Central Estuary Specific Plan

Summary of Key Environmental Issues

Prepared for

COMMUNITY DESIGN + ARCHITECTURE
REGION • CITY • NEIGHBORHOOD • BUILDING

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The *whole* view.

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Summary of Key Environmental Issues

The Central Estuary Specific Plan will be one component of the broader area Estuary Plan developed in 1999 to revitalize Oakland's image as a waterfront city. The Central Estuary Plan Area (Plan Area) encompasses 416-acres located at the western perimeter of the City of Oakland. The Plan Area extends from 19th Avenue to the north, Interstate 880 (I-880) to the east, the San Leandro Bay to the south, and the Oakland Estuary to the west. **Figure 1** shows the location and boundaries of the Plan Area.

This memorandum provides a summary of key environmental issues within the Plan Area relating to air quality, biological resources, cultural resources, geology and hydrology, hazards and hazardous materials, and noise. This memorandum is intended to provide background information to guide the development of the Central Estuary Specific Plan (project) and the Project Alternatives.

ENVIRONMENTAL ISSUE AREAS

AIR QUALITY

There are numerous stationary air pollutant sources under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD) in and near the Plan Area. Based on a review of the 2007 BAAQMD database, 29 stationary sources with toxic air contaminant (TAC) emissions within the Plan Area exceeded BAAQMD regulated emissions levels. Additionally, 33 stationary sources have criteria pollutant (i.e. carbon monoxide, nitrous oxide, sulfur dioxide, and particulate matter) emissions in exceedance of the BAAQMD standard thresholds. **Figure 2** through **Figure 6** shows the location of these stationary sources in exceedance of BAAQMD TAC and criteria pollutant standards. These stationary sources pose potential environmental concerns to people living and working in and around the Plan Area. Virtually all households within the Plan Area are within 1000 feet of at least one stationary source. Future land uses in the Plan Area need to consider the future disposition of these stationary sources. Mobile source emissions were not specifically analyzed for this memorandum, but it is safely assumed that I-880, traffic in the Plan Area, and trains are significant sources of mobile emissions.

BIOLOGICAL RESOURCES

While the Plan Area is within an industrial area and almost entirely developed, areas containing native or naturalized habitat are located in the shoreline areas and the MLK Regional Shoreline Park within the Plan Area. As shown on **Figure 2** through **Figure 6**,

the shorelines bordering the western portion of the Plan Area are also considered tidal wetlands and jurisdictional resources. As such, a permit from the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and the San Francisco Bay Conservation and Development Commission (BCDC) would be required for any work that would result in fill being deposited into these shoreline areas.

While there are no documented occurrences of special-status wildlife species in the Plan Area, the MLK Regional Shoreline Park within the Plan Area contains habitat that could support special-status wildlife species, such as the salt marsh harvest mouse, salt-marsh wandering shrew, California clapper rail, California black rail, Alameda song sparrow, great egret rookery, great blue heron rookery, burrowing owl (wintering only), northern harrier, and osprey. Several special-status fish species could occur in the marine and estuarine habitats bordering the Plan Area as well. **Figure 6** shows the location of the MLK Regional Shoreline Park in the Plan Area that would have the potential to support such habitats. Special-status plant species are also known to have the potential to occur in the MLK Regional Shoreline Park within the Plan Area. Furthermore, a large cluster of trees in the northern portion of 23rd Avenue are considered to be potentially protected by the City of Oakland Protected Tree Ordinance, as shown in **Figure 3**.

CULTURAL RESOURCES

Archeological Resources

Based on a record search at the Northwest Information Center of the California Historical Resources Information Center (NWIC), no previously documented prehistoric archeological sites have been recorded in the Plan Area. However, it is expected that several types and classes of archeological sites may be present in the Plan Area, particularly along the bayshore and in close proximity to drainages and geomorphic features. **Figure 2** through **Figure 6** shows the locations with moderate potential for the presence of buried prehistoric resources.

While the Plan Area does not contain any documented prehistoric resources, two historic archeological sites are located within the Plan Area, including the Southern Pacific Railway rail spur that runs through the West Subarea of the Plan Area and a cluster of 10 historic period features near High Street and I-880. The mix of residential and commercial uses in the Plan Area also suggests a high likelihood of encountering historic-era archeological resources, including the archeological remains of building foundations beneath the existing potentially historic structures. Such potential historic resources are discussed further below, under the heading “Historic Resources.”

Historical Resources

Although there are no known properties listed in the National Register of Historic Places, California Register of Historic Places, or landmarks identified by the Oakland Heritage Alliance, the Central-West and Central-East Subareas of the Plan Area are considered to have the potential for historic resources. As shown on **Figure 3**, Jingletown, a residential

neighborhood located in the center of the Plan Area, and its surrounding areas are considered to have a high potential for historic resources in need of further historic survey in subsequent environmental analysis. The residential and industrial buildings within Jingletown, as well as bridges (i.e. Park Street Bridge, Fruitvale Bridge, and High Street Bridge), wharves, and piers are also considered potential historical architectural resources in the Plan Area. A more extensive review of historic properties, including coordination with staff at the Oakland Cultural Historic Survey, will occur during project level review of potential impacts.

Geology and Hydrology

A variety of geologic issues need to be considered in planning for future uses in the Plan Area, such as subsurface conditions, seismic hazards, and flood hazards. The Plan Area is located in a seismically active region, as is the majority of northern California, with the closest known active fault (Hayward fault) located approximately 2.6 miles northeast of the Plan Area. Based on a review of published geologic maps, the central portion of the Plan Area is underlain by Quaternary alluvium, or soils deposited by a river or other running water originating in the Quaternary geologic time period (approximately 1.6 million years ago). Quaternary alluvium is typically made up of fine particulates of silt and clay with some sandy gravel. As shown on **Figure 2** and **Figure 6**, the northern and southern portions of the Plan Areaare underlain by recent artificial fill that overlies Bay Mud, or thick deposits of soft, unconsolidated silty clay that is typically unsuitable for foundation material. Strong seismic ground shaking can trigger liquefaction, or the process by which soils become suspended resulting in a loss of foundation bearing capacity, in portions of the Plan Area. The West Subarea and East Subarea of the Plan Area underlain with artificial fill and Bay Mud are considered to have high potential for liquefaction, while the Central-West and Central-East Subareas underlain by Quaternary alluvium are considered to have moderate potential for liquefaction, as shown on **Figure 2** and **Figure 6**.

Figure 2 through **Figure 6** also show the areas of hydrologic concerns, such as areas within a dam inundation zone, 100-year and 500-year floodplain, and tsunami run-up zone. Portions of the Central-West and Central-East Subareas of the Plan Area are located within the Central Reservoir Dam Failure Inundation Area and would be flooded following a conjectured catastrophic dam failure. Additionally, the Fruitvale Avenue corridor is within the 500-year floodplain and the engineered channel at the southern limit of the Plan Area is within the 100-year floodplain. This southern portion of the Plan Area is also considered to be within the tsunami run-up zone, as identified by the Oakland General Plan. There are also several creeks, engineered channels, former creeks (circa 1850) that have been buried or drained, and underground culverts located within and adjacent to the Plan Area, as shown on **Figure 2** through **Figure 6**.

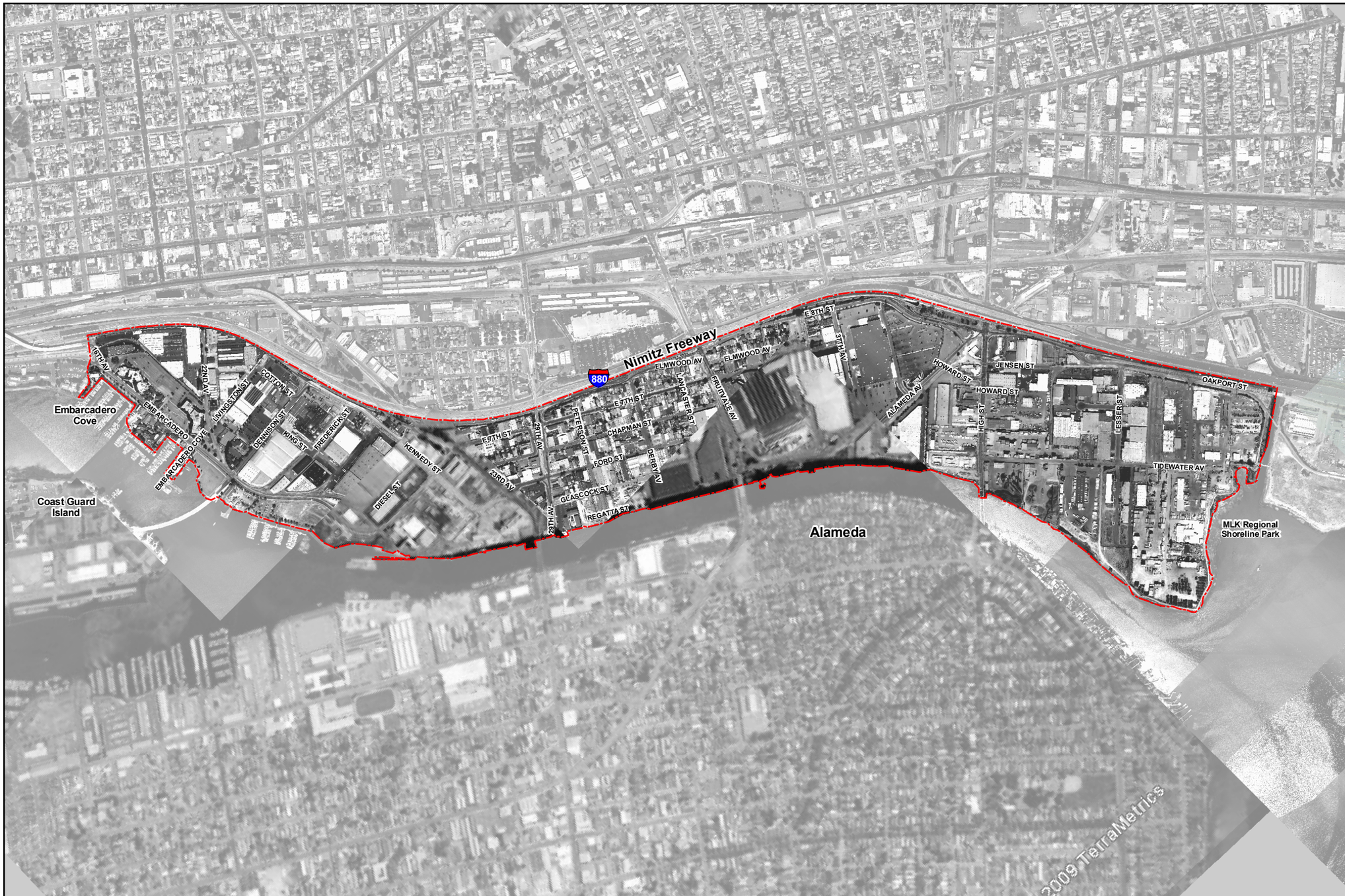
Hazards and Hazardous Materials

A Phase I Hazardous Materials Assessment (HMA) was conducted for the Plan Area in March 2009 to identify contaminated and potentially contaminated areas and other

hazardous materials issues within the Plan Area. As shown on **Figure 2** through **Figure 6**, the Phase I HMA concluded that there are 24 identified properties of high to moderate concern with regards to hazardous materials. The particular area of concern is within the East Subarea of the Plan Area (shown on **Figure 6**), where two properties of concern and a historical lumber yard operations are located. It is anticipated that this area has been contaminated with hazardous materials, such as motor-oil, volatile organic compounds, and other solvents. It is recommended that a limited Phase II Environmental Site Assessment be conducted at the potential future residential areas of the Plan Area to evaluate the existing soils and groundwater in the area.

NOISE

The noise and vibration environment in the Plan Area is characterized primarily as an urban or industrial environment, dominated by the I-880 and local industrial uses. Sensitive receptors within the Plan Area include existing residential areas, including Jingletown, residences along I-880 south of Fruitvale Avenue, and residential lofts near the Beacon Day School. **Figure 2** through **Figure 6** shows the noise contours in the Plan Area and study area, showing an existing noise environment of 65 Ldn to 75 Ldn in the Plan Area, with the noise levels increasing with closer proximity to I-880. With regard to existing land uses, such as residential, school, and office, the compatibility of such uses with the Conditionally Acceptable or Normal Unacceptable noise levels, as defined by the Oakland General Plan's Land Use Compatibility Matrix, typically depends on the noise control provided by the building envelope. Outdoor areas such as parks and school yards can also be protected from some environmental noise by buildings or sound barriers in some areas, depending on the level of ambient noise.



Legend

Central Estuary Specific Plan Boundary

1 inch = 1,000 feet

0 550 1,100 Feet

Source: Oakland GIS, 2009;

Locator Map

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Project Location Map FIG 1

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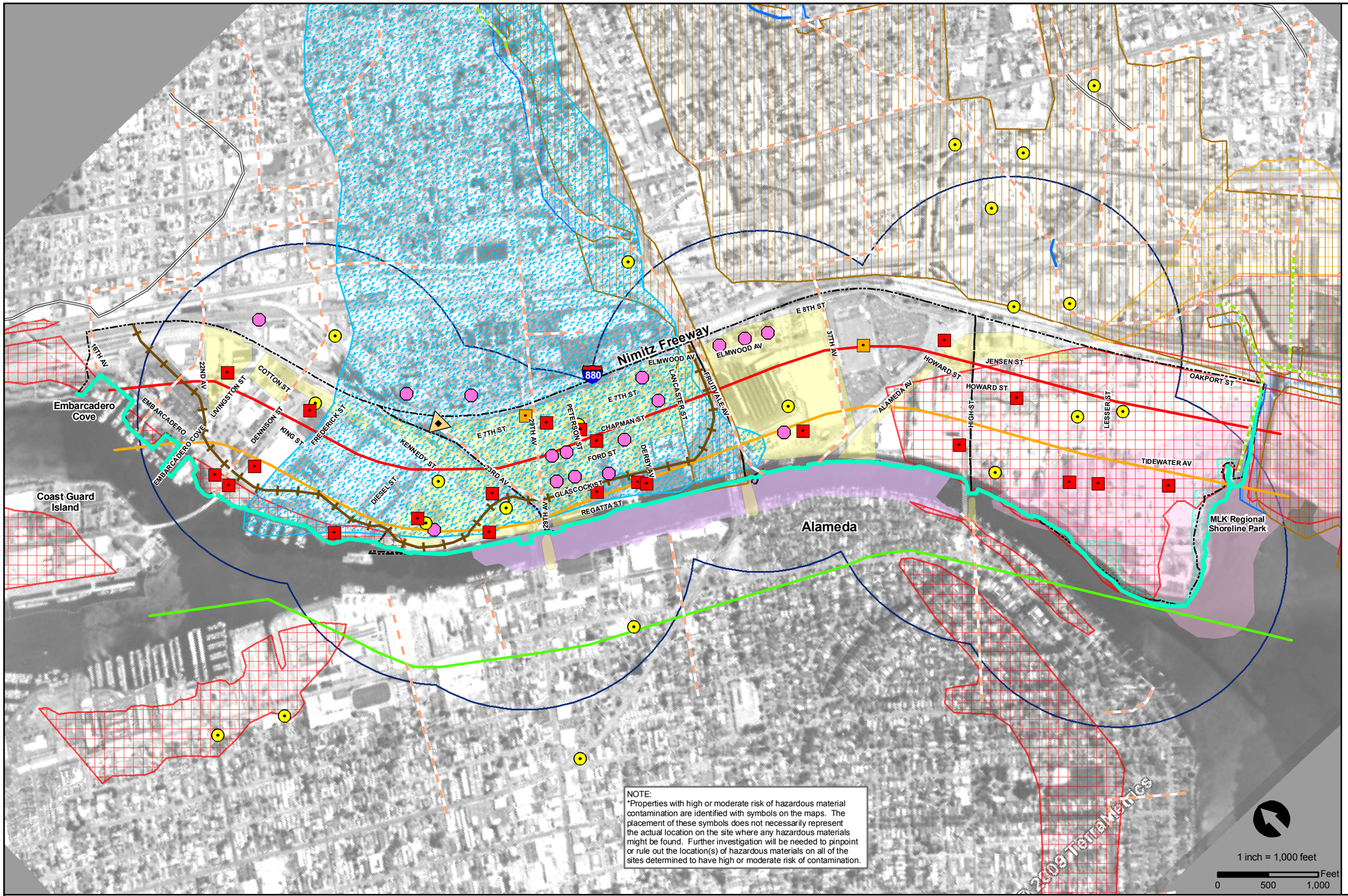

Legend

Central Estuary Specific Plan Boundaries

Key Environmental Issues

Air Quality

- Major Stationary Sources of Air Pollutants

Hazardous Materials Risk

- Moderate
- High

Noise Contours (From I-880)

- 75 Ldn - Estimated
- 70 Ldn
- 65 Ldn

Noise Zone of Influence

- Heavy Industrial - Existing

Cultural Resources

- Potential Historic Resources
- Southern Pacific Railroad Spur (Potential Historic Site)
- High Potential For Prehistorical Resources Near Bayshore
- Likely Areas of Historic Resources in Need of Historic Survey

Biological Resources

- Potentially Protected Trees
- Tidal Wetlands / Jurisdictional Resources
- Potential Special Status Species Habitat (Martin Luther King Regional Shoreline Park)

Geologic Resources

- Creek
- Engineered Channels
- Former Creeks (Buried or Drained) Circa 1850
- Underground Culvert
- Artifical Estuary
- Central Reservoir Dam Failure Inundation Area
- Floodplain - 100 Year
- Floodplain - 500 Year
- High Liquefaction Susceptibility Level
- Very High Liquefaction Susceptibility Level
- Tsunami Run-Up Zone

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Key Environmental Issues Map (Combined)

FIG 2

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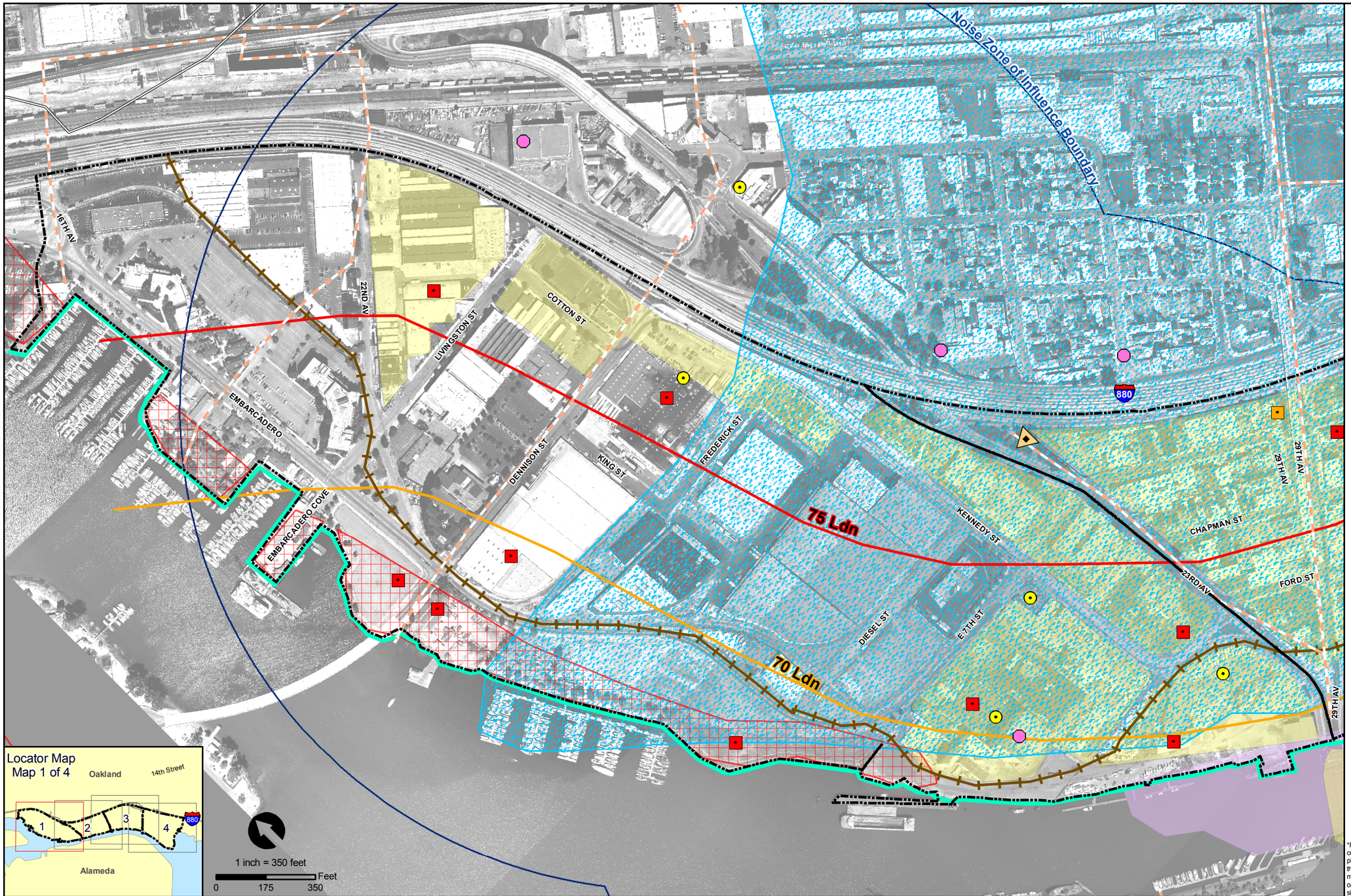

Legend

Central Estuary Specific Plan Boundaries

Key Environmental Issues

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Biological Resources

- Potentially Protected Trees
- Tidal Wetlands / Jurisdictional Resources

Geologic Resources

- Creek
- Engineered Channels
- Former Creeks (Buried or Drained) Circa 1850
- Underground Culvert
- Artifical Estuary
- Central Reservoir Dam Failure Inundation Area
- High Liquefaction Susceptibility Level
- Very High Liquefaction Susceptibility Level

*Properties with high or moderate risk of hazardous material contamination are identified with symbols on the maps. The placement of these symbols does not necessarily represent the actual location on the site where any hazardous materials might be found. Further investigation will be needed to pinpoint or rule out the location(s) of hazardous materials on all of the sites determined to have high or moderate risk of contamination.

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Area 1 - Key Environmental Issues

FIG 3

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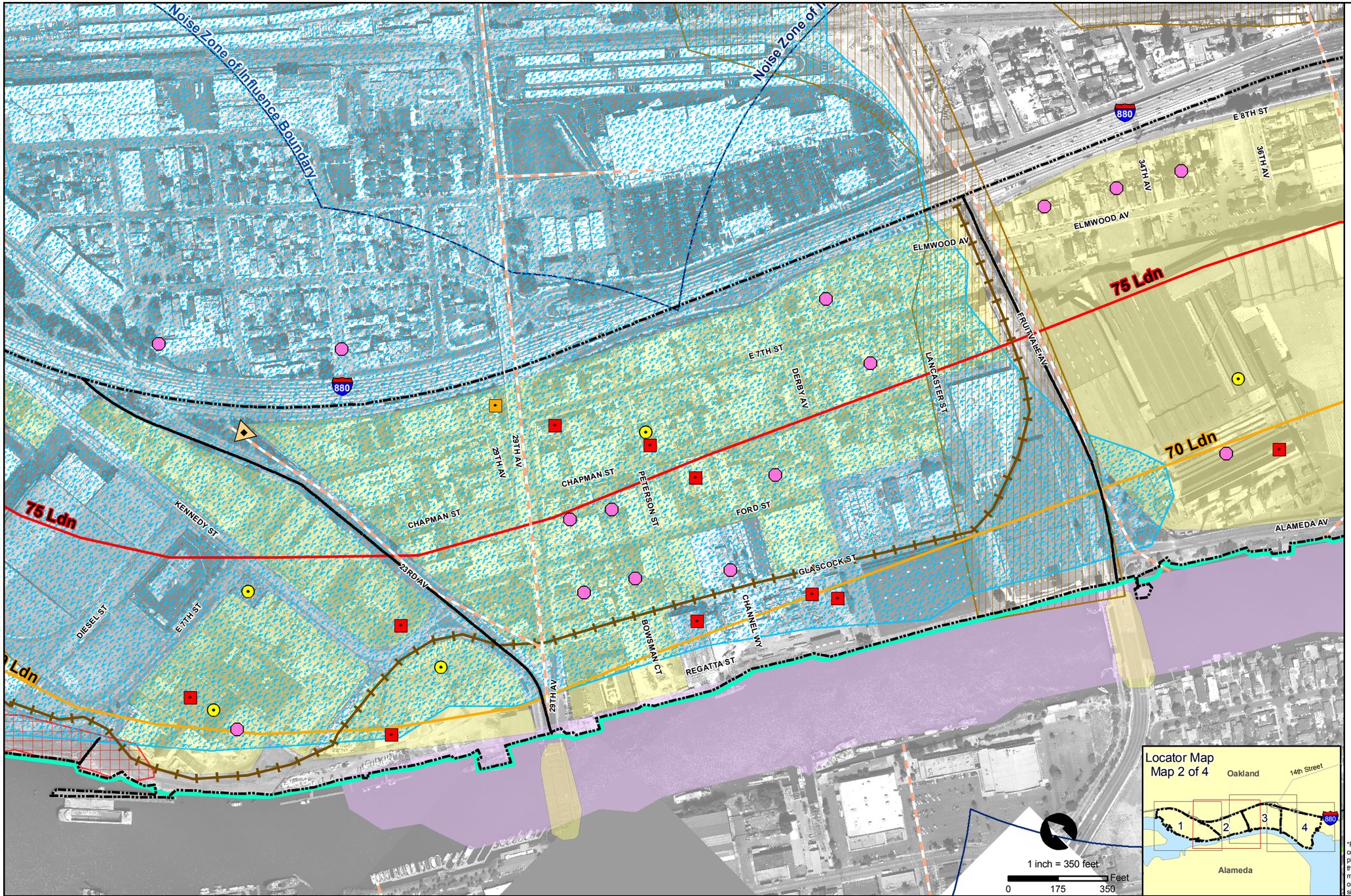

Legend

Central Estuary Specific Plan Boundaries

Key Environmental Issues

Air Quality

- Major Stationary Sources of Air Pollutants

Hazardous Materials Risk

- Moderate
- High

Noise Contours (From I-880)

- 75 Ldn - Estimated
- 70 Ldn
- 65 Ldn

Noise Zone of Influence

- Heavy Industrial - Existing

Cultural Resources

- Potential Historic Resources
- Southern Pacific Railroad Spur (Potential Historic Site)
- High Potential For Prehistorical Resources Near Bayshore
- Likely Areas of Historic Resources in Need of Historic Survey

Biological Resources

- Potentially Protected Trees
- Tidal Wetlands / Jurisdictional Resources

Geologic Resources

- Creek
- Engineered Channels
- Former Creeks (Buried or Drained) Circa 1850
- Underground Culvert
- Artifical Estuary
- Central Reservoir Dam Failure Inundation Area
- Floodplain - 500 Year
- High Liquefaction Susceptibility Level
- Very High Liquefaction Susceptibility Level

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Area 2 - Key Environmental Issues FIG 4

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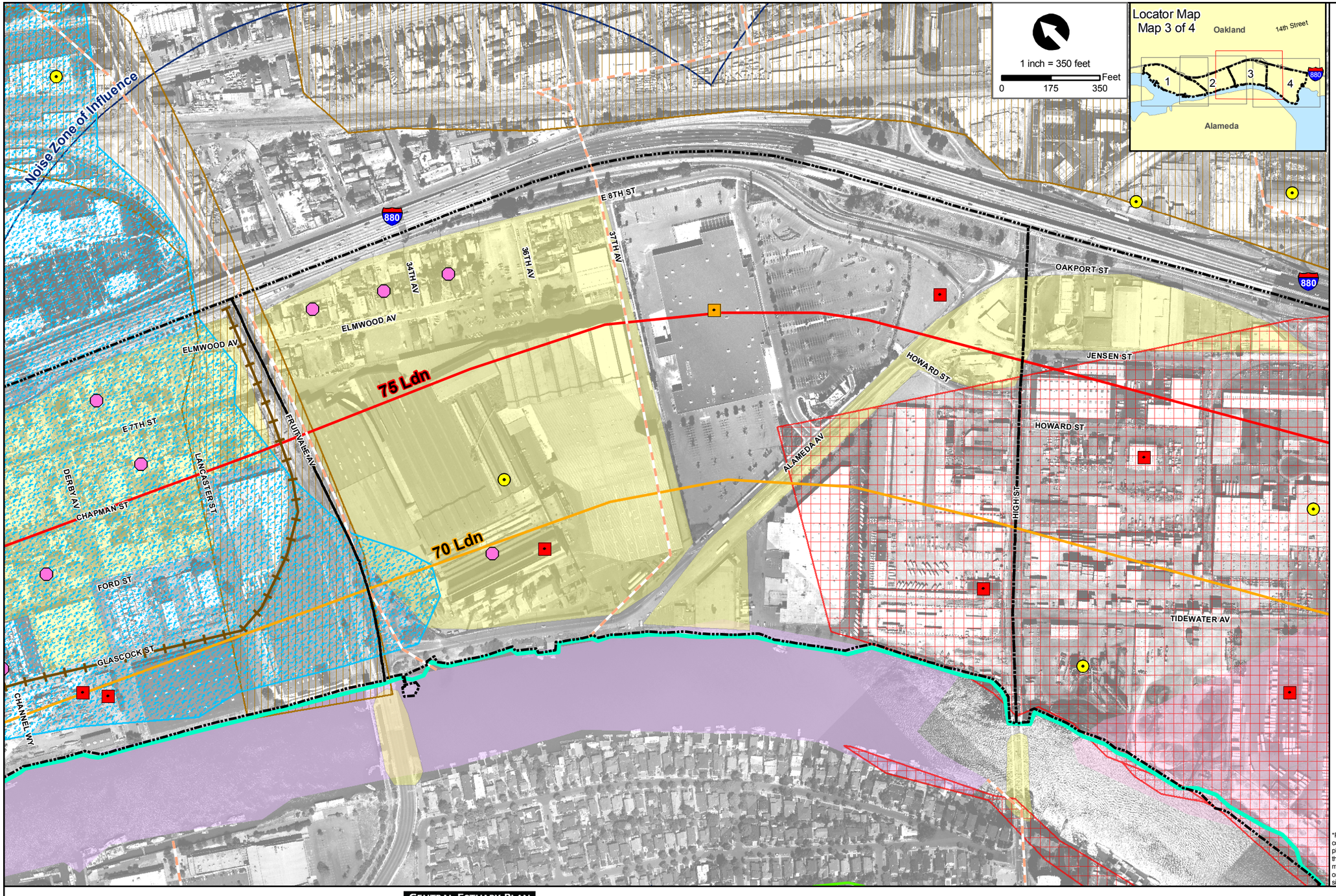

Legend

Central Estuary Specific Plan Boundaries

Key Environmental Issues

Air Quality

- Major Stationary Sources of Air Pollutants

Hazardous Materials Risk

- Moderate
- High

Noise Contours (From I-880)

- 75 Ldn - Estimated
- 70 Ldn
- 65 Ldn

Noise Zone of Influence

- Heavy Industrial - Existing

Cultural Resources

- Potential Historic Resources
- Southern Pacific Railroad Spur (Potential Historic Site)
- High Potential For Prehistorical Resources Near Bayshore
- Likely Areas of Historic Resources in Need of Historic Survey

Biological Resources

- Potentially Protected Trees
- Tidal Wetlands / Jurisdictional Resources

Geologic Resources

- Creek
- Engineered Channels
- Former Creeks (Buried or Drained) Circa 1850
- Underground Culvert
- Artifical Estuary
- Central Reservoir Dam Failure Inundation Area
- Floodplain - 500 Year
- High Liquefaction Susceptibility Level
- Very High Liquefaction Susceptibility Level
- Tsunami Run-Up Zone

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Area 3 - Key Environmental Issues FIG 5

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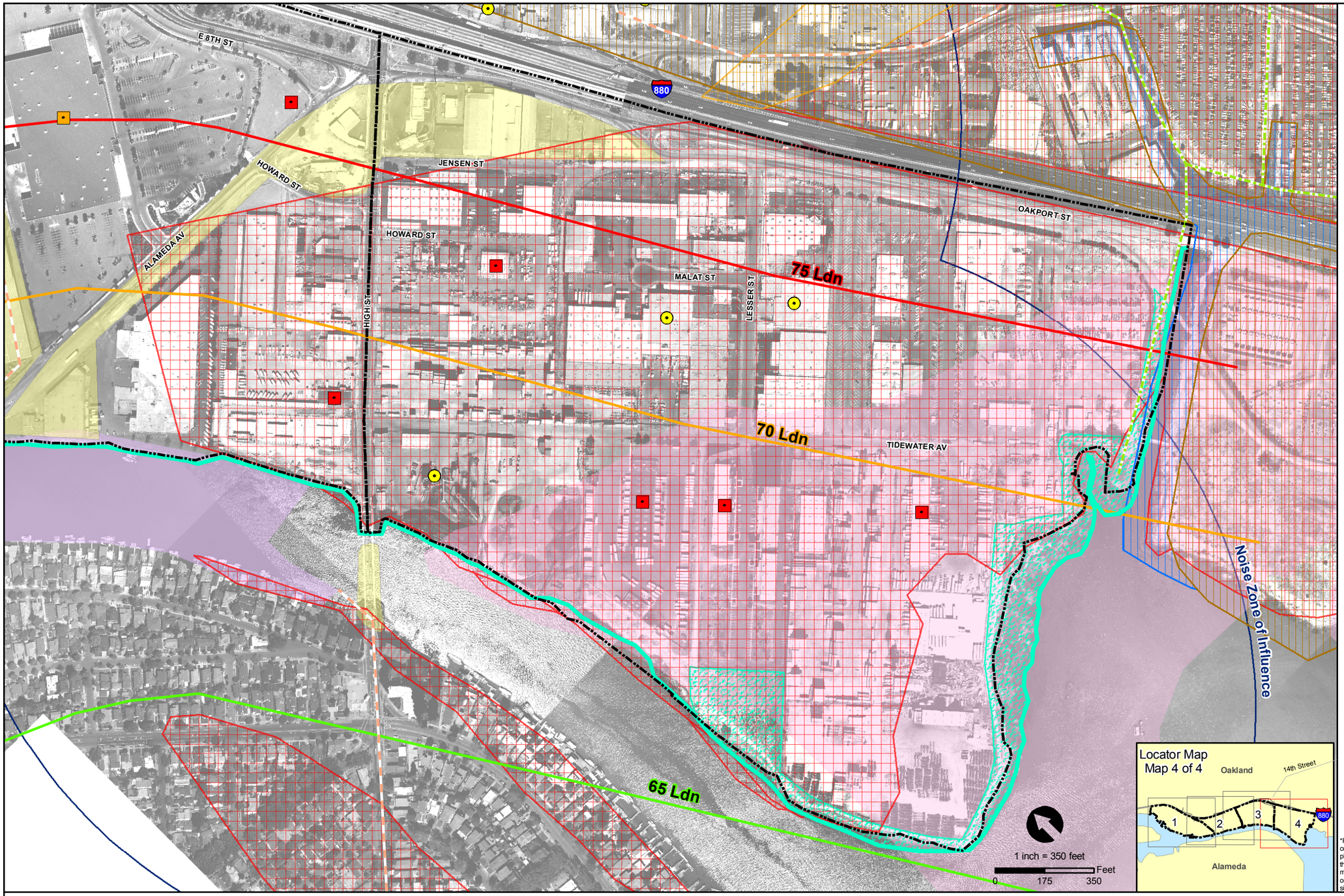

Legend

Central Estuary Specific Plan Boundaries

Key Environmental Issues

Air Quality

- Major Stationary Sources of Air Pollutants

Hazardous Materials Risk*

- Moderate
- High

Noise Contours (From I-880)

- 75 Ldn - Estimated
- 70 Ldn
- 65 Ldn

Noise Zone of Influence

- Heavy Industrial - Existing

Cultural Resources

- High Potential For Prehistorical Resources Near Bayshore
- Likely Areas of Historic Resources in Need of Historic Survey

Biological Resources

- Tidal Wetlands / Jurisdictional Resources
- Potential Special Status Species Habitat (Martin Luther King Regional Shoreline Park)

Geologic Resources

- Creek
- Engineered Channels
- Former Creeks (Buried or Drained) Circa 1850
- Underground Culvert
- Artifical Estuary
- Central Reservoir Dam Failure Inundation Area
- Floodplain - 100 Year
- Floodplain - 500 Year
- High Liquefaction Susceptibility Level
- Very High Liquefaction Susceptibility Level
- Tsunami Run-Up Zone

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Area 4 - Key Environmental Issues

FIG 6

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