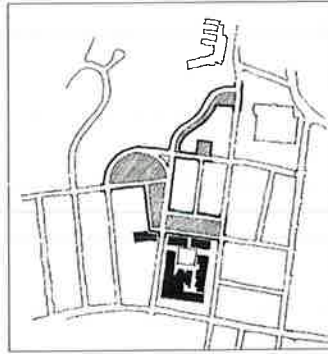
4.32 Aerial perspective of an older industrial campus redeveloped and reintegrated with its surroundings by introducing new connecting streets and residential, as well as industrial, uses. (Darker buildings represent redevelopment concepts.)

THE LARGE INDUSTRIAL CAMPUS

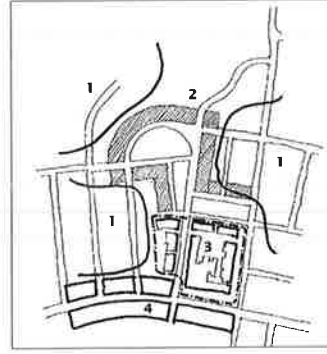
The other mixed-use opportunities are at the few remaining large single sites such as Cytec and Clairol. As suggested elsewhere, these may ultimately become mapped as Mixed-Use Overlay Districts (MOD's). Ideally, in keeping with the goals for economic diversity, these sites would remain exclusively industrial in use. However, changes in manufacturing technology may mean that less space is required in older buildings, that more space is needed in modern flex buildings and that manufacturing processes become cleaner, setting the stage for mixed-use development even as the basic manufacturing use is retained. As this happens, new



4.33 New neighborhood connections



4.34 New open space network



4.35

- 4.35 Redevelopment Strategy**
1. Reinforce existing neighborhoods
 2. Higher density housing
 3. Industrial area
 4. Commercial corridor

MIXED USE INDUSTRIAL CAMPUS

Proposed Conditions

- Create a new network of open spaces (fig. 4.34) and linkages to the neighborhood (fig. 4.33)
- Extend the existing neighborhoods into the site with higher density housing around the open spaces (fig. 4.35)
- Promote technology-based industry in new and existing buildings (fig. 4.35)
- Redesign the commercial corridor (fig. 4.35)



4.36 The industrial campus-existing and potential new buildings



4.37 The industrial campus-aerial photograph

opportunities to complete fractured street networks by extending roads from the neighborhoods into the core of the sites should be exploited.

Figures 4.33 through 4.37 illustrate one way in which a Mixed-Used Overlay District, endorsed in the neighborhood plan, might play out on the Cytec site. The attractive and monumental loft building is retained but modernized and perhaps subdivided. Several modern industrial buildings create a campus around the original structure. The edge of the property along West Main becomes part of an improved business corridor as mapped in this Master Plan.

Over much of the rest of the site, a new street and block pattern is created by extending the streets in the surrounding neighborhoods into and through the site. A new system of parks and open spaces winds through the site. The new blocks support single-family houses at the same density as the surrounding neighborhood with some low-rise multifamily housing facing the parks.

A CAUTION

There are two important cautionary notes with regards to these suggested improvements to industrial districts. First, the market place alone will not support them. The Growth Management study suggests that in the absence of policies for economic diversification, traditional manufacturing employment will decline even in the best of economic times. On the one hand, a commitment to up-grading these areas will facilitate a smart growth strategy that promotes conversion to high-value-added, technology-based industries. On the other hand, to prevent these policies from simply "gentrifying" industrial districts for housing or actually office uses, there must be a commitment to industrial employment, clarifying the distinction between "new industry" and office uses. While the potential benefits for a mixed-use live-work neighborhood industrial district are many, mixed-use will become a vehicle for industrial displacement in the absence of a commitment to industrial retention. One of the "performance criteria" for these places must be its ability to support the City's industrial base and to stem displacement.

A NOTE ABOUT THE INDUSTRIAL DISTRICTS AND GROWTH MANAGEMENT

The Growth Management model suggests that industrial employment will decline, making these districts vulnerable to retail and office encroachment. Collectively, there is the theoretical capacity for more than two million square feet of retail and office development, most of which needs to be directed to transit-accessible locations in downtown or neighborhood centers.

The vision presented here, of a vibrant mixed-use district, is only possible if 1) retail and office encroachment is limited and if 2) a portion of potential office development in these districts is redirected towards technology-based industries that support and build on Stamford's manufacturing base.

A more complete discussion, including benchmark goals for limits on encroachment of non-industrial uses is presented in the Economic Development report.