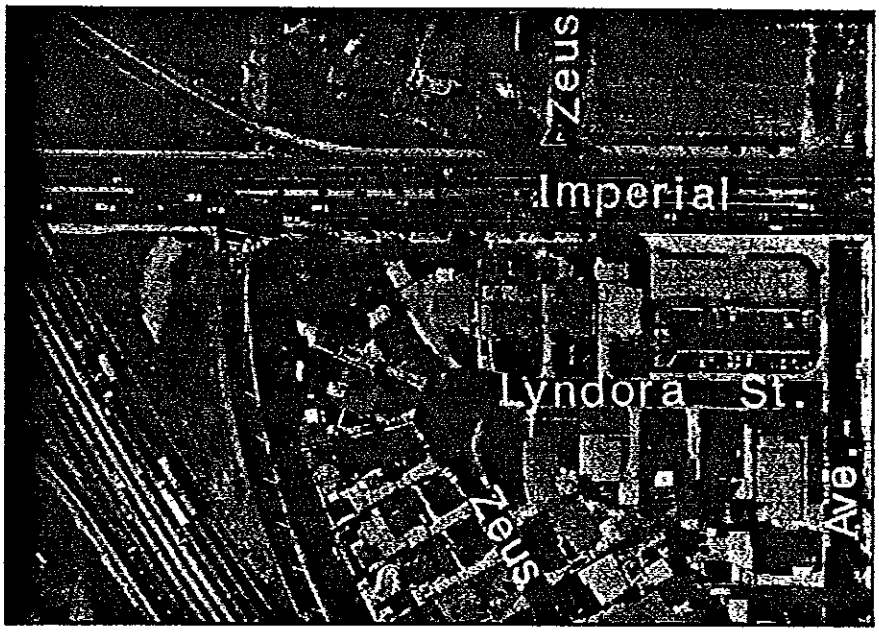
F. Noise



1. Goals and Opportunities

The noise element of a general plan provides information on current noise levels in the City. This information is used to identify the most suitable locations for various land uses, especially those uses that are most sensitive to noise impacts. In addition, the Noise Element provides the basis for the enforcement of noise associated codes and standards protecting the health and well being of the persons living in Norwalk.

The purpose of the Noise Element is to accomplish the following general goals through policies and implementation measures:

- To ensure that all areas of the City are free from excessive noise.

- To reduce the number of people exposed to excessive noise and minimize the future effect of noise in the City.

- To ensure that land uses are compatible with existing and future noise levels.

2. Existing Conditions

Noise is generated by numerous sources. For the purpose of this Noise Element, the City recognized two major categories of noise sources, mobile and stationary. The main noise generators within the City of Norwalk consist of vehicular traffic along the I-5 and I-605 Freeways, major highways and thoroughfares, the Atchison Topeka and Santa Fe Railroad line and the Southern Pacific Railroad line. The City is also exposed to noise emanating from industrial and commercial activities, construction work, and human activities. Diagrams are provided in Section 6 which show the existing and future noise contours in Norwalk.

HOW NOISE IS MEASURED

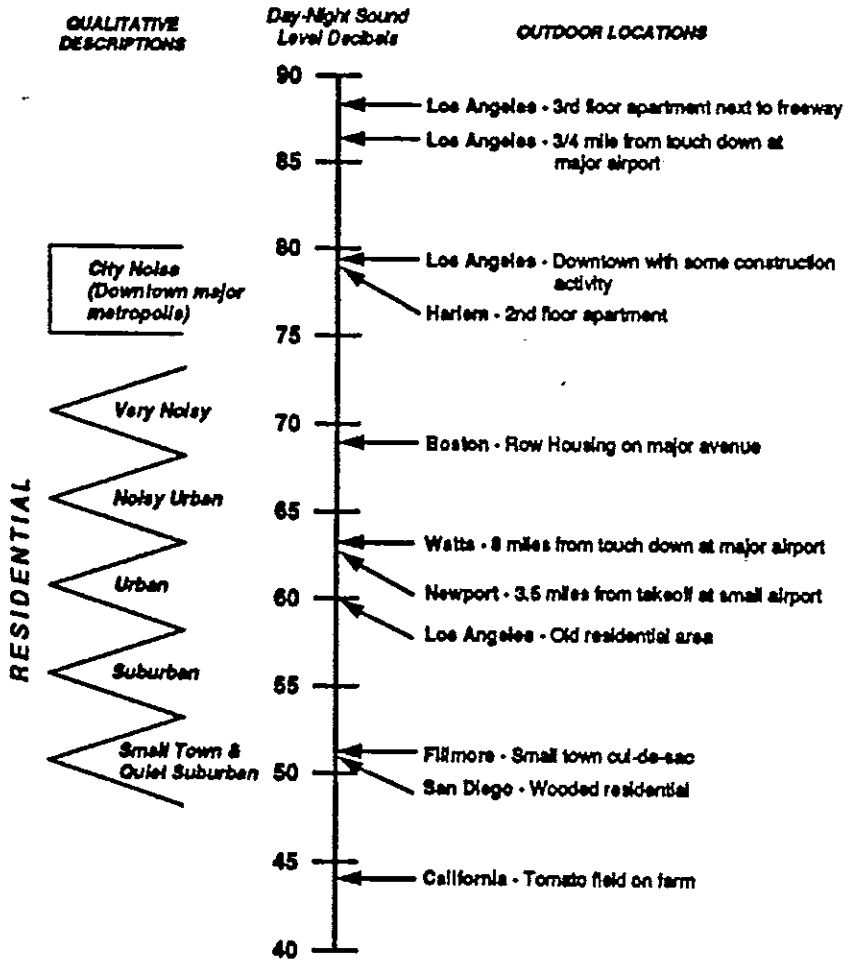
Community Noise levels are measured in terms of the A-weighted decibel, abbreviated dBA. A-weighting is a frequency correction that correlates overall sound pressure levels with the frequency response of the human ear. Several rating scales have been developed for the measurement of community noise. These account for: (1) the parameters of noise that have been shown to contribute to the effects of noise on man, (2) the variety of noises found in the environment, (3) the variations in noise levels that occur as a person moves through the environment, and (4) the variations associated with the time of day. A predominant rating scale now in use in California for land use compatibility assessment is the Day-Night Noise Level (Ldn).

The Ldn scale represents a time weighted 24-hour average noise level based on the A-weighted decibel. Time weighted refers to the fact that noise that occurs during certain sensitive time periods is penalized for occurring at these times. Nighttime (10:00 P.M. to 7:00 A.M.) period noises are penalized by 10 dBA. This time period and penalty was selected to reflect peoples' increased sensitivity to noise during this time period.

To account for the persistence of loudness and variations over time, noise measurements are often expressed by a statistical descriptor such as an exceedance level, L_x, where "x" refers to the percentage of time a noise level is exceeded. L_{10}, L_{50}, and L_{90} are frequently used to describe peak, median, and background noise levels, respectively. In addition to describing noise levels in terms of an exceedance level, noise analysis can utilize a scale of measurement, expressed in terms of dBA, called the equivalent noise level (Leq). The Leq noise level takes into account fluctuations in a noise level over a given period of time based on the acoustical energy content of that sound. A one-hour Leq, for example, averages total noise energy over that period of time.

Noise affects all types of land uses and activities, although some are more sensitive to high noise levels than others. Noise sensitive land uses include residences, convalescent and rest homes, hospitals, libraries, churches, and schools.

RANGE OF TYPICAL OUTDOOR NOISE ENVIRONMENTS EXPRESSED IN TERMS OF DAY-NIGHT SOUND LEVEL (L_{dn}), dB



Source: Guidelines for the Preparation and Content of the Noise Element of the General Plan prepared by the California Department of Health Services.

a. Mobile Noise Sources

Mobile noise sources include vehicular noise from commercial and passenger vehicles and railroad noise.

- **Vehicular Noise** - The Circulation Element identifies the existing average daily traffic flows. The highest traffic volumes occur on the I-605, I-105, I-91, and the I-5 Freeways and major roadways such as Alondra Boulevard, Rosecrans Avenue, Imperial Highway, Firestone Boulevard, Carmenita Road, Bloomfield Avenue, Pioneer Boulevard, San Antonio Drive, Norwalk Boulevard - north of the I-5 Freeway, and Studebaker Road. Future development resulting in increased traffic will have an impact on noise volumes.

- **Railroad Noise** - The Atchison Topeka and Santa Fe Railroad, which runs along Norwalk's eastern boundary, operates freight trains, Amtrak commercial passenger trains, and Metrolink commuter trains.

  The Southern Pacific Transportation Company Railroad, which runs diagonally through Norwalk parallel to the south side of Firestone Boulevard, operates freight trains. This rail line impacts several residential neighborhoods along its length.

c. Stationary Noise Sources

Stationary noise sources are also a cause of noise impact and annoyance. The City contains relatively few sources of stationary noise. The only areas where concentration of

noise may be experienced are in the commercial centers and industrial areas. The primary noise associated with commercial centers is attributed to mobile noise sources, such as automobile and truck traffic. Due to the design of the centers and the associated roadway and parking locations, shopping generated vehicles do not greatly impact the adjacent residential areas.

The types of industrial uses characteristically locating in Norwalk include research and development, light industry, wholesale, and warehouse facilities. Heavy machinery type industries have not located in the City. Therefore, the noise generation is primarily associated with transportation activities. Industrial centers are typically located adjacent to arterial and secondary streets with easy access to freeways, resulting in minimal effects on residential areas.

Other stationary noise sources that should be considered include but are not limited to air conditioning or compressor units, or soil remediation equipments. Though smaller in size, this type of equipment can also create noise impacts.

4. Land Use Compatibility

Noise compatibility standards establish an acceptable limit for noise exposure for various land uses with in the City. New buildings and developments, not including modifications or additions to existing structures, should be reviewed to determine if the project lies in one of the following noise classifications:

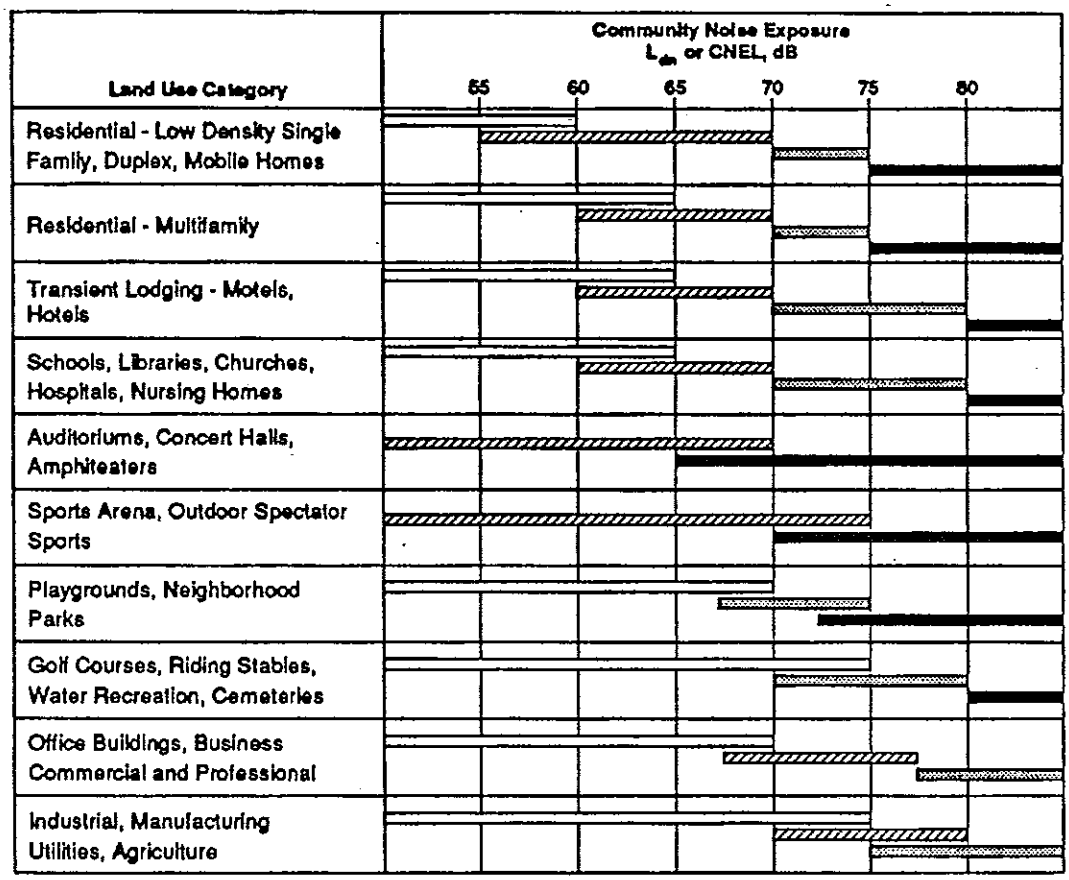
- *Clearly Acceptable* - Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

- *Normally Acceptable* - New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

- *Normally Unacceptable* - New consruction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

- *Clearly Unacceptable* - New development should generally not be undertaken. If the proposed development is intended for storage or other uses where persons will not be exposed to excessive noise levels, and a detailed analysis provides for adequate noise insulation features, the new development or construction may occur.

Using the future noise contour map in Section 6, the worst case scenario noise levels should be identified. After identifying the proposed location, land use, and CNEL level, the following table should be referred to:



Legend:

Clearly Acceptable
Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.

Normally Acceptable
New construction or development should be undertaken only where a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.

Normally Unacceptable
New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

Clearly Unacceptable
New construction or development should generally not be undertaken.

Considerations In Determination of Noise-Compatible Land Use

a. **Suitable Interior Environments**
One objective of locating residential units relative to a known noise source is to maintain a suitable interior noise environment at no greater than 45 dB CNEL of L_{dn}. This requirement, coupled with the measured or calculated noise reduction performance of the type of structure under construction, should govern the minimum acceptable distance to a noise source.

b. **Acceptable Outdoor Environments**
Another consideration, which in some communities is an overriding factor, is the desire for an acceptable outdoor noise environment. When this is the case, more restrictive standards for land use compatibility, typically below the maximum considered "normally acceptable" for that land use category, may be appropriate.

Source: Guidelines for the Preparation and Content of the Noise Element of the General Plan prepared by the California Department of Health Services.

When using the table, the stricter noise classification shall apply. In addition to any acoustical analysis that may be performed, the State of California Noise Insulation Standards require that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. Any new development must conform with this standard, and all other requirements of the State of California Noise Insulation Standards.

5. Objectives and Policies

Objectives

- To have noise levels in all areas of the City meet the minimum standards of land use compatibility established in the Noise Element, especially adjacent to noise sensitive uses.

- To promote the reduction of noise impacts from existing transportation to a level of compatibility with adjoining land uses.

Policies

- Encourage compliance with state and federal legislation designed to abate and control noise pollution.

- Existing noise sources that exceed the appropriate maximum standard shall be encouraged to reduce their noise level to at least the land use compatibility standards of the noise element.

- Discourage truck traffic from using local residential streets.

- Encourage the use of acoustical materials in a new residential and community development where noise levels exceed the compatibility standards of the Noise Element.

- Encourage railroads to institute noise reduction techniques to reduce impacts on adjoining land uses.

- Encourage the California Department of Transportation (Caltrans) to continue programs which lead to the reduction of noise levels on I-5, I-605, I-105, and the I-91.

- Ensure that proposed noise sources are reduced below a level of significance and properly muffled to prevent noise impacts on neighboring properties.

5. Implementation Programs

- Require noise study reports to be prepared for new projects that are not clearly compatible with the future noise level at the site, and identify measures necessary to reduce noise levels to meet the City standard.

- Implement the mitigation measures identified by noise study reports through imposing appropriate conditions of approval on development proposals and Building Permits.

- Update the highway/railroad noise contour

maps concurrently with future updates of the Circulation Element.

- Establish a priority system for erecting sound walls along freeway routes, and encourage the construction of sound walls by the California Department of Transportation pursuant to Section 215.5 of the California Streets and Highways Code.

- Encourage or require new development to provide for adequate sound barriers from railroad noise.

- Condition discretionary actions for projects adjacent to any property designated, developed, or occupied by noise sensitive land uses. Developer may be required to submit a construction noise mitigation plan to the City Engineer for review and approval prior to the issuance of a grading or building permit. The plan must show how the noise from construction would be mitigated, through the use of such methods as:

  - Time of operation
  - Temporary noise attenuation fences
  - Location of construction equipment
  - Use of current technology and noise suppression equipment

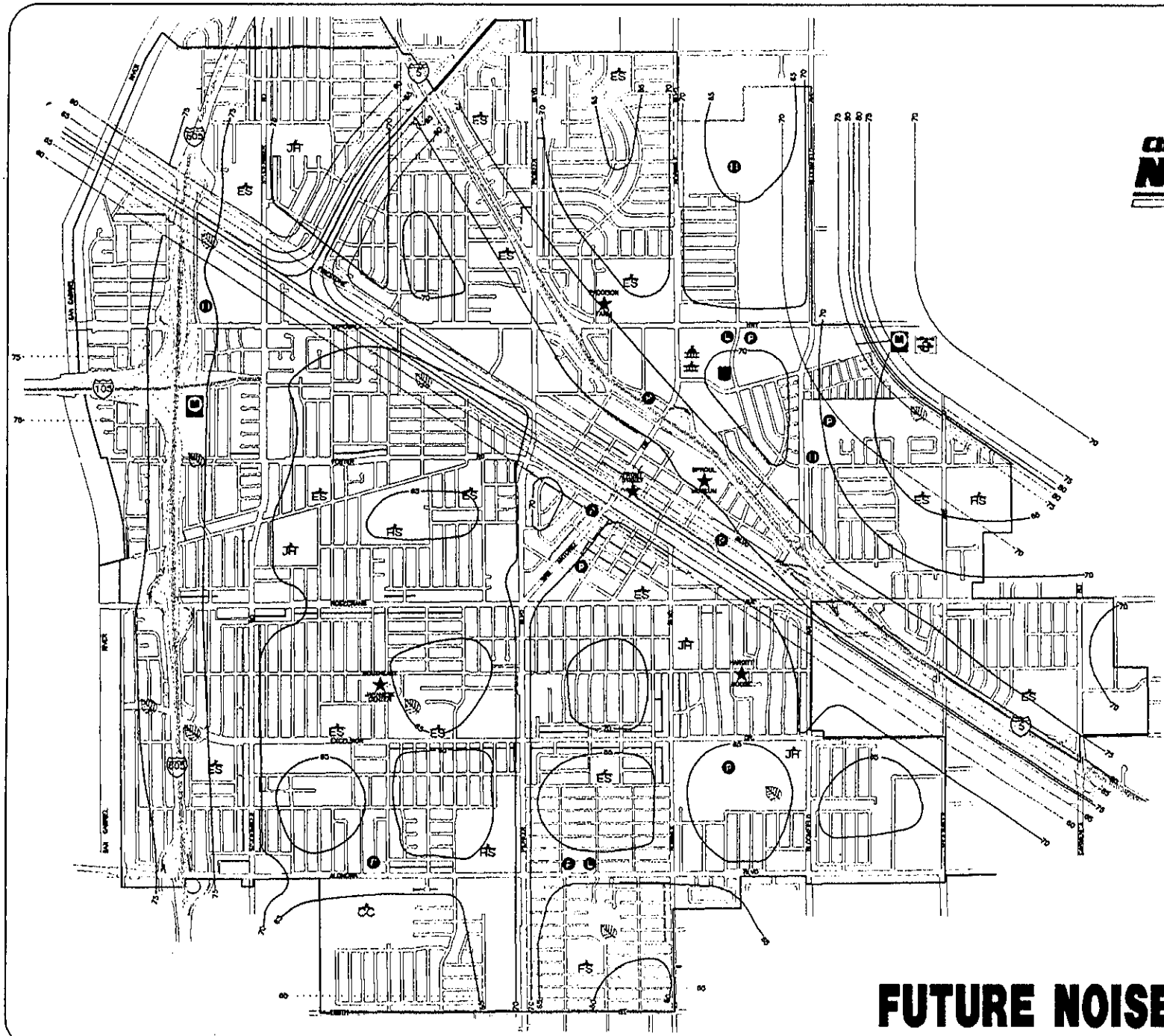
- Revise noise related zoning regulations to be consistent with the Noise Element.

- Continue to include in the City's codes, restrictions on the hours of operation of

construction equipment, site maintenance equipment (leaf blowers, power mowers, etc.), trash collection, and truck deliveries.

- Disseminate to the public and developers information regarding City noise regulations and programs, the adverse effects of high noise levels, and means of mitigating such levels.

- The City will act to reduce noise levels by making noise levels of equipment a consideration when making purchases.



City of NORWALK

NORTH

NOISE LEGEND

70 TRAFFIC NOISE CONTOURS CNEL

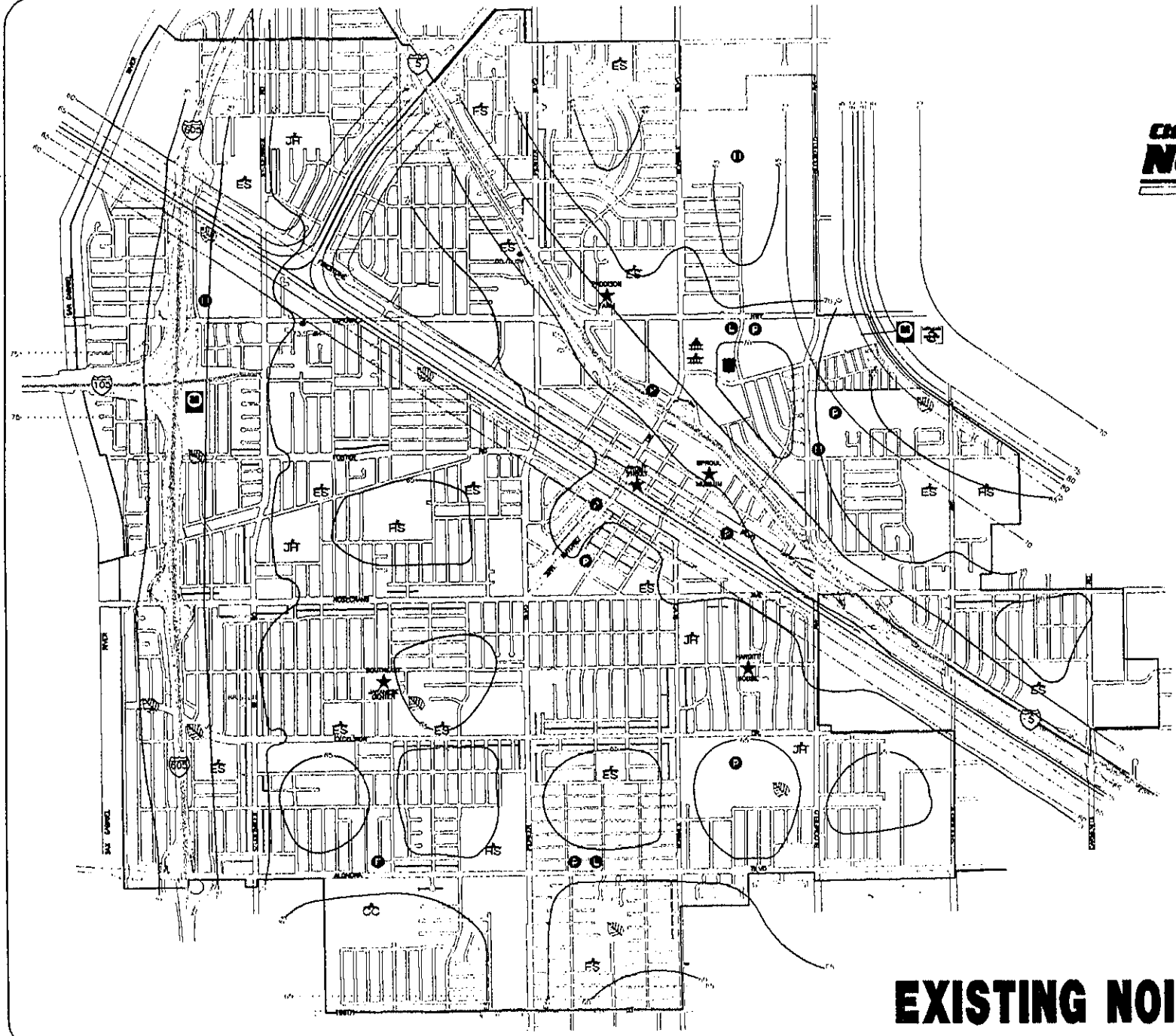
70 RAILROAD NOISE CONTOURS CNEL

LEGEND

- CITY HALL
- COURT HOUSE
- POLICE / SHERIFF
- COMMUNITY COLLEGE
- HIGH SCHOOL
- JUNIOR HIGH SCHOOL
- ELEMENTARY SCHOOL
- FIRE STATION
- HEALTH CENTER
- OTHER PUBLIC FACILITY
- PARK
- LIBRARY
- HISTORIC / CULTURAL SITE
- TRANSPORTATION CENTER
- TRANSPORTATION CORRIDOR

SOURCE: ENVIRONMENTAL NOISE ANALYSIS, INC
CITY OF DOWNEY NOISE ELEMENT
CITY OF SANTA FE SPRINGS NOISE ELEMENT
CITY OF WHITTIER NOISE ELEMENT

FUTURE NOISE CONTOURS



City of NORWALK

NORTH

NOISE LEGEND

- TRAFFIC NOISE CONTOURS CNEL
- RAILROAD NOISE CONTOURS CNEL
- MEASURED NOISE LEVELS CNEL

LEGEND

- CITY HALL
- COURT HOUSE
- POLICE / SHERIFF
- COMMUNITY COLLEGE
- HIGH SCHOOL
- JUNIOR HIGH SCHOOL
- ELEMENTARY SCHOOL
- FIRE STATION
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EXISTING NOISE CONTOURS