



**SUMMARY REPORT**

**MARKET ASSESSMENT OF  
POTENTIALS FOR BUSINESS MIX/LIGHT INDUSTRIAL USES  
FOR  
WEST OAKLAND SPECIFIC PLAN**

*Prepared for*  
**CITY OF OAKLAND**

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**INTRODUCTION**

As part of the planning process for the West Oakland Specific Plan (WOSP), Hausrath Economics Group (HEG) prepared an assessment of market potentials for growth of business activities and job opportunities in West Oakland. The assessment focused on potentials for commercial/industrial uses and development in the areas designated for “Business Mix” and “Light Industrial” land uses in the Oakland General Plan. Those areas and sites are concentrated in two of the WOSP Opportunity Areas: The Mandela/West Grand Opportunity Area 1 and the 3<sup>rd</sup> Street Opportunity Area 3.

**MARKET SECTORS/INDUSTRIES  
WITH POTENTIALS IN WEST OAKLAND**

**Approach**

Within the local context of West Oakland and the larger market context of the East Bay and Bay Area economy, five market sectors were identified for consideration as potential uses/businesses for West Oakland. The sectors identified are ones that are anticipated to be growing. The sectors are defined to include the business functions within industries that occupy the types of locations and building space existing and anticipated in West Oakland. These could include light industrial, R&D, business campus, and incubator space in existing and new buildings. Business functions and industries that occupy office space, particularly Class A office space, as offered in Downtown Oakland, are not included. Business functions involving heavier industrial and truck-intensive activities also are not included.

**Five Potential Market Sectors**

Five potential market sectors for West Oakland were identified and assessed:

- Life Sciences/Biotechnology;
- Clean/Green Economy and Clean Technology;
- Small, Urban Manufacturing;
- Construction and Related; and
- Information Sector: Digital Media and Information Technology.

These sectors include newer types of industries and more traditional industries that are growing. The chart in Figure 1 summarizes the types of industries and business functions included in each sector, with emphasis on those relevant to West Oakland. There are existing businesses in West

**FIGURE 1**  
**POTENTIAL MARKET SECTORS FOR**  
**BUSINESS / LIGHT INDUSTRIAL USES IN WEST OAKLAND**

◆ **Life Sciences/Biotechnology**

*Functions:* R&D, Manufacturing, Office-administrative support

*Industries:* Pharmaceuticals  
Medical devices and equipment  
Diagnostics products  
Scientific research and development

◆ **Clean/Green Economy and Clean Technology**

*Definition:* Segments of the economy that produce goods and services with an environmental benefit

*Functions:* R&D, manufacturing/test products, construction and related, design/software, professional services (small businesses)

*Industries:* Segments of many industries, including:

Green construction/building materials	Energy and related:
Green packaging	– solar, wind
Green chemical products	– biofuels
Emission control technology	– smart grid
Environmental management software	– battery technology/energy storage
Environmental services	– lighting/LEDs
	Building control systems

◆ **Small Urban Manufacturing**

*Functions:* Production and assembly of a wide range of products

Today's manufacturing is dominated by small, specialized businesses serving Bay Area markets

*Industries:*

Specialty foods and beverages	Fabricated metal products and machinery
Textiles, apparel, leather, and related	Chemicals, minerals, and plastics
Printing, paper, publishing	Industrial arts
Custom products (furniture, woodwork, ironwork, sign-making)	

◆ **Construction and Related**

*Functions (at business location):* Office-admin. support, storage (materials, tools, equipment), staging back-up

Much of construction work is done at project site, and work sites shift continuously

*Industries:* Specialty trades contracting (largest group)  
Building construction (residential, commercial, institutional)  
Infrastructure construction

◆ **Information Sector: Digital Media and Information Technology**

*Functions/Industries:*  
Internet services/web design-hosting  
Software design/data management  
Social media/cloud computing  
Digital film-making/sound studios/animation  
Video games/web music  
Telecommunications (cellular/wireless)  
Publishing (print media/software)

Oakland from these market segments, including newer businesses that located in the area over the last decade.

**Shares of Economy Currently**

Among market sectors, the more established sectors of urban manufacturing and construction support the largest amounts of business activity and employment currently, as summarized in Table 1. The newer sectors, focused on technology industries and the clean/green economy, support smaller amounts of business activity and employment currently and represent relatively small shares of the economy today.

<b>TABLE 1 MARKET SECTORS: SHARES OF ECONOMY IN 2010 (2010 Employment for Sectors and Shares of Total Employment)</b>					
<b>Market Sectors</b>	<b>East Bay I-80/880 Corridor /a/</b>	<b>Alameda County</b>	<b>East Bay: Alameda and Contra Costa Cos.</b>	<b>Central Bay Area (EB/SF/SM) /b/</b>	<b>San Francisco- Oakland- Fremont Metro Area /c/</b>
<b>Life Sciences/Biotechnology</b>	16,190 2.5% Ala. Co. 1.5% E. Bay	-	-	37,000 2.1% Metro Area	45,910 2.6%
<b>Clean, Green Economy/ Clean Technology</b>	-	-	-	-	51,800 2.7%
<b>Manufacturing</b>	36,970 5.8% Ala. Co. 3.9% E. Bay	60,500 9.4%	78,600 8.3%	-	116,100 6.4%
<b>Construction /d/</b>	12,950 2.0% Ala. Co. 1.4% E. Bay	30,300 4.8%	48,700 5.1%	-	80,900 4.3%
<b>Digital Media/Info. Technology</b>	-	14,000 2.2%	23,800 2.5%	-	62,300 3.3%
<p>NOTE: Employment in 2010 is lower than prior years due to the impact of the recession. Increases in employment are anticipated as the economy recovers, in addition to longer-term growth potentials. Employment data are presented for geographic areas as available for each sector. There is some overlap of employment between sectors, such as between the clean economy/clean technology sector and the manufacturing and construction sectors.</p> <p>/a/ I-80/880 Corridor, Richmond to Union City.</p> <p>/b/ East Bay I-80/880 Corridor (Richmond to Union City), San Francisco, and North and Central San Mateo County (county line south to Redwood Shores).</p> <p>/c/ San Francisco-Oakland-Fremont Metropolitan Statistical Area, including five counties: Alameda, Contra Costa, San Francisco, San Mateo, and Marin.</p> <p>/d/ Construction sector is down significantly in 2010, due to the recession and housing market collapse, and was hit harder than the other sectors above. For example, in 2006, Alameda County construction had 44,200 jobs with a 6.3% share and East Bay construction had 74,200 jobs with a 7.1% share.</p>					
<p>Source: See tables in the market sector assessments in the full Market Assessment Report.</p>					

## **Potentials for Future Growth**

There is growth forecast for all five market sectors. The highest rates of growth are anticipated in the technology sectors. Growth potentials are summarized in Table 2.

The emerging *clean technology and energy industries*, in particular, have strong growth potentials. However, it is difficult to accurately forecast growth for emerging industries, as it will depend on the extent and success of scientific discoveries as well as the extent of federal spending for research and business development. The amount of potential growth is largest for the *clean/green economy and cleantech sector*, although that forecast is for a large geographic area, the metro area (MSA) covering five Bay Area counties. However, the Inner East Bay has already established itself as the location for leading research efforts supporting this sector.

The *life sciences/biotechnology* sector also has substantial growth potential. This sector is very competitive, however, with a large pipeline of entitled projects and already-established marketing partnerships of city, university, and developer representatives.

Notable growth is forecast for *urban manufacturing and construction*, with demand focused on the East Bay I-80/880 corridor including Oakland. West Oakland can be an attractive location for smaller businesses in these sectors with competitively-priced land/space. There also is potential to capture relocations of existing manufacturing and construction businesses in the future.

Growth of the *digital media and information technology* sector also is forecast, focusing on the technology, internet-related, software, and video/sound groups. These groups include start-ups and other smaller businesses that could be attracted to an interesting, “gritty”, older industrial area like West Oakland.

The market sector assessments identify and describe strategy options for capturing business and job growth and associated new development potentials for each market sector. These are summarized in Figure 2.

**TABLE 2**  
**MARKET SECTORS: GROWTH POTENTIALS 2010-2030**  
**(Potential Growth of Employment and Space)**

Market Sector	Geographic Area for Forecasts	Growth Potentials
<b>Life Sciences/Biotechnology</b>	Central Bay Area (EB/SF/SM) /a/	37,000 - 55,000 jobs (+2%/yr) +18,000 jobs +7.65 mil. sq. ft. space  <ul style="list-style-type: none"> <li>Substantial growth potential</li> <li>Very competitive market context with large pipeline of entitlements and existing marketing partnerships targeted at biotech.</li> </ul>
<b>Clean/Green Economy/Clean Tech.</b> (Forecasts exclude some business types and include segments of most relevance to this effort)	San Francisco-Oakland-Fremont Metro Area /b/	36,150 to 77,080-107,830 jobs (+3.9 - 5.3%/yr) +40,930 - 71,680 jobs +16.4 - 28.3 mil. sq. ft. space  <ul style="list-style-type: none"> <li>Strong growth potential</li> <li>Difficult to forecast since emerging sector</li> <li>Growth somewhat dependent on federal research spending and extent of scientific discoveries</li> <li>Share of growth will occur in downtown office space</li> </ul>
<b>Urban Manufacturing</b>	East Bay: I-80/880 Corridor /c/	34,980 - 39,900 jobs (+0.66%/yr) +4,920 jobs +2.35 mil. sq. ft. space  Potential relocations ~3.3 - 4.2 mil. sq. ft. space  <ul style="list-style-type: none"> <li>West Oakland is an attractive location if can provide space/land at competitive rents/prices</li> </ul>
<b>Construction /d/</b>	East Bay: I-80/880 Corridor /c/	12,950 - 21,000 jobs (+1.7%/yr) +8,050 jobs +5.2 mil. sq. ft. space  Potential relocations ~1.6 - 2.1 mil. sq. ft.  <ul style="list-style-type: none"> <li>West Oakland is already an attractive location for construction; can remain so with competitively-priced space/land</li> <li>Larger cluster of construction and related businesses could be successful</li> </ul>
<b>Digital Media/Info. Tech.</b> (Forecasts focus on growing business types and exclude those less relevant to this effort)	East Bay: Alameda and Contra Costa Cos.	11,600 - 18,000 jobs (+2%/yr) +6,400 jobs +2.24 mil. sq. ft. space  Potential relocations ~360,000 sq. ft.  <ul style="list-style-type: none"> <li>Smaller businesses and start-ups most likely</li> <li>Could be attracted to interesting, "gritty" older industrial area environment</li> <li>Share of growth will occur in downtown office space</li> </ul>
NOTE: Growth potentials forecast for different geographic areas based on available data for market sectors. The larger the area forecast, the more competition for the growth identified. West Oakland will compete with other locations within each geographic area.		
/a/ East Bay I-80/880 Corridor (Richmond to Union City), San Francisco, and North and Central San Mateo County (county line south to Redwood Shores). /b/ San Francisco-Oakland-Fremont Metropolitan Statistical Area (MSA), including five counties: Alameda, Contra Costa, San Francisco, San Mateo, and Marin. /c/ I-80/880 Corridor, Richmond to Union City. /d/ Construction sector is down significantly in 2010, due to the recession and housing market collapse, and was hit harder than the other sectors above.		
Source: See earlier tables in the market sector assessments.		

**FIGURE 2**  
**POTENTIALS FOR WEST OAKLAND TO CAPTURE MARKET SECTOR GROWTH**

<u>Market Sector</u>	<u>Potentials and Strategies</u>
<b>Life Sciences/Biotechnology</b>	<ul style="list-style-type: none"> <li>• Very competitive market context</li> <li>• Could be difficult to attract to West Oakland in nearer term</li> <li>• Should position West Oakland to capture demand once Emeryville/Berkeley areas more fully developed, and as an extension of Emeryville</li> <li>• Partnership with key players in Inner East Bay could be important</li> <li>• Could be easier to attract start-ups and smaller companies first</li> <li>• Life science buildings are high cost to build, and require higher rents and environment attractive to those uses</li> <li>• To attract, need to improve infrastructure, safety, and image of the area and add amenities</li> </ul>
<b>Clean, Green Economy/Clean Tech</b>	<ul style="list-style-type: none"> <li>• Strong growth potentials</li> <li>• Competitive market context, although UCB and LBNL helping to establish sector in Inner East Bay</li> <li>• Offer building types in West Oakland that are not now available in Oakland, including incubators</li> <li>• Beneficial to establish relationships with UCB, LBNL, and related energy research institutions; seek to attract research facility if possible</li> <li>• Attract start-ups and smaller companies with lower-cost space options</li> <li>• Continue to work through East Bay Green Corridor Partnership</li> <li>• May be potential for a cluster of green construction and related businesses in West Oakland (see below)</li> </ul>
<b>Urban Manufacturing</b>	<ul style="list-style-type: none"> <li>• Industrial space/land declining in central Bay Area while business demand grows. Will increase interest in West Oakland.</li> <li>• West Oakland is an attractive location if can provide space/land at competitive rents/prices</li> <li>• Need investments in older industrial areas to modernize facilities and improve infrastructure</li> <li>• Land use policies should encourage light industrial/flex development and reuse of existing buildings</li> <li>• Land owners need to understand potentials</li> <li>• Positive steps to attract and support mfg. could be beneficial. Could promote “Made in West Oakland” brand.</li> </ul>
<b>Construction</b>	<ul style="list-style-type: none"> <li>• Construction sector has presence in West Oakland. Can build on that as sector recovers from recession.</li> <li>• Focus on smaller companies in future, particularly specialty trades and building/remodeling contractors</li> <li>• Need competitive, affordable space in existing buildings and new, light industrial/flex development</li> <li>• Potential for larger cluster of construction and related businesses               <ul style="list-style-type: none"> <li>– green/clean and other building and related companies</li> <li>– engineering, architecture, design</li> <li>– environmental services</li> <li>– building materials sales</li> <li>– manufacturing, custom products and building products</li> </ul> </li> </ul>
<b>Information: Digital Media/ Information Technology</b>	<ul style="list-style-type: none"> <li>• Could be attracted to “gritty” urban industrial area environment</li> <li>• Smaller businesses and start-ups most likely</li> <li>• Need to establish image for area as location for tech start-ups; “West Oakland” should become the “South of Market” of Oakland/Emeryville.</li> <li>• Renovate buildings near each other to create a cluster</li> <li>• Incubator/co-working space options; studios and small offices</li> <li>• Need support for contemporary technology</li> </ul>

## STRATEGY FOR CAPTURING POTENTIALS

Achievement of potentials for business and job growth and associated new development will depend on a successful economic and real estate development strategy for opportunity areas and sites within areas.

### Building Products Types

The building product types that could be options for the industrial parts of West Oakland (Opportunity Areas 1 and 3) are summarized in Figure 3. The chart identifies market sectors that could support the different types of building space and development.

<b>FIGURE 3 BUILDING PRODUCT TYPES SUPPORTED BY MARKET SECTORS</b>						
<b>Industry Market Sectors</b>	<b>Building Product Types</b>					
	<b>Industrial/ Manufacturing Space</b>	<b>Light Industrial/ Flex Space</b>	<b>Incubators/ Shared Facilities</b>	<b>R&amp;D/ Flex Space</b>	<b>Individual Buildings/ Campus</b>	<b>R&amp;D/ Life Sciences, Mid-Rise</b>
Life Sciences/ Biotechnology			X	X	X	X
Clean Economy & Clean Technology	X	X	X	X	X	X
Small, Urban Manufacturing	X	X	X		X	
Construction and Related	X	X				
Digital Media/ Information Technology		X	X	X	X	

The building types reflect differences in the physical characteristics of buildings, the types of improvements within the space, and the amenity levels at the site and in the surrounding area. Generally, they are ordered in the chart so that the building types listed on the left side are lower density with fewer interior building improvements and amenities. They provide space that can be supported by businesses with lower rent-paying abilities. The building types listed on the right are higher density with more interior improvements, more amenities, and more costly structured parking. The space in those building types is more costly to build and must be supported by businesses with greater rent-paying abilities.



The building types apply for existing buildings in the areas and for new construction that could occur on opportunity sites. Generally, the first four buildings types listed (from left to right in Figure 3) could apply to existing buildings, and most apply to new construction as well. The building types listed last (on the right in Figure 3) typically reflect new construction.

A mix of building products would be needed to attract and support business types from the five market sectors with growth potentials for West Oakland. The differences among building types in densities, development costs, space rents, and land values suggest a subarea strategy that encourages different types of development and business activities in different parts of the opportunity areas, particularly the Mandela/West Grand Opportunity Area.

### **Financial Feasibility Depends On Extent of Cleanup, Infrastructure, and Other Costs Not Required At Competitive Locations**

Where there is market demand, the types of development and building space identified for each potential market segment could capture revenues/rents that are competitive with other similar space within the relevant market areas. The building types are *financially feasible* to the extent that the space (existing and new) can be provided/developed at costs that are comparable to costs at other competitive locations. Buildings of these types currently exist elsewhere in the relevant market areas. The building types may not be financially feasible with “extraordinary” costs not required in other locations. Such extraordinary costs could include:

- costs for environmental cleanup;
- costs for infrastructure and other area-wide improvements; and/or
- potentially, costs for extensive improvements and upgrades to modernize existing buildings (depending on the new use).

Extraordinary costs of these types would first reduce land values, reducing the return to property owners as a result of the higher costs. The higher costs could be greater than land values, making projects infeasible. In those cases, the improvements with extraordinary costs would require public sector and/or area-wide financial participation and assistance if development is to proceed.

### **Existing Conditions Constrain Development/Revitalization and Need to Be Addressed**

While there are market potentials for new business mix and light industrial uses, conditions in West Oakland could continue to constrain business revitalization and job development if not improved. The following are constraints to be addressed *before* significant change can occur in the older industrial areas, particularly those in the Mandela/West Grand Opportunity Area.

◆ ***Inadequate Infrastructure and Streetscape***

Infrastructure investments could improve:

- streets and streetscape including sidewalks, curbs and gutters, street paving, and street lighting;
- circulation and accessibility in some locations;
- utilities as needed to assure adequate water and wastewater services for manufacturing and R&D/life sciences uses and to provide contemporary telecommunications access; and/or
- removal of rails and spurs no longer in use in the area.

It also could be beneficial to add amenities such as street trees in parts of the area where life sciences and technology uses are desired.

◆ ***Environmental Contamination of Sites***

An area-wide strategy could be useful in encouraging owners to undertake cleanup and identifying options for funding costly efforts.

◆ ***Safety Concerns and Poor Image***

Crime in the area and the reputation for crime adversely affect West Oakland's image and deter business development. A strategy is needed to improve safety and reduce crime and to build an improved image as a business location. While both safety and image will improve as activity and development increase in the area, efforts are needed to initially address these issues so as to begin to change perceptions and attract new uses.

**Other Aspects of Overall Revitalization/Development  
Strategy for Achieving Market Potentials**

The following outlines aspects of an overall strategy for encouraging economic and real estate development in the older industrial areas of West Oakland so as to capture market potentials for business and job growth. These aspects are *in addition to* the need to improve existing conditions that constrain development and revitalization, as described above.

◆ ***Recognize That Revitalization and Development is a Long-term, Evolutionary Process***

The overall strategy should be to improve the areas, remove constraints to development and business growth, and encourage the market to respond. Most likely, the process will go slowly, will need nurturing, and will build up over time. It could easily be 20 years or more before substantial changes occur.

Most business and job growth is from start-ups and from existing businesses that grow and change over time. While the relocation of a large, existing company or institution to the area would be great, it is not the most likely scenario, particularly in the early years. Attention needs to be focused on new start-ups and smaller businesses already in Oakland and nearby cities.

◆ ***Focus on Reuse of Existing Buildings, Particularly Initially***

The existing building stock provides a resource for attracting new businesses, particularly initially, and should be retained and reused for new business uses, as much as possible. Larger buildings can be subdivided for smaller tenants. Reuse and the “gritty” industrial feel it can provide are attractive to many businesses, particularly smaller businesses and new uses for the area. For many businesses, reuse is likely to be less costly than new construction. Reuse and small-scale infill can “set the stage” for redevelopment of larger opportunity sites nearby.

◆ ***Identify Other Location Options for Heavier Industrial Uses***

Consideration is currently being given to location options on the former Oakland Army Base for two recycling businesses now located in West Oakland. Their relocation could provide sites for new development and new uses within West Oakland. It also could improve the desirability of West Oakland locations in the vicinity. There also is a need to identify location options for other, still-viable heavier industrial and truck-intensive businesses in West Oakland, that are now more appropriately located outside the I-880 freeway boundaries.

◆ ***Undertake Proactive and Coordinated Marketing Approach***

A proactive marketing approach will be needed to promote West Oakland business locations and attract new uses. Both the public and private sectors need to be actively involved and consistent, in terms of the uses and development they envision for the area. Strategies for attracting different market sectors are identified in the analyses of market potentials, and summarized in Figure 2 above.

◆ ***Build on Existing Business Activities***

Revitalization and development of industrial areas should support and build on the strengths of existing business activities in West Oakland. There are both existing and new types of businesses that emerged in West Oakland over the past decade, many of which are part of the market sectors assessed herein. The future strategy should include land uses, building types, and infrastructure improvements that support existing businesses and encourage new ones to locate and expand in West Oakland. Existing businesses are assets for attracting new businesses, particularly initially.

◆ ***Educate Property Owners and Encourage Them to Be Realistic About Market Potentials and Land Values***

Space and land in West Oakland needs to be available at competitive prices and rents for uses from which there is market demand. Initially, West Oakland may need to be priced just below the competition to help in attracting new uses not yet in the area. Unrealistic property owner expectations will only delay development and revitalization if owners hold out for higher rents and prices than can be supported.

◆ ***Consider Subarea Approach for Development in Mandela/West Grand Opportunity Area***

As the market sectors differ in densities of development and the rents and land prices they support, revitalization may be facilitated by encouraging different sectors and/or different types of uses and development in different subareas of the larger opportunity areas.

◆ ***Land Use Policy and Zoning Should Provide Direction and Be Clear***

City regulatory land use policies set “the rules” for development and provide direction to the private sector. While allowing some flexibility, the more definitive the rules, the more clarity and predictability there is for property owners and developers. Zoning rules that prohibit residential and live/work uses in the Business Mix and Light Industrial zones should be enforced to ensure that these areas are as attractive as possible to business activities and the jobs they support.

## **EMPLOYMENT OPPORTUNITIES IN BUSINESS MIX/LIGHT INDUSTRIAL MARKET SECTORS**

The occupational profiles for jobs in the market sectors with potentials for West Oakland show that the large majority are good-paying jobs with training and advancement opportunities. The occupational distributions are summarized in Table 3.

The *life sciences and information sectors* have a large share of jobs in the professional, technical, and scientific occupations. These are higher-wage occupations and many require college educations. These sectors also support jobs that provide on-the-job training for employees without higher education, and they include jobs in good-paying, middle-wage occupations as well.

The majority of jobs in the *urban manufacturing and construction* sectors are in the production and construction occupations. These are good-paying, middle-wage jobs for workers with less than a college education. Many offer on-the-job training and advancement opportunities. Jobs in these occupations are often referred to as blue collar jobs.

**TABLE 3  
OCCUPATIONAL DISTRIBUTIONS FOR BUSINESS MIX/LIGHT INDUSTRIAL MARKET SECTORS**

<b>SOC Code</b>	<b>Occupation Title</b>	<b>Life Sciences/ Biotechnology</b>	<b>Clean/Green Economy</b>	<b>Urban Manufacturing</b>	<b>Construction</b>	<b>Digital Media / Information Technology</b>
<b>Higher Wage / Higher Education Occupations</b>						
11	Management	14.4%	5.7%	7.3%	4.9%	12.9%
13	Business and Financial Operations	8.1%	5.8%	3.3%	3.2%	7.9%
15	Computer and Math	10.5%	2.1%	2.5%	0.2%	13.5%
17	Architecture and Engineering	13.0%	5.7%	5.1%	0.8%	1.0%
19	Life, Physical, and Social Science	27.7%	2.3%	1.6%	0.1%	0.7%
21	Community and Social Services	0.3%	1.4%	0.0%	0.0%	0.0%
23	Legal	0.7%	0.7%	0.1%	0.0%	0.3%
25	Education, Training, and Library	0.1%	0.4%	0.0%	0.0%	0.1%
27	Arts, Design, Entertainment, Sports, and Media	1.1%	0.6%	0.7%	0.0%	24.5%
29	Healthcare Practitioners and Technical	1.1%	1.2%	0.0%	0.0%	0.0%
	<b>Subtotal</b>	<b>76.9%</b>	<b>25.9%</b>	<b>20.6%</b>	<b>9.1%</b>	<b>60.9%</b>
<b>Middle Wage Occupations / Less than College Education</b>						
33	Protective Service	0.3%	4.5%	0.0%	0.0%	0.0%
43	Office and Administrative Support	9.6%	14.1%	11.2%	9.7%	16.3%
47	Construction and Extraction	0.1%	7.2%	0.8%	70.8%	0.3%
49	Installation, Maintenance, and Repair	1.5%	6.2%	3.5%	5.7%	7.3%
51	Production	9.1%	15.9%	51.6%	1.0%	1.5%
53	Transportation and Material Moving	0.6%	19.3%	8.1%	2.0%	1.1%
	<b>Subtotal</b>	<b>21.2%</b>	<b>67.2%</b>	<b>75.3%</b>	<b>89.2%</b>	<b>26.6%</b>
<b>Lower Wage Occupations</b>						
31	Healthcare Support	0.4%	0.3%	0.0%	0.0%	0.0%
35	Food Preparation and Serving-Related	0.0%	0.4%	0.3%	0.0%	1.4%
37	Building and Grounds Cleaning and Maintenance	0.4%	0.9%	0.4%	0.2%	0.2%
39	Personal Care and Service	0.0%	1.2%	0.0%	0.0%	2.3%
41	Sales and Related	1.1%	3.4%	2.5%	1.5%	8.6%
45	Farming, Fishing, and Forestry	0.1%	0.7%	0.9%	0.0%	0.0%
	<b>Subtotal</b>	<b>1.9%</b>	<b>6.9%</b>	<b>4.1%</b>	<b>1.7%</b>	<b>12.5%</b>
	<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>100.0%</b>

Sources: State of California, Employment Development Department; Brookings Institution; and Hausrath Economics Group.

The *clean/green economy* sector includes a diversified mix of industries that offer a range of types of jobs. Overall, the majority of jobs in this sector are in the middle-wage occupations, and are often defined as green collar and blue collar occupations. They offer good-paying jobs, do not require higher education, and can provide training and advancement opportunities for workers. The newer, *clean technology* segments have occupation profiles more similar to the life science and information sectors described above, with a large share of jobs in the higher-wage, higher-education occupations.

### **Comparison With East Bay Economy Overall**

Comparison of the occupational distributions of jobs in the market sectors assessed for West Oakland and the occupational distribution for total employment in the East Bay highlight some differences.

- There are proportionally more, middle-wage jobs in the urban manufacturing, construction, and clean economy sectors than in the economy overall (67 percent to 89 percent compared to 27 percent overall). Many of the jobs in this group are green collar and blue collar jobs.
- There are proportionally more higher-wage/higher-education jobs in the life science, information, and clean technology sectors than in the economy overall (60 percent to 70 percent compared to 36 percent overall).

Together, the market sectors assessed for West Oakland provide good jobs for workers with a range of skills and educational attainment.