2.1.3 Community Impacts

This section addresses potential effects on community character and cohesion (Section 2.1.3.1), relocations (Section 2.1.3.2), and low-income and minority populations (Section 2.1.3.3) associated with the construction and operation of the proposed build alternatives. Because there are no specific guidelines under NEPA or CEQA for determining potential areas of influence of community impacts, the Caltrans Environmental Handbook, Volume 4 (1997) – Community Impact Assessment was consulted. The handbook states that the boundary of potentially affected social and economic environments should be drawn to include surrounding buildings, transportation facilities, land, and neighborhood and community features. On this basis, the project study area was delineated to include the Port and those portions of the adjacent communities potentially affected within the cities of Long Beach and Los Angeles. The project study area includes all census tracts within 0.75-mi (2.4 km) of the project corridor (0.75-mi [2.4 km] on both sides of the project corridor, as shown in Exhibit 2.1.3-1).

2.1.3.1 Community Character and Cohesion

2.1.3.1.1 Regulatory Setting

NEPA established that the federal government use all practicable means to ensure for all Americans safe, healthful, productive, and aesthetically and culturally pleasing surroundings [42 U.S.C. 4331(b)(2)]. FHWA, in its implementation of NEPA [23 U.S.C. 109(h)], directs that final decisions regarding projects are made in the best overall public interest. This requires taking into account adverse environmental impacts, such as destruction or disruption of human-made resources, community cohesion, and the availability of public facilities and services.

Under CEQA, an economic or social change by itself is not to be considered a significant effect on the environment; however, if a social or economic change is related to a physical change, then social or economic change may be considered in determining whether the physical change is significant. Because this project would result in physical change to the environment, it is appropriate to consider changes to community character and cohesion in assessing the significance of the project's effects.

2.1.3.1.2 Affected Environment

Study Area

The EIR/EA was reviewed to identify potentially adverse effects of the project on the adjacent communities within the project area. Based on consideration of the potential project effects as discussed within this EIR/EA, traffic effects were determined to have the largest potential direct effects area, extending into downtown Long Beach. The 0.75-mi (2.4-km) study area is centered on the project corridor within the project limits and encompasses the entire traffic study area (see Section 2.1.5, Exhibit 2.1.5-1). The 0.75-mi (2.4-km) study area includes the proposed project area, its immediate surrounding areas, and an additional area to account for potential project effects on community character and cohesion.

The study area consists of 11 census tracts (see Exhibit 2.1.3-1). Due to the irregular shape of the census tracts, some tracts extend outside of the 0.75-mi (2.4-km) project study area. Census data were not adjusted to account for this; therefore, census data presented for the study area actually account for an area slightly larger than the project study area. It should also be noted that Tracts 5756 and 2961 are located within the Ports of Long Beach and Los Angeles.

In addition to the planning areas of the Ports of Long Beach and Los Angeles, the study area census tracts include portions of the community of Wilmington and the City of Long Beach. Socioeconomic and demographic data for the study area census tracts discussed below were obtained from the 2000 census data. The City of Long Beach and the County of Los Angeles are also discussed for comparison to provide local and regional socioeconomic and demographic context for the study area.

Community Facilities and Services

The Cities of Long Beach and Los Angeles supply water and sewer services to the project site and the entire study area. Electricity and natural gas within the study area are provided by SCE and Long Beach Energy, respectively. Solid waste collection within the Port is handled by private contractors. Trash and other nontoxic solid waste are disposed of at various landfills in Los Angeles County. No shortages of these facility capacities in the Port or the larger study area currently exist or are anticipated.

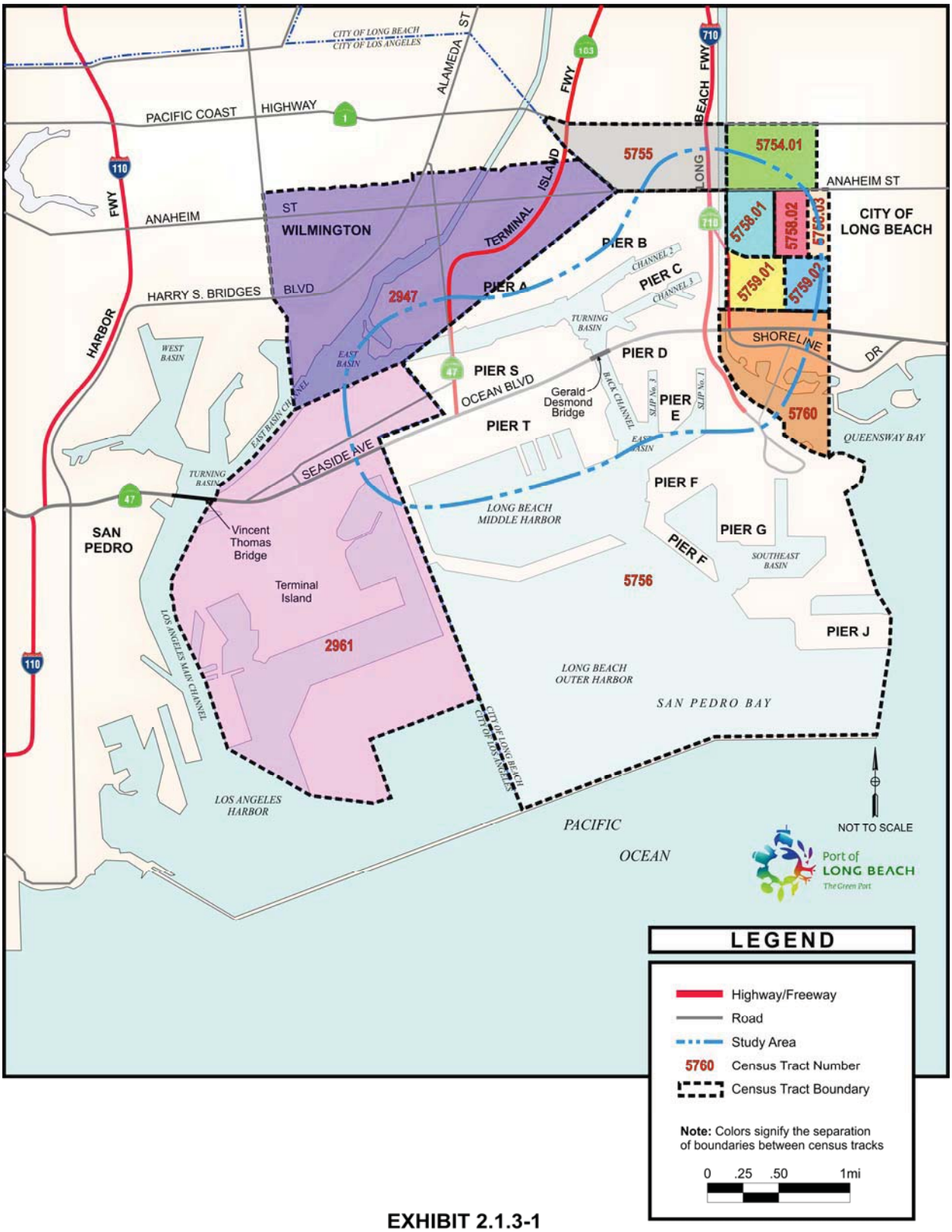

EXHIBIT 2.1.3-1
Census 2000 Tracts

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Other community resources located within the study area include schools and recreational facilities. The nearest schools to the project are located within the City of Long Beach and are located approximately 0.3-mi (0.5-km) from the eastern edge of the proposed project: Edison Elementary is a public school at 625 Maine Avenue, and Cesar Chavez Elementary School is a public school located at 730 West 3rd Street.

Recreational Amenities

San Pedro Bay supports recreational uses such as marinas, sportfishing facilities, and other public access areas (POLB, 1999). Specific recreational amenities within the area include the Long Beach Marina, Queen Mary, Queensway Bay, Golden Shore RV Resort, public fishing access on the eastern side of Pier J, and Long Beach Sportfishing on Berth 55. None of these recreational facilities and attractions is located within the immediate project vicinity (see Section 2.1.1 [Land Use] for further discussion)

Study Area Socioeconomic and Demographic Characteristics

Population socioeconomic data from the U.S. Census Bureau (U.S. Census, 2000) were analyzed at the census tract level. A census tract is a statistical subdivision of a county delineated by a local committee of census data users for the purpose of presenting data. Census tract boundaries normally follow visible features, but they may follow governmental unit boundaries and other nonvisible features in some instances. During their development, census tracts are designed to be relatively homogeneous units with respect to population characteristics, economic status, and living conditions. Each census tract contains an average of 4,000 inhabitants (U.S. Census, 2000), and it may be split by any subcounty geographic entity. As previously discussed, the study area consists of 11 census tracts. All but 2 of the 11 census tracts, Tracts 2947 and 2961, are located within the City of Long Beach (see Exhibit 2.1.3-1).

Study Area Population Demographics

Population reported for the study area census tracts are provided in Table 2.1.3-1, and study area population age and racial composition are provided in Tables 2.1.3-2 and 2.1.3-3. The reported population of the 11 census tracts is approximately 31,000 people. The percentage of working age (19 to 64) adults within the study census tracts range from a low of 50.4 (Tract 5758.01) to 90.6 (Tract 5760). Overall, 58.4 percent of the study area population is working age adults. This compares to 58.6 percent and 59.3 percent for the City of Long Beach and the County of Los Angeles, respectively.

With the exception of Census Tract 5760, persons classified as Hispanic or Latino constitute most of the population in the study area census tracts. The percentage of Hispanic or Latino populations ranges from 28.8 percent (Tract 5760) to 86.7 percent (Tract 5758.01). Overall, 64 percent of the study area census tract population is Latino or Hispanic. This compares to 35.8 percent and 44.6 percent for the City of Long Beach and the County of Los Angeles, respectively; however, all census tracts have majority minority populations. Minority percentages of the study area census tracts range from 60.4 percent (Tract 5760) to 95.4 percent (Tract 574.01). Overall, 85.6 percent% of the study area census tract population is minority (not white). This compares to 66.9 percent and 68.6 percent for the City of Long Beach and the County of Los Angeles, respectively. Except for Tracts 2961, 5759.02, and 5760, the percentage of white persons is much lower in the study area census tracts than the City of Long Beach and the County of Los Angeles. Based on the information

Table 2.1.3-1
Historical Population Data within the Project Study Area

Communities	1990	2000	2006 Estimates	Percent Change 1990-2000	Percent Change 2000-2006
Study Area[1]	---[2]	30,978	N/A*	0.2	N/A
City of Long Beach	429,433	461,522	466,520	7.5	1.1
County of Los Angeles	8,863,164	9,519,338	8,878,554	7.4	-6.7

[1]Project study area includes all census tracts within 0.75-mi (2.4 km) of the project area.

[2]Census tract boundaries in 1990 Census are different from census tract boundaries for 2000 Census.

*N/A: data not available for census tracts.

Sources: U.S. Census, 2000; and U.S. Census, 1990.

provided in Table 2.1.3-3, the study area is considered a predominantly minority community when compared to the City of Long Beach and County of Los Angeles

Study Area Socioeconomic Demographics

Socioeconomic demographic data for the study area census tracts are provided in Tables 2.1.3-4 and 2.1.3-5. The information is summarized below.

According to the 2000 census data, 9,973 households and 5,740 families are within the study area census tracts. Average household and family size within the study area range from 1.67 (Tract 2961) to 5.09 (Tract 5755) and 2.14 (Tract 5760) to 4.51 (Tract 5758.01), respectively. This compares to 2.77 and 3.55 for the City of Long Beach and 2.98 and 3.61 for the County of Los Angeles. Median family and household incomes within the study area census tracts range from $0 (Tract 5756; no families) to $69,375 (Tract 2961) and $13,750 (Tract 5755) to $152,338 (Tract 5756), respectively. This compares to $40,002 and $37,270 for the City of Long Beach and $46,492 and $42,189 for the County of Los Angeles. Even when leaving out the study area census tracts that contain the Ports (2961 and 5756), the median family and household incomes reported for the study area are much lower than those reported for the City of Long Beach and the County of Los Angeles.

The study area census tracts contain 9,693 housing units. No housing or residential communities are located within the project footprint or larger Port area (Tract 5756). Residential neighborhoods are located within the bordering census tracts in the City of Long Beach. According to U.S. Census 2000 data, residential communities are found east of the Los Angeles River (8,626 units) and also north of Anaheim Street (100 units). Housing units within the study area vary from high-density apartments to single-family homes built on individual lots. Approximately 84 percent of the housing units within the study area census tracts are classified as renter occupied. This compares to 59 percent of renter-occupied housing units in the City of Long Beach and 52 percent of renter-occupied housing units in the County of Los Angeles.

According to the City of Long Beach Housing Authority and Los Angeles County Community Development Commission, six low-income affordable housing developments that provide affordable housing for seniors, disabled, and people with HIV/AIDS are located within the study area census tracts.

Employment data for the study area census tracts show that there are 11,306 individuals in the civilian labor force (i.e., does not include military). Unemployment within the study area census tracts range from zero percent (Tracts 5755 and 5756) to 27.8 percent (Tract 5754.01). Overall unemployment within study area census tracts is 16.9 percent. This compares to 9.4 percent and 8.2 percent for the City of Long Beach and County of Los Angeles, respectively.

Individual earnings in 1999 that are below the poverty level within study area census tracts range from 21.9 percent (Tract 5760) to 53.4 percent (Tract 5754.01). With the exception of Tract 5760, all study area tracts have greater percentages of individuals earning below the poverty level than both the City of Long Beach (22.8 percent) and County of Los Angeles (17.9 percent).

The U.S. Census Bureau uses a set of income thresholds that vary by family size and composition to determine poverty status. If a family's total income is less than the poverty threshold income, then that family is considered impoverished. The poverty thresholds do not vary geographically, and they are updated annually to reflect inflation using the Consumer Price Index (CPI). The official poverty definition considers monetary income before taxes and does not include capital gains and non-cash benefits (e.g., public housing, Medicaid, and food stamps). Poverty is not defined for people in military barracks, institutional group quarters, or for unrelated individuals under age 15 (e.g., foster children) (Dalaker and Proctor, 1999).

Except for tracts 2961, 5756, and 5760 (no families or no families below the poverty level), percentages of families with incomes below the poverty level ranged from 32.4 percent (Tract 5759.02) to 77.3 percent (Tract 5755). Overall, 40.1 percent of the families within study area census tracts have incomes that fall below the poverty level, and is much higher than the City of Long Beach (19.3 percent) and County of Los Angeles (14.4 percent). Based on the higher percentages of individuals and families living below the poverty level when compared to the City of Long Beach and County of Los Angeles, all study area tracts, except for 2961 (located in the Port of Los Angeles), 5756 (located in the Port of Long Beach), and 5760, are considered low-income populations.

Table 2.1.3-2
Study Area Age Composition

	Study Area Census Tracts																						Comparison Areas			
	2947		2961		5754.01		5755		5756		5758.01		5758.02		5758.03		5759.01		5759.02		5760		City of Long Beach		County of Los Angeles	
Demographic	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total Population	3,270	100.0	1,434	100.0	5,476	100.0	252	100.0	46	100.0	2,721	100.0	5,433	100.0	2,968	100.0	3,825	100.0	5,108	100.0	445	100.0	461,522	100.0	9,519,338	100.0
Population 19 or younger	1,242	38.0	81	5.6	2,527	46.1	71	28.2	16	34.8	1,298	47.7	2,345	43.2	833	28.1	1,452	38.0	1,239	24.3	31	7.0	149,119	32.3	2,946,796	31.0
Population 19 to 64	1,881	57.5	1,296	90.4	2,835	51.8	176	69.8	28	60.9	1,372	50.4	2,949	54.3	1,567	52.8	2,259	59.1	3,353	65.6	403	90.6	270,501	58.6	5,645,869	59.3
Population 65+	147	4.5	57	4.0	114	2.1	5	2.0	2	4.3	51	1.9	139	2.6	568	19.1	114	3.0	516	10.1	11	2.5	41,902	9.1	926,673	9.7

Source: U.S. Census, 2000.

Table 2.1.3-3
Study Area Racial Composition

	Study Area Census Tracts																						Comparison Areas			
	2947		2961		5754.01		5755		5756		5758.01		5758.02		5758.03		5759.01		5759.02		5760		City of Long Beach		County of Los Angeles	
Demographic	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total Population	3,270	100.0	1,434	100.0	5,476	100.0	252	100.0%	46	100.0	2,721	100.0	5,433	100.0	2,968	100.0	3,825	100.0	5,108	100.0	445	100.0	461,522	100.0	9,519,338	100.0
White	224	6.9	459	32.0	251	4.6	55	21.8	7	15.2	176	6.5	466	8.6	617	20.8	565	14.8	1,554	30.4	176	39.6	152,899	33.1	2,959,614	31.1
Black or African American	205	6.3	337	23.5	485	8.9	19	7.5	11	23.9	114	4.2	518	9.5	478	16.1	815	21.3	965	18.9	81	18.2	66,836	14.5	901,472	9.5
American Indian or Native American	6	0.2	12	0.8	19	0.3	3	1.2	1	2.2	7	0.3	10	0.2	25	0.8	25	0.7	41	0.8	2	0.4	1,772	0.4	25,609	0.3
Asian	36	1.1	40	2.8	272	5.0	7	2.8	1	2.2	31	1.1	238	4.4	314	10.6	267	7.0	318	6.2	35	7.9	54,937	11.9	1,124,569	11.8
Native Hawaiian and other Pacific Islander	27	0.8	12	0.8	52	0.9	2	0.8	4	8.7	3	0.1	12	0.2	18	0.6	31	0.8	47	0.9	5	1.1	5,392	1.2	23,265	0.2
Other (not Hispanic or Latino)	0	0.0	0	0.0	5	0.1	4	1.6	0	0.0	1	0.0	7	0.1	5	0.2	5	0.1	14	0.3	2	0.4	1,013	0.2	19,935	0.2
Two or more races	38	1.2	30	2.1	83	1.5	2	0.8	1	2.2	31	1.1	67	1.2	67	2.3	88	2.3	185	3.6	16	3.6	13,581	2.9	222,661	2.3
Hispanic or Latino	2,734	83.6	544	37.9	4,309	78.7	160	63.5	21	45.7	2,358	86.7	4,115	75.7	1,444	48.7	2,029	53.0	1,984	38.8	128	28.8	165,092	35.8	4,242,213	44.6

Source: U.S. Census, 2000.

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Table 2.1.3-4
Study Area Socioeconomic and Housing Characteristics

	Study Area Census Tracts																						Comparison Areas			
	2947		2961		5754.01		5755		5756		5758.01		5758.02		5758.03		5759.01		5759.02		5760		City of Long Beach		County of Los Angeles	
Demographic	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Total Population over 16 Years Old	2,222	100.0	1,281	100.0	3,312	100.0	175	100.0	2	100.0	1,607	100.0	3,431	100.0	2,305	100.0	2,681	100.0	4,802	100.0	533	100.0	339,395	100.0	7,122,525	100.0
In Labor Force over 16 Years Old	1,150	51.8	71	5.5	1,777	53.7	105	60.0	2	100.0	763	47.5	1,960	57.1	1,087	47.2	1,699	63.4	2,458	60.2	273	51.2	209,485	61.7	4,312,264	60.5
Per Capita Income	9,622		7,639		6,128		6,992		171,900		7,285		7,100		9,656		15,207		15,323		16,407		19,040		20,683	
Total Poverty-Based Population	3,242	100.0	155	100.0	5,305	100.0	208	100.0	2	100.0	2,737	100.0	5,410	100.0	2,918	100.0	3,817	100.0	5,108	100.0	370	100.0	453,065	100.0	9,349,771	100.0
Individuals below Poverty Level	1,324	40.8	48	31.0%	2,674	50.4	111	53.4	0	0	1,190	43.5	2,723	50.3	1,289	44.2	1,448	37.9	1,704	33.4	81	21.9	103,434	22.8	1,674,599	17.9
Total Families	629	100.0	42	100.0	1,052	100.0	22	100.0	0	100.0	540	100.0	1,165	100.0	487	100.0	841	100.0	945	100.0	17	100.0	100,866	100.0	2,154,311	100.0
Average Family Size	4.2		2.95		4.42		4.06		3.20		4.51		4.23		3.66		3.78		3.18		2.14		3.55		3.61	
Median Family Income	23,179		69,375		19,199		12,115		0		22,667		19,265		20,613		25,262		23,935		12,361		40,002		46,452	
Families below Poverty Level	250	39.7	0	0	498	47.3	17	77.3	0	0	250	46.3	513	44.0	185	38.0	284	33.8	306	32.4	0	0	19,512	19.3	311,226	14.4
Total Households	946	100.0	104	100.0	1,191	100.0	38	100.0	2	100.0	725	100.0	1,419	100.0	1,094	100.0	1,374	100.0	2,614	100.0	286	100.0	163,279	100.0	3,136,279	100.0
Average Household Size	3.39		1.67		4.25		5.09		2.00		4.17		3.65		2.41		2.76		1.95		1.70		2.77		2.98	
Median Household Income	21,914		31,500		19,789		13,750		152,338		23,750		19,349		17,109		25,898		23,170		28,750		37,270		42,189	
Total Housing Units	941	100	93	100	1,189	100	32	100	1	100	655	100	1,479	100	1,077	100	1,375	100	2,618	100	233	100	163,107	100	3,133,774	100
Owner Occupied	139	14.8	93	100.0	70	5.9	0	0.0	0	0.0	80	12.2	132	8.9	156	14.5	465	33.8	418	16.0	25	10.7	66,971	41.1	1,499,694	47.9
Renter Occupied	802	85.2	0	0.0	1,119	94.1	32	100.0	1	100.0	575	87.8	1,347	91.1	921	85.5	910	66.2	2,200	84.0	208	89.3	96,136	58.9	1,634,080	52.1

Source: U.S. Census, 2000.

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Table 2.1.3-5
Study Area Employment Status, Work Location, and Means of Transportation to Work

	Study Area Census Tracts																						Comparison Areas			
	2947		2961		5754.01		5755		5756		5758.01		5758.02		5758.03		5759.01		5759.02		5760		City of Long Beach		County of Los Angeles	
Demographic	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
Employment Status																										
Total Population over 16 in Labor Force	1,150	100.0	71	100.0	1,777	100.0	105	100.0	2	100.0	763	100.0	1,960	100.0	1,087	100.0	1,699	100.0	2,458	100.0	273	100.0	209,485	100.0	4,312,264	100.0
Employed	1,001	87	56	78.9	1,283	72.2	105	100	2	100	649	85.1	1,556	79.4	885	78.7	1,442	84.9	2,183	90.2	266	97.4	189,487	90.6	3,953,415	91.8
Unemployed	149	13	15	21.1	494	27.8	0	0	0	0	114	14.9	404	20.6	232	21.3	257	15.1	236	9.8	7	2.6	19,680	9.4	354,347	8.2
Work Location																										
Work in Residence	458	46.3	0	0.0	434	35.4	91	90.1	2	100.0	121	19.3	543	37.3	272	34.4	506	36.7	805	36.5	106	39.8	61,685	33.4	1,382,500	36.5
Work outside of Residence	531	53.7	48	100.0	792	64.6	10	9.9	0	0.0	506	80.7	914	62.7	518	65.6	871	63.3	1,401	63.5	160	60.2	122,794	66.6	2,402,195	63.5
Transportation to Work																										
Car, Truck, or Van	767	77.6	48	100.0	799	65.2	16	15.8	2	100.0	505	80.5	981	67.3	532	67.3	1,065	77.3	1,565	70.9	224	84.2	159,133	86.3	3,296,964	87.5
Public Transportation	110	11.1	0	0.0	276	22.5	10	9.9	0	0.0	62	9.9	318	21.8	202	25.6	198	14.4	307	13.9	11	4.1	12,260	6.6	254,091	6.7
Walk, Bike, Motorcycle, or Other	108	10.9	0	0.0	124	10.1	75	74.3	0	0.0	53	8.5	139	9.5	48	6.1	81	5.9	305	13.8	31	11.7	7,798	4.2	81,906	2.2
Work at Home	4	0.4	0	0.0	27	2.2	0	0.0	0	0.0	7	1.1	19	1.3	8	1.0	33	2.4	29	1.3	0	0.0	5,288	2.9	134,643	3.6

Source: U.S. Census, 2000.

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2.1.3.1.3 Environmental Consequences

Evaluation Criteria

NEPA requires consideration of social and economic impacts of projects in the preparation of environmental documents. NEPA states that consideration is to be given to qualitative factors and unquantifiable environmental amenities and values, along with economic and technical considerations, in decision making that may affect the following:

- Human-made and natural resources and/or aesthetic values
- Community cohesion and the availability of public facilities and services
- Adverse employment effects and tax and property value losses
- Disruption of desirable community and regional growth

No Action Alternative

Continued operation of the Gerald Desmond Bridge would have no effect on community character. It would not divide or weaken the cohesion of any established communities or affect any community or recreation facilities or services or access to facilities or services.

Construction and Demolition Impacts

North-side Alignment Alternative

Community Facilities and Services. Approximately 150 construction workers would be required to build the North-side Alignment Alternative. It is likely, as is the case with most construction projects in southern California, that the construction workforce would consist of workers from existing regional labor pools. Due to the temporary nature of construction industry jobs, the relatively large regional construction industry, and the fact that construction workers do not typically relocate to near the jobsite, it is unlikely that new construction jobs would lead to increases in local or regional population; however, it should be noted that even if the workforce resulted in a permanent relocation of the workforce to the City of Long Beach, the increase associated with 150 construction workers and their families would not likely result in a measurable increase in demand on local facilities and services or cause a substantial increase in the demand for existing electrical sources or require the development of new sources.

Construction of the North-side Alignment Alternative would not substantially increase demand for public utilities in the Port or region (see Section 2.1.4 [Utilities and Service Systems]). Based on the temporary nature of construction industry jobs, construction of the North-side Alignment Alternative is not anticipated to have a substantial effect on local school enrollments, hospital admissions, or other demand-sensitive facilities or services. Demand-sensitive public services and facilities would not be substantially affected by the small workforce anticipated for construction of the North-side Alignment Alternative.

Demolition of the existing bridge would not occur until after the opening of the new bridge, allowing Ocean Boulevard to remain open to through traffic at all times; however, there would be some temporary closures of lanes and adjacent roads, as well as access changes or restrictions. To minimize delays and inconvenience, a Transportation Management Plan (TMP) identifying alternative routes would be developed. As part of the TMP, portable changeable message signs and advanced warning roadway signs would be used to direct traffic to these alternative routes. Emergency access would be maintained during construction. All affected emergency routes would be identified in the TMP and coordinated with all agencies prior to construction (see Section 2.1.5 [Traffic and Circulation]). Construction of this alternative would not adversely affect existing emergency facilities or services (see Section 2.2.4 [Public Health and Safety]).

The North-side Alignment Alternative would not result in any loss of public parking. The proposed demolition of the Gerald Desmond Bridge would eliminate the existing pedestrian sidewalk. Removal of the sidewalk would not adversely affect pedestrian access to community facilities or services because there are none within the Port areas. Removal of the pedestrian access is discussed in detail in Section 2.1.5 (Traffic and Circulation).

Recreational Amenities. There would be no limitation on access to recreational resources within the harbor during construction of the North-side Alignment Alternative; however, there may be some traffic slowdowns near the project area as a result of heavy equipment movement and material hauling. Recreational boating businesses that use the Back Channel would be notified of any restrictions to the Back Channel well in advance of construction and demolition activities

The North-side Alignment Alternative would not result in an increased use of existing recreational

facilities in the area. The North-side Alignment Alternative would not adversely affect recreational opportunities within the project study area (see Section 2.1.1 [Land Use]).

Population. Construction of the North-side Alignment Alternative is located within an area zoned for industrial use, would not result in the creation or elimination of permanent jobs, and would not result in any land use changes that would affect local or regional growth projections.

Housing. Construction of the North-side Alignment Alternative would not result in the removal of any residences or construction of additional residences. The project involves the replacement of an existing bridge in an industrial area, and it would not divide or weaken the cohesion of any established communities. There are no residential neighborhoods within the immediate project vicinity. Residential neighborhoods closest to the project site are found beyond the industrial use area, outside the Port to the north and east. The nearest residential development is at least 0.3-mi (0.5-km) east of the project site on the east side of the Los Angeles River near the Cesar Chavez Elementary School. No impacts to housing would result from construction or demolition activities associated with this alternative.

South-side Alignment Alternative

The South-side Alignment Alternative would essentially be a mirror image of the North-side Alignment Alternative. The potential construction and demolition effects of this alternative on community facilities and services, recreational amenities, population, and housing would be the same as those described under the North-side Alignment Alternative.

Rehabilitation Alternative

Community Facilities and Services. Similar to the North- and South-side Alignment Alternatives, construction workers for the Rehabilitation Alternative would likely be drawn from existing regional labor pools,and would not measurably increase demand on local facilities and services. Construction of this alternative would not cause a substantial increase in the demand on existing electrical sources or require the development of new sources. The proposed bridge rehabilitation would not substantially increase demand on public utilities in the Port or region (see Section 2.1.4 [Utilities and Service Systems]).

The small increase in the number of workers in the Port during construction of this alternative is not anticipated to affect local school enrollments, hospitals admissions, or other demand-sensitive facilities or services. Workers would likely be selected from existing local labor pools. Demand-sensitive public services and facilities would not be affected by this alternative.

During construction of the Rehabilitation Alternative, lane closures for roadway and bridge deck replacement would occur from 7:00 p.m. to 7:00 a.m. Two lanes of traffic would be open in each direction at all times on the bridge. Construction of this alternative would likely not require access changes or restrictions; however, to minimize delays and inconvenience, a TMP would be prepared to identify alternative routes as applicable. As part of the TMP, portable changeable message signs and advanced warning roadway signs would be used to direct traffic if additional lane closures or detour routes would be required. Emergency access would be maintained across the bridge at all times during construction; however, planning for alternative emergency routes would be included in the TMP and coordinated with all agencies prior to construction (see Section 2.1.5 [Traffic and Circulation]). Construction of the Rehabilitation Alternative would not adversely affect existing emergency facilities and services (see Section 2.2.4 [Public Health and Safety]).

Construction of the Rehabilitation Alternative would occur within the existing footprint of the Gerald Desmond Bridge and would not result in any loss of public parking.

Recreational Amenities. There are no recreational amenities within the footprint of the Gerald Desmond Bridge. No recreational amenities would be affected by construction activities associated with this alternative.

Population. Construction of the Rehabilitation Alternative would occur within an area zoned for industrial use and would not result in any land use changes that affect local or regional growth projections.

Housing. Construction of the Rehabilitation Alternative would occur within the footprint of the existing Gerald Desmond Bridge. There is no housing within the existing footprint, and construction of this alternative would have no effect on housing.

Operational Impacts

North-side Alignment Alternative

Operation of the North-side Alignment Alternative would not adversely affect community character or

cohesion. This alternative involves the replacement of an existing bridge in an industrial area, and it would not divide or weaken the cohesion of any established communities or affect any community recreation facilities or services, or access to those facilities or services. There are no residential neighborhoods within the immediate project vicinity. Residential neighborhoods closest to the project site are found beyond the industrial use area, outside the Port to the north and east. The nearest residential development or school is located at least 0.3-mi (0.5-km) from the project site. No effect on population or housing would result from operation of this alternative.

South-side Alignment Alternative

The South-side Alignment Alternative would essentially be a mirror image of the North-side Alignment Alternative. The potential operational effects of this alternative on community facilities and service, recreational amenities, population, and housing would be the same as those described under the North-side Alignment Alternative.

Rehabilitation Alternative

Once construction is complete, the Rehabilitation Alternative would operate the same as the No Action Alternative. Operation of the rehabilitated Gerald Desmond Bridge would have no effect on community character or cohesion. It would not divide or weaken the cohesion of any established communities or affect any community or recreation facilities or services or access to community or recreation facilities or services.

2.1.3.1.4 Avoidance, Minimization and/or Mitigation Measures

No measures are required.

2.1.3.2 Relocations

2.1.3.2.1 Regulatory Setting

The Caltrans Relocation Assistance Program (RAP) is based on the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (as amended) and 49 CFR Part 24.

The purpose of the Uniform Relocation Act is to "ensure that persons displaced as a direct result of federal or federally assisted projects are treated fairly, consistently, and equitably" so as not to suffer disproportionately from projects designed for the benefit of the public as a whole [49 CFR 24.1(b)]. Unlike for residential displacees, the Uniform Relocation Act does not require that nonresidential displacees (i.e., businesses, farms, nonprofit organizations) be made whole; thus, they receive fewer benefits (Caltrans, 2001). To qualify for benefits, one must legally occupy the property as an owner or lessee/tenant when negotiations commence or when possession of the property is taken. Benefits are limited to moving and related expenses. The acquisition of replacement business property is not included in the provisions and is the responsibility of the displacee; however, the displacee may qualify for re-establishment payment to cover some of the costs involved in re-establishing their business.

All relocation services and benefits are administered without regard to race, color, national origin, or sex in compliance with Title VI of the Civil Rights Act (42 U.S.C. 2000d, *et seq.*). See Appendix B for a copy of the Caltrans Title VI Policy Statement.

2.1.3.2.2 Affected Environment

The project site is completely surrounded by industrial uses associated with the Port. The Port is located in the southwestern portion of Long Beach, and it is adjacent to the downtown area. The project area is zoned for Port-related industrial. Only heavy industrial operations and associated facilities are located within the project area. Exhibits 2.1.3-2 and 2.1.3-3 provide an aerial view of the project area and identify the companies operating within the construction footprint of the proposed project. No residential neighborhoods or farms are located within the census tract (Census Tract 5756, see Exhibit 2.1.3-1) in which the project site is located.

The Port and industrial development that make up most of the study area are characterized by large areas of cargo container and bulk handling infrastructure. Some of the larger structures adjacent to the project limits are the Tidelands Oil Production Company warehouse (1370 W. Broadway) and the LBGS power plant building north of Ocean Boulevard along the west approach to the Gerald Desmond Bridge. Two large areas at the western end of the project area are vacant or partially vacant, and they are undergoing/completed redevelopment: Pier S north of Ocean Boulevard is a former oil production property, which the Port is proposing to redevelop as a marine cargo terminal, and Pier T was the former Naval Complex, which is now occupied by TTI (Hanjin Shipping Company; see Exhibits 2.1.3-1 and 2.1.3-2).

2.1.3.2.3 Environmental Consequences

Evaluation Criteria

The proposed project may result in adverse effects if it would:

- Result in injurious displacement of people or businesses

No Action Alternative

The No Action Alternative would not result in acquisition of ROW and would not displace any people or businesses. The No Action Alternative would not require relocations.

North-side Alignment Alternative:

Most of the potentially affected businesses are located on lands owned and administered by the Port. The level of impact on the affected businesses could include rearrangement of onsite facilities within existing property boundaries, reconfiguration of access to properties, complete relocation of businesses to other areas within the Port, purchase of properties from private property owners, or termination of leases with affected Port tenants. Table 2.1.3-6 provides a list of businesses and associated features potentially affected by this alternative. Detailed descriptions of potential property effects follow the table.

Table 2.1.3-6
List of Facilities Potentially Affected by North-side Alignment Alternative

No.	Facility Name	Facility Description	Property Ownership	Potentially Affected Features
1	Tidelands Oil Production Co.	Oil production facilities, oil wells, pipelines	COLB Harbor Department	• Gravel lot • Active oil wells (adjacent to the oil storage tank farm) • Aboveground pipelines • "W-strip" Oil Field near Ocean Boulevard and SR 47 • Three active oil wells adjacent to LBGS (between the building and the existing bridge)
2	Pacific Pipeline System, LLC	Oil storage tank farm	Pacific Pipeline System, LLC	• Access road
3	LBGS (NRG Energy)	Power station	Long Beach Generation, LLC	• Access road • Pipelines (pipes are adjacent to fence)
4	SCE	Substation, power lines, and towers	SCE	• High-voltage transmission towers and lines
5	Fireboat Station #20	Fireboat station	COLB Harbor Department	• Air space over garage for fire truck • Air space over main building (1980 Pier D Street) • AC lot
6	Connolly Pacific	Storage yard	L.G. Everist, Inc.	• Gravel parking lot • Gravel lot (material storage) • Driveway and access road • Main office building (1925 Pier D Street) and office parking
7	California United Terminals	Storage yard	COLB Harbor Department	• PCC lot adjacent to terminal gate at northern end of terminal
8	Port Maintenance Yard	Maintenance yard	COLB Harbor Department	• AC lot (material storage) • Buildings (1401 W. Broadway) • 1 active oil well

Table 2.1.3-6
List of Facilities Potentially Affected by North-side Alignment Alternative

No.	Facility Name	Facility Description	Property Ownership	Potentially Affected Features
9	Tidelands Oil Production Co. (Topko Yard)	Warehouse area	COLB Harbor Department	• AC lot (material storage) • Main building (1370 W. Broadway) • Ancillary buildings
10	COLB Harbor Department	Vacant office building	COLB Harbor Department	• AC parking lot
11	THUMS Long Beach Company	Gas processing facility and custody transfer station	COLB Harbor Department	• Aboveground pipelines (adjacent to Pico Avenue) • Access
12	Loren Scale Company, Inc.	Truck scales	COLB Harbor Department	• Main building (249 Pico Avenue) • Truck scale • AC parking lot
13	Quick Stop Commercial Oil and Lube Service	Oil and lube service	COLB Harbor Department	• Main service building (180 Pico Avenue) • AC access road
14	Pacific Energy	Offshore oil processing station	COLB Harbor Department	• Concrete wall and fencing • Gravel lot • Oil storage tank (170 Pico Avenue)
15	Port Petroleum, Inc.	Gas station	COLB Harbor Department	• AC access road • Fuel pumps • Truck scale
16	International Seafarers Center Memorial Maritime Clinic Vacant Lot	Support services, clinic, and office building	COLB Harbor Department	• No impact to International Seafarers Center permanent structure (trailer/sheds and construction impacts) • Memorial Maritime Clinic rear parking lot – Caltrans Maintenance Easement • Vacant lot • AC lot
17	Pacific Energy Resources	Production facility	LACFCD	• Gravel access road • Oil wells • Pipelines
18	TTI	Storage and Office Facilities	U.S. Navy Lease to Port and COLB Harbor Department	• Modified access
19	Weyerhaeuser Company	Lumber yard and storage facility	COLB Harbor Department	• New bridge footings and air space over lumber yard • Storage area during construction and demolition

AC: Asphalt concrete
COLB: City of Long Beach
LACFCD: Los Angeles County Flood Control District
PCC: Portland cement concrete
Source: POLB, 2005d.

The North-side Alignment Alternative would potentially affect 19 properties within the project area (Exhibit 2.1.3-2). Five of these 19 properties are privately owned or owned by other public agencies. Private property owners would be compensated in accordance with the Federal Uniform Relocation Assistance and Real Property Acquisition Policies Act. Property owners would be compensated at fair market value for their property, determined on the basis of the highest and best use. All effects of the proposed project on Port tenants would be resolved based on the terms and conditions of each tenant's agreement with the Port or negotiated with the Port. Discussion and negotiation between the affected businesses and the Port would take place well before the scheduled construction of the bridge to avoid any adverse economic impacts. This typically occurs during the final design phase when more detailed engineering is available.

Estimates of business displacements and acquisition requirements are based on review of preliminary engineering design plans, aerial photographs, and field reviews. Note that the potential ROW impacts described in Table 2.1.3-6 are based on the available preliminary engineering plans. The number of affected properties could change during final design as more detailed engineering is completed. The anticipated acquisition and, as necessary, site access and facility reconfiguration and relocation of potentially affected businesses would not displace a substantial number of businesses, but they may necessitate identification of replacement facilities or land elsewhere within the Port, as applicable.

Where building demolition is required, buildings would be surveyed for asbestos and LBP. Any ACMs would be removed and disposed of in accordance with state and federal guidelines prior to demolition. LBP debris would be disposed of in accordance with regulatory requirements prior to demolition (see Section 2.2.3 [Hazardous Materials/Wastes]).

In areas where the Port would be acquiring private property, the Port hopes to obtain the voluntary sale of these properties by entering into purchase-sales transaction and acquiring the properties for fair market value (an "Early Acquisition Program"). If voluntary sale is not feasible and the Port determines to proceed with condemnation, then the Port would pay fair market value to acquire the properties commensurate with statutory and constitutional requirements. Furthermore, California law requires the Port to provide relocation benefits to the affected private property owners (or their tenants, if appropriate) either as part of an Early Acquisition Program, in the case of voluntary acquisitions, or as required by state law and regulations, in the case of involuntary acquisitions. Under California law and regulations, displaced businesses are entitled to reimbursement of certain actual, reasonable moving expenses pursuant to 25 CCR § 6090.

Potentially Affected Properties: North-side Alignment Alternative

Site No. 1: Tidelands Oil Production Co. facilities would be affected by the proposed bridge footings in areas between the bridge and LBGS and within the "W-Strip" at the location of the new loop ramps. Temporary construction impacts could include modified access to these areas to accommodate construction activities and equipment. Abandoned oil wells within the affected areas would require testing and reabandonment. Several active oil wells and aboveground pipelines would require relocation. Subsequent to construction, limited vertical clearance associated with proposed overhead structures and access for oil extraction and transport within and adjacent to the new loop ramps may restrict future operations in affected areas. Tidelands Oil Production Co. is located on land administered by the Port.

Site No. 2: No ROW would be required from the Pacific Pipeline System, LLC, tank farm; however, a temporary construction easement would be required along the southeast corner of the property. During construction, modified access from the tank farm to/from Pier T Avenue would be required. Access to this facility would be maintained during construction of the proposed project. Subsequent to construction, an easement for bridge maintenance would be required. Pacific Pipeline System, LLC, is located on privately owned land. The Port would enter negotiations with Pacific Pipeline System to address potential effects on access, as well as terms and conditions of the required construction and maintenance easements.

Site No. 3: A sliver of the property, currently occupied by LBGS pipeline facilities, located north of the existing bridge, would be permanently occupied by the proposed bridge footings, and pipeline facilities/utilities would require relocation. Access would be modified the same as discussed for Site No. 2. A construction easement would be required to accommodate construction activities and equipment. The proposed project would also affect LBGS air space, where the elevated bridge

LIST OF FACILITIES POTENTIALLY IMPACTED BY NORTH-SIDE ALIGNMENT ALTERNATIVE			
No.	FACILITY NAME	No.	FACILITY NAME
1	Tidelands Oil Production Co.	11	Thums Long Beach Company
2	Pacific Pipeline System, LLC	12	Loren Scale Company, Inc.
3	Long Beach Generating Station (NRG Energy)	13	Quick Stop Commercial Oil and Lube Service
4	SCE	14	Pacific Energy, LLC.
5	Fireboat Station #20	15	Port Petroleum, Inc.
6	Connolly Pacific	16	International Seafarers Center Memorial Maritime Clinic Vacant Building (Formerly MSRC)
7	California United Terminals		
8	Port of Long Beach Maintenance Yard	17	Pacific Energy Resources
9	Tidelands Oil Production Co. (Topko Yard)	18	Total Terminal International, LLC. (T.T.I.)
10	COLB Harbor Department	19	Weyerhaeuser Company

Note: The colors signify the limits of the potentially impacted properties.

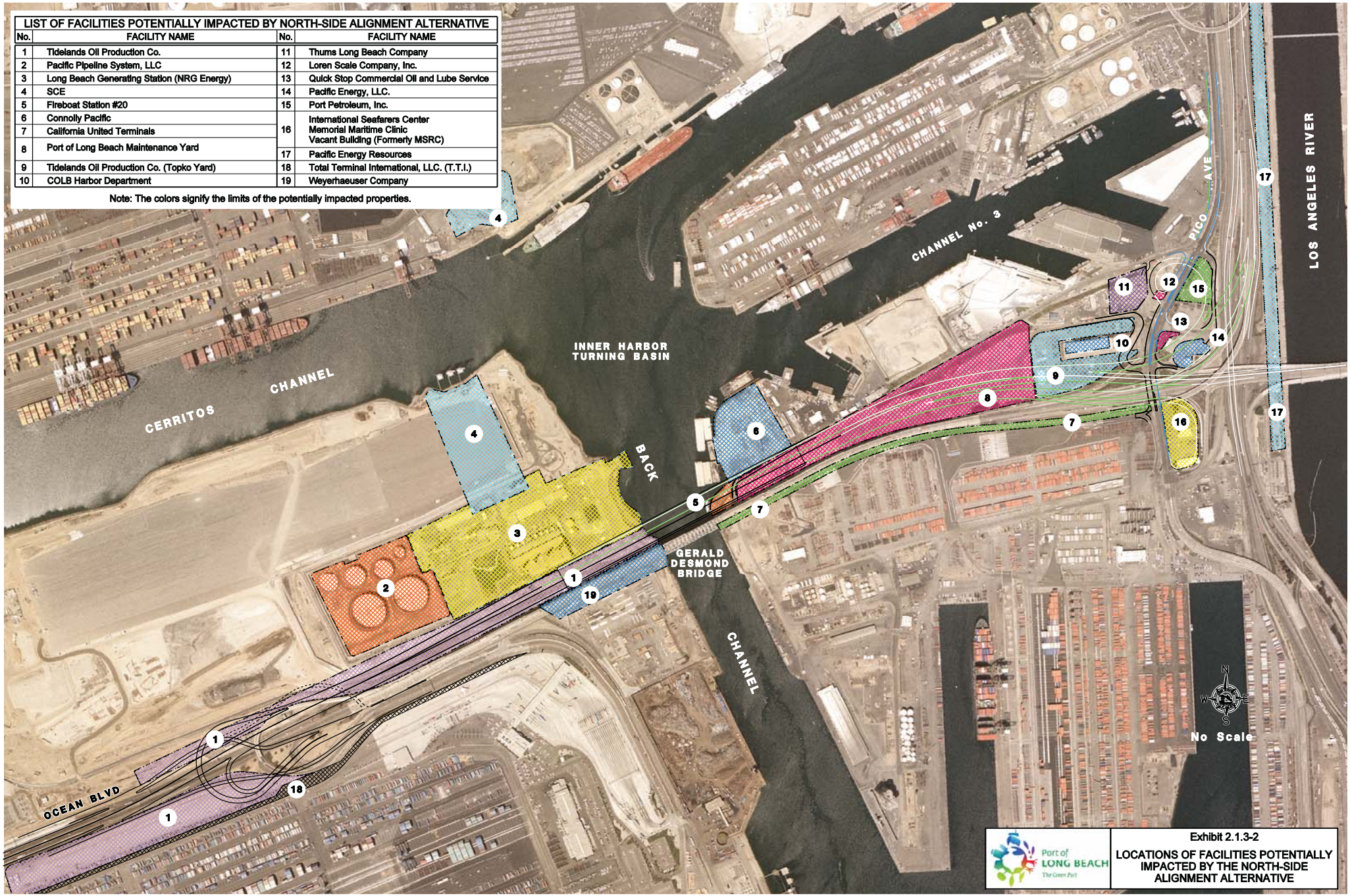

Exhibit 2.1.3-2

LOCATIONS OF FACILITIES POTENTIALLY IMPACTED BY THE NORTH-SIDE ALIGNMENT ALTERNATIVE

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would encroach on the property, requiring an aerial easement. Additionally, an easement would be required for maintenance of the proposed transportation facility. Approximately 1.33 acres (0.54-ha) within the property would be required for the easements. LBGS is located on privately owned land. The Port would enter negotiations with LBGS to address potential effects of pipeline/utility relocation, as well as terms and conditions of the required aerial, construction, footing, and maintenance easements.

Site No. 4: SCE high-voltage transmission lines cross the Cerritos Channel from LBGS. The line elevation currently limits the air draft of vessels transiting to Piers A and S, and it is a potential hazard to navigation. The proposed project includes relocation of the SCE lines for the bridge replacement alternatives. The recommended relocation option would require building new, taller towers adjacent to the existing towers. The new towers would be constructed to increase the transmission line elevation to at least the vertical clearance of the proposed bridge. The existing towers would be left in place (see Section 2.1.8 [Cultural Resources]). Relocation would be completed in accordance with the applicable laws and regulations governing power transmission lines over navigable waters (see Section 2.1.4 [Utilities and Service Systems] and Appendix I for further discussion). SCE towers are privately owned. Site No. 5: The air space above the City of Long Beach Fireboat Station No. 20 would be temporarily affected during construction of the proposed project. The fire truck garage, which is the main building at 1980 Pier D Street, would be protected in place during construction. All essential operations for Fireboat Station No. 20 would be relocated to temporary facilities located approximately 100 ft (30.5 m) south of the Gerald Desmond Bridge during construction. After completion of the proposed project, Fireboat Station No. 20 would be relocated back to its existing location. The temporary relocation would have no effect on its services or response times. Fire Boat Station No. 20 is located on land administered by the Port. Relocation of this facility would be the responsibility of the local lead agency as a separate project development process.

Site No. 6: A temporary construction easement would be required within the Connolly Pacific facility to accommodate construction access. Construction would also temporarily affect the gravel parking lot, gravel lot, driveway, access road, and main office building and parking lot at 1925 Pier D Street. Construction access and proposed bridge footing locations would require demolition/relocation of an office building within the property. The proposed project would require an aerial easement over the Connolly Pacific yard space, along the north side of Ocean Boulevard at 1401 Pier D Street, and maintenance and footing easements. Approximately 0.47-acre (0.19-ha) within the yard would be required for the easements. The Connolly Pacific facility is located on privately owned land. The Port would enter negotiations with L.G. Everest Inc., (property owner) to address the potential effects of the proposed project on the property and facilities.

Site No. 7: The PCC lot adjacent to the terminal gate, located at the northern end of California United Terminal, would be permanently affected by the ramp structures for the hook off-ramp to Pico Avenue. During construction, modified access may be required to accommodate construction activities at this location. Additionally, a temporary construction easement for the area directly south of Ocean Boulevard along the northern boundary of this property would be required to accommodate demolition of the Gerald Desmond Bridge. A bridge maintenance easement would also be required. California United Terminal is located on land administered by the Port.

Site No. 8: The new bridge would occupy a portion of the Port Maintenance Yard, located along the north side of Ocean Boulevard and east of the existing bridge. This would require relocation of the maintenance yard, demolition of existing structures and ancillary buildings, and relocation/abandonment of an active oil well. The Port Maintenance Yard would be demolished as part of the proposed project, and operations would temporarily be moved to an interim site and separately permitted by the Port. Ultimately, the maintenance yard would be co-located with the Administration Building Complex, as identified in the FEIR for the Administration Building and Maintenance Facility Project. Two candidate locations for the temporary relocation of the Maintenance Building are as follows:

- At the proposed location for the new Port Administration Building (669 Harbor Plaza Drive).
- Former Long Beach Ironworks site south of Anaheim Street, west of 9th Street.

The relocation and replacement of this facility would be the responsibility of the Port as a separate project development process being

covered under the EIR for the Administration Building and Maintenance Facility Project. The Port Maintenance Yard is located on land administered by the Port.

Site No. 9: The new bridge would occupy a portion of the Tidelands Oil Production Co. Topko Yard and would require the demolition or relocation of the main office and ancillary buildings. During construction, storage areas and operations may be limited or restricted to accommodate construction activities and equipment. The easternmost portions of the site would be permanently affected by the realignment of West Broadway. The Tidelands Oil Production Co. Topko Yard is located on land administered by the Port.

Site No. 10: COLB Harbor Department Property AC lot would be affected by the realignment of West Broadway and would be occupied by portions of the approach structure footings. The vacant building on the property may be demolished to accommodate construction activities and equipment.

Site No. 11: The THUMS Long Beach Company's gas processing facility and custody transfer station would be avoided by the proposed bridge and
ramp construction; however, some aboveground pipelines adjacent to Pico Avenue that connect to this facility would be affected by the bridge footings for the new Pico Avenue on-ramp and would require relocation. Additionally, access to the facility would be permanently relocated from Pico Avenue to Pier D Street. THUMS Long Beach Company is located on land administered by the Port.

Site No. 12: The Loren Scale Company, Inc., building at 249 Pico Avenue, the truck scales, and AC parking lot would be permanently affected by the proposed WB Ocean Boulevard on-ramp from Pico Avenue. Demolition/relocation of this facility would be required. Loren Scale Company, Inc., is located on land administered by the Port.

Site No. 13: The Quick Stop Commercial Oil and Lube Service station would experience temporary construction-related and permanent effects due to its proximity to the proposed bridge footings. The main service building, located at 180 Pico Avenue, may require relocation prior to construction of the SB SR 710 connector to WB Ocean Boulevard and the hook on-ramp from Pico Avenue. Quick Stop Commercial Oil and Lube Service is located on land administered by the Port.

Site No. 14: The Pacific Energy, LLC, offshore oil processing station would be affected by the proposed bridge construction. Effects would include falsework for bridge supports and an aerial easement for the proposed overhead structures above the valve assemblies. Some of the pipelines would be affected by the proposed bridge footings and would require relocation. The concrete wall and fencing surrounding the oil storage tank, portions of the gravel lot, and a building would also be affected. The oil storage tank might require relocation. Pacific Energy is located on land administered by the Port.

Site No. 15: Port Petroleum, Inc., located at 260 N. Pico Avenue, consists of a gas station with seven fuel pumps and a truck scale (Interstate Scales) located in the rear (northeast) portion of the lot. All facilities would be permanently affected by the realigned Pico Avenue on-ramp to Ocean Boulevard and would require demolition/ relocation. Port Petroleum, Inc. is located on land administered by the Port.

Site No. 16: The International Seafarers Center, Memorial Maritime Clinic, and a vacant building (formerly the Marine Spill Response Corporation [MSRC] office building), currently located inside the hook off-ramp to Pico Avenue from EB Ocean Boulevard, would experience temporary construction-related and permanent effects due to their proximity to the off-ramp. Construction-related effects would require the partial and/or full relocation/demolition of several existing trailers/ sheds located on the north portion of the lot. The vacant building located at 190 S. Pico Avenue and the metal storage containers to the rear portion of the lot (west side of the SR 710 ramp) are anticipated to be directly affected by the hook off-ramp. The Memorial Maritime Clinic rear parking lot would be closer to the west side of the hook ramp. There would be no effect on the permanent structures of the International Seafarers Center main building at 120 S. Pico Avenue. A Caltrans maintenance easement would be required in a portion of the rear parking area for the Memorial Maritime Clinic building at 150 S. Pico Avenue. The International Seafarers Center, Memorial Maritime Clinic, and vacant building are located on lands administered by the Port.

Site No. 17: Pacific Energy Resources' facilities may be affected by proposed improvements to the NB Harbor Scenic Drive and SR 710. Potential effects on this parcel could include modifications to the access/service roads during construction; however, access to the site would be maintained during construction. Additionally, some relocation

of existing facilities may be required. Pacific Energy Resources is on land owned by LACFCD.

Site No. 18: The TTI terminal would be temporarily affected by a proposed construction easement along the northern boundary of the site in the area containing the entry gate. This may require minor modification of access within the site during construction, but it would not require relocation of the gate. TTI is located on land administered by the Port.

Site No. 19: Weyerhaeuser Company, located south of the existing bridge adjacent to the Back Channel, would be affected by proposed bridge footings and aerial easement requirements. Temporary construction and permanent maintenance easements within the yard would be required during demolition of the Gerald Desmond Bridge and subsequent to construction of the new bridge. Weyerhaeuser Company is located on land administered by the Port.

South-side Alignment Alternative

Most of the businesses potentially affected by the South-side Alignment Alternative are also located on lands administered by the Port. The level of impact on the affected businesses include rearrangement of onsite facilities within existing property boundaries, reconfiguration of access to properties, complete relocation of businesses to other areas within the Port, purchase of properties from private property owners, or termination of leases with affected Port tenants. Table 2.1.3-7 provides a list of businesses and associated features potentially affected by this alternative.

The South-side Alignment Alternative would potentially affect 16 properties within the project area (Exhibit 2.1.3-3). Similar to the North-side Alignment Alternative, potential effects on Port tenants and private property owners were considered. Potential ROW effects are described in Table 2.1.3-7, and detailed descriptions follow the table. Anticipated acquisition and, as necessary, site access and facility reconfiguration and relocation of potentially affected businesses would not displace a substantial number of businesses, but it may necessitate identification of replacement facilities or land elsewhere within the Port as applicable. Where building demolition is required, buildings would be surveyed for asbestos and LBP. Any ACMs would be removed and disposed of in accordance with state and federal guidelines prior to demolition. LBP debris would be disposed of in accordance with regulatory requirements prior to demolition (see Section 2.2.3 [Hazardous Materials/Wastes]).

Table 2.1.3-7
List of Facilities Potentially Affected by South-side Alignment Alternative

No.	Facility Name	Facility Description	Property Ownership	Potentially Impacted Features
1	Tidelands Oil Production Co.	Oil production facilities, oil wells, pipelines	COLB Harbor Department	• Gravel lot • Active and abandoned oil wells • Aboveground pipelines • “W-strip” Oil Field near Ocean Boulevard and SR 47
4	SCE	Substation, power cables, and towers	SCE	• High-voltage transmission towers and lines
5	Fireboat Station #20	Fireboat station	COLB Harbor Department	• Air space over garage for fire truck • Air space over main building (1980 Pier D Street) • AC lot
7	California United Terminals	Storage yard	COLB Harbor Department	• Entrance and exit gates • Radiation detection area • Storage areas • Buildings
8	Port Maintenance Yard	Maintenance yard	COLB Harbor Department	• Property access

Table 2.1.3-7
List of Facilities Potentially Affected by South-side Alignment Alternative

No.	Facility Name	Facility Description	Property Ownership	Potentially Impacted Features
9	Tidelands Oil Production Co. (Topko Yard)	Warehouse area	COLB Harbor Department	• AC lot (material storage) • Storage sheds
10	COLB Harbor Department	Vacant office building	COLB Harbor Department	• AC parking lot • Site access
11	THUMS Long Beach Company	Gas processing facility and custody transfer station	COLB Harbor Department	• Aboveground pipelines (adjacent to Pico Avenue) • Dirt lot • Access
12	Loren Scale Company, Inc.	Truck scales	COLB Harbor Department	• Main building (249 Pico Avenue) • Truck scale • AC parking lot
13	Quick Stop Commercial Oil and Lube Service	Oil and lube service	COLB Harbor Department	• Main service building (180 Pico Avenue) • AC access road
14	Pacific Energy	Offshore oil processing station	COLB Harbor Department	• Concrete wall and fencing • Gravel lot • Oil storage tank (170 Pico Avenue)
15	Port Petroleum, Inc.	Gas station	COLB Harbor Department	• AC access road • Fuel pumps • Truck scale
16	International Seafarers Center Memorial Maritime Clinic Vacant Lot	Support services, clinic, and office building	COLB Harbor Department	• No impact to International Seafarers Center permanent structure (trailer/sheds and construction impacts) • Memorial Maritime Clinic rear parking lot – Caltrans Maintenance Easement • Vacant lot • AC lot
17	Pacific Energy Resources	Production facility	LACFCD	• Gravel access road • Oil wells • Pipelines
18	TTI	Storage and Office Facilities	U.S. Navy Lease to Port and City of Long Beach Harbor Department	• Property access • Gates • Storage area • Weight readers • Administrative building
19	Weyerhaeuser Company	Lumber yard and storage facility	COLB Harbor Department	• Storage area

AC: Asphalt concrete

COLB: City of Long Beach

LACFCD: Los Angeles County Flood Control District

PCC: Portland cement concrete

Source: POLB, 2005d.

LIST OF FACILITIES POTENTIALLY IMPACTED BY SOUTH-SIDE ALIGNMENT ALTERNATIVE			
No.	FACILITY NAME	No.	FACILITY NAME
1	Tidelands Oil Production Co.	11	Thums Long Beach Company
2	Pacific Pipeline System, LLC	12	Loren Scale Company, Inc.
3	Long Beach Generating Station (NRG Energy)	13	Quick Stop Commercial Oil and Lube Service
4	SCE	14	Pacific Energy, LLC.
5	Fireboat Station #20	15	Port Petroleum, Inc.
6	Connolly Pacific	16	International Seafarers Center Memorial Maritime Clinic Vacant Building (Formerly MSRC)
7	California United Terminals		
8	Port of Long Beach Maintenance Yard	17	Pacific Energy Resources
9	Tidelands Oil Production Co. (Topko Yard)	18	Total Terminal International, LLC. (T.T.I.)
10	COLB Harbor Department	19	Weyerhaeuser Company

Note: The colors signify the limits of the potentially impacted properties.

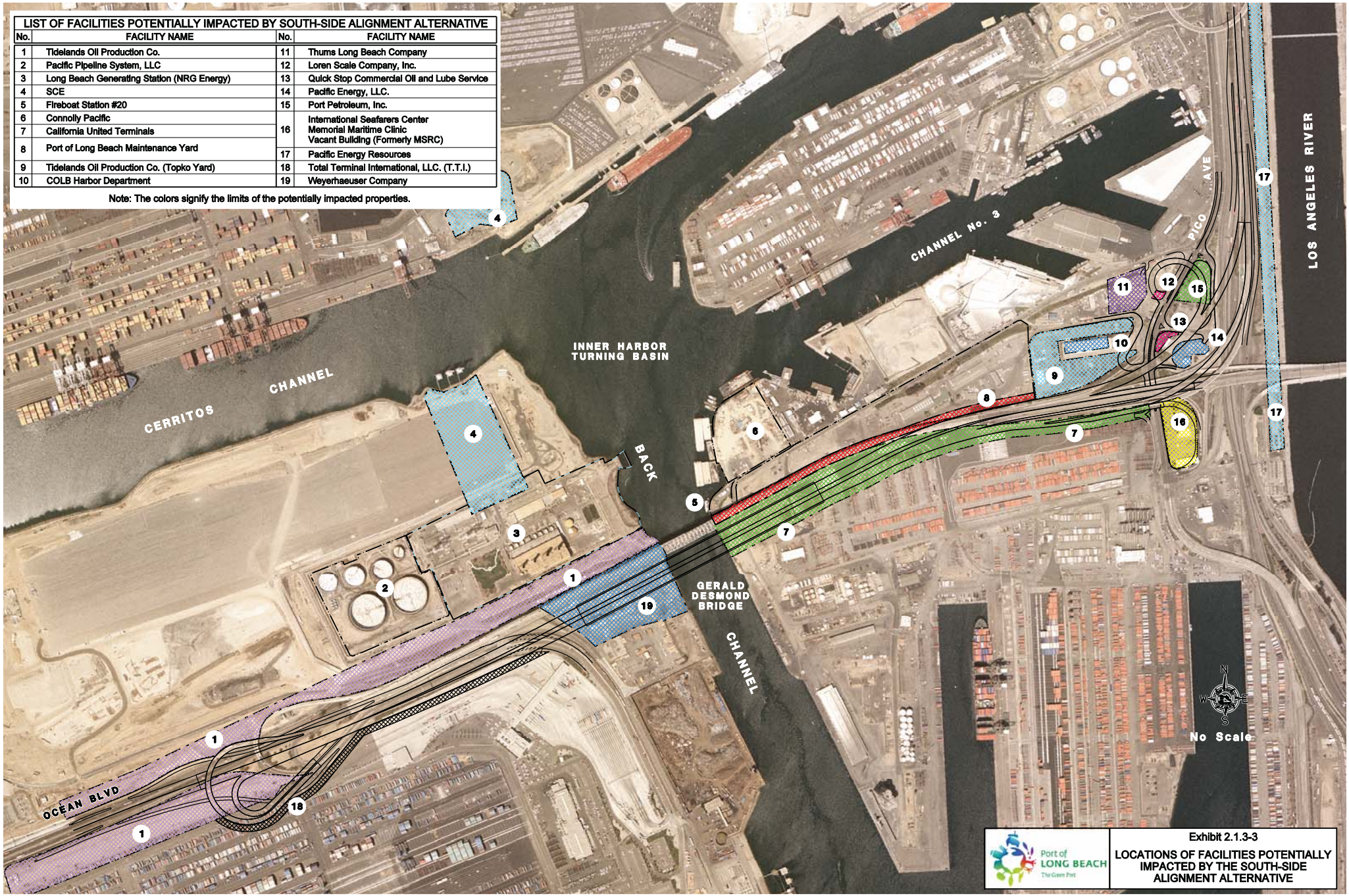

Exhibit 2.1.3-3

LOCATIONS OF FACILITIES POTENTIALLY IMPACTED BY THE SOUTH-SIDE ALIGNMENT ALTERNATIVE

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Potentially Affected Properties: South-side Alignment Alternative

Construction of the South-side Alignment would have no effect on sites 2, 3, or 6, which are affected by the North-side Alignment Alternative. Similar construction/demolition effects, as described under the North-side Alignment Alternative, are anticipated for construction of the South-side Alignment Alternative at the western end of site 1 and for sites 4, 5, 10, 11, 12, 13, 14 15, 16, and 17. This alternative would also potentially result in construction/demolition effects on the properties discussed below.

Site No. 1: A construction easement within Tidelands Oil Production Co. for the area between the Gerald Desmond Bridge and LBGS would be required during bridge demolition. Effects on the "W-strip" at the western end of the project would be the same as discussed under the North-side Alignment Alternative. Tidelands Oil Production Co. is located on land administered by the Port.

Site No. 7: For the California United Terminal (Piers D and E), the South-side Alignment Alternative would likely result in restricted use and modified access during construction and reconfiguration of operations subsequent to construction. Effects on operations would require relocation of the Pier E gate and reconfiguration of the following elements: entrance and exit roadways, inbound OCR, receiving gate lanes with pedestals, scales cameras and queuing area, trouble resolution building with parking area, outbound primary RPM and OCR, outbound secondary RPM, exit gate lanes with pedestals and cameras, and associated underground electrical, communication, and pavement markings/barriers. It is estimated that the reconfiguration on Piers D and E would cost approximately $10.0 million. The California United Terminal is located on land administered by the Port.

Site No. 8: A construction easement within the Port Maintenance Yard along the alignment of the Gerald Desmond Bridge may be required during bridge demolition. Access to the yard from West Broadway and along an unnamed road to the south of the property would likely be closed/ modified during bridge demolition. At this time, building demolition within the Port Maintenance Yard is not anticipated. The Port Maintenance Yard is located on land administered by the Port.

Site No. 9: A construction easement would be required along the southern property boundary of the Tidelands Oil Production Co. adjacent to the Gerald Desmond Bridge within the Topko Yard to accommodate construction and demolition activities. These activities would likely require the relocation/demolition of several small storage buildings within this area. Footing, aerial, and maintenance easements would also be required within the same areas. The easternmost portions of the site would be permanently affected by the realignment of West Broadway. The Tidelands Oil Production Co. Topko Yard is located on land administered by the Port.

Site No. 18: For TTI (Pier T), the South-side Alignment Alternative would likely result in restricted use and modified access during construction and reconfiguration of operations subsequent to construction. Effects on operations would require reconfiguration of Pier T resulting in the permanent loss of 2.4 acres (1-ha) within the TTI terminal storage facility currently used for Reefer storage. Additionally, reconfiguration on Pier T would require reconfiguration of the following elements: relocation of a portion of the main gate canopy, driver's service building and trouble parking, steel high-mast light poles, chassis storage, and associated utilities, barriers, and pavement markings. It is estimated that the reconfiguration on Pier T would cost approximately $10.0 million. The South-side Alignment Alternative would also permanently reduce leasable Port acreage by approximately 2.4 acres (1-ha). The estimated present value of lost Port lease revenue would be $7.0 million over a typical 20-year lease. TTI is located on land administered by the Port.

Site No. 19: Weyerhaeuser Company storage space would be affected by the South-side Alignment Alternative due to restricted access resulting from the proposed alignment and footings and required aerial, construction, and maintenance easements. Operations at this facility would also be temporarily affected by construction and demolition access and easement requirements. If reconfiguration of Weyerhaeuser Company operations during construction or for long-term operation is not feasible, then total relocation of Weyerhaeuser Company operations would be required. The Weyerhaeuser Company is located on land administered by the Port.

Rehabilitation Alternative

This alternative would require improvements to the existing bridge and roadway structures only. Construction easements would be required on all properties adjacent to the existing bridge to provide access to column and footing locations. Additionally, this alternative would utilize similar areas for construction storage and staging areas identified for the North- and South-side Alignment

Alternatives. This alternative would not have any substantial effects on Port tenants or privately owned businesses. This alternative would not result in any permanent changes to facilities or facility operations within the project area.

2.1.3.2.4 Avoidance, Minimization and/or Mitigation Measures

No measures are required.

2.1.3.3 Environmental Justice

Over the last two decades, public awareness and concern has increased due to evidence that low-income and minority communities often suffer disproportionately from exposure to unhealthy environmental conditions. Key concerns for the environmental justice movement include exposure to lead, hazardous materials in the workplace, noise and air pollution, and location of industry and infrastructure within in these communities. In response, Executive Order (EO) 12898 was issued to raise awareness and bring environmental justice issues into public policy.

2.1.3.3.1 Regulatory Setting

Federal

All projects involving a federal action (funding, permit, or land) must comply with EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations,* signed by President Clinton on February 11, 1994. This Executive Order directs federal agencies to take the appropriate and necessary steps to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations to the greatest extent practicable and permitted by law.

EO 12898 does not mandate special mitigation measures for environmental justice impacts; however, the Presidential Memorandum accompanying the Executive Order does direct federal agencies to include measures to mitigate disproportionately high and adverse environmental effects of proposed federal actions on minority and/or low-income populations. Federal agencies are also required to give affected communities opportunities to provide input into the NEPA process, including identification of mitigation measures.

EO 12898 focused attention on Title VI of the Civil Rights Act of 1964, which is a policy of the United States that prevents discrimination on the grounds of race, color, or national origin in connection with programs and activities receiving federal financial assistance, by providing that "each federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations."

All considerations under Title VI of the Civil Rights Act of 1964 and related statutes have also been included in this project. The Caltrans commitment to upholding the mandates of Title VI is evidenced by its Title VI Policy Statement, signed by the Director, which can be found in Appendix B of this document.

Department of Transportation Order 5610.2

In accordance with EO 12898, in April 1997 the U.S Department of Transportation (DOT) issued DOT Order 5610.2 to Address Environmental Justice in Minority Populations and Low-Income Populations. The order generally describes the process for incorporating environmental justice principles into all DOT programs, policies, and activities, and it instructs each DOT agency to develop specific procedures to incorporate the goals of the DOT and Executive Orders with the programs, policies, and activities that they administer or implement.

FHWA Order 6640.23

As directed in DOT Order 5610.2, in December 1998 FHWA issued Order 6640.23 "FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." This Order establishes policies and procedures for FHWA to use in complying with EO 12898.

FHWA's environmental justice policy is dedicated to three fundamental principles (FHWA, 2000):

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations
- To ensure full and fair participation by all potentially affected communities in the transportation decision-making process
- To prevent denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations

Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users

Enacted in 2005, SAFETEA-LU placed additional emphasis on environmental stewardship as a part of metropolitan and statewide transportation planning. This strengthens the linkages between planning and environmental protection and

creates opportunities to examine the potential for environmental justice issues early on and throughout the project development process.

Federal-Aid Highway Act of 1970

This law established that agencies must assure that the adverse economic, social, and environmental effects of a federally supported highway project have been fully considered during project development, and final decisions on the project are made in the best overall public interest, taking into consideration the need for fast, safe, and efficient transportation; public services; and the costs of eliminating or minimizing such adverse effects.

Executive Order 13166 – Improving Access to Services for Persons with Limited English Proficiency

EO 13166, signed by President Clinton in August 2000, requires federal agencies to "develop a system by which limited-English proficiency persons can meaningfully access…[federal] services [including participation in the project planning process] without unduly burdening the fundamental mission of the agency." Federal agency response to this order has included the provision for oral language assistance, translating vital documents in languages other than English, and training staff to serve non-English speakers. As it applies to the proposed project, the Executive Order requires that written materials and oral presentations prepared for public dissemination be made available to limited-English speakers and readers.

State and Local

Environmental justice, as it pertains to EO 12898 and the Gerald Desmond Bridge Replacement Project, is a federal requirement as implemented by Caltrans and FHWA as the lead federal agency for the project; however the State of California also recognizes the concepts of environmental justice through the California Government Code Section 65040.12, which defines environmental justice slightly differently as "the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws and policies." While there is no requirement under CEQA to address environmental justice, a few pieces of state legislation have been signed into law since 1999 that address the topic. Legislative and executive actions relating to environmental justice in California have largely been procedural, including, but not limited to, formation of environmental justice advisory committees and assigning coordinating roles and responsibilities to the Governor's Office of Planning and Research and the California Environmental Protection Agency (Cal-EPA). Although there is no specific state law requiring the Port to assess environmental justice issues, Port projects may trigger the jurisdiction of two state agencies, California State Lands Commission (CSLC) and California Air Resources Board (CARB), which have adopted environmental justice review requirements consistent with the California Government Code Section.

The CSLC adopted an Environmental Justice Policy on October 1, 2002. In its policy, the CSLC pledges to continue and enhance its processes, decisions, and programs with environmental justice as an essential consideration. The policy also cites the definition of environmental justice in state law and points out that this definition is consistent with the Public Trust Doctrine principle that the management of trust lands is for the benefit of all of the people. To date, the CSLC has not issued any guidance to implement the policy, although environmental justice is discussed in CSLC environmental documents.

CARB was one of the first state entities to adopt an environmental justice policy (CARB, 2007e). CARB has taken various steps to implement the policy, such as publishing a public participation handbook for agencies in English and Spanish, developing an air quality handbook on land use, and convening a multi-stakeholder environmental justice group to serve as a forum to discuss its environmental justice program.

In 1997, the SCAQMD adopted a set of guiding principles of environmental justice to ensure environmental equity. The principles address, for example, the right of residents to live and work in an environment of clean air free of airborne health threats; the obligation of government to protect the public health; the right of public and private sectors to be informed about scientific findings concerning hazardous and toxic emission levels; and other principles.

The City of Long Beach has not adopted policies related to environmental justice.

2.1.3.3.2 Affected Environment

After consideration of potential effects associated with construction and operation of the proposed project, as discussed in Chapter 2 of this document, the study area for considering environmental justice is the same as previously described in Section 2.1.3.1 (see Exhibit 2.1.3-1).

The study area (i.e., affected community) is centered on the project corridor and extends along Ocean Boulevard from near the SR 47 interchange to Pine Street in the City of Long Beach, and also north along SR 710 (see Section 2.1.5). Race and income data from the 2000 U.S. Census for the affected community were previously discussed in Section 2.1.3.1. Pertinent information regarding environmental justice populations are summarized below.

The project site is located within the Port of Long Beach and is surrounded by industrial land uses associated with the Ports. No residential neighborhoods or communities are present within the census tract in which the project site is located (Census Tract 5756).

The communities outside of the Port area include the City of Long Beach and a portion of the community of Wilmington (located within the City of Los Angeles). All other areas within the study area are within the Ports of Long Beach and Los Angeles. The racial and ethnic composition of the affected community is shown in Table 2.1.3-3. The population of the study area census tracts is characterized as a predominantly Hispanic and Latino community, comprising 64 percent of the total population within the affected community. The overall makeup of the affected community is 85.6 percent minority. This compares with 66.9 percent and 68.9 percent for the City of Long Beach and County of Los Angeles, respectively.

Income and poverty data are shown in Table 2.1.3-4. When comparing the median incomes, the affected community has lower median family and household incomes and higher percentages of families and individuals below the poverty level than the City of Long Beach and County of Los Angeles. Considering the 2000 U.S. Census data for race and economic characteristics of the study area, it appears that the minority and low-income populations are in readily identifiable groups rather than dispersed pockets within the study area. Low-income and minority populations within the study area census tracts are considered relatively homogenous, and the affected community as a whole is considered both a low-income and minority population for the purpose of this environmental justice discussion.

The proposed project is a transportation project near the Ports of Long Beach and Los Angeles, which would reduce congestion and enhance goods movement within the region. Thus, the reference community, which consists of the population that will benefit from the proposed project, is the southern California region. The reference community will be used as a comparison population in determining if potential project effects are disproportionately high and adverse on the affected community when considering both the project effects and benefits.

2.1.3.3.3 Environmental Consequences

Evaluation Criteria

EO 12898 requires federal agencies to identify and address disproportionately high and adverse effects of federal projects on the health or environment of minority and low-income populations. Caltrans, through the FHWA NEPA delegation process, is the lead federal agency for the project. This environmental justice analysis has been prepared in accordance with the applicable guidance for addressing environmental justice. Consistent with FHWA policy and guidance, the environmental justice analysis will be based on the following:

- Potential adverse effects of the proposed project associated with construction and operation of the proposed project; and
- Disproportionately high and adverse effects on minority and low-income populations

The definition of "low-income," "minority," "disproportionately high and adverse effect,", "low income population," and "minority population" for this environmental justice assessment are per FHWA Policy 6640.23 (FHWA, 1998) and are as follows:

- "Low-income" means a household income at or below the Department of Human Health Services poverty guidelines;
- "Minority" means a person who is:
  - Black (having origins in any of the black racial groups of Africa);
  - Hispanic (of Mexican, Puerto Rican, Cuban, Central or South American, or other Spanish culture or origin, regardless of race);
  - Asian American (having origins in any of the original people of the Far East, Southeast Asia, the Indian subcontinent, or the Pacific Islands); or
  - American Indian or Alaskan Native (having origins in any of the original people of North America and who maintains cultural identification through tribal affiliation or community recognition).

- "Disproportionately high and adverse effect on minority and low-income populations" means an adverse effect that:
  - Is predominantly borne by a minority population and/or low-income population; or
  - Will be suffered by the minority population and/or low-income population and is appreciably more severe or greater in magnitude than the adverse effect that would be suffered by the non-minority population and/or non-low-income population.
- "Low-income population" means any readily identifiable group of low-income persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons who would be similarly affected by a proposed FHWA program, policy or activity.
- "Minority population" means any readily identifiable group of minority persons who live in geographic proximity, and, if circumstances warrant, geographically dispersed/transient persons who would be similarly affected by a proposed FHWA program, policy or activity.

Methodology

The potential adverse effects associated with the North- and South-side Alignment Alternatives (Bridge Replacement Alternatives) and the Rehabilitation Alternative associated with construction and operation of the proposed project are discussed in Chapter 2. As applicable and where feasible, Chapter 2 also includes avoidance, minimization, and/or mitigation measures to avoid and/or minimize potential adverse project effects on resources affected by the construction and operation of the proposed project.

For the proposed project, no distinct pockets or areas of low-income or minority populations were identified. The entire affected community is considered a low-income and minority population for the purpose of the environmental justice assessment; therefore, to the extent that adverse effects would be localized, resulting from either the construction or operation of the proposed project, they would be borne predominantly by a minority and low-income population. Based upon results of the impact analyses, and as described below, such localized effects would be temporary and confined to short-term construction activities. Where the project effects have been reduced to a level that is less than adverse, there is, by definition, no potential for the effect to be considered disproportionately high and adverse, whether it be on minority or low-income populations or the general population. Thus, only potentially unavoidable adverse effects (i.e., those that remain potentially adverse after implementation of avoidance/minimization and or mitigation measures) would have the potential to be considered to have a disproportionately high and adverse effect on minority or low-income populations. This environmental justice analysis considers all potentially unavoidable adverse effects on the affected population, and the potential to result in disproportionately high and adverse effects on minority and low-income populations when considered together with the benefits of the proposed project.

This section also summarizes the planned public outreach, focusing on efforts to provide information and meaningful opportunities for participation for potentially affected minority and low-income populations. Chapter 4 discusses the project coordination with the interested parties to date.

No Action Alternative

The Gerald Desmond Bridge was constructed in 1966. The Gerald Desmond Bridge was also constructed prior to the issuance of EO 12898; therefore, its requirements were not considered within the scope of an environmental justice evaluation. However, with the No Action Alternative, the transportation facility would continue to result in traffic congestion, as well as potential for increased emergency response times. Surface runoff from the transportation facilities would continue to enter Long Beach Harbor without treatment, potentially contributing to water quality impairment. Lack of shoulders and capacity on the bridge would continue to have increased potential for accidents resulting in releases of hazardous substances into the environment; therefore, potential effects associated with the No Action Alternative could affect all communities within the study area.

Summary of Unavoidable Adverse Effects: Bridge Replacement Alternatives

Traffic and Circulation

The unavoidable adverse effects on traffic and circulation and minimization/mitigation measures are summarized below (see Section 2.1.5 for further discussion). Additionally, the proposed mitigation measures would be considered and implemented as part of the TMP required for the project. Prior to construction, the TMP would be submitted to the Port and Caltrans for approval. The TMP, at a minimum, would include detour routes, flagmen, traffic controls, signing, and

traffic lane closure scheduling to minimize impacts. Unavoidable adverse traffic and circulation effects summarized below are located within the Port planning area on roadways that are primarily used to provide local and regional access to facilities and roadways within the Ports (intersection of Pico Avenue, Pier B Street, and 9th Street; intersection of Pico Avenue and Pier D Street; WB Ocean Boulevard between the Horseshoe Ramps and the Terminal Island Freeway interchange; and the north and south intersections of the Ocean Boulevard ramps and the Terminal Island Freeway). Adverse traffic and circulation effects at these locations would be highly localized; therefore, they would have little effect on the adjacent community. As previously discussed in Section 2.1.3.1, most of the residences are located north of Anaheim Street and east of the Los Angeles River. Persons within the affected community would be able to continue to access the City of Long Beach or the regional transportation system (i.e., SR 710 and SR 47) via Ocean Boulevard or Pacific Coast Highway.

- A temporary adverse traffic effect attributable to the Bridge Replacement Alternatives would occur at the Pico Avenue and Pier B Street/9th Street intersection during construction Stages 3 and 4.

TC-1 Prior to the start of construction Stages 3 and 4, the following improvements will be made to the intersection of Pico Avenue, Pier B Street, and 9th Street to mitigate the project's temporary adverse effect during construction at that intersection during Stages 3 and 4: remove NB-SB split-signal phasing; restripe NB through lane to a NB left-turn lane; widen SB approach and provide two (2) left-turn lanes and one (1) through lane; and continue two (2) on-ramp lanes to NB SR 710.

- A temporary adverse traffic effect attributable to the Bridge Replacement Alternatives would occur at the Pico Avenue and Pier D Street intersection during construction Stages 2, 3, and 4.

TC-2 Prior to the start of construction Stage 2, a traffic signal will be installed at the intersection of Pico Avenue and Pier D Street to mitigate the project's temporary adverse effect during construction at that intersection during Stages 2, 3, and 4. The traffic signal will be permanent and will not be removed after completion of construction of a Bridge Replacement Alternative.

TC-3 During the design phase of the project, and after approval of the TMP, the Port shall identify those intersections requiring temporary signalization and shall implement the signalization.

- A short-term temporary adverse traffic condition effect attributable to the Bridge Replacement Alternatives would occur on WB Ocean Boulevard between the Horseshoe Ramps and the Terminal Island Freeway interchange.

  No feasible measures to minimize traffic effects at WB Ocean Boulevard between the Horseshoe Ramps and the Terminal Island Freeway interchange have been identified; however, construction of the SR 47 Flyover as part of the SR 47 project would eliminate the temporary adverse traffic conditions effect.

- A temporary adverse traffic effect has been identified that would result from construction of the proposed Bridge Replacement Alternatives at the Ocean Boulevard and Terminal Island Freeway interchange.

  The two intersections of the Ocean Boulevard ramps (north and south) and the Terminal Island Freeway would have temporary unavoidable adverse effects for 3 years, which is the approximate combined duration of construction Stages 2, 3, and 4 of either of the proposed Bridge Replacement Alternatives.

Air Quality

The unavoidable adverse air quality effects and associated minimization/mitigation measures are summarized below (see Section 2.2.5 [Air Quality] for further discussion). Construction emissions of nitrogen oxides (NO_X) would exceed SCAQMD peak daily regional construction emission thresholds, based on worst-case construction activity scenarios during the 9th month of construction years 1 and 2 and the 3rd month of construction year 3 (see Section 2.2.5 [Air Quality]). The associated construction activities potentially occurring during these construction years (i.e., Phases 1, 2, and 3) are discussed in Section 1.6.1.3. This adverse effect is due to exceedance of the SCAQMD regional peak daily construction emission threshold and is associated with regional air quality. The exceedance would contribute to regional air quality degradation and is independent of sensitive receptors or uses.

Localized NO_X effects due to construction activities would also result in offsite ambient NO_X

concentrations that would exceed SCAQMD thresholds of significance during construction years 2 and 3 at a distance of up to 1,640 ft (500 m) from the construction area. This is based on the SCAQMD localized significance threshold look-up tables for Source Receptor Area Number 4. As discussed in Section 2.2.5, even with incorporation of the mitigation measures summarized below, the exceedance would occur during construction years 2 and 3. Areas with potential receptors within 1,640 ft (500 m) include areas within Census Tracts 5760 and 5759.01, primarily south of west 6th Street and west of Maine Avenue. Sensitive community receptors within these tracts include Cesar Chavez Park and Elementary School, the Golden Shore Marine Reserve, Edison Elementary School, and a few residences.

Emissions of NO_X are mainly associated with exhaust emissions from heavy-duty construction equipment that operate simultaneously onsite. Temporary adverse ambient offsite exceedances would be intermittent over the 12-month period, occur only during the most intense construction activities, and be highly dependent upon construction vehicle mix, location of activities, and prevailing climactic conditions.

Exceedance of the SCAQMD daily operational threshold would occur during the opening year (2015) and would be below the threshold in the horizon year (2030). This is attributed to increased average daily traffic (ADT) within the project corridor for which there is no feasible mitigation. This adverse effect is also due to exceedance of a regulatory threshold associated with regional air quality in the SCAQMD. The exceedance during operation would contribute to regional air quality degradation, and is independent of sensitive receptors or uses.

- Construction emissions associated with the North- and South-Side Alignment Alternatives would exceed SCAQMD NO_X regional and localized thresholds.

AQ-C1 Construction processes shall adhere to all applicable SCAQMD rules and regulations concerning the operation of construction equipment and dust control.

AQ-C2 Construction equipment shall be properly tuned and maintained in accordance with manufacturer's specifications.

AQ-C3 During construction, trucks and vehicles in loading and unloading queues must be kept with their engines off when not in use to reduce vehicle emissions. Construction emissions shall be phased and scheduled to avoid emissions peaks, where feasible, and discontinued during second-stage smog alerts.

AQ-C4 To the extent feasible, use electricity from power poles rather than temporary diesel or gasoline power generators.

AQ-C5 As part of the Port's commitment to promote the Green Port Policy and implement the Clean Air Action Plan (CAAP), proposed project construction would employ all applicable control measures included in the CAAP and relevant clean air technologies. Project heavy-duty construction equipment would use alternative clean fuels, such as ultra-low sulfur or emulsified diesel fuel, or compressed natural gas, with oxidation catalysts

AQ-C6 Construction activities that affect traffic flow on the arterial roadways shall be scheduled to off-peak hours to the extent possible. Additionally, construction trucks shall be directed away from congested streets or sensitive receptor areas.

AQ-C7 During the construction period, provide temporary traffic controls, such as flagger person, and improved signal flow for synchronization to maintain smooth traffic flow shall be provided.

AQ-C8 Trucks used for construction prior to 2015 shall use engines with the lowest certified NO_X emission levels, but not greater than the 2007 NO_X emission standards.

AQ-C9 Where feasible, use construction equipment that shall meet the EPA Tier 4 non-road engine standards. The equipment with Tier 4 engine standards become available starting in year 2012.

AQ-C10 Where feasible, heavy-duty diesel-fueled construction equipment shall use diesel oxidation catalyst and selective catalytic reduction system for heavy-duty diesel-fuel construction equipment. This measure would reduce the NO_X and diesel particulate matter (DPM) emissions by 40 percent and 25 percent, respectively.

- Operational emissions associated with the North- and South-Side Alignment Alternatives would exceed SCAQMD NO_X daily operational thresholds.

There is no feasible mitigation. This exceedance is attributed to increased ADT within the project corridor. In the design horizon (2030), operational emissions are expected to be below the SCAQMD operational threshold. The future emissions reduction is due to future year modeling that incorporates a newer vehicle fleet composition and compliance with adopted regulations in the Air Quality Management Plan (AQMP) that are aimed at controlling emissions from mobile sources. Compliance measures include use of alternative or reformulated fuels, retrofit control on engines, and installing or encouraging the use of new engines and cleaner in-use heavy-duty vehicles.

Summary of Unavoidable Adverse Effects: Bridge Rehabilitation Alternative

There are no unavoidable adverse effects associated with the Bridge Rehabilitation Alternative; however, similar to the No Action Alternative, operations under this alternative would result in increased traffic congestion and potentially increased emergency response times due to congestion during major incidents on the roadway or at facilities on Terminal Island. Lack of shoulders and needed capacity on the bridge would continue to have increased potential for accidents, potentially resulting in releases of hazardous substances into the environment. These potential effects would continue to degrade the environment within the affected community.

It should be noted that the design life of the rehabilitation alternative is 30 years versus 100 years for the Bridge Replacement Alternatives. The existing transportation connection between Terminal Island, SR 710, and the City of Long Beach is locally and regionally important. It is reasonable to assume that an alternative similar to one of the Bridge Replacement Alternatives would still be necessary at the end of the design life of the Bridge Rehabilitation Alternative. It is also reasonable to believe that there is a potential for similar adverse effects for a future bridge replacement alternative.

Project Benefits: Bridge Replacement Alternatives

Implementation of either the North- or South-side Alignment Alternatives would have offsetting benefits that would accrue to the adjacent community and the region. The proposed project would result in a seismically superior bridge that could be returned to service shortly after a major seismic event. As discussed in Section 2.1.5 (Traffic and Circulation), the Bridge Replacement Alternatives are expected to result in some local redistribution of traffic as Port and regional traffic modify their travel paths to take advantage of the congestion-relief benefits of the Bridge Replacement Alternatives. This redistribution would most likely occur from parallel roadways north of the Ports, such as Anaheim Street, Pacific Coast Highway, and Willow Street. Some trips that would otherwise seek local street routes may use the new bridge, thereby acting to improve local circulation in the area. In addition, all transportation users would be afforded a safer and more reliable bridge. Other potential benefits would include reduced regional congestion and improved air quality; surface water runoff treatment prior to being released into the Long Beach Harbor; and shoulders and additional capacity to enhance safety and minimize emergency response times and enhanced safety for workers and ships.

Project Benefits: Bridge Rehabilitation Alternative

Implementation of the Bridge Rehabilitation Alternative would provide a seismically safe bridge that would minimize the potential for loss of life during a major seismic event; however, it would likely be condemned and require replacement.

Potential Disproportionately High and Adverse Effects

When considering the potential for unavoidable adverse effects to also constitute disproportionately high and adverse effects on minority and low-income populations, two factors must be considered: (1) whether the effects of the project are predominantly borne by a minority population; or (2) whether the effects of the project are appreciably more severe or greater in magnitude on minority and low-income populations compared to the effect on non-minority and low-income populations.

The first consideration above would be the most appropriate for application to the proposed project, because the potential project effects are not substantially different in severity or magnitude than other past or present transportation projects within the region, and because they would be distributed relatively uniformly across the adjacent community, including areas of minority and low-income residents, as well as nearby residents of non-minority and/or low-income status.

The adverse effects that would occur, and which are largely confined to portions of the construction period, could be considered, at first observation,

to be predominantly borne by nearby minority and/or low-income residents, because of their higher proportion of the nearby resident population; however, when considering these effects, potential offsetting benefits of the proposed project must also be considered. A brief summary of the comparison of both sets of factors is as follows:

Traffic and Circulation

- Locations of potentially unavoidable adverse traffic effects previously discussed are all located within industrial areas and the port planning area. These locations are primarily used by Port and regional traffic to access the Ports and regional transportation facilities. All motorists using these intersections would be affected during the construction period. Adverse effects on traffic and circulation would therefore not be disproportionately high and adverse on minority or low-income populations. Moreover, subsequent to construction, the affected community would benefit from the potential reduced congestion associated with redistribution of traffic from arterials within the community to the new bridge.

Air Quality:

- The unavoidable adverse air quality effects associated with exceedances of SCAQMD daily construction and operational thresholds, in addition to being a temporary condition, would occur at a regional scale; therefore, they are not associated with the presence of sensitive receptors or uses. The effects of the exceedances are regional in nature and all residents of the South Coast Air Basin (SCAB) would experience similar effects; therefore, the exceedances would not be considered a disproportionately high and adverse effect on low-income or minority populations within the affected community.
- Temporary adverse ambient offsite exceedances could occur up to 1,640 ft (500 m) from the project site during the most intense construction activities; however, these exceedances would be intermittent. Project-related NO_X concentrations resulting from construction would be similar to those expected with any similar large-scale construction project in the SCAB. In addition, minority and non-minority and low-income and non-low-income residents living adjacent would be equally affected. A full range of mitigation measures is being implemented to reduce the emissions as much as practicable, consistent with SCAQMD requirements; therefore, the offsite NO_X exceedances would not be considered to constitute a disproportionately high and adverse effect on minority and low-income populations.

Consistent with the intent of EO 12898 to maximize opportunity for meaningful participation by the affected community during the environmental process, public outreach, public notice, project information, and meetings would be conducted and accommodations made to involve low-income and minority populations, including language translation to persons for which English may be a second language.

Based on the above discussion and analysis, the proposed project alternatives would not cause disproportionately high and adverse effects on minority or low-income populations within the meaning and intent of EO 12898.

Community Outreach and Public Involvement

To date, community outreach and public involvement has included scoping meetings with public agencies and the general public, distribution of notices, presentations, public hearings, and public review and comment on the 2004 Draft EIR/EA described in Chapter 4 (Comments and Coordination). Project coordination to date has also resulted in an extensive distribution list of interested parties, contained in Chapter 6, who will receive copies of the hearing notices and a copy of this revised Draft EIR/EA.

Efforts to provide meaningful opportunities for public participation in the project planning and development process will be ongoing until either the project is approved and constructed or abandoned. Two public hearings are anticipated to occur during the public comment period for this revised Draft EIR/EA. Additional efforts may also include, but are not limited to, community meetings, informational mailings, project Web site information, and news releases to the local media. The overall goal of all project-related community outreach and public involvement activities is to maximize opportunities for meaningful participation by all interested persons within and outside of the affected community by minimizing/ eliminating barriers to participation due to economic status, cultural affiliation, or language.

2.1.3.3.4 Avoidance, Minimization and/or Mitigation Measures

All measures summarized above and as discussed in Sections 2.1.5 (Traffic and Circulation) and Section 2.2.5 (Air Quality) would be implemented.