

- 180,000 building sqft under construction
- 500,000 total estimated building sqft at buildout (based on an average 0.45 FAR)

4. Boeing Long Beach Airport Site (PacifiCenter)

- Located at 3855 Lakewood Blvd, Long Beach, California
- 260 planned acres to include office, retail, hotels, housing, and open space in addition to industrial space.
- 2.3 million planned industrial building sqft
- Buildout anticipated to be within 10 years

5. Port of Los Angeles Distribution Center

- Located in San Pedro
- Pure warehouse distribution product
- Initial phase of 547,000 sqft already leased to garment industry-related packaging/distribution tenant
- 1.3 million sqft second phase recently completed and available
- 1.9 million sqft total

POLICY-DRIVEN REAL ESTATE DEMAND

In the past and present, the WIP has been the beneficiary of several major relocations brought about by expansion of the Port of Los Angeles. Because the Port, like the CRA, is statutorily required to fund the relocation of displaced businesses, this is likely to continue indefinitely. In addition, the City has been actively exploring the potential feasibility of developing an eco-industrial park, with significant focus on the WIP as a potential venue for such a complex. The following section evaluates future absorption potential stemming from these sources.

PORT RELOCATION OUTLOOK

The San Pedro Bay Cargo Forecast projects that cargo through the ports of Long Beach and Los Angeles is anticipated to triple between 2000 and 2020. To accommodate this anticipated growth, both ports have implemented aggressive expansion programs to provide additional terminal space through expansion or consolidation of their existing terminals, or creation of new landfills. These expansion programs have displaced a number of non-port-related uses and other industrial uses that do not require waterfront access. In the Port of Los Angeles, plans are currently underway to expand terminal operations in the West Basin area, and portions of Terminal Island. In the Port of Long Beach, expansion efforts are occurring throughout the harbor. These expansion efforts

could potentially displace existing businesses that may be appropriate for relocation into the Wilmington Industrial Park.

In the Port of Los Angeles, the Fish Harbor area on Terminal Island contains businesses that previously supported the commercial fishing business, which has declined significantly. These businesses include pet food producers, fish processing facilities, and wholesale fish sales. With the loss of the commercial fishing fleets, these processing uses could be located inland away from the waterfront areas. The CRA is currently assisting the State Fish Company with relocating portions of their business to the Wilmington Industrial Park. There may be other similar operations that would benefit by relocating to the project area; however, given the current known expansion plans for the Port of Los Angeles, there does not appear to be an immediate or demand for significant relocation of this type.

The Port of Long Beach is planning to expand the Eighth Street rail yard in the northern portion of the harbor. The rail yard will be expanded to the north to allow installation of additional tracks to accommodate rail traffic associated with the Alameda Corridor. This expansion will require relocation of existing businesses located in the North Harbor area along Ninth Street. Development plans have also been considered that would use all, or portions, of the 80-acre North Harbor area. This area contains a significant number of port-related support industries that provide services to both ports.

Of the many different types of businesses that benefit from proximity to the Ports of Los Angeles and Long Beach, the majority can be categorized in one of three general areas.

Port Support Industries

Both ports employ support industries that maintain, repair, and upgrade the existing port facilities. Typical support industries include welders, surveyors, commercial divers, fabrication facilities, construction yards, heavy equipment repair, oil spill response equipment, and ship chandlery businesses that provide vessel supplies. A relatively new support industry currently being formulated in the wake of the 9-11 terrorist attack is centered around security. As the security requirements of the Ports become more defined in the near future, specialized security equipment operators, repair workers, and other security support industries will benefit from close proximity to the port. The U.S. Customs Service operates off-terminal inspection facilities to unload and inspect cargoes.

Indirectly supporting the Port and the movement of cargo are truck and chassis storage, vehicle repair and maintenance facilities, and fueling locations. While it does not appear that there is any direct benefit of locating these industries adjacent to the Port, there are many located in the WIP.

Of significant importance to the Port are the facilities used to train the operators of the various cranes and vehicles designed to transfer cargo from ship to yard to vehicle. These training centers incorporate a variety of facility types as seen in the Metropolitan Stevedores facility and the PMA/ILWU facilities located within the WIP.

Trade Companies

Throughout the South Bay Region, companies focusing on importing and exporting of commerce are locating and expanding to take advantage of their proximity to the Port. A key industry that has significant potential for the WIP is cold storage facilities and support services.

Aside from the union labor issues discussed in previous sections of this report, these facilities could be located in the project area to take advantage of the project site's proximity to the ports. The CRA could also work with the Port of Los Angeles to identify potential businesses that could increase trade through the Port. For example, eco-businesses similar to Potential Industries, active in recycling and exporting waste products to foreign manufacturers, are expected to increase shipments through the Port over time.

Logistics Companies

The movement of cargo from ships to final destination represents an opportunity for logistics companies to locate near the ports to better organize, control, repackage, and distribute a variety of cargo types. Facilities that transfer cargo from shipping containers to truck trailers provide an alternative to the rail transfer of shipping containers that arrive full at their destination but are empty on return. These companies have a wide range of employment requirements depending upon the specific service they provide.

OPPORTUNITIES FOR ECO-INDUSTRIAL PARK DEVELOPMENT⁸

As indicated in the CRA report on eco-industrial development, the WIP is a possible demonstration site for an eco-industrial park (EIP). The WIP's location as prime industrial real estate and its proximity to the Port make it a viable candidate for traditional industrial development. Furthermore, with strong leadership and an adequate strategy for implementation, eco-industrial park concepts could be implemented at the WIP.

Broadly defined, there are three phases of EIP development. Phase I is characterized by planning and devising implementation strategies for integrating environmental principles into an industrial development. Phase II EIPs are parks in the implementation stage. They have devised a set of principles and a strategy for implementation and are actively recruiting firms to the park or working with existing firms on integrating environmental practices into their business. Phase III EIPs are parks that have achieved full lease-up and have managed to implement environmental principles into member business practices for a period long enough to evaluate.

⁸ Information on EIP development from "Sustainable Development: The Case of Implementing Industrial Ecology," Shanna Wasserman, MIT Masters Thesis, June 2001

Based on a survey of 12 EIPs in North America, two parks were identified as being in Phase I and were planning park principles and implementation strategies. Five EIPs were in Phase II and were in the process of implementing park principles and attracting firms to the EIP. No EIP had reached the Phase III stage. Additionally, a fourth category, called Phase 0, was created to characterize those EIPs that had moved backward from the planning stage and were no longer attempting to develop an EIP. Five EIPs fell into the Phase 0 stage.

EIP development in North America is nascent. The only mature (Phase III) EIP exists in Kalundburg, Denmark, where over the course of 25 years, industry leaders, in an effort to decrease the costs of adhering to Danish environmental law, devised a system of byproduct exchange. The business leaders in Kalundburg have developed strong interpersonal relationships that led to discussions around alternative methods for adherence to regulation. Additionally, the industry mix at Kalundburg, which is comprised of a coal-fired power plant, an oil refinery, a gypsum and pharmaceutical manufacturer, as well as the local government, yields significant waste exchange opportunities.

Lessons from the survey of EIPs include the following:

- EIP development is complicated, involving many stakeholders and requiring the cross-fertilization of experts on environmental practice with real estate development and business operations. The planning of environmental principles in conjunction with traditional industrial development requires significant resources and leadership. Many potential EIPs fail to materialize without the development of sound implementation strategies.
- There is a taxonomy of four types of eco-industrial practices being employed at EIPs in the implementation phase. These four practices are land stewardship, green building design, individual firm environmental practices, and byproduct exchange.
- Based on the four types of eco-industrial practices, there are differences in how implementation should progress. For example, various players (developers, business leaders, facility managers) are involved in different ways with each type of eco-industrial practice. Additionally, the degree of technical assistance required by the participating business and the type of capacity required by park management depends on the type of environmental practice being implemented. **Table 14** outlines the different eco-industrial practice areas and the implications for implementation.

Land stewardship and green building design occur during the facility development and site planning portion of developing the EIP and require that the management entity understand environmentally friendly land use and building design practices. The land and building developers are involved in implementing these practices, which usually require moderate technical assistance on the part of the management entity. Land

Table 14
Wilmington Industrial Park Economic Adjustment Strategy
Characteristics of Eco-Industrial Areas of Practice

	Land Stewardship	Green Building Design	Individual Firm Environmental Practices	Byproduct Exchange
Examples of eco-industrial practice	<ol style="list-style-type: none"> 1. Wetlands preservation 2. Sensitive ecological area protection 	<ol style="list-style-type: none"> 1. Construction product substitution 2. Building orientation 	<ol style="list-style-type: none"> 1. Pollution prevention 2. Increased resource and energy efficiency 	<ol style="list-style-type: none"> 1. Waste from one firm is input for another 2. Scavenger firms treating and selling waste
When it occurs	Facility development	Facility development	Firm operations	Firm operations
Potential players involved	<ol style="list-style-type: none"> 1. Developers 2. Architects 3. Landscape architects 4. Construction managers 	<ol style="list-style-type: none"> 1. Developers 2. Architects 3. Landscape architects 4. Construction managers 	<ol style="list-style-type: none"> 1. Firm management 	<ol style="list-style-type: none"> 1. Firm management
Type of capacity required by implementation agent	<ol style="list-style-type: none"> 1. Knowledge of ecological land use practices 	Knowledge of . . . <ol style="list-style-type: none"> 1. Green building design techniques 2. Land use planning 	Knowledge of . . . <ol style="list-style-type: none"> 1. Ways to reduce waste streams 2. Resource and energy efficiency techniques 3. Product substitution techniques 	<ol style="list-style-type: none"> 1. Knowledge of waste streams that can be transformed into inputs 2. Ability to bring firms together to discuss linkages 3. Knowledge of scale required to make exchange feasible 4. Ability to develop infrastructure required for byproduct exchange
Potential implementation agents	<ol style="list-style-type: none"> 1. Local government 2. EIP management entity 	<ol style="list-style-type: none"> 1. Local government 2. State government 3. EIP management entity 	<ol style="list-style-type: none"> 1. EIP management entity 2. University IE research centers 3. Manufacturing extension program 	<ol style="list-style-type: none"> 1. Private firms 2. EIP management entity 3. University IE research centers 4. Manufacturing extension program 5. Private sector brokering or scavenger firms
Technical assistance required	<ol style="list-style-type: none"> 1. Little to none 	<ol style="list-style-type: none"> 1. Moderate 	<ol style="list-style-type: none"> 1. Extensive 	<ol style="list-style-type: none"> 1. Extensive

stewardship is less of a concern for parks like the WIP, where infill and redevelopment efforts are planned instead of the development of greenfield areas.

Key to successfully implementing land stewardship and green building design practices is working with land and building developers to assist them in implementing these practices. Furthermore, because there is not necessarily any inherent economic incentive for developers to alter design and site planning techniques on their own, developing park covenants that guide development is a potentially useful mechanism for implementation.

Individual firm environmental practices occur during business operations by the end user. As such, the players involved include the EIP managing entity and business leaders as well as possibly facility managers. This form of eco-industrial practice requires extensive technical assistance by an entity well versed in how to alter existing business operations in order to improve environmental performance. At the Burnside Industrial Park in Halifax, Nova Scotia, the Eco-Efficiency Centre (run by the local University) manages an environmental technical assistance center to help member firms reduce waste streams, increase resource efficiency, and employ product substitution techniques, among other practices.

Because actions that occur through individual firm environmental practices can coincide with enhanced economic performance, covenants and restrictions are not necessarily required to stimulate changes in business practice. For example, increasing resource efficiency is beneficial for the environment and can save money by decreasing input costs. As such, extensive technical assistance, instead of covenants or regulations, may be adequate to stimulate improved environmental performance.

Finally, byproduct exchange requires multiple businesses and occurs during business operations. In addition to technical assistance on how to alter business practices, byproduct exchange may require the brokering of byproducts between firms in order to determine costs as well as the infrastructure needed to support the byproduct transfer. Additionally, byproducts may not be available at the scale required to support demand and, as such, firms that aggregate as well as treat byproducts would be useful for facilitating waste exchange at the WIP. As a recycling company, Potential Industries offers the WIP an opportunity to build byproduct exchanges around the paper industry. Other brokering and scavenging firms would be an asset to the WIP as they could aggregate byproducts that could potentially service the entire Long Beach/Harbor Cities industrial market or beyond.

The current report commissioned by the CRA on eco-industrial development targets the environmental technology industry. The implementation strategy has strengths and limitations. The strengths lie in attracting firms that understand and that may already be implementing enhanced environmental practices. However, by limiting the park to one particular industry, the WIP may find it more difficult to attract firms to the site. Additionally, byproduct exchange, as witnessed in Kalundburg, Denmark, occurs with some of the “dirtiest” businesses in operation. In the Kalundburg case, the use of

byproducts between firms creates little to no net pollution at the Park and serves to improve economic performance by cutting costs. Furthermore, the other forms of eco-industrial practice are applicable to all industries to some degree or another, making industry targeting less applicable.

Instead of attracting one particular type of industry to the WIP, the CRA and/or other stakeholders may want to consider working with existing firms and adjacent tenants to create a strategy for implementing eco-industrial practices, where practical. With an adequate mix of implementation strategies that address facility design and development, as well as individual firm practices and potentially inter-firm byproduct exchange, the WIP could begin to implement EIP concepts, where appropriate.

IV. WILMINGTON INDUSTRIAL PARK: COMPETITIVE POSITION AND OUTLOOK

EXISTING CONDITIONS

Presently, small manufacturing, food processing, warehousing, storage, and repair facilities dominate the Wilmington Industrial Park, while few residential uses remain in the area. Most of the developed uses in the WIP are industrial and manufacturing uses, including metal fabrication, paper products, food processing, warehousing, truck terminals, and other truck related uses. Among the improved properties are 58 firms occupying a total of 812,000 square feet of building space. Manufacturing uses account for less than a quarter, or 13, of these businesses and nearly half of all improved building space, or 388,000 square feet. The 45 non-manufacturing businesses comprise an assortment of uses, occupying a total of 424,000 square feet of building space.

According to the Blight Analysis study⁹, it is estimated that half of the firms located in developed areas of the WIP are dependent upon Port activity. These firms comprise 45 percent of the total building square feet in the WIP, and include 4 manufacturing businesses, such as Stone Depot USA, and 25 non-manufacturing businesses, including Metropolitan Stevedore, State Fish, and Union Ice.¹⁰ Of the businesses not significantly related to Port activity, 9 are manufacturing businesses such as American Soccer and Juanita Foods, while 20 are non-manufacturing businesses. Approximately half of the WIP continues to have underutilized properties including automobile and marine salvage yards, oil extraction sites, and small manufacturing operations located in sheds, tin-sided buildings, and similar portable structures. Many of these uses appear to violate design standards and some illegally occupy City right-of-way.

DEVELOPMENT OPPORTUNITIES AND CONSTRAINTS

The WIP should be in an optimal position to market to a mix of users and industries, benefiting from the strength of the Los Angeles Industrial Complex and the booming international trade industry. The tendency for new development involving significant investment and employment generation capacity to geographically skip over the WIP in favor of other areas is primarily related to a lack of existing development opportunities.

⁹ *Preliminary Draft Economic Blight Analysis*, dated February 1, 2002 and prepared by Udewitz Associates & GRC Redevelopment Consultants, Inc.

¹⁰ This categorization differs from that of the *Economic Blight Analysis*. In that document, American Soccer is identified as a Port-related manufacturing use. Because this firm does not export any of its product and relies on few imported materials, EPS has categorized this firm as non Port-related.

DEVELOPMENT OPPORTUNITIES

Although new development within the WIP faces a number of impediments as described above, it also offers key opportunities to businesses looking to locate in the area.

Shortage of Viable Inventory

The lack of functional, master-planned inventory has resulted in strong competition between manufacturing and logistics firms for available space that is proximate to the Ports.

In the short-term, industrial users will be attracted to those master planned industrial parks that do exist and have capacity, such as Dominguez Technology Center and Carson Town Center. Once the availability of these parks is diminished, new location and expansion opportunities will seek locations outside of the South Bay and Los Angeles County unless other opportunities can be created. As indicated previously, the Inland Empire will be a desirable location for larger, less employment-intensive companies that are not port dependent.

Quality Anchor Tenants

One critical source of ongoing real estate demand in the WIP will be the existing tenants. It is very important that the CRA do everything in its power to cultivate these companies and encourage their expansion on-site. Interviews with existing WIP tenants yielded a number of interesting observations, including the following:

- Prevailing wage hinders efforts to expand. If RDA resources are in use, this is out of the control of the CRA as State law requires prevailing wage in redevelopment Agency construction contracts.
- Many tenants are willing to help pay for improvements. Examples could include landscaping, graffiti removal, street maintenance, and security.
- The area needs late night/morning police patrols. Presently there is spotty coverage during these hours, despite the presence of a substation approximately one mile to the north-west of the WIP.
- Streets are poorly maintained. Many streets are simply not paved and/or are being occupied by illegal businesses.
- The area needs more amenities. The area needs consistent landscaping and fencing, and possibly the introduction of public space in key areas.
- Receiving Agency assistance can be an expensive endeavor for some tenants. The lower interest rates do not compensate for the increased costs associated with paying living/prevailing wages, and making proprietary information public.

Proximity to the Ports of Los Angeles and Long Beach

No other industrial park located outside of Port-owned land offers the proximity to Port operations that can be found at the Wilmington Industrial Park. The volume of containerized cargo moving through these Ports doubled from less than 4 million containers in 1990 to just over 7 million containers by the year 2000. This volume is expected to triple to more than 24 million containers per year by 2020. As Port traffic has increased so have the number and size of many port-related businesses located on Port properties and in a number of South Bay communities.

Strong Local Labor Force

The Wilmington labor force has been described as hard working and reliable, and has been cited as a primary reason for the initial location, expansion, or continued presence of existing tenants in the area. Many employees walk to work from their nearby Wilmington homes. Other businesses that rely either on the Wilmington labor force in particular, or a labor force with similar characteristics, may be good candidates for location at the WIP, provided the constraints identified above can be addressed.

Growth of the local labor force requires the provision of a broad spectrum of housing types, including housing that is affordable to unskilled and semi-skilled labor. Because many employees live near and walk to the WIP, close-in housing development should be pursued by the CRA to the extent possible.

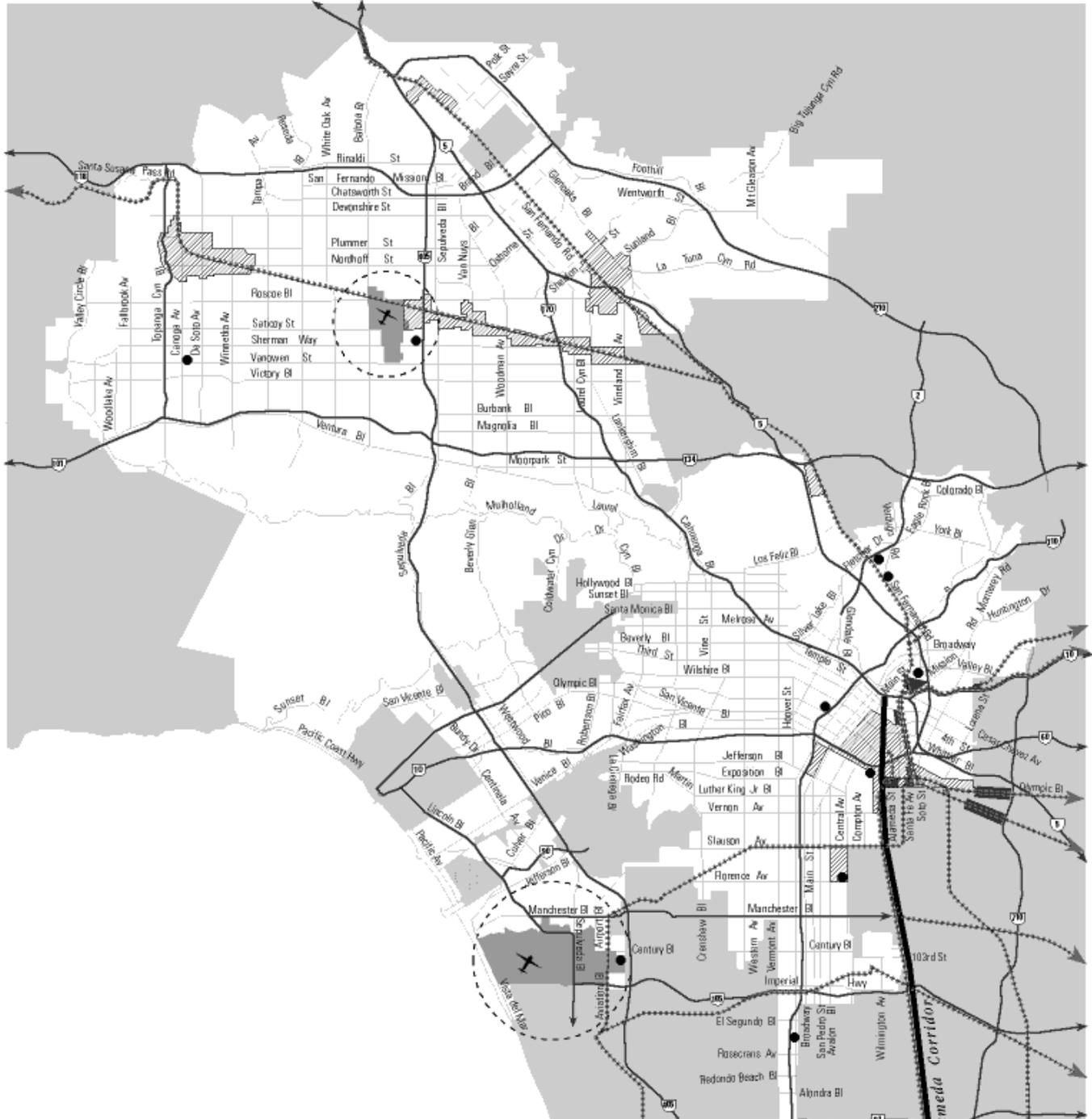
Ongoing Infrastructure Upgrades

The Alameda Corridor, one of the nation's largest public works projects, will significantly affect the logistics sector in Los Angeles when it opens for use in spring 2002 (see **Figure 11**). This 20-mile railway project runs parallel to Alameda Street from the ports to the downtown rail yards, consolidating 90 miles of rail operations into a single high-capacity route. Once completed, it will create a faster and more efficient way to distribute cargo throughout the United States and to move U.S. exports to overseas markets. This \$2.4 billion project relies on funding from a variety of sources, such as revenue bonds, a federal loan, the ports, the Metropolitan Transportation Authority, the railroads, and other institutions.

This facility addresses increasing congestion connected to growing freight movement. As a result, the operational efficiency of the Ports has been enhanced, and more opportunities for firms providing supplies and equipment to growing logistics operations in the area will result, potentially benefiting sites like the WIP.

Other Opportunities

- **Enterprise Zone.** Rising energy costs have hurt small manufacturing firms the hardest hit by so it is very important to resolve the state's crisis. As a California Enterprise Zone, WIP tenants are eligible for 25 percent discount on electricity for five years.



Transportation Element of the General Plan
Freight Movement
In the City of Los Angeles

- Freight rail lines
- Truck routes (> 3 tons)
- Locally-designated truck routes
- Rail yards
- Major truck terminals
- ▨ Industrial concentrations

MAJOR INTERMODAL TERMINALS

- LAX (Airport property) ✈
- Port (Port/Harbor property) ⚓
- Van Nuys Airport (Airport property) ✈



- **Rail Access.** Two railroad lines serve the project area and connect with other lines serving the two ports. Rail access is an advantage insofar as it provides a viable alternative to, and reduces dependency on, trucking operations.

DEVELOPMENT CONSTRAINTS

Despite the significant assets described above, many of the blight conditions documented when the redevelopment area was created continue to exist today, albeit to a less significant degree. The following is a summary of the constraints that are likely to impact future development at the WIP.

Blighted areas create an unwelcome appearance for potential investors.

Lack of enforcement in the area has created areas of the WIP that are dominated by dirt lots, junkyards, and illegal dumping.

Zoning incompatibility, small parcel sizes, multiple landowners, and poor parcel configuration represent greater levels of investment required to assemble industrial sites.

The project area is zoned for light industrial uses but originally plotted for residential development with residential size lots and streets. Lots average 24,000 square feet in size and are adjacent to narrow streets. Of 676 total parcels, 313 are considered small and/or oddly shaped. This is an inefficient situation from the perspective of creating developable property accommodating a diversity of manufacturing, light industrial, and specialized warehousing products.

Assembling two or three acres of land, which is likely the minimum required for a significant industrial project, would require a highly coordinated purchase effort involving as many as 10 to 20 different landowners in portions of the WIP. These ownership patterns introduce a significant amount of risk to potential developers, implying a continued major role for the Agency in this regard.

Many property owners in the Study Area currently have little incentive to invest in developing “higher and better uses.”

There are various property owners in the Study Area who have not taken advantage of the market for higher and better industrial uses or the potential profit from renewed investment in their current properties, as concerns exist regarding the additional costs of upgrading buildings to satisfy current building codes. This does not necessarily constitute a market problem. The market may be working correctly, as property owners, by maintaining the status quo, are making a profit without having to invest large sums of money into a more risky endeavor.

Property owners may be receptive to converting to “higher and better uses” if the CRA, through this effort, provides information and financial incentives encouraging redevelopment. Some property owners expressed a desire to work collaboratively with

the CRA and would consider greater investment in their properties or land use conversion with incentives from the CRA related to reducing the risks and/or costs associated with environmental remediation, parking, infrastructure improvement, demolition, and tenant identification and negotiation.

Oil wells and surface rights limit development potential of many properties.

A total of 43 WIP parcels are currently being used for oil extraction purposes and another 11 satellite “gathering” areas are in use, according to Magness Petroleum Company, the current oil operator. Further, the *Economic Blight Analysis* indicates that “there appears to be little likelihood of a significant reduction in the amount of land used for oil extraction activity” within the WIP. In fact, while the former oil operating company, Exxon, made considerable strides toward consolidating and centralizing their activities in past years, “further consolidation is not physically or economically feasible.”

Even more important than existing drilling activities, however, are the extensive surface rights granted to oil companies in lease agreements made six decades ago. These rights cover the entire land area of individual parcels and are considered the “one factor most directly affecting the opportunity for new building activity,” according to the *Economic Blight Analysis*.

Inadequate subsurface soils and soil contamination increase cost and risk for potential developers.

The *Environmental Impact Report* prepared in 1994 identifies an extensive list of properties that are impacted by subsurface soils that are inadequate to support standard foundations. Rectifying this situation requires the removal of inadequate soils, and soil replacement and recompaction. Additional problems are associated with soil contamination as a result of former uses involving toxic chemicals, automobile related oils, chemical spills, and petroleum products. This issue will be partially addressed by the CRA’s efforts document subsurface conditions.

Prevalence of property and other crimes in the area discourages potential investors.

Approximately half the business owners and tenants interviewed for the *Economic Blight Analysis* responded that they were experiencing problems with crime. The most frequently reported problems were vandalism, graffiti, and theft, followed by robberies and burglaries. Regular police patrols are imperative if significant investment is to be attracted to the area.

Specific wage requirements and unionization may restrict the types of uses that can be profitable within the Redevelopment Area.

Living wage requirement is \$10 per hour plus benefits, or \$13 per hour total. Prevailing wage requirements increase the cost of constructing new buildings. Also, the jurisdiction of the International Longshoreman Worker’s Union (ILWU) may affect certain uses. On this latter point, the formal jurisdiction of the ILWU is 50 miles from the Port areas, which would encompass all of Los Angeles, and a significant portion of

surrounding counties. In reality, the ILWU has exercised its jurisdiction on only a small portion of this area, restricted primarily to the Port cities of San Pedro, Long Beach, and Wilmington.

While any one of these factors could restrict the amount and type of development interested in locating in the WIP, the confluence of these issues may reduce absorption rates in the WIP as long as viable alternative sites in nearby communities continue to be available and competitively priced. However, the supply of such sites is dwindling and unionization is less likely to be a factor for smaller firms associated with the manufacturing sector.

PROJECTED INDUSTRIAL ACTIVITY

In the short term, industrial demand is expected to favor smaller spaces of 10,000 to 30,000 square feet in Los Angeles County and the South Bay. This is the result of two factors. First, companies are choosing to consolidate space as a cost-saving device in reaction to the contracting economy. A second factor in the heightened demand for smaller sized products is the increasing number of small- to mid-sized companies during the 1990s. This is particularly true in the case of for-sale buildings. This is associated with the entrepreneurial nature of businesses moving from garages to needing small space, such as welding/fabrication, truck repair, and industrial machinery (equipment). Many small businesses are already taking advantage of low interest rates by purchasing industrial buildings in the 5,000 to 30,000 square foot range.

Over the next decade, demand for industrial facilities for lease and for sale will outstrip the supply of space that can be developed on the limited amount of land available for building in central and south Los Angeles County.

Simultaneously, demand for port related transloading, storage facilities, and transportation support facilities will become more acute, due to increasing levels of goods moving in and out of Los Angeles County.

Demand Forecast

During the 1999-2001 period, the industrial market in the five-county region absorbed an average of 42.9 million square feet of space per year, as shown in **Table 13**. Los Angeles County has accounted for 45 percent of this growth, with an average of 19.5 million square feet of net absorption over the period.

Table 15 shows employment projections converted into a building absorption forecast based on estimated employment densities among key sectors. As shown, this analysis suggests demand for more than 201 million square feet created by new employment growth over the next 10 years in Los Angeles County. This translates to an average annual absorption of about 20 million square feet per year, which corresponds with historical net absorption figures between 1999 and 2000 of 19.5 million square feet.

Table 15
Wilmington Industrial Park Economic Adjustment Strategy
Forecast of Future Demand for Building Sqft for Los Angeles County

Industry	Employment by Building Type [1]		Employment Growth (2000 - 2010)	Building Space Demand (in sqft.): 2000 - 2010			Average Annual Demand	Land Demand (in acres): 2000 - 2010 [5]			Average Annual Demand
	Manf./ Indus.	Warehouse		Manufacturing	Warehouse	Total		Manf.	Warehouse	Total	
Manufacturing	55%	30%	55,000	22,790,000	24,540,000	47,330,000	4,730,000	1,600	1,400	3,000	300
Wholesale Trade	18%	68%	32,400	4,250,000	33,050,000	37,300,000	3,730,000	300	1,800	2,100	210
Other [4]	15%	10%	117,700	13,240,000	17,660,000	30,900,000	3,090,000	900	1,000	1,900	190
Services	12%	8%	431,500	38,840,000	51,780,000	90,620,000	9,060,000	2,700	2,900	5,600	560
Total	-----	-----	636,600	79,120,000	127,030,000	206,150,000	20,620,000	5,500	7,100	12,600	1,260

"sqft_demand"

Source: ABAG; California Employment Development Department (EDD); Economic & Planning Systems, Inc.

- [1] Based on an analysis of EDD workforce occupational data.
- [2] Assumes 750 square feet per employee for manufacturing uses.
- [3] Assumes 1500 square feet per employee for warehouse/distribution uses.
- [4] Includes Transportation & Public Utilities (TPU) and Finance, Insurance & Real Estate (FIRE).
- [5] Assumes 40% Floor Area Ratio (FAR) for manufacturing, 50% FAR for wholesale trade. Assumes 20% net to gross factor to account for roads, drainage, landscaping, and other infrastructure.

Taking the midrange of the absorption and employment-driven forecasts for the County suggests that the Los Angeles region can expect demand for roughly 19.8 million square feet of industrial space annually over ten years. If the South Bay captures 20 percent of the County total, this would equate to 4 million square feet of demand annually; if the South Bay captures 10 percent of the County total, 1.9 million square feet of space would be demanded annually within the submarket (**Table 16**).

The ability for the South Bay to meet this demand will be tested in the years ahead as available supply dwindles. For both manufacturing and Port-dependent firms, there are few options to this area for new development. In order to maintain and attract a healthy and diverse roster of businesses, the private sector and public agencies will need to work cooperatively and creatively to identify reuse and rehabilitation opportunities to add to the supply of industrial building development opportunities. The WIP is a prime opportunity to demonstrate this approach.

Estimated WIP Capture Rate and Absorption Estimate

Tables 17 through **19** show different scenarios for WIP buildout, solving for the percentage of South Bay market capture needed to complete WIP buildout over a decade. As shown, the WIP would need to capture between 10 and 12 percent of the South Bay submarket's growth to achieve a ten-year buildout.

Depending on the specific type of operation, additional employment could be between 1,600 and 2,600 employees housed in additional space likely ranging in volume from 1.9 million and 2.4 million square feet.

Small industrial buildings available for sale, or divisible space with common walls within larger buildings available for sale, may be a successful product at the WIP. This confirms information from earlier market studies and articles. Carson Town Center provides a good example of where this is succeeding currently, though the large floorplate of these buildings would need to be reduced for application to the WIP.

In addition to assembly and manufacturing uses, there is a potential market for conversion and redevelopment of existing properties for light industrial "flex" space in the Study Area, if adequate infrastructure improvements are made and appropriate sites can be made available. This will require strategic investment in public infrastructure improvements, and the proper configuration of parcels to accommodate expected building prototypes. The development of such space would be a natural complement to other manufacturing and assembly uses, and would diversify local employment opportunities as well as increase the overall rate of absorption through additional market segmentation.

Overall, there is about six million square feet of planned development among significant projects in the South Bay submarket, excluding capacity at the WIP. Forecasted demand exceeds 20 million square feet in the area over the next ten years, indicating that finding sites to meet demand will be an ongoing challenge in this submarket as well as Los

Table 16
Wilmington Industrial Park Economic Adjustment Strategy
Forecast of Future Demand for Building Sqft for the South Bay

Item	Amount
Annualized Forecasted Demand for New Industrial Building Space - LA County	
Method 1 [1]	19,500,000
Method 2 [1]	20,620,000
Average of Methods 1 and 2	20,060,000
South Bay Share of LA County Net Absorption - (Ave. of 1999 to 2001)	20%
Projected Annualized Demand for Industrial Building Space	
South Bay (based on 20% capture rate)	4,090,000
South Bay (based on 10% capture rate)	2,010,000

"sqft_demand_sb"

Source: EDD, DAUM, Colliers Seeley, & EPS

[1] Method 1 is the average net absorption from 1999 to 2001. See **Table 13**.
Method 2 is based on translating future employment projections to demand for building space based on employees per sqft assumptions. See **Table 15**.

Table 17
Wilmington Industrial Park Economic Adjustment Strategy
Buildout of WIP Based on Manufacturing Use

Item	Amount
WIP Total Acres	232
WIP Vacant / Underutilized Acres (estimated) [1]	110
Manufacturing FAR	0.40
Additional Manufacturing Building Sqft at Buildout - WIP	1,920,000
Annualized Additional Manufacturing Building Sqft - WIP (based on 10 yr buildout)	192,000
WIP's Future Capture Rate of South Bay Demand Required to Reach Buildout in 10 Years [2]	10%
Additional Manufacturing Employees at Buildout [3]	2,600

"wip_manuf"

[1] Accounts for acreage needed to build roads and other infrastructure.

[2] Assuming South Bay captures 10% of LA County future industrial space demanded.

[3] Assumes 750 sqft per employee (EPS estimate).

Table 18
Wilmington Industrial Park Economic Adjustment Strategy
Buildout of WIP Based on Wholesale Trade Use

Item	Amount
WIP Total Acres	232
WIP Vacant/Underutilized Acres (estimated) [1]	110
Wholesale Trade FAR	0.50
Additional Wholesale Trade Building Sqft at Buildout - WIP	2,400,000
Annualized Additional Wholesale Trade Building Sqft - WIP (based on 10 yr buildout)	240,000
WIP's Future Capture Rate of South Bay Demand Required to Reach Buildout in 10 Years [2]	12%
Additional Wholesale Trade Employees at Buildout [3]	1,600

"wip_whl_trade"

[1] Accounts for acreage needed to build roads and other infrastructure.

[2] Assuming South Bay captures 10% of LA County future industrial space demanded.

[3] Assumes 1500 sqft per employee (EPS estimate).

Table 19
Wilmington Industrial Park Economic Adjustment Strategy
Buildout of WIP Based on 50% Wholesale Trade and 50% Manufacturing Uses

Item	Amount
WIP Total Acres	232
WIP Vacant / Underutilized Acres (estimated) [1]	110
<u>Buildout of Manufacturing on 1/2 the WIP</u>	
WIP Manufacturing Acres	55
Manufacturing FAR	0.40
Additional Manufacturing Building Sqft at Buildout - WIP	960,000
Annualized Additional Manufacturing Building Sqft - WIP (based on 10 yr buildout)	96,000
Additional Manufacturing Employees at Buildout [2]	1,300
<u>Buildout of Wholesale Trade on 1/2 the WIP</u>	
WIP Wholesale Trade Acres	55
Wholesale Trade FAR	0.50
Additional Wholesale Trade Building Sqft at Buildout - WIP	1,200,000
Additional Annualized Wholesale Trade Building Sqft - WIP (based on 10 yr buildout)	120,000
Additional Wholesale Trade Employees at Buildout [2]	800
<u>Total New Employees at Buildout</u>	2,100
WIP's Future Capture Rate of South Bay Demand Required to Reach Buildout in 10 Years [3]	11%

"wip_manuf_trade"

[1] Accounts for acreage needed to build roads and other infrastructure.

[2] Assumes 1500 sqft per employee for wholesale trade and 750 sqft per employee for manufacturing.

[3] Assuming South Bay captures 10% of LA County future industrial space demanded.

Angeles County as a whole. Therefore, it appears that there is sufficient demand to enable the WIP to capture between 10 and 12 percent of the new development potential associated with the South Bay submarket (as shown in **Tables 17-19**) over the next decade, assuming the land can be made viable for key manufacturing, light industrial, and specialty warehousing operations.

NEXT STEPS

Following this report, more specific discussion of development prototypes will be provided in concert with initial planning concepts within a Development Opportunities memo to be issued in early June 2002. This memo will also provide a framework for discussing disposition techniques in various parts of the WIP based on more specific treatment of site opportunities and constraints, including backbone infrastructure conditions, soil conditions, etc. Following that document, the Team will provide master planning recommendations, followed by subsequent products presenting development and related capital improvement phasing and implementation strategies.