Draft Program Environmental Impact Report

CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM

COMMUNITY REDEVELOPMENT AGENCY
OF THE CITY OF LOS ANGELES

March 1994

CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM ENVIRONMENTAL IMPACT REPORT

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Prepared for

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1.0 INTRODUCTION

1.1 INTRODUCTION AND BACKGROUND

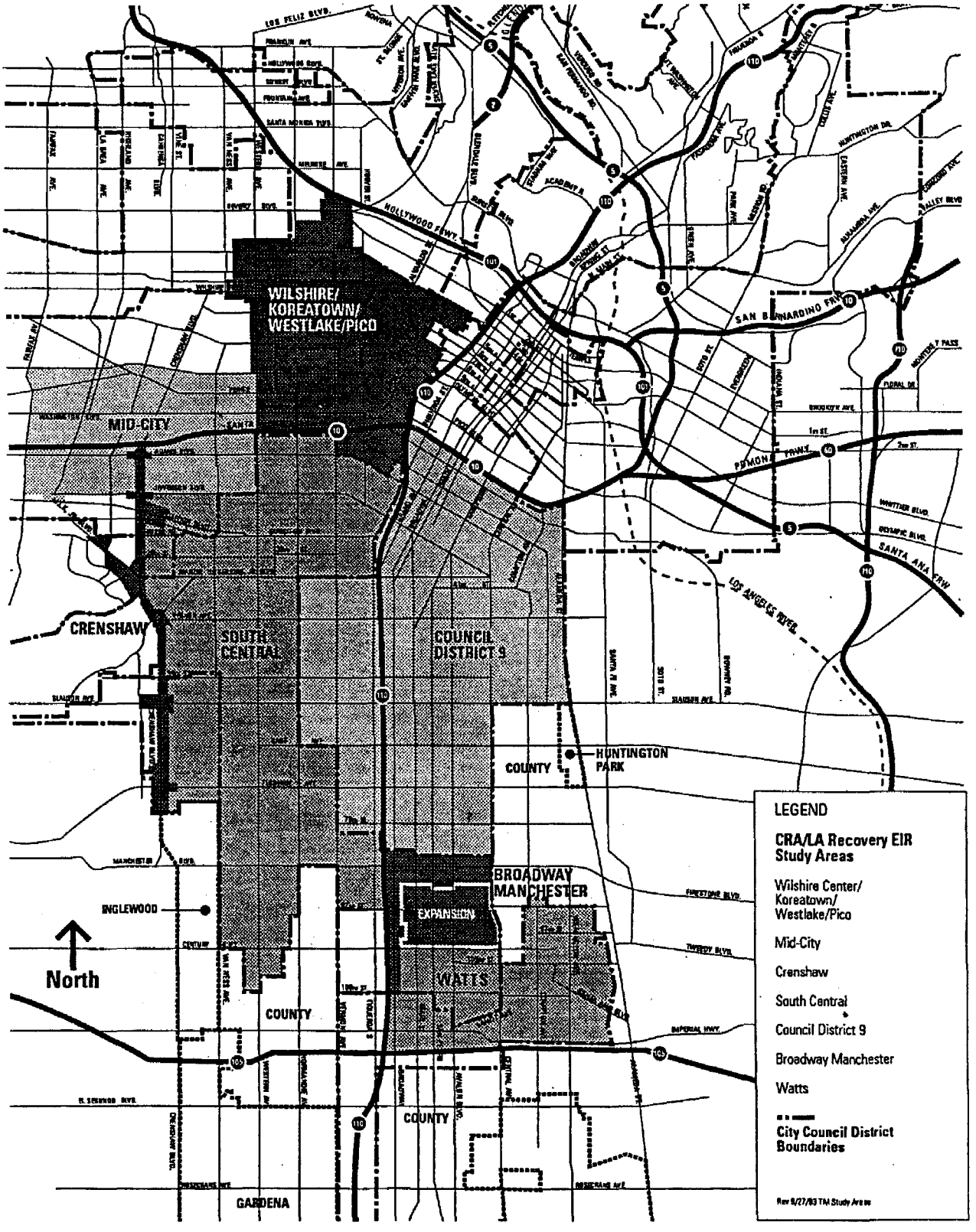
In 1984, the Crenshaw Redevelopment Plan (Plan) was adopted by the Community Redevelopment Agency (CRA) and the City Council of the City of Los Angeles. The Plan includes the area bounded by 39th Street on the north, Stocker Street on the south, Crenshaw Boulevard on the east, Marlton Avenue on the west and Santa Rosalia Drive on the southwest. The existing Crenshaw Redevelopment Project was created as part of an overall plan for the revitalization of the greater Crenshaw neighborhood. The Redevelopment Project Area includes the new Baldwin Hills Crenshaw Plaza (previously known as the Crenshaw Shopping Center) which opened in 1988. It includes the renovated Broadway Crenshaw and Robinsons-May Company department stores and a new Sears department store.

In November 1991, the City Council of the City of Los Angeles approved the survey area for an expanded Crenshaw Redevelopment Project and directed the Agency to proceed with the process of amending the existing Crenshaw Redevelopment Project for an expansion area consisting of about 39 acres, located west, northwest and immediately adjacent to the existing Crenshaw Redevelopment Project. The largest component of this area is the Santa Barbara Plaza, an approximately 20-acre site, bounded generally by Martin Luther King Jr. Boulevard on the north, Marlton Avenue on the east, Santa Rosalia Drive on the south and Buckingham Road on the west. The other portion of this area was a strip of commercial development about 2.7 acres, located on the south side of Martin Luther King Jr. Boulevard between Buckingham Road and Hillcrest Drive.

The Plan Amendment process included the preparation of an Environmental Impact Report (EIR). The Plan Amendment Area was proposed at that time sustained damage during the April 1992 civil disturbance. In September 1992, work on the EIR was suspended t o allow Agency staff to work with the community and the Council District 8 office to reassess land use options in light of the effect of the civil disturbance on the proposed Plan Amendment Area and the surrounding community.

In April 1993, the City Council adopted a motion directing the Agency to focus recovery and revitalization efforts on areas affected by the April 1992 civil unrest, and specifically identified the Crenshaw Corridor (extending from Adams Boulevard on the north to 77th Street on the south) as a priority area. The Crenshaw Corridor Recovery and Revitalization Study Area thus includes a now expanded Crenshaw Redevelopment Plan Amendment Area as well as other areas to the north and south where local Citizen Advisory Committees will be considering revitalization or redevelopment options for these additional areas.

This overall Recovery Program authorized by the City Council encompasses a number of areas in the City that were substantially affected by the civil unrest in April 1992, including Watts, Southeast Los Angeles, South Central Los Angeles, Westlake, Koreatown and Mid-City (see **Figure 1.1-1**) As part of this process, the original Citizens Advisory Committee (CAC) for the Crenshaw Redevelopment Project (Council District 8) was expanded and two



SOURCE: Community Redevelopment Agency.

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF
THE CITY OF LOS ANGELES

FIGURE 1.1-1

CRA/LA RECOVERY STUDY AREA

additional CAC's were formed to address recovery and revitalization issues in the Council Districts 6 and 10 portions of the Crenshaw Corridor.

The intent of the proposed Crenshaw Corridor Recovery and Revitalization Program is to continue upgrading the physical and economic environment of the Crenshaw community through new development and rehabilitation. The proposed Recovery and Revitalization Program does not in itself entitle new development levels within the proposed Recovery Program Area. Specifically, the proposed Recovery Program would facilitate implementation of land use densities and intensities consistent with the adopted West Adams-Baldwin Hills-Leimert District Plan and the associated underlying zoning affecting the proposed Recovery Program Area.

1.2 AUTHORIZATION AND FOCUS

This report is a Draft Environmental Impact Report (EIR) prepared for the Community Redevelopment Agency of the City of Los Angeles in accordance with the Guidelines for Implementation of the California Environmental Quality Act (CEQA), as amended. In accordance with CEQA Guidelines, a Notice of Preparation (NOP) was prepared and circulated on December 3, 1993. The NOP identified specific areas of possible environmental effects. A copy of the NOP and the responses to the NOP are attached as in Appendix A.

Under the provisions of the California Environmental Quality Act (CEQA) and the Community Redevelopment Law, environmental impact documentation of any proposed revitalization and recovery plan is required. In this regard, it is the intent of the CRA to prepare a Programmatic Environmental Impact Report (EIR) for the proposed Crenshaw Corridor Recovery Program Area. A Program EIR is not project specific, but instead addresses policy interventions and the broad land use changes that may be incorporated into a revitalization and recovery plan. Under CEQA specific projects may "tier" off of a Program EIR and further reduce and expedite environmental review processing time when actual projects to stimulate revitalization and recovery are proposed by private and/or public entities.

The purpose of this EIR is to provide a document that will inform the Community Redevelopment Agency, the City Council and the general public of the environmental effects of the proposed Recovery and Revitalization Program including the proposed Amendment to the Crenshaw Redevelopment Plan. The EIR document, in itself, does not determine whether a project will be approved. According to Section 15121 of the State CEQA Guidelines, its purpose is to identify all potentially significant effects of a project on the physical environment, to determine the extent to which those effects could be reduced or avoided and to identify and evaluate feasible alternatives to the project. When an EIR determines that a project could cause significant impacts on the physical environment, those agencies with permit authority over the project are required to make one or more of the following findings before the project can be approved:

(1) The project has been altered to avoid or substantially lessen significant impacts identified in the Final EIR;

(2) The responsibility to implement or construct the proposed mitigation measure that would avoid or substantially lessen the significant impacts is within the jurisdiction of another public agency (e.g., another department, City or County); and

(3) Specific social, economic or other concerns render the mitigation measures or alternatives to the project infeasible.

According to the State CEQA Guidelines (Section 15151), the EIR need not be exhaustive in its analysis of a project, but should analyze important issues to a sufficient degree that permitting and approving agencies can make informed decisions. Disagreements between experts, for example, do not render an EIR inadequate, but the major points of such disagreements should be summarized.

1.3 LEAD AGENCY

The Community Redevelopment Agency is the "lead agency" in accordance with Section 15367 of the State CEQA Guidelines, which defines the lead agency as "the public agency which has the principal responsibility for carrying out or approving the project".

The Crenshaw Corridor Recovery and Revitalization Program (hereafter referred to as the proposed Recovery Program) is proposed by:

The Community Redevelopment Agency
of the City of Los Angeles
354 South Spring Street, Suite 800
Los Angeles, California 90013

1.4 PROBABLE ENVIRONMENTAL EFFECTS OF THE PROPOSED ACTIONS

Implementation of the proposed recovery and revitalization options, including development under the proposed Amendment to the Crenshaw Redevelopment Plan, will or may have the following significant effects, either by itself or cumulatively with existing and proposed development in the area:

1. Land use/neighborhood impacts
2. Soils (hazardous materials) and seismic impacts
3. Increase in noise levels
4. Increase in traffic which is substantial in relation to the capacity of the roadway systems
5. Socioeconomic impacts, including potential relocation of existing businesses and residents
6. Increased demand on public services and facilities
7. Potential to disrupt or displace known cultural resources

1.5 FORMAT OF THE ANALYSIS

Impact analysis for each subject is addressed and presented in five subsections as described below: (Note: This EIR has regrouped some of the subjects listed above for the purpose of analysis)

- **EXISTING CONDITIONS** - This subsection provides information describing the existing conditions on, or surrounding, the proposed Recovery Program Area which may be subject to change as a result of ultimate development of the proposed Recovery Program.

- **IMPACTS** - Each environmental category has identified criteria for determining whether an impact is considered significant. This subsection then provides information on the characteristics of the proposed Recovery Program which would have an effect with regard to environmental concerns, the nature and extent to which the proposed Recovery Program is expected to change the existing environment, and whether or not the impacts of the proposed Recovery Program meet or exceed the threshold levels of significance.

- **MITIGATION MEASURES** - This subsection identifies specific measures which will be imposed to reduce significant adverse impacts, and identifies whether or not the impacts would be reduced to a level of "not significant" with implementation of the mitigation measures.

- **OTHER RECOMMENDED MEASURES** - Measures in this category are <u>not</u> required to mitigate potentially significant impacts of the proposed Recovery Program to comply with the provisions of the California Environmental Quality Act (CEQA). Measures in this category are improvements that the CRA Board and/or City Council may wish to consider that could provide additional environmental enhancements or benefits to the proposed Recovery Program.

- **UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS** - This subsection identifies the residual effects of the proposed Recovery Program which would result even after mitigation measures have been applied.

2.0 SUMMARY

The proposed project considers three development alternatives for the proposed Crenshaw Corridor Recovery Program Area. The alternatives considered include the Infill/Rebuild Alternative, Moderate Development Alternative and the Maximum Probable Development Alternative. With respect to the magnitude of change anticipated, the alternatives range from consideration of approximately 917,000 net new square feet of commercial and industrial space and 244 residential dwelling units for the Infill/Rebuild Alternative to approximately 1,973,000 net new square feet of commercial and industrial space and 1,695 residential dwelling units for the Maximum Probable Development Alternative. The Moderate Development Alternative represents an intermediate level of change and would entail the creation of 1,293,000 net new square feet of commercial/industrial space and 426 residential dwelling units. The proposed Recovery Program Area encompasses approximately 340 acres and is intended to stimulate reinvestment and growth within the Crenshaw Corridor. The anticipated environmental consequences of the three alternatives as well as proposed mitigation measures are summarized below.

LAND USE IMPACTS

Compatibility with General Plan. It is anticipated that all development would be implemented in accordance to the adopted West Adams-Baldwin Hills-Leimert District Plan regardless of the alternative considered. The proposed alternatives do not anticipate the need for General Plan amendments.

- Infill/Rebuild Alternative. No adverse impact anticipated.

- Moderate Development Alternative. No adverse impact anticipated.

- Maximum Probable Development Alternative. It should be recognized that the Maximum Probable Development Alternative may be able to take advantage of higher densities in areas adjacent to Metro Rail Transit Stations because of increased densities that are recommended in the Metropolitan Transit Authority (MTA)/City of Los Angeles Transportation and Land Use Policy. Development levels associated with this alternative are not anticipated to exceed the floor area ratio (FAR) of 2:1 recommended in the Policy for Neighborhood Center type station areas. The floor area ratio recommended in the Transportation and Land Use Policy is about 30 percent higher than the FAR of 1.5 currently allowed on commercially designated properties along the corridor. It is anticipated that this policy would modify the affected Community Plan designations as an overlay type zone in the appropriate areas. It is anticipated that this higher density would only affect areas within one quarter mile of the following proposed rail transit stations.

    - Washington Boulevard and Crenshaw Boulevard
    - Exposition Boulevard and Crenshaw Boulevard
    - Martin Luther King Jr. Boulevard and Crenshaw Boulevard
    - Vernon Avenue and Crenshaw Boulevard

- Slauson Avenue and Crenshaw Boulevard
- West Boulevard and Redondo Boulevard

Potential for Land Use Conflicts. In general there are no significant differences between the alternatives.

- Infill/Rebuild Alternative. Since this alternative assumes some degree of development on properties currently designated for commercial use and which have in the past been used for commercial purposes, there is a limited likelihood that this alternative would create significant land use conflicts beyond those that currently occur in the corridor.

- Moderate Development Alternative. See discussion of Infill/Rebuild Alternative.

- Maximum Probable Development Alternative. See discussion of the Infill/Rebuild Alternative.

Displacement. Displacement has been estimated for comparative purposes only based on possible development of opportunity areas (described in the project description).

- Infill/Rebuild Alternative. Since only vacant sites or unoccupied buildings would be used, no displacement is associated with the Infill/Rebuild Alternative.

- Moderate Development Alternative. For planning purposes it is estimated that the Moderate Development Alternative could displace approximately 616,000 square feet of commercial/industrial buildings and nine residential dwelling units

- Maximum Probable Development Alternative. This alternative could displace approximately 1,000,000 square feet of commercial/industrial buildings and 137 residential dwelling units. See Section 5.2, Housing, Population and Employment, for a discussion of employment and business implications of the commercial/industrial building displacement.

MITIGATION MEASURES

1. Land uses displaced within the proposed Recovery Program Area shall be subject to the real property acquisition policies and relocation policies of the Community Redevelopment Agency. Should the redevelopment process be utilized in the corridor, then explicit provisions shall be established for the re-entry and re-establishment of displaced uses within the proposed Recovery Program Area.

2. The development of sites within the commercial frontage of Crenshaw Boulevard shall explicitly consider the effects of the commercial development on adjacent residential properties. Towards that end, screening, setbacks, landscaping, transitional building heights, the location of loading docks and delivery areas shall be designed to minimize adverse effects and/or nuisances.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

To the extent that displaced uses beneficial to the community cannot be relocated or accommodated within the proposed Recovery Program Area, the loss of such uses would be considered significant. Beneficial uses shall be defined as those uses that provide employment to persons in the adjacent community, uses owned by persons or organizations in the adjacent community or uses that provide a desired and needed community service or product.

HOUSING, POPULATION, EMPLOYMENT IMPACTS

Housing and Population Added. The net increase in housing units would be as follows:

- Infill/Rebuild Alternative. This alternative would result in the addition of approximately 244 residential dwelling units. This would represent a ten percent increase in the local housing stock. The associated increase in population would be 622 persons.

- Moderate Development Alternative. This alternative would result in the addition of approximately 436 residential dwelling units. This would represent a 17 percent increase in the local housing stock. The associated increase in population would be 1,086 persons.

- Maximum Probable Development Alternative. This alternative would result in the addition of approximately 1,695 residential dwelling units. This would represent a 68 percent increase in the local housing stock. The associated increase in population would be 4,322 persons.

Employment Capacity Added. The net addition of commercial space would provide added capacity within the proposed Recovery Program Area for employment:

- Infill/Rebuild Alternative 2,300 added job capacity
- Moderate Development Alternative 3,200 added job capacity
- Maximum Probable Development Alternative 4,900 added job capacity

Housing, Population and Employment Displacement.

- Infill/Rebuild Alternative. Since only vacant sites or unoccupied commercial space would be utilized, no displacement is anticipated.

- Moderate Development Alternative. It is estimated that this option could displace nine residential dwelling units (23 persons) and displace approximately 147 businesses (1,176 employees).

- Maximum Probable Development Alternative. It is estimated that this option could displace 137 residential dwelling units (349 persons) and displace approximately 239 businesses (1,912 employees).

MITIGATION MEASURES

1. Displaced residents and businesses shall receive assistance under the established relocation assistance procedures of the Community Redevelopment Agency of the City of Los Angeles.

2. Explicit procedures shall be established that displaced residents as well as businesses are able to relocate within the proposed Recovery Program Area, if desired.

3. The proposed Recovery Program shall contain financial mechanisms to allow and financial incentives to encourage displaced businesses to re-enter into new developments that may be constructed.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

To the extent that displaced residents, businesses, and or employees cannot be re-incorporated into the proposed Recovery Program Area, these impacts would be considered significant.

URBAN DESIGN, AESTHETICS AND ARCHITECTURAL RESOURCES IMPACTS

Disruption of Scenic Vistas

- Infill/Rebuild Alternative. Development associated with the Infill/Rebuild Alternative would be predominantly lower scale (one to two-stories), and would not have an effect on west-facing vistas of the Baldwin Hills.

- Moderate Development Alternative. Development associated with the Moderate Development Alternative would be predominantly lower scale (one to two-stories), and would not have an effect on west facing vistas of the Baldwin Hills.

- Maximum Development Alternative. This alternative could result in some concentration of three to four-story buildings in selected areas. These buildings could limit west facing vistas of Baldwin Hills from Crenshaw Boulevard. Westward views from residential neighborhoods would be less affected. It should be noted that eastward facing scenic vistas of the Downtown Los Angeles skyline from lower elevation residences in View Park could be adversely affected by any concentration of three to four-story buildings between Stocker Street and Vernon Avenue.

The Removal of Existing Urban Design, Architectural, Historical, or Landscape Resources

- Infill/Rebuild Alternative. Since only vacant sites would be utilized, there would be no adverse impacts on existing resource elements in the proposed Recovery Program Area.

- Moderate Development Alternative. This alternative would entail the use of the currently underutilized sites, as well as vacant sites. With approximately 600,000 square feet of existing buildings potentially affected (12 percent of the existing building space in the proposed Recovery Program Area), there is a low to moderate probability that the use of these underutilized sites could entail the removal of a building or buildings of architectural or historical significance.

- Maximum Probable Development Alternative. This alternative could entail the use of the currently underutilized sites, vacant sites, as well as currently occupied sites. With approximately 1,000,000 square feet of existing buildings potentially affected (20 percent of the existing building space within the proposed Recovery Program Area), there is a moderate to high probability that the use of these sites could entail the removal of a building or buildings of architectural or historical significance.

Adverse Impacts on the Existing Pedestrian Environment. No significant impacts are anticipated to result from the proposed Recovery Program-related alternatives. This concern should be addressed on a site specific basis and focus on such issues as, but not limited to, the number and location of driveways, ground floor uses, and sidewalk widths.

Casting of Shadows or Shade

- Infill/Rebuild Alternative. If not properly setback or stepped back, two-story buildings associated with this option could cast shadows on adjacent residences.

- Moderate Development Alternative. If not properly setback or stepped back. two-story buildings associated with this option could cast shadows on adjacent residences, particularly in those areas where there is no intervening public alley.

- Maximum Probable Development Alternative. If not properly setback or stepped back, two to four-story buildings associated with this option could cast shadows on adjacent residences, particularly in those areas where there is no intervening public alley. It is also anticipated that the massing of higher density buildings under this alternative could contribute to shade and shadow effects on adjacent residential areas.

Light and Glare. Given the shallow lot depths along the corridor (less than 150 feet), there is the possibility that ornamental or security lighting associated with each of the alternatives could result in the casting of illumination onto adjacent residential properties.

MITIGATION MEASURES

1. Elevated bridges or structures across Crenshaw Boulevard shall be prohibited in order to preserve scenic north facing vistas of the Hollywood Hills.

2. Four-story or buildings greater in height shall not be concentrated along Crenshaw Boulevard between Stocker Street and Vernon Avenue in order to preserve east facing scenic vistas of the Los Angeles Downtown area from View Park residences.

3. To the extent feasible, existing urban design, architectural, historical or landscape resources in the proposed Recovery Program Area shall be incorporated into future development.

4. Rehabilitation of architecturally significant or historically significant buildings shall meet the U.S. Secretary of the Interior Standards for the Rehabilitation of Historic Structures.

5. Should street trees or median street trees be removed then an equal number of trees of equal size shall be incorporated into the streetscape or landscaping plan for the future development.

6. New developments greater than one story shall be setback or stepped back from adjacent residential properties to avoid or minimize adverse shade and shadow impacts.

7. Ornamental and security lighting associated with future developments shall be oriented to avoid or minimize illumination of adjacent residential properties. In addition, illuminated signs shall be prohibited on the portion of commercial building facades that directly face residential areas.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

The measures identified above would reduce the potential urban design impacts to insignificant levels.

TRAFFIC AND CIRCULATION IMPACTS

Infill/Rebuild Alternative

Based on Los Angeles Department of Transportation (LADOT) criteria for determining significant impact, the traffic expected to be generated by the proposed Infill/Rebuild Alternative would have a significant impact on 22 of the 41 intersections studied. These affected intersections are as follows:

2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Rd.
5. La Brea Ave. & Adams Blvd
9. Crenshaw Blvd & I-10 WB off-ramp
10. Crenshaw Blvd & I-10 EB off-ramp
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum St.
16. Crenshaw Blvd & Rodeo Rd.
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker St.
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd
25. Arlington Ave. & I-10 WB off-ramp
28. Arlington Ave. & Jefferson Blvd
30. Arlington Ave. & Martin Luther King Jr. Blvd
35. Crenshaw Blvd & Venice Blvd

Moderate Development Alternative

The proposed Moderate Development Alternative would have a significant impact at 25 of the 41 intersections studied. The affected intersections are as follows:

2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Rd.
4. Martin Luther King Jr. Blvd & Rodeo Rd.
5. La Brea Ave. & Adams Blvd
6. Martin Luther King Jr. Blvd & Coliseum St.
7. Martin Luther King Jr. Blvd & Buckingham Rd.
9. Crenshaw Blvd & I-10 WB off-ramp
10. Crenshaw Blvd & I-10 EB off-ramp
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum St.
16. Crenshaw Blvd & Rodeo Rd
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker St.
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd
25. Arlington Ave. & I-10 WB off-ramp
28. Arlington Ave. & Jefferson Blvd
30. Arlington Ave. & Martin Luther King Jr. Blvd
35. Crenshaw Blvd & Venice Blvd

Maximum Probable Development Alternative

Traffic associated with the proposed Maximum Probable Development Alternative would have a significant impact at 30 of the 41 intersections studied. The affected intersections are as follows:

2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Rd.
4. Martin Luther King Jr. Blvd & Rodeo Rd.
5. La Brea Ave. & Adams Blvd
6. Martin Luther King Jr. Blvd & Coliseum St.
7. Martin Luther King Jr. Blvd & Buckingham Rd.
9. Crenshaw Blvd & I-10 WB off-ramp
10. Crenshaw Blvd & I-10 EB off-ramp
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum St.
16. Crenshaw Blvd & Rodeo Rd.
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker St.
19. Stocker St. & Santa Rosalia Drive
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd
25. Arlington Ave. & I-10 WB off-ramp
28. Arlington Ave. & Jefferson Blvd
29. Arlington Ave. & Rodeo Rd.
30. Arlington Ave. & Martin Luther King Jr. Blvd
31. Arlington Ave. & Vernon Ave.
33. Slauson Ave. & Van Ness Ave.
35. Crenshaw Blvd & Venice Blvd
36. Van Ness Ave. & Florence Ave.

Traffic Impact on Freeways

The proposed Recovery Program would not increase traffic volumes on any freeway link by more than 150 vph in either direction. Based on criteria established by the Los Angeles County CMP, the proposed Recovery Program does not justify further analysis under CMP standards and would not, therefore, have a significant impact.

MITIGATION MEASURES

Measures to Reduce Travel Demand

It is recommended that a shuttle bus system similar to the DASH system that is operated in downtown Los Angeles and other high activity centers of the City be implemented within the proposed Recovery Program Area. This shuttle bus system should operate along the entire 4.7 mile length of the corridor and offer service to adjacent residential areas as well. This service should be in addition to the existing regional service provided by the MTA and should operate during the midday as well as the morning and evening peak hours. This proposed improvement would be an appropriate measure for all three alternative land use scenarios.

Measures to Increase Capacity

- Infill/Rebuild Alternative. The following intersection improvements are suggested to mitigate the project impacts under the Infill/ Rebuild Alternative:

  La Brea Avenue & Jefferson Boulevard - Add this intersection to the City of Los Angeles Automated Traffic Surveillance and Control (ATSAC) system.

  La Brea Avenue & Rodeo Road - Add this intersection to ATSAC.

  La Brea Avenue & Adams Boulevard - Re-stripe both the westbound and eastbound approaches to add an exclusive westbound right-turn lane, resulting in one exclusive left-turn lane, two through lanes and one exclusive right-turn lane on the westbound approach.

  Crenshaw Boulevard & Adams Boulevard - Widen the southbound approach by seven feet to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require one to seven feet of right-of-way acquisition for a distance of 50 feet.

  Crenshaw Boulevard & Jefferson Boulevard - Widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 80 feet. Also, widen the eastbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, two through lanes and one exclusive right-turn lane. This would require four feet of right-of-way acquisition for 120 feet. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Exposition Boulevard - Add this intersection to ATSAC.

Crenshaw Boulevard & Coliseum Street - Re-stripe the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Rodeo Road - Widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 100 feet. Also, widen the eastbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, two through lanes and one exclusive right-turn lane. This would require nine feet of right-of-way acquisition for 80 feet. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Martin Luther King Jr. Boulevard - Re-stripe the westbound approach to provide dual left-turn lanes, one through lane and one shared through/right-turn lane. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Stocker Street - Re-stripe the eastbound approach to provide two exclusive left-turn lanes, two through lanes and one exclusive right-turn lane. This would require eight feet of right-of-way acquisition for 180 feet. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Vernon Avenue - Add this intersection to ATSAC.

Crenshaw Boulevard & Slauson Avenue - Re-stripe the southbound approach from 470 feet north of Slauson Avenue to provide one exclusive left-turn lane, three through lanes and one shared through/right-turn lane. This would require removing the frontage road on the southbound approach. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Hyde Park Boulevard - Re-stripe the eastbound and westbound approaches to provide one exclusive left-turn lane and one shared through/right-turn lane. In addition, add this intersection to ATSAC.

Crenshaw Boulevard & Florence Avenue - Add this intersection to ATSAC.

Crenshaw Boulevard & Manchester Boulevard - Add this intersection to ATSAC.

Arlington Avenue & I-10 westbound ramps - Remove the existing island on the southbound approach to provide an additional through lane, resulting in two through lanes and one shared through/right-turn lane.

Arlington Avenue & Jefferson Boulevard - Add this intersection to ATSAC.

Arlington Avenue & Martin Luther King Jr. Boulevard - Add this intersection to ATSAC.

Crenshaw Boulevard & Venice Boulevard - Re-stripe Crenshaw Boulevard to provide dual left-turn lanes on both the northbound and southbound approaches. Also, modify the traffic signal to provide protected left-turn phasing in the north/south direction. This improvement would require the removal of about one parking space on the southbound approach and about five spaces on the northbound approach.

- Moderate Development Alternative. The following mitigation measures proposed for the Moderate Development Alternative include those discussed above for the Infill/ Rebuild Alternative as well as those discussed below:

Martin Luther King Jr. Boulevard & Rodeo Road - Add this intersection to ATSAC.

Martin Luther King Jr. Boulevard & Coliseum Street - Re-stripe Martin Luther King Jr. Boulevard to provide an additional through lane on the southbound approach, resulting in one exclusive left-turn lane, two through lanes and one shared through/right-turn lane. This would require median modifications along Martin Luther King Jr. Boulevard. In addition, add this intersection to ATSAC.

Martin Luther King Jr. Boulevard & Buckingham Road - Add this intersection to ATSAC.

Crenshaw Boulevard & Vernon Avenue - In addition to the mitigation measure suggested for the Infill/ Rebuild Alternative, widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 80 feet.

- Maximum Probable Development Alternative. The mitigation measures proposed for the Maximum Probable Development Alternative include those discussed for the Infill/Rebuild and Moderate Development Alternatives above as well as those discussed below:

Crenshaw Boulevard & Jefferson Boulevard - The eastbound exclusive right-turn lane would need to be extended in length by an additional 40 feet. This increase in length would require acquisition of four feet of additional right-of-way along this portion of Crenshaw Boulevard. The added four feet of right-of-way would thus bring the total right-of-way for the street to 160 feet.

Crenshaw Boulevard & Exposition Boulevard - In addition to the mitigation measure suggested for the Infill/ Rebuild Alternative, widen the westbound approach to provide an exclusive right-turn lane, resulting in one shared through/left-turn lane, one through lane and one exclusive right-turn lane. This would require 12 feet of right-of-way acquisition for 120 feet.

Santa Rosalia Drive & Stocker Street - Add this intersection to ATSAC.

Crenshaw Boulevard & Hyde Park Boulevard - In addition to the mitigation measure suggested for the Infill/ Rebuild Alternative, widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 50 feet.

Arlington Avenue & Rodeo Road - Add this intersection to ATSAC.

Arlington Avenue & Vernon Avenue - Add this intersection to ATSAC.

Van Ness Avenue & Slauson Avenue - Add this intersection to ATSAC.

Van Ness Avenue & Florence Avenue - Add this intersection to ATSAC.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

- Mitigation measures for the proposed Recovery Program include the implementation of a shuttle bus system, adding impacted intersections to the City's ATSAC system, and the implementation of physical roadway improvements.

- The implementation of the proposed improvement package would mitigate impacts at 17 of the 22 significantly impacted intersections under the Infill/Rebuild Alternative resulting in a total of five unmitigatable locations.

- A total of 15 of the 25 significantly impacted intersections can be mitigated by the proposed package resulting in 10 intersections whose impacts cannot be mitigated under the Moderate Development Alternative.

- Impacts at a total of 16 of the 30 significantly impacted intersections can be mitigated resulting in 14 unmitigatable intersections under the Maximum Probable Development Alternative.

AIR QUALITY IMPACTS

Construction Emissions. The construction emissions comparison of the alternatives indicates that for a typical project within the proposed Recovery Program Area construction emissions would likely exceed the South Coast Air Quality Management District (SCAQMD) threshold criteria for Particulates (PM_{10}). SCAQMD quarterly emissions thresholds would be exceeded for Nitrogen Oxides and PM_{10} for each of the alternatives. In addition, the Maximum Probable Development Alternative may also cumulatively exceed the Reactive Organic Gas threshold of 2.5 tons per quarter.

Operations Emissions

- Each alternative, if completely built out, would exceed the carbon monoxide, nitrogen dioxide, and reactive organic gas thresholds of 550 pounds, 55 pounds and 55 pounds per day, respectively.

- None of the alternatives would exceed the threshold for sulfur dioxide.

- Only the Maximum Probable Development Alternative would exceed the PM_{10} threshold of 150 pounds per day.

Carbon Monoxide Analysis

- Infill/Rebuild Alternative would have one-hour concentrations ranging from 6.0 to 16.0 ppm. The one-hour standard would not be exceeded at the representative receptor locations.

- Moderate Development Alternative would have one-hour concentrations ranging from 6.0 to 16.8 ppm. The one-hour standard would not be exceeded at the representative receptor locations.

- Maximum Probable Development Alternative would have one-hour concentrations ranging from 6.0 to 16.8 ppm. The one-hour standard would not be exceeded at the representative receptor locations.

- Infill/Rebuild Alternative would have eight-hour concentrations ranging from 4.1 to 10.9 ppm. The eight-hour standard would be exceeded at one of the five representative receptor locations. This impact would be considered significant.

- Moderate Development Alternative would have eight-hour concentrations ranging from 4.1 to 11.5 ppm. The eight-hour standard would be exceeded at one of the representative receptor locations. This impact would be considered significant.

- Maximum Probable Development Alternative would have eight-hour concentrations ranging from 4.1 to 11.3 ppm. The eight-hour standard would be exceeded at one of the five representative receptor locations.

Consistency with the *Air Quality Management Plan (AQMP)*. The proposed Recovery Program alternatives would not increase development densities above that which is already allowed under the existing West Adams-Baldwin Hills-Leimert District Plan. As a result, the proposed Recovery Program is consistent with the *AQMP*.

MITIGATION MEASURES

Construction Phase. Short-term impacts of the construction equipment shall be minimized by the following measures. These measures shall be established as conditions of individual

project approvals within the proposed Recovery Program Area and be contained in all applicable contracts between the project sponsors and contractors.

1. **Fugitive Dust Control.** Maintain a fugitive dust control program consistent with the provisions of SCAQMD Rule 403 for any grading or earthwork activity that may be required. Measures to be implemented shall include:

   - **Wetting.** Water all active projects with multiple daily applications to assure proper dust control.

   - **Haul Trucks.** Wash down the under carriage of all haul trucks leaving site. Install vehicle wheel-washers before the roadway entrance at construction sites. Require all trucks hauling dirt, sand, soil, or other loose substances and building materials to be covered, or to maintain a minimum freeboard of two feet between the top of the load and the top of the truck bed sides.

   - **Unpaved Areas.** Use of soil binders or vegetation on all undeveloped or non-built areas of the site. Chemically treat unattended construction areas (disturbed lands which have been, or are expected to be unused for four or more consecutive days). Require paving, curbing, and vegetative stabilization of the unpaved areas adjacent to roadways on which vehicles could potentially drive (i.e., road shoulders).

   - **Driveways and Curbs.** Pave all driveways and internal roadways as early as practicable in the site construction process. Install all curbs at the initial phase of development within the proposed Recovery Program Area.

   - **Street Sweeping.** Utilize street sweeping equipment on all adjacent streets used by haul trucks or vehicles that have been on-site.

   - **Barriers.** Construct a temporary wall or barriers of sufficient height along the perimeter of the site to restrict windblown dust from affecting adjacent residences.

   - **Open Stock Piles.** Contractors will cover, enclose or chemically stabilize any open stockpiles of soil, sand and/or other aggregate materials.

   - **Phasing.** Require a phased schedule for construction activities to minimize daily emissions. Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.

   - **Vehicles on Unpaved Surfaces.** Prohibit parking on unpaved and untreated parking lots. Enforce low vehicle speeds on unpaved roads or surface areas.

2. **Equipment Emissions.** Construction equipment will be shut off to reduce idling when not in direct use. Diesel engines, motors, or equipment shall be located as far away

as possible from existing residential areas. Low sulfur fuel should be used for construction equipment.

3. **Location of Staging Areas.** If required, haul truck staging areas shall be approved by the Department of Building and Safety. Haul trucks shall be staged in non-residential areas.

Operation Phase. Transit use within the Crenshaw Corridor is already high. Long-term emissions from operations of development projects within the proposed Recovery Program Area shall be further reduced through the following transportation systems management measures:

4. **Transportation Management Association.** Creation of a Transportation Management Association (TMA) within the proposed Recovery Program Area. The TMA would be charged with the responsibility of implementing and achieving a Transportation Demand Management Plan (TDM) with specific trip reduction goals for the developments within the proposed Recovery Program Area that would be consistent with *AQMP* trip reduction targets above the requirements of Regulation XV. The TMA shall also provide public education regarding the importance of reducing vehicle miles traveled and the related air quality impacts through the use of brochures, classes, and other informational tools.

5. **Parking Management.** Creation of preferential parking for high occupancy vehicles, as well as other forms of parking management that would encourage higher vehicle occupancies.

6. **Amenities for Non-Vehicular Modes.** Provision of amenities that would encourage transit, pedestrian or bicycle access to the site. Such amenities would include bus shelters, visible signage identifying transit routes and stops, bike racks/shower facilities, bicycle lanes, attractive pedestrian pathways and sidewalks, shuttle service to nearby activity centers or park and ride lots, free information on transit services, free or subsidized transit passes, and guaranteed ride home programs. This measure shall also entail the establishment of additional bus or transit stops and services, where feasible.

7. **Non-Travel Incentives.** Encourage and facilitate the reduction of the number of trips that an individual makes from home or work by introducing compressed work weeks, telecommuting, and the combining of non-work trips.

8. **Peak Hour Travel Restrictions.** Encourage the reduction of trips during the most congested periods and spread them throughout the day by introducing alternative work hours, flexible work hours, staggered work hours, as well as vehicle and truck use restrictions.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Construction phase emissions would exceed SCAQMD daily emissions criteria. Operations emissions would also exceed SCAQMD criteria and the California Ambient Air Quality Standard would be exceeded in the eight-hour period for two of the five representative receptor locations.

NOISE IMPACTS

Regardless of the alternative, there could be a substantial change to the ambient noise environment during the period of construction. The change would exceed the five decibel limit allowed under the City of Los Angeles Noise Ordinance, Section 112.08. Depending on the duration of construction, these noise levels could be considered significant.

- Infill/Rebuild Alternative. Sound levels at four of the five receptors would increase by one decibel and noise levels at one receptor would not change. Based on a threshold change of three decibels, none of these changes are considered significant.

- Moderate Development Alternative. The sound level at one receptor (Coliseum School) would increase by two decibels, while the remaining four receptors would increase by one decibel. Based on a threshold change of three decibels, none of these changes are considered significant.

- Maximum Probable Development Alternative. The sound level at one receptor (Coliseum School) would increase by two decibels while the remaining four receptors would increase by one decibel. Based on a threshold change of three decibels, none of these changes are considered significant.

Based on the above, mobile noise resulting from the alternative is not anticipated to have a significant adverse effect on community noise levels.

MITIGATION MEASURES

The following measures would reduce construction impacts to a level of "not significant":

1. The projects constructed within the proposed Recovery Program Area shall comply with applicable City noise regulations.

2. For individual projects within the proposed Recovery Program Area, a procedure shall be established to notify adjacent property owners and tenants, particularly residences, of time periods when there would be noisy construction activities.

3. During construction, the contractors for projects within the proposed Recovery Program Area shall muffle and shield intakes and exhaust, shroud and shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible.

4. During construction of projects within the proposed Recovery Program Area, truck haul routes (demolition waste, dirt excavation, cement, materials delivery) shall be designated and approved. These routes shall avoid residential streets and local streets adjacent to public and private schools where possible.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

PUBLIC SERVICES IMPACTS

FIRE PROTECTION

The Los Angeles City Fire Department considers fire protection services for the proposed Recovery Program Area to be adequate. Project implementation would marginally increase the need for fire protection and emergency medical services in this area. The proposed Recovery Program would not impact paramedic access to the proposed Recovery Program Area. At the present time, there are no immediate plans to increase Fire Department staffing or resources in those stations which would serve the proposed Recovery Program Area. As a result, the proposed Recovery Program would increase the need for fire protection and emergency medical services in the proposed Recovery Program Area.

The traffic impact analysis indicates that each of the alternatives under consideration will increase the number of intersections in the area that would operate at Level of Service E or worse. These intersections would have an adverse effect on emergency response.

MITIGATION MEASURES

1. Intersection improvement measures shall be implemented as discussed in Section 5.4, Traffic and Circulation, to improve intersection traffic operations, and thereby improve emergency response capabilities.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

In view of the fact that from 27 to 29 intersections would remain operating at levels of service E or F even with the imposition of mitigation measures, then according to Fire Department Criteria, there would be a unavoidable significant adverse effect of emergency response times.

POLICE PROTECTION

The Los Angeles Police Department (LAPD) considers police protection services for the proposed Recovery Program Area to be adequate. Project implementation would marginally increase the need for increase police personnel in this area. Using the existing citywide ratio of three sworn officers to 1,000 persons as an approximate indicator of police personnel needed, the incremental increase associated with each alternative would be as follows:

- Infill/Rebuild Alternative. Would require nine additional officers.
- Moderate Development Alternative. Would require 13 additional officers.
- Maximum Probable Development Alternative. Would require 28 additional officers.

MITIGATION MEASURES

2. Prepare security plans in consultation with the LAPD crime prevention unit prior to approval for site specific developments within the corridor area. The security plans should include consideration of such issues as on-site security officers for new developments, security lighting and surveillance equipment for interior and exterior building areas.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

SCHOOLS

According to the Los Angeles School District's "Student Generation Factors", the proposed Recovery Program is estimated to generate the following number of students:

- Infill/Rebuild Alternative: 101 school-age children (52 elementary, 22 junior high, and 27 senior high-school students).
- Moderate Development Alternative: 175 school-age children (90 elementary, 39 junior high, and 46 senior high school students).
- Maximum Probable Development Alternative: 698 school-age children (359 elementary, 154 junior-high, and 185 senior high school students).

MITIGATION MEASURES

3. According to the Los Angeles Unified School District, net student generation in the area of schools can be mitigated by paying a temporary transport fee (to bus the new students) until such time as adequate schools are built in the proposed Recovery Program Area to accommodate students. The amount of this fee shall be negotiated with the Los Angeles Unified School District.

4. Currently each of the three Community Advisory Committees (CACs) within the proposed Recovery Program Area are considering use of revitalization or redevelopment to stimulate reinvestment and growth in their communities. The CAC for the Council District 8 segment of the Crenshaw corridor (Subarea 8) has already selected redevelopment as the desired approach. The selection of redevelopment as an approach means that the mitigation of impacts on schools would be addressed under provisions of the California Community Redevelopment Law.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

UTILITIES IMPACTS

WATER

- Infill/Rebuild Alternative. This option would require 171,959 net new gallons per day or 324,500 gallons per day per square mile. This would exceed the assumed average year 2005 available supply by a factor of 2.3.

- Moderate Development Alternative. This option would require 260,153 net new gallons per day or 490,900 gallons per day per square mile. This would exceed the assumed average year 2005 available water supply by a factor of 3.6.

- Maximum Probable Development Alternative. This option would require 627,437 net new gallons per day or 1.2 million gallons per day per square mile. This would exceed the assumed average year 2005 available water supply by almost nine times.

MITIGATION MEASURES

1. Projects within the proposed Recovery Program Area shall satisfy and/or exceed water conservation measures mandated by local ordinances, i.e., Ordinance No. 166,080 and Ordinance No.165,004.

2. During the course of the buildout of development within the proposed Recovery Program Area -- over a 10-15 year period-- it may become necessary for individual developments to make a fairshare contribution to replacing and updating the water supply infrastructure.

Water conservation measures described in the Ordinances include, but are not limited to, the following:

- Reclaimed water shall be used during grading and construction for dust control, soil compaction, and concrete mixing.

- Mandatory reduction of water consumption by 15 percent.

- Installation of toilet tank conservation devices.

- Landscaping with drought-tolerant/indigenous species (xeriscape).

- Installation of other water saving devices such as faucets and showers for new development, as well as the retrofit of fixtures for existing developments that may be included within proposed Recovery Program Area reinvestment projects.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Water conservation measures may not be sufficient to reduce the water demand from the alternatives to less than significant.

SEWERS

- Infill/Rebuild Alternative. The wastewater generation by this alternative would be approximately 147,000 net new gallons per day (gpd) or 294,000 gpd per square mile. This demand level would exceed the average citywide allowed increases by 48 percent, and would represent a disproportionate share of the total growth in wastewater that would ultimately be treated at the Hyperion Treatment Plant (HTP). This would be considered a significant impact. Given the allowed wastewater increase limits, approximately 67 percent of this alternative could be built out during the 1993-2005 period.

- Moderate Development Alternative. The projected wastewater incremental increase would be approximately 223,000 net new gpd or 446,000 gpd per square mile. This demand level would exceed the average citywide allowed increases by 125 percent, and would represent a disproportionate share of the total growth in wastewater service demand. This change would be considered a significant impact. Given the allowed wastewater increase limits, approximately 44 percent of this alternative could be built out during the 1993-2005 period.

- Maximum Probable Development Alternative. The projected wastewater service demand would be approximately 550,000 net new gpd or 1,100,000 gpd per square mile. This consumption would exceed the allowed increases by over 500 percent, and would represent a disproportionate share of the total growth in wastewater demand. This change would be considered a significant impact. Given the allowed wastewater increase limits, approximately 18 percent of this alternative could be built out during the 1993-2005 period.

Sewer Infrastructure. According to recent sewer gauging data compiled by the Department of Public Works as part of the General Plan Framework study, 10 of the total 16 gauging locations (60 percent) in the proposed Recovery Program Area vicinity indicated that the trunk sewer being assessed was at 50 percent capacity or greater. Added wastewater generation associated with each of the alternatives would thus constitute a significant impact on the local sewer infrastructure system.

MITIGATION MEASURES

3. To reduce wastewater generation impacts on treatment and sewer facilities and to increase the amount of recovery and revitalization-related development, projects within the proposed Recovery Program Area shall be equipped with wastewater conservation fixtures including low flow toilets.

4. Approval of future developments within the Recovery Program Area shall be prohibited unless there is demonstrated adequate infrastructure capacity as determined by the City of Los Angeles Department of Public Works.

5. Inclusion of capital improvements to the local sewer system as part of either the revitalization or redevelopment plan for the proposed Recovery Program Area.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

The proposed Recovery Program would add as much as 550,000 net new gallons of sewage per day into the HTP watershed which is currently experiencing capacity problems. The impact of any sewage generation increase within the system may be considered significant because of the ongoing plans to redesign the HTP system and the concurrent reduction in available sewage capacity.

STORMWATER DRAINAGE

Approximately the same amount and type of runoff would be generated by the proposed Recovery Program Area for a 50-year frequency storm (Q50) as under the existing conditions, therefore impacts in regard to storm drainage facilities are not considered significant.

MITIGATION MEASURES

None.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

SOLID WASTE AND DISPOSAL

The addition of the proposed Recovery Program-related solid waste would further incrementally contribute to the reduction in available landfill capacity.

- Infill/Rebuild Alternative. This alternative would contribute approximately 5,325 pounds per day (2.7 tons per day).

- Moderate Development Alternative. In comparison, the Moderate Development Alternative would contribute approximately 7,829 pounds per day (3.9 tons per day).

- Maximum Probable Development Alternative. The Maximum Probable Development Alternative would contribute 16,149 pounds per day (8.1 tons per day).

These solid waste contributions are considered to be a significant impact.

MITIGATION MEASURES

Future developers of the proposed Recovery Program Area shall be required to conform to the following measures:

6. For commercial and industrial projects as well as multi-family housing projects more than 20 units, commercial size trash compactors shall be installed in all portions of each component of the proposed Recovery Program.

7. In order to reduce the volume of solid waste generated by each component of the proposed Recovery Program, a recycling program shall be established by the management of each facility on-site.

8. Trash pick up areas shall be of sufficient size to allow the provision of separate bins for newspapers, aluminum cans, glass and "white" paper to allow materials to be easily hauled off-site and recycled via a recycling program established by the management of each facility on-site.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Continued consumption of scarce landfill capacity.

ENERGY IMPACTS

- Infill/Rebuild Alternative. This alternative would result in the consumption of 14.5 net new million kWh of electricity and 42.4 net new million cubic feet of natural gas per year. This change would represent a 22 percent increase in electricity consumption and a 17 percent increase in natural gas consumption.

- Moderate Development Alternative. This alternative would result in the consumption of 21.0 net new million kWh of electricity and 63.6 net new million cubic feet of natural gas. This change would represent a 31 percent increase in electricity consumption and a 26 percent increase in natural gas consumption.

- Maximum Probable Development Alternative. This alternative would result in the consumption of 37.3 net new million kWh of electricity and 146.0 net new million cubic feet of natural gas. This change would represent a 56 percent increase in electricity consumption and a 59 percent increase in natural gas consumption.

MITIGATION MEASURES

1. During the design process, each site developer shall consult with the Department of Water and Power, Energy Services Subsection, and the Southern California Gas Company, the Commercial Industrial or Residential Staff Supervisor, regarding possible Energy Conservation Measures. Each site developer shall incorporate measures which would exceed minimum Title XXIV standards.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Energy consumption by the proposed Recovery Program would increase the use of electricity and natural gas consumption which would result in significant adverse impacts to those irretrievable and irreplaceable resources.

GEOLOGY AND HYDROLOGY IMPACTS

GEOLOGY

Slope Stability Assessment

Approximately 53 acres (14 percent) of the proposed Recovery Program Area is within the Slope Stability Study Area as designated by the City of Los Angeles, General Plan Seismic Safety Element. Within this portion of the proposed Recovery Program Area, there is potential for slope instability that may affect the design of future projects.

Foundation Stability Assessment.

Approximately 277 acres (72 percent) of the proposed Recovery Program Area is located within the City of Los Angeles designated Detailed Study Area where geology reports are required prior to approval of all projects.

- **Fault-Induced Ground Rupture.** The hazard of fault-induced ground rupture in the proposed Recovery Program Area is considered to be slight.

- **Seismic Ground Shaking.** In the proposed Recovery Program Area, the geotechnical hazard posed by seismic shaking is considered to be high, due both to the proximity of known active faults (Newport-Inglewood, Santa Monica), and to the nature of the materials underlying the proposed Recovery Program Area (unconsolidated alluvium and colluvium).

- **Seismically-Induced Settlement.** The potential hazard posed by seismic settlement in the proposed Recovery Program Area is considered to be moderate.

- **Ground Lurching.** The potential for ground lurching due to seismic shaking is considered to be moderate in the proposed Recovery Program Area.

HYDROLOGY

Groundwater. Approximate 377 acres (97 percent) of the proposed Recovery Program Area are located within areas with high groundwater levels less than 50 feet. Future projects associated with each of the alternatives under consideration --where subterranean structures are required-- would have the potential to affect groundwater flow in these areas.

- Infill/Rebuild Alternative. This alternative would be least likely to require subterranean levels and no adverse impacts are anticipated.

- Moderate Development Alternative. Given the modest scale of future development projects assumed to be associated with this alternative, there would be some limited potential for affects on groundwater flows. Impacts for this alternative would possibly be significant.

- Maximum Probable Development Alternative. The greatest potential for groundwater to be affected would result from higher density developments more likely to be associated with the Maximum Probable Development Alternative (where underground parking may be provided). Impacts for this alternative would be considered significant.

Liquefaction. Approximately 184 acres (47 percent) of the proposed Recovery Program Area are located within an area susceptible to liquefaction. Future projects located in these areas and associated with each of the alternatives under consideration would be subject to this potential hazard, and as a result the potential for liquefaction would be considered a significant impact.

Flooding. Approximately 107 acres (28 percent) of the proposed Recovery Program Area are located within the 500-year floodplain as designated by the Federal Emergency Management Agency (FEMA). Future projects associated with each of the alternatives under consideration would be subject to this potential hazard, and as a result the potential for flood would be considered a significant impact.

MITIGATION MEASURES

1. The stability of any excavations should be evaluated prior to construction and appropriate methods, such as benching, slope layback, or shoring, applied. All methods should comply with or exceed Cal-OSHA standards.

2. The soils underlying the proposed Recovery Program Area, especially where structures are planned, should be evaluated for the presence of compressible materials. Compressible materials should be removed and replaced as compacted fill (with the exception of peat which should be removed from the fills). The criteria for leaving surficial soils in-place should be consistent with the grading specifications of the City of Los Angeles. Other recommendations may include deep piles or caissons to support the structures and/or in-place mechanical densification of compressible layers.

3. Determine if the soils underlying the proposed Recovery Program Area are susceptible to liquefaction, and if so, special foundation recommendations should be provided to mitigate this hazard. Possible mitigation recommendations may include deep piles or caissons to support the planned structures, and/or mechanical densification of subsurface soils prone to liquefaction.

4. Determine if the alluvial deposits underlying the site are susceptible to seismically-induced settlement. Special recommendations should be made to mitigate this hazard. Mitigation alternatives include foundations on piles or caissons driven into deeper subsurface materials that are not settlement-prone, or compaction of the near-surface soil materials to decrease their susceptibility to settlement.

5. Determine if soils underlying the proposed Recovery Program Area would be susceptible to ground lurching. If so, special foundation recommendations may be made to mitigate this hazard. An alternate mitigation measure is to remove and recompact the subsurface soils prone to ground lurching.

6. Determine which soils with moderate expansivity beneath structural areas may be mitigated by conventional foundations with additional reinforcement. For highly expansive soils, special foundations, such as post-tensioned slab foundations, raft foundations, or caissons may be used as mitigation measures.

7. A state-certified geologist should review all excavations of future projects within the proposed Recovery Program Area for evidence indicative of faulting, or seismically-induced ground deformation. If during grading, an active fault is determined to extend through the proposed Recovery Program Area, appropriate building setbacks may have to be established.

8. Temporary erosion control measures should be provided during the construction phase for future projects in the proposed Recovery Program Area, as required by current grading codes. In addition, a permanent erosion control program should be implemented for the development. This program should include proper care of drainage control devices, proper irrigation, rodent control, and landscaping. Erosion control devices should be field-checked following heavy rainfall periods to confirm that they are performing as designed.

9. A hydrological assessment shall be prepared for all proposed Recovery Program Area projects in areas with high water tables. This assessment shall assess effects on associated aquifers as well as pumping and dewatering requirements.

10. Under the supervision of the City of Los Angeles Department of Building and Safety, any loose surficial liquefaction-prone sediments occurring in the proposed Recovery Program Area shall be compacted to appropriate City standards to reduce liquefaction potential. Additionally, foundations and footings for all developments within susceptible areas shall be designed in accordance with City of Los Angeles code standards to reduce the potential for structural failure associated with liquefaction.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

SAFETY/RISK OF UPSET IMPACTS

The wide extent of hazardous and toxic materials within the proposed Recovery Program Area suggests that a significant impact is anticipated for each alternative.

MITIGATION MEASURES

Listed below are recommended mitigation measures to reduce the potential incidents involving hazardous and toxic materials, as well as lessen the contaminated soils impacts.

1. Projects involving hazardous materials shall be reviewed for proper handling procedures and safe operating practices. A detailed engineering analysis should be completed to include a review of spill containment procedures and waste minimization appraisal.

2. The project sponsor/s shall obtain all necessary regulatory agency permits prior to commencing project. A hazardous material inventory business plan shall be registered with the Fire Department Hazardous Material Unit.

3. If the evidence of soil contamination or the presence of an underground storage tank is revealed, excavation shall be conducted to remove the underground storage tank and/or remediate contaminated soils and groundwater. The procedure shall be performed by a qualified environmental professional in conformance with applicable city, state and federal standards.

4. A project involving hazardous waste shall only use properly trained and qualified hazardous waste handlers to address hazardous waste disposal needs.

5. Site specific Phase I Environmental Assessments are recommended for proposed developments within the proposed Recovery Program Area. Where applicable, an asbestos and/or lead-based paint investigation shall be conducted on structures to be demolished or rehabilitated.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

ARCHAEOLOGICAL RESOURCES IMPACTS

Due to the fact that archaeological resources have been recorded within and adjacent to the proposed Recovery Program Area, the likelihood of encountering archaeological resources as part of site specific development is considered high. This potential for a significant impact would be similar for each of the alternatives.

MITIGATION MEASURES

Prior to the approval of building permits for future site specific developments within the proposed Recovery Program Area, particularly those within or adjacent to the sensitive archaeological areas, a Phase 1 archaeological investigation should be conducted by a professional archaeologist.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

3.0 PROJECT DESCRIPTION

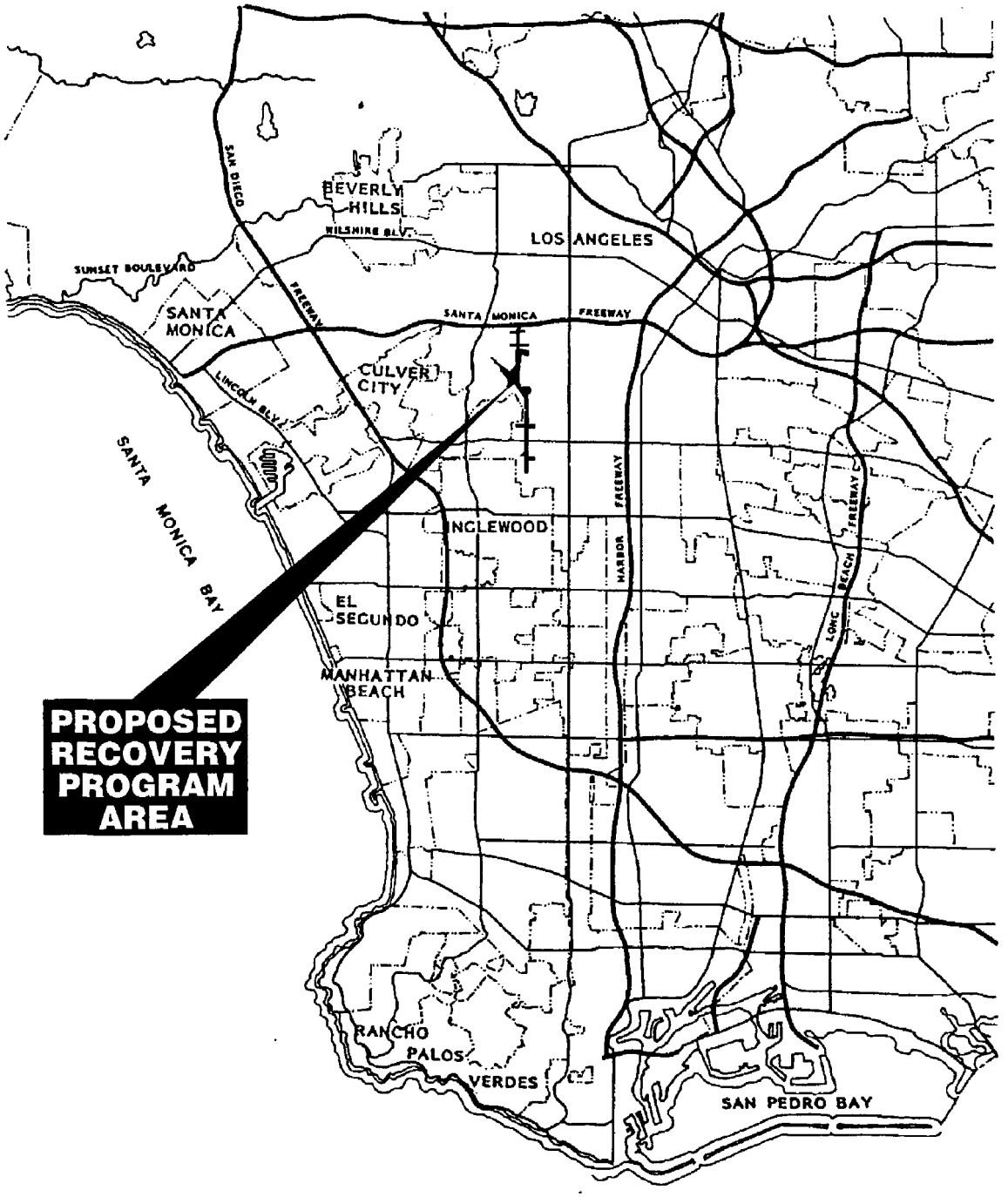
3.1 LOCATION

In April, 1993, the City Council of the City of Los Angeles directed the Community Redevelopment Agency of the City of Los Angeles (CRA) to initiate revitalization and recovery efforts in areas affected by the April 29, 1992 civil unrest. The proposed Recovery Program Area is one of seven areas identified by the City Council and the CRA. The Crenshaw Corridor (**Figure 3.1-1**), extends approximately 4.7 miles from the Santa Monica Freeway on the north to the City of Los Angeles/Inglewood limits on the south. As shown in **Figure 3.1-2,** the corridor has been specifically defined to encompass primarily commercially or industrially zoned parcels that adjoin Crenshaw Boulevard. There are also portions of the corridor that extend west of the Baldwin Hills Crenshaw Plaza and include commercially zoned properties along Martin Luther King Jr. Boulevard and Stocker Street. The Crenshaw Corridor encompasses approximately 340 acres and includes portions of City of Los Angeles Council Districts 6, 8 and 10 (see **Figure 3.1-3**). The corridor also includes the existing 54-acre Crenshaw Redevelopment Project Area (Baldwin Hills Crenshaw Plaza).

3.2 ALTERNATIVES TO BE CONSIDERED

The Program EIR for the proposed Crenshaw Corridor Recovery Program is intended to be an Alternatives EIR where there are a range of optional proposals that the City and the CRA may wish to pursue. The purpose of the alternatives approach is to bracket a range of probable options to ensure that the environmental review process at the Program level can be used to its maximum extent to reduce administrative reviews when actual projects are proposed. Alternatives for the proposed Recovery Program have been based on the extensive planning and community participation efforts that have taken and continue to take place in the Crenshaw Corridor. Specifically, the alternatives have incorporated findings from the following:

- Crenshaw Neighborhood Plan (Draft) prepared by the Crenshaw Neighborhood Cluster
- West Adams-Baldwin Hills-Leimert District Plan Revision (Draft) prepared by the Department of City Planning
- Crenshaw-Prairie Corridor Preliminary Planning Study (Draft) prepared by the Metropolitan Transportation Authority
- Leimert Park Community Planning Charrette (Draft)
- Crenshaw Redevelopment Project Expansion Economic Feasibility Study and Administrative Draft Environmental Impact Report.

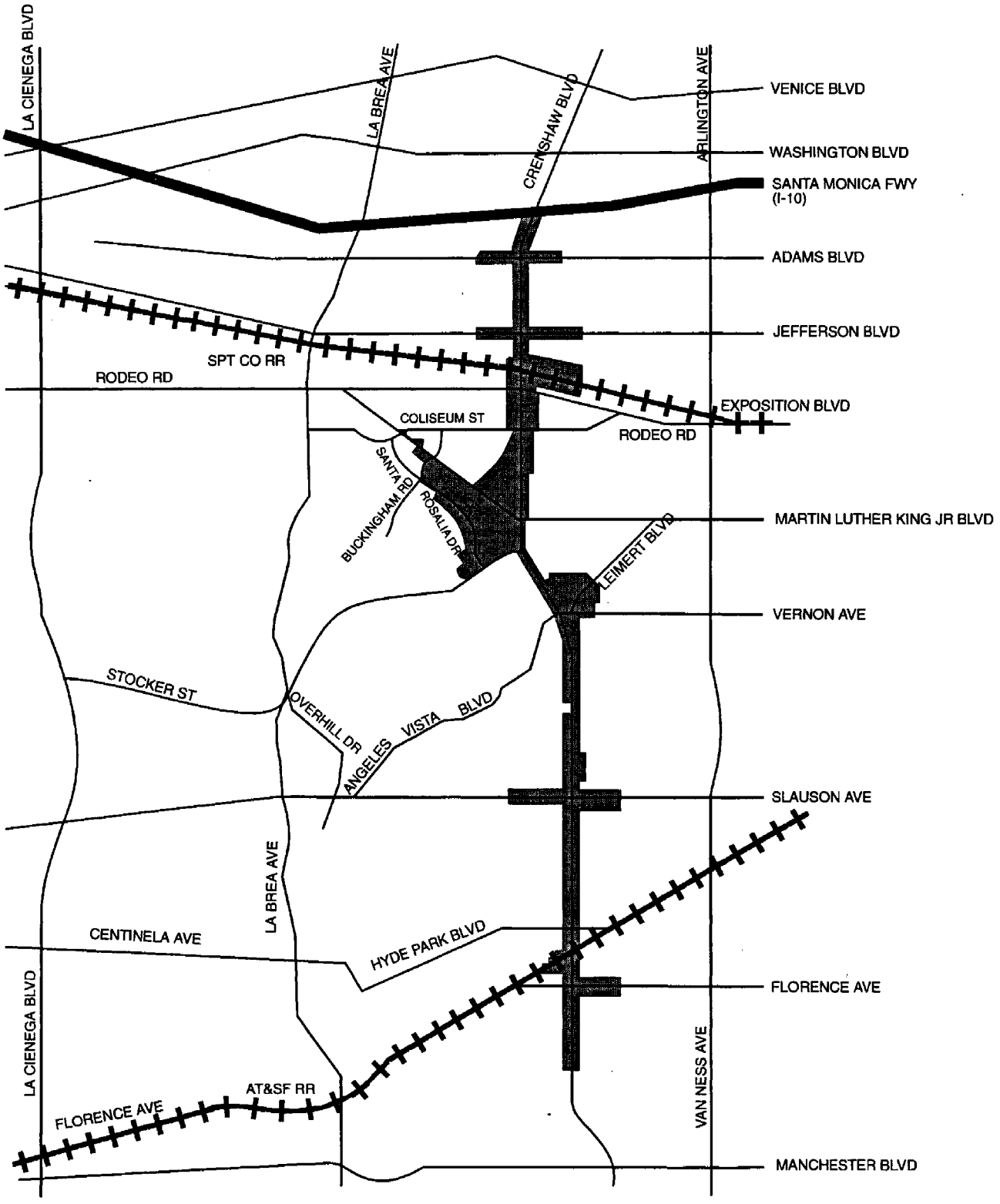


SOURCE: Terry A. Hayes Associates

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 3.1-1
REGIONAL LOCATION
OF PROPOSED
RECOVERY PROGRAM AREA



LEGEND:

Proposed Recovery Program Area

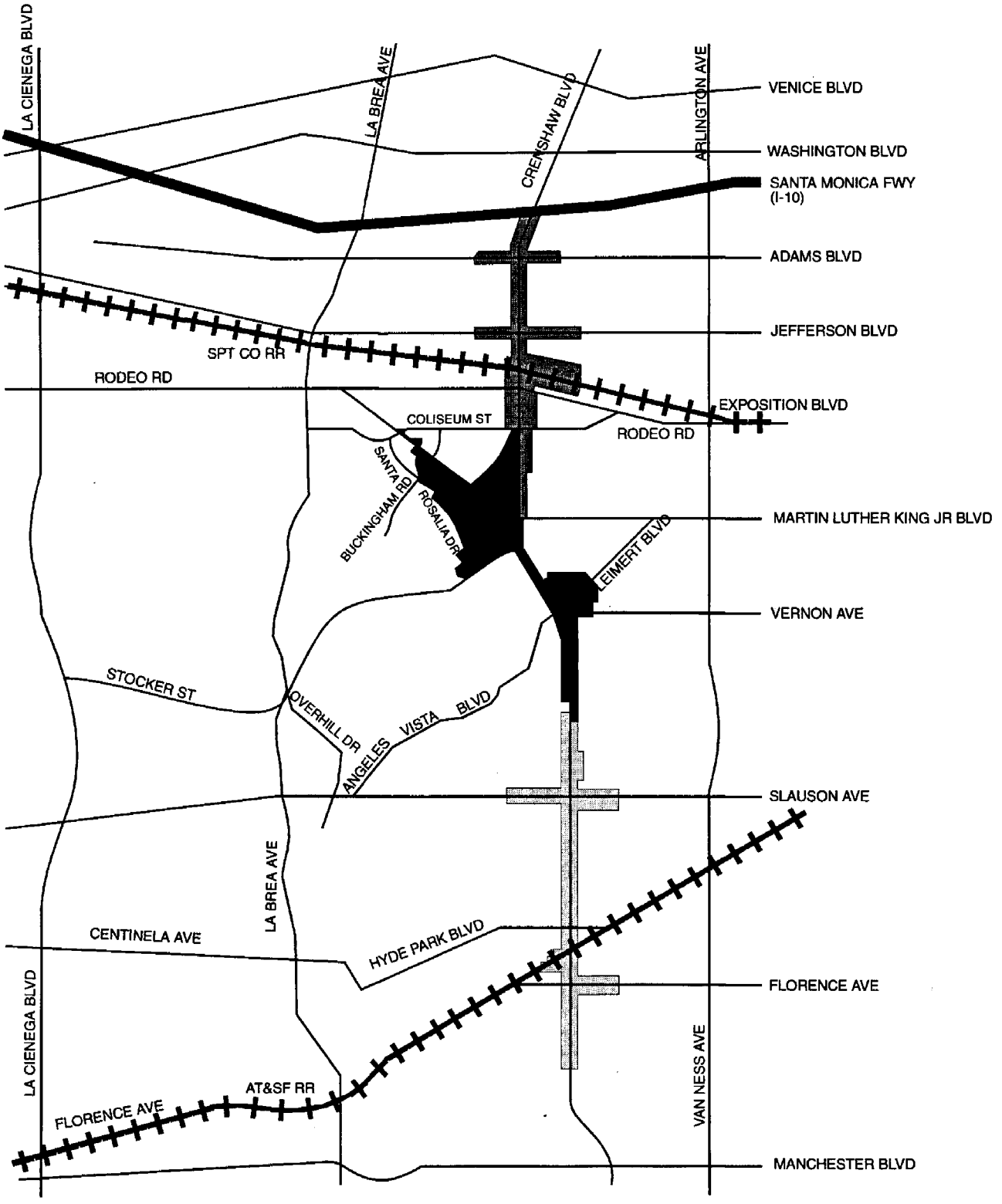
SOURCE: Terry A. Hayes Associates.

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 3.1-2

PROPOSED RECOVERY PROGRAM AREA



LEGEND:

- Subarea 6
- Subarea 8
- Subarea 10

SOURCE: Terry A. Hayes Associates

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 3.1-3

SUBAREAS IN THE PROPOSED RECOVERY PROGRAM AREA

As stated above, the purpose of the alternatives to be evaluated in the Program EIR is to bracket the range of possible or probable revitalization and development options. Towards this end, the Program EIR will evaluate three development alternative scenarios and the no project alternative. The no project alternative, the option of doing nothing, is specifically required to be addressed by CEQA.

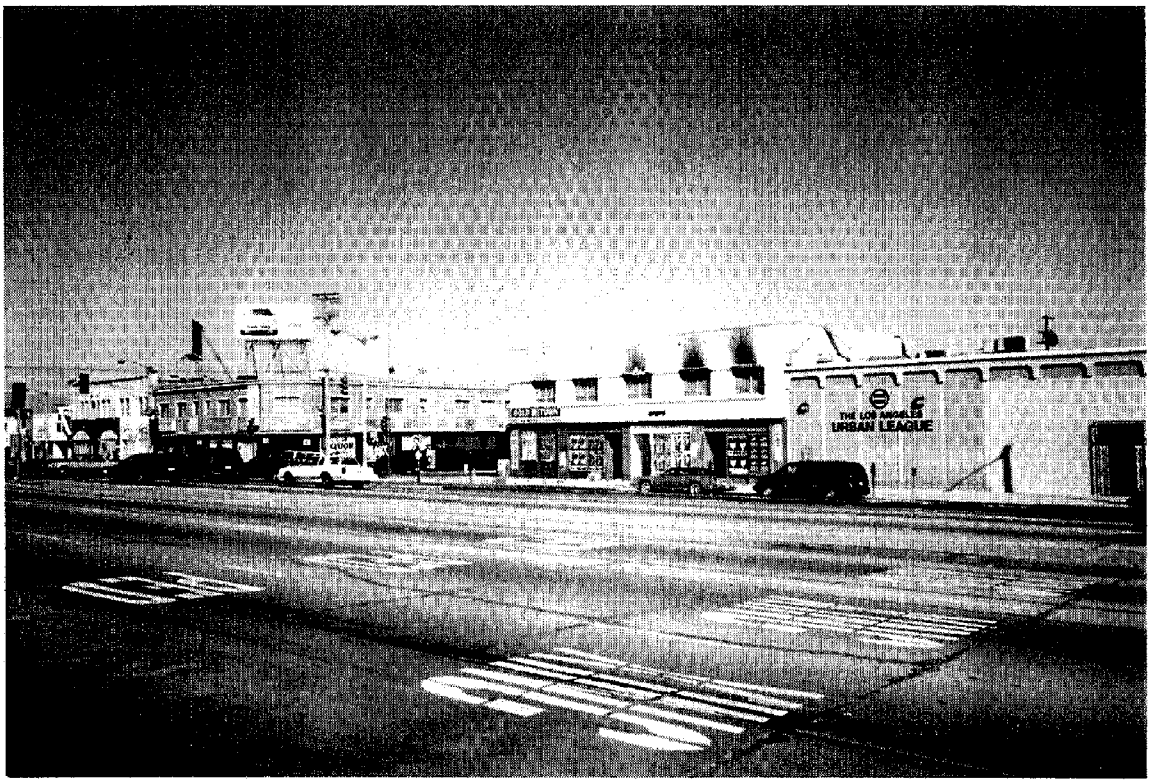
For purposes of defining development scenario alternatives, the Crenshaw Corridor has been divided into Opportunity Areas. Opportunity areas are defined as locations where change is most likely to take place and encompass portions of blocks or multiple blocks within the Crenshaw Corridor. Areas have been identified as Opportunity Areas if they satisfy one or more of the following criteria:

- Site(s) are undeveloped (vacant lot)
- Site(s) contain vacant buildings
- Site(s) contain buildings that are structurally damaged
- Site(s) contain buildings that were either burned and/or totally destroyed during the 1992 civil unrest.
- Site(s) exhibit a shifting of uses such as commercial use in a residential building or vice versa
- Site(s) and adjacent public areas are poorly maintained and require major repairs and/or upgrading
- Site(s) contains uses that are not consistent with the adopted zoning and planned land use, e.g., single-family homes in a commercial or industrial zone.
- Site(s) are developed at a density not comparable with surrounding properties and indicate economic underutilization
- Building facades and exterior spaces are not conducive to commercial activity
- Site(s) that may have redevelopment potential due to proximity (1/4 mile or less) to a possible Metro Rail transit station and subject to the City of Los Angeles Draft Transportation and Land Use Policy

It is important to note that the proposed Recovery Program Alternatives do not represent a site specific project or projects. Rather these alternatives serve as a means to assess various levels of development that may be stimulated throughout the proposed Recovery Program Area. The levels of development evaluated in each alternative are intended to bracket the range of possible environmental consequences. In theory, the levels of development evaluated do not represent a worst case. This is because the maximum development level in the proposed Recovery Program Area is approximately 20 million square of development according to the land use densities allowed in the West Adams-Baldwin Hills-Leimert District Plan. The alternatives under consideration would range from 30 to 35 percent of this overall land use development capacity. These alternatives represent what are believed to be the most probable levels of development over the next 10 to 15 year period.

Infill/Rebuild Alternative

This alternative is intended to address the theoretical minimum probable level of change that would be necessary to support and stimulate reinvestment, revitalization and recovery



Fire damaged building at 54th Street and Crenshaw Boulevard.

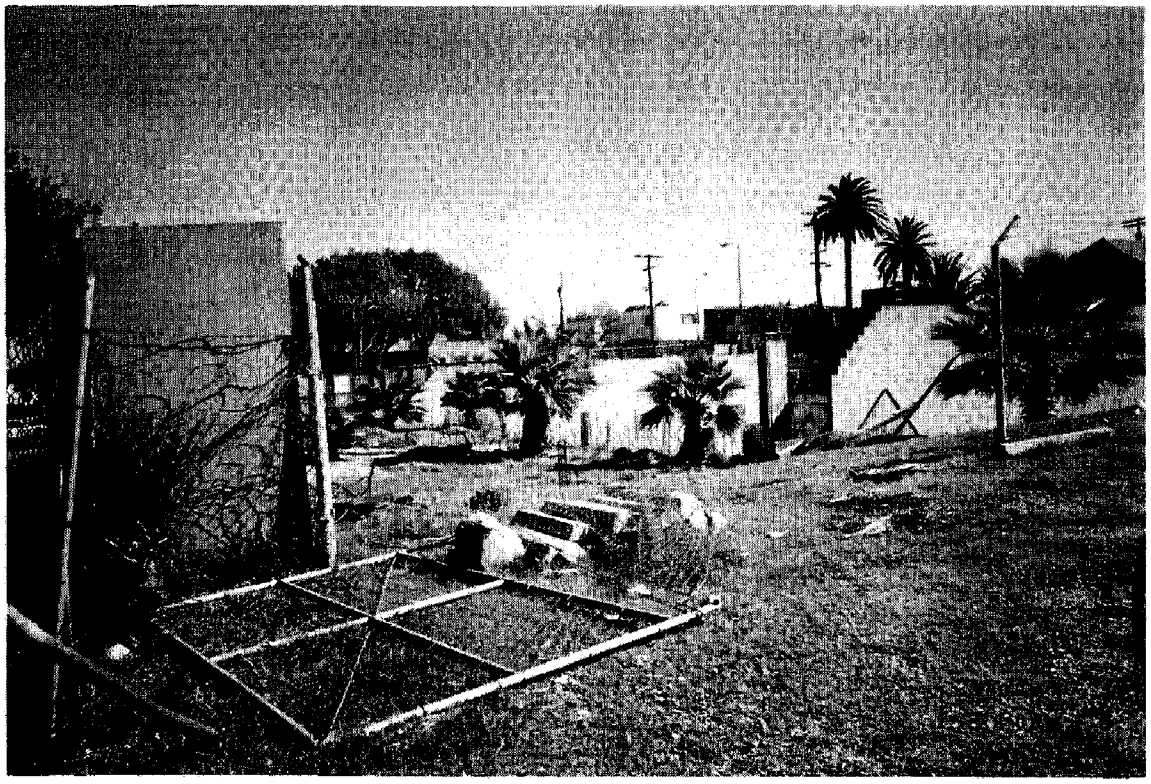
Vacant theater at Crenshaw Boulevard and Adams Boulevard.

SOURCE: Terry A. Hayes Associates.

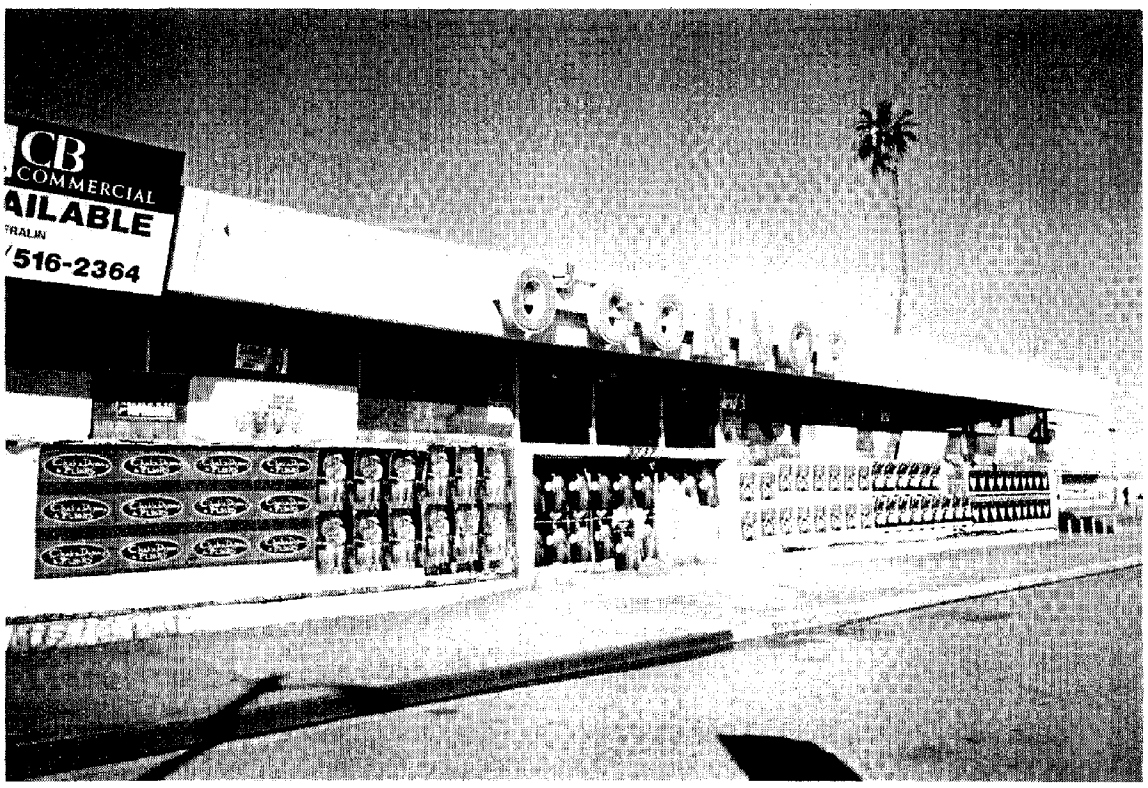
Site adjacent to Sumotomo Bank.

Corner site in Leimert Park.

SOURCE: Terry A. Hayes Associates.



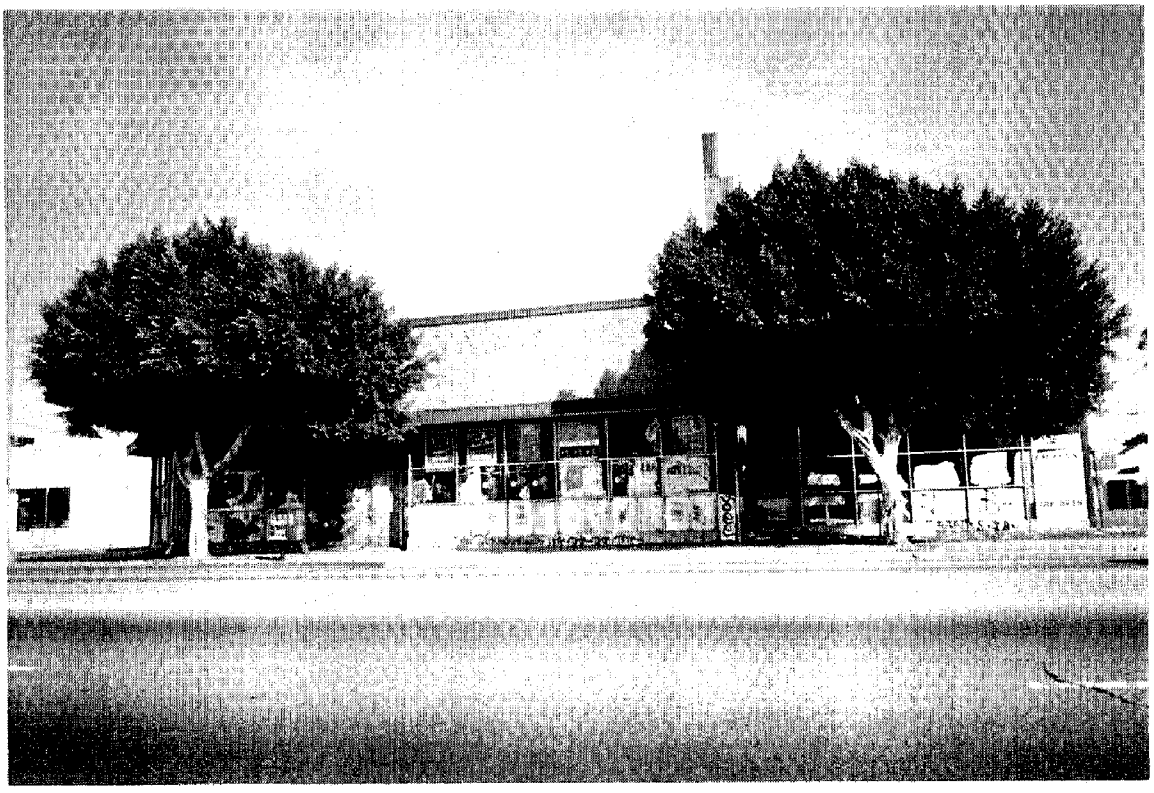
Abandoned motel construction site near 73rd Street and Crenshaw Boulevard.



Vacant O'Connor Lincoln Mercury building site.

SOURCE: Terry A. Hayes Associates.

Vacant site on Santa Rosalia overlooking Baldwin Hills Crenshaw Plaza.



Vacant Pep Boys building near the intersection of Adams Boulevard and Crenshaw Boulevard.

SOURCE: Terry A. Hayes Associates.

in the Crenshaw Corridor. This alternative would primarily focus on providing in-fill development on vacant sites within the corridor. In-fill development would include neighborhood-oriented commercial services and new residential development. These in-fill actions would be complemented by streetscape improvements along Crenshaw Boulevard to include repairs to public areas as well as landscaping and improvements to participating private properties to upgrade the appearance of corridor businesses (e.g., awnings, painting, graffiti removal, etc.). In addition, it is envisioned that public parking areas would be enhanced to include resurfacing, landscaping, lighting and signage. This alternative could result in approximately 917,000 gross square feet of new development, which may include but is not limited to retail, commercial, office and manufacturing uses, and the addition of approximately 244 residential units. Since only vacant sites or vacant buildings are used by this alternative, no displacement of existing occupied uses is anticipated. This alternative would represent approximately 18 percent growth in development over existing levels (see **Table 3.1-1**).

Moderate Development Alternative

This alternative is intended to address the theoretical probable level of development that could occur if economically underutilized properties were used in addition to vacant sites. This alternative also considers the possibility that redevelopment of the underutilized properties would increase development densities in certain areas and/or convert a proportion of developable properties from single use commercial projects to mixed use or residential uses. Commercial development levels would assume floor area ratios consistent with newer neighborhood and community-oriented projects currently being built in the City of Los Angeles. Anticipated residential densities would be 20 units per acre or less. New development on currently developed properties could take the form of gradual conversion over time or through the use of land assembly and/or eminent domain powers that may be applied to commercially or industrially zoned properties. This alternative assumes that rail transit improvements along the Crenshaw Corridor would not be implemented during the lifetime of any revitalization or recovery plan that may be adopted for all or portions of the Crenshaw Corridor and as a result there would not be greater commercial development or residential densities in station areas.

It should be recognized that some degree of displacement of existing uses is implied by this alternative. Under this option, approximately 615,000 gross square feet of existing developed space and nine dwelling units are assumed to be converted to higher density new development. Under this option, a net increase of approximately 1.2 million gross square feet of non-residential development and approximately 425 dwelling units is projected. This change would represent a 24 percent growth over the existing level of development.

Maximum Probable Development Alternative

This alternative is intended to address the theoretical maximum probable level of change that could be achieved within the land use capacity of the Crenshaw Corridor established by the West Adams-Baldwin Hills-Leimert District Plan. This alternative would include cosmetic improvements to streetscapes and building facades similar to the Infill/Rebuild Alternative, however, this alternative would consider new development on both vacant sites

and on sites that are considered economically underutilized or physically dilapidated. New development on currently developed properties could take the form of gradual conversion over time or through land assembly and/or the use of eminent domain powers that may be applied to commercially or industrially zoned properties. It should be recognized that a larger degree of displacement of existing uses is implied by this alternative. Under this option, approximately one million square feet of existing developed space and 137 dwellings units is assumed to be converted to higher density new development.

It is envisioned that large mixed use projects and residential densities around 40 dwelling units per acre would be facilitated by this alternative. While it is assumed that the primary focus of the Agency will be to stimulate commercial and industrial expansion and growth in the Crenshaw Corridor, it is anticipated that other public agencies or private entities would contribute significantly to establishing the expanded residential component of possible mixed use projects.

The theoretical maximum probable level of change that could occur as part of this alternative would be consistent with maximum floor area ratios and residential densities permitted by the West Adams-Baldwin Hills-Leimert District Plan. Under ideal circumstances the highest densities are also considered in the rail transit station areas that may result from the implementation of the City of Los Angeles/Metropolitan Transportation Authority (MTA) Transportation and Land Use Policy. The assumption of higher densities within one quarter mile of possible rail transit stations is contingent upon the MTA's possible future adoption and funding of a rail transit alignment along the Crenshaw-Prairie Corridor.[1] This alternative would represent a net growth of approximately 1.9 million square feet of non-residential development and approximately 1,700 dwelling units. This change would result in a 38 percent growth over existing levels of development in the Crenshaw Corridor.

Existing Crenshaw Redevelopment Project and Proposed Amendment Area

The Crenshaw Corridor includes the Crenshaw Redevelopment Project Area, located approximately one and one-half miles south of the Santa Monica Freeway along Crenshaw Boulevard. Adopted by the City Council in 1984, the Redevelopment Project is bounded generally by 39th Street on the north, Crenshaw Boulevard on the east, Stocker Street and Santa Rosalia Drive on the south and southwest and Marlton Avenue on the west. Martin Luther King Jr. Boulevard, which runs diagonally in the northwesterly direction, bisects the Baldwin Hills Crenshaw Plaza.

On November 1991, the City Council of the City of Los Angeles directed the Agency to proceed with the process of amending the existing Crenshaw Redevelopment Plan to include Santa Barbara Plaza and a commercial strip on the south side of Martin Luther King Jr. Boulevard between Buckingham Road and Hillcrest Drive. The Plan Amendment process included the Preparation of an EIR. In September 1992, work on the EIR was suspended to allow Agency staff to work with the community and Council District 8 office to reassess

[1]County of Los Angeles, Metropolitan Transportation Authority, Crenshaw-Prairie Corridor, Preliminary Planning Study, December 28, 1993.

land use options in light of the effect of the April 1992 civil disturbance on the Plan Amendment Area and the surrounding community. The Community Advisory Committee of the Council District 8 area of the Crenshaw Corridor has voted to pursue feasibility studies for the expansion of the existing Crenshaw Redevelopment Project to encompass the middle of the Crenshaw Corridor, located within Council District 8 and bounded generally by Coliseum Street on the north and 52nd Street on the south. For an environmental assessment of the Plan Amendment proposal, see Section 7.0, Proposed Amendment to the Crenshaw Redevelopment Project in Council District 8.

TABLE 3.1-1: NET NEW DEVELOPMENT

	Non-Residential Development			Residential Development		
	Total New Development	Existing Development Potentially Displaced	Net New Development	Total New Units	Existing Units Potentially Displaced	Net New Units
Infill/Rebuild Alternative						
Subarea 6	256,000	0	256,000	76	0	76
Subarea 8	136,400	0	136,400	63	0	63
Subarea 10	524,500	0	524,500	105	0	105
TOTAL	916,900	0	916,900	244	0	244
Moderate Development Alternative						
Subarea 6	253,400	13,000	240,400	64	0	64
Subarea 8	933,700	514,500	548,200	202	0	202
Subarea 10	590,000	88,400	501,600	169	9	160
TOTAL	1,777,100	615,900	1,290,200	435	9	426
Maximum Probable Development Alternative	385,300	42,700	342,600	485	108	377
Subarea 6	1,378,500	698,600	808,900	717	20	697
Subarea 8	1,086,600	264,900	821,700	630	9	621
Subarea 10	2,850,400	1,006,200	1,973,200	1,832	137	1,695
TOTAL						

Source: Terry A. Hayes Associates.

No Project Alternative

This alternative is required to be considered under the provisions of the California Environmental Quality Act (CEQA). This alternative would mean that no revitalization, recovery, or redevelopment activities would be undertaken and that changes in the corridor would be limited to the type and magnitude of growth and development that would occur in the area without public intervention.

3.3 INTENDED USES OF THE EIR AND ANTICIPATED PUBLIC AGENCY ACTIONS

The intended use of the EIR is to assist the Community Redevelopment Agency and the City Council of the City of Los Angeles in making decisions with regard to the approval of

the proposed Crenshaw Corridor Recovery Program including the proposed Amendment to the Crenshaw Redevelopment Plan and future development projects in the proposed Recovery Program Area. Ultimate certification of the EIR, in itself, does not determine whether the proposed Recovery Program will be approved. According to Section 15121 of the State CEQA Guidelines, its purpose is for informational purposes and to identify all potentially significant effects of a project on the physical environment, and to determine the extent to which those effects could be reduced or avoided.

This EIR will be used in the processing of individual development projects, within the boundaries of the proposed Recovery Program Area, as a Program EIR per Section 15168 of the CEQA Guidelines. Individual projects will be reviewed by the Community Redevelopment Agency and/or appropriate departments of the City to determine whether the project is consistent with the proposed Recovery Program, and to determine if potential impacts of the project have been addressed in the Program EIR. If the impacts were already addressed, and appropriate mitigation measures conditioned on the project where needed, no further environmental review will be required. If it is determined that the project may have potential adverse impacts that are not addressed in the Program EIR, additional environmental review may be required to adequately evaluate these potential impacts and to establish additional mitigation measures.

This EIR will be used by the following public bodies:

- Community Redevelopment Agency of the City of Los Angeles
- City Council of the City of Los Angeles
- Planning Commission of the City of Los Angeles
- All City Departments that must approve activities to be undertaken as a part of the proposed Recovery Program
- All other public agencies which must approve activities undertaken as a part of the proposed Recovery Program

The Draft EIR (DEIR) will circulate for 45 days. During this period of review, the CRA solicits comments regarding the DEIR from Responsible Agencies and the public. The comments submitted should address specific issues presented in the report and be supported with documentation. The Final EIR will incorporate the comments received and evaluate and respond to the issues raised in them.

SECTION 4 OVERVIEW OF THE ENVIRONMENTAL SETTING

4.1 LAND USE CHARACTER

Development in and around the proposed Recovery Program Area can be generally characterized as low-scale strip commercial along major north-south and east-west arterials surrounded by large expanses of predominantly single-family neighborhoods, such as West Adams, Leimert Park, View Park, Baldwin Hills, Windsor Hills, Hyde Park and Morningside Park. There are scattered areas where there are concentrations of higher density housing including areas near Crenshaw Boulevard and Adams Boulevard, Martin Luther King Jr. Boulevard at Marlton Avenue, and south of Martin Luther King Jr. Boulevard west of Buckingham Road.

The primary commercial development focal point in the area is the 850,000-square foot Baldwin Hills Crenshaw Plaza Mall and the adjacent 450,000-square foot Santa Barbara Plaza area. In recent years the Mall has been expanded and refurbished as part of the Crenshaw Redevelopment Project while the Santa Barbara Plaza area is in need for refurbishment and revitalization. Other commercial development consists mainly of development along Crenshaw Boulevard and major cross streets such as Adams Boulevard, Jefferson Boulevard, Exposition Boulevard, Martin Luther King Jr. Boulevard, Slauson Avenue and Florence Avenue. Much of the commercial development consists of older one to two-story buildings with on-street parking. The Leimert Park Village Center near Vernon Avenue and Crenshaw Boulevard contains low-rise low density office and retail uses in older buildings many with unique design and character. Newer community shopping centers with off-street parking are located at Rodeo Road and Crenshaw Boulevard and Slauson Avenue and Crenshaw Boulevard.

4.2 ENVIRONMENTAL CHARACTER

Topography. Generally the overall area can be characterized as flat terrain (mean sea level elevation of 120 feet), with a gradual slope from south to north. However, the western portion of the area encompasses the slopes of the Baldwin Hills that rise to an elevation of 511 feet above mean sea level. Views of and from Baldwin Hills provide dramatic scenic vistas.

Seismicity. The western portion of the area encompasses portions of an active series of earthquake faults known as the Newport-Inglewood Fault Rupture Zone. The zone is oriented in a northwest to southeast direction. A good portion of the area is characterized with a high groundwater table (approximately 30 feet below the ground surface) which along with permeable soils contributes an increased liquefaction potential in the event of an earthquake.

Natural and Ecological Areas. Portions of the Baldwin Hills serve as natural open space and plant and animal habitats. Most of the underveloped area is encompassed within the Kenneth Hahn Regional Park and the Inglewood Oil Field located east of La Brea Avenue.

Air Quality. Los Angeles County has been designated as a non-attainment area by the U.S. Environmental Protection Agency (EPA) under the provisions of the Clean Air Act and Amendments for ozone, carbon monoxide, nitrogen dioxide and total suspended particulates. The vicinity of the proposed Recovery Program Area, however, has generally good air quality due to a strong eastward oriented sea breeze that transports pollutants out of the area and due turbulence patterns created around Baldwin Hills that greatly aids in the dispersion of pollutants.

4.3 TRANSPORTATION AND CIRCULATION

Crenshaw Boulevard is a north-south major arterial in metropolitan Los Angeles. It extends continuously from Wilshire Boulevard on the north to just south of Pacific Coast Highway on the south (a distance of 23 miles). There are Crenshaw Boulevard off and on-ramps at all major freeways, including the Santa Monica Freeway (I-10), Glenn Anderson Freeway (I-105) and the San Diego Freeway (I-405). In addition, the Harbor Freeway and the Harbor Freeway Transitway (currently under construction) are located three miles east of the proposed Recovery Program Area. The area is also well served by a grid of east-west arterials including Washington Boulevard, Adams Boulevard, Jefferson Boulevard, Exposition Boulevard, Martin Luther King Jr. Boulevard, Vernon Avenue, Slauson Avenue and Florence Avenue. It is estimated that there are approximately vehicle miles of travel within the West Adams-Baldwin Hills-Leimert area. With respect to transit, the area is served by the a number of east-west and north-south buslines as well as DASH service the Leimert Park-Baldwin Hills Crenshaw Plaza area.

4.4 DEMOGRAPHIC CHARACTER

To provide an overall profile of the demographic and socioeconomic characteristics of the area surrounding the proposed Recovery Program Area, the information on the West Adams-Baldwin Hills Leimert District Plan area is highlighted:[1]

- **Population**. The population for the plan area is estimated to be 168,574 persons in 1992. This would represent 4.9 percent of the overall City population of 3,462,403.

- **Population Growth**. Between 1980 and 1990 the population increased from 151,528 to 169,397 persons. The 10-year growth rate for the area was 11.8 percent compared to 17.5 percent for the City.

- **Population Density**. The density of persons within the area is 13,248 persons per square mile, compared to an overall City density of 7,414 persons per square mile. Of the 35 district plans, only five have a higher population density.

- **Housing**. The housing stock in the plan area is estimated to be 65,281 units. This stock represents five percent of the total units in the City.

[1]Population Estimate and Housing Inventory, City of Los Angeles Department of City Planning, 1993.

- **Employment**. The total employment in the area is estimated to be 47,166 jobs and represents 2.5 percent of the total employment in the City.

5.0 ENVIRONMENTAL IMPACT ANALYSIS, MITIGATION MEASURES AND UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

5.1 LAND USE

General Plan Designated Land Uses

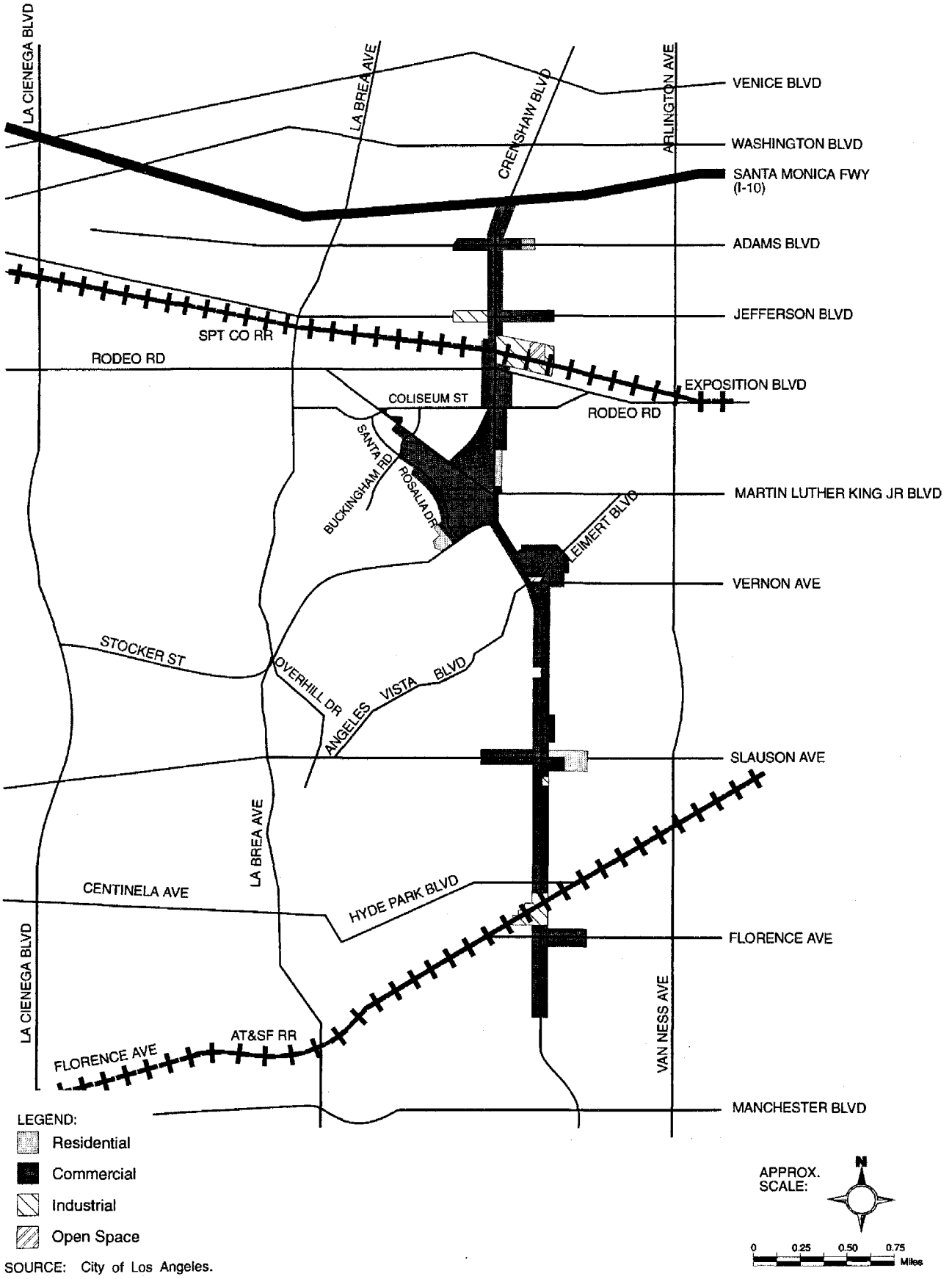
The proposed Crenshaw Corridor Recovery Program Area encompasses approximately 340 acres of land, including approximately 1,100 individual parcels. Based on the planned land use categories there is a theoretical maximum development of 19.6 million square feet of commercial and industrial use and 1,100 residential dwelling units.

In general the proposed Recovery Program Area includes only those parcels with a commercial or industrial designation that directly front on Crenshaw Boulevard or Martin Luther King Jr. Boulevard (see **Figure 5.1-1**). There are, however, several areas within the proposed Recovery Program Area that include residentially designated land. These areas include a portion of Adams Boulevard east of Crenshaw Boulevard, Stocker Street near Don Felipe Drive, and Slauson Avenue east of Crenshaw Boulevard. The overall distribution of planned land use categories from the West Adams-Baldwin Hills-Leimert District Plan is shown in **Table 5.1-1**. It can be seen that the majority of land use falls into the commercial category (76 percent), with industrial designations accounting for 12 percent, residential designations 11 percent and open space or public designation account for one percent. The planned land use characteristics of Subareas 6, 8 and 10 are as follows:

TABLE 5.1-1: DISTRIBUTION OF PLANNED LAND USE CATEGORIES WITHIN PROPOSED RECOVERY PROGRAM AREA

Land Use Category	Acres	Percent
Residential	37	11%
Subarea 6	19	6%
Subarea 8	8	2%
Subarea 10	10	3%
Commercial	256	76%
Subarea 6	73	22%
Subarea 8	116	34%
Subarea 10	67	20%
Industrial	40	12%
Subarea 6	18	5%
Subarea 8	0	0%
Subarea 10	22	7%
Open Space/Public	5	1%
Subarea 6	0	0
Subarea 8	1	neg
Subarea 10	4	1%
TOTAL	338	100%

Source: City of Los Angeles Department of City Planning and Terry A. Hayes Associates.



SOURCE: City of Los Angeles.

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.1-1

PLANNED LAND USE

Existing Land Uses

Within the proposed Recovery Program Area there is currently approximately five million square feet of development (commercial, industrial and residential). As shown in **Figure 5.1-2**, existing land uses are generally consistent with the General Plan land use category designations. However, it should be recognized that there are large portions of commercially and industrially designated land that have been developed for residences and apartments. Approximately two acres (five percent) of the industrially designated land is in residential use and 43 acres (17 percent) of commercially designated land is also used for residences. Residential uses located in industrial zones, particularly single-family homes near the Atchison, Topeka, & Santa Fe (AT&SF) railroad tracks in the southern portion of the corridor, are currently the primary source of observed land use conflicts along the corridor. Overall, residences are concentrated in the following areas:

- East and west sides of Crenshaw Boulevard north of Adams Boulevard. Single-family homes on the east side and apartment buildings on the west side.
- East side of Crenshaw Boulevard between Martin Luther King Jr. Boulevard and 39th Street (mix of single-family homes and apartments).
- East and west sides of Crenshaw Boulevard between 48th Street and 52nd Street (primarily single-family homes).
- Slauson Avenue east of Crenshaw Boulevard (apartments in Dorsett Village).
- West side of Crenshaw Boulevard between 58th Place and 67th Street (multi-family housing including motels used for long term residency).
- Florence Avenue east of Crenshaw Boulevard (mix of apartments and single-family housing).
- Crenshaw Boulevard south of Florence Avenue (mix of apartments and single-family housing).

The condition of buildings in the corridor appears to be good. There are several instances, however, where maintenance is a problem. Poorly maintained structures appear to be industrial-type buildings concentrated near the AT&SF railroad tracks in the southern portion of the corridor. There are also isolated pockets where graffiti on commercial buildings is evident.

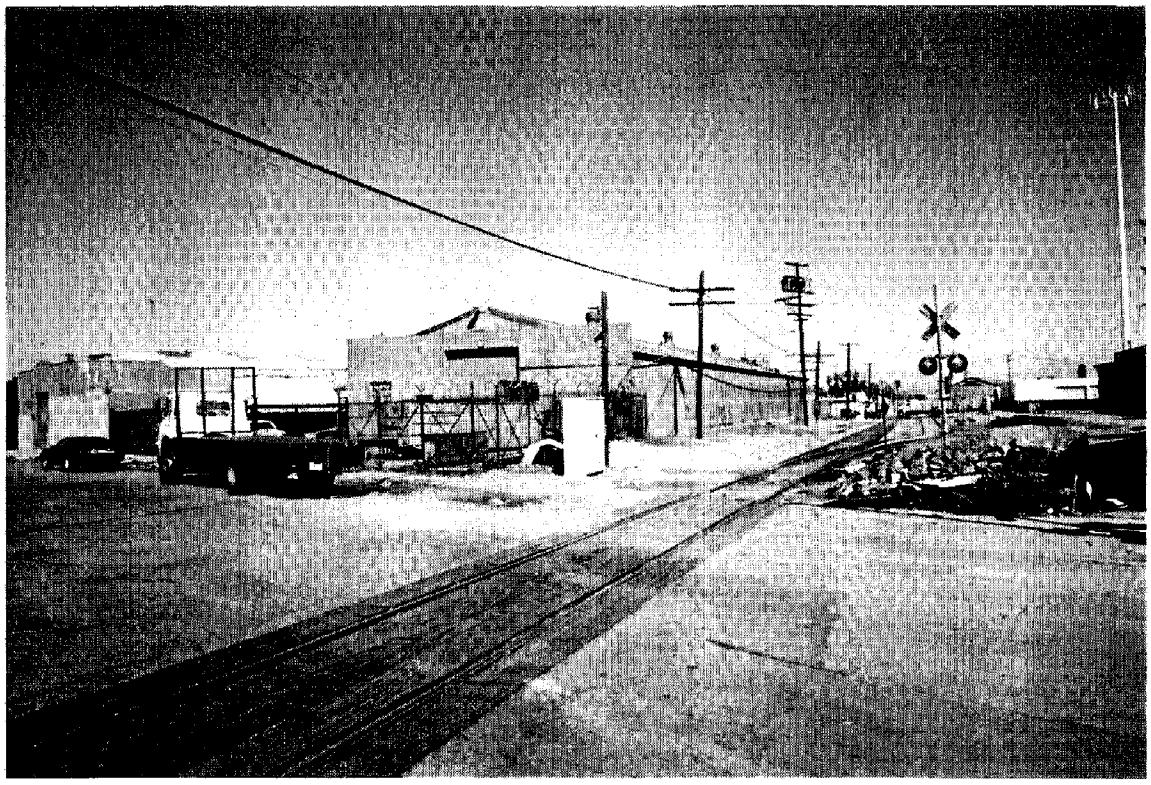
Of the total 340 acres within the proposed Recovery Program Area, approximately 30 acres are vacant or underutilized. In addition, unoccupied buildings comprise from 10 to 15 percent of the total corridor existing development or about 500,000 to 750,000 square feet. The largest single amount of unoccupied space is currently the 20th Century Plastics complex at Crenshaw and Exposition Boulevards. Other concentrations of unoccupied spaces are concentrated south of Hyde Park Boulevard.

New commercial development near 67th Street and Crenshaw Boulevard.

Recent development near 30th Street and Crenshaw Boulevard.

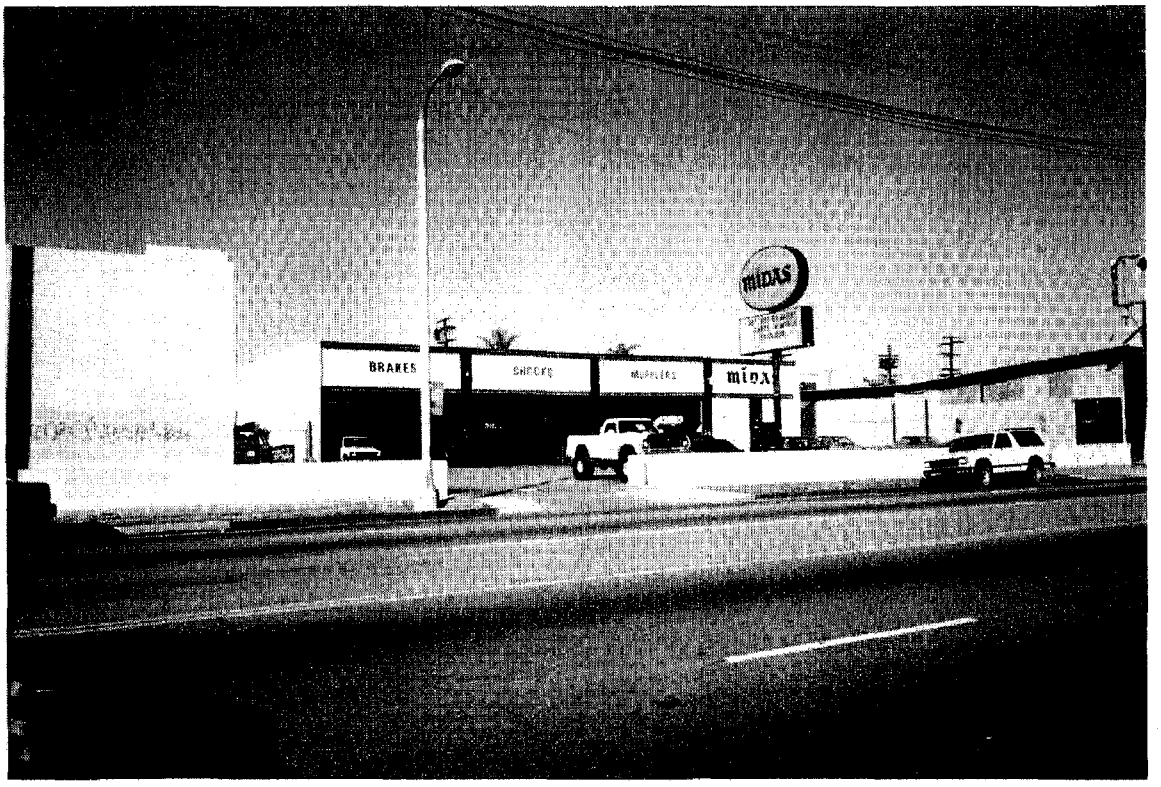
SOURCE: Terry A. Hayes Associates.

Example of office space on the second floor near 39th Street and Crenshaw Boulevard.



Example of the older industrial buildings typical to the southern part of the proposed Recovery Program Area.

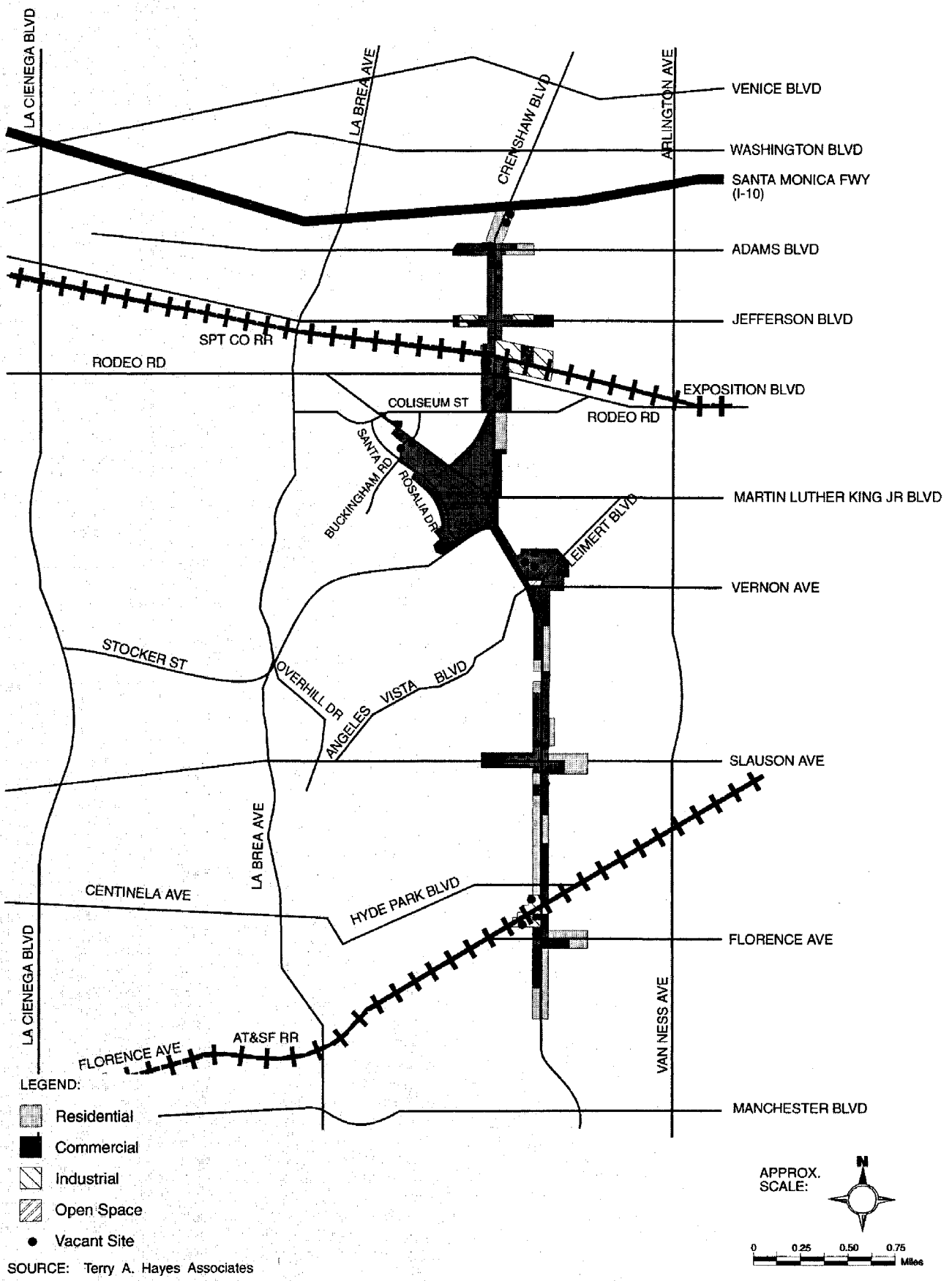
SOURCE: Terry A. Hayes Associates.



Auto repair uses near Jefferson Boulevard.

Auto sales near 52nd Street.

SOURCE: Terry A. Hayes Associates.



SOURCE: Terry A. Hayes Associates

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.1-2

EXISTING LAND USE

IMPACTS

Significance Criteria. Land use changes are considered to have a significant impact on the environment if the change 1) results in the displacement of existing uses and activities, 2) is not compatible with the land use, building height, and building density permitted in the applicable General Plan, or 3) increase the potential for land use conflicts. Land use conflicts are considered to include the following effects:

- Noisy late night operations affecting adjacent residences
- Noise from loading dock and delivery areas.
- Noise from parking lots (car alarms, loud voices)
- Parking spillover effects on adjacent residential streets
- Generation of objectionable odors, smoke, or gases.
- Noise from equipment and/or operations that is discernible in adjacent residential areas.
- 24-hour operations that create a nuisance for adjacent residences.
- Land uses that create significant pedestrian queuing on public sidewalks.
- Land uses that attract vehicular or pedestrian traffic to residential streets or neighborhoods.
- Land uses where ornamental or security lighting spills over into adjacent residences.

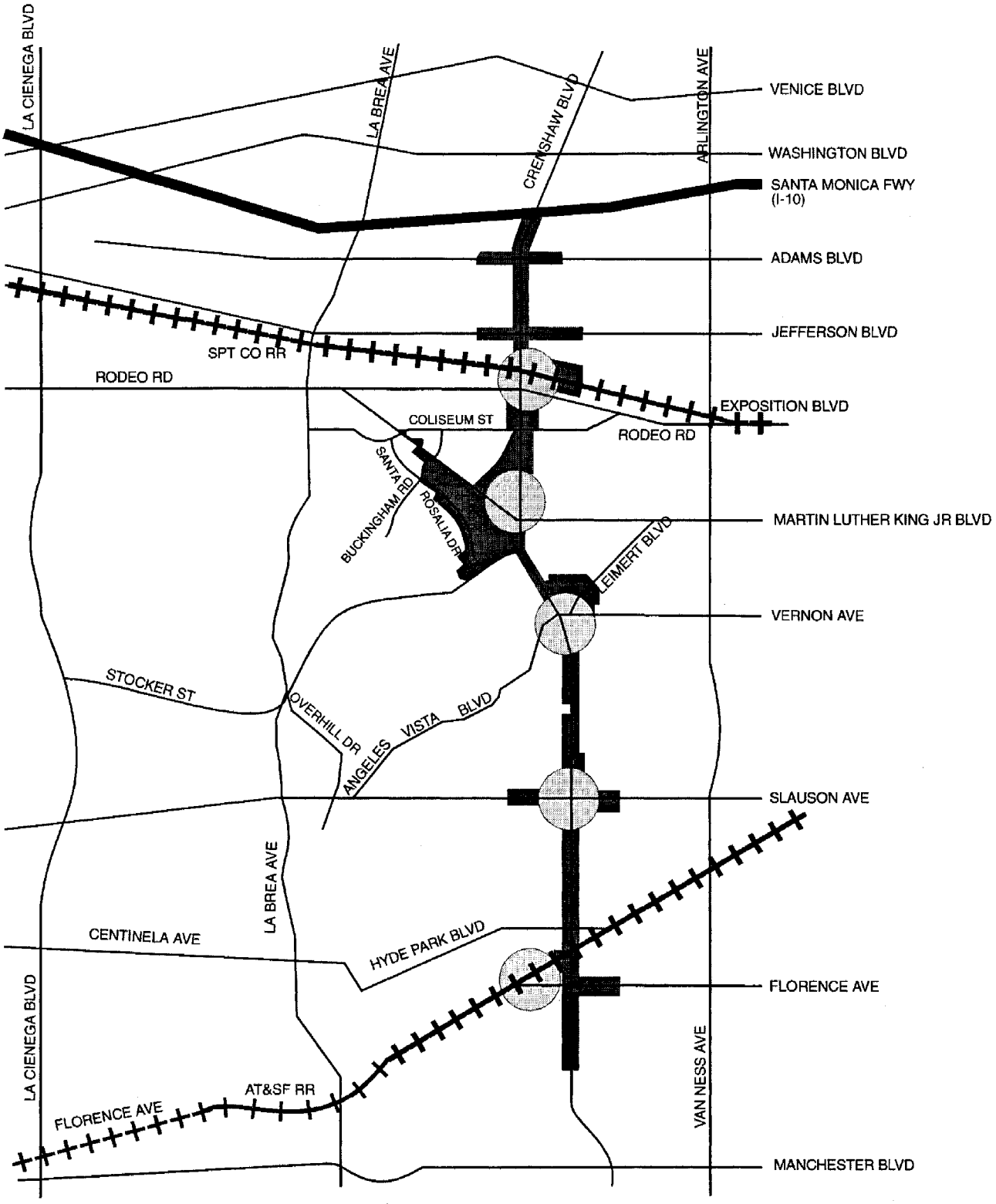
Assessment

Compatibility with General Plan. It is anticipated that all development would be implemented in accordance to the adopted West Adams-Baldwin Hills-Leimert District Plan regardless of the alternative considered. The proposed alternatives do not anticipate the need for General Plan amendments.

- Infill/Rebuild Alternative. No adverse impact anticipated.

- Moderate Development Alternative. No adverse impact anticipated.

- Maximum Probable Development Alternative. It should be recognized that the Maximum Probable Development Alternative may be able to take advantage of higher densities in areas adjacent to Metro Rail Transit Stations because of increased densities that are recommended in the MTA/City of Los Angeles Transportation and Land Use Policy. Development levels associated with this alternative are not anticipated to exceed the floor area ratio (FAR) of 2:1 recommended in the Policy for Neighborhood Center type station areas. The floor area ratio recommended in the Transportation and Land Use Policy is about 30 percent higher than the FAR 1.5 currently allowed on commercial designated properties along the corridor. It is anticipated that this policy would modify the affected Community Plan designations as an overlay type zone in the appropriate areas. It is anticipated that this higher density would only affect areas within one quarter mile of the following proposed rail transit stations as shown in **Figure 5.1-3**.



LEGEND:

Proposed MTA Stations (1/4 mile radius)

Proposed Recovery Program Area

APPROX. SCALE: N

0 0.25 0.50 0.75 Miles

SOURCE: Crenshaw Corridor Preliminary Planning Study, December 1993

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.1-3

PROPOSED MTA STATIONS

- Washington Boulevard and Crenshaw Boulevard
- Exposition Boulevard and Crenshaw Boulevard
- Martin Luther King Jr. Boulevard and Crenshaw Boulevard
- Vernon Avenue and Crenshaw Boulevard
- Slauson Avenue and Crenshaw Boulevard
- West Boulevard and Redondo Boulevard

Potential for Land Use Conflicts. In general there are no significant differences between the alternatives.

- Infill/Rebuild Alternative. Since this alternative assumes some degree of development on properties currently designated for commercial use and which have in the past been used for commercial purposes, there is a limited likelihood that this alternatives would create significant land use conflicts beyond those that currently occur in the corridor. However, this potential is highly dependent on type of land use that occupies a commercial site, and the degree of separation of the commercial site from adjacent residences. As noted above, in a number of segments of the corridor residences currently are either located within the commercial zone or residences, directly abut commercial property without an intervening public alley. The greatest potential for conflicts would likely result from small scale projects that may not have adequate site area to allow for buffering or transition with adjacent residences.

- Moderate Development Alternative. See discussion of Infill/Rebuild Alternative.

- Maximum Development Alternative. See discussion of the Infill/Rebuild Alternative.

Displacement. The potential for land use displacement is summarized in **Table 5.1-2**. Displacement has been estimated for comparative purposes only based on possible development of opportunity areas (described in the project description).

- Infill/Rebuild Alternative. Since only vacant sites or unoccupied buildings would be used, no displacement is associated with the Infill/Rebuild Alternative.

- Moderate Development Alternative. For planning purposes it is estimated that the Moderate Development Alternative could displace approximately 616,000 square feet of commercial/industrial buildings and nine residential dwelling units.

- Maximum Probable Development Alternative. This alternative could displace approximately 1,000,000 square feet of commercial/industrial buildings and 137 residential dwelling units. See Section 5.2, Housing, Population and Employment, for a discussion of employment and business implications of the commercial/industrial building displacement.

TABLE 5.1-2: POTENTIAL LAND USE DISPLACEMENT

Alternative	Commercial and Industrial Space Potentially Removed (square feet)	Residential Dwelling Units Potentially Removed
Infill Rebuild Alternative		
Subarea 6	0	0
Subarea 8	0	0
Subarea 10	0	0
TOTAL	0	0
Moderate Development		
Subarea 6	13,000	0
Subarea 8	514,500	0
Subarea 10	88,400	9
TOTAL	615,900	9
Maximum Probable Development		
Subarea 6	42,700	108
Subarea 8	698,600	20
Subarea 10	264,900	9
TOTAL	1,006,200	137

Source: Terry A. Hayes Associates.

MITIGATION MEASURES

1. Land uses displaced within the proposed Recovery Program Area shall be subject to the real property acquisitions policies and relocation policies of the Community Redevelopment Agency. Should the redevelopment process be utilized in the corridor, then explicit provisions shall be established for the re-entry and re-establishment of displaced uses within the proposed Recovery Program Area.[1]

2. The development of sites within the commercial frontage of Crenshaw Boulevard shall explicitly consider the effects of the commercial development on adjacent residential properties. Towards that end, screening, setbacks, landscaping, transitional building heights, the location of loading docks and delivery areas shall be designed to minimize adverse effects and/or nuisances.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

To the extent that displaced uses beneficial to the community cannot be relocated or accommodated within the proposed Recovery Program Area, the loss of such uses would be considered significant. Beneficial uses shall be defined as those uses that provide employment to persons in the adjacent community, uses owned by persons or organizations in the adjacent community or uses that provide a desired and needed community service or product.

[1]This measure would be applicable only if the CRA is providing financial assistance in the corridor.

Apartments adjacent to vacant commercial property.

Single-family home adjacent to commercial property.

SOURCE: Terry A. Hayes Associates.

5.2 HOUSING, POPULATION, AND EMPLOYMENT

EXISTING CONDITIONS

Housing and Population. As noted in the project description, the proposed Recovery Program Area encompasses approximately 340 acres of land or 0.53 square miles. Based on a windshield survey and review of recent aerial photographs of the area, it is estimated that there are approximately 2,500 residential dwelling units within the proposed Recovery Program Area. Ninety-six percent (approximately 2,400 units) of these are apartments while the remainder are single-family homes. Some of the single-family buildings are used for both commercial and residential purposes. Based on 1990 Census information for census tracts that directly include the proposed Recovery Program Area, there are approximately 2.55 persons per household. Thus, the estimated population within the proposed Recovery Program Area is approximately 6,400 persons. The population density within the area is estimated to be about 19 persons per acre (which is 58 percent higher than the citywide average population density of 12 persons per acre).

Employment. According to 1990 employment information available from the Southern California Association of Governments (SCAG), there are approximately 19,700 employees within the 12 census tracts that encompass the proposed Recovery Program Area. Additionally, these same areas have approximately 2,400 employers or businesses. Thus, there are approximately eight employees per business. Given that there is approximately 5,000,000 square feet of existing development within the proposed Recovery Program Area, the data also suggests that the average business size is approximately 2,100 square feet (5,000,000 square feet/2,400 businesses). According to Standard Industrial Classification information and assumed space use, 20 percent of the employment is office employment, 32 percent retail employment, 37 percent industrial employment and 11 percent public or other.

IMPACTS

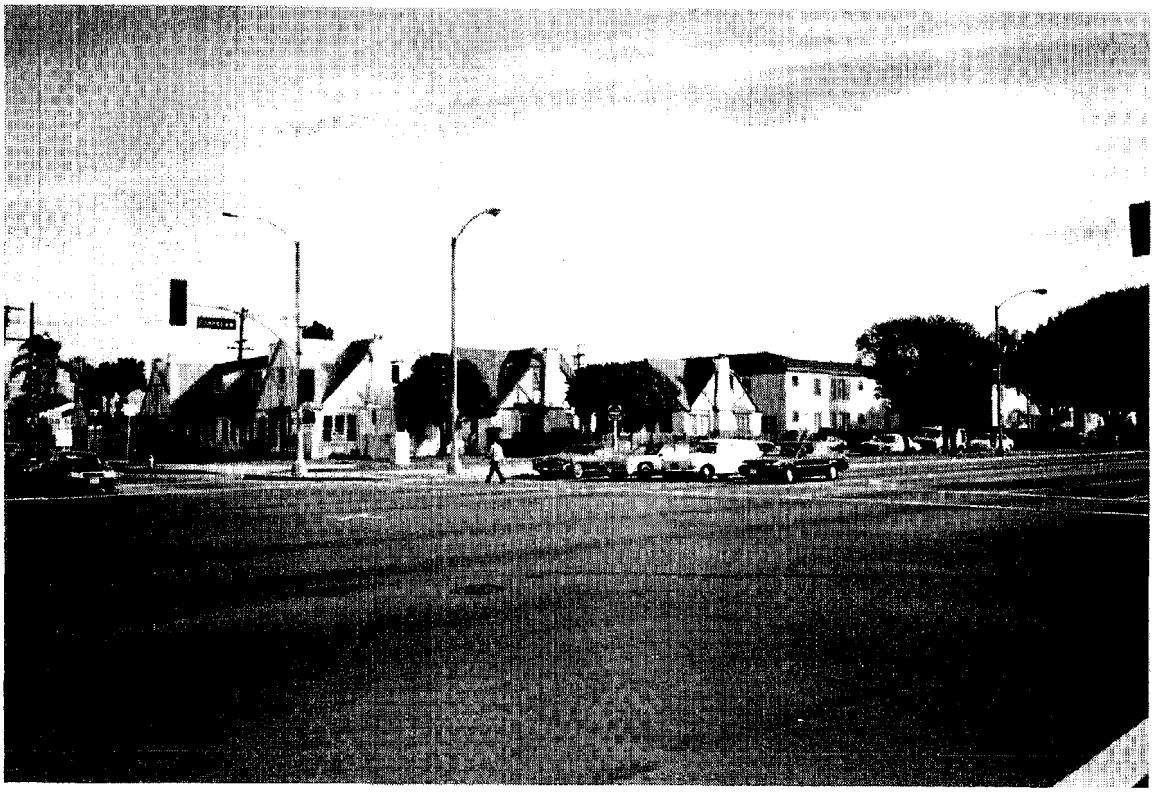
Significance Criteria. An impact in this category would be considered significant if there is 1) a reduction in the local housing stock, 2) a loss of businesses and employment, or 3) there is no mechanism to relocate or reestablish displaced residential dwelling units or businesses within the proposed Recovery Program Area.

Assessment

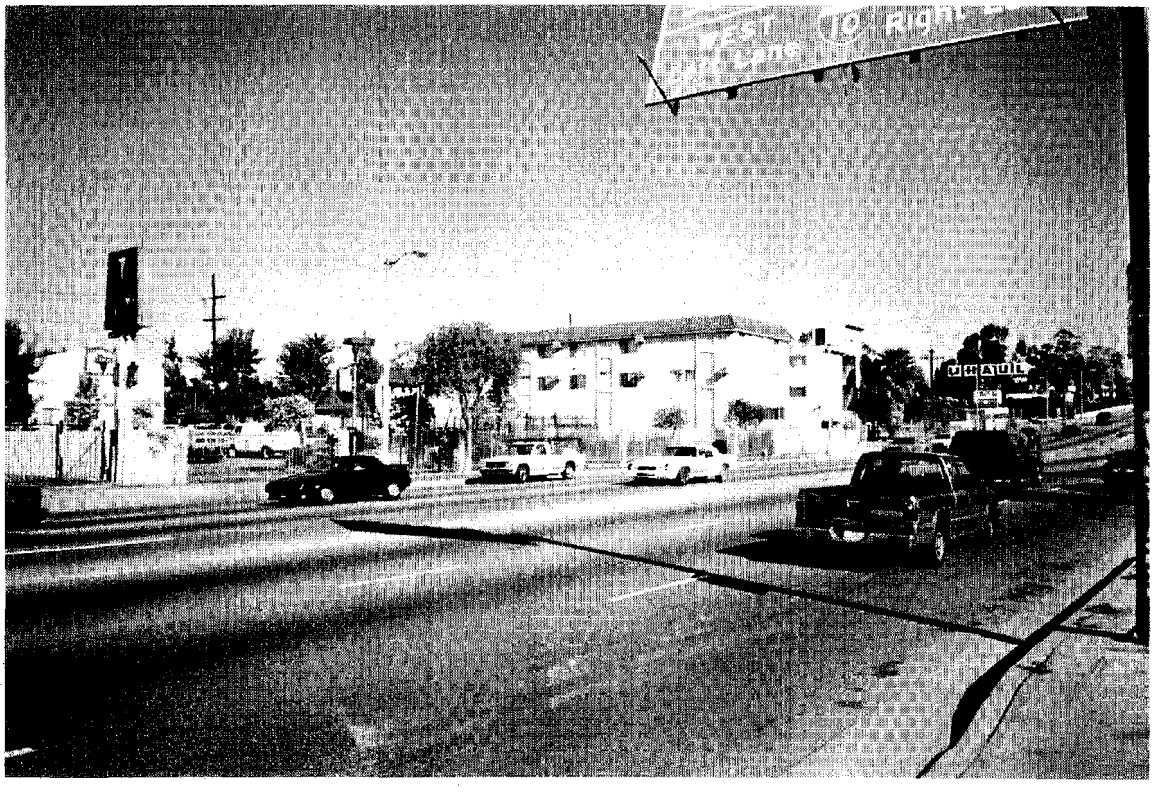
As discussed in the project description section of this report, each of the alternatives under consideration would result in a net increase in the number of residential dwelling units and commercial/industrial space in the proposed Recovery Program Area.

Housing and Population Added. The net increase in residential dwelling units would be as follows:

- Infill/Rebuild Alternative. This alternative would result in the addition of approximately 244 residential dwelling units. This would represent a 10 percent



Single-family and multi-family housing located near Crenshaw and 39th Street.



Multi-family housing north of Adams Boulevard in the vicinity of the Santa Monica Freeway.

SOURCE: Terry A. Hayes Associates.

Multi-family housing located south of Florence Avenue.

Single-family housing located south of Florence Avenue. Note billboard located on front lawn.

SOURCE: Terry A. Hayes Associates.

Single-family dwelling located between industrial buildings in Subarea 6 near Florence Avenue.

Single-family and multi-family housing located on the Crenshaw frontage in the Hyde Park area.

SOURCE: Terry A. Hayes Associates.

increase in the local housing stock. The associated increase in population would be 622 persons.

- Moderate Development Alternative. This alternative would result in the addition of approximately 436 residential dwelling units. This would represent a 17 percent increase in the local housing stock. The associated increase in population would be 1,086 persons.

- Maximum Probable Development Alternative. This alternative would result in the addition of approximately 1,695 residential dwelling units. This would represent a 68 percent increase in the local housing stock. The associated increase in population would be 4,322 persons.

Employment Capacity Added. The net addition of commercial space would provide added capacity within the proposed Recovery Program Area for employment. Assuming approximately 400 square feet per employee, the added employment capacity would be as follows:

- Infill/Rebuild Alternative 2,300 added job capacity
- Moderate Development Alternative 3,200 added job capacity
- Maximum Probable Development Alternative 4,900 added job capacity

Housing, Population and Employment Displacement. Since the proposed Recovery Program Area is virtually built out, there is some likelihood that new development could affect some existing residential dwelling units, businesses and employees. These changes would be considered significant impacts. **Table 5.2-1** illustrates the possible magnitude of displacement effects assuming all affected residential dwelling units are occupied and 50 percent of displaced commercial space is occupied.

- Infill/Rebuild Alternative. Since only vacant sites or unoccupied commercial space would be utilized, no displacement is anticipated.

- Moderate Development Alternative. It is estimated that this option could displace nine residential dwelling units (23 persons) and displace approximately 147 businesses (1,176 employees).

- Maximum Probable Development Alternative. It is estimated that this option could displace 137 dwelling units (349 persons) and displace approximately 239 businesses (1,912 employees).

TABLE 5.2-1: POTENTIAL HOUSING AND POPULATION DISPLACEMENT/a/

Alternative	Residential Dwelling Units Potentially Displaced	Estimated Number of Persons Affected
Infill/Rebuild Alternative		
Subarea 6	0	0
Subarea 8	0	0
Subarea 10	0	0
TOTAL	0	0
Moderate Development Alternative		
Subarea 6	0	0
Subarea 8	0	0
Subarea 10	9	23
TOTAL	9	23
Maximum Probable Development Alternative		
Subarea 6	108	275
Subarea 8	20	51
Subarea 10	9	23
TOTAL	137	349

/a/ Population displacement assumes 2.55 persons per dwelling unit.
Source: Terry A. Hayes Associates.

TABLE 5.2-2: POTENTIAL BUSINESS AND EMPLOYMENT DISPLACEMENT/a/

Alternative	Commercial Space Potentially Displaced (sf)	Estimated Number of Businesses Affected	Estimated Number of Employees Affected
Infill/Rebuild Alternative			
Subarea 6	0	0	0
Subarea 8	0	0	0
Subarea 10	0	0	0
TOTAL	0	0	0
Moderate Development Alternative			
Subarea 6			
Subarea 8	13,000	3	24
Subarea 10	514,500	123	984
TOTAL	88,400	21	168
	615,900	147	1,176
Maximum Probable Development Alternative			
Subarea 6	42,700	10	80
Subarea 8	698,600	166	1,328
Subarea 10	264,900	63	504
TOTAL	1,006,200	239	1,912

/a/ Business displacement assumes that 50% of displaced commercial space is occupied. Business displacement assumes 2,100 square feet per business. Employment displacement assumes 8 employees per displaced business. Since no site specific projects have been proposed within the Crenshaw Corridor, the estimate of businesses displaced and employees affected is based on statistical averages. Specifically business displaced assumes approximately 2,100 square feet per business. This average was arrived at by dividing the total amount of existing development in the corridor by the total number of existing businesses (5 million sf/2,400 businesses). Employees per business were determined by dividing the total number of 1990 employees in the area as indicated by 1990 Standard Industrial Classification (SIC) data by the total number of employers also shown in the SIC data base.
Source: Terry A. Hayes Associates.

MITIGATION MEASURES

1. Displaced residents and businesses shall receive assistance under the established relocation assistance procedures of the Community Redevelopment Agency of the City of Los Angeles.[1]

2. Explicit procedures shall be established that displaced residents as well as businesses are able to relocate within the proposed Recovery Program Area, if desired.

3. The proposed Recovery Program shall contain financial mechanisms to allow and financial incentives to encourage displaced businesses to re-enter into new developments that may be constructed.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

To the extent that displaced residents, businesses, and or employees cannot be re-incorporated into the proposed Recovery Program Area, these impacts would be considered significant.

[1]This measure would be applicable only if the CRA is providing financial assistance in the corridor.

5.3 URBAN DESIGN, AESTHETICS AND ARCHITECTURAL RESOURCES

EXISTING CONDITIONS

Crenshaw Boulevard is a major north-south thoroughfare. The boulevard has been designated by the City of Los Angeles Department of City Planning as a Scenic Highway.[1] Although the rationale for the designation is not presented in the City of Los Angeles Scenic Highway Element of the General Plan, it is apparent that northward facing panoramic vistas of the Hollywood Hills are possible as well as westward facing panoramic vistas of the Baldwin Hills. From the View Park area there are also eastward facing vistas which would have Crenshaw Boulevard in the foreground and the Downtown Los Angeles skyline in the background.

Urban Design Resources. There are other urban design resources located along within the proposed Recovery Program Area, including the landmark Broadway Crenshaw and the Robinsons-May buildings at Crenshaw Boulevard and Martin Luther King Jr. Boulevard, the art deco-style Vision Theater, the village-scale French Revival and Streamline Moderne storefronts in Leimert Park Village Center, the Leimert Park open space with its distinctive fountain and surrounding plaza, and the Crenshaw wall mural at approximately 50th Street and Crenshaw Boulevard. Street trees and landscaping along Crenshaw Boulevard are particularly noticeable in the segment between Vernon Avenue and 54th Street.

Architectural and Historical Resources. As part of the Community Plan Revision Program for the West Adams-Baldwin Hills-Leimert District Plan by the City of Los Angeles Department of City Planning, an inventory of architectural and historical resources was conducted. From this inventory, **Table 5.2-1** identifies approximately 35 resources within the proposed Recovery Program Area. Three of these, the May Company department store, the Broadway department store, and the Sanchez Ranch, were identified as possibly eligible for listing in the National Register of Historic Places. The Sanchez Ranch has also been designated by the City of Los Angeles Cultural Heritage Commission as Historic-Cultural Monument No. 487. The remaining 32 structures were identified as eligible for listing under a local landmark ordinance.

Character of Development. Crenshaw Boulevard is primarily strip commercial with curbside parking from Adams Boulevard to Jefferson Boulevard, Martin Luther King Jr. Boulevard to Stocker Street (east side only), Stocker Street to Vernon Avenue (both sides), Vernon Avenue to 50th Street, and 54th Street to Slauson Avenue. The Baldwin Hills Crenshaw Plaza due to its size (850,000 square feet on 30 acres) and visibility is the dominant commercial feature in the proposed Recovery Program Area. The Santa Barbara Plaza area located west of the Baldwin Hills Crenshaw Plaza is also notable because of the size of the area (approximately 20 acres). The northern edge of Santa Barbara Plaza along Santa Rosalia Drive as a particularly active strip commercial frontage. Santa Barbara Plaza, however, is also visually notable because of the extensive poorly maintained central parking area and disrepair of surrounding buildings. Other community shopping centers with extensive off street parking areas are located at Rodeo Road and Crenshaw Boulevard and

[1]Department of City Planning, City of Los Angeles Scenic Highways Plan, July, 1979.

Slauson Avenue and Crenshaw Boulevard. Both centers are well maintained, however, there is little or no landscaping to reduce the hardscape effect of the large parking areas. The center at Slauson Avenue and Crenshaw Boulevard is currently being refurbished.

TABLE 5.3-1: WEST ADAMS AREA - LIST OF POTENTIAL HISTORIC RESOURCES

Location of Resources	Historic Name	Year Built	Description	Evaluation
4450 W. Adams Bl.	Morris Memorial Baptist Church		Classical Revival, 1-Story	Is listed or appears eligible for listing under a local landmark ordinance.
4471 W. Adams Bl.		1934	Zigzag Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
4539 W. Adams Bl.		1934	Zigzag Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
2620-2628 Crenshaw Bl.			Streamline Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3651 Crenshaw Bl.		1940	Streamline Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3653-3657 Crenshaw Bl.			Postwar Moderne 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3663 Crenshaw Bl.			Streamline Moderne, 2-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3669 Crenshaw Bl.			Streamline Moderne 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
4001 Crenshaw Bl.	May Company Department Store	1947	Postwar Modern, Streamline Moderne 4-Story	Appears eligible for listing on the National Register of Historic Places.
4101 Crenshaw Bl.	Broadway Department Store	1948	Postwar Modern, Streamline Moderne 3-Story	Appears eligible for listing on the National Register of Historic Places.
5311 Crenshaw Bl.	Ford/Crenshaw Motors		Streamline, 1-Story, Auto Showroom	Is listed or appears eligible for listing under a local landmark ordinance.
5356-5360 Crenshaw Bl.			2-Story/Commercial Vernacular	Is listed or appears eligible for listing under a local landmark ordinance.
5419-5421 Crenshaw Bl.			Art Deco 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
5424-5426 Crenshaw Bl.		1927	Spanish Colonial Influence, 1-Story/ Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
5440-5442 Crenshaw Bl.			French Revival Influence, 2-Story/ Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
5450 Crenshaw Bl.			Spanish Colonial Revival, 1-Story	Is listed or appears eligible for listing under a local landmark ordinance.
5454 Crenshaw Bl.			Baroque Influence, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
5460 Crenshaw Bl.		1939	Spanish Colonial Revival, 1-Story/ Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
5730 Crenshaw Bl.			Spanish Colonial Revival, Italian Influence 1-Story/Firehouse	Is listed or appears eligible for listing under a local landmark ordinance.

TABLE 5.3-1: WEST ADAMS AREA - LIST OF POTENTIAL HISTORIC RESOURCES

Location of Resources	Historic Name	Year Built	Description	Evaluation
6501 Crenshaw Bl.	Hyde Park Congregational Church		Church	Is listed or appears eligible for listing under a local landmark ordinance.
4317-4331 Degnan Bl.		1948	Postwar Modern 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
4330-4346 Degnan Bl.			Forties Colonial Influence, 1-Story/ Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
4331 Degnan Bl.		1948	Postwar Modern, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
4333-4335 Degnan Bl.		1946	Streamline Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
4337-4341 Degnan Bl.		1946	Streamline Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3725 Don Felipe Dr.	Sanchez Ranch, Rancho Cienego O Paso De La Tijera	1843	Adobe & associated bldgs,1-Story/Residence	Historic-Cultural Monument #487. Potentially eligible for listing on the National Register of Historic Places.
3125 Exposition Bl.	DWP Distributing Station No. 39	1932	Postwar Moderne, 2-Story/Industrial Pumping Station	Is listed or appears eligible for listing under a local landmark ordinance.
4115 Martin Luther King Jr. Bl.	Guy's & Dolls Beauty & Barber Shop		50's Fantasy, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3300 Block W. 43rd Pl.	Leimert Park/Plaza		Landscaped Park	Is listed or appears eligible for listing under a local landmark ordinance.
3341 W. 43rd Pl.	Watchtower Theatre/ Jehovah's Witness	1931	Art Deco, Theatre, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3343-3351 W. 43rd Pl.		1933	Art Deco, 1-Story/ Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3401 W. 43rd Pl.		1939	Streamline Moderne, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3411 W. 43rd Pl.			Streamline Moderne, Influence, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3413-3415 W. 43rd Pl.			French Revival Influence, 2-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.
3419 W. 43rd Pl.		1941	Streamline Moderne Influence, 1-Story/Commercial	Is listed or appears eligible for listing under a local landmark ordinance.

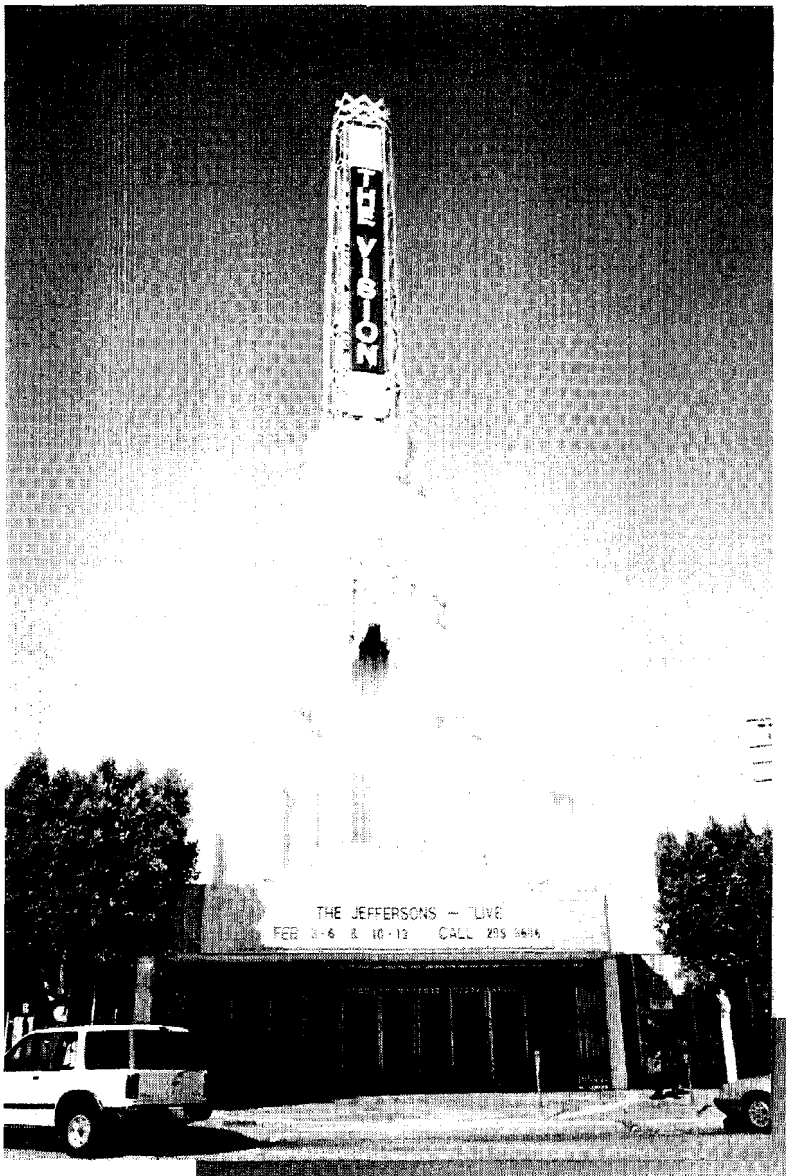
Source: Draft, Historic Resources Final Report for the West Adams - Baldwin Hills - Leimert District Plan Area, The City of Los Angeles, Department of Planning. Prepared by: Myra L. Frank & Associates, Inc., et.al, October 15, 1990.

Martin Luther King Jr. Boulevard, which is included in a western "leg" of the proposed Recovery Program Area, has a mixed character with little or no defining characteristic other than the visual effect of the width of the street (approximately 160 to a maximum of 240 feet at the widest part by Santa Barbara Plaza).

Village-scale retail along Degnan Avenue in Leimert Park Village Center.

Landmark Broadway Crenshaw and Robinsons-May buildings at Martin Luther King Jr. Boulevard and Crenshaw Boulevard.

SOURCE: Terry A. Hayes Associates.



Landmark "Vision Theater" in Leimert Park. Home of the recent Los Angeles Arts Festival.

Community-oriented retail uses near 54th Street. Note planted street median.

SOURCE: Terry A. Hayes Associates.

Pedestrian Concentrations. Pedestrian activity is concentrated in three major locations along Crenshaw Boulevard.

- 30th Street to Jefferson Boulevard (West Angeles Church facilities)
- Martin Luther King Jr. Boulevard to Vernon Avenue. (Baldwin Hills Crenshaw Plaza and Leimert Park Village Center). Within the Leimert Park section, there are scattered locations with outside cafe seating.
- 54th Street to Slauson Avenue (Post Office, Bank, Urban League, Black Employees Association, gymnasium, mosque, community-oriented businesses and street vendors are the major attractors).

Building Heights and Shade/Shadow Effects. The proposed Recovery Program Area is characterized by one to two story buildings both commercial and residential. This low scale of development is punctuated by taller structures including the Family Savings and Loan building near Rodeo Road and Crenshaw Boulevard, the Broadway Crenshaw and Robinsons-May buildings at Martin Luther King Jr. Boulevard and Crenshaw Boulevard and medical and office buildings located along Santa Rosalia Drive and Stocker Street. The limited number of taller buildings, none of which are adjacent to residences, means that there are currently no areas of significant shade or shadows in the proposed Recovery Program Area.

Street Width. Another defining characteristic of Crenshaw Boulevard is the width of the street. From the Santa Monica Freeway to Rodeo Place, the width of the street is approximately 100 feet. From Rodeo Place to 39th Street, Crenshaw Boulevard widens to approximately 200 feet including frontage roads on both sides of the street. Between 39th Street and Martin Luther King Jr. Boulevard, the width is approximately 200 feet, except for a narrow section approximately 100 feet wide just north of Martin Luther King Jr. Boulevard. Between Martin Luther King Jr. Boulevard and Stocker Street, the width is approximately 160 feet. From Stocker Street to Vernon Avenue, the width narrows to 100 feet. This segment, in particular the narrowness of the street, contributes significantly to the low-scale village like character of Leimert Park. With the exception of the segment of Crenshaw Boulevard between 54th Street and 57th Street, the narrowest segments of the boulevard appear to contribute to a more active pedestrian environment. South of Vernon Avenue the street widens again to approximately 200 feet until 60th Street. South of 60th Street, the boulevard narrows to 100 feet.

IMPACTS

Significance Criteria. Proposed changes would have a significant impact if the change would result in 1) the disruption of an existing scenic vista or viewshed, 2) the removal of an urban design, architectural, historical, or landscape resource features, 3) an adverse affect on the existing pedestrian environment, 4) the casting of shadows or shade on residences or public open spaces, and 5) creation of objectionable levels of light or glare in adjacent residential neighborhoods.

Assessment

Disruption of Scenic Vistas. The predominant major vista within the area is a north facing view of the Hollywood Hills. It is not anticipated that there would be elevated bridges or structures associated with any of the alternatives under consideration. A comparative evaluation of the Alternatives is as follows:

- Infill/Rebuild Alternative. Development associated with the Infill/Rebuild Alternative would be predominantly lower scale (one to two-stories), and would not have an effect on west facing vistas of the Baldwin Hills.

- Moderate Development Alternative. Development associated with the Moderate Development Alternative would be predominantly lower scale (one to two-stories), and would not have an effect on west facing vistas of the Baldwin Hills.

- Maximum Development Alternative. This alternative could result in some concentration of three to four-story buildings in selected areas. These buildings could limit west facing vistas of Baldwin Hills from Crenshaw Boulevard. Westward views from residential neighborhoods would be less affected. It should be noted that eastward facing scenic vistas of the Downtown Los Angeles skyline from lower elevation residences in View Park could be adversely affected by any concentration of three to four-story buildings between Stocker Street and Vernon Avenue.

The Removal of Existing Urban Design, Architectural, Historical, or Landscape Resources.

- Infill/Rebuild Alternative. Since only vacant sites would be utilized, there would be no adverse impacts on existing resource elements in the proposed Recovery Program Area.

- Moderate Development Alternative. This alternative would entail the use of the currently underutilized sites, as well as vacant sites. With approximately 600,000 square feet of existing buildings potentially affected (12 percent of the existing building space in the proposed Recovery Program Area), there is a low to moderate probability that the use of these underutilized sites could entail the removal of a building or buildings of architectural or historical significance.

- Maximum Probable Development Alternative. This alternative could entail the use of the currently underutilized sites, vacant sites, as well as currently occupied sites. With approximately 1,000,000 square feet of existing buildings potentially affected (20 percent of the existing building space within the proposed Recovery Program Area), there is a moderate to high probability that the use of these sites could entail the removal of a building or buildings of architectural or historical significance.

Adverse Impacts on the Existing Pedestrian Environment. No significant impacts are anticipated to result from the proposed Recovery Program Area-related alternatives. This concern should be addressed on a site specific basis and focus on such issues as the number and location of driveways, ground floor uses, and sidewalk widths.

Casting of Shadows or Shade.

- Infill/Rebuild Alternative. If not properly setback or stepped back, two-story buildings associated with this option could cast shadows on adjacent residences.

- Moderate Development Alternative. If not properly setback or stepped back, two-story buildings associated with this option could cast shadows on adjacent residences, particularly in those areas where there is no intervening public alley.

- Maximum Probable Development Alternative. If not properly setback or stepped back, two to four-story buildings associated with this option could cast shadows on adjacent residences, particularly in those areas where there is no intervening public alley. It is also anticipated that the massing of higher density buildings under this alternative could contribute to shade and shadow effects on adjacent residential areas.

Light and Glare. Given the shallow lot depths along the corridor (less than 150 feet), there is the possibility that ornamental or security lighting associated with each of the alternatives could result in the casting of illumination onto adjacent residential properties.

MITIGATION MEASURES

1. Elevated bridges or structures across Crenshaw Boulevard shall be prohibited in order to preserve scenic north facing vistas of the Hollywood Hills.

2. Four-story or buildings greater in height shall not be concentrated along Crenshaw Boulevard between Stocker Street and Vernon Avenue in order to preserve east facing scenic vistas of the Los Angeles Downtown area from View Park residences.

3. To the extent feasible, existing urban design, architectural, historical or landscape resources in the proposed Recovery Program Area shall be incorporated into future development.

4. Rehabilitation of architecturally significant or historically significant buildings shall meet the U.S. Secretary of the Interior Standards for the Rehabilitation of Historic Structures.

5. Should street trees or median street trees be removed then an equal number of trees of equal size shall be incorporated into the streetscape or landscaping plan for the future development.

6. New developments greater than one-story shall be setback or stepped back from adjacent residential properties to avoid or minimize adverse shade and shadow impacts.

7. Ornamental and security lighting associated with future developments shall be oriented to avoid or minimize illumination of adjacent residential properties. In addition, illuminated signs shall be prohibited on the portion of commercial building facades that directly face residential areas.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

The measures identified above would reduce the potential urban design impacts to insignificant levels.

5.4 TRAFFIC AND CIRCULATION

EXISTING CONDITIONS

The discussion below summarizes the findings of the traffic impact study prepared by Kaku Associates, Inc. This report is on file with the Community Redevelopment Agency. The scope of work for the study was developed in conjunction with the City of Los Angeles Department of Transportation (LADOT) and the Community Redevelopment Agency (CRA) staff. The base assumptions, technical methodologies and geographic coverage of the study were all identified as part of the jointly-developed study approach.

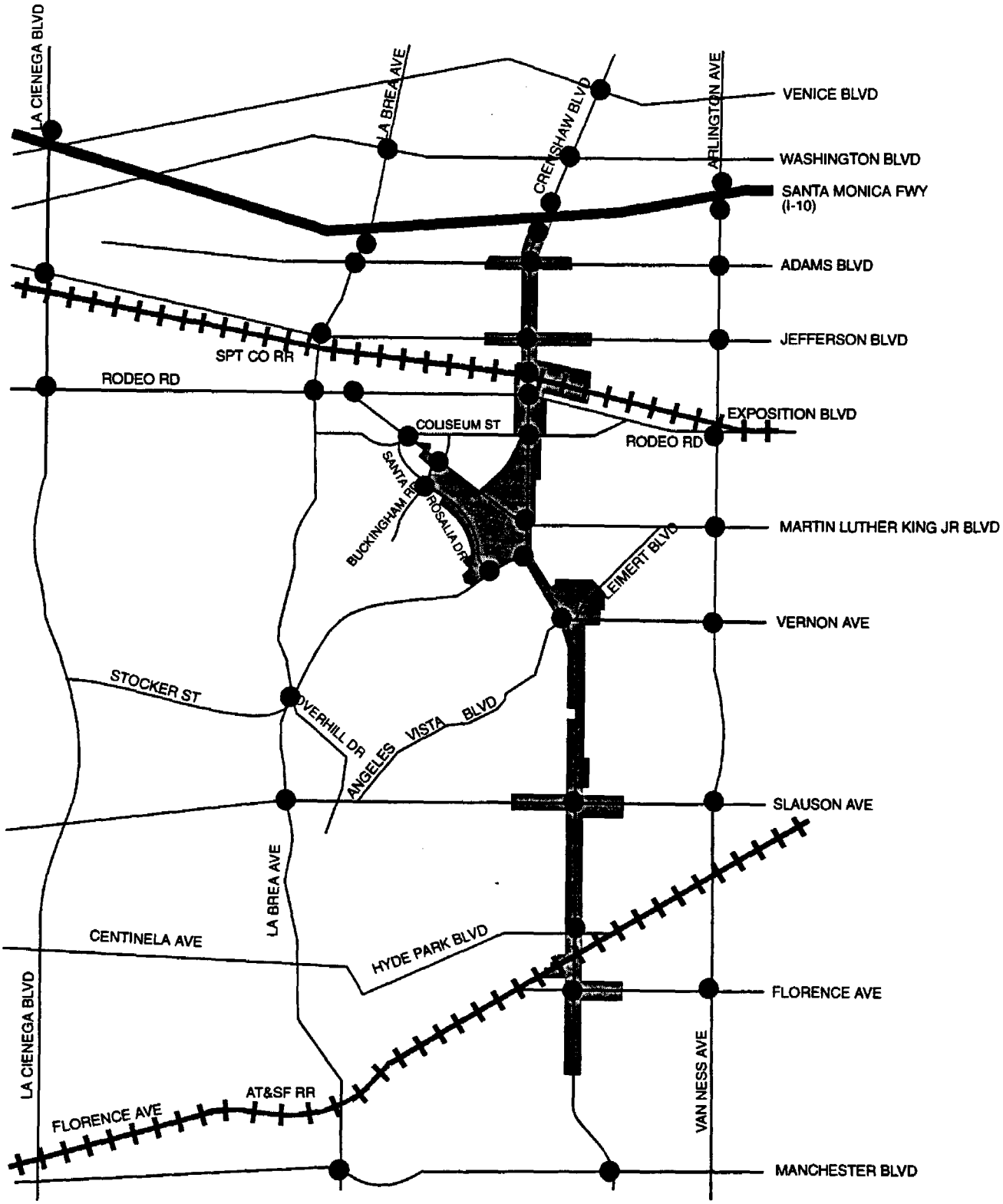
The study is directed at the analysis of potential project-generated traffic impacts along major roadways in the vicinity of the study area upon the full buildout of the various development alternatives of the proposed Recovery Program. For the analysis and establishment of existing base conditions, 41 intersections were identified for detailed level of service analysis during the morning and evening peak hours. The intersections analyzed in this study are shown in **Figure 5.4-1**. They include:

1. La Brea Ave. & Santa Monica Fwy (I-10) EB off-ramp
2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Road
4. Martin Luther King Jr. Blvd & Rodeo Road
5. La Brea Ave. & Adams Blvd
6. Martin Luther King Jr. Blvd & Coliseum Street
7. Martin Luther King Jr. Blvd & Buckingham Road
8. Santa Rosalia Dr & Buckingham Road
9. Crenshaw Blvd & I-10 WB Off
10. Crenshaw Blvd & I-10 EB Off
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum Street
16. Crenshaw Blvd & Rodeo Road
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker Street
19. Stocker Street & Santa Rosalia Dr
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd (CMP Arterial Monitoring Location)
25. Arlington Ave. & I-10 WB Off
26. Arlington Ave. & I-10 EB Off
27. Arlington Ave. & Adams Blvd
28. Arlington Ave. & Jefferson Blvd
29. Arlington Ave. & Rodeo Road
30. Arlington Ave. & Martin Luther King Jr. Blvd
31. Arlington Ave. & Vernon Ave.
32. Rodeo Road & La Cienega Blvd
33. Slauson Ave. & Van Ness Ave.
34. Washington Blvd & La Brea Ave.
35. Venice Blvd & Crenshaw Blvd
36. Florence Ave. & Van Ness Ave.
37. La Brea Ave. & Stocker Street
38. Jefferson Blvd & La Cienega Blvd
39. Slauson Ave. & La Brea Ave.
40. La Brea Ave. & Manchester Blvd (CMP Arterial Monitoring Location)
41. La Cienega Blvd & Venice Blvd (CMP Arterial Monitoring Location)

A comprehensive data collection effort was undertaken to develop a detailed description of the existing conditions in the study area. The assessment of conditions relevant to this study includes an inventory of streets and highways within the study area, existing traffic operating conditions and existing public transit services. In addition, this chapter includes a discussion of regional transit plans as they relate to the study area.

Existing Circulation Network

Primary regional access to the study area is provided by the Santa Monica Freeway (I-10) in the east-west direction and by the San Diego Freeway (I-405) and the Harbor Freeway



LEGEND:

- Location of Analyzed Intersections
- Recovery Program Area

SOURCE: Kaku Associates.

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.4-1

LOCATION OF ANALYZED INTERSECTIONS

(I-110) in the north-south direction. The proposed Recovery Program Area extends approximately 4.7 miles and includes the block faces adjoining Crenshaw Boulevard between the Santa Monica Freeway (I-10) and the City of Los Angeles/Inglewood limits. These areas are approximately 3.5 and five miles from the Harbor Freeway (I-110) and the San Diego Freeway (I-405), respectively. The proposed Recovery Program Area also includes the Baldwin Hills Crenshaw Plaza and the commercially zoned properties along Martin Luther King Jr. Boulevard and Stocker Street.

Area access is provided by La Cienega Boulevard, La Brea Avenue, Martin Luther King Jr. Boulevard, Crenshaw Boulevard, Jefferson Boulevard, Exposition Boulevard, Coliseum Street, Stocker Street, Adams Boulevard, Rodeo Road, Arlington Avenue, Slauson Avenue, Vernon Avenue, Florence Avenue and Manchester Boulevard. Local access and circulation are provided by numerous east-west streets adjoining the Crenshaw Corridor. Brief descriptions of the principal streets serving the proposed Recovery Program Area follow.

- **La Cienega Boulevard** - La Cienega Boulevard is a north-south arterial which provides six lanes between Rodeo Road and Jefferson Boulevard along with a central turn lane. North of Jefferson Boulevard, La Cienega Boulevard is a four-lane facility with a central turn lane. Parking is not allowed during peak periods along La Cienega Boulevard from Rodeo Road to Venice Boulevard. The posted speed limit is 35 mph.

- **La Brea Avenue** - La Brea Avenue is a north-south arterial located west of the proposed Recovery Program Area. It is a six-lane facility between Slauson Avenue and Venice Boulevard, and a four lane facility between Slauson Avenue and Manchester Boulevard. Also, a central turn lane exists along La Brea Avenue between Manchester Boulevard and Slauson Avenue, except for a short segment of the roadway between Centinela Avenue and Hillsdale Street. Parking is allowed on La Brea Avenue between Slauson Avenue and Centinela Avenue and also between Manchester Boulevard and Plymouth Street. La Brea Avenue provides access to the Santa Monica Freeway (I-10) in the eastbound and westbound directions.

- **Martin Luther King Jr. Boulevard** - Martin Luther King Jr. Boulevard provides six travel lanes and is separated by a raised median between Rodeo Road and Crenshaw Boulevard. Martin Luther King Jr. Boulevard provides four-lanes between Crenshaw Boulevard and Leimert Boulevard with a central turn lane and provides six lanes between Leimert Boulevard and Arlington Avenue. There are exclusive left-turn lanes at major intersections with parking permitted along certain segments of the roadway. It provides access to the Harbor Freeway (I-110) in both northbound and southbound directions. The intersections at Coliseum Street, Rodeo Road, Buckingham Road, Marlton Avenue, Crenshaw Boulevard and Arlington Avenue are all signalized.

- **Crenshaw Boulevard** - Crenshaw Boulevard is a six-lane north-south arterial between 80th Street and Washington Boulevard. Crenshaw Boulevard provides four travel lanes between 80th Street and Manchester Boulevard. Parking is not allowed on either side of Crenshaw Boulevard between Rodeo Road and Martin Luther King

Jr. Boulevard, and also between Leimert Boulevard and Slauson Avenue. Parking is restricted during peak periods along Crenshaw Boulevard between Rodeo Road and Venice Boulevard, Stocker Street and Leimert Boulevard and also between 60th Street and 80th Street. There are exclusive left-turn lanes at major intersections. The intersections of Crenshaw Boulevard and Adams Boulevard, Jefferson Boulevard, Exposition Boulevard, Rodeo Road, Coliseum Street, 39th Street, Martin Luther King Jr. Boulevard, Stocker Street, Vernon Avenue, Slauson Avenue, Hyde Park, Florence Avenue and Manchester Boulevard are all controlled by traffic signals. The posted speed limit on Crenshaw Boulevard is 35 mph.

- **Washington Boulevard** - Washington Boulevard is a six-lane east-west arterial that is located north of the proposed Recovery Program Area. A central turn lane is available along Washington Boulevard between 10th Avenue and the Santa Monica Freeway (I-10). It provides access to the Santa Monica Freeway in both eastbound and westbound directions. Parking is prohibited during peak hours in the peak direction of travel. The posted speed limit on Washington Boulevard is 35 mph.

- **Jefferson Boulevard** - Jefferson Boulevard is a four-lane facility traversing in the east-west direction in the northern portion of the proposed Recovery Program Area. Parking is allowed on either side of Jefferson Boulevard between Arlington Avenue and Bronson Avenue. Parking is not allowed in the westbound direction of Jefferson Boulevard between Bronson Avenue and Victoria Avenue.

- **Exposition Boulevard** - Exposition Boulevard is a four-lane arterial from Crenshaw Boulevard to Gramercy Place, and is a two-lane roadway from Crenshaw Boulevard to La Brea Avenue. Exposition Boulevard becomes a eight-lane facility from Gramercy Place to Western Avenue. Parking is not allowed on either side of Exposition Boulevard between Crenshaw Boulevard and Gramercy Place. Between Crenshaw Boulevard and La Brea Avenue, parking is allowed along Exposition Boulevard. The posted speed limit along Exposition Boulevard in the vicinity of Crenshaw Boulevard is 35 mph.

- **Coliseum Street** - Coliseum Street varies from two to four lanes within the study area with parking allowed on most sections of the road. Its intersections with Crenshaw Boulevard and Martin Luther King Jr. Boulevard are signalized. The posted speed limit on Coliseum Street is 35 mph.

- **Stocker Street** - Stocker Street is a four-lane facility between La Cienega Boulevard and Crenshaw Boulevard. Parking is not allowed on either side of Stocker Street between Crenshaw Boulevard and La Brea Avenue. The posted speed limit on Stocker Street is 45 mph. Its intersections with La Cienega Avenue, La Brea Avenue and Crenshaw Boulevard are all controlled by traffic signals.

- **Adams Boulevard** - Adams Boulevard is a four-lane facility which runs in an east-west direction in the northern area of the Crenshaw Corridor. Adams Boulevard provides access to the Harbor Freeway (I-110) in both northbound and southbound

directions. Parking is allowed along Adams Boulevard between Gramercy Place and Fairfax Avenue. The posted speed limit on Adams Boulevard is 35 mph.

- **Rodeo Road** - Rodeo Road is a four-lane east-west arterial from Gramercy Place to Martin Luther King Jr. Boulevard. From Martin Luther King Jr. Boulevard to Sycamore Avenue, Rodeo Road is a six-lane arterial with a central turn lane and parking not allowed on either side of the street. Rodeo Road provides three travel lanes in the eastbound direction and two lanes westbound, from Sycamore Avenue to Hauser Boulevard, with a central turn lane. West of Hauser Boulevard to Jefferson Boulevard, Rodeo Road is a four-lane facility with a central turn lane. Parking is allowed on Rodeo Road only for short segments between Gramercy Place and 2nd Avenue and also between Hauser Boulevard and La Cienega Boulevard.

- **Arlington Avenue** - Arlington Avenue is a four-lane north-south arterial providing access to the Santa Monica Freeway (I-10) in both eastbound and westbound directions. Parking is not allowed in the peak direction of travel on Arlington Avenue between Vernon Avenue and Rodeo Road. Also, parking is not allowed on either side of Arlington Avenue between Rodeo Road and Exposition Boulevard.

- **Slauson Avenue** - Slauson Avenue provides four to six lanes of travel in the study area. Slauson Avenue is a four-lane east-west arterial with a central turn lane between Alviso Avenue and Van Ness Avenue. From Alviso Avenue to La Brea Avenue, Slauson Avenue provides six travel lanes with a central turn lane for most sections of the roadway except between Angeles Vista and Overhill Drive where a raised median separates the two directions of travel. Slauson Avenue provides access to both the Harbor Freeway (I-110) and San Diego Freeway (I-405) in both northbound and southbound directions. Parking is prohibited on Slauson Avenue during both AM and PM peak periods. The posted speed limit on Slauson Avenue is 35 mph.

- **Vernon Avenue** - Vernon Avenue provides four travel lanes and runs in the east-west direction with parking permitted on both sides during off-peak periods. Its intersections with Crenshaw Boulevard and Arlington Avenue are signalized.

- **Santa Rosalia Drive** - Santa Rosalia Drive is a four-lane street running in the north-west/south-east direction. Parking is allowed on both sides of the street except between Stocker Street and Marlton Avenue where parking is allowed only in the westbound direction. Its intersections with Buckingham Road, Marlton Avenue and Stocker Street are all controlled by traffic signals. The posted speed limit on Santa Rosalia Drive is 40 mph.

- **Marlton Avenue** - Marlton Avenue is a four-lane north-south facility with parking allowed on the south side of the street. Its intersections with Santa Rosalia Drive and Martin Luther King Jr. Boulevard are signalized.

- **Buckingham Road** - Buckingham Road is a two-lane north-south facility with parking permitted on both sides of the street. It is the eastern boundary of the Santa

Barbara Plaza and its intersections with Martin Luther King Jr. Boulevard and Santa Rosalia Drive are signalized.

- **Florence Avenue** - Florence Avenue is a east-west six-lane arterial with a central turn lane between West Drive and Gramercy Place. Parking is prohibited along Florence Avenue during both the peak periods. Its intersections with West Boulevard, Crenshaw Boulevard and Van Ness Avenue are all signalized.

- **Manchester Boulevard** - Manchester Boulevard is a four to six lane east-west arterial that runs south of the Crenshaw Corridor in the City of Inglewood. Manchester Boulevard provides six lanes of travel with parking prohibited between La Brea Avenue and Crenshaw Drive. Its intersections with La Brea Avenue and Crenshaw Boulevard are Congestion Management Plan (CMP) Arterial Monitoring Locations. Manchester Boulevard provides access to both the Harbor Freeway (I-110) and the San Diego Freeway (I-405) in the northbound and southbound directions.

Existing Base Traffic Volumes and Levels of Service

Current peak hour turning movement information was obtained from several sources including the LADOT, City of Inglewood (CMP Arterial Monitoring Locations) and from data collection efforts undertaken by Kaku Associates, Inc. These traffic counts were used as the base for determining existing traffic conditions. The existing traffic volumes at all the analyzed intersections are shown in Appendix B, Figures 3a and 3b.

Intersection Level of Service Methodology

Level of service (LOS) is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. Level of service definitions for signalized intersections are summarized in **Table 5.4-1**. It should be noted that the LADOT has established that the minimum acceptable Level of Service Standard is LOS D for all signalized intersections. The "Critical Movement Analysis-Planning" (CMA) method of intersection capacity analysis (per LADOT requirements) was used to determine the intersection volume to capacity (V/C) ratio and corresponding level of service at the intersections. This methodology is in conformance with the Congestion Management Program for Los Angeles County.

TABLE 5.4-1: LEVEL OF SERVICE DEFINITIONS FOR SIGNALIZED INTERSECTIONS		
Level of Service	**Volume/Capacity Ratio**	**Definition**
A	0.000 - 0.600	EXCELLENT. No vehicle waits longer than one red light and no approach phase is fully used.
B	0.601 - 0.700	VERY GOOD. An occasional approach phase is fully utilize; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.701 - 0.800	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.801 - 0.900	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.901 - 1.000	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	Greater than 1.000	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.

Source: Transportation Research Board, Interim Materials on Highway Capacity, Transportation Research Circular Nol 212, January 1980.

Existing Peak Hour Levels of Service

Table 5.4-2 summarizes the existing weekday morning and evening peak hour V/C ratio and corresponding level of service at each of the 41 analyzed intersections (see **Figures 5.4-2** and **5.4-3**. Under existing base conditions, 15 of the 41 intersections are currently operating at unacceptable levels of service (LOS E or F) during the morning and/or afternoon peak hours. The intersections operating at unacceptable levels of service are:

2. La Brea Ave. & Jefferson Blvd (AM & PM)
3. La Brea Ave. & Rodeo Rd. (AM & PM)
9. Crenshaw Blvd & I-10 WB off-ramp (AM)
11. Crenshaw Blvd & Washington Blvd (AM & PM)
17. Crenshaw Blvd & Martin Luther King Jr. Blvd (PM)
21. Crenshaw Blvd & Slauson Ave. (AM & PM)
24. Crenshaw Blvd & Manchester Blvd (AM & PM)
25. Arlington Ave. & I-10 WB off-ramp (PM)
32. La Cienega Blvd & Rodeo Rd. (AM & PM)
35. Crenshaw Blvd & Venice Blvd (AM & PM)
37. La Brea Ave. & Stocker St. (AM & PM)
38. La Cienega Blvd & Jefferson Blvd (AM&PM)
39. La Brea Ave. & Slauson Ave. (AM & PM)
40. La Brea Ave. & Manchester Blvd (AM&PM)
41. La Cienega Blvd & Venice Blvd (PM)

The remaining intersections (26 out of 41) are operating at acceptable levels of service (LOS D or better) during both AM and PM peak hours.

Existing Public Transit Service

The proposed Recovery Program Area is currently served by the following twelve Southern California Rapid Transit District (SCRTD)/Los Angeles County Metropolitan Transportation Authority (MTA) bus lines:

- Line 37 - This line travels along Adams Boulevard, connecting the West Los Angeles Transit Center with Downtown Los Angeles.

- Line 38 - This line travels along Jefferson Boulevard connecting the West Los Angeles Transit Center with the Union Station Metrolink.

- Line 40 - This line runs along Crenshaw Boulevard, then Leimert Boulevard and Martin Luther King Jr. Boulevard, connecting Downtown Los Angeles and Redondo Beach.

- Line 42 - This line travels along Stocker Street through Crenshaw Boulevard and then east along Martin Luther King Jr. Boulevard connecting Downtown Los Angeles and L.A.X. Transit Center.

- Line 102 - This line travels along Coliseum Street east of La Brea Avenue serving the areas of mid-city Los Angeles and south of Downtown Los Angeles.

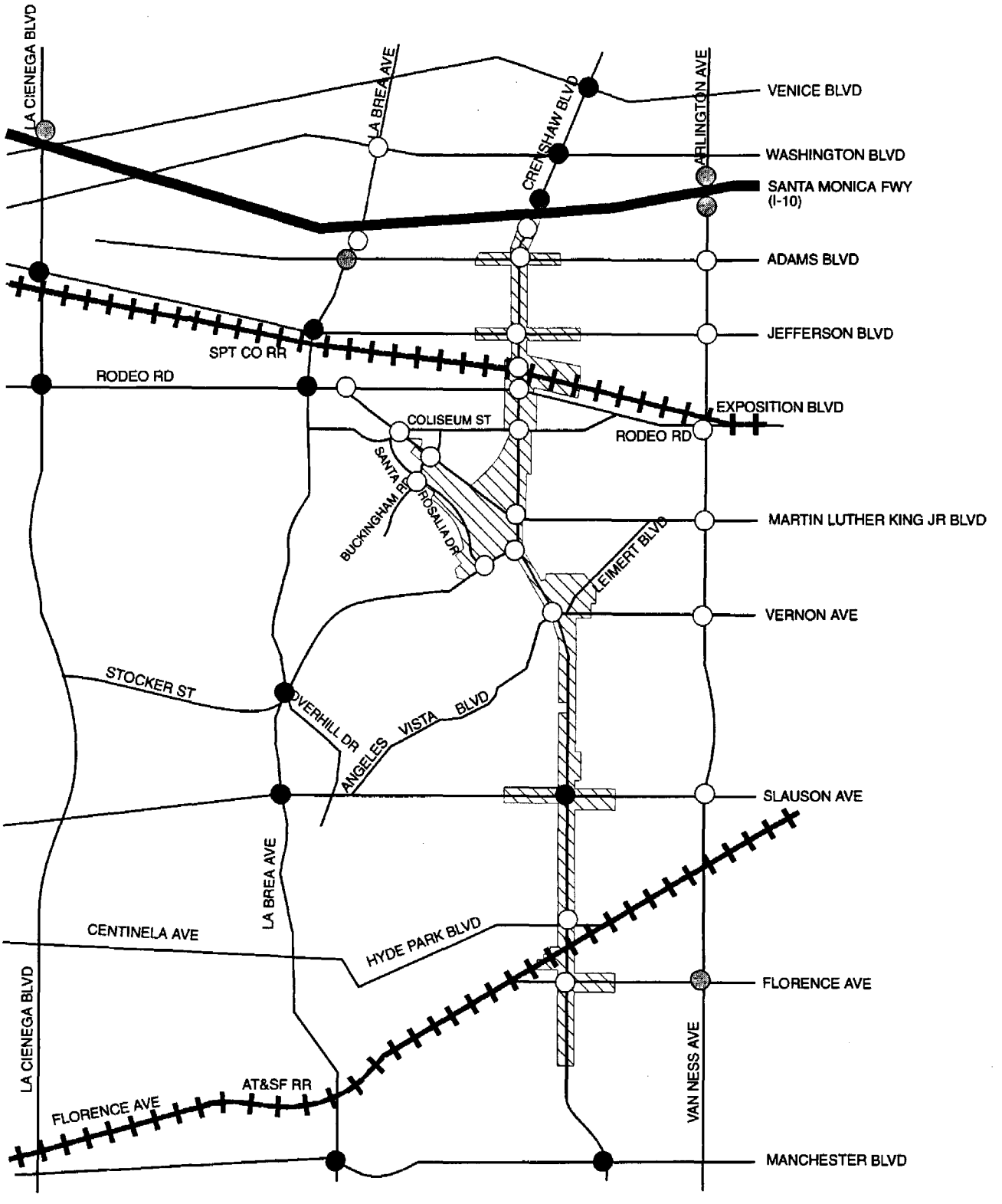
- Line 105 - This line runs along Rodeo Road, Martin Luther King Jr. Boulevard, detours to Hillcrest Drive and Santa Rosalia Drive, returns to Martin Luther King Jr. Boulevard and then along Crenshaw Boulevard and Vernon Avenue. This local bus line runs extensively throughout the study area. This line connects West Hollywood and City of Cudahy.

- Line 107 - This line travels along 54th Street, connecting the City of Inglewood and the City of Cudahy.

- Line 108 - This line travels along Slauson Avenue, serving the southern portions of the Crenshaw Corridor.

- Line 110 - This line travels along Hyde Park Boulevard connecting Culver City with Bell Gardens.

- Line 111 - This line runs along Florence Avenue serving the southern area of the Crenshaw Corridor. This line connects the Whittwood Center in Whittier with the Los Angeles International Airport Transit Center.



LEGEND: Intersection Levels of Service

○ A-C ● E

◍ D ● F

▨ Recovery Program Area

SOURCE: Kaku Associates.

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

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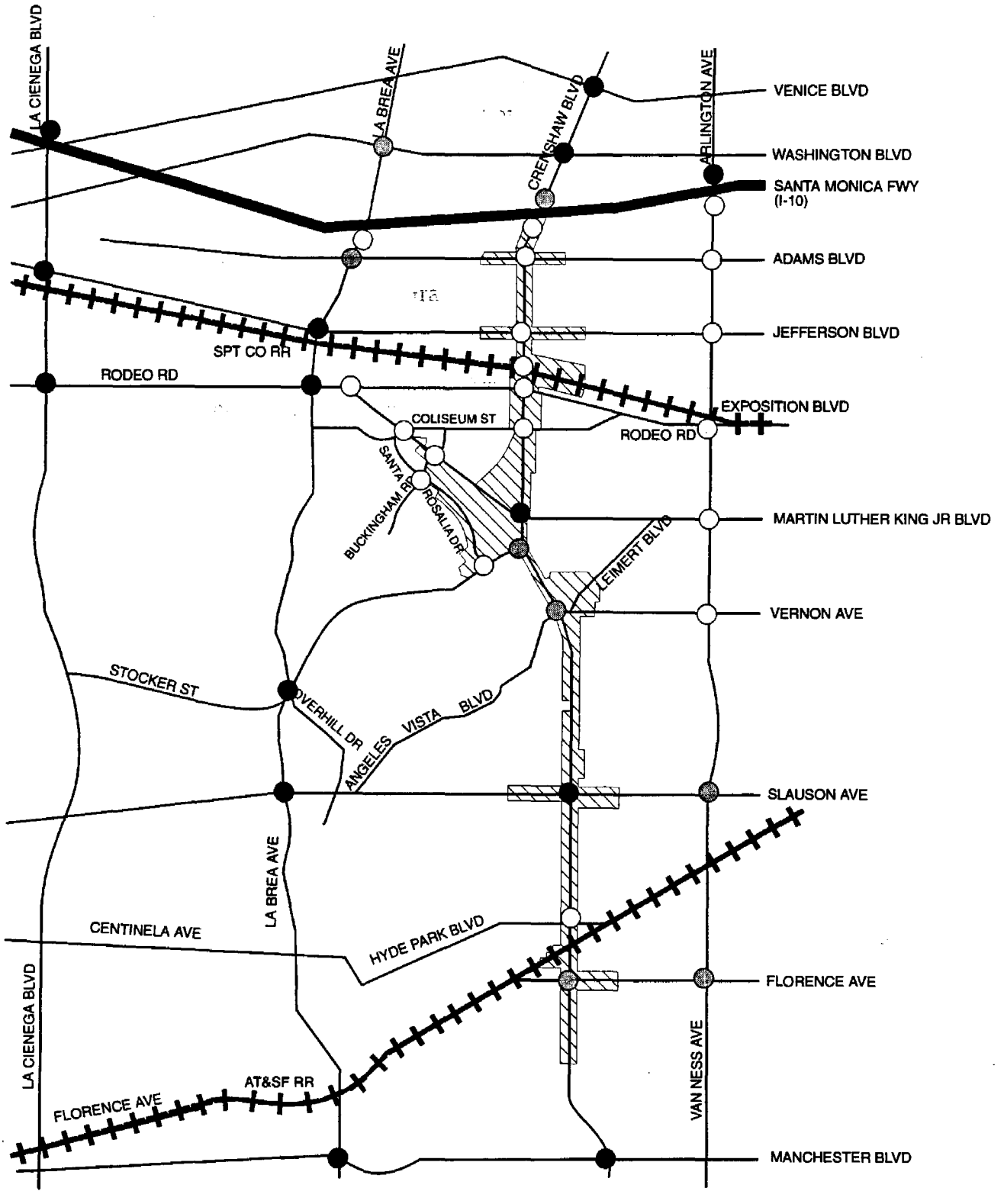
FIGURE 5.4-2

EXISTING INTERSECTION AM LEVELS OF SERVICE



LEGEND: Intersection Levels of Service

○ A-C ● E

◍ D ● F

▨ Recovery Program Area

SOURCE: Kaku Associates.

APPROX. SCALE: N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.4-3

EXISTING INTERSECTION PM LEVELS OF SERVICE

TABLE 5.4-2: EXISTING INTERSECTION LEVELS OF SERVICE

Intersections	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
1. La Brea Ave. & I-10 EB off-ramp/a/	0.718	C	0.781	C
2. La Brea Ave. & Jefferson Blvd	1.096	F	1.116	F
3. La Brea Ave. & Rodeo Rd	0.932	E	1.027	F
4. Martin Luther King Jr. Blvd & Rodeo Rd.	0.417	A	0.626	B
5. La Brea Ave. & Adams Blvd/a/	0.836	D	0.840	D
6. Martin Luther King Jr. Blvd & Coliseum St.	0.399	A	0.646	B
7. Martin Luther King Jr. Blvd & Buckingham Rd.	0.309	A	0.506	A
8. Santa Rosalia Dr. & Buckingham Rd	0.347	A	0.427	A
9. Crenshaw Blvd & I-10 WB off-ramp/a/	0.938	E	0.811	D
10. Crenshaw Blvd & I-10 EB off-ramp/a/	0.616	B	0.707	C
11. Crenshaw Blvd & Washington Blvd/a/	0.983	E	0.907	E
12. Crenshaw Blvd & Adams Blvd/a/	0.525	A	0.725	C
13. Crenshaw Blvd & Jefferson Blvd	0.704	C	0.745	C
14. Crenshaw Blvd & Exposition Blvd	0.663	B	0.672	B
15. Crenshaw Blvd & Coliseum St.	0.637	B	0.752	C
16. Crenshaw Blvd & Rodeo Rd	0.675	B	0.722	C
17. Crenshaw Blvd & Martin Luther King Jr. Blvd	0.764	C	1.004	F
18. Crenshaw Blvd & Stocker St.	0.713	C	0.855	D
19. Santa Rosalia Dr. & Stocker St.	0.499	A	0.578	A
20. Crenshaw Blvd & Vernon Ave.	0.672	B	0.813	D
21. Crenshaw Blvd & Slauson Ave.	0.921	E	1.173	F
22. Crenshaw Blvd & Hyde Park Blvd	0.555	A	0.754	C
23. Crenshaw Blvd & Florence Ave.	0.639	B	0.879	D
24. Crenshaw Blvd & Manchester Blvd	1.027	F	1.211	F
25. Arlington Ave. & I-10 WB off-ramp/a/	0.860	D	0.960	E
26. Arlington Ave. & I-10 EB off-ramp/a/	0.868	D	0.692	B
27. Arlington Ave. & Adams Blvd/a/	0.594	A	0.677	B
28. Arlington Ave. & Jefferson Blvd	0.585	A	0.595	A
29. Arlington Ave. & Rodeo Rd	0.387	A	0.560	A
30. Arlington Ave. & Martin Luther King Jr. Blvd	0.587	A	0.779	C
31. Arlington Ave. & Vernon Ave.	0.525	A	0.698	B
32. La Cienega Blvd & Rodeo Rd	1.025	F	1.133	F
33. Van Ness Ave. & Slauson Ave.	0.632	B	0.807	D
34. La Brea Ave. & Washington Blvd/a/	0.794	C	0.859	D
35. Crenshaw Blvd & Venice Blvd/a/	1.074	F	1.053	F

TABLE 5.4-2: EXISTING INTERSECTION LEVELS OF SERVICE

Intersections	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
36. Van Ness Ave. & Florence Ave.	0.817	D	0.849	D
37. La Brea Ave. & Stocker St.	1.135	F	1.201	F
38. La Cienega Blvd & Jefferson Blvd	1.161	F	1.125	F
39. La Brea Ave. & Slauson Ave.	0.934	E	1.134	F
40. La Brea Ave. & Manchester Blvd	0.964	E	0.983	E
41. La Cienega Blvd & Venice Blvd/a/	0.868	D	0.951	E

/a/ Intersection operates at ATSAC.
Source: Kaku Associates.

- Line 112 - This line also runs along Florence Avenue connecting the City of Lynwood with the Crenshaw Corridor.

- Line 210 - This line travels along Crenshaw Boulevard and serves all the area within the Crenshaw Corridor. This line connects the City of Hollywood with the City of Torrance.

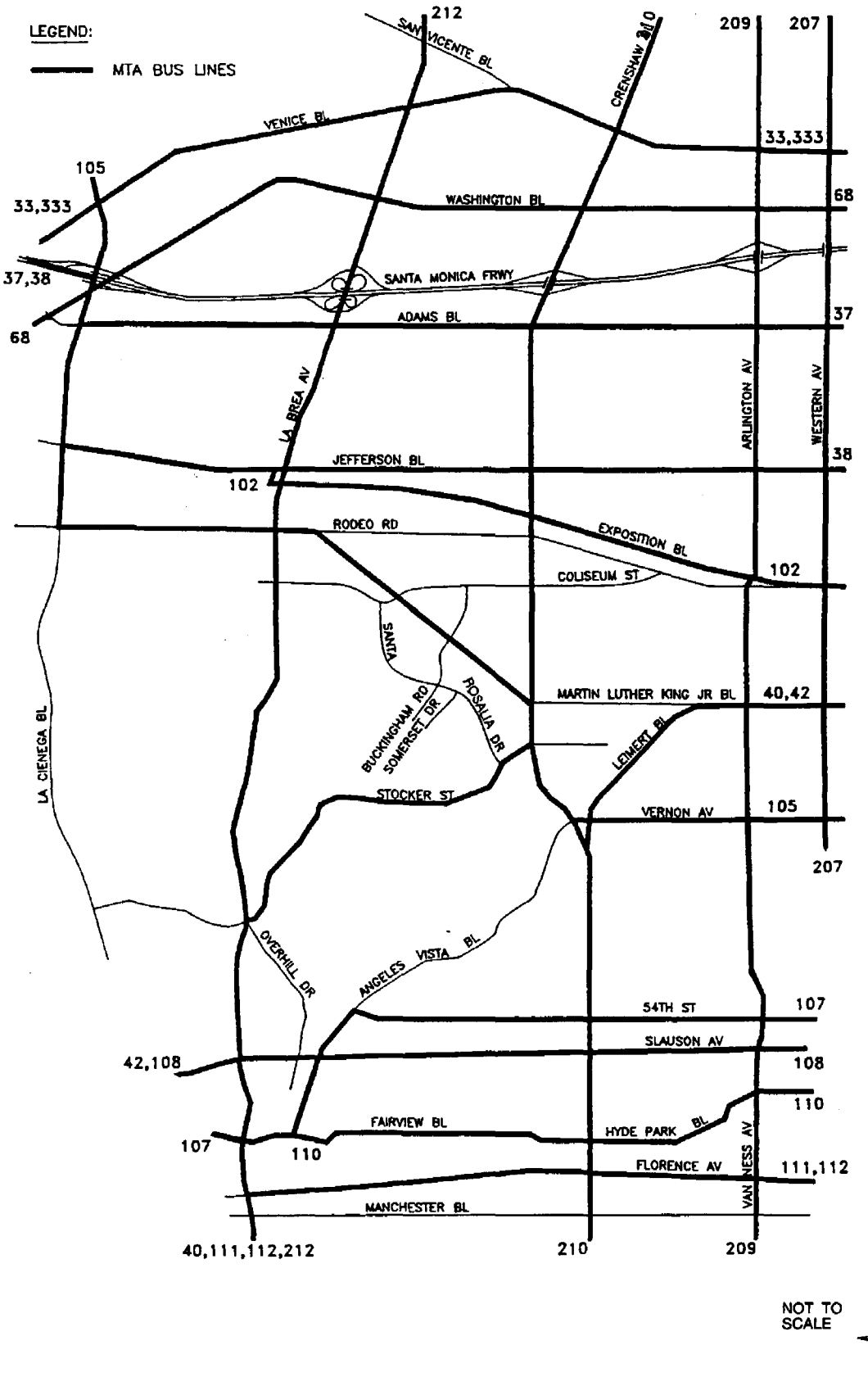
Figure 5.4-4 shows the various bus routes currently serving the study area.

Proposed Regional Transit Improvements

One major regional rail transit project (Crenshaw-Prairie Corridor Project) is being proposed by the Los Angeles County Metropolitan Transportation Authority (MTA), which would serve the proposed Recovery Program Area. This project is in preliminary planning stages.

Crenshaw-Prairie Corridor

The MTA conducted a preliminary planning study to evaluate rail transit options along the Crenshaw Boulevard-Prairie Avenue corridor. This corridor is one of ten competing candidate transit corridors under consideration by the MTA for construction over the next 30 years, in addition to the committed elements of the regional rail system (such as the Metro Green Line, the Metro Red Line to North Hollywood, the Metro Red Line east and west extensions to East Los Angeles and Westwood Village, the Metro Blue Line to Pasadena, the San Fernando Valley east-west rail line, and the MetroLink commuter rail system).



SOURCE: Kaku Associates

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

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FIGURE 5.4-4

EXISTING PUBLIC TRANSIT

The proposed Crenshaw-Prairie transit line would connect with the Metro Red Line Mid-City segment at the Pico Boulevard/Rimpau Boulevard station, travel south along Crenshaw Boulevard through Los Angeles and Inglewood, and terminate either at El Segundo Boulevard in the City of Hawthorne or at Lot C of the Los Angeles International Airport (LAX). The preliminary planning study evaluated three different route and mode alternatives:

- Subway from Pico/Rimpau to El Segundo Boulevard in Hawthorne
- Elevated light rail from Pico/Rimpau to El Segundo Boulevard in Hawthorne
- Light rail (Elevated and At-Grade) from Pico/Rimpau to LAX

All the three alternatives studied serve the proposed Recovery Program Area from the Santa Monica Freeway (I-10) to AT & SF Railroad at Florence Avenue. Various station areas have been proposed along Crenshaw Boulevard under all three rail alternatives, including ones at Washington Boulevard, Exposition Boulevard, Martin Luther King Jr. Boulevard, Leimert Park (Vernon Avenue), Slauson Avenue and West Boulevard/Florence Avenue.

Due to the preliminary planning status of the Crenshaw-Prairie Corridor rail transit project and the fact that it is one of ten candidate corridors to be considered by the MTA for which funding and scheduling is currently uncertain, a comprehensive evaluation of the potential impacts of the rail project on circulation and traffic patterns within the proposed Recovery Program Area is not incorporated into the quantitative analysis presented later in this report. The potential for such impacts is recognized, however, and would be the subject of further environmental review to be conducted for the Crenshaw-Prairie Corridor Project as part of the future planning and approval process. As part of the Candidate Corridor evaluation process conducted by the MTA to select additional corridors for the 30-year transit plan, the rail transit alternatives being considered in the Crenshaw-Prairie Corridor have each been given a "medium" designation according to the Draft Report: Candidate Corridor Evaluation Process, January 6, 1994., prepared by MTA.

Future Traffic Projections

Evaluation of the project-related traffic impacts involves estimation of the magnitude of traffic that will be generated by the project alternatives, and distribution of this traffic onto the surrounding street system. The project traffic must then be added to future traffic conditions (i.e., Cumulative Base Traffic Conditions) which are expected in the study area at the time of project completion to represent Cumulative Plus Project Conditions. The future traffic conditions without the project (Cumulative Base) include the changes that occur regionwide, areawide growth, as well as specific (background) development projects in the vicinity of the proposed Recovery Program Area. The methodologies and key assumptions used in this analysis are described in this section.

Cumulative Base Traffic Projections

The cumulative base traffic forecasts, future conditions without the addition of project traffic, consist of three elements: existing traffic, increases due to areawide growth and development, and traffic from specific projects in the vicinity of the project. Research of

LADOT's files indicated that there was only one (background) additional project (of size > 100,000 square feet) located in the vicinity of the study area. This project located at 6100-6160 Jefferson Boulevard would consist of approximately 450,000 square feet of office with 15,000 square feet of supporting retail. This project was included in the estimation of future cumulative base traffic conditions. Also, upon LADOT's direction, an ambient growth rate of one percent per year was used to factor up the existing base traffic volumes in the estimation of future cumulative traffic projections. Since the project buildout year is expected to be year 2005, the 1993 base traffic volumes were adjusted upwards by twelve percent to reflect this areawide regional growth. (See Appendix B, Figures 5a and 5b illustrating the Cumulative Base traffic volumes, which reflect year 2005 future conditions without the proposed Recovery Program.)

Proposed Recovery Program Area Traffic Volumes

The development of traffic generation projections for the proposed Recovery Program alternatives involves the use of a three-step process including trip generation, trip distribution, and traffic assignment.

Project Traffic Generation

Traffic generation forecasts for the proposed land use alternatives for the proposed Recovery Program Area EIR were developed separately for each land use, within each land use alternative. Trip generation estimates were developed by applying rates that provide a relationship between the type of land use and density of development to the total number of trips expected to be generated. These trip generation rates are summarized in Appendix B, Table 4. The rates were obtained from the document, Trip Generation, (5th Edition), 1991, Institute of Transportation Engineers (ITE).

As indicated earlier, the proposed Recovery Program consists of three land use alternatives for the proposed Recovery Program Area. The three land-use alternatives include the infill/rebuild alternative, moderate redevelopment alternative and the maximum probable redevelopment alternative. **Table 5.4-3** summarizes the trip generation estimates of the proposed alternatives Infill/Rebuild, Moderate Development, and Maximum Probable Development, respectively, (see Appendix B, Tables 5, 6, and 7 for detailed calculations). Pass-by trips for retail were calculated using pass-by percentages developed using a graded pass-by technique (based on the size of retail development). These pass-by assumptions were consistent with the pass-by percentages given in the Trip Generation, (5th Edition), 1991, Institute of Transportation Engineers (ITE).

As summarized in **Table 5.4-3**, trip generation estimates for the proposed Recovery Program - Infill/Rebuild Alternative, indicate that a total of 44,375 daily trips, 1,090 AM peak hour trips and 4,120 PM peak hour trips would be generated; the proposed Recovery Program - Moderate Development Alternative would generate a total of 55,015 daily trips, 1,390 AM peak hour trips and 5,145 PM peak hour trips; and the Maximum Probable Development Alternative would generate a total of 84,065 daily trips, 2,475 AM peak hour trips and 7,885 PM peak hour trips.

TABLE 5.4-3: TRIP GENERATION OF PROPOSED ALTERNATIVES/a/			
Alternatives	**Daily Trips**	**AM Peak Hour**	**PM Peak Hour**
Infill/Rebuild			
Subarea 6	13,715	335	1,270
Subarea 8	9,595	245	875
Subarea 10	21,065	510	1,975
TOTAL	**44,375**	**1,090**	**4,120**
Moderate Development			
Subarea 6	13,180	320	1,230
Subarea 8	20,915	540	1,960
Subarea 10	20,920	530	1,955
TOTAL	**55,015**	**1,390**	**5,145**
Maximum Probable Development			
Subarea 6	19,060	570	1,785
Subarea 8	35,040	1,035	3,285
Subarea 10	29,965	870	2,815
TOTAL	**84,065**	**2,475**	**7,885**

/a/ For detailed calculation, see Appendix B, Tables 5, 6, and 7.
Source: Kaku Associates.

Project Traffic Distribution

The geographic distribution of traffic generated by developments such as those included in this analysis is dependent on several factors. These factors include the type and density of the proposed land uses, the geographic distribution of the population from which the employees and potential patrons of the proposed hotel and office developments are drawn, the location of site access points in relation to the surrounding street system, the level of congestion on local streets, and the physical characteristics of the street system. A travel demand forecasting model has been developed for the City of Los Angeles by Kaku Associates, Inc. The model is based upon data from the Southern California Association of Governments (SCAG) 1987 Trip Table. Information was extracted from the model regarding the distribution of regional and local trips to the study area and used as the basis for developing the trip distribution patterns for the project generated traffic.

Two sets of distribution patterns were developed based on the nature of the land uses and their location, one for all project land uses located north of Stocker Street (northern area of Crenshaw Corridor) and the other for all project land uses located south of Stocker Street (southern area of Crenshaw Corridor). Within each of these sets of distribution patterns, the distribution patterns for retail uses were different from those for office/residential uses. The pattern for the retail land use assumed that the market area from which patronage will be drawn would be local in nature. The distribution pattern for the office, hotel and housing land uses assumed that the market for these uses would be

both local and regional in nature, resulting in a combination of distribution percentages. The two sets of distribution patterns used in this study are shown in **Table 5.4-4.**

TABLE 5.4-4: DISTRIBUTION PATTERNS FOR THE CRENSHAW CORRIDOR

Direction	Retail		Office, Hotel, Residential	
	Local	Regional	Local	Regional
NORTHERN AREA				
North	40%	NA	19%	7%
East	24%	NA	23%	6%
South	24%	NA	20%	3%
West	12%	NA	19%	3%
SOUTHERN AREA				
North	27%	NA	20%	3%
East	30%	NA	24%	6%
South	23%	NA	20%	6%
West	20%	NA	17%	4%

Source: Kaku Associates.

Project Traffic Assignment

The distribution patterns developed above were used to assign the traffic generated by the proposed Recovery Program alternatives to the existing street network. The proposed Recovery Program-generated peak hour traffic volumes for each of the three land use alternatives Infill/Rebuild, Moderate Development, and Maximum Probable Development, at each of the 41 intersections are illustrated in Figures 6a, 6b, 7a, 7b, 8a, and 8b, respectively, in Appendix B.

Cumulative plus Project Traffic Conditions

The project-generated traffic volumes for each of the proposed Recovery Program alternatives (Infill/Rebuild, Moderate Development, and Maximum Probable Development) were then added to the Cumulative Base traffic volumes to derive estimates of the Cumulative Plus Project traffic volumes. The Cumulative Plus Project traffic volume estimates for Alternatives Infill/Rebuild, Moderate Development, and Maximum Probable Development Alternatives are shown in Figures 9a, 9b, 10a, 10b, 11a, and 11b, respectively, in Appendix B.

IMPACTS

This chapter presents the results of intersection capacity analyses for the projected future traffic conditions before and after project completion. The future traffic volumes discussed in the previous chapter were analyzed to assess the potential impact of the proposed Recovery Program alternatives on the street system. The analysis includes an evaluation of each of the 41 intersections under Cumulative Base traffic conditions and Cumulative Plus Project conditions for Infill/Rebuild, Moderate Development, and Maximum Probable Development Alternatives.

Significance Criteria. It is necessary to establish the criteria to be used to determine whether an intersection is significantly impacted by traffic generated by a project. The City of Los Angeles Department of Transportation has established standards to be used for projects within the City. LADOT standards indicate that a project is considered to have a significant traffic impact if the project-related increase in V/C ratio is equal to or greater than a specific threshold value depending on the level of service. A sliding scale has been developed whereby the minimum allowable increase in the V/C ratio decreases as the final V/C ratio with the project increases. The standard established by the LADOT for the City of Los Angeles is as follows:

LOS	Final V/C Ratio	Project-Related Increase in V/C
C	> 0.700 - 0.800	equal to or greater than 0.0400
D	> 0.800 - 0.900	equal to or greater than 0.0200
E,F	> 0.900	equal to or greater than 0.0100

Using these criteria, the project would not have a significant impact at an intersection if it is operating at LOS A or B after the addition of project traffic. However, if the intersection is operating at LOS F after the addition of project traffic and the incremental change in the V/C ratio due to the project is equal to or greater than 0.0100, then the project is considered to have a significant impact at this location. Similarly, if the intersection is operating at LOS C after the addition of project traffic and the incremental increase in the V/C ratio due to the project is equal to or greater than 0.0400, then the project is considered to have a significant impact at that location.

Cumulative Base Traffic Analysis

The results of the intersection capacity analyses at the 41 analyzed intersections under the Cumulative Base traffic conditions are shown on **Figures 5.4-5** and **5.4-6** and summarized in **Table 5.4-5**. **Table 5.4-5** indicates that 23 of the 41 intersections would operate at LOS E or F during the morning and/or evening peak hours. These intersections which are projected to operate at unacceptable levels of service are:

2. La Brea Ave. & Jefferson Blvd (AM & PM)
3. La Brea Ave. & Rodeo Rd. (AM & PM)
5. La Brea Ave. & Adams Blvd (PM)
9. Crenshaw Blvd & I-10 WB off-ramp (AM)
11. Crenshaw Blvd & Washington Blvd (AM&PM)
17. Crenshaw Blvd & Martin Luther King Jr. Blvd (PM)
18. Crenshaw Blvd & Stocker St. (PM)
20. Crenshaw Blvd & Vernon Ave. (PM)
21. Crenshaw Blvd & Slauson Ave. (AM & PM)
23. Crenshaw Blvd & Florence Ave. (PM)
24. Crenshaw Blvd & Manchester Blvd (AM&PM)
25. Arlington Ave. & I-10 WB off-ramp (AM&PM)
26. Arlington Ave. & I-10 EB off-ramp (AM)
32. La Cienega Blvd & Rodeo Rd. (AM & PM)
33. Slauson Ave. & Van Ness Ave. (PM)
34. La Brea Ave. & Washington Blvd (PM)
35. Crenshaw Blvd & Venice Blvd (AM & PM)
36. Van Ness Ave. & Florence Ave. (AM&PM)
37. La Brea Ave. & Stocker St. (AM & PM)
38. La Cienega Blvd & Jefferson St. (AM&PM)
39. La Brea Ave. & Slauson Ave. (AM & PM)
40. La Brea Ave. & Manchester Blvd (AM&PM)
41. La Cienega Blvd & Venice Blvd (AM&PM)

Cumulative Plus Project Traffic Analysis

The Cumulative Plus Project conditions were analyzed to assess the resulting V/C ratios and levels of service for each of the 41 analyzed intersections under each of the land use alternatives for the project. The following sections describe the results of the analyses of the Future Cumulative Plus Project Infill/Rebuild, Moderate Development, and Maximum Probable Development Alternatives conditions.

TABLE 5.4-5: YEAR 2005 CUMULATIVE BASE INTERSECTION LEVELS OF SERVICE

Intersections	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
1. La Brea Ave. & I-10 EB off-ramp/a/	0.796	C	0.868	D
2. La Brea Ave. & Jefferson Blvd	1.217	F	1.239	F
3. La Brea Ave. & Rodeo Rd	1.055	F	1.156	F
4. Martin Luther King Jr. Blvd & Rodeo Rd.	0.469	A	0.709	C
5. La Brea Ave. & Adams Blvd/a/	0.927	E	0.933	E
6. Martin Luther King Jr. Blvd & Coliseum St.	0.445	A	0.721	C
7. Martin Luther King Jr. Blvd & Buckingham Rd.	0.342	A	0.578	A
8. Santa Rosalia Dr. & Buckingham Rd	0.385	A	0.484	A
9. Crenshaw Blvd & I-10 WB off-ramp/a/	1.041	F	0.900	D
10. Crenshaw Blvd & I-10 EB off-ramp/a/	0.684	B	0.784	C
11. Crenshaw Blvd & Washington Blvd/a/	1.092	F	1.007	F
12. Crenshaw Blvd & Adams Blvd/a/	0.582	A	0.806	D
13. Crenshaw Blvd & Jefferson Blvd	0.781	C	0.827	D
14. Crenshaw Blvd & Exposition Blvd	0.736	C	0.746	C
15. Crenshaw Blvd & Coliseum St.	0.707	C	0.835	D
16. Crenshaw Blvd & Rodeo Rd	0.759	C	0.805	D
17. Crenshaw Blvd & Martin Luther King Jr. Blvd	0.847	D	1.115	F
18. Crenshaw Blvd & Stocker St.	0.791	C	0.949	E
19. Santa Rosalia Dr. & Stocker St.	0.554	A	0.641	B
20. Crenshaw Blvd & Vernon Ave.	0.747	C	0.903	E
21. Crenshaw Blvd & Slauson Ave.	1.023	F	1.303	F
22. Crenshaw Blvd & Hyde Park Blvd	0.615	B	0.837	D
23. Crenshaw Blvd & Florence Ave.	0.709	C	0.975	E
24. Crenshaw Blvd & Manchester Blvd	1.140	F	1.344	F
25. Arlington Ave. & I-10 WB off-ramp/a/	0.954	E	1.064	F
26. Arlington Ave. & I-10 EB off-ramp/a/	0.964	E	0.768	C
27. Arlington Ave. & Adams Blvd/a/	0.661	B	0.750	C
28. Arlington Ave. & Jefferson Blvd	0.650	B	0.661	B
29. Arlington Ave. & Rodeo Rd	0.429	A	0.621	B
30. Arlington Ave. & Martin Luther King Jr. Blvd	0.651	B	0.865	D
31. Arlington Ave. & Vernon Ave.	0.607	B	0.775	C
32. La Cienega Blvd & Rodeo Rd	1.180	F	1.297	F
33. Van Ness Ave. & Slauson Ave.	0.701	C	0.906	E
34. La Brea Ave. & Washington Blvd/a/	0.881	D	0.953	E
35. Crenshaw Blvd & Venice Blvd/a/	1.193	F	1.169	F

TABLE 5.4-5: YEAR 2005 CUMULATIVE BASE INTERSECTION LEVELS OF SERVICE

Intersections	AM Peak Hour		PM Peak Hour	
	V/C	LOS	V/C	LOS
36. Van Ness Ave. & Florence Ave.	0.908	E	0.942	E
37. La Brea Ave. & Stocker St.	1.259	F	1.332	F
38. La Cienega Blvd & Jefferson Blvd	1.302	F	1.258	F
39. La Brea Ave. & Slauson Ave.	1.036	F	1.259	F
40. La Brea Ave. & Manchester Blvd	1.069	F	1.091	F
41. La Cienega Blvd & Venice Blvd/a/	0.964	E	1.057	F

/a/ Intersection operates at ATSAC.
Source: Kaku Associates.

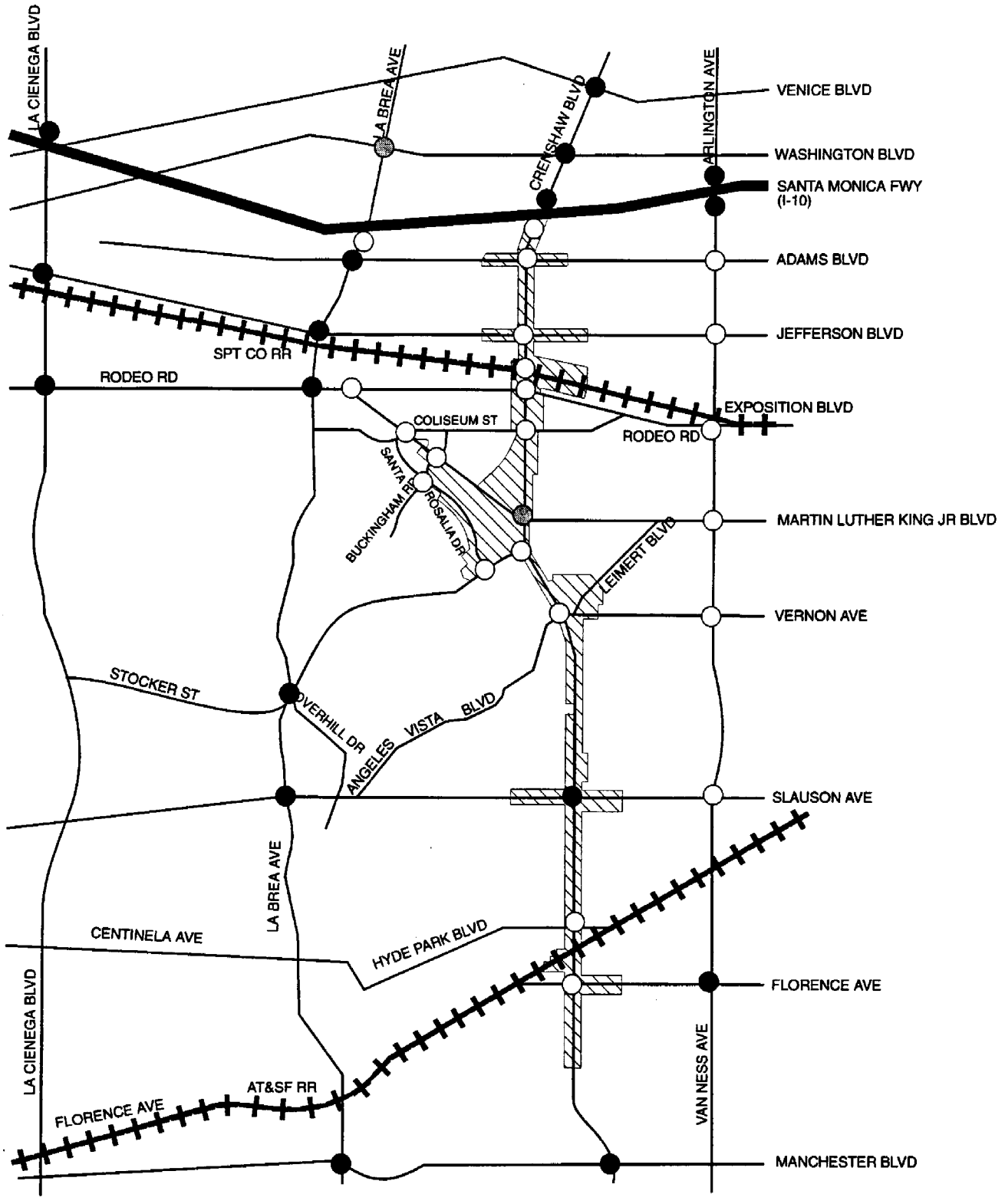

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FIGURE 5.4-5

CUMULATIVE BASE YEAR 2005 AM LEVELS OF SERVICE

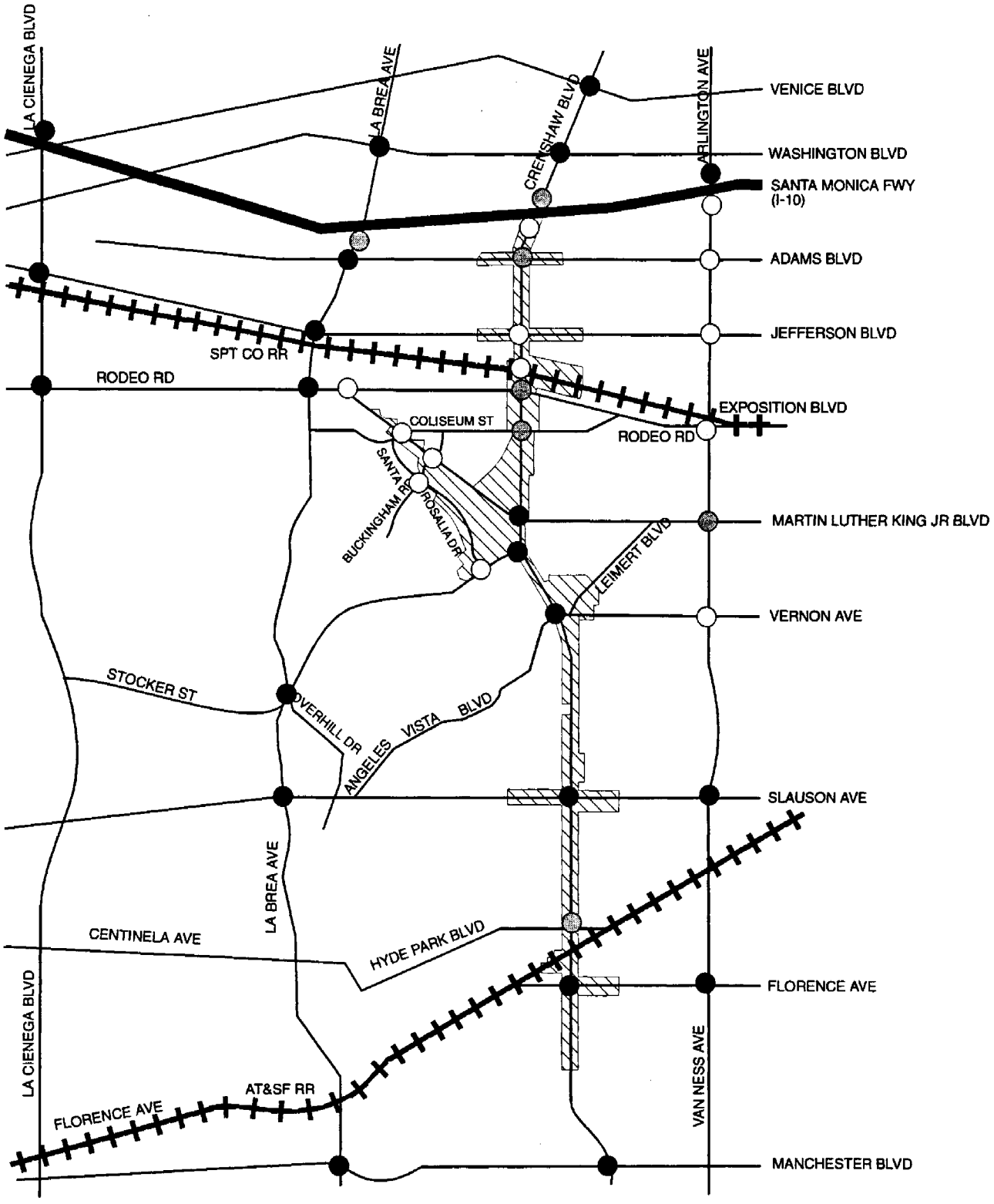

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FIGURE 5.4-6

CUMULATIVE BASE YEAR 2005 PM LEVELS OF SERVICE

Cumulative Plus Project Infill/Rebuild Alternative

The results of the analysis are shown in **Figures 5.4-7** and **5.4-8** and provided in **Table 5.4-6**. From **Table 5.4-6**, it can be observed that a total of 27 intersections would be operating at unacceptable levels of service (LOS E or F) under these future conditions. Based on LADOT criteria for determining the significant impact, it was determined that traffic expected to be generated by the proposed Infill/Rebuild Alternative would have a significant impact at the following 22 intersections:

2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Rd.
5. La Brea Ave. & Adams Blvd
9. Crenshaw Blvd & I-10 WB off-ramp
10. Crenshaw Blvd & I-10 EB off-ramp
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum St.
16. Crenshaw Blvd & Rodeo Rd.
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker St.
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd
25. Arlington Ave. & I-10 WB off-ramp
28. Arlington Ave. & Jefferson Blvd
30. Arlington Ave. & Martin Luther King Jr. Blvd
35. Crenshaw Blvd & Venice Blvd

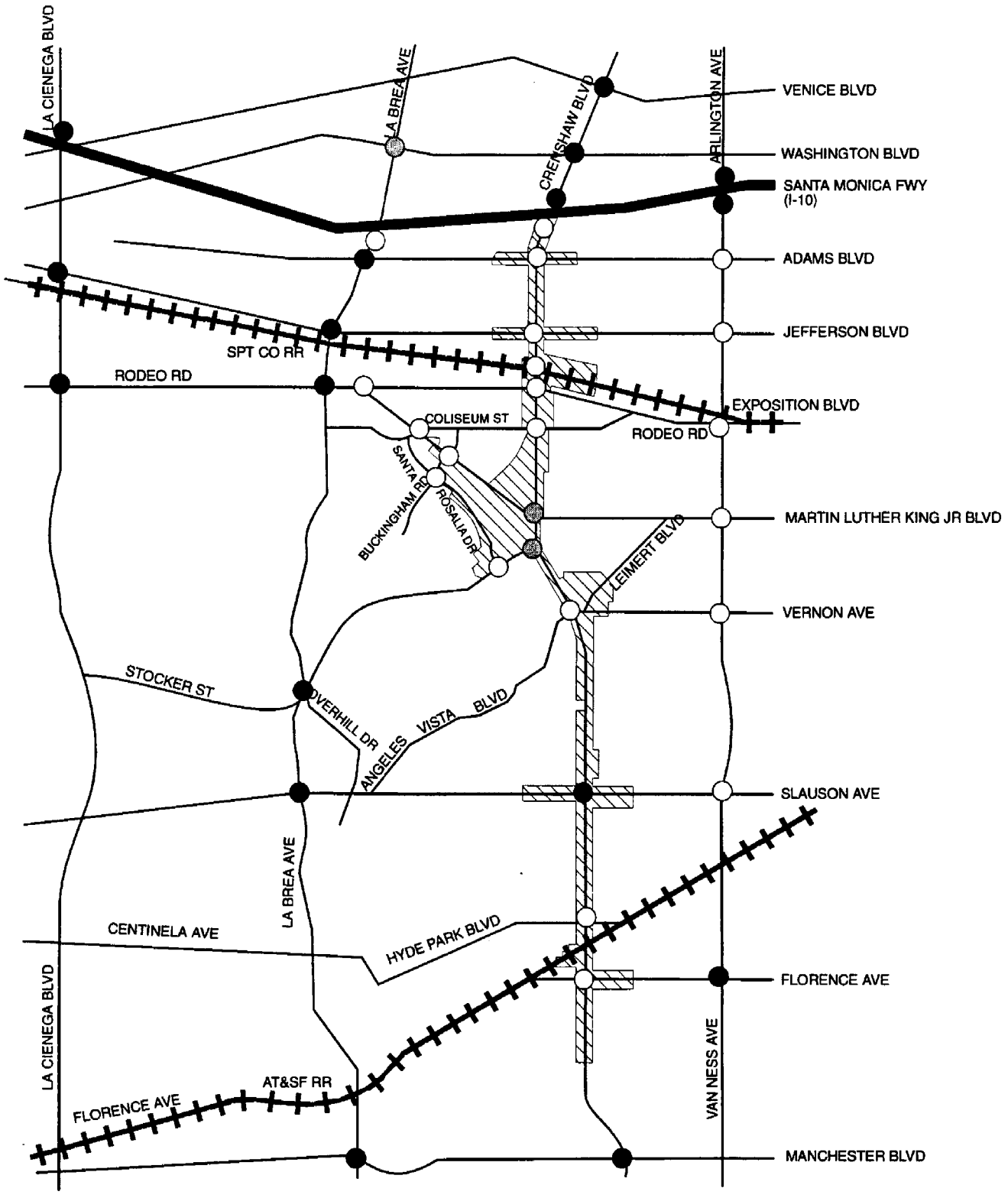

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FIGURE 5.4-7
CUMULATIVE PLUS PROJECT
INFILL/REBUILD ALTERNATIVE
AM LEVELS OF SERVICE

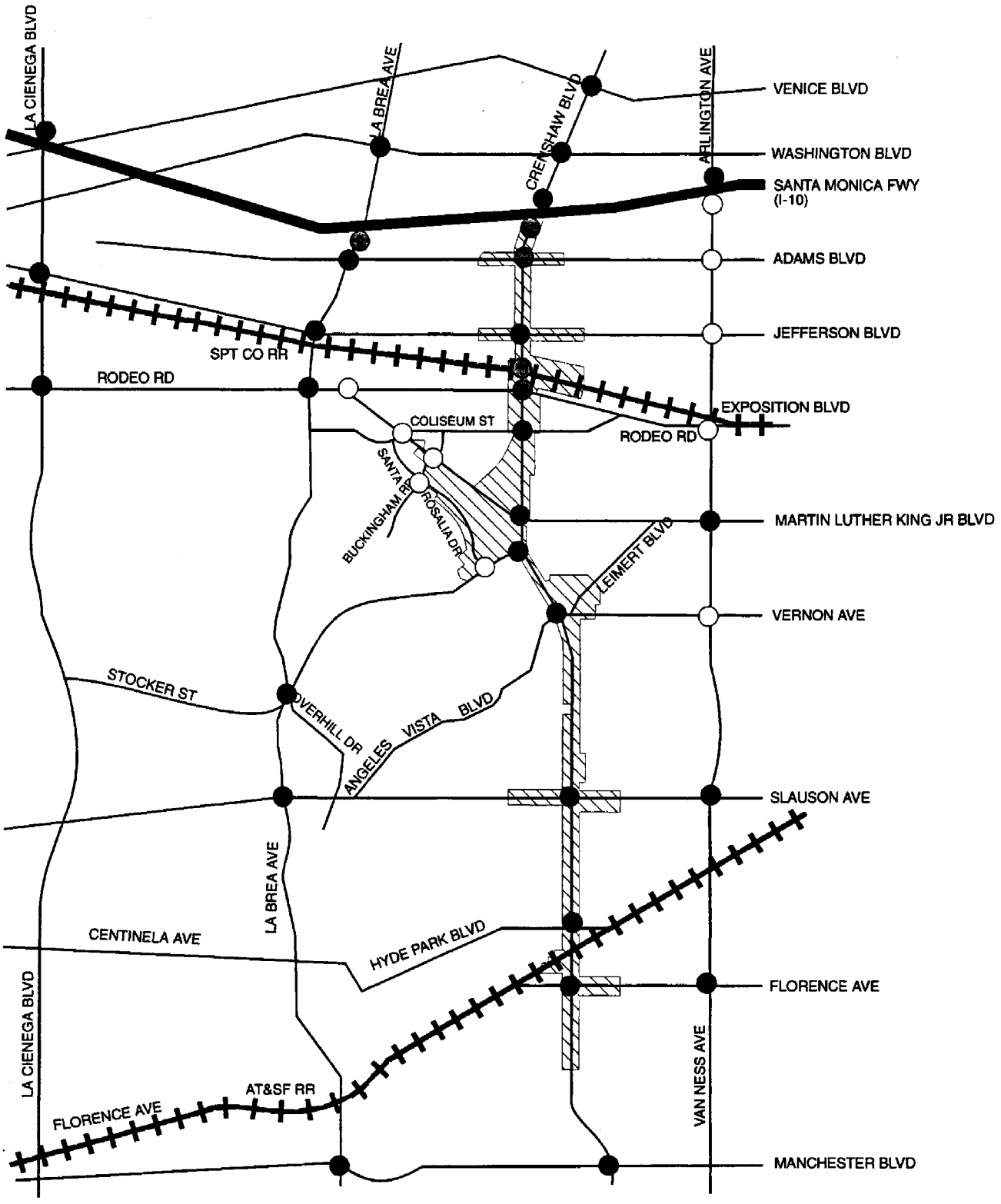

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FIGURE 5.4-8
CUMULATIVE PLUS PROJECT
INFILL/REBUILD ALTERNATIVE
PM LEVELS OF SERVICE

TABLE 5.4-6: YEAR 2005 CUMULATIVE BASE AND CUMULATIVE PLUS PROJECT INFILL/REBUILD INTERSECTION LEVELS OF SERVICE

		Before Mitigation						After Mitigation			
		Cumulative Base		Cumulative + Project				Cumulative + Project w/Mitigation Package			
Intersection	Hour	V/C	LOS	V/C	LOS	Increase in V/C	Significant Impact	V/C	LOS	Increase in V/C	Significant Impact
1. La Brea Av. & I-10 EB off-ramp	AM Peak PM Peak	0.796 0.868	C D	0.798 0.873	C D	0.002 0.005	NO NO				
2. La Brea Av. & Jefferson Bl.	AM Peak PM Peak	1.217 1.239	F F	1.222 1.259	F F	0.005 0.020	NO YES	1.141 1.174	F F	-0.076 -0.065	NO NO
3. La Brea Av. & Rodeo Rd.	AM Peak PM Peak	1.055 1.156	F F	1.069 1.194	F F	0.014 0.038	YES YES	0.995 1.110	E F	-0.060 -0.046	NO NO
4. Martin Luther King Jr. Bl. & Rodeo Rd.	AM Peak PM Peak	0.469 0.709	A C	0.476 0.735	A C	0.007 0.026	NO NO				
*5. La Brea Av. & Adams Bl.	AM Peak PM Peak	0.927 0.933	E E	0.934 0.948	E E	0.007 0.015	NO YES	0.875 0.932	D E	-0.052 -0.001	NO NO
6. Martin Luther King Jr. Bl. & Coliseum St.	AM Peak PM Peak	0.445 0.721	A C	0.453 0.746	A C	0.008 0.025	NO NO				
7. Martin Luther King Jr. Bl. & Buckingham Rd.	AM Peak PM Peak	0.342 0.578	A A	0.353 0.628	A B	0.011 0.050	NO NO				
8. Santa Rosalia Dr. & Buckingham Rd.	AM Peak PM Peak	0.385 0.484	A A	0.405 0.556	A A	0.020 0.072	NO NO				
*9. Crenshaw Bl. & I-10 WB off-ramps	AM Peak PM Peak	1.041 0.900	F D	1.054 0.935	F E	0.013 0.035	YES YES	1.052 0.931	F E	0.011 0.031	YES YES
*10. Crenshaw Bl. & I-10 EB off-ramps	AM Peak PM Peak	0.684 0.784	B C	0.692 0.818	B D	0.008 0.034	NO YES	0.691 0.815	B D	0.007 0.031	NO YES
*11. Crenshaw Bl. & Washington Bl.	AM Peak PM Peak	1.092 1.007	F F	1.104 1.077	F F	0.012 0.070	YES YES	1.102 1.070	F F	0.010 0.063	YES YES
*12. Crenshaw Bl. & Adams Bl.	AM Peak PM Peak	0.582 0.806	A D	0.594 0.894	A D	0.012 0.088	NO YES	0.593 0.842	A D	0.011 0.036	NO YES
13. Crenshaw Bl. & Jefferson Bl.	AM Peak PM Peak	0.781 0.827	C D	0.799 0.974	C E	0.018 0.147	NO YES	0.745 0.811	C D	-0.036 -0.016	NO NO
14. Crenshaw Bl. & Exposition Bl.	AM Peak PM Peak	0.736 0.746	C C	0.750 0.801	C D	0.014 0.055	NO YES	0.700 0.744	B C	-0.036 -0.002	NO NO
15. Crenshaw Bl. & Coliseum St.	AM Peak PM Peak	0.707 0.835	C D	0.727 0.937	C E	0.020 0.102	NO YES	0.677 0.831	B D	-0.030 -0.004	NO NO
16. Crenshaw Bl. & Rodeo Rd.	AM Peak PM Peak	0.759 0.805	C D	0.778 0.891	C D	0.019 0.086	NO YES	0.725 0.800	C C	-0.034 -0.005	NO NO
17.Crenshaw Bl. & Martin Luther King Jr. Bl.	AM Peak PM Peak	0.847 1.115	D F	0.869 1.212	D F	0.022 0.097	YES YES	0.810 1.102	D F	-0.037 -0.013	NO NO
18.Crenshaw Bl. & Stocker St.	AM Peak PM Peak	0.791 0.949	C E	0.809 1.055	D F	0.018 0.106	NO YES	0.702 0.876	C D	-0.089 -0.073	NO NO

19.Santa Rosalia Dr. & Stocker St.	AM Peak PM Peak	0.554 0.641	A B	0.567 0.666	A B	0.013 0.025	NO NO				
20.Crenshaw Bl. & Vernon Av.	AM Peak PM Peak	0.747 0.903	C E	0.772 0.961	C E	0.025 0.058	NO YES	0.647 0.800	B C	-0.100 -0.103	NO NO
21.Crenshaw Bl. & Slauson Av.	AM Peak PM Peak	1.023 1.303	F F	1.041 1.431	F F	0.018 0.128	YES YES	0.971 1.207	E F	-0.052 -0.096	NO NO
22.Crenshaw Bl. & Hyde Park Bl.	AM Peak PM Peak	0.615 0.837	B D	0.633 0.943	B E	0.018 0.106	NO YES	0.561 0.844	A D	-0.054 0.007	NO NO
23.Crenshaw Bl. & Florence Av.	AM Peak PM Peak	0.709 0.975	C E	0.731 1.025	C F	0.022 0.050	NO YES	0.682 0.952	B E	-0.027 -0.023	NO NO
24.Crenshaw Bl. & Manchester Bl.	AM Peak PM Peak	1.140 1.344	F F	1.145 1.363	F F	0.005 0.019	NO YES	1.070 1.272	F F	-0.070 -0.072	NO NO
*25.Arlington Av. & I-10 WB off-ramp	AM Peak PM Peak	0.954 1.064	E F	0.958 1.076	E F	0.004 0.012	NO YES	0.814 0.909	D E	-0.140 -0.155	NO NO
*26.Arlington Av. & I-10 EB off-ramp	AM Peak PM Peak	0.964 0.768	E C	0.966 0.779	E C	0.002 0.011	NO NO				
*27.Arlington Av. & Adams Bl.	AM Peak PM Peak	0.661 0.750	B C	0.664 0.767	B C	0.003 0.017	NO NO				
28.Arlington Av. & Jefferson Bl.	AM Peak PM Peak	0.650 0.661	B B	0.661 0.704	B C	0.011 0.043	NO YES	0.616 0.654	B B	-0.034 -0.007	NO NO
29.Arlington Av. & Rodeo Rd.	AM Peak PM Peak	0.429 0.621	A B	0.441 0.665	A B	0.012 0.044	NO NO				
30.Arlington Av. & Martin Luther King Jr. Bl.	AM Peak PM Peak	0.651 0.865	B D	0.659 0.904	B E	0.008 0.039	NO YES	0.615 0.842	B D	-0.036 -0.023	NO NO
31.Arlington Av. & Vernon Av.	AM Peak PM Peak	0.607 0.775	B C	0.612 0.785	B C	0.005 0.010	NO NO				
32.La Cienega Bl. & Rodeo Rd.	AM Peak PM Peak	1.180 1.297	F F	1.180 1.300	F F	0.000 0.003	NO NO				
33.Van Ness Av. & Slauson Av.	AM Peak PM Peak	0.701 0.906	C E	0.704 0.915	C E	0.003 0.009	NO NO				
*34.La Brea Av. & Washington Bl.	AM Peak PM Peak	0.881 0.953	D E	0.882 0.956	D E	0.001 0.003	NO NO				
*35.Crenshaw Bl. & Venice Bl.	AM Peak PM Peak	1.193 1.169	F F	1.210 1.231	F F	0.017 0.062	YES YES	1.079 1.233	F F	-0.114 0.064	NO YES
36.Van Ness Av. & Florence Av.	AM Peak PM Peak	0.908 0.942	E E	0.911 0.951	E E	0.003 0.009	NO NO				
37.La Brea Av. & Stocker St.	AM Peak PM Peak	1.259 1.332	F F	1.259 1.332	F F	0.000 0.000	NO NO				
38.La Cienega & Jefferson Bl.	AM Peak PM Peak	1.302 1.258	F F	1.302 1.258	F F	0.000 0.000	NO NO				
39.La Brea Av. & Slauson Av.	AM Peak PM Peak	1.036 1.259	F F	1.036 1.259	F F	0.000 0.000	NO NO				
40.La Brea Av. & Manchester Bl.	AM Peak PM Peak	1.069 1.091	F F	1.070 1.091	F F	0.001 0.000	NO NO				
*41.La Cienega Bl. & Venice Bl.	AM Peak PM Peak	0.964 1.057	E F	0.964 1.057	E F	0.000 0.000	NO NO				

*Intersection operates at ATSAC.
Source: Kaku Associates.

Cumulative Plus Project Moderate Development Alternative

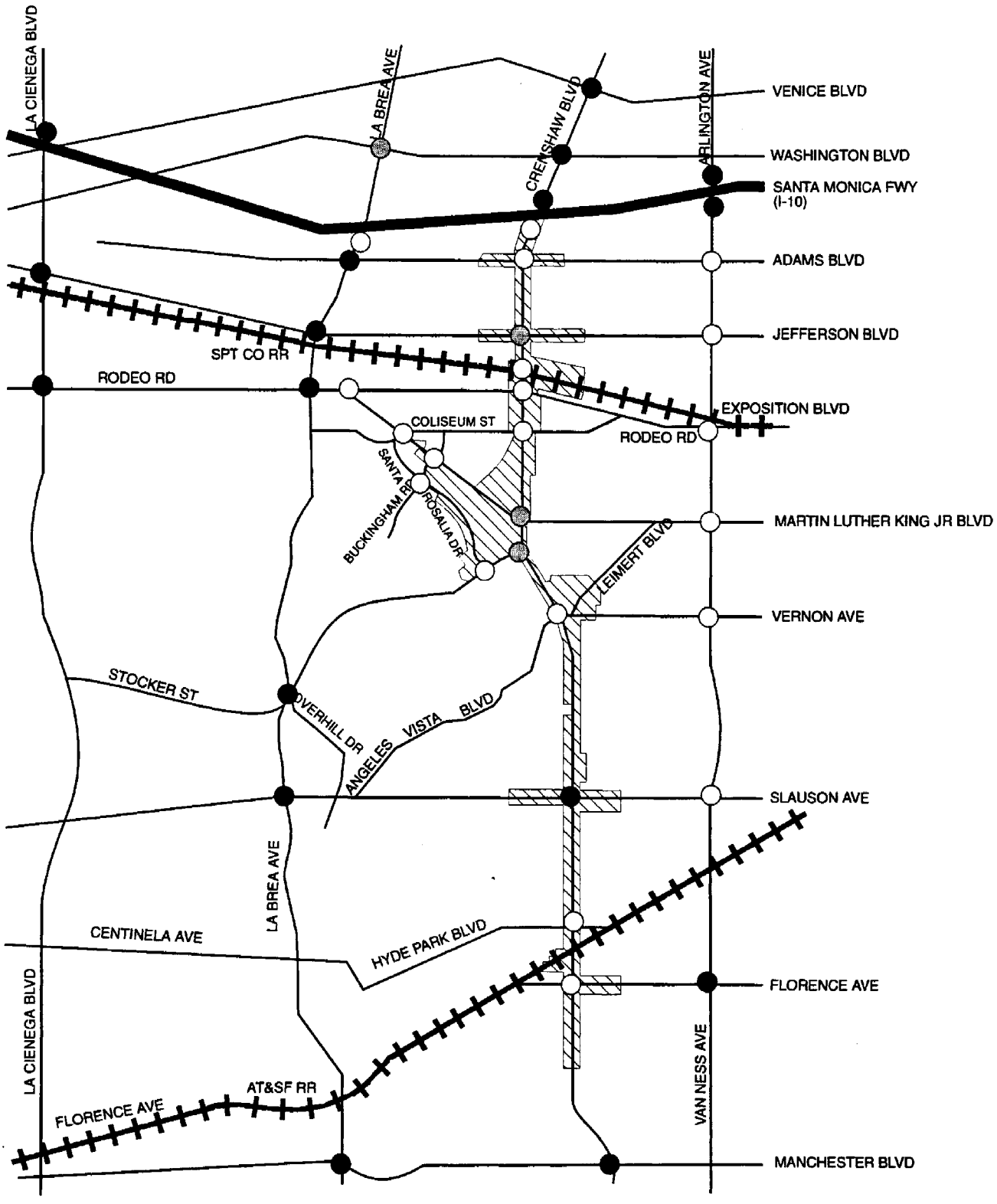
The results of the analysis are shown on **Figures 5.4-9** and **5.4-10** and provided in **Table 5.4-7**. From **Table 5.4-7**, it can be observed that 28 of the 41 intersections would be operating at unacceptable levels of service (LOS E or F). Based on LADOT criteria for determining significant impact, it was determined that the proposed Moderate Development Alternative would have a significant impact at the following 25 intersections:

2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Rd.
4. Martin Luther King Jr. Blvd & Rodeo Rd.
5. La Brea Ave. & Adams Blvd
6. Martin Luther King Jr. Blvd & Coliseum St.
7. Martin Luther King Jr. Blvd & Buckingham Rd.
9. Crenshaw Blvd & I-10 WB off-ramp
10. Crenshaw Blvd & I-10 EB off-ramp
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum St.
16. Crenshaw Blvd & Rodeo Rd
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker St.
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd
25. Arlington Ave. & I-10 WB off-ramp
28. Arlington Ave. & Jefferson Blvd
30. Arlington Ave. & Martin Luther King Jr. Blvd
35. Crenshaw Blvd & Venice Blvd

Cumulative Plus Project Maximum Probable Development Alternative

The results of the analysis are shown on **Figures 5.4-11** and **5.4-12** and provided in **Table 5.4-8**. From **Table 5.4-8**, it can be observed that the 29 of the 41 intersections would be operating at unacceptable levels of service (LOS E or F). Using LADOT's criteria for significant impact, it was determined that the proposed Maximum Probable Development Alternative would have a significant impact at the following 30 intersections:

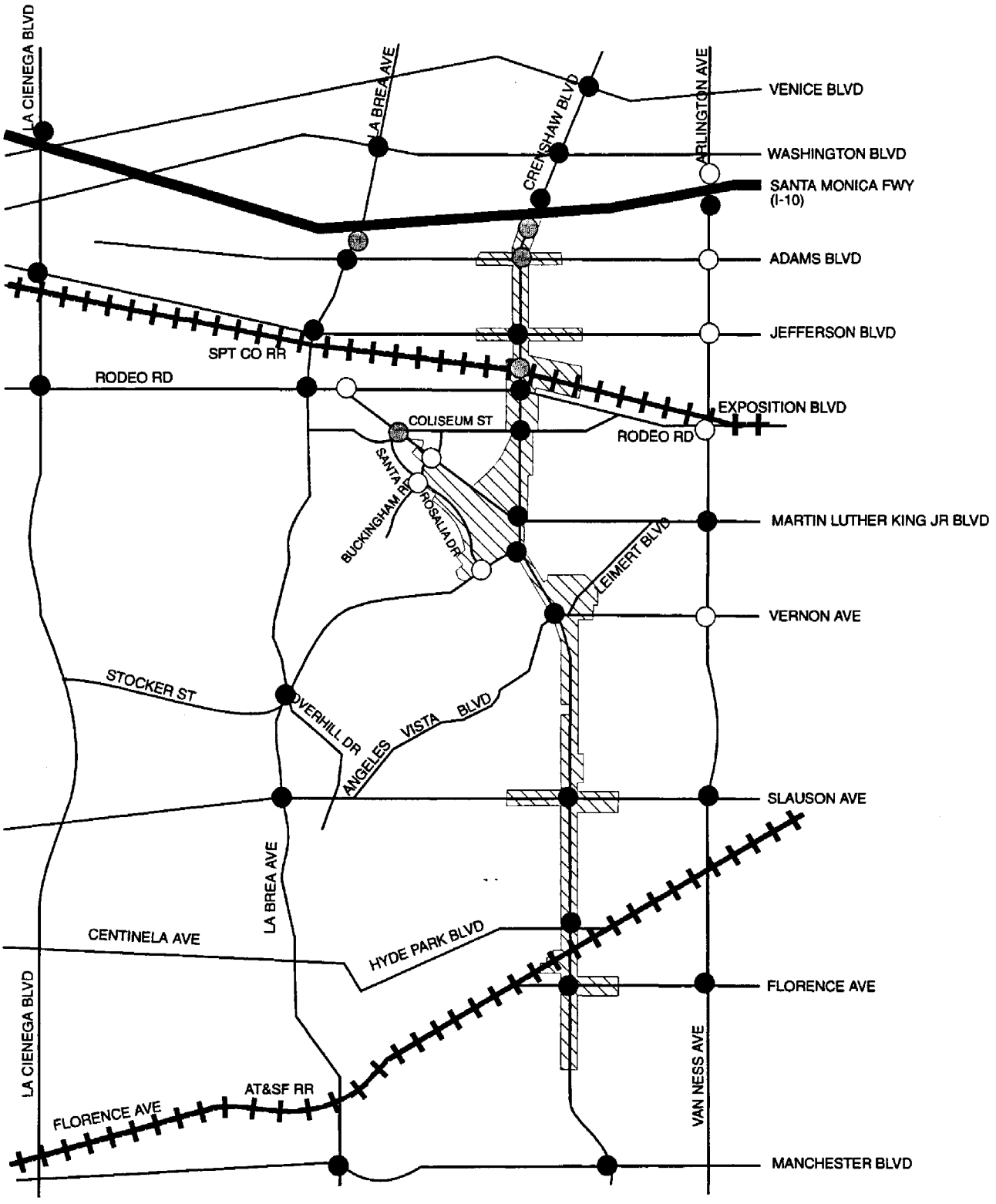
2. La Brea Ave. & Jefferson Blvd
3. La Brea Ave. & Rodeo Rd.
4. Martin Luther King Jr. Blvd & Rodeo Rd.
5. La Brea Ave. & Adams Blvd
6. Martin Luther King Jr. Blvd & Coliseum St.
7. Martin Luther King Jr. Blvd & Buckingham Rd.
9. Crenshaw Blvd & I-10 WB off-ramp
10. Crenshaw Blvd & I-10 EB off-ramp
11. Crenshaw Blvd & Washington Blvd
12. Crenshaw Blvd & Adams Blvd
13. Crenshaw Blvd & Jefferson Blvd
14. Crenshaw Blvd & Exposition Blvd
15. Crenshaw Blvd & Coliseum St.
16. Crenshaw Blvd & Rodeo Rd.
17. Crenshaw Blvd & Martin Luther King Jr. Blvd
18. Crenshaw Blvd & Stocker St.
19. Stocker St. & Santa Rosalia Drive
20. Crenshaw Blvd & Vernon Ave.
21. Crenshaw Blvd & Slauson Ave.
22. Crenshaw Blvd & Hyde Park Blvd
23. Crenshaw Blvd & Florence Ave.
24. Crenshaw Blvd & Manchester Blvd
25. Arlington Ave. & I-10 WB off-ramp
28. Arlington Ave. & Jefferson Blvd
29. Arlington Ave. & Rodeo Rd.
30. Arlington Ave. & Martin Luther King Jr. Blvd
31. Arlington Ave. & Vernon Ave.
33. Slauson Ave. & Van Ness Ave.
35. Crenshaw Blvd & Venice Blvd
36. Van Ness Ave. & Florence Ave.



CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.4-9
CUMULATIVE PLUS PROJECT
MODERATE DEVELOPMENT ALTERNATIVE
AM LEVELS OF SERVICE



LEGEND: Intersection Levels of Service

○ A-C ● E

◎ D ● F

▨ Recovery Program Area

SOURCE: Kaku Associates.

APPROX. SCALE: N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

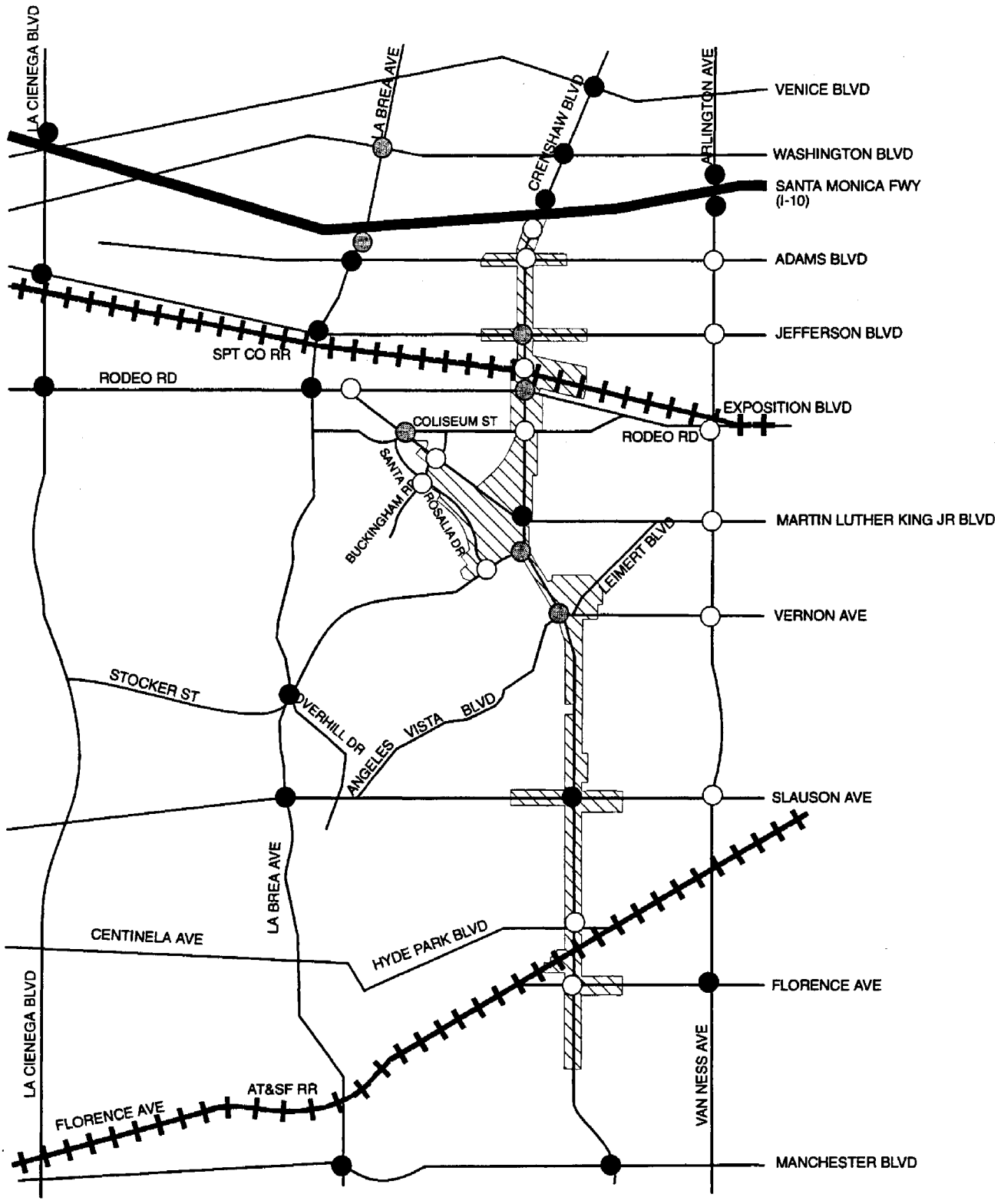
FIGURE 5.4-10
CUMULATIVE PLUS PROJECT
MODERATE DEVELOPMENT ALTERNATIVE
PM LEVELS OF SERVICE

TABLE 5.4-7: YEAR 2005 CUMULATIVE BASE AND CUMULATIVE PLUS PROJECT MODERATE DEVELOPMENT ALTERNATIVE INTERSECTION LEVELS OF SERVICE

		Before Mitigation						After Mitigation			
		Cumulative Base		Cumulative + Project				Cumulative + Project w/Mitigation Package			
Intersection	Hour	V/C	LOS	V/C	LOS	Increase in V/C	Significant Impact	V/C	LOS	Increase in V/C	Significant Impact
1.La Brea Av. & I-10 EB off-ramp	AM Peak PM Peak	0.796 0.868	C D	0.799 0.879	C D	0.003 0.011	NO NO				
2.La Brea Av. & Jefferson Bl.	AM Peak PM Peak	1.217 1.239	F F	1.227 1.286	F F	0.010 0.047	YES YES	1.146 1.197	F F	-0.071 -0.042	NO NO
3.La Brea Av. & Rodeo Rd.	AM Peak PM Peak	1.055 1.156	F F	1.095 1.275	F F	0.040 0.119	YES YES	1.017 1.179	F F	-0.038 0.023	NO YES
4.Martin Luther King Jr. Bl. & Rodeo Rd.	AM Peak PM Peak	0.469 0.709	A C	0.491 0.779	A C	0.022 0.070	NO YES	0.456 0.720	A C	-0.013 0.011	NO NO
*5.La Brea Av. & Adams Bl.	AM Peak PM Peak	0.927 0.933	E E	0.936 0.954	E E	0.009 0.021	NO YES	0.877 0.939	D E	-0.050 0.006	NO NO
6.Martin Luther King Jr. Bl. & Coliseum St.	AM Peak PM Peak	0.445 0.721	A C	0.488 0.870	A D	0.043 0.149	NO YES	0.454 0.660	A B	0.009 -0.061	NO NO
7.Martin Luther King Jr. Bl. & Buckingham Rd.	AM Peak PM Peak	0.342 0.578	A A	0.367 0.702	A C	0.025 0.124	NO YES	0.340 0.645	A B	-0.002 0.067	NO NO
8.Santa Rosalia Dr. & Buckingham Rd.	AM Peak PM Peak	0.385 0.484	A A	0.416 0.599	A A	0.031 0.115	NO NO				
*9.Crenshaw Bl. & I-10 WB off-ramps	AM Peak PM Peak	1.041 0.900	F D	1.056 0.936	F E	0.015 0.036	YES YES	1.055 0.932	F E	0.014 0.032	YES YES
*10.Crenshaw Bl. & I-10 EB off-ramps	AM Peak PM Peak	0.684 0.784	B C	0.693 0.817	B D	0.009 0.033	NO YES	0.692 0.814	B D	0.008 0.030	NO YES
*11.Crenshaw Bl. & Washington Bl.	AM Peak PM Peak	1.092 1.007	F F	1.105 1.078	F F	0.013 0.071	YES YES	1.104 1.070	F F	0.012 0.063	YES YES
*12.Crenshaw Bl. & Adams Bl.	AM Peak PM Peak	0.582 0.806	A D	0.596 0.900	A D	0.014 0.094	NO YES	0.596 0.848	A D	0.014 0.042	NO YES
13.Crenshaw Bl. & Jefferson Bl.	AM Peak PM Peak	0.781 0.827	C D	0.806 1.001	D F	0.025 0.174	YES YES	0.750 0.836	C D	-0.031 0.009	NO NO
14.Crenshaw Bl. & Exposition Bl.	AM Peak PM Peak	0.736 0.746	C C	0.755 0.825	C D	0.019 0.079	NO YES	0.704 0.763	C C	-0.032 0.017	NO NO
15.Crenshaw Bl. & Coliseum St.	AM Peak PM Peak	0.707 0.835	C D	0.733 1.050	C F	0.026 0.215	NO YES	0.683 0.898	B D	-0.024 0.063	NO YES
16.Crenshaw Bl. & Rodeo Rd.	AM Peak PM Peak	0.759 0.805	C D	0.789 0.935	C E	0.030 0.130	NO YES	0.733 0.827	C D	-0.026 0.022	NO YES
17.Crenshaw Bl. & Martin Luther King Jr. Bl.	AM Peak PM Peak	0.847 1.115	D F	0.880 1.287	D F	0.033 0.172	YES YES	0.819 1.179	D F	-0.028 0.064	NO YES
18.Crenshaw Bl. & Stocker St.	AM Peak PM Peak	0.791 0.949	C E	0.817 1.053	D F	0.026 0.104	YES YES	0.710 0.885	C D	-0.081 -0.064	NO NO

19.Santa Rosalia Dr. & Stocker St.	AM Peak PM Peak	0.554 0.641	A B	0.561 0.681	A B	0.007 0.040	NO NO				
20.Crenshaw Bl. & Vernon Av.	AM Peak PM Peak	0.747 0.903	C E	0.780 0.987	C E	0.033 0.084	NO YES	0.726 0.886	C D	-0.021 -0.017	NO NO
21.Crenshaw Bl. & Slauson Av.	AM Peak PM Peak	1.023 1.303	F F	1.044 1.433	F F	0.021 0.130	YES YES	0.974 1.290	E F	-0.049 -0.013	NO NO
22.Crenshaw Bl. & Hyde Park Bl.	AM Peak PM Peak	0.615 0.837	B D	0.632 0.942	B E	0.017 0.105	NO YES	0.560 0.842	A D	-0.055 0.005	NO NO
23.Crenshaw Bl. & Florence Av.	AM Peak PM Peak	0.709 0.975	C E	0.729 1.024	C F	0.020 0.049	NO YES	0.680 0.951	B E	-0.029 -0.024	NO NO
24.Crenshaw Bl. & Manchester Bl.	AM Peak PM Peak	1.140 1.344	F F	1.144 1.362	F F	0.004 0.018	NO YES	1.069 1.272	F F	-0.071 -0.072	NO NO
*25.Arlington Av. & I-10 WB off-ramp	AM Peak PM Peak	0.954 1.064	E F	0.958 1.075	E F	0.004 0.011	NO YES	0.814 0.908	D E	-0.140 -0.156	NO NO
*26.Arlington Av. & I-10 EB off-ramp	AM Peak PM Peak	0.964 0.768	E C	0.965 0.779	E C	0.001 0.011	NO NO				
*27.Arlington Av. & Adams Bl.	AM Peak PM Peak	0.661 0.750	B C	0.664 0.767	B C	0.003 0.017	NO NO				
28.Arlington Av. & Jefferson Bl.	AM Peak PM Peak	0.650 0.661	B B	0.661 0.713	B C	0.011 0.052	NO YES	0.617 0.660	B B	-0.033 -0.001	NO NO
29.Arlington Av. & Rodeo Rd.	AM Peak PM Peak	0.429 0.621	A B	0.444 0.687	A B	0.015 0.066	NO NO				
30.Arlington Av. & Martin Luther King Jr. Bl.	AM Peak PM Peak	0.651 0.865	B D	0.669 0.976	B E	0.018 0.111	NO YES	0.624 0.903	B E	-0.027 0.038	NO YES
31.Arlington Av. & Vernon Av.	AM Peak PM Peak	0.607 0.775	B C	0.612 0.789	B C	0.005 0.014	NO NO				
32.La Cienega Bl. & Rodeo Rd.	AM Peak PM Peak	1.180 1.297	F F	1.182 1.300	F F	0.002 0.003	NO NO				
33.Van Ness Av. & Slauson Av.	AM Peak PM Peak	0.701 0.906	C E	0.706 0.915	C E	0.005 0.009	NO NO				
*34.La Brea Av. & Washington Bl.	AM Peak PM Peak	0.881 0.953	D E	0.882 0.955	D E	0.001 0.002	NO NO				
*35.Crenshaw Bl. & Venice Bl.	AM Peak PM Peak	1.193 1.169	F F	1.210 1.232	F F	0.017 0.063	YES YES	1.080 1.231	F F	-0.113 0.062	NO YES
36.Van Ness Av. & Florence Av.	AM Peak PM Peak	0.908 0.942	E E	0.911 0.951	E E	0.003 0.009	NO NO				
37.La Brea Av. & Stocker St.	AM Peak PM Peak	1.259 1.332	F F	1.259 1.332	F F	0.000 0.000	NO NO				
38.La Cienega & Jefferson Bl.	AM Peak PM Peak	1.302 1.258	F F	1.302 1.258	F F	0.000 0.000	NO NO				
39.La Brea Av. & Slauson Av.	AM Peak PM Peak	1.036 1.259	F F	1.036 1.259	F F	0.000 0.000	NO NO				
40.La Brea Av. & Manchester Bl.	AM Peak PM Peak	1.069 1.091	F F	1.069 1.091	F F	0.000 0.000	NO NO				
*41.La Cienega Bl. & Venice Bl.	AM Peak PM Peak	0.964 1.057	E F	0.964 1.057	E F	0.000 0.000	NO NO				

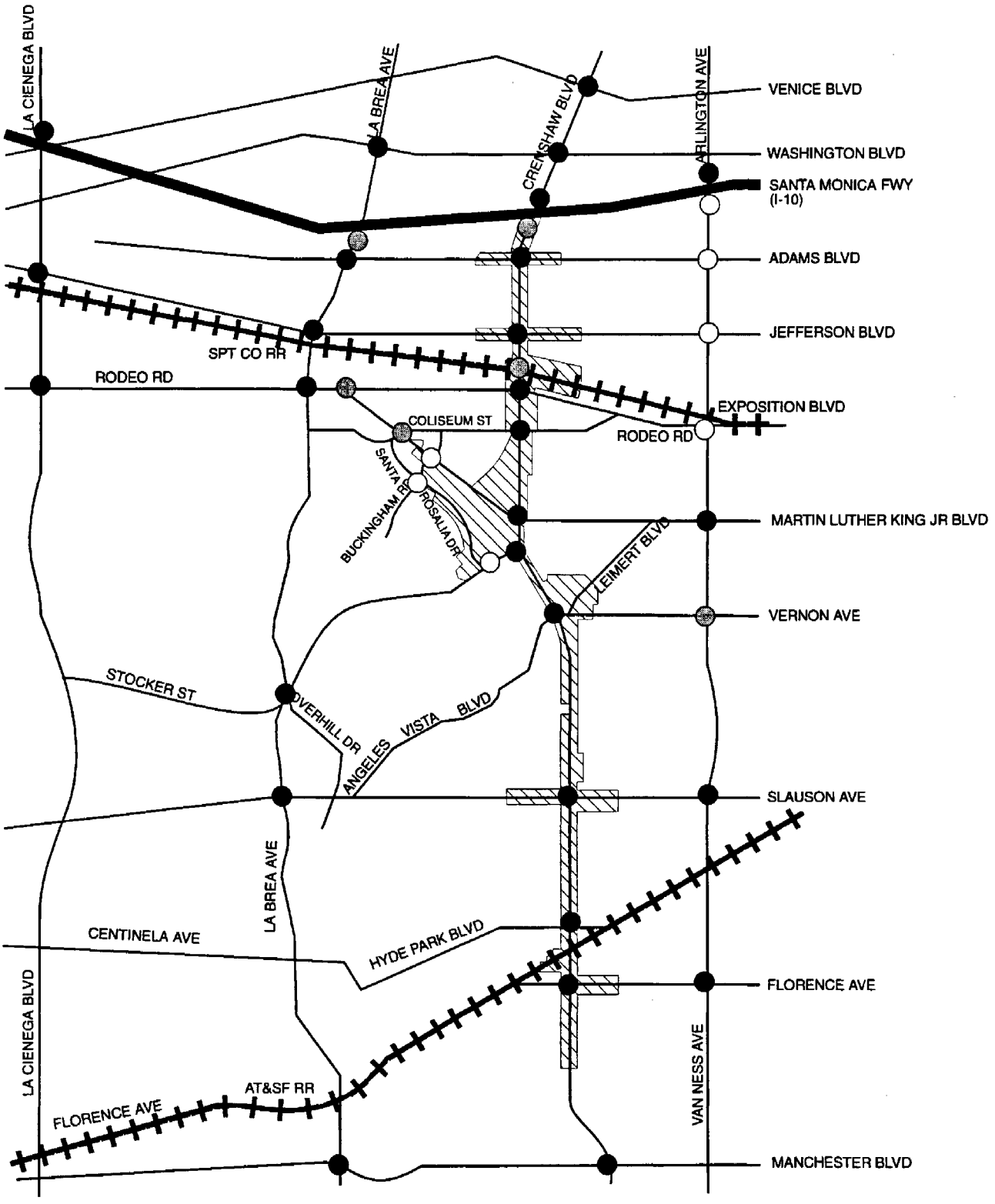
*Intersection operates at ATSAC.
Source: Kaku Associates.



CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.4-11
CUMULATIVE PLUS PROJECT
MAXIMUM PROBABLE DEVELOPMENT
ALTERNATIVE AM LEVELS OF SERVICE



CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.4-12
CUMULATIVE PLUS PROJECT
MAXIMUM PROBABLE DEVELOPMENT
ALTERNATIVE PM LEVELS OF SERVICE

TABLE 5.4-8: YEAR 2005 CUMULATIVE BASE AND CUMULATIVE PLUS PROJECT MAXIMUM PROBABLE DEVELOPMENT ALTERNATIVE INTERSECTION LEVELS OF SERVICE

		Before Mitigation						After Mitigation			
		Cumulative Base		Cumulative + Project				Cumulative + Project w/Mitigation Package			
Intersection	Hour	V/C	LOS	V/C	LOS	Increase in V/C	Significant Impact	V/C	LOS	Increase in V/C	Significant Impact
1.La Brea Av. & I-10 EB off-ramp	AM Peak PM Peak	0.796 0.868	C D	0.802 0.885	D D	0.006 0.017	NO NO				
2.La Brea Av. & Jefferson Bl.	AM Peak PM Peak	1.217 1.239	F F	1.232 1.293	F F	0.015 0.054	YES YES	1.150 1.204	F F	-0.067 -0.035	NO NO
3.La Brea Av. & Rodeo Rd.	AM Peak PM Peak	1.055 1.156	F F	1.114 1.320	F F	0.059 0.164	YES YES	1.034 1.219	F F	-0.021 0.063	NO YES
4.Martin Luther King Jr. Bl. & Rodeo Rd.	AM Peak PM Peak	0.469 0.709	A C	0.502 0.806	A D	0.033 0.097	NO YES	0.466 0.743	A C	-0.003 0.034	NO NO
*5.La Brea Av. & Adams Bl.	AM Peak PM Peak	0.927 0.933	E E	0.941 0.964	E E	0.014 0.031	YES YES	0.881 0.948	D E	-0.046 0.015	NO YES
6.Martin Luther King Jr. Bl. & Coliseum St.	AM Peak PM Peak	0.445 0.721	A C	0.490 0.887	A D	0.045 0.166	NO YES	0.455 0.675	A B	0.010 -0.046	NO NO
7.Martin Luther King Jr. Bl. & Buckingham Rd.	AM Peak PM Peak	0.342 0.578	A A	0.378 0.756	A C	0.036 0.178	NO YES	0.352 0.692	A B	0.010 0.114	NO NO
8.Santa Rosalia Dr. & Buckingham Rd.	AM Peak PM Peak	0.385 0.484	A A	0.425 0.630	A B	0.040 0.146	NO NO				
*9.Crenshaw Bl. & I-10 WB off-ramps	AM Peak PM Peak	1.041 0.900	F D	1.067 0.952	F E	0.026 0.052	YES YES	1.066 0.947	F E	0.025 0.047	YES YES
*10.Crenshaw Bl. & I-10 EB off-ramps	AM Peak PM Peak	0.684 0.784	B C	0.698 0.828	B D	0.014 0.044	NO YES	0.697 0.824	B D	0.013 0.040	NO YES
*11.Crenshaw Bl. & Washington Bl.	AM Peak PM Peak	1.092 1.007	F F	1.111 1.100	F F	0.019 0.093	YES YES	1.109 1.090	F F	0.017 0.083	YES YES
*12.Crenshaw Bl. & Adams Bl.	AM Peak PM Peak	0.582 0.806	A D	0.610 0.959	B E	0.028 0.153	NO YES	0.608 0.900	B D	0.026 0.094	NO YES
13.Crenshaw Bl. & Jefferson Bl.	AM Peak PM Peak	0.781 0.827	C D	0.826 1.102	D F	0.045 0.275	YES YES	0.764 0.904	C E	-0.017 0.077	NO YES
14.Crenshaw Bl. & Exposition Bl.	AM Peak PM Peak	0.736 0.746	C C	0.768 0.862	C D	0.032 0.116	NO YES	0.655 0.784	B C	-0.081 0.038	NO NO
15.Crenshaw Bl. & Coliseum St.	AM Peak PM Peak	0.707 0.835	C D	0.749 1.121	C F	0.042 0.286	YES YES	0.696 0.950	B E	-0.011 0.115	NO YES
16.Crenshaw Bl. & Rodeo Rd.	AM Peak PM Peak	0.759 0.805	C D	0.807 0.995	D E	0.048 0.190	YES YES	0.750 0.865	C D	-0.009 0.060	NO YES
17.Crenshaw Bl. & Martin Luther King Jr. Bl.	AM Peak PM Peak	0.847 1.115	D F	0.905 1.428	E F	0.058 0.313	YES YES	0.841 1.308	D F	-0.006 0.193	NO YES
18.Crenshaw Bl. & Stocker St.	AM Peak PM Peak	0.791 0.949	C E	0.836 1.124	D F	0.045 0.175	YES YES	0.727 0.937	C E	-0.064 0.012	NO NO

19.Santa Rosalia Dr. & Stocker St.	AM Peak PM Peak	0.554 0.641	A B	0.567 0.701	A C	0.013 0.060	NO YES	0.530 0.650	A B	-0.024 0.009	NO NO
20.Crenshaw Bl. & Vernon Av.	AM Peak PM Peak	0.747 0.903	C E	0.819 1.070	D F	0.072 0.167	YES YES	0.761 0.958	C E	0.014 0.055	NO YES
21.Crenshaw Bl. & Slauson Av.	AM Peak PM Peak	1.023 1.303	F F	1.103 1.530	F F	0.080 0.227	YES YES	1.024 1.283	F F	0.001 -0.020	NO NO
22.Crenshaw Bl. & Hyde Park Bl.	AM Peak PM Peak	0.615 0.837	B D	0.646 0.978	B E	0.031 0.141	NO YES	0.569 0.864	A D	-0.046 0.027	NO YES
23.Crenshaw Bl. & Florence Av.	AM Peak PM Peak	0.709 0.975	C E	0.747 1.045	C F	0.038 0.070	NO YES	0.696 0.971	B E	-0.013 -0.004	NO NO
24.Crenshaw Bl. & Manchester Bl.	AM Peak PM Peak	1.140 1.344	F F	1.153 1.369	F F	0.013 0.025	YES YES	1.076 1.277	F F	-0.064 -0.067	NO NO
*25.Arlington Av. & I-10 WB off-ramp	AM Peak PM Peak	0.954 1.064	E F	0.959 1.082	E F	0.005 0.018	NO YES	0.815 0.913	D E	-0.139 -0.151	NO NO
*26.Arlington Av. & I-10 EB off-ramp	AM Peak PM Peak	0.964 0.768	E C	0.968 0.785	E C	0.004 0.017	NO NO				
*27.Arlington Av. & Adams Bl.	AM Peak PM Peak	0.661 0.750	B C	0.666 0.777	B C	0.005 0.027	NO NO				
28.Arlington Av. & Jefferson Bl.	AM Peak PM Peak	0.650 0.661	B B	0.668 0.741	B C	0.018 0.080	NO YES	0.622 0.684	B B	-0.028 0.023	NO NO
29.Arlington Av. & Rodeo Rd.	AM Peak PM Peak	0.429 0.621	A B	0.454 0.717	A C	0.025 0.096	NO YES	0.423 0.662	A B	-0.006 0.041	NO NO
30.Arlington Av. & Martin Luther King Jr. Bl.	AM Peak PM Peak	0.651 0.865	B D	0.676 1.005	B F	0.025 0.140	NO YES	0.631 0.926	B E	-0.020 0.061	NO YES
31.Arlington Av. & Vernon Av.	AM Peak PM Peak	0.607 0.775	B C	0.617 0.803	B D	0.010 0.028	NO YES	0.576 0.748	A C	-0.031 -0.027	NO NO
32.La Cienega Bl. & Rodeo Rd.	AM Peak PM Peak	1.180 1.297	F F	1.182 1.301	F F	0.002 0.004	NO NO				
33.Van Ness Av. & Slauson Av.	AM Peak PM Peak	0.701 0.906	C E	0.713 0.929	C E	0.012 0.023	NO YES	0.665 0.865	B D	-0.036 -0.041	NO NO
*34.La Brea Av. & Washington Bl.	AM Peak PM Peak	0.881 0.953	D E	0.883 0.958	D E	0.002 0.005	NO NO				
*35.Crenshaw Bl. & Venice Bl.	AM Peak PM Peak	1.193 1.169	F F	1.215 1.252	F F	0.021 0.083	YES YES	1.083 1.248	F F	-0.110 0.079	NO YES
36.Van Ness Av. & Florence Av.	AM Peak PM Peak	0.908 0.942	E E	0.911 0.955	E E	0.003 0.013	NO YES	0.852 0.892	D D	-0.056 -0.050	NO NO
37.La Brea Av. & Stocker St.	AM Peak PM Peak	1.259 1.332	F F	1.259 1.332	F F	0.000 0.000	NO NO				
38.La Cienega & Jefferson Bl.	AM Peak PM Peak	1.302 1.258	F F	1.302 1.258	F F	0.000 0.000	NO NO				
39.La Brea Av. & Slauson Av.	AM Peak PM Peak	1.036 1.259	F F	1.039 1.261	F F	0.003 0.002	NO NO				
40.La Brea Av. & Manchester Bl.	AM Peak PM Peak	1.069 1.091	F F	1.070 1.091	F F	0.001 0.000	NO NO				
*41.La Cienega Bl. & Venice Bl.	AM Peak PM Peak	0.964 1.057	E F	0.964 1.057	E F	0.000 0.000	NO NO				

*Intersection operates at ATSAC.
Source: Kaku Associates.

MITIGATION MEASURES

The analysis summarized in the previous chapter indicated that traffic expected to be generated by the proposed Recovery Program would impact 22 to 30 intersections, depending on the alternative under consideration. Land uses proposed under the Infill/Rebuild Alternative would generate about 44,375 daily trips and 4,120 vehicles per hour (vph) during the evening peak hour. These trips are projected to impact 22 of the 41 intersections analyzed in this study. Traffic from the Moderate Development Alternative would impact 25 intersections and 30 from the Maximum Probable Development Alternative.

Mitigation measures were developed for those locations where it was feasible and their effectiveness was analyzed. These measure were categorized into two elements: those that reduce travel demand and those that increase capacity. The measures that are designed to increase capacity included operational improvements as well as physical improvements.

The recommended improvement program for this project includes measures designed to reduce travel demand as well as those that would increase the capacity of the roadway system at specific locations.

Measures to Reduce Travel Demand

A review of travel demand data and bus ridership patterns for this area indicates that a higher percentage of residents and workers use transit to travel to, from and within the study area than the region as a whole. The transit mode split is about 15 percent for this area which is about 10 percent higher than the regional average. Therefore, it is recommended that a shuttle bus system similar to the DASH system that is operated in downtown Los Angeles and other high activity centers of the City be implemented within the proposed Recovery Program Area. It is recommended that this shuttle bus system operate along the entire 4.7 mile length of the corridor and offer service to adjacent residential areas as well. This service should be in addition to the existing regional service provided by the MTA and should operate during the midday as well as the morning and evening peak hours.

This proposed improvement would be an appropriate measure for all three alternative land use scenarios.

Measures to Increase Capacity

The following summarizes the proposed roadway improvements designed to increase the capacity of the system. They include both operational measures as well as physical improvements. It can be seen that these proposed improvements are site specific and are discussed relative to the relevant land use alternative.

- **Infill/Rebuild Alternative**. The following intersection improvements are suggested to mitigate the project impacts under the Infill/ Rebuild Alternative:

2. La Brea Avenue & Jefferson Boulevard - Add this intersection to the City of Los Angeles Automated Traffic Surveillance and Control (ATSAC) system.

3. La Brea Avenue & Rodeo Road - Add this intersection to ATSAC.

5. La Brea Avenue & Adams Boulevard - Re-stripe both the westbound and eastbound approaches to add an exclusive westbound right-turn lane, resulting in one exclusive left-turn lane, two through lanes and one exclusive right-turn lane on the westbound approach.

12. Crenshaw Boulevard & Adams Boulevard - Widen the southbound approach by seven feet to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require one to seven feet of right-of-way acquisition for a distance of 50 feet.

13. Crenshaw Boulevard & Jefferson Boulevard - Widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 80 feet. Also, widen the eastbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, two through lanes and one exclusive right-turn lane. This would require four feet of right-of-way acquisition for 120 feet. In addition, add this intersection to ATSAC.

14. Crenshaw Boulevard & Exposition Boulevard - Add this intersection to ATSAC.

15. Crenshaw Boulevard & Coliseum Street - Re-stripe the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. In addition, add this intersection to ATSAC.

16. Crenshaw Boulevard & Rodeo Road - Widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 100 feet. Also, widen the eastbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, two through lanes and one exclusive right-turn lane. This would require nine feet of right-of-way acquisition for 80 feet. In addition, add this intersection to ATSAC.

17. Crenshaw Boulevard & Martin Luther King Jr. Boulevard - Re-stripe the westbound approach to provide dual left-turn lanes, one through lane and one shared through/right-turn lane. In addition, add this intersection to ATSAC.

18. Crenshaw Boulevard & Stocker Street - Re-stripe the eastbound approach to provide two exclusive left-turn lanes, two through lanes and one exclusive right-turn lane. This would require eight feet of right-of-way acquisition for 180 feet. In addition, add this intersection to ATSAC.

20. Crenshaw Boulevard & Vernon Avenue - Add this intersection to ATSAC.

21. Crenshaw Boulevard & Slauson Avenue - Re-stripe the southbound approach from 470 feet north of Slauson Avenue to provide one exclusive left-turn lane, three through lanes and one shared through/right-turn lane. This would require removing the frontage road on the southbound approach. In addition, add this intersection to ATSAC.

22. Crenshaw Boulevard & Hyde Park Boulevard - Re-stripe the eastbound and westbound approaches to provide one exclusive left-turn lane and one shared through/right-turn lane. In addition, add this intersection to ATSAC.

23. Crenshaw Boulevard & Florence Avenue - Add this intersection to ATSAC.

24. Crenshaw Boulevard & Manchester Boulevard - Add this intersection to ATSAC.

25. Arlington Avenue & I-10 westbound ramps - Remove the existing island on the southbound approach to provide an additional through lane, resulting in two through lanes and one shared through/right-turn lane.

28. Arlington Avenue & Jefferson Boulevard - Add this intersection to ATSAC.

30. Arlington Avenue & Martin Luther King Jr. Boulevard - Add this intersection to ATSAC.

35. Crenshaw Boulevard & Venice Boulevard - Re-stripe Crenshaw Boulevard to provide dual left-turn lanes on both the northbound and southbound approaches. Also, modify the traffic signal to provide protected left-turn phasing in the north/south direction. This improvement would require the removal of about one parking space on the southbound approach and about five spaces on the northbound approach.

- Moderate Development Alternative. The following mitigation measures proposed for the Moderate Development Alternative include those discussed above for the Infill/ Rebuild Alternative as well as those discussed below:

4. Martin Luther King Jr. Boulevard & Rodeo Road - Add this intersection to ATSAC.

6. Martin Luther King Jr. Boulevard & Coliseum Street - Re-stripe Martin Luther King Jr. Boulevard to provide an additional through lane on the southbound approach, resulting in one exclusive left-turn lane, two through lanes and one shared through/right-turn lane. This would require median modifications along Martin Luther King Jr. Boulevard. In addition, add this intersection to ATSAC.

7. Martin Luther King Jr. Boulevard & Buckingham Road - Add this intersection to ATSAC.

20. Crenshaw Boulevard & Vernon Avenue - In addition to the mitigation measure suggested for the Infill/ Rebuild Alternative, widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 80 feet.

- Maximum Probable Development Alternative. The mitigation measures proposed for the Maximum Probable Development Alternative include those discussed for the Infill/Rebuild and Moderate Development Alternatives above as well as those discussed below:

13. Crenshaw Boulevard & Jefferson Boulevard - The eastbound exclusive right-turn lane would needed to be extended in length by an additional 40 feet. This increase in length would require the acquisition of four feet of additional right-of-way along this segment of Crenshaw Boulevard. The added four feet of right-of-way would thus bring the total right-of-way for the street to 160 feet.

14. Crenshaw Boulevard & Exposition Boulevard - In addition to the mitigation measure suggested for the Infill/ Rebuild Alternative, widen the westbound approach to provide an exclusive right-turn lane, resulting in one shared through/left-turn lane, one through lane and one exclusive right-turn lane. This would require 12 feet of right-of-way acquisition for 120 feet.

19. Santa Rosalia Drive & Stocker Street - Add this intersection to ATSAC.

22. Crenshaw Boulevard & Hyde Park Boulevard - In addition to the mitigation measure suggested for the Infill/ Rebuild Alternative, widen the southbound approach to provide an exclusive right-turn lane, resulting in one exclusive left-turn lane, three through lanes and one exclusive right-turn lane. This would require seven feet of right-of-way acquisition for 50 feet.

29. Arlington Avenue & Rodeo Road - Add this intersection to ATSAC.

31. Arlington Avenue & Vernon Avenue - Add this intersection to ATSAC.

33. Van Ness Avenue & Slauson Avenue - Add this intersection to ATSAC.

36. Van Ness Avenue & Florence Avenue - Add this intersection to ATSAC.

Effectiveness of Mitigation Measures

The effectiveness of each of the mitigation measures described above was assessed relative to the appropriate land use alternative for which they were proposed. The ability of each to adequately mitigate the potential impact was determined by conducting intersection capacity analyses at each of the significantly impacted intersections using methods similar to those previously discussed.

Local Shuttle Bus System

It is estimated that the propose shuttle bus system would be able to attract sufficient ridership to reduce the vehicle trip generation of each alternative land use scheme by 10 percent. The effectiveness of this 10 percent reduction in trips expected to be generated by the proposed Recovery Program did not serve to mitigate any of the significantly impacted intersections to levels of insignificance. This is true for all intersections under all three land use scenarios.

Since the majority of the sources for the ITE trip generation rates for this land use (neighborhood retail) were obtained from suburban areas, these rates reflect a relatively low transit ridership. The ITE manual indicates that these rates reflect an inherent transit mode split of less than 5 percent. It should be noted that this 10 percent increase in bus ridership would result in a total transit mode split for the area of about 15 percent. This is equal to the actual existing mode split as determined by SCAG in the development of their regional model. Therefore, the 10 percent reduction in trip generation resulting this proposed mitigation measure may only serve to lower the rate to a level that is more reflective of actual conditions in the area. Although this may be true, no further reductions were assumed for this analysis.

Automated Traffic Surveillance And Control

The LADOT has determined that intersections which are included in the City's Automated Traffic Surveillance and Control (ATSAC) system can expect to experience an increase in their capacity of up to seven percent. The first major roadway improvement program for the proposed Recovery Program is to include each of the significantly impacted intersections into the ATSAC program. Each of the impacted intersections was analyzed to determine the potential effectiveness of this measure. The results of this analysis indicate that the implementation of this proposed improvement, in combination with the shuttle bus system, would mitigate project impacts at seven to 11 intersections, depending on the land use alternative. The analysis indicates that eight of the 22 impacted intersections under the Infill/ Rebuild Alternative can be mitigated with the installation of ATSAC. The analysis indicates that seven of the 25 impacted intersections under the Moderate Development Alternative can be mitigated and 11 of 30 can be mitigated under the Maximum Probable Development Alternative.

Physical Improvements

The mitigation program proposed for this project and discussed above also includes a list of measures which require the implementation of physical improvements at specific locations. These proposed improvements can be classified into two categories: those that can be implemented within existing city right-of-way and those that can be feasibly implemented but will require the dedication or acquisition of additional private property to implement.

Improvements Within Existing Right-of-Way. The analysis indicates that physical roadway improvements can be implemented at seven or eight intersections, depending on the land

use alternative, within the existing right-of-way. Improvements within the existing right-of-way can be implemented at seven locations under the Infill/ Rebuild Alternative and the Moderate Development Alternative and eight locations under the Maximum Probable Development Alternative. The analysis of the potential effectiveness indicates that the measures which can be implemented within the existing right-of-way can, either by themselves or in combination with the ATSAC and the shuttle bus system, mitigate significant impacts at an additional three to six intersections, depending on the land use alternative. The analysis indicates that these physical improvements can mitigate impacts at six additional intersections under the Infill/ Rebuild Alternative for a total of 14. The analysis indicates that these measures can mitigate impacts at five additional intersections for a total of 12 under the Moderate Development Alternative and that these measures can mitigate impacts at three additional intersections for a total of 14 under the Maximum Probable Development Alternative.

Measures Which Require Property Dedication. The analysis indicates that physical improvements which require dedication of private property can be implemented at four additional intersections under the Infill/ Rebuild Alternative, five additional locations under the Moderate Development Alternative, and seven under the Maximum Probable Development Alternative. The results of the analysis indicate that these improvements may mitigate impacts at two to three additional locations. **Table 5.4-6** indicates that these proposed improvements, either by themselves or in combination with ATSAC, the shuttle bus system, and other improvements within the existing right-of-way, may mitigate project impacts at three additional intersections under the Infill/ Rebuild Alternative for a total of 17 locations that can be mitigated by the total mitigation package. This would result in five intersections where impacts are unmitigatable under the Infill/ Rebuild Alternative.

Table 5.4-7 indicates that proposed improvements in this category can mitigate impacts at three additional intersections under the Moderate Development Alternative for a total of 15 locations that can be mitigated. This results in 10 locations where impacts cannot be feasibly mitigated. **Table 5.4-8** indicates that these improvements can mitigate impacts at two additional intersections under the Maximum Probable Development Alternative for a total of 16 locations where impacts can be mitigated and 14 where impacts cannot be mitigated.

Summary of Results

Table 5.4-9 summarizes the results of the traffic impact analysis, indicating the number of intersections that would potentially be impacted by the traffic expected to be generated by the proposed Recovery Program; the number of intersections where impacts can be mitigated by ATSAC and by the additional physical roadway improvements; and the total number of unmitigatable intersections for each land use alternative. As indicated above, project traffic is projected to impact a total of 22 locations under the Infill/ Rebuild Alternative of which 17 can be mitigated by the cumulative effects of the combined package of mitigation measures resulting in five significantly impacted locations that cannot be mitigated. The table also indicates that traffic from the Moderate Development Alternative is projected to impact 25 locations of which 15 can be mitigated resulting in a total of 10 significantly impacted locations that are unmitigatable. The table indicates that traffic from

the Maximum Probable Development Alternative would significantly impact 30 intersections of which 16 can be mitigated resulting in 14 that cannot.

TABLE 5.4-9: SUMMARY OF PROPOSED MITIGATION MEASURES RESULTS

Alternatives	Number of Impacted Intersections	Mitigated by ATSAC	Mitigated by ATSAC & Physical Improvements		Total Number of Mitigated Intersections	Number of Unmitigated Intersections
			Within Existing Right-of-Way	Require Property Dedication		
Infill/Rebuild	22	8	6	3	17	5
Moderate Development	25	7	5	3	15	10
Maximum Probable Development	30	11	3	2	16	14

Source: Kaku Associates.

Additional Issues

As previously discussed, the most significant transportation improvement planned for the study area is the proposed Crenshaw/Prairie Corridor Rail Line. Although the proposed facility is only at the planning stages, it is expected that it will undergo environmental analysis and processing within the next year and be given serious consideration for implementation within the context of at least the 30-year program and possibly sooner. If this rail line is implemented, it is very likely that it would have a positive impact on the traffic conditions within the study area. Although no quantitative assessment was made, it is estimated that the line would increase transit usage by at least 10 percent for the users of the project and, more importantly, the remainder of the traffic in the study area. It is, therefore, expected that the Cumulative Base traffic volumes will be reduced as well as the Cumulative Plus Project under future conditions with the implementation of the proposed rail line.

Regional Analysis

An analysis was also conducted to quantify the potential impacts of the project traffic on the regional freeway system. The selection of the freeway segments to be analyzed was based on the criteria established by the Los Angeles County Congestion Management Program (CMP) which states that freeway segments must be analyzed if the proposed Recovery Program increases the peak hour volume in either direction by 150 vehicles per hour or more. Using this standard, it was determined that the only two freeway segments which would potentially be impacted by the proposed Recovery Program would be two segments of the I-10 (Santa Monica Freeway): the segment immediately west of La Brea Avenue and the segment immediately east of Western Avenue. The following traffic scenarios were analyzed for each:

- **Existing Conditions** - Existing Base Conditions

- **Cumulative Base Conditions** - Future freeway traffic volumes without the proposed Recovery Program.

- **Cumulative Plus Project Conditions** - Future freeway traffic volumes with addition of traffic expected to be generated by the proposed Recovery Program alternatives.

Existing Freeway Traffic Volumes

The 1992 average annual daily traffic volumes (AADT) and afternoon peak hour volumes for the freeway system within the study area were obtained from 1992 Traffic Volumes on California Highways, California Department of Transportation, 1993. A growth rate of one percent per year was applied to these traffic volumes to derive the 1994 existing base conditions. The Santa Monica Freeway east of Western Avenue carries 346,800 vehicles per day (vpd) on an average weekday and 24,170 vehicles per hour (vph) during the evening peak hour under 1994 Existing Base conditions. The segment west of La Brea Avenue carries 325,690 vpd and 18,000 vph during the same time periods.

Future Freeway Traffic Volumes

The methodology used to develop forecast of future traffic on these two freeway segments is similar to that used for the arterial street system previously described. It includes the application of a growth factor to reflect ambient growth and development in the area, the addition of traffic from appropriate cumulative projects in the area, and the addition of traffic expected to be generated by the proposed Recovery Program.

Cumulative Base Freeway Traffic Volumes

The Year 2005 Cumulative Base traffic projections were developed by factoring the 1994 Existing Base traffic volumes by 11 percent, which represents one percent per year in growth, and then by adding the traffic volumes generated by the related project. As previously indicated, only one related project is located in the vicinity of the study area and consists of a 450,000-square-foot office building with 15,000 square feet of supporting retail located on Jefferson Boulevard. **Table 5.4-10** lists the Year 2005 Cumulative Base traffic volumes for the analyzed freeway segments. As shown in the table, the Santa Monica Freeway east of Western Avenue is projected to carry 394,450 vpd on an average weekday and 26,810 vph during the evening peak hour while the segment west of La Brea Avenue is expected to carry 325,690 vpd and 18,000 vph during these same time periods under 2005 Cumulative Base conditions.

TABLE 5.4-10: YEAR 2005 CUMULATIVE BASE AND CUMULATIVE PLUS PROJECT FREEWAY TRAFFIC VOLUMES

Freeway Segment	Daily			Afternoon Peak Hour		
	Cumulative Base	Cumulative Plus Project	Percent Contribution	Cumulative Base	Cumulative Plus Project	Percent Contribution
Infill/Rebuild Alternative						
Santa Monica Fwy w/o La Brea Ave	325,690	325,770	0.02%	18,000	18,010	0.03%
Santa Monica Fwy e/o Western Ave	384,450	384,770	0.08%	26,810	26,840	0.10%
Moderate Development Alternative						
Santa Monica Fwy w/o La Brea Ave	325,690	325,850	0.05%	18,000	18,020	0.09%
Santa Monica Fwy e/o Western Ave	384,450	385,160	0.18%	26,810	26,880	0.24%
Maximum Probable Development Alternative						
Santa Monica Fwy w/o La Brea Ave	325,690	326,190	0.15%	18,000	18,050	0.27%
Santa Monica Fwy e/o Western Ave	384,450	385,910	0.38%	26,810	26,950	0.53%

Source: Kaku Associates.

Project Freeway Traffic Volumes

Proposed Recovery Program Infill/ Rebuild Alternative. The trips generated by the proposed Recovery Program Infill/ Rebuild Alternative (as previously summarized in **Table 5.4-3**) were distributed and assigned to the freeway system using the trip distribution patterns previously discussed in Chapter III. The resulting project freeway traffic volumes, which are also summarized in **Table 5.4-11**, indicate that the segment of the Santa Monica Freeway east of Western Avenue is projected to carry about 320 vpd and 30 vph during the afternoon peak hour while the segment west of La Brea Avenue is expected to carry 80 vpd and 10 vph, respectively.

Proposed Recovery Program Moderate Development Alternative. The trips generated by the proposed Recovery Program Moderate Development Alternative (as previously shown in **Table 5.4-3**) were also distributed and assigned to the freeway system using the same patterns. The resulting project freeway traffic volumes, which are summarized in **Table 5.4-11**, indicate that the segment of the Santa Monica Freeway east of Western Avenue is

projected to carry about 710 vpd and 70 vph during the afternoon peak hour. The volumes on the segment of the freeway west of La Brea Avenue are 160 vpd and 20 vph, respectively.

Proposed Recovery Program Maximum Probable Development Alternative. The trips generated by the proposed Recovery Program Maximum Probable Development Alternative (as previously shown in **Table 5.4-3**) were also distributed and assigned to the freeway system. The resulting project freeway traffic volumes shown in **Table 5.4-11** indicate that the segment of the Santa Monica Freeway east of Western Avenue is projected to carry about 1,460 vpd and 140 vph during the afternoon peak hour. The volumes on the segment west of La Brea Avenue are 500 vpd and 50 vph, respectively.

TABLE 5.4-11: PROPOSED RECOVERY PROGRAM GENERATED FREEWAY TRAFFIC VOLUMES

Freeway Segment	Daily	Afternoon Peak Hour
Infill/Rebuild Alternative		
Santa Monica Fwy w/o La Brea Ave	80	10
Santa Monica Fwy e/o Western Ave	320	30
Moderate Development Alternative		
Santa Monica Fwy w/o La Brea Ave	160	20
Santa Monica Fwy e/o Western Ave	710	70
Maximum Probable Development Alternative		
Santa Monica Fwy w/o La Brea Ave	500	50
Santa Monica Fwy e/o Western Ave	1,460	140

Source: Kaku Associates.

Cumulative plus Project Freeway Traffic Volumes

The traffic expected to be generated by the proposed Recovery Program and assigned to the freeway was added to the Year 2005 Cumulative Base freeway traffic volumes. The resulting 2005 Cumulative Plus Project traffic forecasts for Alternatives Infill/Rebuild, Moderate Development, and Maximum Probable Development are also summarized in **Table 5.4-10**. Under the Year 2005 Cumulative Plus Project conditions for Infill/ Rebuild Alternative, the segment of the Santa Monica Freeway east of Western Avenue is projected to carry 384,770 vpd and 26,840 during the evening peak hour. Similar volumes for Moderate Development Alternative are 385,160 vpd and 26,880 vph, respectively. For the Maximum Probable Development Alternative, the volumes are 385,910 vpd and 26,950 vph, respectively.

As indicated in **Table 5.4-10**, the addition of project traffic from the Infill/ Rebuild Alternative to the freeway would increase the future daily volume on the segment east of Western Avenue by 0.08 percent on a daily basis and 0.10 percent during the evening peak hour. Project traffic from the Moderate Development Alternative would increase the

freeway volumes on the same segment by 0.18 percent on a daily basis and 0.24 percent during the evening peak hour. Project traffic from the Maximum Probable Development Alternative is expected to increase freeway traffic on this segment by 0.38 percent on a daily basis and 0.53 percent during the evening peak hour.

Traffic Impact

As indicated in the analysis and summarized in **Table 5.4-10**, the proposed Recovery Program would not increase traffic volumes on any freeway link by more than 150 vph in either direction. Based on criteria established by the Los Angeles County CMP, the proposed Recovery Program does not justify further analysis under CMP standards and would not, therefore, have a significant impact.

Summary of Conclusions

The results of the traffic impact analysis for the proposed Recovery Program Area include the following conclusions:

- A total of 41 intersections were analyzed within the study area for this project. Of these, 15 are currently operating at an unacceptable level of service, i.e., LOS E or F.

- Three alternative land use plans have been developed for the proposed Recovery Program. Of these, the Infill/ Rebuild Alternative is projected to generate a total of 44,375 daily vehicle trips of which 4,120 vph are expected to occur during the evening peak hour. The Moderate Development Alternative is expected to generate 55,015 daily trips and 5,145 vph during the evening peak hour. The Maximum Probable Development Alternative is projected to generate 84,065 daily vehicle trips and 7,885 vph during the evening peak hour.

- Under future Cumulative Base conditions, i.e., future conditions without the addition of proposed Recovery Program traffic, a total of 23 of the 41 intersections are expected to operate at an unacceptable level of service.

- Under future conditions with the addition of traffic from the Infill/Rebuild Alternative, 22 of the 41 intersections would be significantly impacted by the proposed Recovery Program.

- A total of 25 of the 41 intersections within the study area would be significantly impacted by the proposed Recovery Program under the Moderate Development Alternative.

- Traffic from the Maximum Probable Development Alternative would significantly impact 30 of the 41 intersections.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

- Mitigation measures for the proposed Recovery Program include the implementation of a shuttle bus system, adding impacted intersections to the City's ATSAC system, and the implementation of physical roadway improvements.

- The implementation of the proposed improvements would mitigate impacts at 17 of the 22 significantly impacted intersections under the Infill/Rebuild Alternative resulting in a total of five unmitigatable locations.

- A total of 15 of the 25 significantly impacted intersections can be mitigated by the proposed improvements resulting in 10 intersections whose impacts cannot be mitigated under the Moderate Development Alternative.

- For the Maximum Probable Development Alternative, a total of 16 of the 30 significantly impacted intersections can be mitigated. This would leave 14 unmitigated intersections under this alternative.

5.5 AIR QUALITY

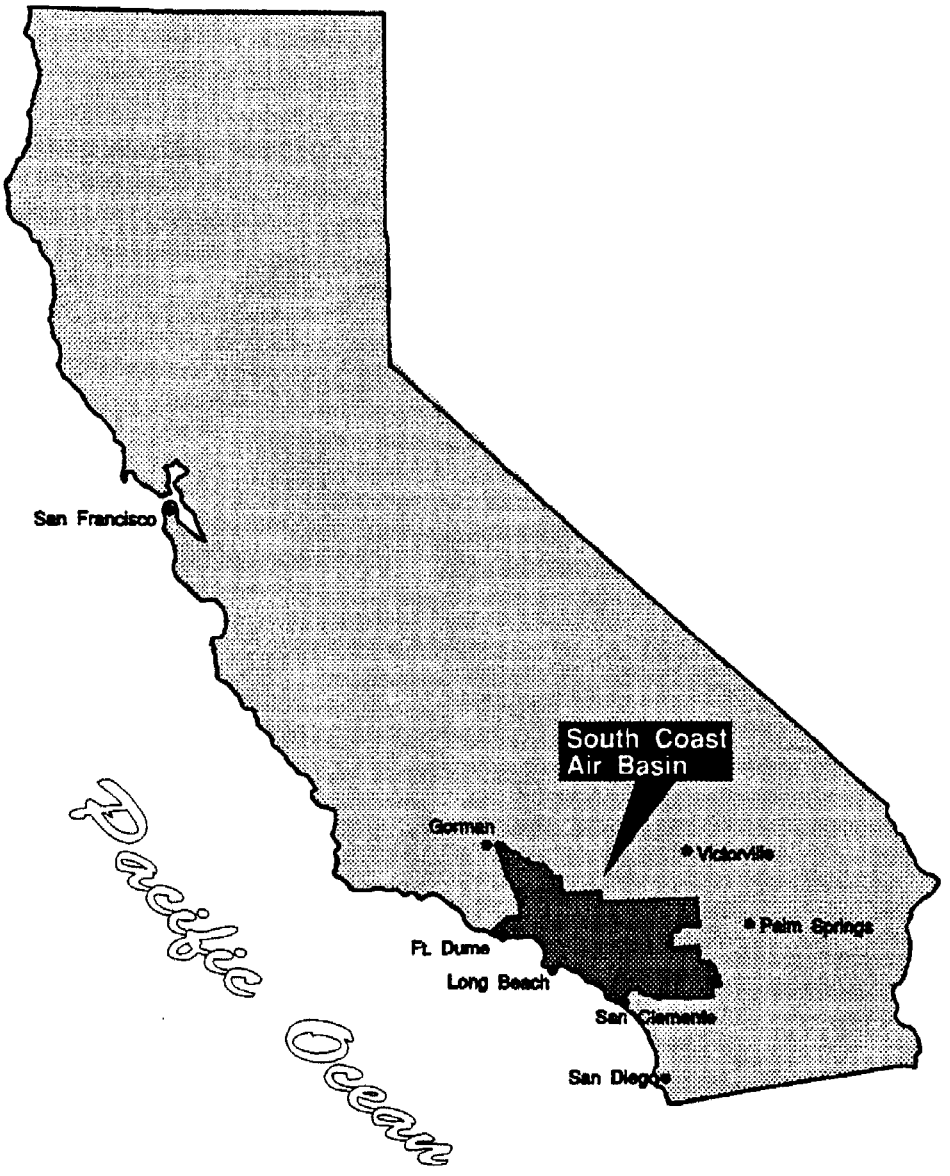
EXISTING CONDITIONS

South Coast Air Basin. The proposed Recovery Program Area is located within the South Coast Air Basin (SOCAB), a 6,600-square-mile basin encompassing all of Orange County, most of Los Angeles County and Riverside County and the western portion of San Bernardino County (**Figure 5.5-1**). Ambient pollution concentrations in Los Angeles County are among the highest in the four counties comprising the SOCAB. In the winter, air quality problems are created due to carbon monoxide and nitrogen dioxide emissions. Summer air quality problems result from the formation of photochemical smog as hydrocarbons and nitrogen dioxide react under strong sunlight.

Attainment Status. Los Angeles County has been designated as a non-attainment area by the United States Environmental Protection Agency (EPA) under provisions of the Clean Air Act for ozone, carbon monoxide, nitrogen dioxide and total suspended particulates. Los Angeles County is designated an attainment area for sulfur dioxide. The California Clean Air Act, effective January 1, 1989, divides the non-attainment areas into three categories with progressively stringent requirements: moderate, serious, and severe (Health and Safety Code 40918-40920). The South Coast Air Basin is a severe non-attainment area for ozone, carbon monoxide, and nitrogen dioxide. The Basin is nearing attainment for sulfates and has met attainment goals for lead and sulfur dioxide. The California Clean Air Act does not address suspended particulates (PM_{10}). According to the California Clean Air Act, air quality management districts containing severe non-attainment pollutants are required to include specified emission reduction strategies to meet milestones in implementing emission controls into regional air quality management plans.

Air Quality Management Plan. The attainment strategy identified in the *AQMP* consists of three tiers. Tier I identifies control measures that can be adopted within the next five years through technological applications and management practices that are currently available. Tier II measures include the use of existing technologies, as well as future technologies that require advancements expected to occur in the near future. Tier III programs are designed to bring about major technological breakthroughs to further reduce emissions of reactive organic gases.

As a result of the passage of the California Clean Air Act, the 1989 *AQMP* was required to be amended to develop new strategies for the South Coast Air Basin to reach the attainment of state as well as federal air quality standards. The 1989 *AQMP* is exclusively a federal attainment plan. As a result, the 1989 *AQMP* was revised. The revised 1991 *AQMP*, in addition to developing strategies to achieve state standards, also reflects updated data on the South Coast Air Basin and recognizes air pollutant emissions reduction achievements. The 1991 *AQMP* requires ozone, carbon monoxide, and nitrogen dioxide levels to be reduced by 25 percent by the end of 1994, by 40 percent by the end of 1997, and by 50 percent by the end of the year 2000. Attainment targets for PM_{10} are not included in the 1991 *AQMP* because the California Clean Air Act does not cover PM_{10}'s.



LEGEND:

South Coast Air Basin

State of California

APPROX. SCALE:

N

0 40 80 120 Miles

SOURCE: California Air Resources Board, California Air Quality Data, "Summary of 1990 Air Quality Data" Volume XXII, Frontispiece-California Air Basins.

Local Conditions. Wind speed and direction, as well as climate, directly affect local and regional air quality. The wind direction in the proposed Recovery Program Area is predominantly from the west and west-southwest. The average recorded wind speed in the proposed Recovery Program Area vicinity is 4.9 miles per hour.[1] The most representative air quality monitoring stations to the proposed Recovery Program Area are the Los Angeles North Main Street Station located at 1630 North Main Street approximately 6.5 miles northeast of the proposed Recovery Program Area and the Hawthorne Station located at 5234 West 120th Street in Hawthorne approximately 3.8 miles southwest of the proposed Recovery Program Area (**Figure 5.5-2**). The Los Angeles North Main Street and Hawthorne air quality monitoring stations monitor criteria pollutants including ozone, carbon monoxide, sulfur dioxide, nitrogen dioxide, particulates and lead and non-criteria pollutants including sulfate. The most recently available data from the Los Angeles North Main Street and Hawthorne Stations for the years 1988-1992 is shown in **Table 5.5-1**. This data indicates the following trends per pollutant:

Los Angeles North Main Street Monitoring Station:

- Ozone - The maximum one-hour concentration recorded between the years 1988-1992 was 0.25 parts per million (ppm) in 1989. The state one-hour standard of 0.09 ppm was exceeded between 59 and 76 days annually between 1988 and 1992 with the lowest number of days in 1992.

- Particulates (PM_{10}) - The highest recorded concentration was 152 ppm recorded in 1990. The state standard of 50 $\mu g/m^3$ for 24-hours was exceeded between 22 and 33 days between 1989-1992.

- Total Suspended Particulates - The maximum 24-hour concentration recorded during 1988-1992 ranged from 192 $\mu g/m^3$ to 257 $\mu g/m^3$.

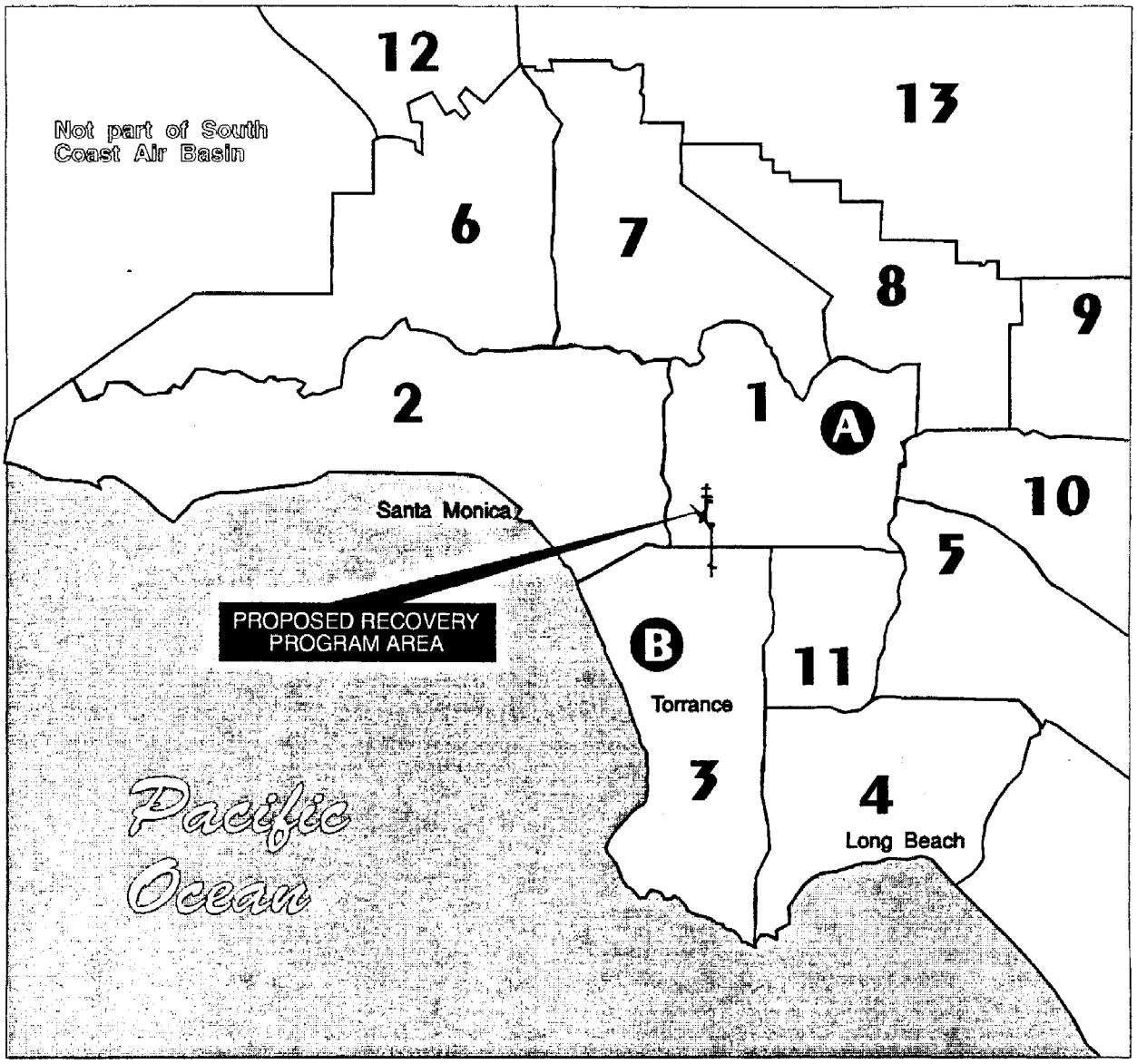
- Carbon Monoxide - The maximum recorded one-hour concentration during 1988-1992 ranged from 12 to 16 ppm. The state one-hour standard of 20 ppm was not exceeded in any year between 1988-1989. The eight-hour state standard was exceeded between one and five days over the five year period with no exceedance in 1991.

- Sulfur Dioxide - The maximum 24-hour concentration during the five year 1988-1992 period was 0.05 ppm in 1992. The state standard was not exceeded during the five year period.

- Nitrogen Dioxide - The maximum one-hour concentration recorded during the five years between 1988 and 1992 was 0.54 ppm in 1988. The one-hour state standard of 0.25 ppm was exceeded six days that year.

---

[1]This represents the average wind speed recorded at three monitoring stations in the vicinity of the proposed Recovery Program Area; Los Angeles Station No. 76, 11408 La Cienega Boulevard, from 1971 to 1974, Los Angeles Pico Station from 1955 to 1971, and the Los Angeles Normandie Station from 1955 to 1967.



LEGEND:

Air Monitoring Areas in Los Angeles County:

1. Central Los Angeles
2. Northwest Coastal
3. Southwest Coastal
4. South Coastal
5. Southeast Los Angeles County
6. West San Fernando Valley
7. East San Fernando Valley
8. West San Gabriel Valley
9. East San Gabriel Valley
10. South San Gabriel Valley
11. South Central Los Angeles
12. Santa Clarita Valley
13. San Gabriel Mountains

● Monitoring Stations

A. Los Angeles North Main Street
B. Hawthorne

APPROX. SCALE: N

0 3.0 6.0 9.0 Miles

SOURCE: South Coast Air Quality Management District Air Monitoring Areas Map, 1989

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.5-2

AIR MONITORING AREAS IN VICINITY OF PROPOSED RECOVERY PROGRAM AREA

- Sulfate - The maximum 24-hour concentration was 26.6 $\mu g/m^3$ in 1988. The state standards were exceeded twice during the five year period, in 1988 and 1990.

- Lead - The maximum 24-hour concentration ranged between 0.09 $\mu g/m^3$ to 0.44 $\mu g/m^3$ during 1988-1992 period. No state standards were exceeded during the five year period.

Hawthorne Monitoring Station:

- Ozone - The maximum one-hour concentration recorded between the years 1988-1992 was 0.22 parts per million (ppm) in 1988. The state one-hour standard of 0.09 ppm was exceeded between three and 17 days annually between 1988 and 1992 with the lowest number of days in 1990.

- Particulates (PM_{10}) - 24-hour concentrations were monitored only in 1989-1992. The highest recorded concentration was 133 ppm in 1989. The state standard of 50 $\mu g/m^3$ for 24-hours was exceeded between five and 24 days between 1989-1992.

- Total Suspended Particulates - The maximum 24-hour concentration recorded during 1988-1992 ranged from 113 $\mu g/m^3$ to 370 $\mu g/m^3$.

- Carbon Monoxide - The maximum recorded one-hour concentration during 1988-1992 ranged from 18 to 23 ppm. The state one-hour standard of 20 ppm was exceeded between two and four days between 1988-1989. There were no exceedances of the state standard during 1990 and 1992. The eight-hour state standard was exceeded between 10 and 31 days over the five-year period.

- Sulfur Dioxide - The maximum 24-hour concentration during the five year 1988-1992 period was 0.31 ppm in 1990. The state standard was not exceeded during the five-year period.

- Nitrogen Dioxide - The maximum one-hour concentration recorded during the five-years between 1988 and 1992 was 0.27 ppm in 1988. The one-hour state standard of 0.25 ppm was exceeded one day that year.

- Sulfate - The maximum 24-hour concentration was 24.8 $\mu g/m^3$ in 1990. The state standards were not exceeded during the five-year period.

- Lead - The maximum 24-hour concentration ranged between 0.08 $\mu g/m^3$ to 0.27 $\mu g/m^3$ during 1988-1992 period. No state standards were exceeded during the five-year period.

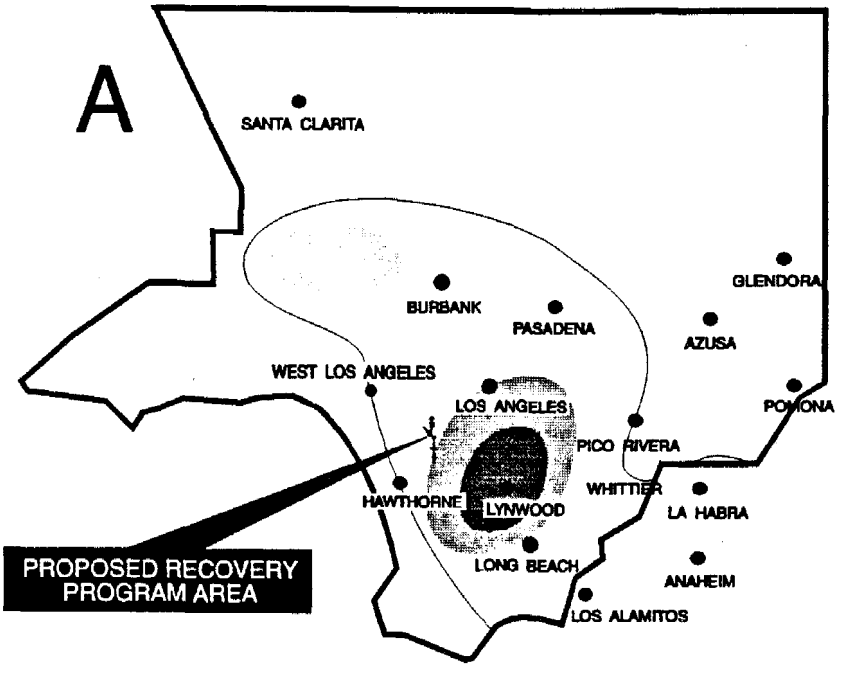
As shown in **Figures 5.5-3** and **5.5-4**, it can be seen that overall the proposed Recovery Program Area is located outside the major areas of pollutant concentration in the region.

TABLE 5.5-1: DATA FROM LOS ANGELES NORTH MAIN STREET AND HAWTHORNE AIR QUALITY MONITORING STATIONS

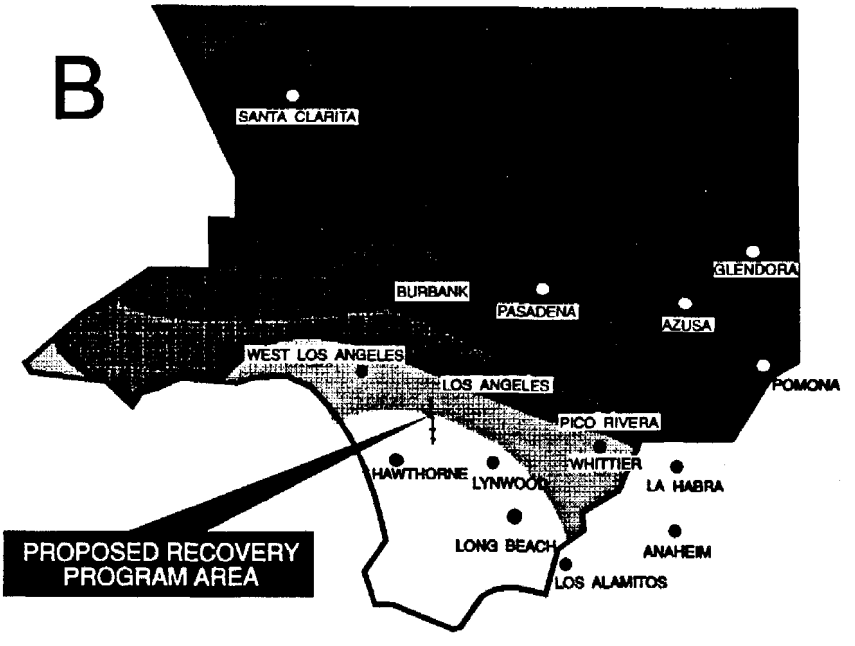
Pollutant	State Standard	National Standard	Year	SOURCE RECEPTOR AREA NO. 1 Los Angeles North Main Street Station		SOURCE RECEPTOR AREA NO. 3 Hawthorne Station	
				Max. Level	Days	Max. Level	Days
Ozone	0.09 ppm for 1-hour	0.12 ppm for 1-hour	1988	0.21	68	0.22	11
			1989	0.25	76	0.19	11
			1990	0.20	70	0.10	3
			1991	0.19	59	0.11	17
			1992	0.20	57	0.15	11
Particulate (PM_{10})	50 $\mu g/m^3$ for 24 hours	150 $\mu g/m^3$ for 24 hours	1988	130	33	nm	nm
			1989	137	33	133	24
			1990	152	31	127	17
			1991	151	31	79	14
			1992	137	22	67	5
Total Suspended Particulates	No State Standard	150 $\mu g/m^3$	1988	257	na	248	na
			1989	217	na	370	na
			1990	211	na	186	na
			1991	183	na	153	na
			1992	192	na	113	na
Carbon Monoxide	20 ppm for 1-hour	35 ppm for 1-hour	1988	16	0	23	4
			1989	14	0	23	2
			1990	13	0	19	0
			1991	12	0	18	0
			1992	12	0	18	0
Carbon Monoxide	9.1 ppm for 8-hours	9.5 ppm for 8-hours	1988	11.4	5	15.9	31
			1989	9.8	2	16.4	28
			1990	9.9	1	12.7	11
			1991	9.0	0	11.3	10
			1992	9.5	2	12.3	11
Nitrogen Oxides	0.25 ppm for 1-hour	0.0534 ppm annual average	1988	0.54	6	0.27	1
			1989	0.28	1	0.24	0
			1990	0.28	3	0.23	0
			1991	0.38	5	0.21	0
			1992	0.30	1	0.19	0
Sulfur Dioxide	0.05 ppm for 1-hour	0.14 ppm for 24 hours	1988	0.04	0	0.15	0
			1989	0.03	0	0.09	0
			1990	0.02	0	0.31	0
			1991	0.02	0	0.12	0
			1992	0.05	0	0.15	0
Sulfates	25 $\mu g/m^3$ for 24-hours	No Federal Standard	1988	26.6	1	19.0	0
			1989	23.0	0	22.6	0
			1990	25.3	1	24.8	0
			1991	23.1	0	24.7	0
			1992	19.4	0	17.6	0
Lead	1.5 $\mu g/m^3$ for 24 hours. 1 month average	1.5 $\mu g/m^3$ for 24 hours quarterly average	1988	0.44	0	0.27	0
			1989	0.17	0	0.13	0
			1990	0.09	0	0.08	0
			1991	0.21	0	0.08	0
			1992	0.16	0	0.05	0

Note: nm = no measurement. na=not applicable. Days= number of days State standard exceeded.
Source: South Coast Air Quality Management District, Air Quality Data Summaries, 1988-1992.

1990 CARBON MONOXIDE LEVELS



1990 OZONE LEVELS



LEGEND:

# of Days State Standard was Exceeded — A

- <10
- 10 TO 20
- 20 TO 40
- >40

# of Days State Standard was Exceeded — B

- <30
- 30 TO 50
- 50 TO 70
- 70 TO 100
- >100

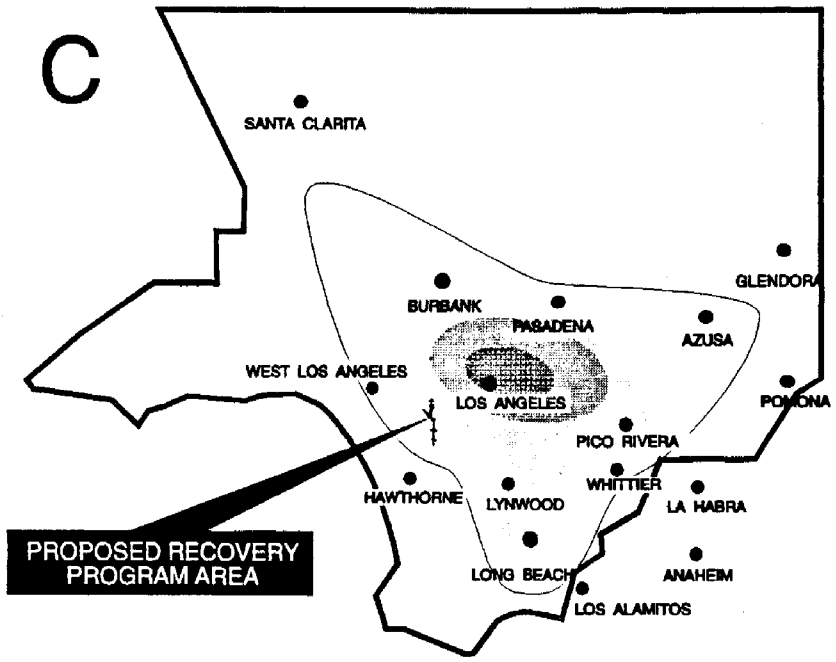
APPROX. SCALE:

N

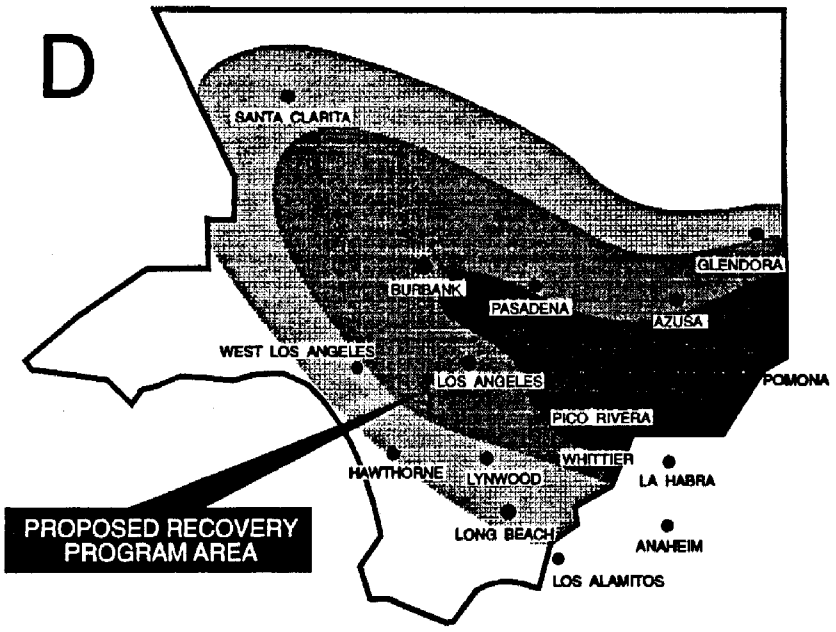
0 4 8 12 16 20 Miles

SOURCE: South Coast Air Quality Management District, "Summary of 1990 Air Quality Management Plan" (1991)

1990 NITROGEN DIOXIDE LEVELS



1990 PARTICULATE MATTER LEVELS



LEGEND:

# of Days State Standard was Exceeded **A**

- <10
- 10 TO 20
- 20 TO 40
- >40

# of Days State Standard was Exceeded **B**

- <30
- 30 TO 50
- 50 TO 70
- 70 TO 100
- >100

APPROX. SCALE:

N

0 4 8 12 16 20 Miles

SOURCE: South Coast Air Quality Management District, "Summary of 1990 Air Quality Management Plan" (1991)

FIGURE 5.5-4
NITROGEN DIOXIDE AND PARTICULATE MATTER IN PROPOSED RECOVERY PROGRAM AREA VICINITY

Existing and Baseline Carbon Monoxide Concentrations. Existing local carbon monoxide air quality conditions can be assessed using a carbon monoxide dispersion computer model. The model utilizes existing traffic volumes, worst-case meteorological conditions and roadway geometry as data inputs. The results of the model are added to the ambient background conditions to provide an estimate of existing local conditions. Based on recorded monitoring data at the Los Angeles North Main Street and Hawthorne Stations, the ambient background concentration is assumed to be 13.4 and 9.1 for one-hour and eight-hour concentrations, respectively[2]. These levels represent the average of the second highest recorded concentrations at the Los Angeles North Main Street and Hawthorne Monitoring Stations for each time period.

Sensitive Land Uses. Certain land uses are considered to be more sensitive to air pollution as a result of the population groups or activities associated with that use. Sensitive population groups include the elderly, the acutely ill, and the chronically ill, particularly those with cardiorespiratory illnesses, and children. Five representative locations have been identified as sensitive receptors in the proposed Recovery Program Area vicinity. These representative locations, shown in **Figure 5.5-5**, include:

1. West Angeles Christian Academy.

2. Coliseum Street School.

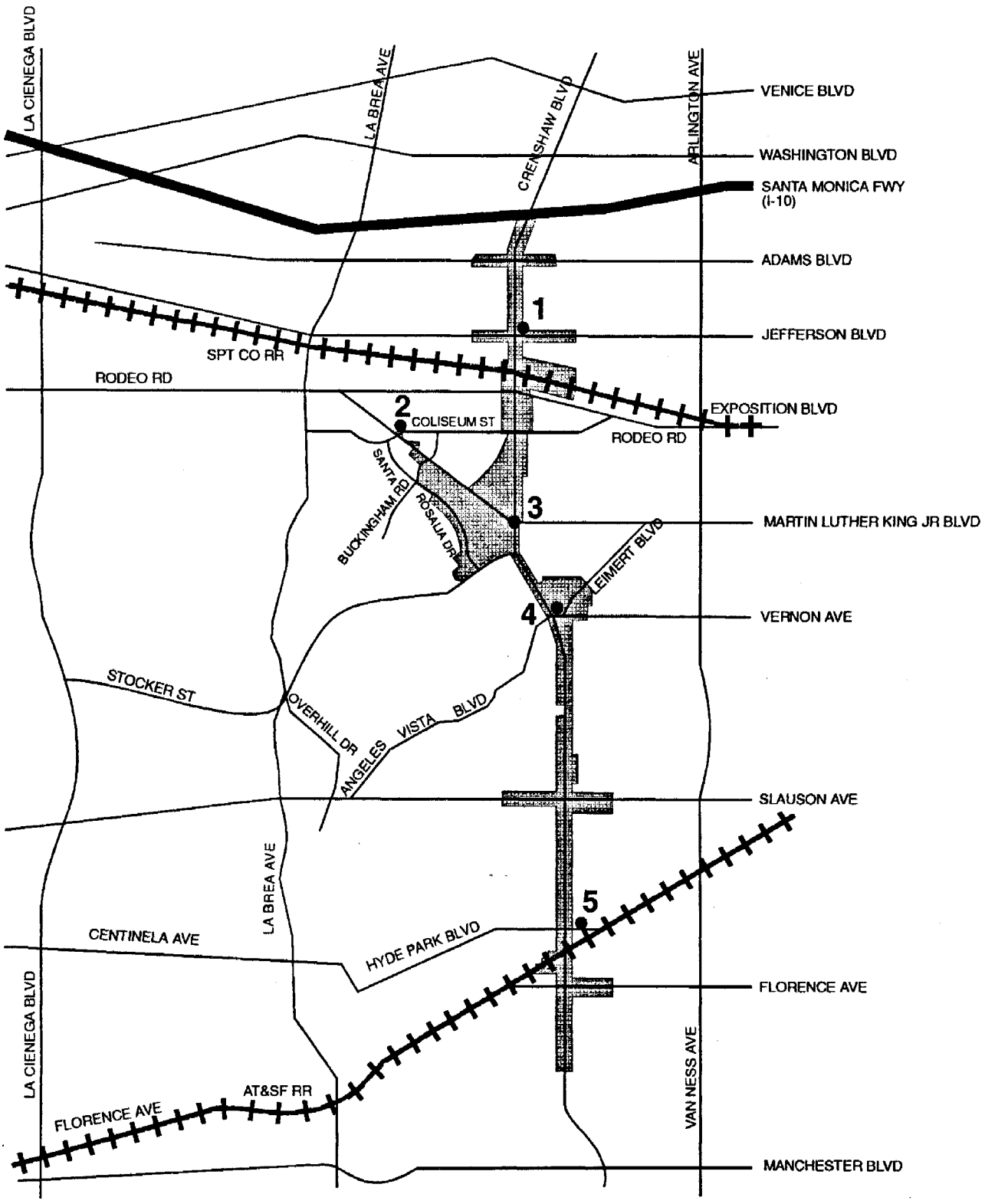
3. Bus Stops at Martin Luther King Jr. Boulevard and Crenshaw Boulevard.

4. Leimert Park.

5. Hyde Park School.

The data indicates that the California Ambient Air Quality Standard (CAAS) for the one-hour standard is currently exceeded at two of the five locations studied (**Table 5.5-2**). The exceedance of the one-hour standard is approximately 193 percent of the standard. In contrast, all five receptor locations exceed the nine ppm eight-hour standard. The exceedance of the eight-hour standard would range from 112 to 213 percent of the standard. According to the indices established by the South Coast Air Quality Management District and published daily in the Los Angeles Times, levels that are 101 to 200 percent of the eight-hour standard represent unhealthful conditions. From 201 to 275 percent is characterized as very unhealthful.

[2]Ambient conditions reflect the fact that about two-thirds of the proposed Recovery Program Area is located in the Los Angeles North Main Street Station source receptor area and one-third in the Hawthorne Station area. Weighting was used to estimate ambient conditions.



LEGEND:

1 Church School
2 Elementary School
3 Bus Stop
4 Park
5 Elementary School

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

SOURCE: Terry A. Hayes Associates.

IMPACTS

The purpose of this air quality assessment is to determine whether significant adverse effects would result from either the construction or operation of the proposed Recovery Program. To make this determination the following types of analyses are conducted:

- Daily Emissions from construction and operations are compared against SCAQMD Daily Emissions Threshold Criteria.
- Carbon Monoxide Concentrations are compared against California Ambient Air Quality Standards (CAAS) for the one-hour and eight-hour periods.
- Characteristics of the proposed Recovery Program are compared with provisions of the Air Quality Management Plan to determine conformity and consistency with the *AQMP*.

TABLE 5.5-2: EXISTING CARBON MONOXIDE CONCENTRATIONS AT REPRESENTATIVE LOCATIONS (Parts Per Million, ppm)

Key to Figure 5.5-5	Location/Description	One-Hour Concentration Standard=20 ppm	Eight-Hour Concentration Standard=9 ppm
1	West Angeles Christian Academy Crenshaw Boulevard north of Jefferson Boulevard	16.0	10.9*
2	Coliseum Street School Martin Luther King Jr. Boulevard near Coliseum Street	14.9	10.1*
3	Bus Stops Martin Luther King Jr. and Crenshaw Boulevards	38.6*	26.2*
4	Leimert Park Crenshaw Boulevard and Vernon Avenue	38.9*	26.4*
5	Hyde Park School Hyde Park Boulevard east of Crenshaw Boulevard	15.3	10.4*

Note
* Exceeds California Ambient Air Quality Standards.
Existing conditions computed by adding traffic-related CO concentrations from dispersion model to ambient background conditions. Based on monitoring data from the Hawthorne Station, the ambient background is estimated to be 13.4 ppm for the one-hour period and 9.1 ppm for the eight-hour period.
Source: Terry A. Hayes Associates.

Daily Emissions Analysis

Significance Criteria. The South Coast Air Quality Management District has established the following daily emissions threshold criteria for assisting in the evaluation of the

significance of air quality impacts. The threshold levels listed in **Table 5.5-3** were developed by SCAQMD in support of the District's New Source Review Rule (Regulation XIII).

TABLE 5.5-3: SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT DAILY EMISSIONS THRESHOLD CRITERIA

Pollutant	Construction		Operations
	Pounds/Day	Tons/Quarter	
Carbon Monoxide	550	24.75	550
Sulfur Dioxide	N/A	6.75	150
Nitrogen Oxides	100	2.5	55
Particulates 10 Microns (PM_{10})	150	6.75	150
Reactive Organic Gas	75	2.5	55

Source: South Coast Air Quality Management District, CEQA Air Quality Handbook, 1993.

Assessment

As shown in **Table 5.5-4**, the construction emissions comparison of the alternatives indicates that for a typical project within the proposed Recovery Program Area construction emissions would likely exceed the SCAQMD threshold criteria for PM_{10}. The exceedance would range from 153 percent of the threshold for the Infill/Rebuild Alternative to 159 percent of the threshold for the Maximum Probable Development Alternative. When all projects that may be constructed in a given year are taken together, SCAQMD quarterly emissions thresholds would be exceeded for Nitrogen Oxides and PM_{10} for each of the alternatives. In addition, the Maximum Probable Development Alternative may also cumulatively exceed the Reactive Organic Gas threshold of 2.5 tons per quarter (see **Table 5.5-5**).

TABLE 5.5-4: WORST CASE PHASE DAILY CONSTRUCTION EMISSION FOR A TYPICAL PROJECT (pounds/day)

		Alternative		
	Threshold	Infill/Rebuild (pounds/day)	Moderate Development ((pounds/day)	Maximum Probable Development (pounds/day)
Carbon Monoxide	550	51.5	51.9	52.3
Reactive Organic Gas	75	12.9	21.3	41.5
Nitrogen Oxides	100	61.8	62.1	62.3
Sulfur Oxides	150	5.2	5.2	5.2
Particulates 10 Microns	150	228.8*	229.1*	238.3*

Notes:
Infill/Rebuild Alternative: Assumes a 6,500-square foot project built in 76 working days.
Moderate Development Alternative: Assumes a 16,000-square foot project built in 90 working days.
Maximum Probable Development Alternative: Assumes a 30,500-square foot project built in 115 working days.
For detailed assumptions, see Appendix C.
* Exceeds threshold.
Source: Terry A. Hayes Associates.

TABLE 5.5-5: ESTIMATED QUARTERLY EMISSIONS FOR PROJECTS CONSTRUCTED DURING AN AVERAGE YEAR (tons/day)

		Alternative		
	Threshold	Infill/Rebuild (tons/day)	Moderate Development (tons/day)	Maximum Probable Development (tons/day)
Carbon Monoxide	24.75	6.3	5.5	10.3
Reactive Organic Gas	2.5	1.3	1.6	3.0*
Nitrogen Oxides	2.5	7.6*	6.5*	12.3*
Sulfur Oxides	6.75	0.6	0.5	1.0
Particulates 10 Microns	6.75	8.7*	7.5*	13.2*

Notes:
Infill/Rebuild Alternative: Assumes 17 6,500-square foot projects built in an average year.
Moderate Development Alternative: Assumes 14 16,000-square foot projects built in an average year.
Maximum Probable Development Alternative: Assumes 14 30,500-square foot projects built in an average year.
* Exceeds threshold.
For detailed assumptions, see Appendix C.
Source: Terry A. Hayes Associates.

The operations emissions shown in **Table 5.5-6** indicate the following:

- Each alternative --if completely built out-- would exceed the carbon monoxide, nitrogen dioxide, and reactive organic gas thresholds of 550 pounds, 55 pounds and 55 pounds per day, respectively.
- None of the alternatives would exceed the threshold for sulfur dioxide.
- Only the Maximum Probable Development Alternative would exceed the PM_{10} threshold of 150 pounds per day.

TABLE 5.5-6: OPERATIONS EMISSIONS (Pounds/day)

		Carbon Monoxide	Nitrogen Oxides	Reactive Organic Gas	Particulate 10 Microns	Sulfur Oxides
	SCAQMD Threshold	550	55	55	150	150
Alternative						
Infill/Rebuild						
Mobile/a/		2,040	540	280	80	40
Stationary/b/		------	60	1	2	5
Total		**2,040**	**600**	**281**	**82**	**5**
Moderate Development						
Mobile		2,520	660	340	100	40
Stationary		15	84	2	2	7
Total		**2,535**	**744**	**342**	**102**	**47**
Maximum Probable Development						
Mobile		3860	1000	540	160	80
Stationary		28	160	3	4	12
Total		**3888**	**1160**	**543**	**164**	**92**

/a/ Based on 221,575 VMT for Infill Alternative, 275,075 VMT for Moderate Alternative, and 420,325 VMT for Maximum Probable Development Alternative. Emissions based on tons per vehicle derived from Burden 7F run for the year 2005.
/b/ Based on electrical energy and natural gas consumption.
Source: Terry A. Hayes Associates.

Carbon Monoxide Analysis

Significance Criteria. Carbon monoxide is the primary pollutant associated with vehicular trip generation. The California Ambient Air Quality Standards (CAAS) establish an allowable concentration of 20 ppm for the one-hour period and nine ppm for the eight-hour

period. The SCAQMD has further established in Rule 1403 that under those circumstances when CAAS are exceeded under existing conditions that a one ppm change is allowed in the one-hour period and a 0.45 ppm change is allowed for the eight-hour period.

Assessment

To provide a direct comparison of proposed Recovery Program-related air quality impacts with state air quality standards, a roadside carbon monoxide (CO) dispersion microcomputer model was run for existing conditions, future conditions without the proposed Recovery Program and future conditions with the proposed Recovery Program. To assess potential carbon monoxide concentration impacts, **Tables 5.5-7** and **5.5-8** compare three conditions at five representative locations (see **Figure 5.5-5**) for Existing Conditions, Future Conditions without the Proposed Recovery Program and Future Conditions with the Proposed Recovery Program.

One-Hour Period Findings:

- The one-hour standard is 20 parts per million (ppm)

- The existing ambient background one-hour concentration is estimated to be 5.4 ppm. The ambient is based on EPA "rollback" Guidelines, November 1993.

- Existing Conditions - the CO concentration exceeds the state standard at two of the five representative locations.

- Future Conditions without proposed Recovery Program - CO concentrations range from 6.0 to 16.1 ppm. There would be no exceedance of the one-hour standard in the year 2010. The overall improvement in air quality presumes the successful implementation of *AQMP* control measures that would roll back ambient background CO concentrations.

- Future Conditions with proposed Recovery Program:

  - Infill/Rebuild Alternative would have one-hour concentrations ranging from 6.0 to 16.0 ppm. The one-hour standard would not be exceeded at the representative receptor locations.

  - Moderate Development Alternative would have one-hour concentrations ranging from 6.0 to 16.8 ppm. The one-hour standard would not be exceeded at the representative receptor locations.

  - Maximum Probable Development Alternative would have one-hour concentrations ranging from 6.0 to 16.8 ppm. The one-hour standard would not be exceeded at the representative receptor locations.

TABLE 5.5-7: ONE-HOUR CARBON MONOXIDE (parts per million)

			Alternative		
Receptor Type	**Existing**	**Cumulative Base**	**Infill/ Rebuild**	**Moderate Development**	**Maximum Probable Development**
1. School	18.4	6.4	6.5	6.7	6.8
2. School	17.9	6.0	6.3	6.3	6.3
3. Bus Stop	41.4*	16.1	16.0	16.8	16.8
4. Park	35.6*	17.7	12.3	12.4	13.2
5. School	17.4	6.0	6.0	6.0	6.0

* Exceeds State standard of 20 ppm. Assumes one-hour ambient of 13.4 ppm in 1990, and 5.4 ppm in 2005
Source: Terry A. Hayes Associates.

TABLE 5.5-8: EIGHT-HOUR CARBON MONOXIDE (parts per million)

			Alternative		
Receptor Type	**Existing**	**Cumulative Base**	**Infill/ Rebuild**	**Moderate Development**	**Maximum Probable Development**
1. School	12.5*	4.4	4.4	4.6	4.7
2. School	12.2*	4.1	4.3	4.3	4.3
3. Bus Stop	28.1*	11.0*	10.9*	11.5*	11.5*
4. Park	24.2*	8.0	8.4	8..5	9.0
5. School	11.8*	4.1	4.1	4.1	4.3

* Exceeds State standard of 9 ppm. Assumes eight-hour ambient of 9.1 ppm in 1990, and 3.7 ppm in 2005
Source: Terry A. Hayes Associates.

Eight-Hour Period Findings:

- The one-hour standard is nine parts per million (ppm)
- The existing ambient background eight-hour concentration is estimated to be 3.7 ppm. The estimates are based on EPA rollback calculation procedures (November 1993).
- Existing Conditions - the CO concentration exceeds the state standard at all of the five representative locations. The concentration ranges from 11.8 to 28.1 ppm.

- Future Conditions with proposed Recovery Program:

  - Infill/Rebuild Alternative would have eight-hour concentrations ranging from 4.1 to 10.9 ppm. The eight-hour standard would be exceeded at one of the five representative receptor locations. This impact would be considered significant.

  - Moderate Development Alternative would have eight-hour concentrations ranging from 4.1 to 11.5 ppm. The eight-hour standard would be exceeded at one of the representative receptor locations. This impact would be considered significant.

  - Maximum Probable Development Alternative would have eight-hour concentrations ranging from 4.1 to 11.5 ppm. The eight-hour standard would be exceeded at one of the five representative receptor locations.

Consistency with the *Air Quality Management Plan (AQMP)*

The *AQMP* has been developed to provide mechanisms necessary to attain the improved air quality conditions as stipulated in the Clean Air Act, as amended. Two public agencies have joint responsibility for ensuring compliance with the *AQMP*, i.e., the South Coast Air Quality Management District (SCAQMD) and the Southern California Association of Governments (SCAG). Both agencies have established evaluation criteria as discussed below:

Significance Criteria. The SCAQMD has found that a project is consistent with the *AQMP* if it is consistent with the local General Plan or Air Quality Elements prepared by the affected local jurisdiction. Land use development levels from local general plans were used in the underlying socioeconomic projections upon which the air quality emissions estimates for the *AQMP*.

Assessment

The proposed Recovery Program alternatives would not increase development densities above that which is already allowed under the existing West Adams-Baldwin Hills-Leimert District Plan. As a result, the proposed Recovery Program is consistent with the *AQMP*.

MITIGATION MEASURES

Construction Phase. Short-term impacts of the construction equipment shall be minimized by the following measures. These measures shall be established as conditions of individual project approvals within the proposed Recovery Program Area and be contained in all applicable contracts between the project sponsors and contractors.

1. **Fugitive Dust Control.** Maintain a fugitive dust control program consistent with the provisions of SCAQMD Rule 403 for any grading or earthwork activity that may be required. Measures to be implemented shall include:

   - **Wetting.** Water all active projects with multiple daily applications to assure proper dust control.

- **Haul Trucks.** Wash down the under carriage of all haul trucks leaving site. Install vehicle wheel-washers before the roadway entrance at construction sites. Require all trucks hauling dirt, sand, soil, or other loose substances and building materials to be covered, or to maintain a minimum freeboard of two feet between the top of the load and the top of the truck bed sides.

- **Unpaved Areas.** Use of soil binders or vegetation on all undeveloped or non-built areas of the site. Chemically treat unattended construction areas (disturbed lands which have been, or are expected to be unused for four or more consecutive days). Require paving, curbing, and vegetative stabilization of the unpaved areas adjacent to roadways on which vehicles could potentially drive (i.e., road shoulders).

- **Driveways and Curbs.** Pave all driveways and internal roadways as early as practicable in the site construction process. Install all curbs at the initial phase of development within the proposed Recovery Program Area.

- **Street Sweeping.** Utilize street sweeping equipment on all adjacent streets used by haul trucks or vehicles that have been on-site.

- **Barriers.** Construct a temporary wall or barriers of sufficient height along the perimeter of the site to restrict windblown dust from affecting adjacent residences.

- **Open Stock Piles.** Contractors will cover, enclose or chemically stabilize any open stockpiles of soil, sand and/or other aggregate materials.

- **Phasing.** Require a phased schedule for construction activities to minimize daily emissions. Suspend grading operations during first and second stage smog alerts, and during high winds, i.e., greater than 25 miles per hour.

- **Vehicles on Unpaved Surfaces.** Prohibit parking on unpaved and untreated parking lots. Enforce low vehicle speeds on unpaved roads or surface areas.

2. **Equipment Emissions.** Construction equipment will be shut off to reduce idling when not in direct use. Diesel engines, motors, or equipment shall be located as far away as possible from existing residential areas. Low sulfur fuel should be used for construction equipment.

3. **Location of Staging Areas.** If required, haul truck staging areas shall be approved by the Department of Building and Safety. Haul trucks shall be staged in non-residential areas.

Operation Phase. Transit use within the Crenshaw Corridor is already high. Long-term emissions from operations of development projects within the proposed Recovery Program Area shall be further reduced through the following transportation systems management measures:

4. **Transportation Management Association.** Creation of a Transportation Management Association (TMA) within the proposed Recovery Program Area. The TMA would be charged with the responsibility of implementing and achieving a Transportation Demand Management Plan (TDM) with specific trip reduction goals for the developments within the proposed Recovery Program Area that would be consistent with *AQMP* trip reduction targets above the requirements of Regulation XV. The TMA shall also provide public education regarding the importance of reducing vehicle miles traveled and the related air quality impacts through the use of brochures, classes, and other informational tools.

5. **Parking Management.** Creation of preferential parking for high occupancy vehicles, as well as other forms of parking management that would encourage higher vehicle occupancies.

6. **Amenities for Non-Vehicular Modes.** Provision of amenities that would encourage transit, pedestrian or bicycle access to the site. Such amenities would include bus shelters, visible signage identifying transit routes and stops, bike racks/shower facilities, bicycle lanes, attractive pedestrian pathways and sidewalks, shuttle service to nearby activity centers or park and ride lots, free information on transit services, free or subsidized transit passes, and guaranteed ride home programs. This measure shall also entail the establishment of additional bus or transit stops and services, where feasible.

7. **Non-Travel Incentives.** Encourage and facilitate the reduction of the number of trips that an individual makes from home or work by introducing compressed work weeks, telecommuting, and the combining of non-work trips.

8. **Peak Hour Travel Restrictions.** Encourage the reduction of trips during the most congested periods and spread them throughout the day by introducing alternative work hours, flexible work hours, staggered work hours, as well as vehicle and truck use restrictions.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Construction phase emissions would exceed SCAQMD daily emissions criteria. Operations emissions would also exceed SCAQMD criteria and the California Ambient Air Quality Standard would be exceeded in the eight-hour period for two of the five representative receptor locations.

5.6 NOISE

EXISTING CONDITIONS

Noise is defined as unwanted or excessive sound. The principal noise source within the proposed Recovery Program Area vicinity is automobile traffic using arterials such as Crenshaw Boulevard, Martin Luther King Jr. Boulevard, and Stocker Street. Traffic on secondary arterials such as Santa Rosalia Drive, Marlton Avenue, Buckingham Road, and Hillcrest Drive also contributes to the community noise environment. Peak hour noise measurements taken as part of this study indicate that existing noise levels range from 70 to 71 decibels along Martin Luther King Jr. Boulevard and from 63 to 68 decibels along Buckingham Road and Santa Rosalia Drive.

IMPACTS

Construction Noise

Significance Criteria. The City of Los Angeles Noise Ordinance generally allows a five decibel increase in the ambient noise levels as the threshold for a significant noise impact from stationary noise sources such as machinery and construction equipment.

Assessment

In general, demolition and construction activities resulting from development within the proposed Recovery Program Area would result in slight increases in ambient noise levels in the vicinity of construction sites on an intermittent basis. These activities may pose a temporary annoyance to some adjacent residences. Noise levels would fluctuate depending on construction phase, equipment type and duration of use, distance between noise source and listener, and presence or absence of barriers between noise source and listener.

It is estimated that typical construction noise levels associated with the type of work to take place would range between 85 and 90 decibels at a reference distance of 50 feet between the noise source and the listener[1]. At greater distances, the noise from construction activity will typically decrease by six decibels for each doubling of the distance between the noise source and the listener. As discussed in the Land Use section of this report, residential land uses are located either within the commercial zone, near residential lots directly adjoining commercial property or residences that are separated from commercial sites by an intervening public alley. **Table 5.6-1** illustrates on a prototypical basis, construction noise levels for various situations:

- Residences located within the commercial frontage along Crenshaw Boulevard. Residences would be located directly adjacent to the construction site.

- Residences or schools located across an alley from a construction site.

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[1]Source: Bolt, Beranek and Newman, December 31, 1971, Noise from Construction Equipment and Home Appliances, U.S. Environmental Protection Agency. Noise from erection and finishing activities was assumed.

- Residences or schools separated from construction site by Crenshaw Boulevard or other major arterial.

- Residences or schools on a local neighborhood street, one block from the Crenshaw Boulevard commercial frontage.

It can be seen that in three out of four cases, there would be a substantial change to the ambient noise environment during the period of construction. The change would exceed the five decibel limit allowed under the City of Los Angeles Noise Ordinance, Section 112.08. Depending on the duration of construction, these noise levels could be considered significant.

TABLE 5.6-1: TYPICAL CONSTRUCTION NOISE CONDITIONS/a/

Location	Distance to Construction Site	Ambient Noise Level (decibels)	Construction Noise Level at Receptor Location/b/ (decibels)	New Ambient Noise Level	Change in Ambient Noise Level (decibels)	Change Greater than 5 Decibels
Residences located within commercial zone	10 feet	70	104	96	+26	Yes
Residences or schools located across public alley from commercial site	20 feet	67	98	90	+23	Yes
Residences or schools separated from construction site by major street	150 feet	70	80	73	+3	No
Residences or schools on adjacent neighborhood street	250 feet	60	76	69	+9	Yes

/a/ Assumes construction equipment is operating 40 percent of the time (3.2 hours per day).
/b/ Reference noise level is 90 decibels at a distance of 50 feet.
Source: Terry A. Hayes Associates.

Another source of construction-related noise would be haul trucks accessing the proposed Recovery Program Area. At a distance of 50 feet many diesel engine trucks with haul trailers generate sound levels between 85 and 95 decibels. Frequent truck activity along such streets as Santa Rosalia Drive and Buckingham Road would significantly raise the ambient noise level during the construction period, particularly due to the fact that construction-related hauling typically occurs in the early parts of the morning. Noise from haul trucks along these routes would be intermittent but noticeable and could be a source of annoyance.

Traffic-Related Noise

Significance Criteria. The City noise ordinance does not specifically address sound from mobile sources such as street traffic. The City of Los Angeles EIR Manual for Private Projects indicates that an acceptable noise level for residences, schools, lodging, parks is a Community Noise Equivalent Level (CNEL) of 65 decibels. The CNEL represents an energy average of the A-weighted noise level over a 24-hour period with 5 decibel and 10 decibel "penalties" added for evening (7:00 p.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise.

Assessment

To address potential noise impacts, traffic volumes for streets in the proposed Recovery Program Area vicinity, prepared by Kaku Associates, were utilized in conjunction with the Federal Highway Administration's Highway Traffic Noise Prediction Model (RD-77-108). A series of representative sensitive locations were evaluated as shown in **Table 5.6-2** (see **Figure 5.6-1**). As can be seen from this Table, noise changes from current conditions to future conditions without the proposed Recovery Program would result in a negligible change. One of the five receptors studied would increase by one decibel. Typically a noise change of three decibels or more is necessary for the average human ear to detect a noise change. When the traffic for the alternatives is considered, noise changes from existing conditions would be as follows:

- Infill/Rebuild Alternative. Sound levels at four of the five receptors would increase by one decibel and noise levels at one receptor would not change. Based on a threshold change of three decibels, none of these changes are considered significant.

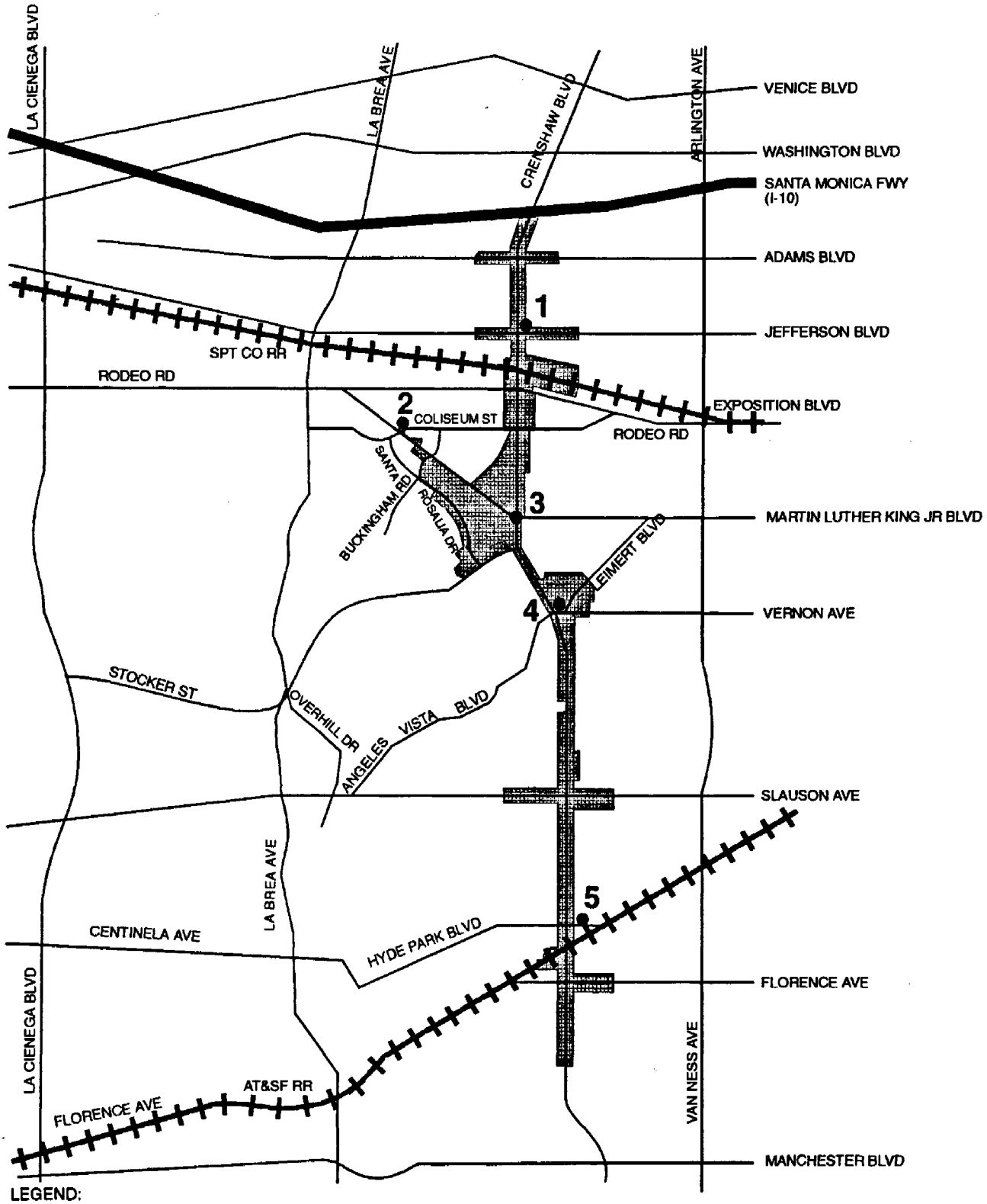
- Moderate Development Alternative. The sound levels at one receptor (Coliseum School) would increase by two decibels, while the remaining four receptors would increase by one decibel. Based on a threshold change of three decibels, none of these changes are considered significant.

- Maximum Probable Development Alternative. The sound level at one receptor (Coliseum School) would increase by two decibels while the remaining four receptors would increase by one decibel. Based on a threshold change of three decibels, none of these changes are considered significant.

Based on the above, mobile noise resulting from the three alternatives is not anticipated to have a significant adverse effect on community noise levels.

Delivery Trucks and Trash Pickup Noise

At this stage in the planning process for the proposed Recovery Program Area there are no precise site plans showing the location of loading docks and trash pickup areas. However, trucks using these facilities, particularly during early morning or late night hours, could create a nuisance for adjacent residents if these facilities were located at the perimeter of newly rebuilt or developed properties.



LEGEND:

1 Church School
2 Elementary School
3 Bus Stop
4 Park
5 Elementary School

Proposed Recovery Program Area

SOURCE: Terry A. Hayes Associates.

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.6-1

NOISE SENSITIVE RECEPTOR LOCATIONS

TABLE 5.6-2: COMPARISON OF EXISTING AND FUTURE TRAFFIC NOISE LEVELS (CNEL, Decibels)

			Alternative		
Location	Existing/a/	Future Without proposed Recovery Program/b/	Infill/Rebuild Alternative	Moderate Development Alternative	Maximum Probable Development Alternative
West Angeles. Christian Academy Crenshaw near Jefferson	69	69	70	70	70
Coliseum School Martin Luther King near Coliseum	63	64	64	65	65
Apartments near Martin Luther King and Crenshaw	65	66	66	66	66
Leimert Park Crenshaw at Vernon	72	72	72	73	73
Hyde Park School Crenshaw near Hyde Park	61	61	62	62	62

Note: Traffic Estimate based on results of FHWA Highway Traffic Noise Prediction Model (RD77108) assuming 35 mph average daily speed.
Source: Terry A. Hayes Associates.

MITIGATION MEASURES

The following measures would reduce construction impacts to a level of "not significant":

1. The projects constructed within the proposed Recovery Program Area shall comply with applicable City noise regulations.

2. For individual projects within the proposed Recovery Program Area, a procedure shall be established to notify adjacent property owners and tenants, particularly residences, of time periods when there would be noisy construction activities.

3. During construction, the contractors for projects within the proposed Recovery Program Area shall muffle and shield intakes and exhaust, shroud and shield impact tools, and use electric-powered rather than diesel-powered construction equipment, as feasible.

4. During construction of projects within the proposed Recovery Program Area truck haul routes (demolition waste, dirt excavation, cement, materials delivery) shall be designated and approved. These routes shall avoid residential streets and local streets adjacent to public and private schools where possible.

OTHER RECOMMENDED MEASURES

- During the operation of projects within the proposed Recovery Program Area truck delivery routes shall be designated and approved. These routes shall avoid residential streets or local streets adjacent to schools.

- As projects are designed and developed within the proposed Recovery Program Area, truck loading and trash pickup areas shall be located as far away as possible from adjacent residences. These facilities shall utilize screening walls or be enclosed.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

5.7 PUBLIC SERVICES

FIRE

EXISTING CONDITIONS

Fire protection services for the proposed Recovery Program Area are provided by the City of Los Angeles Fire Department. These services are pursuant to the Los Angeles Fire Code, other applicable sections of the Los Angeles Municipal Code, and the Fire Protection and Prevention Plan as well as the Safety Plan, both elements of the General Plan of Los Angeles. These plans are intended to guide City departments, other government agencies, developers and the public at large for the construction, maintenance and operation of fire protection facilities in the City and establish standards for the distribution, design, construction and location of fire protection facilities including systems incorporated into private developments. These standards specify fire flow criteria, minimum distances to fire stations, public and private hydrant specifications and location criteria, and access provisions for fire fighting vehicles and personnel.

The City of Los Angeles Fire Department has five existing fire stations at the following locations for initial response into the proposed Recovery Program Area:

Fire Station No. 94
Task Force Station, Engine and Truck Companies
4470 Coliseum Street
Staffing - 10
Located within proposed Recovery Program Area

Fire Station No. 34
Single Engine Company, Paramedic Ambulance, EMT Ambulance
3661 Seventh Avenue
Staffing - 8
Miles - 0.5 (to Crenshaw and Rodeo)

Fire Station No. 68
Single Engine Company, Paramedic Ambulance
5023 Washington Boulevard
Staffing - 6
Miles - 1 (to Crenshaw and Adams)

Fire Station No. 66
Task Force Station, Engine and Truck Companies,
Paramedic Ambulance, EMT Ambulance
1909 West Slauson Avenue
Staffing - 14
Miles - 1 (to Crenshaw and Slauson)

Fire Station No.26
Task Force Station, Engine and Truck Companies
2009 South Western Avenue
Staffing - 12
Miles - 1.5 (to Crenshaw and Adams)

In addition to the above, there is a fire station maintained by Los Angeles County located at Keniston Avenue and 54th Street approximately 0.5 miles from the western extension of Slauson Avenue in the proposed Recovery Program Area.

Although the Los Angeles County Fire Department provides assistance to some areas of the City of Los Angeles, the proposed Recovery Program Area is not within one of these areas. However, due to the proximity of the Los Angeles County station, it is likely in the event of a major fire in the proposed Recovery Program Area that assistance would be provided.

IMPACTS

Significance Criteria. The adequacy of fire protection for a given area is based on required fire-flow, response distance from existing fire stations, and the Fire Department's judgement for needs in the area. In general, the required fire-flow is closely related to land use. The quantity of water necessary for fire protection varies with the type of development, life hazard, occupancy and degree of fire hazard.

Fire-flow requirements vary from 2,000 gallons per minute (gpm) in low density residential areas to 12,000 gpm in high density commercial or industrial areas (Section 57.09.06, Subsection A). According to the Los Angeles Fire Department, the proposed Recovery Program Area would require a fire-flow of 9,000 gpm from six fire hydrants flowing simultaneously. Based on the required fire-flow, the first-due Engine Company should be located within 0.75 miles, and the first-due Truck Company should be located within 1.0 miles. If this distance is greater, then the proposed Recovery Program Area would be considered to result in a significant impact in relation to fire protection services.

Assessment

Based on response distance from existing fire stations, the City of Los Angeles Fire Department considers fire protection services for the proposed Recovery Program Area to be adequate. Project implementation would marginally increase the need for fire protection and emergency medical services in this area. At the present time, there are no immediate plans to increase Fire Department staffing or resources in those stations which would serve the proposed Recovery Program Area. As a result, the proposed Recovery Program would increase the need for fire protection and emergency medical services in the proposed Recovery Program Area.

The City of Los Angeles Fire Department considers intersections that operate at LOS E or F as decreasing the level of fire protection and emergency services that can be provided by the Department.

With respect to the effects on emergency response, the traffic impact analysis indicates that each of the alternatives under consideration will increase the number of intersections in the area that would operate at Level of Service E or worse. These intersections would have an adverse effect on emergency response. Currently, 14 of the 41 (34 percent) proposed Recovery Program Area intersections operate at level of service E or worse during either morning or evening peak travel hour. With the addition of development from the alternatives, the percentage of intersections with unacceptable operations (without traffic mitigation measures) would increase to 54 percent for the Infill/Rebuild Alternative; 61 percent for the Moderate Development Alternative; and 73 percent for the Maximum Probable Development Alternative. These traffic operation changes suggest that there would be a significant adverse effect on emergency response regardless of which alternative was chosen for implementation.

It is likely that implementation of alternatives with higher levels of development would require additional water main facilities. Improvements to the water system in this area may be required to provide 9,000 gpm fire-flow. If water service and/or fire hydrants are required to be installed, then future developments within the proposed Recovery Program Area would be required to pay the full cost of the required mains.

Based on the significance criteria, the proposed Recovery Program is anticipated to result in significant impacts in relation to fire protection services.

MITIGATION MEASURES

1. Intersection improvement measures shall be implemented as discussed Section 5.4 to improve intersection traffic operations and thereby improve emergency response capabilities.

OTHER RECOMMENDED MEASURES

The Fire Department requires that several measures concerning emergency access be incorporated into new developments that may be approved within the proposed Recovery Program. For the following measures, access requirements for above-ground floors shall be interpreted as being the horizontal travel distance from the street, driveway, alley or designated fire lane to the main entrance or exit of individual units.

- Any person owning or having control of any facility, structure, group of structures or premises shall provide and maintain Fire Department access (Section 57.09.03, Subsection B).

- No building or portion of a building shall be constructed more than 150 feet from the edge of the roadway of any improved street, access road or designated fire lane. (Section 57.09.03, Subsection B).

- Every first-story dwelling unit, first-story guest room, and all first-story portions of any commercial or industrial building must be within 300 feet of an approved fire hydrant (Section 57.09.06, Subsection B-1).

- The maximum distance between fire hydrants on roads and fire lanes in a regional commercial area is 300 feet.

- Fire lane width shall not be less than 20 feet clear to sky. When a fire lane must accommodate the operation of Fire Department aerial ladder apparatus or where fire hydrants are installed, those portions shall not be less than 28 feet in width.

- Access for Fire Department apparatus and personnel to enter into all structures shall be required.

- Fire lanes, where required, and dead-ending streets shall terminate in a cul-de-sac, or other approved turning area. No dead-ending street or fire lane shall be greater than 700 feet in length or secondary access shall be required.

In addition to measures concerning access, the Fire Department also states that the following measures be incorporated into the proposed Recovery Program to reduce the impact on fire protection services:

- The proposed Recovery Program shall comply with all applicable State and local codes and ordinances and the guidelines found in the Fire Protection and Fire Prevention Plan, as well as the Safety Plan, bother of which are elements of the General Plan of the City of Los Angeles (C.P.C 19708).

- Definitive plans and specifications shall be submitted to the Fire Department and requirements for necessary permits satisfied prior to commencement of future site development.

- Installation of a sprinkler system, in any newly constructed structures, as required by the Los Angeles City Fire Code, Section 57.118.11.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

In view of the fact that from 27 to 29 intersections within the study area would remain operating a levels of service E or worst even with the imposition of mitigation measures, then according to Fire Department Criteria, there would be a unavoidable significant adverse effect of emergency response times.

POLICE

EXISTING CONDITIONS

The proposed Recovery Program Area is located in the Police Department's Southwest Area, and 77th Street Area. The address of the Southwest Area station is 1546 Martin Luther King Jr. Boulevard. Southwest area currently has 281 sworn officers assigned over three watches. The address of the 77th Street Area station is 236 W. 77th Street. 77th Street Area currently has 339 sworn officers assigned over three watches. In addition, a

small police substation, part of the Police Department's Southwest Area, is located in Baldwin Hills Crenshaw Mall.

For purposes of this discussion, the Police Reporting Districts in the proposed Recovery Program Area are compared to the crime rate for the City of Los Angeles as a whole. In 1992, the crime reported most frequently in the area was automobile theft, followed by aggravated assault, store robbery, automobile burglary, and "other theft". For the City of Los Angeles as a whole, the crime reported most often was automobile theft, followed by automobile burglary, aggravated assault, "other theft", and residential burglary.

From 1991 to 1992, Police Reporting Districts in the proposed Recovery Program Area experienced an average annual increase in crime of 2.3 percent as compared to an increase of 6.6 percent for the City of Los Angeles as a whole. The growth rate in crime for the proposed Recovery Program Area is 4.3 percentage points less than for the City as a whole. The highest incidence of growth is in the incidence of store robbery, and "other theft" which increased 33 and 22 percent respectively, between 1991 and 1992. (Residential burglary increased four percent, and automobile burglary, assault, and automobile theft decreased by one, six, and 22 percent respectively).

IMPACTS

Significance Criteria. An impact would be determined significant if it would result in or contribute to a substantial change in the availability of police protection services such as a reduction in the acceptable response times of police service (acceptability as determined by the City of Los Angeles Police Department).

Assessment

The Los Angeles Police Department (LAPD) considers police protection services for the proposed Recovery Program Area to be adequate. Project implementation would incrementally increase the need for police personnel in this area. Using the existing citywide ratio of three sworn officers to 1,000 persons as an approximate indicator of police personnel needed, the incremental increase associated with each alternative is shown in **Table 5.7-1**.

TABLE 5.7-1: ADDITIONAL POLICE OFFICERS REQUIRED/a/

Alternative	Added Population	Added Employment	Total Persons Added	Theoretical number of officers required
Infill/Rebuild	622	2,300	2,922	9
Moderate Redevelopment	1,086	3,200	4,286	13
Maximum Probable Redevelopment	4,322	4,900	9,222	28

/a/ For planning assessment purposes, the estimate of police personnel requirements is based on the current ratio of police officers to 1,000 persons in the City of Los Angeles. This ratio is approximately 3 officers per 1,000 persons. The actual allocation of personnel used by the LAPD depends on a variety of factors and judgements by LAPD management.
Source: Terry A. Hayes Associates.

MITIGATION MEASURES

2. Prepare security plans in consultation with the LAPD crime prevention unit prior to approval for site specific developments within the corridor area. The security plans should include consideration of such issues as on-site security officers for new developments, security lighting and surveillance equipment for interior and exterior building areas.

OTHER RECOMMENDED MEASURES

None.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

SCHOOLS

EXISTING CONDITIONS

Table 5.7-2 shows the public schools located in the vicinity of the proposed Recovery Program Area together with the student capacity and enrollment. These figures indicate that many schools are operating at or near, and in some cases over the maximum levels of capacity. Of all the public schools in the vicinity of the proposed Recovery Program Area, 13 (65 percent) are on a traditional calendar track which means the students attend school approximately nine months out of the year, and spend the remainder on vacation, six (30 percent) are on a "90/30" program which equates to a four-track system. This means that there are four groups of students in rotation, with 75 percent of the students in school and 25 percent on vacation. One school is on a "Concept 6" program which equates to a three-track system, and divides the students into six groups where approximately 66 percent are in school and 33 percent are on vacation at any given time. Increases in capacity that have resulted from the adoption of a year-round calendar have partially relieved overcrowding problems in the schools in the area.

IMPACTS

Significance Criteria. An impact would be considered significant if it resulted in the generation of additional students to a school district where all or most schools adjacent to the proposed Recovery Program Area are operating over capacity.

Assessment

A substantial number of residential dwelling units is being proposed as part of the proposed Recovery Program. These residential dwelling units would increase the enrollment levels of local schools through the addition of school-age children into the area. According to the Los Angeles School Districts "Student Generation Factors", the proposed Recovery Program is estimated to generate the following number of students; Infill/Rebuild Alternative: 101

school-age children (52 elementary, 22 junior high, and 27 senior high-school students); Moderate Development Alternative: 175 school-age children (90 elementary, 39 junior high, and 46 senior high school students); Maximum Probable Development Alternative: 698 school-age children (359 elementary, 154 junior-high, and 185 senior high school students).

Indirect Student Generation from Commercial Use. In addition to residential dwelling units included in the assumed level of development within the proposed Recovery Program Area, there is a limited potential for new jobs created to also indirectly generate a demand for new housing and higher student generation rates. The potential for induced housing demand is considered limited because of the relatively high existing unemployment in the area (four to 14 percent) and because the objectives of the proposed Recovery Program and other environmental mitigation measures are focused on giving local residents preference for jobs created in the proposed Recovery Program Area. These factors would mean that existing area residents that already live in the area would likely occupy the new jobs created and there would be no new indirect demand for housing with no subsequent increase in student generation rates.

Using information provided by the Los Angeles Unified School District in their response to the Notice of Preparation for the proposed Recovery Program EIR, a worst case estimate of indirect housing demand was calculated, where 100 percent of the new jobs would theoretically induce new housing. The Los Angeles Unified School District has estimated that each new job would generate a demand for 0.34 residential dwelling units[1].

Applying this generation rate to the net new jobs created by the three alternatives in the proposed Recovery Program, the following demands for housing and resulting student generation are illustrated in **Table 5.7-3** below.

[1]Recht Hausrath & Associates, Los Angeles Unified School District, School Facilities Fee Plan, Documentation for Imposition of School Impact Fees, Final Report, 1990.

TABLE 5.7-2: AREA PUBLIC SCHOOLS

School	Calendar Track	Capacity	Fall 1992 Enrollment	Percent Capacity
42nd Street Elementary School	Traditional	833	806	97%
6th Avenue Elementary School	90/30	1334	1168	88%
Alta Loma Elementary School	90/30	1206	1042	86%
Angeles Mesa Elementary School	Traditional	766	722	94%
Arlington Heights Elementary School	90/30	1220	1102	90%
Baldwin Hills Elementary School	Traditional	639	461	72%
Cienega Elementary School	90/30	1270	1077	85%
Coliseum Street Elementary School	Traditional	384	336	88%
Dublin Avenue Magnet Elementary School	Traditional	707	707	100%
Hillcrest Drive Elementary School	Concept 6	945	800	85%
Hyde Park Boulevard Elementary School	90/30	1369	1269	93%
Marvin Avenue Elementary School	Traditional	1094	1115	102%
Shenandoah Elementary School	Traditional	1077	883	82%
Virginia Road Elementary School	Traditional	771	627	81%
Audubon Middle School	Traditional	2033	2163	106%
Mount Vernon Middle School	90/30	1983	2411	122%
Crenshaw High School	Traditional	2095	2316	110%
Dorsey High School	Traditional	2760	2051	74%
Hamilton High School	Traditional	2706	2489	92%
Marlton Special Education Center	Traditional	237	237	100%

Source: Los Angeles Unified School District.

TABLE 5.7-3: STUDENTS GENERATED BY NEW EMPLOYMENT/a/

Alternative	Added Employment/b/	Residential Dwelling Units	Students Generated		
			Elem.	Jr. High	Sr.High
Infill/Rebuild	622	211	45	19	23
Moderate Development	1,086	369	78	34	40
Maximum Probable Development	4,322	1,469	311	134	160

/a/ Source: Recht Hausrath & Associates, Los Angeles Unified School District, School Facilities Fee Plan, Los Angeles Unified School District, School Facilities Fee Plan, Documentation for Imposition of School Impact Fees, Final Report, 1992
/b/ Source: Terry A. Hayes Associates.

MITIGATION MEASURES

3. According to the Los Angeles Unified School District, net student generation in the area of schools can be mitigated by paying a temporary transport fee (to bus the new students) until such time as adequate schools are built in the proposed Recovery Program Area to accommodate students. The amount of this fee shall be negotiated with the Los Angeles Unified School District.

4. Currently each of the three Community Advisory Committees (CACs) within the proposed Recovery Program Area are considering use of revitalization or redevelopment to stimulate reinvestment and growth in their communities. The CAC for the Council District 8 segment of the Crenshaw Corridor (Subarea 8) has already selected redevelopment as the desired approach. The selection of redevelopment as an approach means that the mitigation of impacts on schools would be addressed under provisions of the California Community Redevelopment Law.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

5.8 UTILITIES

WATER SUPPLY

EXISTING CONDITIONS

Water service to the proposed Recovery Program Area is provided by the City of Los Angeles Department of Water and Power (DWP) which distributes water to most of the City of Los Angeles. DWP has the responsibility of supplying, conserving, treating and distributing water for fire fighting, agriculture, domestic and industrial uses. The City obtains its water from local wells in the Los Angeles groundwater basin, the Los Angeles Aqueducts, by purchasing water from the Metropolitan Water District and by reclaiming wastewater for reuse in certain irrigation applications. According to the most current estimate (1990), the available water supply citywide is 678,796 acre-feet per year or about 606 million gallons per day.

With respect to the water distribution system, the proposed Recovery Program Area is served by a 24-inch line located in Crenshaw Boulevard and another 20-inch line extends eastward along Martin Luther King Jr. Boulevard from Crenshaw Boulevard. These mains feed numerous smaller lines throughout the proposed Recovery Program Area. There appear to few if any lines in the West Adams-Baldwin Hills-Leimert area built before 1940 that would suggest that replacement is imperative.

IMPACTS

Significance Criteria. A significant impact would mean; 1) that the anticipated water demand associated with development within the proposed Recovery Program Area would exceed the available water supply; or 2) that the proposed increase in the level of development would require replacement of existing infrastructure.

Assessment

Available Water Supply. The relationship between water demand to water supply is a citywide issue. For assessment purposes, the relationship of water demand from a small geographic area such as the proposed Recovery Program Area (0.53 square miles) to the entire city water delivery system encompassing approximately 303 square miles of developed land can be addressed on a water demand density basis. If the added water demand per square mile is greater for the proposed Recovery Program Area than the added supply of water per square mile citywide, then the proposed Recovery Program would require a disproportionate share of the future water supply, and a significant impact can be assumed.

The City of Los Angeles Urban Water Management Plan indicates that a supply of approximately 756,500 acre-feet of water per year would be available to the City of Los Angeles in the year 2010. This amount of annual acre-feet translates into approximately 675.6 million gallons per day. This would represent a 69.4 million gallons per day increase in available water supply from 1990. The implied rate of increase between 1990 and 2010 is 3.5 million gallons per day. Thus, by the year 2005, 41.6 million gallons per day of

available water supply would be added. Based on land use parcel data contained in the Sewer Permit Allocation Ordinance EIR it is estimated that there are approximately 303 square miles of developed land within the City of Los Angeles. The year 2005 water availability on a per square mile basis would be 137,300 gallons per day. Each of the alternatives under consideration would exceed this average and would require a disproportionate share of the available city water supply.

- Infill/Rebuild Alternative. This option would require 171,959 net new gallons per day or 324,500 gallons per day per square mile (see **Table 5.8-1**). This would exceed the assumed average year 2005 available supply by a factor of 2.3.

- Moderate Development Alternative. This option would require 260,153 net new gallons per day or 490,900 gallons per day per square mile. This would exceed the assumed average year 2005 available water supply by a factor of 3.6.

- Maximum Probable Development Alternative. This option would require 627,437 net new gallons per day or 1.2 million gallons per day per square mile. This would exceed the assumed average year 2005 available water supply by almost nine times.

Infrastructure Replacement. According to information compiled as part of the General Plan Framework process by the Department of City Planning, the water main infrastructure within the West Adams-Baldwin Hills-Leimert area does not appear to be of the age that would require replacement with the advent of future growth and development.[1] It should be acknowledged, however, that over the course of the buildout of the proposed Recovery Program Area, deficiencies may become apparent in the water delivery system that will require replacement and repair given the added demands from new development.

[1]City of Los Angeles Department of City Planning, Report on Los Angeles Framework Infrastructure, Final Draft, January 19, 1994, prepared by Delon Hampton & Associates.

TABLE 5.8-1: NET NEW WATER CONSUMPTION FOR PROPOSED RECOVERY PROGRAM (gallons/day)/a/

	ALTERNATIVE		
Land Use	**Infill/Rebuild (gal/day)**	**Moderate Development (gal/day)**	**Maximum Probable Development (gal/day)**
Subarea 6			
Retail	23,040	21,636	30,834
Office	8,654	8,654	12,333
Industrial	721	721	1,027
Residential	14,080	14,080	82,940
Total	**49,744**	**45,091**	**127,134**
Subarea 8			
Retail	12,276	49,338	72,801
Office	4,910	19,735	29,120
Industrial	409	1,644	2,426
Residential	13,860	44,440	153,340
Total	**31,455**	**115,157**	**257,687**
Subarea 10			
Retail	47,205	45,144	73,950
Office	18,882	18,057	29,581
Industrial	1,573	1,504	2,465
Residential	23,100	35,200	136,616
Total	**90,760**	**99,905**	**242,616**
Total Demand	**171,959**	**260,153**	**627,437**
Demand per square mile/b/	**324,451**	**490,855**	**1,183,843**

/a/ Consumption factor (gallons/unit): 120/1000 sf for retail, 240/1000 sf for office, 30/1000 sf for industrial, and 220/unit for residential.
/b/ Assumes 0.53 square miles in the proposed Recovery Program Area.
Source: City of Los Angeles, Wastewater Program Management, Sewer Facilities Charge Guide and Generation Rates, August 1988.

MITIGATION MEASURES

1. Projects within the proposed Recovery Program Area shall satisfy and/or exceed water conservation measures mandated by local ordinances, i.e., Ordinance No. 166,080 and Ordinance No.165,004.

2. During the course of the buildout of development within the proposed Recovery Program Area, over a 10-15 year period, it may become necessary for individual developments to make a fairshare contribution to replacing and updating the water delivery infrastructure.

Water conservation measures described in the Ordinances include, but are not limited to, the following:

- Reclaimed water shall be used during grading and construction for dust control, soil compaction, and concrete mixing.

- Mandatory reduction of water consumption by 15 percent.

- Installation of toilet tank conservation devices.

- Landscaping with drought-tolerant/indigenous species (xeriscape).

- Installation of other water saving devices such as faucets and showers for new development, as well as, the retrofit of fixtures for existing developments that may be included within proposed Recovery Program Area reinvestment projects.

OTHER RECOMMENDED MEASURES

In addition, the City of Los Angeles Department of Water and Power recommends the following water conservation measures:

- Automatic sprinkler systems should be set to irrigate landscaping during early morning hours or during the evening to reduce water losses from evaporation. However, care must be taken to reset sprinklers to water less often in cooler months and during the rainfall season so that water is not wasted by excessive landscape irrigation.

- All landscaped areas in the proposed Recovery Program Area shall be provided with an irrigation water system separate from the potable water system to allow future use of reclaimed water.

- Drip irrigation systems should be used for any proposed irrigation systems.

- Future site specific developments within the proposed Recovery Program Area shall comply with improvements determined by the Fire Department necessary to satisfy fire flow requirements.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Water conservation measures may not be sufficient to reduce the water demand from the alternatives to less than significant.

SEWERS

EXISTING CONDITIONS

Treatment Capacity. Sewage treatment for the proposed Recovery Program Area is provided by the Hyperion Treatment Plant (HTP) which is located in Playa Del Rey, directly southwest of the Los Angeles International Airport. The plant treats wastewater from almost all of the City of Los Angeles, as well as effluent from the cities of Beverly Hills,

Burbank, Culver City, El Segundo, Glendale, San Fernando, Santa Monica, and portions of Los Angeles County. These neighboring areas are under contract to Los Angeles to participate in the cost of having their wastewater treated at the City's facilities.

The HTP was designed and constructed in the late 1940's and began operation in 1950. Although secondary treatment was added early in the plant's history, capacity for this treatment was not expanded as wastewater flow increased. As a result, current wastewater flows all receive primary treatment, and only about 54 percent (190 mgd) receives secondary treatment through the activated sludge process. (Full secondary treatment was required for all publicly-owned treatment works, such as HTP).[2] The bacteria developed during the secondary treatment produces a floc which helps precipitate out the finer colloidal material. The treated effluent from the primary and secondary processes are mixed together and discharged to the ocean through a five-mile outfall in the Santa Monica Bay. The solids (sludge) captured by the treatment processes were discharged through a seven-mile outfall from 1957 until November 1987, when the practice was stopped as the result of a Consent Decree Agreement, between the Environmental Protection Agency (EPA) and the Regional Water Quality Control Board, entered into in early 1987. Currently, about 55 percent of the sewage sludge is used in the energy recovery process, 15 percent is used in land application for non-food crop growth, 15 percent is chemically fixated and used as landfill cover, and the remaining 15 percent is composted and marketed to farmers in the San Joaquin Valley. The City has been 100 percent beneficially reusing its sludge since November 1989.

The Hyperion Treatment System (HTS) include over 6,500 miles of sewer pipe, four major sewer mains (referred to as outfall and interceptor sewers), 34 pumping plants, and four wastewater treatment plans. HTS also includes two inland water reclamation plants: the Los Angeles/Glendale Water Reclamation Plant (LAGWRP) and the Tillman Water Reclamation Plant (TWRP). The LAGWRP was completed in 1976 and is capable of treating 20 mgd of wastewater. The TWRP became operational in 1985 and is designed to process 40 mgd. Proposed expansion plans for the TWRP would increase its capacity to 80 mgd by 1992. As a result of a California Regional Water Quality Board Cease and Desist Order and an Environmental Protection Agency (EPA) Consent Decree, the City has a major improvement program underway to correct existing deficiencies in the system primarily related to sewer collection capacity, treatment plant capacity, effluent quality, and the disposal of sludge.

On June 27,1990, the City Council adopted Ordinance No. 166,060, amending the sewer allocation regulation for projects which discharge sewage into the HTS. This ordinance divides projects into "priority" and "non-priority" categories. "Priority" projects receive a monthly sewage allotment of 143,750 gallons per day and include such land uses as non-profit hospitals, emergency trauma centers, and affordable rental housing projects. "Non-priority" projects receive a monthly sewage allotment of 239,583 gallons per day, with 65 percent of this allotment going to residential projects and 35 percent going to non-residential projects. A second ordinance (No. 164,965) was also adopted that would place

[2]City of Los Angeles, Department of City Planning, Environmental Review Section, Sewer Permit Allocation EIR, September 1989.

restrictions on other contract cities and agencies that utilize the HTS. Both ordinances are intended as temporary measures and would remain in effect until the TWRP improvements are operational in 1992 and a balanced growth element is adopted by the City, at which time it is anticipated that sufficient capacity could be provided.

TABLE 5.8-2: NET NEW SEWAGE GENERATION FOR PROPOSED RECOVERY PROGRAM (gallons/day)/a/

Land Use	ALTERNATIVE		
	Infill/Rebuild (gal/day)	**Moderate Development (gal/day)**	**Maximum Probable Development (gal/day)**
Subarea 6			
Retail	19,200	18,030	25,695
Office	7,680	7,212	10,278
Industrial	512	480	685
Residential	15,200	12,800	75,400
Total	**42,592**	**38,522**	**112,058**
Subarea 8			
Retail	10,230	41,115	60,667
Office	4,092	16,446	24,267
Industrial	272	1,096	1,617
Residential	12,600	40,400	139,400
Total	**27,194**	**99,057**	**225,951**
Subarea 10			
Retail	39,337	37,620	61,625
Office	15,735	15,048	24,651
Industrial	1,049	1,003	1,643
Residential	21,000	32,000	124,200
Total	**77,121**	**85,671**	**212,119**
Total Alternative	**146,907**	**223,250**	**550,128**
Gallon/day/square mile	**294,000**	**446,000**	**1,100,000**

/a/ Generation factor (gallons/unit): 100/1000 sf for retail, 200/1000 sf for office, 20/1000 sf for industrial, and 200/unit for residential.
Source: City of Los Angeles, Wastewater Program Management, Sewer Facilities Charge Guide and Generation Rates, August 1988.

The Hyperion Energy Recovery System (HERS) is another improvement designed to eliminate the discharge of sludge into the ocean. Proposition M, Sewage and Wastewater System Revenue Bond, was passed by the electorate on November 8, 1988, to fund needed improvement to the HTP.

This proposition authorizes the City of Los Angeles to issue revenue bonds, not secured by the City's taxing power, for an additional $1.5 billion above the previously authorized amount of $2.3 billion. The increase in funding was needed for cost updates and changes

in the project scope of the Wastewater System Improvement Program which includes new collection systems and projects needed to bring the HTP to full secondary treatment.

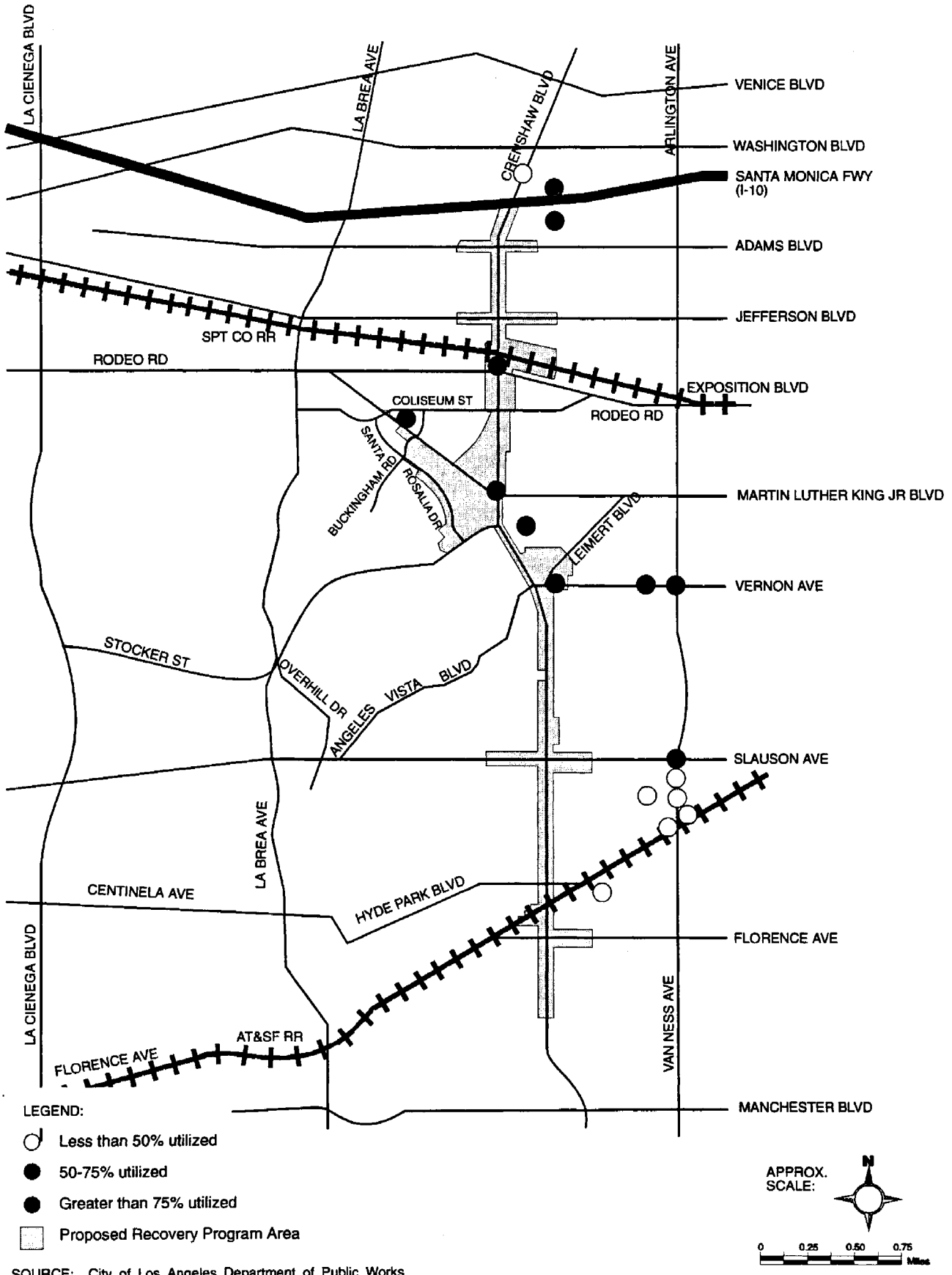
In summary, the activities involve reducing the flow in the sewer by increasing the amount of upstream treatment capacity, constructing a new North Outfall Relief Sewer (NORS), providing additional storage at the North Outfall Treatment Facility, and cleaning and repairing of the existing NORS.

Some of these projects have already been completed with the effect of improving collection capacity, including expansion of the sewage volume treated at Los Angeles-Glendale Water Reclamation Plant from approximately 12 mgd to 20 mgd; provision of a one-million gallon tank for detention storage and permanent screening and continuous chlorination facility at the North Outfall Treatment Facility and expansion of on-line treatment capacity at the Tillman Water Reclamation Plant to 40 mgd.

Infrastructure. Several major sewer lines serve the proposed Recovery Program Area. A 75-inch interceptor sewer line bisects the corridor at Rodeo Road. A 57-inch interceptor sewer line extends down Martin Luther King Jr. Boulevard, crossing the Leimert Park area until it runs into Vernon Avenue, and extends eastward out of the proposed Recovery Program Area. Near the southern end of the proposed Recovery Program Area, a 72x60-inch line crosses the corridor approximately at 63rd Street. A primary 18-inch sewer line starts at 71st Street and runs in an approximately northeast direction along the AT&SF railroad tracks.

Information provided by the Department of Public Works indicates that several of the major sewer lines in the area are experiencing problems of capacity, particularly on the North Outfall Sewer which bisects the corridor at Rodeo Road and Martin Luther King Jr Boulevard.

In addition, as part of the General Plan Framework process the City of Los Angeles Department of Public Works has compiled an assessment of the relative capacity utilization of city sewers based on measurements (see **Figures 5.8-1 and 5.8-2**). Within the vicinity of the proposed Recovery Program Area, 16 measurements have recently been taken. These measurements indicate that almost 60 percent of the measurements taken indicated local sewer capacity is utilized greater than 50 percent. Forty-one percent of the measurements indicated a capacity utilization of 50-75 percent and 18 percent of the measurements indicated a capacity utilization of greater than 75 percent. The greatest capacity deficiencies are concentrated in the Subarea 10 portion of the proposed Recovery Program Area.



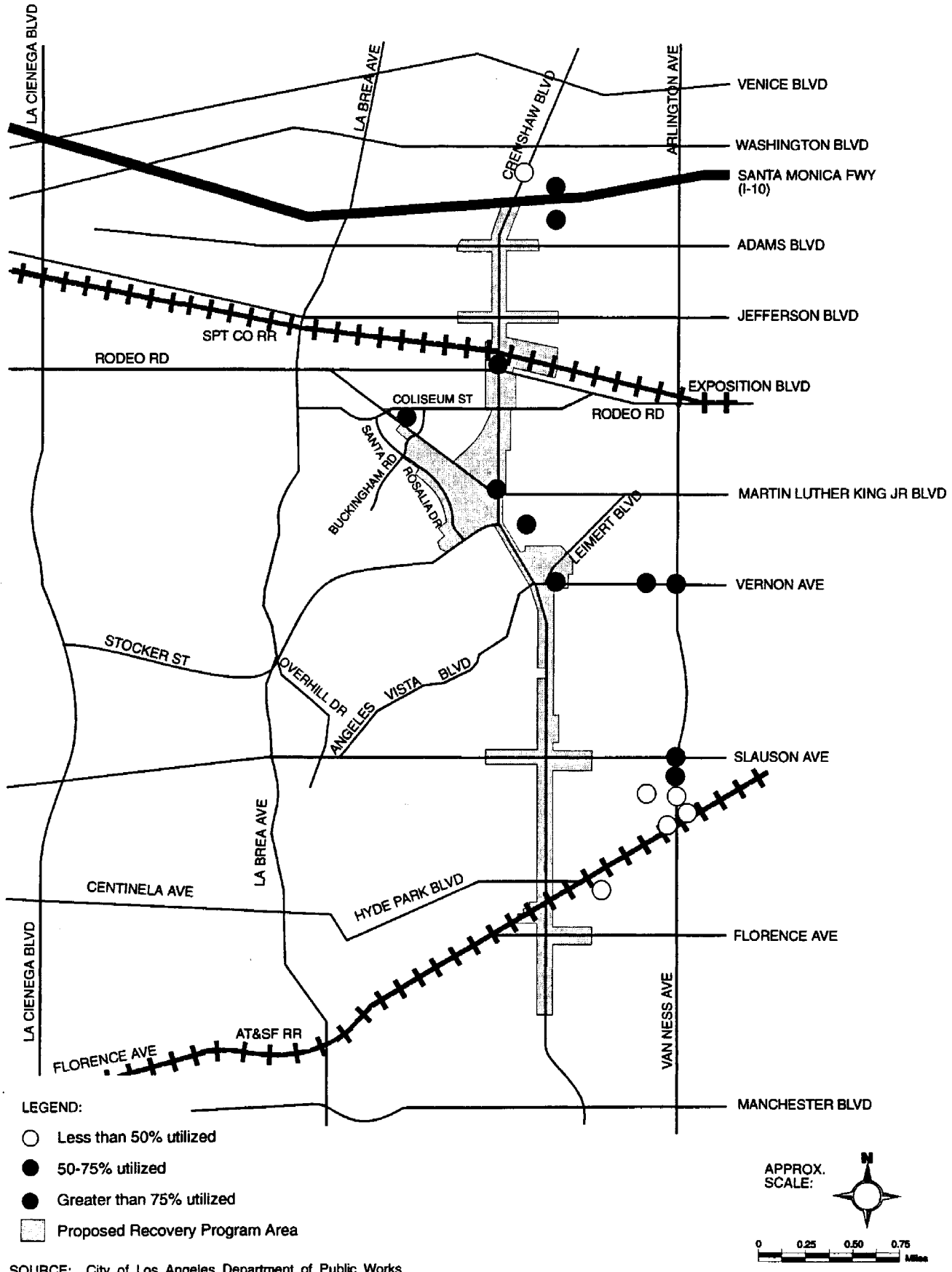
SOURCE: City of Los Angeles Department of Public Works

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.8-1

AVERAGE WASTEWATER LEVELS MEASURED AT REPRESENTATIVE LOCATIONS



SOURCE: City of Los Angeles Department of Public Works

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.8-2

MAXIMUM WASTEWATER LEVELS MEASURED AT REPRESENTATIVE LOCATIONS

Capacity utilization between 50 and 75 percent according to the Department of Public Works is indicative of the need to plan a relief sewer, while a utilization greater than 75 percent suggest serious capacity problems that will be need to solved before additional development can be added.

IMPACTS

Significance Criteria. Impacts on sewers would be considered significant if; 1) the net incremental growth associated with each alternative would result in a wastewater generation demand greater than the ordinance-allowed wastewater generation increases during the same time period; or 2) the developments proposed would require the construction of new local infrastructure to accommodate demand.

Assessment

Wastewater. City Ordinance No. 163,559 currently allows an increase of five million gallons per day annually to ensure adequate treatment at the Hyperion Treatment Plant. In order to compare the potential wastewater demand increases within the proposed Program Recovery Area to the overall Hyperion System, it is necessary to convert the five mgd allowed by the City ordinance to the equivalent number of total gallons per day per square mile for the 1993-2005 planning period. In this regard, the five mgd per year would mean that between 1993 and 2005 (a 12-year period) approximately 60 mgd of wastewater generation would be allowed to be added to the Hyperion System. Given that there are approximately 303 developed square miles of land within the City of Los Angeles portion of the Hyperion service area, then the allowed increase on average would be 198,000 gallons per day per square mile (60,000,000 mgd/303 developed square miles). For planning assessment purposes, it is assumed that wastewater gallons per day per square mile generation rates greater than this amount over the entire Hyperion Treatment Plant service area could result in an exceedance of the ordinance wastewater generation limits.

Table 5.8-2 presents the estimated wastewater generation associated with each proposed alternative. The wastewater generation ranges from approximately 147,000 net new gallons per day (gpd) in the Infill/Rebuild Alternative to 550,000 net new gpd for the Maximum Probable Development Alternative. Since there is approximately one-half square mile within the proposed Recovery Program Area, then the potential per square mile daily wastewater generation would range from 294,000 gpd to 1,100,000 gpd. The specific distinctions pertaining to the alternatives are as follows:

- Infill/Rebuild Alternative. The wastewater generation by this alternative would be approximately 147,000 net new gpd or 294,000 per square mile. This level would exceed the average citywide allowed increases by 48 percent, and would represent a disproportionate share of the total growth in wastewater demand that would ultimately be treated at the HTP. This would be considered a significant impact. Given the allowed wastewater increase limits, approximately 67 percent of this alternative could be built out during the 1993-2005 period.

- Moderate Development Alternative. The projected wastewater incremental increase would be approximately 223,000 net new gpd or 446,000 gpd per square mile. This would exceed the average citywide allowed increases by 125 percent, and would represent a disproportionate share of the total growth in wastewater service demand. This change would be considered a significant impact. Given the allowed wastewater increase limits, approximately 44 percent of this alternative could be built out during the 1993-2005 period.

- Maximum Probable Development Alternative. The projected wastewater service demand would be approximately 550,000 net new gpd or 1,100,000 gpd per square mile. This consumption would exceed the allowed increases by over 500 percent, and would represent a disproportionate share of the total growth in wastewater demand. This change would be considered a significant impact. Given the allowed wastewater increase limits, approximately 18 percent of this alternative could be built out during the 1993-2005 period.

Sewer Infrastructure. According to recent sewer gauging data compiled by the Department of Public Works as part of the General Plan Framework study, 10 of the total 16 gauging locations (60 percent) in the proposed Recovery Program Area vicinity indicated that the trunk sewer being assessed was at 50 percent capacity or greater. Added wastewater generation associated with each of the alternatives would thus constitute a significant impact on the local sewer infrastructure system. Given that the Maximum Probable Development Alternative would result in the greatest wastewater demand, then this alternative would similarly have the greatest adverse effect on existing capacity deficiencies within the proposed Recovery Program Area.

MITIGATION MEASURES

3. To reduce wastewater generation impact on treatment and sewer facilities and to increase the amount of recovery and revitalization-related development, projects within the proposed Recovery Program Area shall be equipped with wastewater conservation fixtures including low flow toilets.

4. Approval of future developments within the Recovery Program Area shall be prohibited unless there is demonstrated adequate infrastructure capacity as determined by the City of Los Angeles Department of Public Works.

5. Inclusion of capital improvements to the local sewer system as part of either the revitalization or redevelopment plan for the proposed Recovery Program Area.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

The proposed Recovery Program would add as much as 550,000 net new gallons of sewage per day into the HTS watershed which is currently experiencing capacity problems. The impact of any sewage generation increase within the system may be considered significant because of the ongoing plans to redesign the HTP and the concurrent reduction in available sewage capacity.

STORM WATER DRAINAGE

EXISTING CONDITIONS

There is an extensive network of stormdrains in the proposed Recovery Program Area, owned by Los Angeles County or the City of Los Angeles. The proposed Recovery Program Area is located in Zone C, an area classified as subject to minimal flooding, by the Flood Insurance Rate Map prepared by the Federal Emergency Management Agency. The Recovery Program Area is not subject to any provisions of the Flood Hazard Management Specific Plan Ordinance.

IMPACTS

Significance Criteria. An impact would be considered significant if stormwater generated as a result of a project were to contribute to water quality degradation and/or exceed or jeopardize the available wastewater handling capacity as determined by the City Department of Public Works.

Assessment

Development of the proposed Recovery Program Area would include retail, industrial, and office space, as well as housing units. The anticipated new development from each of the alternatives would cover about the same area of impervious surface as the existing development. Runoff from street level surfaces on the site would be conveyed as sheet flow to surrounding streets. Roof drains would carry runoff from the buildings on the site to the street via curb drains. Approximately the same amount and type of runoff would be generated by the proposed Recovery Program Area for a 50-year frequency storm (Q50) as under the existing conditions, therefore impacts in regard to storm drainage facilities are not considered significant.

MITIGATION MEASURES

None.

OTHER RECOMMENDED MEASURES

Future developers of the proposed Recovery Program Area shall be required to conform to the following measures:

- Under the requirements of the National Pollutant Discharge Elimination System (N.P.D.E.S.), any construction activities that involve the disturbance of land will be required to submit a Notice of Intent (N.O.I.) to the State Water Resources Control Board to obtain a General Construction Activity Storm Water Permit.

- A drainage plan for each proposed site area shall be developed to the satisfaction of the City Engineer for review and approval, prior to development of any drainage improvements.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

SOLID WASTE AND DISPOSAL

EXISTING CONDITIONS

Refuse from commercial activities in the vicinity of the proposed Recovery Program Area is collected by private haulers and deposited at landfills within Los Angeles County.

California disposes over 40 million tons of municipal solid waste in landfills each year. While the number of California residents is growing each year, the availability of landfill capacity to dispose of that waste is declining each year. Furthermore, new landfills and waste-to-energy facilities are becoming more and more difficult to site in the state.

Pursuant to State Assembly Bill 939 (AB939)[3] guidelines mandating that municipalities complete a plan for implementing the provisions of the Bill by July 1, 1991, the City of Los Angeles is working to complete its plan by early 1994. Further, it is in the process of establishing regulations and guidelines to apply the primary objectives of AB939 to reduce generation of solid waste by commercial and industrial concerns presently serviced by private contractors. The same goals for reducing solid waste could be expected of any identifiable producer in the future. AB939 combines solid waste management, source reduction, recycling, composting, and market development so that by 1995, 25 percent of total solid waste and, by 2000, 50 percent of total solid waste, compared to the base year 1990, is diverted through recycling and other measures.[4]

Development of short-term and long-term plans to guide the City's management of solid waste for the next 30 years was initiated in 1988. The plan, once developed, will be adopted as an integral element of the General Plan. The plan is being developed by the Los Angeles Resource Program Team which includes technical consultants, staff of the Planning Department and staff of the Bureau of Sanitation of the City of Los Angeles. The City's plan is envisioned to be consistent with the County Solid Waste Management Plan, updated in 1985, particularly with respect to siting of the facilities.

Part of the City of Los Angeles' Plan is to implement a citywide recycling program. It has already initiated recycling programs in many areas of the City and recycling programs would be in effect in all areas of the City by 1994. The recycling effort augments the activities associated with the California Bottle Act.

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[3]Assembly Bill 939 amends sections of several Government Codes, specifically sections of the Health and Safety Code, the Public Resources Code and the Revenue and Taxation Code which relate to solid waste.

[4]Mike Young, City of Los Angeles Department of City Planning, Telephone Communication, September 1, 1992.

TABLE 5.8-3: LANDFILL CAPACITY IN LOS ANGELES COUNTY

Site	Location	1990 Daily Use(Tons)	1990 Annual Use(Tons)/a/	Theoretical Remaining Capacity as of 1991 (Tons)/b/	Restrictions
Antelope Valley	Palmdale	400	124,800	925,000	Closed 1996
Azusa Land Reclamation	Azusa	2,756	859,872	0	Closed 1991
BKK	West Covina	9,744	3,040,128	15,960,000	Closed 1995
Bradley West	Sun Valley	1,923	599,976	11,800,000	Closed 1993
Brand Park	Glendale	48	14,976	306,000	Private Use Only
Burbank	Burbank	196	61,152	11,440,000	Burbank use only
Calabasas	Agoura	2,724	849,888	15,155,000	Calabasas Wasteshed Only
Chitquita Cyn	Newhall	1,763	550,056	1,780,000	Closed 1997
Lancaster	Lancaster	295	92,040	150,000	Closed 1995
Lopez Cyn	Pacoima	3,109	970,008	4,200,000	Closed 1996
Pebbly Beach	Santa Catalina Island	10	3,120	97,000	
Pitchess Honor Rancho	Saugus	17	5,304	2,240,000	Closed 1994
Puente Hills	Whittier	11,859	3,700,008	7,500,000	Closed 1993
San Clemente	San Clemente Island	1	312	24,000	Closed 1991
Scholl Cyn	Los Angeles	2,179	679,848	13,320,000	Scholl Cyn Wasteshed Only
Spadra	Walnut	2,724	849,888	6,950,000	LA City Excluded
Sunshine Cyn	Los Angeles	3,141	979,992	400,000	Closed 1991
Two Harbors	Santa Catalina Island	4	1,092	7,300	
Whittier	Whittier	353	110,136	6,380,000	Whittier use only
TOTAL		43,246	13,492,596	98,634,300	

/a/ Assumes 312 operation days per year (6 days/week x 52 weeks)
/b/ This estimate does not take into account various operating restrictions.
Source: Los Angeles County Department of Public Works, 3/91.

As shown in **Table 5.8-3**, the County Department of Public Works estimates that there is a theoretical remaining capacity of 98.63 million tons (156.08 million cubic yards). The existing solid waste generation rate is approximately 43,246 tons per day. Thus, there is theoretically 2,280.7 days (7.3 years) remaining before county landfill capacity is exhausted. The Department notes, however, that a number of landfills are operating under restrictions or court mandates that reduce the practical capacity to a level that will be exhausted within five years (1,560 days of landfill operations). It is estimated that this practical countywide

landfill capacity is about one-third less than theoretical capacity or approximately 67.46 million tons.[5]

IMPACTS

Significance Criteria. An impact would be considered significant if a project would generate solid waste which exceeds or jeopardizes the available capacity to handle and dispose of waste.

Assessment

Table 5.8-4 illustrates the net solid waste generation for the alternatives. The solid waste would consist of typical commercial and residential waste (i.e., paper, cardboard, residential waste) with non-toxic materials. In as much as the solid waste generated by the proposed Recovery Program Area would be hauled by private carriers, it is not possible to precisely determine which landfill in Los Angeles County would be affected. It is likely that due to the severe landfill capacity constraints that solid waste from the proposed Recovery Program Area could be taken to a variety of area landfills depending on daily conditions. The addition of the proposed Recovery Program-related solid waste would further incrementally contribute to the reduction in available landfill capacity. The Infill/Rebuild Alternative would contribute approximately 5,325 pounds per day (2.7 tons per day). In comparison the Moderate Development Alternative would contribute approximately 7,829 pounds per day (3.9 tons per day) and the Maximum Probable Development Alternative would contribute 16,149 pounds per day (8.1 tons per day). These solid waste contributions are considered to be a significant impact.

MITIGATION MEASURES

Future developers of the proposed Recovery Program Area shall be required to conform to the following measures:

6. For commercial and industrial projects as well as multi-family housing projects more than 20 units, commercial size trash compactors shall be installed in all portions of each component of the proposed Recovery Program.

7. In order to reduce the volume of solid waste generated by each component of the proposed Recovery Program, a recycling program shall be established by the management of each facility on-site.

8. Trash pick up areas shall be of sufficient size to allow the provision of separate bins for newspapers, aluminum cans, glass and "white" paper to allow materials to be easily hauled off-site and recycled via a recycling program established by the management of each facility on-site.

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[5]It is a assumed that there are 312 days per year since most land fills are open 6 days per week and there are 52 weeks per year.

TABLE 5.8-4: NET NEW SOLID WASTE GENERATION FOR PROPOSED RECOVERY PROGRAM (tons/day)/a/

Land Use	ALTERNATIVE		
	Infill/Rebuild (tons/day)	**Moderate Development (tons/day)**	**Maximum Probable Development (tons/day)**
Subarea 6			
Retail	.48	.45	.64
Office	.11	.11	.15
Industrial	.01	.01	.02
Residential	.15	.13	.75
TOTAL	**.75**	**.70**	**1.56**
Subarea 8			
Retail	.26	1.03	1.52
Office	.06	.25	.36
Industrial	.01	.03	.04
Residential	.13	.40	1.39
TOTAL	**.46**	**1.71**	**3.31**
Subarea 10			
Retail	.98	.94	1.54
Office	.04	.23	.37
Industrial	.03	.03	.04
Residential	.21	.32	1.24
TOTAL	**1.26**	**1.52**	**3.19**
Total Alternative	**2.47**	**3.93**	**8.06**

/a/ Generation factor (tons/day): 5/1000 sf for retail, 6/1000 sf for office, 1/1000 sf for industrial, and 4/unit for residential.
Source: EIR Manual for Private Projects, pg. S-16, and the California Solid Waste Management Board.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Continued consumption of scarce landfill capacity.

5.9 ENERGY CONSERVATION

EXISTING CONDITIONS

The proposed Recovery Program Area is currently developed with a mixture of commercial office and industrial uses totalling approximately 3.9 million square feet of occupied space, as well as approximately 2,500 dwelling units. The estimated existing annual energy consumption from these existing land uses is 67.1 million kilowatt hours (kWh) of electricity and 246.3 million cubic feet (c.f.) of natural gas.

IMPACTS

Significance Criteria. Significant impacts would occur if a project-related energy demand were to equal or exceed existing supplies, or to reduce the level of service of existing sources, thereby requiring the development of new facilities and sources of energy, in excess of those already planned.

Assessment

During construction of projects within the proposed Recovery Program Area, short-term energy consumption would result from building demolition, excavation, grading and site preparation activities. Long-term energy consumption would result from heating, cooling, lighting and other operational needs anticipated to occur from the development of the retail, office, and industrial space and housing units within the proposed Recovery Program Area.

Table 5.9-1 illustrates the anticipated annual electrical and natural gas energy consumption associated with the alternative under consideration.

- Infill/Rebuild Alternative. This alternative would result in the consumption of 14.5 net new million kWh of electricity and 42.4 net new million cubic feet of natural gas per year. This change would represent a 22 percent increase in electricity consumption and a 17 percent increase in natural gas consumption.

- Moderate Development Alternative. This alternative would result in the consumption of 21.0 net new million kWh of electricity and 63.6 net new million cubic feet of natural gas. This change would represent a 31 percent increase in electricity consumption and a 26 percent increase in natural gas consumption.

- Maximum Probable Development Alternative. This alternative would result in the consumption of 37.3 net new million kWh of electricity and 146.0 net new million cubic feet of natural gas. This change would represent a 56 percent increase in electricity consumption and a 59 percent increase in natural gas consumption.

Energy consumption of future projects associated with each of the alternatives would increase the use of local and regional energy resources and would result in significant impacts with regard to the increased use of electricity and natural gas.

TABLE 5.9-1: NET NEW ENERGY CONSUMPTION

Land Use	ALTERNATIVE					
	Infill/Rebuild		Moderate Development		Maximum Probable Development	
	Electricity /a/ (Million kWh/yr)	Gas/b/ (Million c.f/yr)	Electricity/ a/(Million kWh/yr)	Gas/b/ (Million c.f/yr)	Electricity /a/(Million kWh/yr)	Gas/b/ (Million c.f/yr)
Subarea 6						
Retail	2.9	6.7	2.8	6.3	3.9	8.9
Office	0.7	0.9	0.6	0.9	0.9	1.2
Industrial	0.1	1.0	0.1	1.0	0.1	1.4
Residential	0.4	3.6	0.3	3.0	1.9	17.7
Total	**4.1**	**12.2**	**3.8**	**11.2**	**6.8**	**29.2**
Subarea 8						
Retail	1.6	3.6	6.3	14.3	9.3	21.2
Office	0.3	0.5	1.4	2.0	2.1	2.9
Industrial	0.1	0.5	0.3	2.2	0.4	3.2
Residential	0.3	3.0	1.0	9.5	3.6	32.8
Total	**2.3**	**7.6**	**9.0**	**28.0**	**15.4**	**60.0**
Subarea 10						
Retail	6.0	13.7	5.8	13.1	9.4	21.4
Office	1.3	1.9	1.3	1.8	2.1	3.0
Industrial	0.3	2.1	0.3	2.0	0.4	3.2
Residential	0.5	4.9	0.8	7.5	3.2	29.2
Total	**8.1**	**22.6**	**8.2**	**24.4**	**15.1**	**56.8**
Total Alternative	**14.5**	**42.4**	**21.0**	**63.6**	**37.3**	**146.0**

/a/ Assumes 15.3 kWh/sf/yr for retail, 17.1 kWh/sf/yr for office, 5.3 kWh/sf/yr for industrial, and 5,172 kWh/du/yr for residences.
/b/ Assumes 2.9 cf/sf/mo for retail, 2.0 cf/sf/mo for office, 3.3 cf/sf/mo for industrial, and 3,918 cf/sfmo for residences.
Source: AQMD Handbook for preparing EIR's, Revised April 1993, South Coast Air Quality Management District.

Electric service would be provided in accordance with the City of Los Angeles Department of Water and Power's (LADWP) rules and regulations. The Southern California Gas Company has facilities in the proposed Recovery Program Area. Gas service to the area could be provided without any significant impact to the environment. The service would be in accordance with the Company's policies and extension rules on file with the California Public Utilities Commission at the time contractual agreements are made.

The availability of natural gas service is based upon present conditions of gas supply and regulatory policies. As a public utility, the Southern California Gas Company is under the jurisdiction of the California Public Utilities Commission. The company can also be affected by actions of federal regulatory agencies. Should these agencies take any action which affects gas supply or the condition under which service is available, gas service would be provided in accordance with revised conditions.

MITIGATION MEASURES

1. During the design process, each site developer shall consult with the Department of Water and Power, Energy Services Subsection, and the Southern California Gas Company, the Commercial Industrial or Residential Staff Supervisor, regarding possible Energy Conservation Measures. Each site developer shall incorporate measures which would exceed minimum Title XXIV standards.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

Energy consumption by the proposed Recovery Program would increase the use of electricity and natural gas consumption which would result in significant adverse impacts to those irretrievable and irreplaceable resources.

5.10 GEOLOGY AND HYDROLOGY

EXISTING CONDITIONS

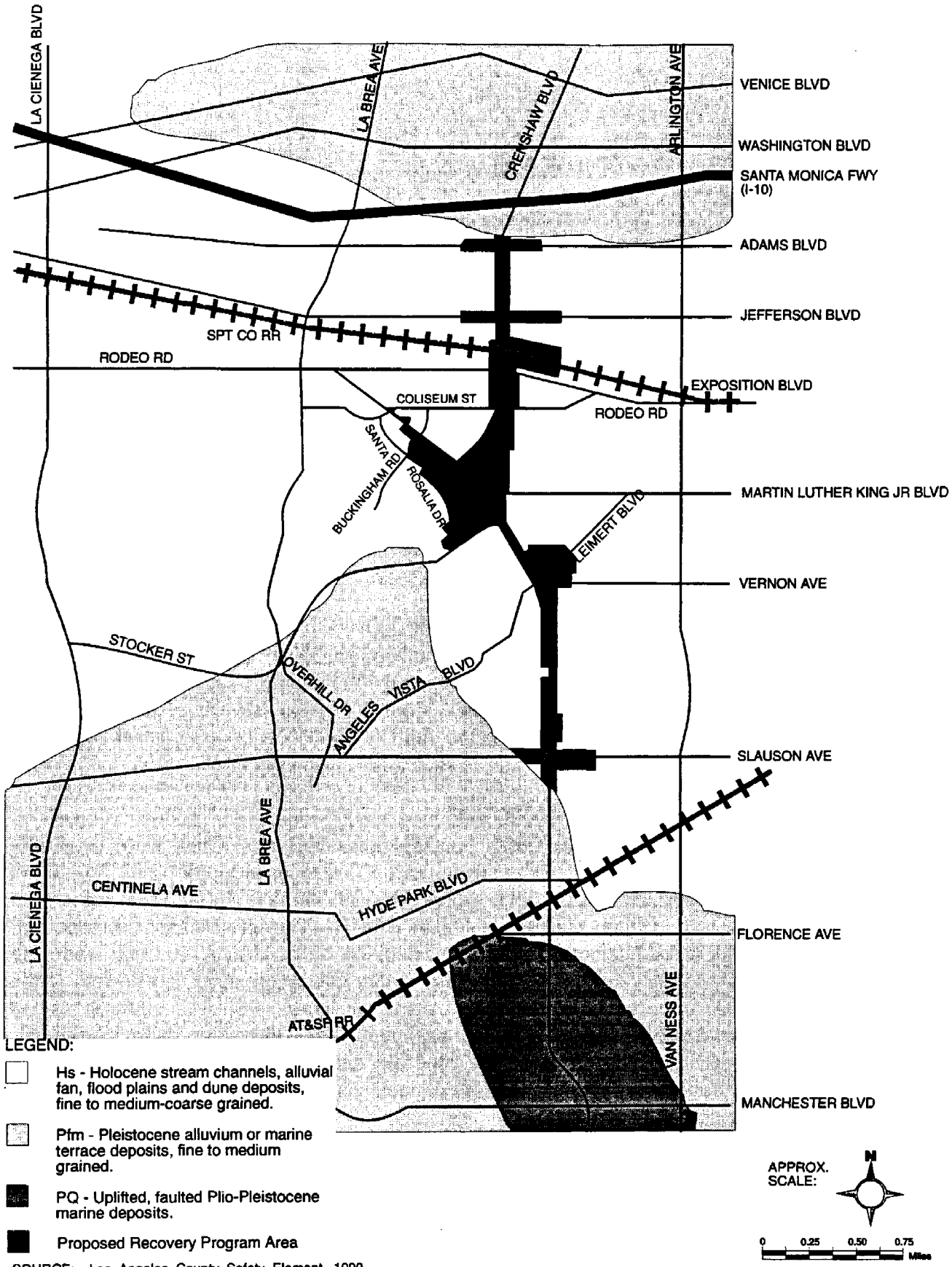
GEOLOGY

The proposed Recovery Program Area is located along the eastern edge of the Baldwin Hills, a major topographic feature of the community, consisting of uplifted blocks within the Newport-Inglewood Fault Zone. In general, the proposed Recovery Program Area is characterized by a gently rolling hillside terrain of alluvial material deposited from the southern slopes of the San Gabriel and Santa Monica Mountains. The surface topography results from several million years of stream erosion into the Pleistocene-age seabed, combined with uplifting and side-slipping effects of local faults.

The northern part of the corridor area slopes gently towards the west from an elevation of about 140 feet above mean sea-level in the area of Adams Boulevard and Crenshaw Boulevard to about 100 feet at Martin Luther King Jr. Boulevard and Rodeo Road. The southern part of the corridor area slopes downward in a rough north-east direction from a high point of about 200 feet above mean sea-level at Slauson Avenue and West Boulevard to about 140 feet at Slauson Avenue and 8th Avenue. In general terms, the elevation of the corridor increases from north to south.

The alluvial materials in the area have been largely derived from weathering and erosion of the geological materials which compose the Santa Monica Mountains. A major influence in the topography has been the deformation caused by the Newport-Inglewood Fault Zone which extends roughly from the Santa Monica Mountains near Beverly Hills to Newport Beach. The zone of deformation defining the fault is underlain by a series of folds and faults which have given rise to most of the hills, plains and mesas in the area.

The surface of this area is frequently underlain by a highly weathered, reddish-colored soil which itself is underlain by marine fossils bearing sands and silts which were originally deposited in a shallow lagoon or sea environment. The main geologic material of the proposed Recovery Program Area is the Holocene Alluvial, which is characteristic of stream channels, alluvial fans and flood plains (see **Figure 5.10-1**). The interbedded siltstone and sandstone of the Inglewood Formation generally have a low permeability, although moderate lateral permeability may occur in the friable, uncemented sand portions at the top of the section. The expansion potential of these deposits is moderate. All of these deposits can be excavated easily with conventional grading equipment. The colluvial and alluvial deposits in the proposed Recovery Program Area are generally suitable as compacted fill material, provided that they are free of organics, oversized materials (greater than one foot diameter) and any other deleterious materials.



SOURCE: Los Angeles County Safety Element, 1990

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.10-1

GEOLOGIC MATERIALS

Soil Characteristics

The soils located in the proposed Recovery Program Area consist of two major groups: the Chino and Ramona-Placentia Associations.[1] The Chino Association is generally located north of Leimert Park and the Ramona-Placentia Association to the south. The Chino Association is the predominant soil of the general area. It is made up of gray and dark gray loam, silt loam, or clay loam surface soils underlain by calcareous light brownish-gray silty clay loam and clay loam. This soil can be affected by a high water table which restricts rooting with saline-alkali conditions. The Ramon-Placentia Association is a brown to reddish-brown heavy loam, loam, or sandy loam. Subsoils consist of similarly colored clay and clay loam. It is less well-drained than other local soils, and this restriction of air and water movement results in lower natural fertility.

Seismicity

Numerous active and potentially active faults have been mapped within the southern California region, several of which are within 30 miles of the proposed Recovery Program Area. The major active and potentially active fault systems that could produce significant ground shaking in the proposed Recovery Program Area include the San Andreas, Whittier, Newport-Inglewood, Malibu Coast - Santa Monica - Hollywood, Palos Verdes, Sierra Madre, Verdugo, and the recently identified Wilshire Fault.

The intensity of ground shaking at a given location depends on several factors, but primarily on the earthquake magnitude, the distance from the epicenter to the proposed Recovery Program Area, and the response characteristics of the soil or bedrock units underlying the proposed Recovery Program Area.

The Newport-Inglewood fault is potentially capable of producing the most intensive ground accelerations in the proposed Recovery Program Area, given that it is located less than two miles from the proposed Recovery Program Area (see **Figure 5.10-2**). A maximum credible earthquake (the worst-case scenario) on the Newport-Inglewood of magnitude 6.8 (Richter) would produce seismic shaking with peak horizontal ground accelerations previously estimated at 0.52 g (g is the acceleration of gravity, equal to 32 feet per second squared).[2] However, data from the recent Northridge Earthquake (6.8 Richter) indicates peak horizontal ground accelerations of 1.21 g in the proposed Recovery Program Area, more than double the previous estimate. Similarly, smaller events on the Newport-Inglewood fault and other faults further away from the proposed Recovery Program Area are expected to produce peak horizontal ground accelerations at the proposed Recovery Area of up to 0.35 g, but in light of measurements from the Northridge Earthquake, this estimate clearly needs to be revised. Damage from the Northridge Earthquake was most severe in the northern part of the proposed Recovery Program Area, particularly around Adams Boulevard. The

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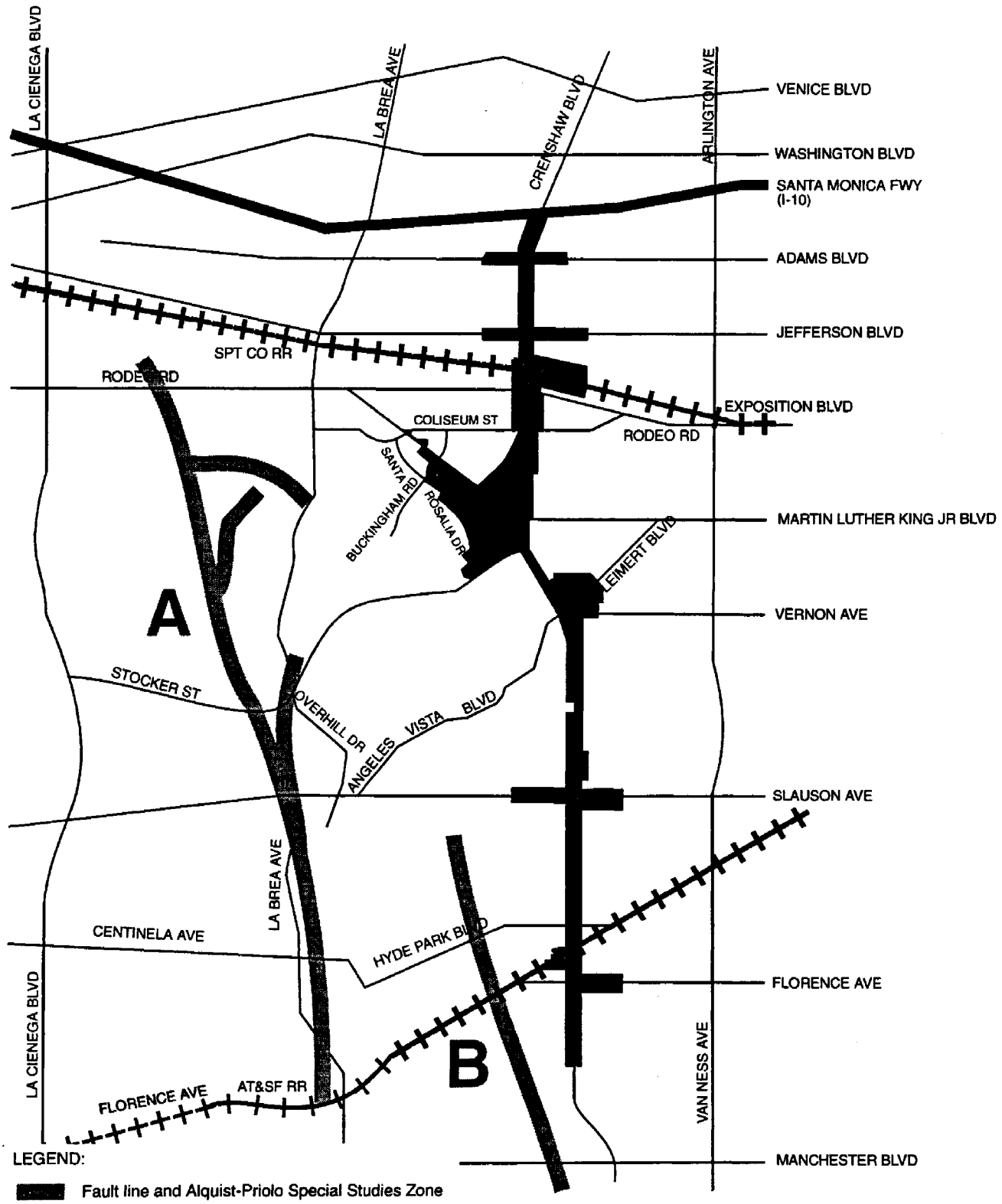
[1]Report and General Soil Map, Los Angeles County, California. Soil Conservation Service, 1979.

[2]Acceleration is the change in velocity with time. The ground accelerations during an earthquake are given as a percent of the acceleration of a free falling object caused by the force of gravity (g). Gravity is expressed in terms of the rate of increase in velocity per second (32 feet/sec^2).



SOURCE: Los Angeles County Safety Element, 1990
California Division of Mines & Geology, 1986

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.10-2

POTENTIALLY ACTIVE FAULTS
NEWPORT-INGLEWOOD FAULT SYSTEM

middle section of the corridor around Leimert Park sustained moderate damage, and further south, damage was light.

- **Subsidence.** Subsidence is the downward settling of the earth's surface with little or no horizontal motion. Land subsidence would occur from one or more of several causes, including withdrawal of fluids (oil, gas, or water) and application of water to moisture-deficient unconsolidated deposits. Subsidence is a relatively slow process that may continue for several decades; however, it may produce conditions that trigger some instantaneous events such as failure of dams and bridges. No areas of subsidence have been identified in the proposed Recovery Program Area.

- **Landsliding.** Landslides can occur either from static slope instability of soil or bedrock or from earthquake-induced groundshaking. Landsliding is perhaps the leading cause of property damage and personal danger related to earthquakes. Usually associated with steep canyons and hillsides, earthquake-induced landslides can originate on or move down slopes as gentle as one degree in areas underlain by saturated, sandy materials. Several landslides, surficial slumps, and slope failures have been documented to have occurred in the Baldwin Hills in the last three decades, specially during periods of heavy rainfall. A portion of the proposed Recovery Program Area is located in a Slope Stability Study Area as designated by the City of Los Angeles Seismic Safety Element.

HYDROLOGY

Groundwater. Shallow groundwater conditions in the area are known to have occurred in the early 1900's. In fact, this area of the Los Angeles Basin was called "Las Cienegas" (Spanish for marshes or swamplands) around 1900 due to the marshy conditions prevalent just north of the Baldwin Hills. With increased groundwater pumping for domestic and irrigation use, the groundwater table in this area dropped in elevation and the marshes dried up. Surface drainage was also improved in the early 1900's, when ditches, and later, buried pipe drains were installed.

The proposed Recovery Program Area is located within the Central Groundwater Basin, which extends to the northeast of the Newport-Inglewood Fault Zone. Fresh water aquifers occur in the Recent (younger than 10,000 years) and Pleistocene (10,000 to 2 million years old) deposits that comprise the upper portion of this groundwater basin. The coarse-grained layers in the alluvial deposits underlying the proposed Recovery Program Area are capable of absorbing, storing, transmitting and yielding water. Therefore, semi-perched, seasonal groundwater can occur in these deposits. In this regard, the Los Angeles County Department of Public Works Hydrological Survey Department shows a recent record of depth to groundwater from four wells located in the study area. The groundwater depths in the wells were all measured in April 1992. Well number 2679-G located near Vernon and 4th Avenue had a depth to groundwater of 35 feet. Well number 2669-A which is located at the Crenshaw Shopping Center had a depth of 47 feet. A well located near the intersection of 48th Street and 5th Avenue, well number 2679-D had a depth to groundwater of 28 feet. Well number 1380-D, located at the intersection of Arlington Boulevard and 51st Street, had a depth to groundwater of 40 feet.

Surface Water. No sources of surface water occur near the proposed Recovery Program Area vicinity. However, part of the proposed Recovery Program Area is located within a 500-year flood plain as defined by the Federal Emergency Management Agency (FEMA).

This flood plain would affect extensive areas of the proposed Recovery Program Area (see **Figure 5.10-3**). The channelized Ballona Creek is located about 1.5 miles to the west of the proposed Recovery Program Area. Rainfall runoff is collected and diverted by surface drainage and flood control facilities, including storm drains and channels maintained by the Los Angeles County Department of Public Works (see Section 5.8, Utilities).

Liquefaction. In areas of low slopes and low topographic relief, seismically-induced ground failure is commonly related to the liquefaction of sediments, particularly saturated cohesionless soils. Flatly bedded strata of poor cohesion may also slip relative to adjacent strata. Liquefaction, essentially the transformation of the soil to a liquid state, results in lateral spreading, ground settlement, sand boils, and soil falls. Earthquake-induced liquefaction does not affect bedrock; however it does affect certain types of alluvium under conditions of water saturation. Water saturated, cohesionless, granular sediment situated a depths of less than 30 feet subsurface constitutes ideal conditions for the liquefaction process. Water encountered at depths of 30-50 feet is considered a low susceptibility to failure from liquefaction. Water levels below 50 feet indicate a very low risk of failure.[3] The Los Angeles County General Plan Safety Element indicates that approximately 47 percent of 184 acres of the proposed Recovery Program Area may be subject to this hazard.

IMPACTS

GEOLOGY

Significance Criteria. An impact will be considered significant if the proposed Recovery Program would subject proposed new developments in direct proximity to any known geotechnical hazard affecting slope stability, foundation stability, fault-induced ground rupture, seismic ground shaking, seismically-induced settlement or ground lurching.

Assessment

As noted in the project description, the difference between the alternatives is the magnitude of net new development anticipated within the same geographic area, i.e., the proposed Recovery Program Area. A geotechnical impact assessment is one of those areas of concern where the primary issue is the effect of the geotechnical environment on the proposed land use changes rather than vice versa. From this standpoint, the geotechnical environment would affect each of the alternatives under consideration in the same manner.

This section presents, in summary form, the principal geotechnical factors that were evaluated and rated on a subjective scale, comparing this study area with the range of hazard severity that is generally representative of southern California.

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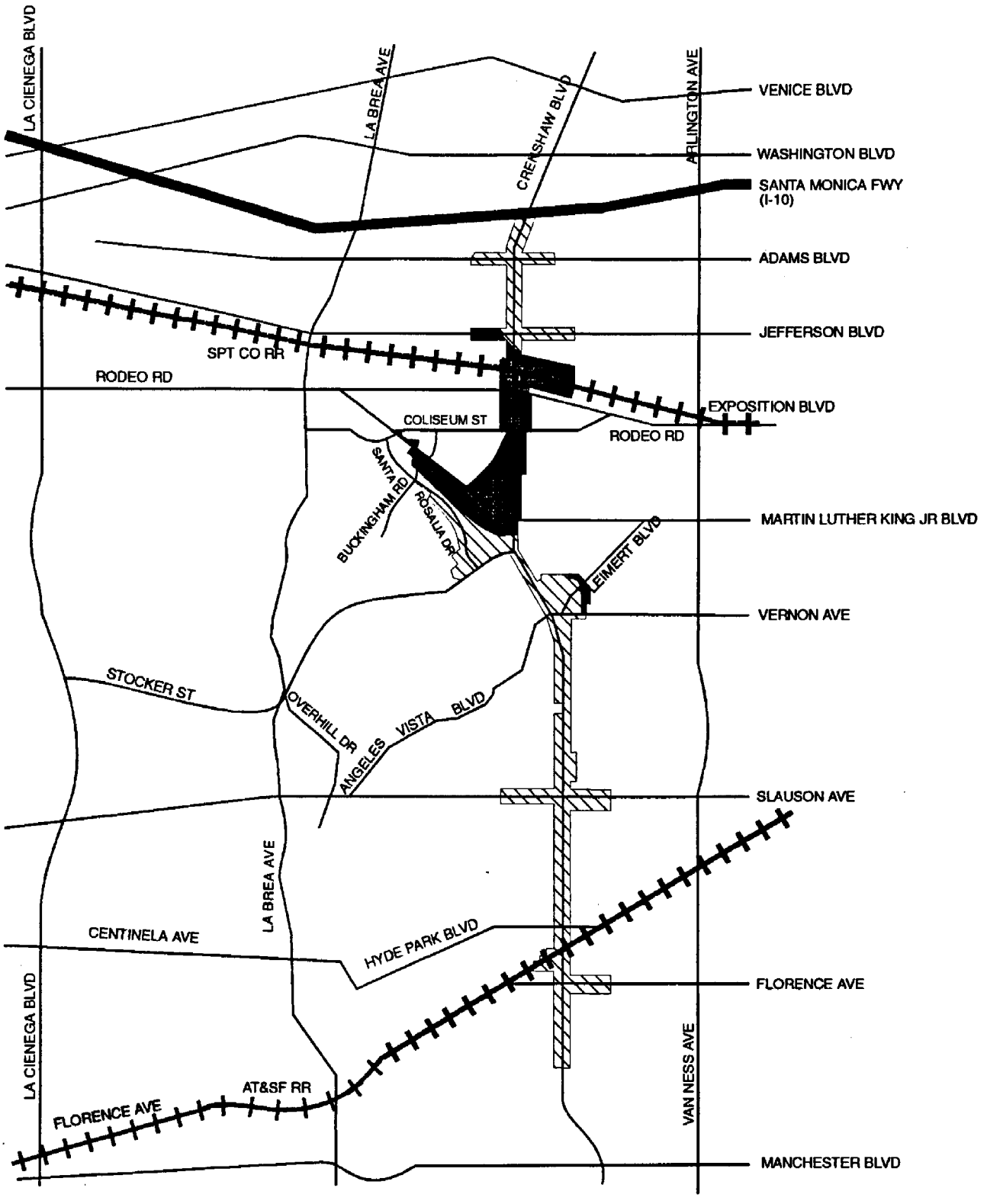
[3]Fault-Rupture Hazard Zones in California, Department of Conservation, Division of Mines and Geology Special Publication 42, 1988.



LEGEND:

500-Year Flood Boundary

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

SOURCE: Federal Emergency Management Agency, 1987

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.10-3

500-YEAR FLOOD PLAIN IN PROPOSED RECOVERY PROGRAM AREA

Slope Stability Assessment

A small portion of the proposed Recovery Program Area along Stocker Street and Don Felipe Drive is located in a hillside area. The City of Los Angeles Seismic Safety Element, however, has established a zone extending to Martin Luther King Jr. Boulevard and Crenshaw Boulevard as a Slope Stability Study Area (see **Figure 5.10-4**). Approximately 53 acres (14 percent) of the proposed Recovery Program Area is within the Slope Stability Study Area as designated by the City of Los Angeles, General Plan Seismic Safety Element. Within this portion of the proposed Recovery Program Area, there is potential for slope instability that may affect the design of future projects.

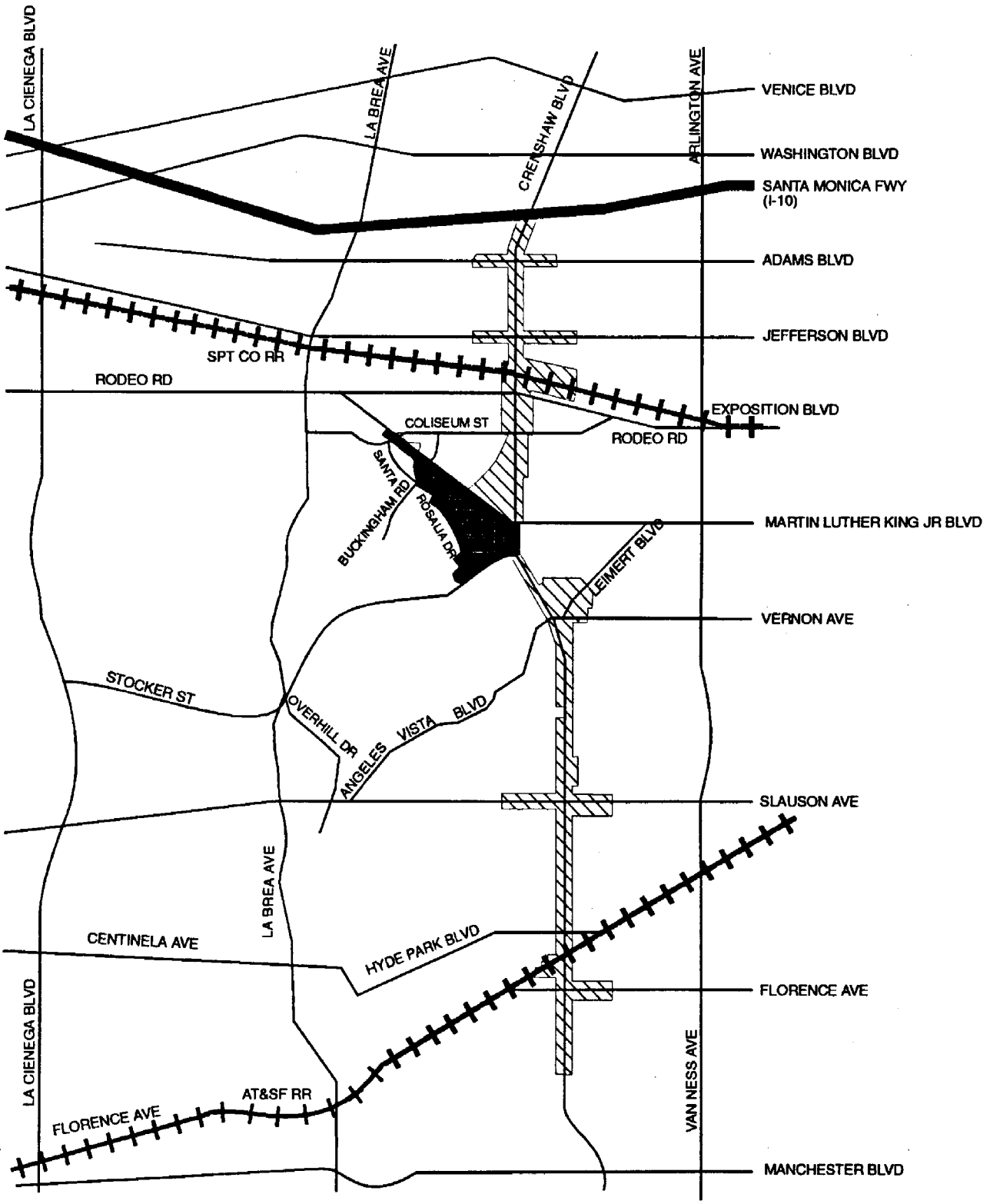
Foundation Stability Assessment

Alluvial and colluvial soils are typically unconsolidated or poorly consolidated, and have medium to very high permeabilities. These soils are considered moderate to highly compressible, and potentially collapsible. Settlement of these soils may occur if either fill or structures are placed directly on these soils. The geotechnical hazard posed by compressible soils is generally moderate in the proposed Recovery Program Area. Clay-rich colluvial deposits may have a moderate to high expansion potential. Expansive materials, if left untreated, can cause damage to structures, including cracking, heaving and buckling of foundations. The geotechnical hazard posed by soil expansivity is generally moderate in the proposed Recovery Program Area. As shown in **Figure 5.10-5**, approximately 277 acres (72 percent) of the proposed Recovery Program Area is located within the City of Los Angeles designated Detailed Study Area where geology reports are required prior to approval of all projects.

- **Fault-Induced Ground Rupture.** Surface slip along a fault plane can severely damage structures built across a fault. Based on the data presently available, the hazard of fault-induced ground rupture in the proposed Recovery Program Area is considered to be slight.

- **Seismic Ground Shaking.** The severity of ground shaking at any point depends on the earthquake magnitude, distance from the earthquake source, and the local geologic conditions, which can either amplify or attenuate the earthquake waves. In the proposed Recovery Program Area, the geotechnical hazard posed by seismic shaking is considered to be high, due both to the proximity of known active faults (Newport-Inglewood, Santa Monica), and to the nature of the materials underlying the proposed Recovery Program Area (unconsolidated alluvium and colluvium).

- **Seismically-Induced Settlement.** Strong ground shaking can cause settlement by allowing sediment particles to become more tightly packed, thereby reducing pore space. Alluvial deposits are especially susceptible to this phenomenon. Artificial fills, if not adequately compacted, may also experience seismically-induced settlement. The potential hazard posed by seismic settlement in the proposed Recovery Program Area is considered to be moderate.



LEGEND:

Slope Stability Study Area

Proposed Recovery Program Area

SOURCE: Seismic Safety Element of the General Plan, City of Los Angeles Department of City Planning, 1972

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

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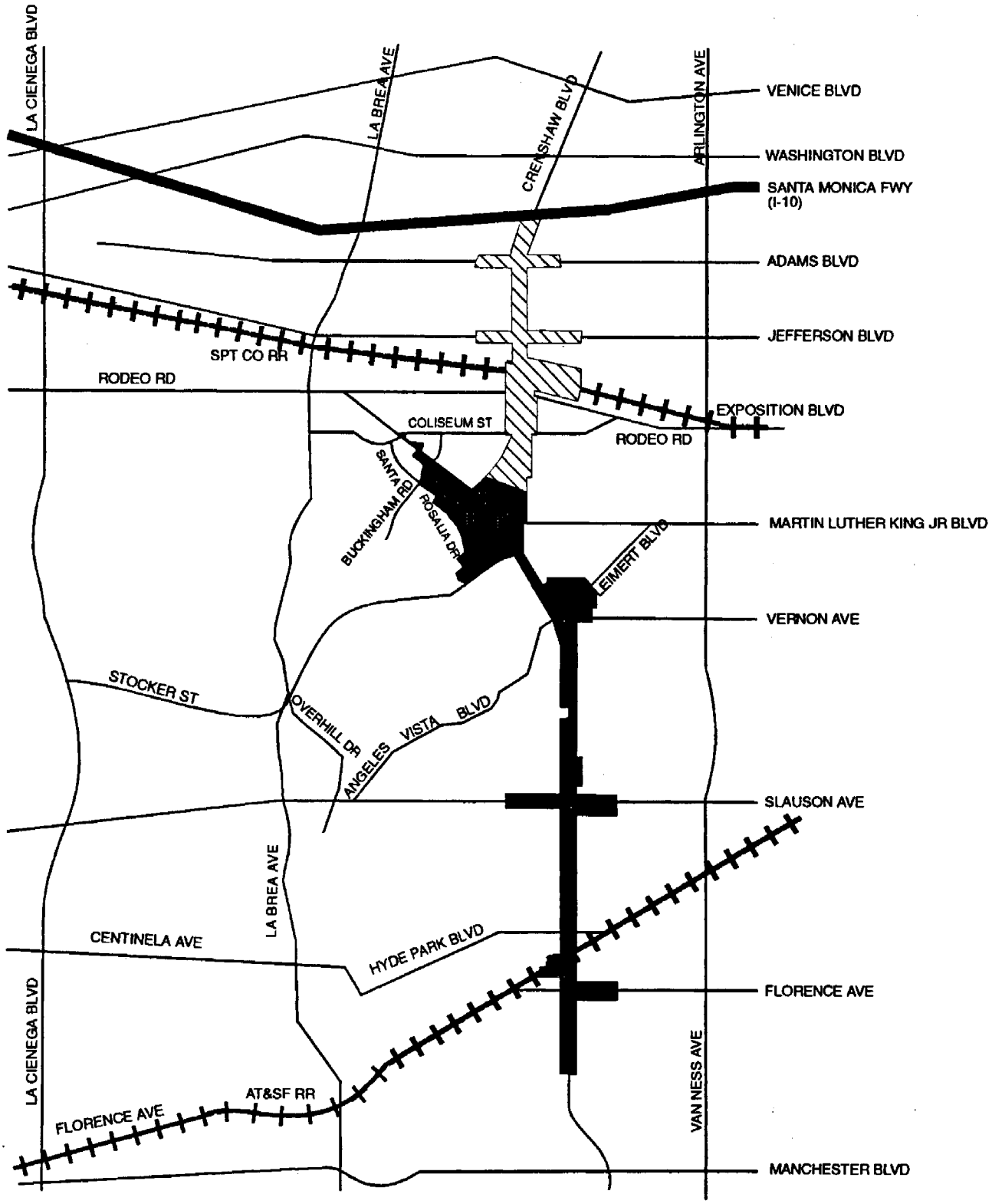
FIGURE 5.10-4
PORTION OF PROPOSED RECOVERY PROGRAM AREA WITHIN SLOPE STABILITY STUDY AREA



LEGEND:

Detailed Study Area

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

SOURCE: Seismic Safety Element of the General Plan, City of Los Angeles Department of City Planning, 1972

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

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FIGURE 5.10-5
PORTION OF PROPOSED RECOVERY PROGRAM AREA WITHIN DETAILED STABILITY STUDY AREA

- **Ground Lurching.** At present, the potential for ground lurching to occur at a given area can be predicted only generally. Areas underlain by thick accumulations of colluvium appear to be more susceptible to ground lurching than bedrock. Under strong seismic ground motion conditions, lurching can be expected within loose, cohesionless soils, or in clay-rich soils with a high moisture content. Generally, only lightly loaded structures such as pavement, fences, pipelines and walkways are damaged by ground lurching; more heavily loaded structures appear to resist such deformation. The potential for ground lurching due to seismic shaking is considered to be moderate in the proposed Recovery Program Area.

HYDROLOGY

An impact will be considered significant if the proposed Recovery Program would 1) result in projects that would disrupt groundwater flows, 2) place proposed new developments in areas susceptible to liquefaction.

Assessment

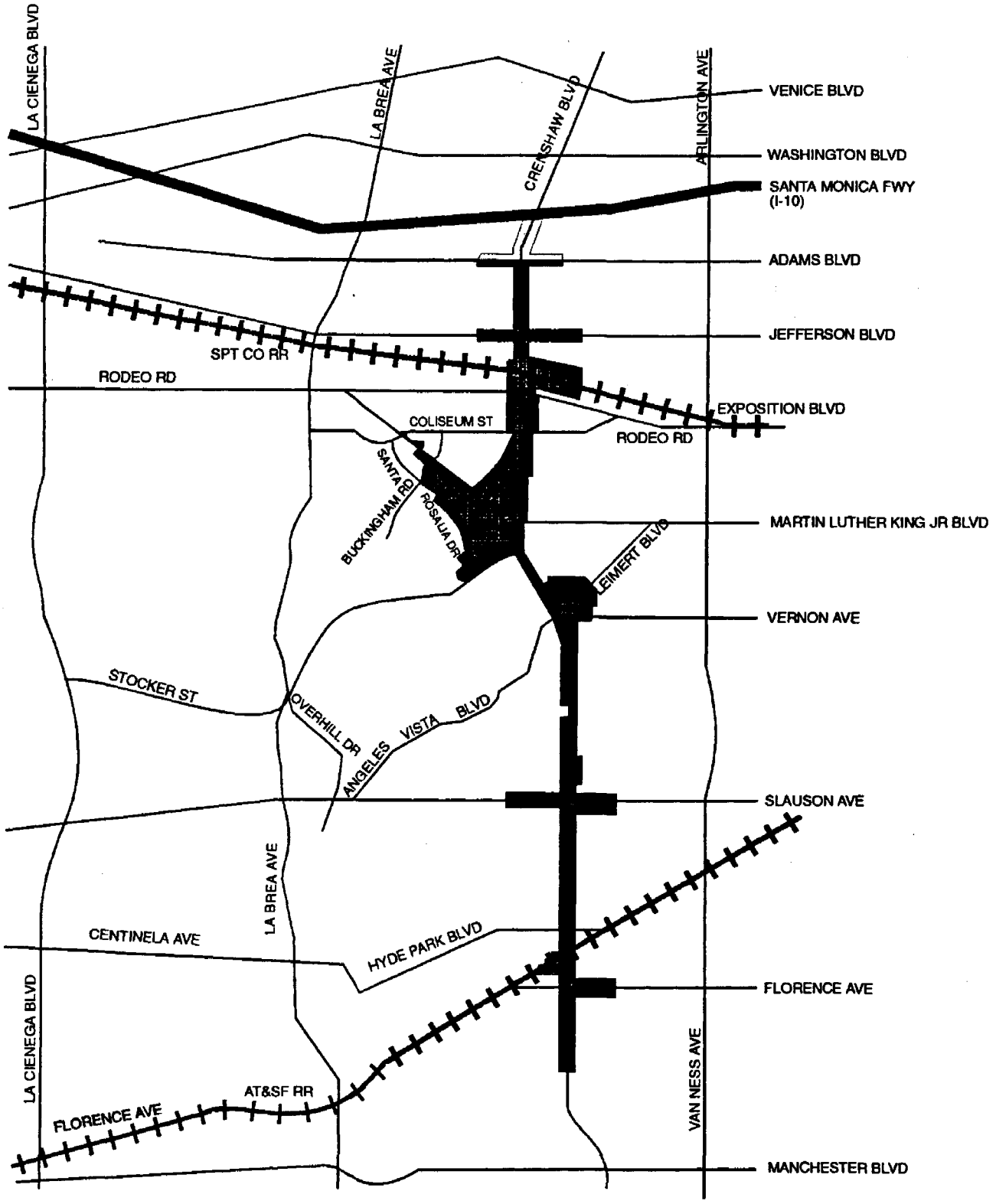
As noted in the project description, the difference between the alternatives is the magnitude of net new development anticipated within the same geographic area, i.e., the proposed Recovery Program Area. A hydrological impact assessment is one of those areas of concern where the primary issue is the effect of the hydrological environment on the proposed land use changes rather than vice versa. From this standpoint, the hydrological environment would affect each of the alternatives under consideration in the same manner. The areas of impact concern are as follows:

Groundwater. Approximate 377 acres (97 percent) of the proposed Recovery Program Area are located within areas with high groundwater levels less than 50 feet (**Figure 5.10-6**). Future projects associated with each of the alternatives under consideration, where subterranean structures are required, would have the potential to affect groundwater flow in these areas.

- Infill/Rebuild Alternative. This alternative would be least likely to require subterranean levels and no adverse impacts are anticipated.

- Moderate Development Alternative. Given the modest scale of future development projects assumed to be associated with this alternative, there would be some limited potential for affects on groundwater flows. Impacts for this alternative would possibly be significant.

- Maximum Probable Development Alternative. The greatest potential for groundwater to be affected would result from higher density developments more likely to be associated with the Maximum Probable Development Alternative (where underground parking may be provided). Impacts for this alternative would be considered significant.



SOURCE: Planned Utilization of the Groundwater Basins of the Coastal Plain of Los Angeles County, California Dept. of Water Resources, Bulletin No. 104, May 1990

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

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FIGURE 5.10-6

APPROXIMATE GROUNDWATER DEPTH IN THE PROPOSED RECOVERY PROGRAM AREA

Liquefaction. Approximately 184 acres (47 percent) of the proposed Recovery Program Area are located within an area susceptible to liquefaction (see **Figure 5.10-7**). Future projects located in these areas associated with each of the alternatives under consideration would be subject to this potential hazard, and as a result the potential for liquefaction would be considered a significant impact.

Flooding. Approximately 107 acres (28 percent) of the proposed Recovery Program Area are located within the 500-year floodplain as designated by the Federal Emergency Management Agency (FEMA). Future projects associated with each of the alternatives under consideration would be subject to this potential hazard, and as a result the potential for flood would be considered a significant impact.

MITIGATION MEASURES

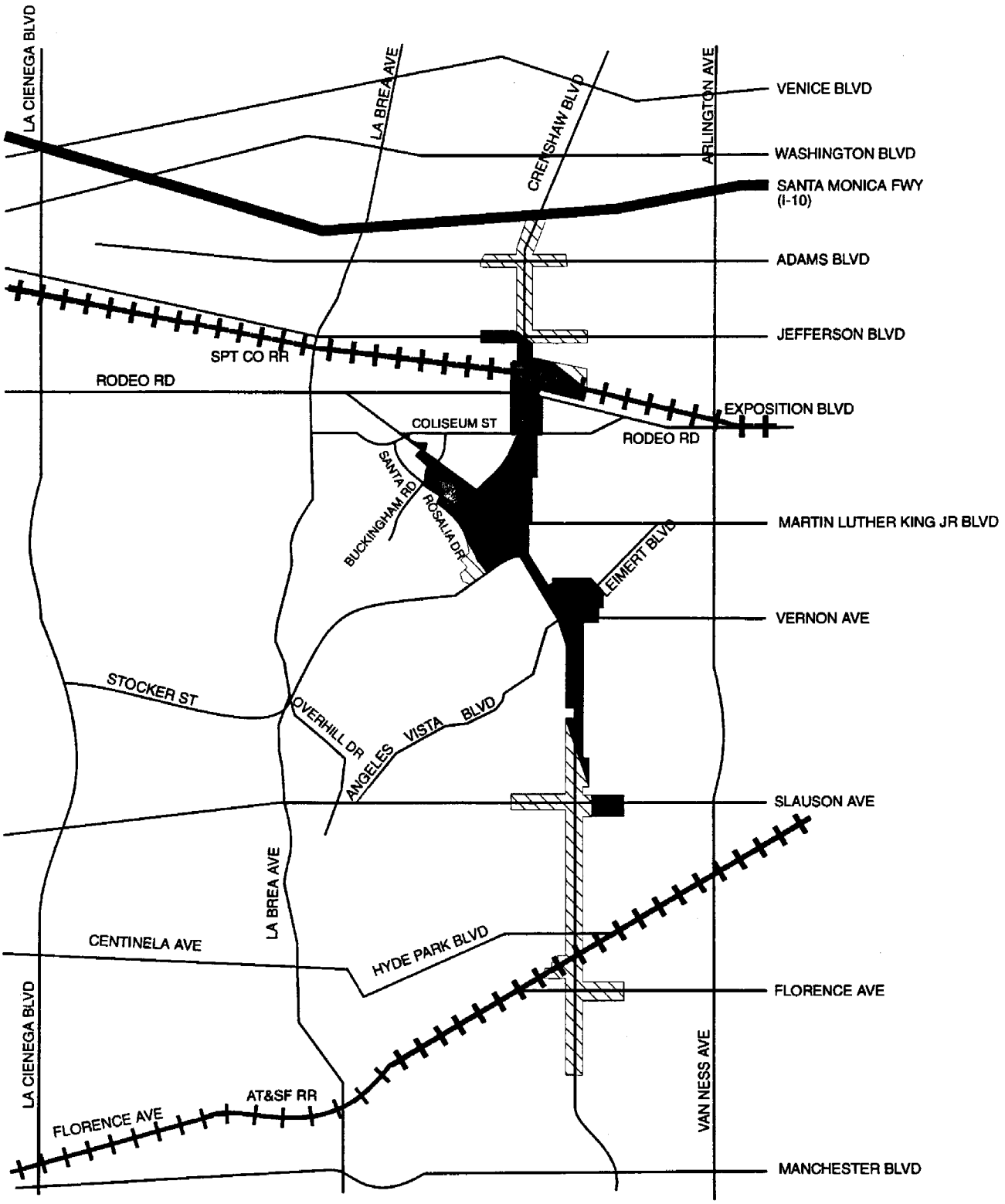
1. The stability of any excavations should be evaluated prior to construction and appropriate methods, such as benching, slope layback, or shoring, applied. All methods should comply with or exceed Cal-OSHA standards.

2. The soils underlying the proposed Recovery Program Area, especially where structures are planned, should be evaluated for the presence of compressible materials. Compressible materials should be removed and replaced as compacted fill (with the exception of peat - which should be removed from the fills). The criteria for leaving surficial soils in-place should be consistent with the grading specifications of the City of Los Angeles. Other recommendations may include deep piles or caissons to support the structures and/or in-place mechanical densification of compressible layers.

3. Determine if the soils underlying the proposed Recovery Program Area are susceptible to liquefaction, and if so, special foundation recommendations should be provided to mitigate this hazard. Possible mitigation recommendations may include deep piles or caissons to support the planned structures, and/or mechanical densification of subsurface soils prone to liquefaction.

4. Determine if the alluvial deposits underlying the site are susceptible to seismically-induced settlement. Special recommendations should be made to mitigate this hazard. Mitigation alternatives include foundations on piles or caissons driven into deeper subsurface materials that are not settlement-prone, or compaction of the near-surface soil materials to decrease their susceptibility to settlement.

5. Determine if soils underlying the proposed Recovery Program Area would be susceptible to ground lurching. If so, special foundation recommendations may be made to mitigate this hazard. An alternate mitigation measure is to remove and recompact the subsurface soils prone to ground lurching.



LEGEND:

Areas susceptible to liquefaction

Proposed Recovery Program Area

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

SOURCE: MLM Associates, 1994

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

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FIGURE 5.10-7

AREAS SUSCEPTIBLE TO LIQUEFACTION

6. Determine which soils with moderate expansivity beneath structural areas may be mitigated by conventional foundations with additional reinforcement. For highly expansive soils, special foundations, such as post-tensioned slab foundations, raft foundations, or caissons may be used as mitigation measures.

7. A state-certified geologist should review all excavations of future projects within the proposed Recovery Program Area for evidence indicative of faulting, or seismically-induced ground deformation. If during grading, an active fault is determined to extend through the proposed Recovery Program Area, appropriate building setbacks may have to be established.

8. Temporary erosion control measures should be provided during the construction phase for future projects in the proposed Recovery Program Area, as required by current grading codes. In addition, a permanent erosion control program should be implemented for the development. This program should include proper care of drainage control devices, proper irrigation, rodent control, and landscaping. Erosion control devices should be field-checked following heavy rainfall periods to confirm that they are performing as designed.

9. A hydrological assessment shall be prepared for all proposed Recovery Program Area projects in areas with high water tables. This assessment shall assess effects on associated aquifers as well as pumping and dewatering requirements.

10. Under the supervision of the City of Los Angeles Department of Building and Safety, any loose surficial liquefaction-prone sediments occurring in the proposed Recovery Program Area shall be compacted to appropriate City standards to reduce liquefaction potential. Additionally, foundations and footings for all developments within susceptible areas shall be designed in accordance with City of Los Angeles code standards to reduce the potential for structural failure associated with liquefaction.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

5.11 SAFETY/RISK OF UPSET

EXISTING CONDITIONS

This section summarizes the findings of a preliminary environmental investigation of the proposed Recovery Program Area performed by MLM & Associates. A copy of this report is on file at the Community Redevelopment Agency. The purpose of this study was to review past and current land use for indications of the manufacture, generation, use, storage and/or disposal of hazardous substances within the proposed Recovery Program Area. In addition, the objective included evaluating the potential for soil and/or ground water contamination resulting from past and present land use activities. Lastly, the investigation was designed to determine the impact any potential environmental contamination may have on plans for future redevelopment. To accomplish the stated objectives, the scope of work included the following:

- A review of readily available aerial photographs to evaluate historic and current land uses and to identify potential activities causing contamination by hazardous substances;

- A review of public records maintained by government and regulatory agencies to determine the reported presence of hazardous substances and contamination in study area; and

- A windshield survey of the study area for visual indications of hazardous substance contamination.

This assessment is limited strictly to identifying potential environmental risks within the proposed Recovery Program Area and does not evaluate the structural condition of any structures. Observations were limited to features visible from the street and were not site specific. The scope of this assessment did not include subsurface exploration or the collection and analysis of any soil, air, ground water or building material samples.

Area Geology and Hydrology

The proposed Recovery Program Area lies in the northwest portion of the Central Block of Los Angeles Basin known as the Downey Plain. The topography of the area is generally flat, sloping gently to the south with an average surface elevation of approximately 130 feet above sea level. The basin is comprised of sedimentary rock overlying basement rock of slightly metamorphosed sedimentary Jurassic rocks. The proposed Recovery Program Area lies on the northwest flank of a gently dipping synclinal trough which trends generally northwest and southeast. Depth of sediment in the area may reach approximately 13,000 feet below sea level. A review of current zoned faults shows that no faults are zoned in the proposed Recovery Program Area. The closest zoned faults lie about one-half mile west of the area and generally trend northwest (see Section 5.10, Geology and Hydrology).

Groundwater occurs in the Recent to Pleistocene-age sediments underlying the proposed Recovery Program Area. Freshwater aquifers are known to exist in the Recent alluvium and

in the Lakewood and San Pedro formations of Pleistocene Age. Perched water zones may occur in the Recent alluvium at any depth before reaching the deeper aquifers. A review of records available indicates area wells have an average depth to groundwater of 165 feet at an average depth of 130 feet.

Historical Review

Historical aerial photographs area were found at the University of California's Department of Geography Spence and Fairchild Aerial Photograph Collection dating from 1921 to 1968. Aerial photographs dating from 1936 to 1958 were viewed at Whittier College's Department of Geology Fairchild Collection. Aerial photographs dating from 1952 to 1993 were viewed at Continental Aerial Photo located in Los Alamitos, California. Historical land use data was extracted from the Sanborn Fire Maps found at California State University Northridge's Geography library.

Review of the photographs indicate rapid development in the area from 1920's to 1930's. The survey results indicate the significant presence of hazardous and toxic materials within the proposed Recovery Program Area dating back to the early 1920's. While the proposed Recovery Program Area was primarily residential, commercial and industrial establishments occupied most of the developed parcels along the main thoroughfares. During a rapid growth period from the 1930's to the 1950's, more industrial businesses came into the area occupying land around the railroad rights-of-way.

Land use data extracted from the Sanborn Fire Maps and aerial photographs indicates land use patterns in the proposed Recovery Program Area of businesses that handled hazardous and toxic materials, primarily auto-related businesses. There were at least 28 facilities dispensing oil and gas within the proposed Recovery Program Area. These were located primarily around the areas where the major arterial streets intersect Crenshaw Boulevard. There were about 12 facilities that provided vehicle maintenance and engine repair. There were at least 10 auto dealerships and eight auto body repair shops.

Current Land Use

Current land uses involving the use of hazardous and toxic materials were determined from analyzing data from government records in conjunction with reviewing results of the windshield survey. Conditions observed during the survey found that along the main thoroughfares, commercial facilities that handled hazardous and toxic substances could be classified in four categories: gas stations, laundries and dry cleaners, auto maintenance shops and auto body shops. While these different facilities were spread randomly along the proposed Recovery Program Area, the highest concentration of hazardous and toxic materials users were found in the Crenshaw Boulevard and Jefferson Boulevard area. The survey indicated that larger industrial facilities that used greater quantities of hazardous and toxic materials and generated more hazardous waste were found to occupy land near the railroad rights-of-way.

Analysis of the proposed Recovery Program Area survey data revealed the number of business that handle hazardous and toxic materials has kept pace with the growth of the

area. The mix of businesses that utilize dangerous substances has changed. While there are at least 41 auto-related businesses in the area, which includes auto maintenance, auto body repair and auto sales, growth in the number of dry cleaners and laundry facilities to a total of 28 has outpaced other business categories. The number of auto sales enterprises has decreased, with some of the facilities being converted into other auto-related businesses, such as auto repair or auto detailing shops. During the early years of rapid development, manufacturing facilities were being built at a rapid rate. Today many of these facilities are no longer operational.

Environmental Records Review

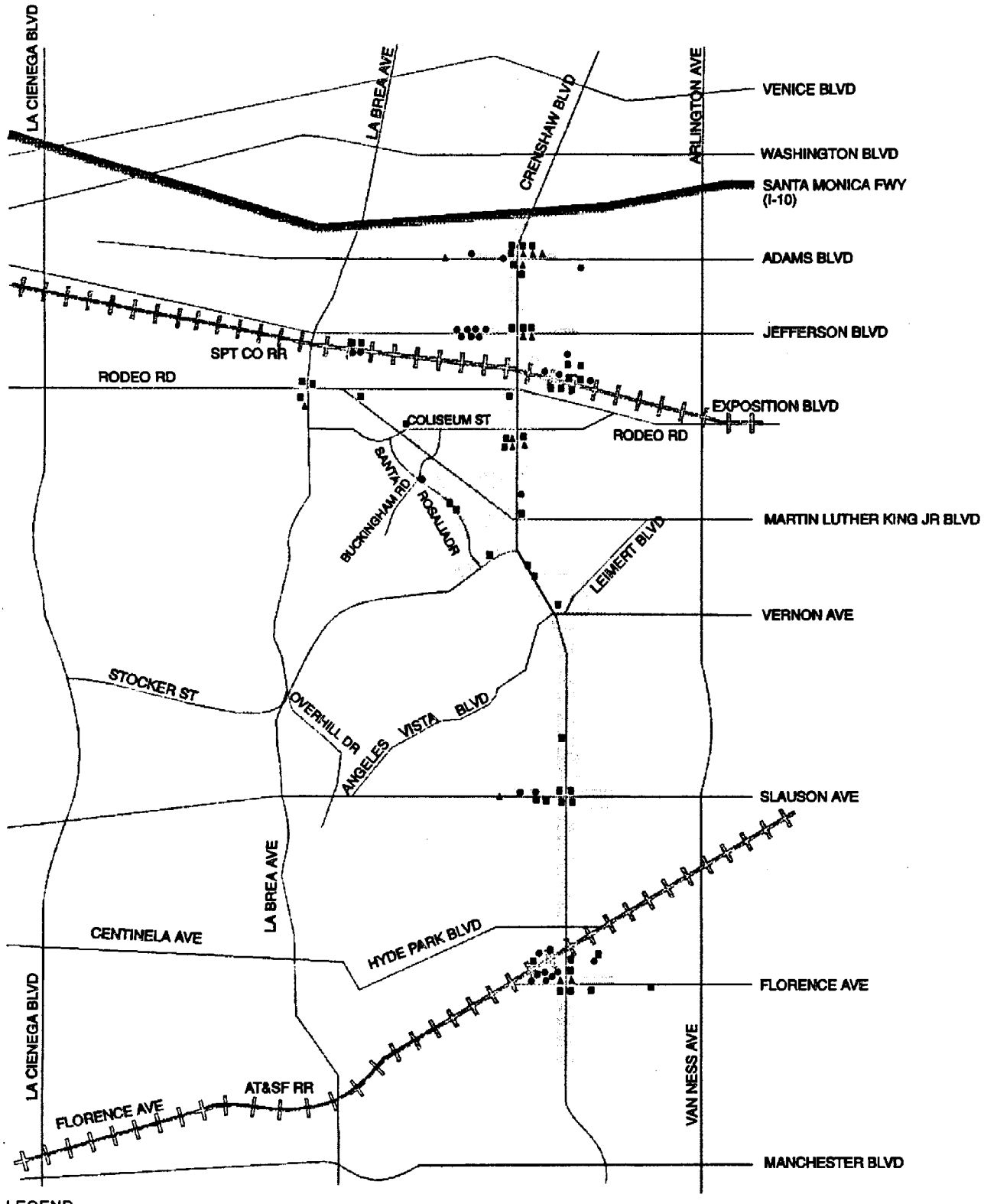
Environmental information and records relating to hazardous and toxic materials were obtained from government and regulatory agencies. Environmental data was gathered on the hazardous materials and regulated wastes, discharge incidents, discharge permits and area oil and gas wells. A search of appropriate environmental data bases was performed by Environmental Data Resources. Information extracted from the environmental data bases can provide insight on the location of identified environmental problems, which may include leaking underground storage tanks, hazardous substances releases and spills, hazardous waste generation, landfills and abandoned sites. The sites that have greater potential for environmental hazards typically include industrial or commercial properties which handle or generate hazardous materials.

The data indicates there are 85 sites within the proposed Recovery Program Area that generate hazardous waste. Fourteen incidents involving leaking underground storage tanks have been reported. There are also 29 abandoned sites listed. **Table 5.11-1** summarizes the sites handling hazardous and toxic materials by subarea. **Figures 5.11-1** and **5.11-2** show the location of these sites.

TABLE 5.11-1: SITES HANDLING HAZARDOUS AND TOXIC MATERIALS

	Cal Sites/a/	Large Quantity Hazardous Waste Generators	Small Quantity Hazardous Waste Generators	Underground Storage Tanks	Leaking Underground Storage Tanks
Subarea 6	4	2	11	17	4
Subarea 8	2	7	24	14	1
Subarea 10	18	16	23	24	9
TOTAL	**24**	**25**	**58**	**55**	**14**

/a/ Indicates abandoned sites listed by the California Department of Toxic Substances.
Source: MLM & Associates.



LEGEND:

- ● Cal Sites
- ■ UST Sites
- ▲ L.U.S.T. Sites
- □ Proposed Recovery Program Area

APPROX. SCALE: N

0 0.25 0.50 0.75 Miles

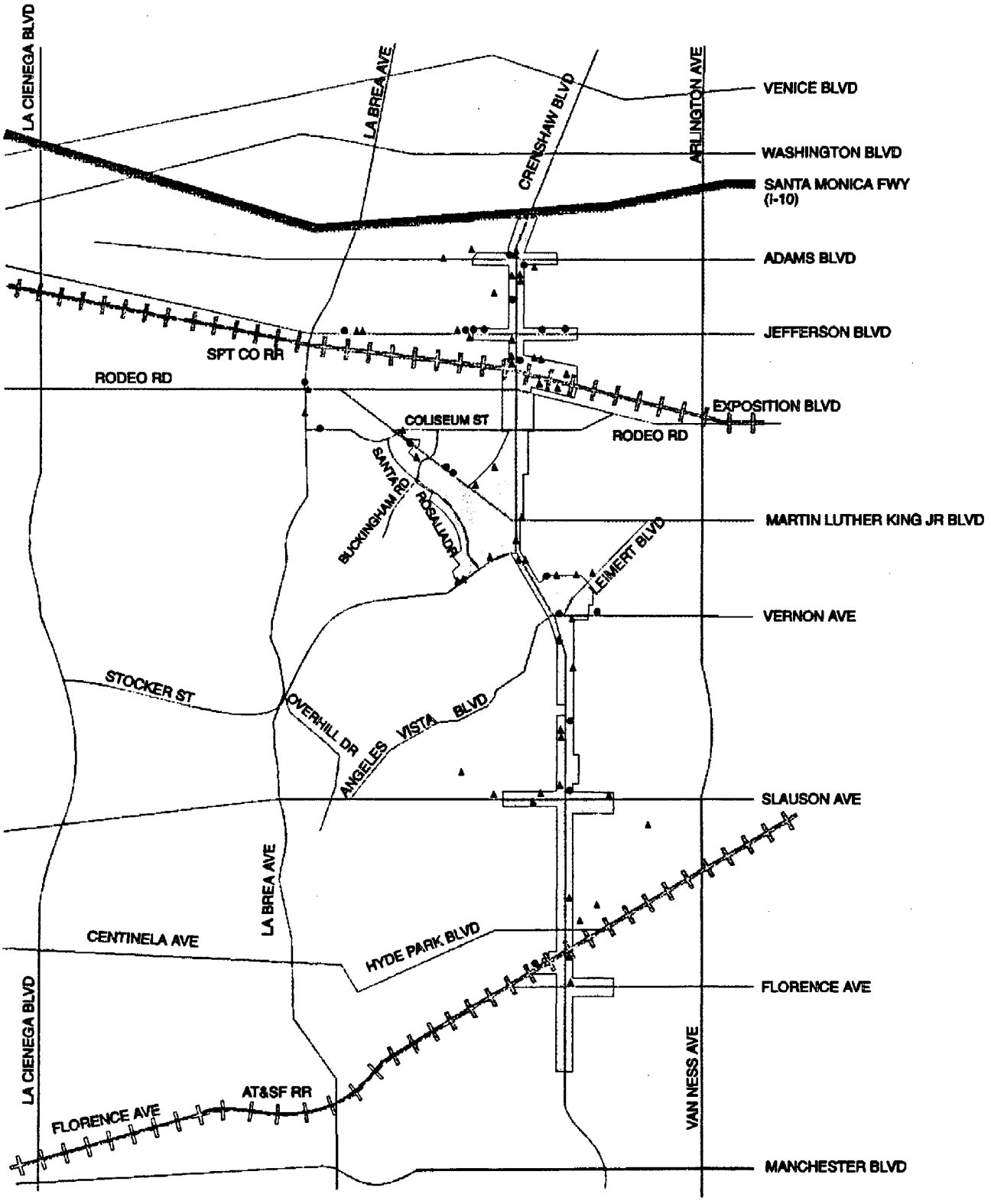
SOURCE: MLM Associates, 1994

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.11-1

ABANDONED SITES AND UNDERGROUND STORAGE TANK SITES



LEGEND:

- ● Large Quantity Hazardous Waste Generator
- ▲ Small Quantity Hazardous Waste Generator
- ☐ Proposed Recovery Program Area

SOURCE: MLM Associates, 1994

APPROX. SCALE: N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.11-2

LARGE AND SMALL QUANTITY HAZARDOUS WASTE GENERATORS

Areas of Risk

The proposed Recovery Program Area consists of primarily commercial and industrial properties. Commercial properties exist throughout the entire area. Industrial facilities are concentrated around the railroad right-of-way area near Crenshaw Boulevard and Florence Avenue as well as Crenshaw and Exposition Boulevards. Another industrial property cluster is found on Jefferson Boulevard just west of Crenshaw Boulevard. For planning purposes, zones of high and medium environmental risk have been identified on **Figure 5.11-3**.

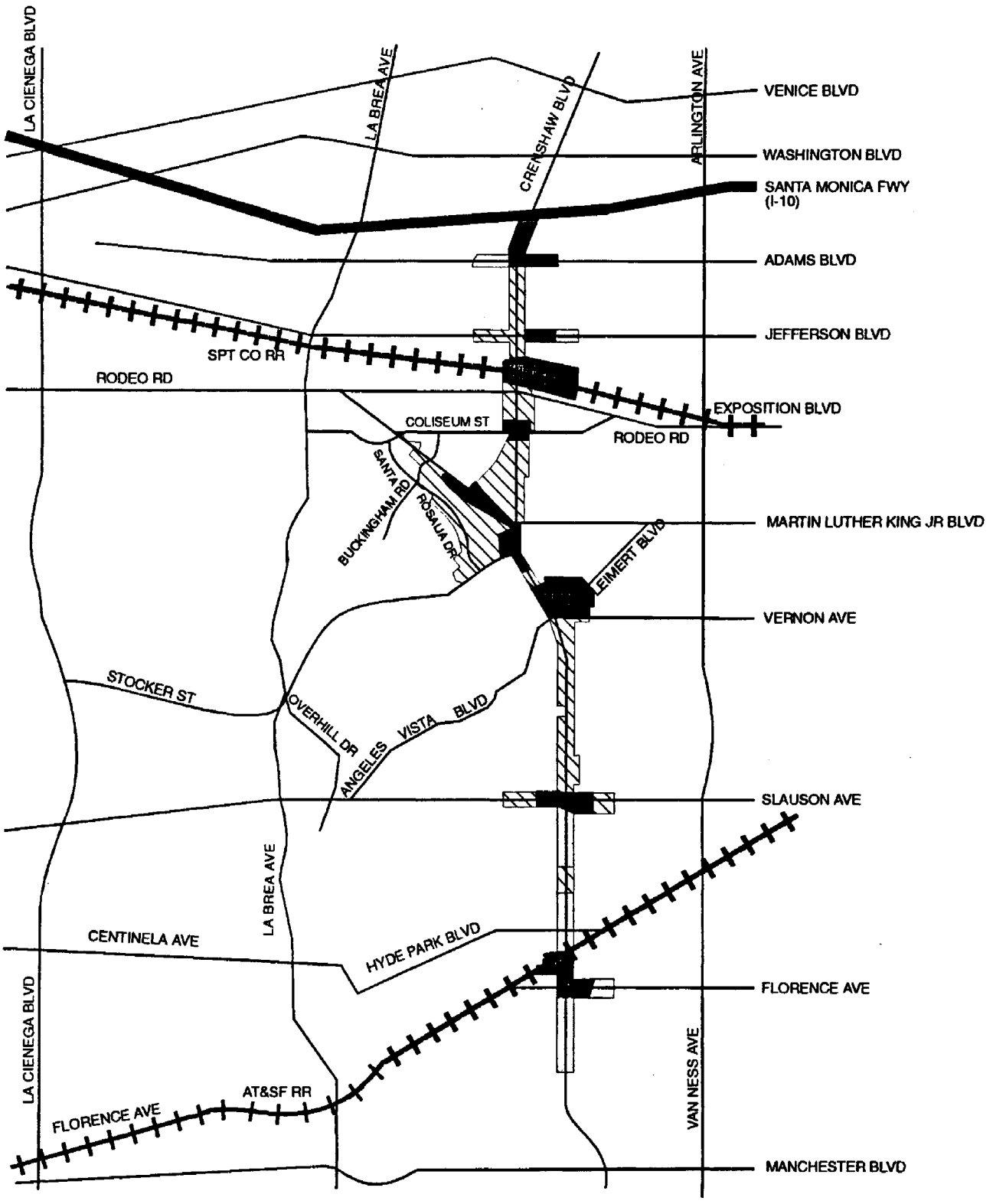
High Risk Areas

Zones of high environmental risk contain sites of known underground storage tanks or areas of intense industrial development. These areas may also contain properties that generate large quantities of hazardous waste. The risk of contamination in these areas is to be considered relatively high as a result of the past or present site usage. An L-shaped area consisting of properties on Crenshaw Boulevard from the Santa Monica Freeway to Adams Boulevard then eastward on Adams Boulevard to Montclair Street has been identified as a high risk area. Within this zone there are five identified sites with underground storage tanks. Soil contamination from leaking underground storage tanks has been found at four sites.

A small strip along Jefferson Boulevard has also been classified as a high environmental risk area due to several underground storage tanks as well as several facilities in the area generating large quantities of hazardous waste. The land located on railroad right-of-way southeast of Crenshaw Boulevard and Exposition Boulevard is heavily industrialized. This zone has manufacturing facilities as well as maintenance staging yards for utility companies. In addition, there are some abandoned sites that appear on the California Sites list.

The 3800 block of Crenshaw Boulevard has been identified as a high risk area. Leaking underground storage tanks have been found at closed automobile sites. In the area of the Baldwin Hills Crenshaw Plaza there are several gasoline stations that have leaking underground storage tanks. Large quantities of hazardous waste are generated by area dry cleaning facilities, thus causing a high risk rating. The Leimert Park vicinity has also been classified as a high risk zone. Several auto-related facilities along with several gas stations and dry cleaners are in the area.

Six underground storage tanks are found on Slauson Avenue near Crenshaw Boulevard. None of the underground tank systems has been found leaking. However, two area sites have been abandoned. The final high environmental risk area within the proposed Recovery Program Area is located around Florence Avenue and the railroad right-of-way. Six abandoned California Sites as well as several underground storage tanks are located near the railroad.



LEGEND:

High Environmental Risk

Medium Environmental Risk

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

SOURCE: MLM Associates, 1994

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.11-3
AREAS OF HIGH AND MEDIUM ENVIRONMENTAL RISK IN THE PROPOSED RECOVERY PROGRAM AREA

Medium Risk Areas

Zones of medium environmental risk are areas of commercial and light industrial use. In these areas the risk of environmental hazards is less that of high risk. Southward on Crenshaw Boulevard from Adams Boulevard to Jefferson Boulevard, dry cleaning facilities and auto-related shops line the street. These businesses handle toxic substances or generate small quantities of hazardous waste. A similar mix of businesses is also found further south on Crenshaw Boulevard just past Exposition Boulevard.

The area surrounding Santa Barbara Plaza has been zoned as a medium environmental risk. A few of the area facilities generate small quantities of hazardous waste. Crenshaw Boulevard, south of Vernon Avenue to Slauson Avenue, was given a medium environmental risk rating. Only one underground storage tank exists in this strip. However, there are a few facilities that generate small quantities of hazardous waste. A school, a senior citizen's center and a library are identified small quantity hazardous waste generators in the zone. The area south of Slauson Avenue extending to the railroad tracks is considered to be a medium environmental risk area. Minimal hazardous materials are found in the zone.

Low Risk Areas

The remainder of the proposed Recovery Program Area is considered to be of relatively low risk for environmental hazards. These areas are mostly retail uses mixed with some residential uses. No indication of hazardous materials use was encountered in these areas. South of Florence Avenue on Crenshaw Boulevard is a recognized low risk zone. Mostly single-family dwellings and apartment buildings occupy land in this area.

IMPACTS

Significance Criteria. Throughout the proposed Recovery Program Area, there is a significant presence of hazardous and toxic materials. Environmental contamination from previous land use has been identified to exist in several sites spread over a wide area of the proposed Recovery Program Area. An impact will be considered significant if, through new development or re-use, a project will result in an accidental upset or release of a hazardous substance, unexpectedly expose people to hazardous material through ingestion, inhalation or absorption, or encounter soil and groundwater contamination.

A hazardous substance assessment is an area of concern where the primary issue is the effect of the hazardous substance environment on the proposed land use changes within the proposed Recovery Program Area. From this standpoint, a hazardous substance environment would affect each of the alternatives under consideration in the same manner. The development on currently vacant infill sites or the re-use of unoccupied buildings or new development would each require the consideration of hazardous substance impacts. The wide extent of hazardous and toxic materials within the proposed Recovery Program Area suggests that a significant impact is anticipated for each alternative.

MITIGATION MEASURES

Listed below are recommended mitigation measures to reduce the potential incidents involving hazardous and toxic materials, as well as lessen the contaminated soils impacts.

1. Projects involving hazardous materials shall be reviewed for proper handling procedures and safe operating practices. A detailed engineering analysis should be completed to include a review of spill containment procedures and waste minimization appraisal.

2. The project sponsor/s shall obtain all necessary regulatory agency permits prior to commencing project. A hazardous material inventory business plan shall be registered with the Fire Department Hazardous Material Unit.

3. If the evidence of soil contamination or the presence of an underground storage tank is revealed, excavation shall be conducted to remove the underground storage tank and/or remediate contaminated soils and groundwater. The procedure shall be performed by a qualified environmental professional in conformance with applicable city, state and federal standards.

4. A project involving hazardous waste shall only use properly trained and qualified hazardous waste handlers to address hazardous waste disposal needs.

5. Site specific Phase I Environmental Assessments are recommended for proposed developments within the proposed Recovery Program Area. Where applicable, an asbestos and/or lead-based paint investigation shall be conducted on structures to be demolished or rehabilitated.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.

5.12 ARCHAEOLOGICAL RESOURCES

EXISTING CONDITIONS

The Archaeological Information Center, UCLA Institute of Archaeology conducted an archaeological records search of the proposed Recovery Program Area and vicinity. A complete copy of their report is on file with the Community Redevelopment Agency.

Six prehistoric archaeological sites have been identified through the records search within a one-mile radius of the Crenshaw Boulevard and Martin Luther King Jr. Boulevard intersection. Two of the sites consist of human burials and three consist of lithic scatter, manos, metates and chipped points (see **Figure 5.12-1**). Information on the sixth site is currently unavailable.

IMPACTS

Significance Criteria. Significant impacts to archaeological properties would occur from any process of surface modification which disturbs, scatters, relocates or otherwise reduces the integrity and scientific research potential of the archaeological resource.

Assessment

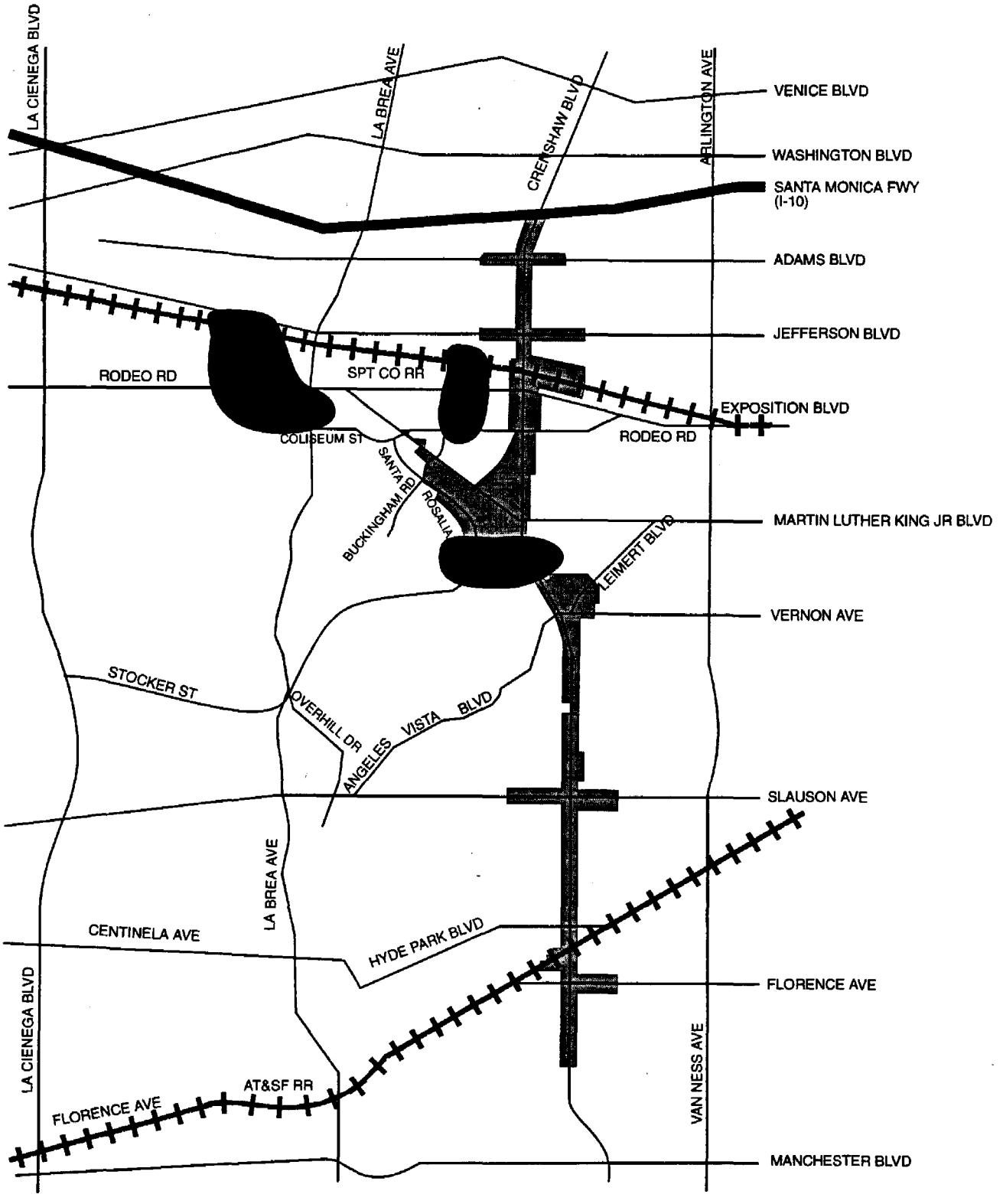
Due to the fact that archaeological resources have been recorded within and adjacent to the proposed Recovery Program Area, the likelihood of encountering archaeological resources as part of site specific development is considered high. This potential for a significant impact would be similar for each of the alternatives.

MITIGATION MEASURES

Prior to the approval of building permits for future site specific developments within the Recovery Program Area, particularly those within or adjacent to the sensitive archaeological areas identified in **Figure 5.12-1**, a Phase 1 archaeological investigation should be conducted by a professional archaeologist.

UNAVOIDABLE SIGNIFICANT ADVERSE IMPACTS

None.



LEGEND:

Sensitive Archaeological Areas

Proposed Recovery Program Area

SOURCE: Archaeological Information Center, UCLA Institute of Archaeology, July 1992.

APPROX. SCALE:

N

0 0.25 0.50 0.75 Miles

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 5.12-1
SENSITIVE ARCHAEOLOGICAL AREAS IN THE VICINITY OF THE PROPOSED RECOVERY PROGRAM AREA

6.0 OTHER DISCUSSIONS REQUIRED BY CEQA

The California Environmental Quality (CEQA) requires that the assessment of potential environmental impacts specifically address the following topics:

- The relationship between local short term uses of the environment and the maintenance and enhancement of long term productivity;
- Irreversible environmental changes resulting from project implementation;
- Growth-inducing impacts of the proposed action;
- Cumulative impacts;
- No Project Alternative; and
- Environmentally Superior Alternative.

6.1 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF THE ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG-TERM PRODUCTIVITY

The proposed Recovery Program Area is used for a variety of commercial purposes including retail, office, and public service. The proposed Recovery Program Area has been designated for regional commercial and community/neighborhood-oriented commercial type uses in the City's West Adams-Baldwin Hills-Leimert District Plan. Therefore, the proposed Recovery Program would not result in a change in the type of use proposed for long-term commitment. The proposed Recovery Program would represent the short-term commitment of the site for continued commercial uses and would preclude use of the site for other long-term uses during the life of the proposed Recovery Program Area (estimated to be at least 15-20 years).

Long-term impacts of the proposed Recovery Program would include incremental additions to air emissions, traffic congestion and increases in water, gas and power consumption, as well as increased demands for sewer and landfill capacity.

The assumed level of development within the proposed Recovery Program Area would increase short-term employment opportunities during construction and would provide long-term employment opportunities required for operation of on-site facilities.

Considerations favoring adoption and implementation of the proposed Recovery Program now, rather than at some later time include:

- Continued revitalization of the area which is becoming an increasing need particularly after the civil unrest in April and May of 1992 which resulted in the closure and/or destruction of several of the proposed Recovery Program Area businesses and structures, leaving some parcels in a blighted condition;

- Increased employment opportunities, especially for area residents; and

- Increasing cost of development, rising labor costs, and rising material costs.

6.2 IRREVERSIBLE ENVIRONMENTAL CHANGES RESULTING FROM PROJECT IMPLEMENTATION

Development of the assumed level and type within the proposed Recovery Program Area would cause the irreversible commitment of limited resources including energy, and water for project development. The construction phases and subsequent occupancy of new development would require a commitment of energy resources for building materials, fuel and operation, and the transportation of goods and people to and from the project site.

Commitment during construction of future projects within the proposed Recovery Program Area would include:

- Construction labor;

- Materials used in construction, such as glass, steel, concrete and petroleum based plastics; and

- Fossil fuels consumed by project generated traffic and construction equipment.

Commitment of resources following construction of projects within the proposed Recovery Program Area would be similar to existing conditions which include:

- Electricity and gas to operate the project; and

- Fossil fuels generated by project-generated traffic.

Since fossil fuels are currently the principal energy source, the assumed level of development within the proposed Recovery Program Area would incrementally reduce existing supplies of fuels including fuel oil, natural gas, and gasoline. These changes are not considered significant when compared to existing energy consumption, however, this still represents a long-term commitment of essentially non-renewable resources.

The construction of future projects within the proposed Recovery Program Area would also require the commitment or destruction of other non-renewable and slowly renewable

resources. These resources include the following: lumber and other forest products, sand, gravel and stone, asphalt, petrochemical construction materials, steel, copper, lead, and other metals, and water.

Commitment of the proposed Recovery Program Area to the proposed level and type of future development would restrict future generations from other uses for the life of the project, approximately 15-20 years.

6.3 GROWTH-INDUCING IMPACTS OF THE PROPOSED ACTION

Generally a project is considered to result in growth-inducing effects if it causes one of the following:

- extends infrastructure (sewer, water, etc.) to an area currently undeveloped and/or lacking in adequate infrastructure; and

- provides housing or employment to an area currently undeveloped or lacking in adequate housing or employment.

The proposed Recovery Program would not extend infrastructure beyond that required to meet the anticipated needs of future development in the proposed Recovery Program Area. In fact, most of the infrastructure necessary for future development within the proposed Recovery Program Area is already in place to serve commercial uses. In addition, the area lies in a developed urban area where adjacent properties are already developed and served by existing infrastructure. Therefore, if infrastructure improvements are required within the proposed Recovery Program Area, they are not anticipated to result in growth inducing effects.

The proposed level of development within the proposed Recovery Program Area is estimated to generate the capacity for as many as 4,900 new jobs. It is anticipated that some of the jobs created by development of the project would be filled by the local labor force. The proposed Recovery Program Area has a higher unemployment rate than adjacent neighborhoods and therefore the additional jobs are anticipated to help fill an existing employment need for area residents.

6.4 CUMULATIVE IMPACTS

The potential for impacts associated with the proposed Recovery Program to have a combined effect with other future developments is discussed below. In the immediate vicinity of the proposed Recovery Program Area, the potential for cumulative impacts is considered quite low because the proposed Recovery Program Area is surrounded by long established residential neighborhoods with little if any vacant land. A review of planned or future projects in these adjacent residential areas has found no active applications or proposals for major development projects.

Housing, Population and Employment. It is the intent of the proposed Recovery Program to provide dwelling units and jobs that are targeted to meet local community needs. The Crenshaw Corridor is, however, adjacent to the Mid City Recovery Program Study Area and to the South Central Recovery Program Study Area which are proposed to be implemented in the same time frame as the Crenshaw Corridor. These three Recovery Areas taken together could cumulatively increase the housing supply and job capacity in the greater South Los Angeles area.

Traffic and Circulation. The traffic impact analysis presented in this report has explicitly taken into account growth in traffic that would be generated in areas outside of the immediate vicinity of the proposed Recovery Program Area. In essence the traffic impact computations for the cumulative base conditions have addressed the impacts of the largely through traffic from other areas passing through the Crenshaw Corridor. Traffic from the proposed Recovery Program alternatives has been added to this base to arrive at a total cumulative effect. Under worst case conditions 29 of the 41 intersections would operate at unacceptable levels of service.

Air Quality. Given that there are no known planned or future projects proposed in the vicinity of the proposed Recovery Program Area, the potential for cumulative construction related emissions is low. In the long term the cumulative effect of through traffic combined with local traffic would result in adverse cumulative carbon monoxide impacts on one of the five representative receptor locations studied.

Noise. Traffic volume changes that combine the effect of local traffic with through traffic have been addressed in the noise impact analysis. The combined effect of these traffic sources would not produce discernible noise changes,

Public Services. The increase in development anticipated in the proposed Recovery Program would contribute to the need for increase fire protection services and would affect the allocation and distribution of these services citywide. In addition, the combined affect of through traffic with proposed Recovery Program-related development traffic would result in unacceptable operations at a number of area intersections. If not properly mitigated --as discussed in the traffic impact section of this report-- these poorly operating intersections could impair fire and paramedic response times.

Similar to fire services, the increase in development anticipated in the proposed Recovery Program Area would increase the residential and daytime population, and as a result there would be an increased demand for police protective services. This increase would constitute a cumulative impact on the citywide delivery of police services.

The addition of new housing into the proposed Recovery Program Area would increase the number of school-age students. This increase would contribute to a cumulative impact on school district where a number of schools in the area are either near or over enrollment capacity.

Utilities and Energy. The discussions of water supply, sewer treatment capacity, sewer capacity and landfill capacity each indicate that there are severe citywide or regionwide capacity restrictions. Anticipated new development within the proposed Recovery Program Area would contribute to increased cumulative demand on these infrastructure elements. Increases in energy consumption would also contribute to the depletion of non-renewable resources such as fossil fuels.

Geology and Hydrology. No cumulative effects anticipated.

Safety/Risk of Upset. No cumulative effects anticipated.

6.5 NO PROJECT ALTERNATIVE

Under this alternative, the Community Redevelopment Agency would not be involved in financial assistance or in land assembly within the Crenshaw Corridor other than current Agency involvement within the Crenshaw Redevelopment Project Area (Baldwin Hills Crenshaw Plaza). There would be no Agency intervention to stimulate development and reinvestment in the overall Crenshaw Corridor. Taking no action would not meet the objectives of the City Council nor of the local community to upgrade the physical and economic environment of the Crenshaw community through new development and rehabilitation of existing uses.

It should be recognized that the No Project Alternative would not mean that there would be a prohibition of the development within the proposed Recovery Program Area. Development initiated by private parties or other public agencies could still occur under the provisions of the West Adams-Baldwin Hills-Leimert District Plan. It is anticipated, however, that the magnitude and level of growth that may occur would be minimal where the historical growth rate in commercial space has been substantially below the City average. For example, the Land Use Planning and Management System (LUPAMS) files for the 1980 to 1990 period indicate that there was a one percent growth rate of space within the proposed Recovery Program Area over the 10-year period. During the same period, citywide the commercial space growth rate was 136 percent. Without significant public intervention in the Crenshaw Corridor, it is anticipated that the No Project Alternative would continue to perpetuate the slow or no growth as has historically been the case in the area.

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The California Environmental Quality Act Guidelines, Section 15126.(d) require the identification of an "environmentally superior" alternative. Generally, the alternative that could most reduce or eliminate the significant adverse impacts associated with the proposed project development would be considered the environmentally superior alternative. Because Alternative 1, the "No Project" alternative does not create any new impacts, it can generally be identified as the environmentally superior alternative. However, CEQA Guidelines require that when the "No Project" alternative is chosen as the environmentally superior

alternative, the EIR must also identify an environmentally superior alternative amongst the other alternatives. In this case, the alternative which most reduces traffic impacts, potential conflicts between proposed land uses, air pollutant emissions, anticipated mobile noise levels, police impacts, sewage infrastructure impacts, and exposure to geologic hazards, would be considered the environmentally superior alternative.

Of the three proposed Recovery Program alternatives presented, the Infill/Rebuild Alternative would be considered the environmentally superior alternative. Development of the Infill/Rebuild Alternative, would generate the least vehicle trips, and therefore, the least air pollutant mobile emissions, and the least mobile noise impacts. In addition, development of the Infill/Rebuild Alternative would generate lesser amounts of natural gas, electricity, water and sewer demands as well as fewer impacts to public services.

7.0 PROPOSED AMENDMENT TO THE CRENSHAW REDEVELOPMENT PROJECT(COUNCIL DISTRICT 8 SUBAREA)

As indicated in the project description section of this report, the Citizen Advisory Committee for the City Council District No. 8 segment of the Crenshaw Corridor (Subarea 8) has voted to pursue redevelopment as the method to facilitate reinvestment and growth in the Subarea. Towards this end, the current Crenshaw Redevelopment Project Area would be expanded to include Subarea 8. The existing Crenshaw Redevelopment Project encompasses 54 acres. The proposed amendment of the Crenshaw Redevelopment Plan would add approximately 71 acres, thus bringing the entire Crenshaw Redevelopment Project Area to approximately 125 acres (see **Figure 7.1-1**).

Similar to the entire corridor, development alternatives considered within proposed Plan Amendment Area would entail infill/rebuild, moderate development and maximum probable development alternatives (see **Table 7.1-1**). The potential environmental consequences and mitigation measures associated with these alternatives are discussed below:

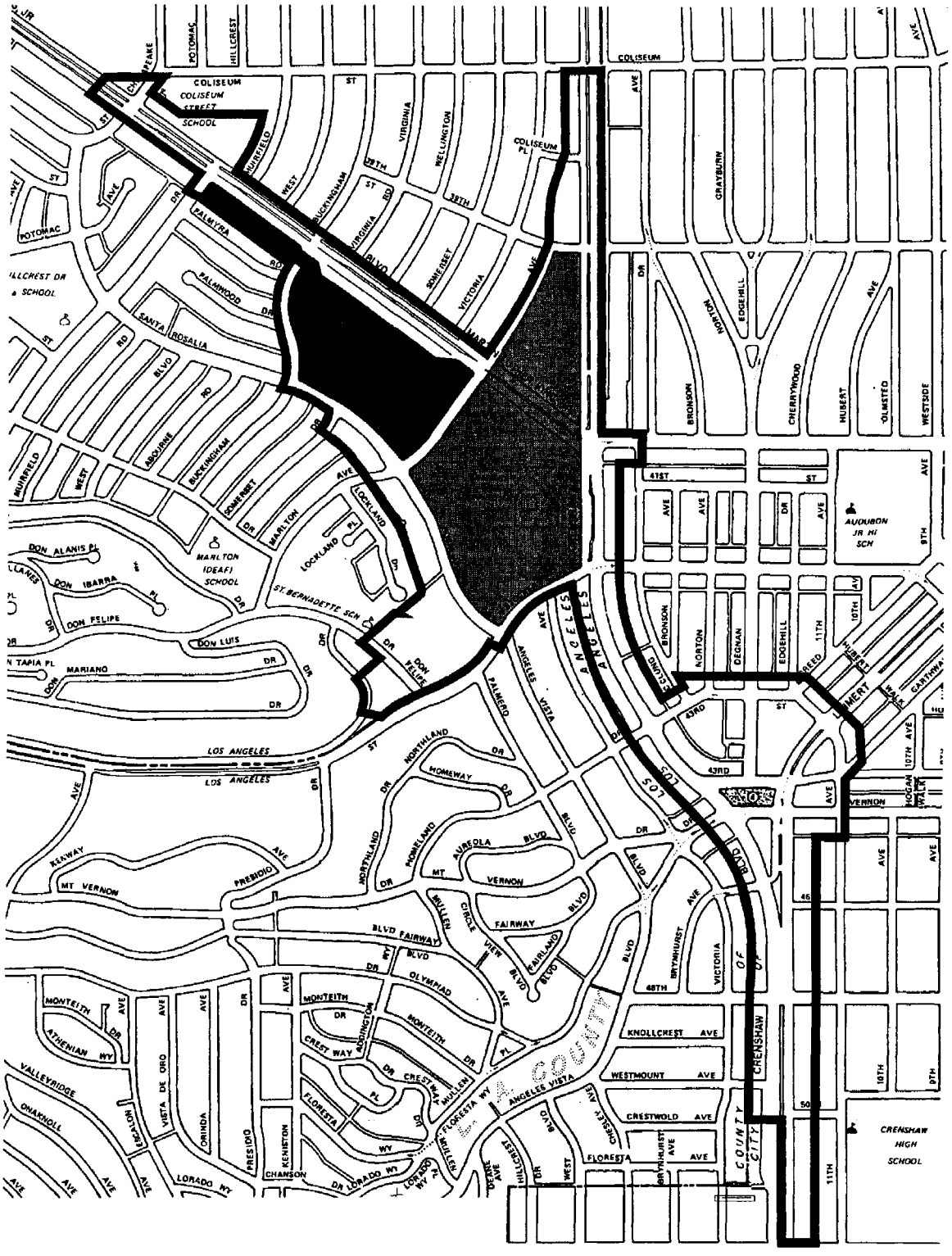
LAND USE

TABLE 7.1-1: NET NEW DEVELOPMENT FOR PROPOSED REDEVELOPMENT PLAN AMENDMENT AREA

	Non-Residential Development			Residential Development		
	Total New Development	Existing Development Potentially Displaced	Net New Development	Total New Units	Existing Units Potentially Displaced	Net New Units
Infill/Rebuild Alternative	136,400	0	136,400	63	0	63
Moderate Development Alternative	933,700	514,500	548,200	202	0	202
Maximum Probable Development Alternative	1,086,600	698,600	808,900	717	20	697

Source: Terry A. Hayes Associates.

- **Compatibility with the General Plan.** Development associated with the Infill/Rebuild and Moderate Development Alternatives would be entirely consistent with the West-Adams-Baldwin Hills-Leimert District Plan and no adverse impacts are anticipated. Development associated with the Maximum Probable Development Alternative would also be substantially consistent with the current district plan, however, densities may exceed plan limits in areas within one-half mile radius of future rail transit stations such as at the intersection of Martin Luther King Jr. Boulevard and Crenshaw Boulevard and at the intersection of Vernon Avenue and Crenshaw Boulevard. This level of development could exceed current plan limits but it would be consistent with the MTA/City of Los Angeles Transportation and Land Use Policy. The potential change in the level of development would require a general plan amendment, which would be considered significant.



LEGEND:

- Current Proposed Redevelopment Amendment Area
- Existing Crenshaw Redevelopment Project Area
- 1991 Proposed Redevelopment Plan Amendment Area

SOURCE: City of Los Angeles Department of Public Works Bureau of Engineering, May 1981 and Community Redevelopment Agency of the City of Los Angeles, 1993

APPROX. SCALE:

N

0 275 550 825 1100 Feet

CRENSHAW REVITALIZATION/RECOVERY PROGRAM EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 7.1-1

PROPOSED CRENSHAW REDEVELOPMENT PROJECT AMENDMENT AREA

- **Potential for Land Use Conflicts.** Impacts may be significant in those areas where new development cannot be adequately buffered from existing residential neighborhoods or individual homes.

- **Displacement.** The Infill/Rebuild Alternative would not displace exiting non-residential or residential land uses, and, as a result, no significant impact is anticipated. The Moderate Development Alternative would potentially displace approximately 515,000 square feet of non-residential space, and no housing would be affected. This impact would be considered significant. The Maximum Probable Development Alternative would displace approximately 699,000 square feet of non-residential space and approximately 20 residential dwelling units. This change would be considered significant.

- **Mitigation Measures.** See Section 5.1.

- **Unavoidable Significant Adverse Impacts.** To the extent that displaced uses beneficial to the Subarea 8 community cannot be relocated or accommodated within the proposed Redevelopment Plan Amendment Area, the loss of such uses would be considered significant.

HOUSING, POPULATION AND EMPLOYMENT

- **Housing and Population Added.** The Infill/Rebuild Alternative would add approximately 63 dwelling units or 161 persons to the Subarea. The Moderate Development Alternative would result in a net increase in 202 dwelling units or 515 persons. The Maximum Probable Development Alternative would result in the net addition of 697 dwelling units or approximately 1,777 persons. Added dwelling units and population for each of the alternatives are considered a significant impact.

- **Employment Capacity Added.** The Infill/Rebuild Alternative would create the capacity for approximately 341 jobs. The Moderate Development Alternative would create the capacity for approximately 2,355 jobs, while the Maximum Probable Development Alternative would create the capacity for 3,350 jobs.

- **Potential Business and Employment Displacement.** Since no site specific projects have been defined, the estimate of displacement is based on estimates of the average business size and number of employees per business. The Infill/Rebuild Alternative would displace no businesses. For the Moderate Development Alternative, approximately 123 businesses and 984 employees could be displaced. For the Maximum Probable Development Alternative, 166 businesses and 1,328 employees could be displaced.

- **Net Employment Change.** When employees potentially displaced are deducted from the added employment capacity the net change is as follows. The Infill/Rebuild Alternative would result in a net increase of 341 jobs. The Moderate Development Alternative would result in a net increase in 1,371 jobs. The Maximum Probable Development Alternative would result in a net increase in 2,022 jobs.

- **Mitigation Measures**. See Section 5.2.

- **Unavoidable Significant Adverse Impacts**. To the extent that displaced residents, businesses and or employees cannot be reincorporated into the proposed Redevelopment Plan Amendment Area, these impacts would be considered significant.

URBAN DESIGN, AESTHETICS AND ARCHITECTURAL RESOURCES

- **Disruption of Scenic Vistas**. The anticipated low scale development resulting from the Infill/Rebuild and Moderate Development Alternative would not disrupt vistas and would not have a significant impact. The three to four-story buildings associated with the Maximum Probable Development Alternative have some potential to disrupt vistas from the Subarea.

- **Removal of Existing Urban Design, Architectural, Historical or Landscape Resources**. The Infill/Rebuild Alternative would not remove existing resources because only currently vacant sites would be used for development. The Moderate and Maximum Probable Development alternatives would have a low-moderate and moderate-high potential to affect resources, respectively.

- **Adverse Impacts on the Existing Pedestrian Environment**. None anticipated.

- **Casting Shadows or Shade**. Without property setbacks or transitional stepped-back building heights each of the alternatives could cast shadows onto adjacent residences and/or backyards.

- **Light and Glare**. Given the shallow lot depths within the Subarea as well as the proximity of commercial and residential land uses, there is the possibility that ornamental and/or security lighting associated with each of the alternatives could result in casting illumination onto adjacent residential properties.

- **Mitigation Measures**. See Section 5.3.

- **Unavoidable Significant Adverse Impacts**. None.

TRAFFIC AND CIRCULATION

- **Infill/Rebuild Alternative**. Four of the 22 intersections that would be significantly impacted by this alternative are located in Subarea 8. These intersections include: Crenshaw Boulevard at Coliseum Street; Crenshaw Boulevard at Martin Luther King Jr. Boulevard; Crenshaw Boulevard at Stocker Street; and Crenshaw Boulevard at Vernon Avenue.

- **Moderate Development Alternative**. Six of the 25 intersections that would be significantly impact by this alternative are located in Subarea 8. These intersections

include: Martin Luther King Jr. Boulevard at Coliseum Street; Martin Luther King Jr. Boulevard at Buckingham Road; Crenshaw Boulevard at Coliseum Street; Crenshaw Boulevard at Martin Luther King Jr. Boulevard; Crenshaw Boulevard at Stocker Street; and Crenshaw Boulevard at Vernon Avenue.

- **Maximum Probable Development Alternative.** Seven of the 30 intersections that would be significantly impacted by this alternative are located in Subarea 8. These intersections include: Martin Luther King Jr. Boulevard at Coliseum Street; Martin Luther King Jr. Boulevard at Buckingham Road; Crenshaw Boulevard at Coliseum Street; Crenshaw Boulevard at Martin Luther King Jr. Boulevard; Crenshaw Boulevard at Stocker Street; Stocker Street at Santa Rosalia Drive; and Crenshaw Boulevard at Vernon Avenue.

- **Mitigation Measures.** See Section 5.4.

- **Unavoidable Significant Adverse Impacts.**

  - Infill/Rebuild Alternative (none).

  - Moderate Development Alternative (2 intersections; Crenshaw Boulevard at Coliseum Street, and Crenshaw Boulevard at Martin Luther King Jr. Boulevard).

  - Maximum Probable Development Alternative (3 intersections; Crenshaw Boulevard at Coliseum Street, Crenshaw Boulevard at Martin Luther King Jr. Boulevard and Crenshaw Boulevard and Vernon Avenue).

AIR QUALITY

- **Construction Emissions.** Particulate emissions would likely exceed the SCAQMD threshold of 150 pounds per day for each of the alternatives.

- **Operation Emissions.** Each of the alternatives, if completely built out, would exceed the carbon monoxide, nitrogen oxide and reactive organic gas daily emission thresholds.

- **Carbon Monoxide.** Three of the five representative sensitive receptors identified for the Recovery Program Area are located within Subarea 8, including Coliseum Street School, bus stops at Crenshaw Boulevard and Martin Luther King Jr. Boulevard and Leimert Park. One-hour carbon monoxide concentrations at these locations would not exceed California Ambient Air Quality Standards. Eight-hour concentrations at two of the three locations (bus stop at Crenshaw Boulevard and Martin Luther King Jr. Boulevard and Leimert Park) would continue to exceed state standards. Compared to the eight-hour standard of nine parts per million (ppm), predicted concentrations at these locations would range from 10.4 to 11.7 ppm depending on the alternative considered.

- **Consistency with the AQMP.** The proposed alternatives would not increase the overall development within Subarea 8 above the West Adams-Baldwin Hills-Leimert District Plan buildout levels anticipated in the AQMP and as a result the alternatives would be consistent with the AQMP.

- **Mitigation Measures.** See Section 5.5.

- **Unavoidable Significant Adverse Impacts.** Construction phase emissions would exceed SCAQMD daily emissions criteria. Operations emissions would also exceed SCAQMD criteria. The California Ambient Air Quality Standard would be exceed in the eight-hour period for two of the three representative receptors in Subarea 8.

NOISE

- **Construction Noise.** Noise limit thresholds would likely be exceeded for residences and/or schools located adjacent to or in the vicinity of construction sites.

- **Traffic-Related Noise.** Changes in traffic-related noise would be less than two decibels. This level of change is not discernible by the human ear, therefore, no significant impacts are anticipated.

- **Noise from Delivery Trucks and Trash Pickup.** There is a possibility of nighttime and early morning impacts, particularly under those circumstances where loading areas would be located adjacent to residences and/or apartments.

- **Mitigation Measures.** See Section 5.6.

- **Unavoidable Significant Adverse Impacts.** None.

PUBLIC SERVICES

- **Fire.** Increased development within Subarea 8 in conjunction with development within the proposed Recovery Program Area would have a cumulative impact on increasing the demand for fire protection services in the area and increasing the need to upgrade water mains and other associated infrastructure. In addition, intersections operating a level of service E or F would adversely affect fire response times according to Fire Department criteria. In this respect, the traffic study for the proposed Crenshaw Recovery Program Area shows that between 54 and 71 percent of the major intersections in the study area would operate at level of service E or F, depending on the alternative. This degree of congestion and delay would have a significant impact on Fire Department emergency response times.

- **Police.** Increased development within Subarea 8 in conjunction with development within the proposed Recovery Program Area would have a cumulative impact on increasing the demand for police protection services. Based on the current ratio of police officers per 1,000 population (approximately three per 1000), the alternatives would generate a need from two to 15 additional police officers.

- **Schools.** The added dwelling units anticipated with each of the alternatives would have the potential to generate school age children. According to student generation factors used by the Los Angeles Unified School District, the alternatives within Subarea 8 would have the potential to generate from 26 to 286 school-age children. Given that many of the schools serving the area are either at or over capacity, added enrollment would constitute a significant impact.

- **Mitigation Measures.** See Section 5.7.

- **Unavoidable Significant Adverse Impacts.**

  - Fire. Adverse effects on emergency response times due to intersection congestion and delays.

  - Police. None.

  - Schools. None.

UTILITIES

- **Water Supply.** Development levels associated with the alternatives would generate a demand from 31,455 to 257,687 gallons per day. The water consumption rate per square mile would range from 157,300 to 1,288,000 gallons per day. These consumption levels would likely exceed the anticipated 2005 available supply (137,300 gallons per day per square mile) by a factor of 1.15 to 9.4. As a result, a significant impact on water supply is anticipated.

- **Sewers.** Wastewater generation would range from 27,194 gallons per day to approximately 225,951 gallons per day. The wastewater generation rate per square mile would range from 136,000 gallons per day to 1,128,000 gallons per day per square mile. These generation levels would likely exceed the anticipated 2005 capacity (198,000 gallons per day per square mile) for the Moderate and Maximum Probable Development Alternative. As a result a significant impact is anticipated.

- **Stormwater Drainage.** Since the area is already paved and developed, no significant stormwater runoff effects are anticipated.

- **Solid Waste Disposal.** The solid waste generation from Subarea 8 is anticipated to range from 0.5 to 3.3 tons per day. Since there is currently a critical shortage of landfill capacity in the region, these incremental increases in solid waste generation are considered significant.

- **Mitigation Measures.** See Section 5.8.

- **Unavoidable Significant Adverse Impacts**

  - Water Supply. Water conservation measures may not be sufficient to reduce water demand to less than significant levels, and additional supply from existing sources is not assured.

  - Sewers. The alternatives in Subarea 8 would add as much as 225,900 gallons per day into the Hyperion Treatment System. Given the capacity problems in the Hyperion Treatment System, this increase would be considered a significant impact.

  - Stormwater Drainage. None.

  - Solid Waste Disposal. The alternatives in Subarea 8 would add as much as 3.3 tons per day to local landfills. The incremental increase would be considered significant given the limited available landfill capacity in the region.

ENERGY CONSERVATION

The alternatives in Subarea 8 would generate a demand for 2.3 million to 15.4 million kilowatt hours of electricity and 7.6 million to 60 million cubic feet of natural gas annually. Since the Department of Water and Power and the Southern California Gas Company operate on supply-on-demand basis, no adverse impacts are anticipated, although the additional demand may result in the construction of generation and delivery systems earlier than currently planned.

- **Mitigation Measures**. See Section 5.9.

- **Unavoidable Significant Adverse Impacts**. Energy consumption resulting from development with Subarea 8 would result in significant adverse impacts on irretrievable and irreplaceable fossil fuel resources.

GEOLOGY AND HYDROLOGY

- **Slope Stability**. Approximately 40 percent of Subarea 8 is within a Seismic Safety Element-designated slope stability area. For projects within these designated areas slope stability would be a potential significant impact.

- **Foundation Stability**. The geotechnical hazard posed by soil expansion is generally moderate.

- **Seismic Ground Shaking**. The geotechnical hazard posed by seismic ground shaking is considered high due to the proximity of known faults and to the nature of the unconsolidated alluvium and colluvium underlying the proposed Recovery Program Area, including Subarea 8.

- **Seismically Induced Settlement**. The potential hazard posed by seismic settlement in Subarea 8 is considered to be moderate.

- **Ground Lurching**. The potential for ground lurching due to seismic shaking is considered to be moderate.

- **Groundwater**. Subsurface structures or below grade parking that may be associated with the Maximum Probable Development Alternative would likely affect local groundwater tables and a significant impact would be anticipated. The Infill/Rebuild and Moderate Development Alternative would not likely require subsurface structures and no significant impact is anticipated.

- **Liquefaction**. All of Subarea 8 is located within an area subject to liquefaction. As a result, a significant impact on future development projects is anticipated.

- **Flooding**. Approximately 50 percent of Subarea 8 is located within an area subject to 500-year flooding. Future projects within these flood-prone areas would be significantly affected.

- **Mitigation Measures**. See Section 5.10.

- **Unavoidable Significant Adverse Impacts**. None.

SAFETY/RISK OF UPSET

- Approximately 20 to 25 percent of Subarea 8 is located within an area considered to have high risks because of hazardous substances or conditions. Future projects located within these areas would be significantly impacted.

- **Mitigation Measures**. See Section 5.11.

- **Unavoidable Significant Adverse Impacts**. Remediation of potential development sites in accordance with state and local standards would reduce the potential for safety impacts to acceptable levels.

ARCHAEOLOGICAL RESOURCES

- According to an archaeological records search, six known sites are either within or directly adjacent to Subarea 8. The probability of encountering archaeological resources in the subarea is considered high.

- **Mitigation Measures**. See Section 5.12.

- **Unavoidable Significant Adverse Impacts**. None.

8.0 ORGANIZATIONS AND PERSONS CONSULTED; EIR AUTHORS

Public and Private Agencies Consulted

City of Los Angeles
Department of Public Works
Bureau of Engineering
Robert S. Horii, City Engineer
West Los Angeles District
Gene D. McPherson, District Engineer
Rudolph Olson, Civil Engineer
Ara Kasparian, Director, Environmental Management Section

City of Los Angeles Fire Department
Bureau of Fire Prevention and Public Safety
Dal L. Howard, Assistant Fire Marshal

City of Los Angeles Unified School District
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Business Services Division
Grant Langon

City of Los Angeles Police Department
Information Resources Division
Robert Lizenby, Research Officer

City of Los Angeles
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Water Operating Division
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Carl L. Blum, Assistant Deputy Director
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Los Angeles County Sanitation Districts
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Property Management Section
David S. Lambert, Project Engineer

City of Los Angeles
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Southern California Gas Company
South Coastal Division
Jim Jordan, Planner

California Archaeological Inventory
Regional Information Center
Elizabeth E. Soriano, Staff Archaeologist

City of Los Angeles Department of Transportation
Transportation Studies Division
T.K. Prime, Senior Transportation Engineer

State of California, Department of Transportation, District 7
Advance Planning Branch
Wilford Melton, Senior Transportation Planner

Metropolitan Water District of Southern California
Environmental Affairs
Kathleen M. Kunysz, Manager

Los Angeles County Metropolitan Transportation Authority
Multimodal Planning
Patricia V. McLaughlin, Deputy Executive Officer

California Integrated Waste Management Board, Permitting and Enforcement Division
Environmental Review Section
John Loane, Associate Waste Management Specialist

South Coast Air Quality Management District
Local Government - CEQA
Connie Day, Program Supervisor

Southern California Association of Governments
Intergovernmental Review
Eric H. Roth, Manager

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Cultural Heritage Commission
Jay M. Oren, Staff Architect

City of Los Angeles
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Tania Gonzalez, Senior Staff Geologist
Kay St. Peters, Project Geologist
Apichart Phukunhaphan, Project Engineer

APPENDIX A

NOTICE OF PREPARATION AND RESPONSES TO NOP

THE COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

CALIFORNIA ENVIRONMENTAL QUALITY ACT

NOTICE OF PREPARATION
(Article VI, Section 2 - CRA CEQA Guidelines)

TO: All Interested Agencies, Parties, Organizations, and Persons

FROM: The Community Redevelopment Agency of the City of Los Angeles
354 South Spring Street, Suite 700
Los Angeles, California 90013

SUBJECT: Notice of Preparation of a Draft Environmental Impact Report

Project Title: Proposed Crenshaw Corridor Recovery and Revitalization Program Area

Project Applicant: The Community Redevelopment Agency of the City of Los Angeles

The Community Redevelopment Agency of the City of Los Angeles will be the Lead Agency and will prepare an environmental impact report for the project identified above. We need to know the views of your agency as to the scope and content of the environmental information which is germane to your agency's statutory responsibilities in connection with the proposed project. Your agency will need to use the EIR prepared by this Agency when considering your permit or other approval.

The project description, location and the probable environmental effects are contained in the attached materials

___A copy of the Initial Study is attached.

_X_A copy of the Initial Study is not attached.

Due to the time limits mandated by state law, your response must be sent at the earliest possible date but not later than 30 days after receipt of this notice.

Please send your response to Ms. Ileana Liel, Senior Planner at the address of the Agency as shown above. We will need the name of a contact person in your agency.

DATE December 3, 1993

Rich Macias

Principal Environmental Planner
Title

(213) 977-1738
Telephone

IL/rdw 12/2/93

PROPOSED CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM AREA

GENERAL INFORMATION

Purpose of Notice of Preparation

The purpose of the Notice of Preparation is to inform Responsible Agencies (i.e., public agencies which may have discretionary approval power over the proposed project) than an Environmental Impact Report (EIR) will be prepared and solicit their concerns regarding the environmental impacts of the specified project. This notification is legally required.

The California Environmental Quality Act (CEQA) also encourages early consultation with private persons and organizations which may be concerned with environmental effects of the project. The Notice of Preparation serves this purpose.

The State CEQA Guidelines state that, to be considered in the preparation of the draft EIR, responses must deal with environmental issues related to the specific project.

All written responses will be included as Appendices in the draft EIR and their contents considered in accordance with State and Agency environmental guidelines. Respondents do not receive individual responses. Instead, each respondent to the Notice of Preparation receives a copy of the draft EIR when it is distributed for public review and comment.

Initial Study

"Initial Study" is a preliminary analysis prepared by the Lead Agency to determine whether an EIR must be prepared or to identify the significant environmental effects to be analyzed in an EIR. If preliminary review indicates that an EIR will be required, the environmental review process can begin right then without the preparation of an Initial Study.

PROJECT AREA AND PURPOSE OF THE ENVIRONMENTAL IMPACT REPORT

In April, 1993, the City Council of the City of Los Angeles directed the Community Redevelopment Agency of the City of Los Angeles (Agency) to initiate revitalization and recovery efforts in areas affected by the April 29, 1992 civil unrest. The Crenshaw Corridor (see Figures 1 and 2), which extends approximately 4.7 miles from the Santa Monica Freeway on the north to the City of Los Angeles/Inglewood limits on the south, is one of the areas specifically identified as a priority by the City Council. Pursuant to City Council directive to focus on commercial and industrial areas, the corridor has been specifically defined to encompass primarily commercially or industrially zoned parcels that adjoin Crenshaw Boulevard. There are also portions of the corridor that extend west of the Baldwin Hills Crenshaw Plaza and include commercially zones properties along Martin Luther King Jr. Boulevard and Stocker Street. The Crenshaw Corridor encompasses approximately 340 acres and includes portions of City Council Districts 6, 8 and 10.

Under the provisions of the California Environmental Quality Act (CEQA) and the Community Redevelopment Law, environmental impact documentation of any proposed revitalization and/or recovery plans is required. In this regard, it is the intent of the Agency to prepare a programmatic Environmental Impact Report (EIR) for the Crenshaw Corridor Revitalization and Recovery Area. A Program EIR is not project site specific, but rather addresses policy interventions and the broad land use changes that may be incorporated into a revitalization or recovery plan. Under CEQA, specific projects may "tier" off of a Program EIR and further reduce and expedite environmental review processing time when actual projects to stimulate revitalization and recovery are proposed by private and/or public entities.

The Program EIR for the Crenshaw Corridor Revitalization and Recovery Area is intended to be an Alternatives EIR where there is a range of optional proposals that the City and the Agency may wish to pursue. The purpose of the alternatives approach is to bracket a range of probable options to ensure that the environmental review process at

the Program EIR level can be used to its maximum extent to reduce administrative reviews when actual projects are proposed. Alternatives for the Crenshaw Revitalization and Recovery Area have been based on the extensive planning and community participation efforts that have taken and continue to take place in the Crenshaw Corridor. Specifically, the alternatives have incorporated findings from the following:

- Crenshaw Neighborhood Plan (Draft) prepared by the Crenshaw Neighborhood Cluster
- West Adams-Baldwin Hills-Leimert District Plan Revision (Draft) prepared by the Department of City Planning
- Crenshaw-Prairie Corridor Preliminary Planing Study (Draft) prepared by the Metropolitan Transportation Authority
- Leimert Park Community Planning Charrette (Draft)
- Crenshaw Redevelopment Project Expansion Economic Feasibility Study

PROJECT DESCRIPTION

The purpose of the alternatives to be evaluated in the Program EIR is to bracket the range of possible or probable revitalization and development options. The Program EIR will evaluate three development alternative scenarios and the "no project" alternative. The "no project" alternative - the option of doing nothing - is specifically required to be addressed by CEQA. For purposes of defining the development scenario alternatives, the Crenshaw Corridor has been divided into Opportunity Areas. These Areas, shown in Figure 3, are labeled A through N. Opportunity Areas are defined as locations where change is most likely to take place and encompass portions of blocks or multiple blocks within the Crenshaw Corridor. Areas have been identified as Opportunity Areas if they satisfy one or more of the following criteria:

- Site(s) are undeveloped (vacant lot)
- Site(s) contain vacant buildings
- Site(s) contain buildings that are structurally damaged
- Site(s) contain buildings that were damaged during the civil unrest
- Site(s) exhibit a shifting of uses such as a commercial use in a residential building or vice versa
- Site(s) and adjacent public areas are poorly maintained and require major repairs and/or upgrading
- Site(s) contain uses that are not consistent with the adopted zoning and planned land use, e.g., single family homes in a commercial or industrial zone
- Site(s) are developed at a density not comparable with surrounding properties and indicate economic underutilization
- Building facades and exterior spaces are not conducive to commercial activity
- Site(s) that may have redevelopment potential due to proximity (1/4 mile or less) to a possible rail transit station and subject to the City of Los Angeles Draft Transportation and Land Use Policy

Infill/Rebuild Alternative

This alternative is intended to address the theoretical minimum probable level of change that would be necessary to support and stimulate reinvestment, revitalization and recovery in the Crenshaw Corridor. This alternative would primarily focus on providing in-fill development on vacant sites within the corridor. In-fill development would include neighborhood oriented commercial services and new residential development. These in-fill actions would be complemented by streetscape improvements along Crenshaw Boulevard to include repairs to public areas as well as landscaping and improvements to participating private properties to upgrade the appearance of corridor businesses (e.g., awnings, painting, graffiti removal, etc.). In addition, it is envisioned that public parking areas would be enhanced to include resurfacing, landscaping, lighting and signage. This alternative could result in approximately 917,000 gross square feet of new development, which may include but is not limited to retail commercial, office and manufacturing uses, and the addition of approximately 244 residential units. Since only vacant sites or vacant buildings are used by this alternative, no displacement of existing occupied uses is anticipated. This alternative would represent approximately 18 percent growth in development over existing levels.

Moderate Development Alternative

This alternative is intended to address the theoretical probable level of development that could occur if economically underutilized properties were used in addition to vacant sites. This alternative also considers the possibility that redevelopment of the underutilized properties would increase development densities in certain areas and/or convert a proportion of developable properties from single use commercial projects to mixed use or residential uses. Commercial development levels would assume floor area ratios consistent with newer neighborhood and community-oriented projects currently being built in the City of Los Angeles. Anticipated residential densities would be 20 units per acre or less. New development on currently developed properties could take the form of gradual conversion over time or through the use of land assembly and/or eminent domain powers that may be applied to commercially or industrially zoned properties. This alternative assumes that rail transit improvements along the Crenshaw Corridor would not be implemented during the lifetime of any revitalization or recovery plan that may be adopted for all or portions of the Crenshaw Corridor and as a result there would not be greater commercial development or residential densities in station areas.

It should be recognized that some degree of displacement of existing uses is implied by this alternative. Under this option, approximately 615,000 gross square feet of existing developed space and 9 dwelling units are assumed to be converted to higher density new development. Under this option a net increase of approximately 1.2 million gross square feet of non-residential development and approximately 425 dwelling units is projected. This change would represent a 24 percent growth over the existing level of development.

Maximum Probable Development Alternative

This alternative is intended to address the theoretical maximum probable level of change that could be achieved within the land use capacity of the Crenshaw Corridor established by the West Adams-Baldwin Hills-Leimert District Plan. This alternative would include cosmetic improvements to streetscapes and building facades similar to the Infill/Rebuild Alternative, however, this alternative would consider new development on both vacant sites and on sites that are considered economically underutilized or physically dilapidated. New development on currently developed properties could take the form of gradual conversion over time or through land assembly and/or the use of eminent domain powers that may be applied to commercially or industrially zoned properties. It should be recognized that a larger degree of displacement of existing uses is implied by this alternative. Under this option, approximately one million square feet of existing developed space and 137 dwelling units is assumed to be converted to higher density new development.

It is envisioned that larger mixed use projects and residential densities around 40 dwelling units per acre would be facilitated by this alternative. While it is assumed that the primary focus of the Agency will be to stimulate commercial and industrial expansion and growth in the Crenshaw Corridor, it is anticipated that other public agencies or private entities would contribute significantly to establishing the expanded residential component of possible mixed use projects.

The theoretical maximum probable level of change that could occur as part of this alternative would be consistent with maximum floor area ratios and residential densities permitted by the West Adams-Baldwin Hills-Leimert District Plan. Under ideal circumstances the highest densities are also considered in the rail transit station areas that may result from the implementation of the City of Los Angeles/Metropolitan Transportation Authority (MTA) Transportation and Land Use Policy. The assumption of higher densities within one quarter mile of possible rail transit stations is contingent upon the MTA's possible future adoption of a rail transit alignment along the Crenshaw-Prairie Corridor. This alternative would represent a net growth of approximately 1.9 million square feet of non-residential development and approximately 1,700 dwelling units. This change would result in a 38 percent growth over existing levels of development in the Crenshaw Corridor.

Existing Crenshaw Redevelopment Project and Proposed Amendment Area

The Crenshaw Corridor includes the Crenshaw Redevelopment Project Area, located approximately one and one-half miles south of the Santa Monica Freeway along Crenshaw Boulevard. Adopted by the City Council in 1984, the Redevelopment Project is bounded generally by 39th Street on the north, Crenshaw Boulevard on the east, Stocker

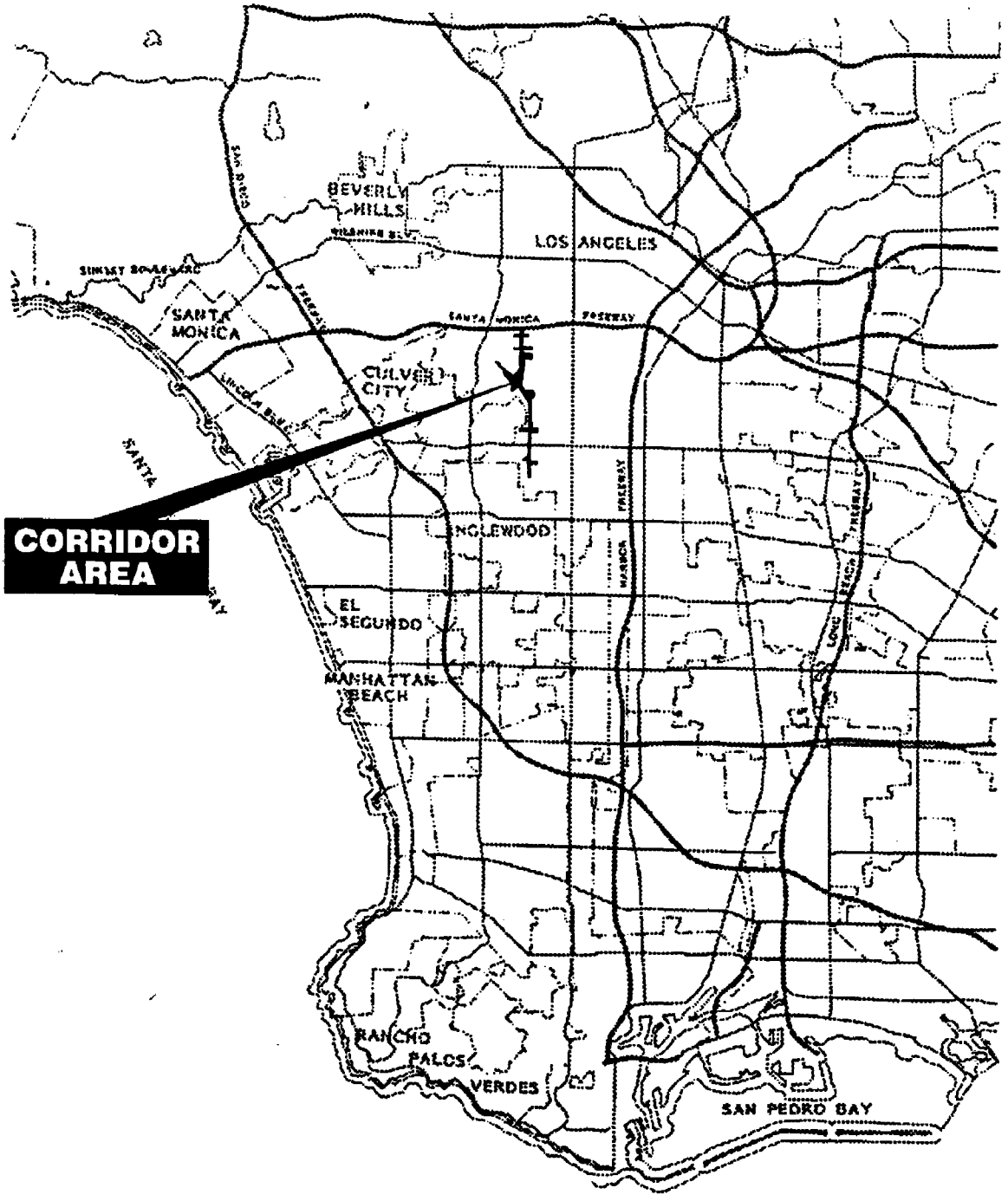
Street and Santa Rosalia Drive on the south and southwest and Marlton Avenue on the west. Martin Luther King Jr. Boulevard, which runs diagonally in the northwesterly direction, bisects the Baldwin Hills Crenshaw Plaza.

On November 1991, the City Council of the City of Los Angeles directed the Agency to proceed with the process of amending the existing Crenshaw Redevelopment Plan to include Santa Barbara Plaza and a commercial strip on the south side of Martin Luther King Jr, Boulevard between Buckingham Road and Hillcrest Drive. The Plan Amendment process included the preparation of an EIR. In September 1992, work on the EIR was suspended to allow Agency staff to work with the community and the Council District 8 office to reassess land use options in light of the effect of the April 1992 civil disturbance on the Plan Amendment Area and the surrounding community. The Community Advisory Committee for the Council District 8 area of the Crenshaw Corridor has voted to pursue feasibility studies for expansion of the existing Crenshaw Redevelopment Project to encompass the middle of the Crenshaw Corridor, located within Council District 8 and bounded generally by Coliseum Street on the north and 52nd Street on the south. (Please refer to Figure 4.) The proposed expanded Crenshaw Redevelopment Project Area would include Opportunity Areas D through H.

Probable Environmental Effects of the Proposed Actions

Implementation of the proposed recovery and revitalization options, including development under the proposed Amendment to the Crenshaw Redevelopment Plan, will or may have the following significant effects, either by itself or cumulatively with existing and proposed development in the area:

1. Land use/neighborhood impacts
2. Soils (hazardous materials) and seismic impacts
3. Increase in noise levels
4. Increase in traffic which is substantial in relation to the capacity of the roadway systems.
5. Socioeconomic impacts, including potential relocation of existing businesses and residents
6. Increased demand on public services and facilities



APPROX. SCALE:

N

1" = 5 miles

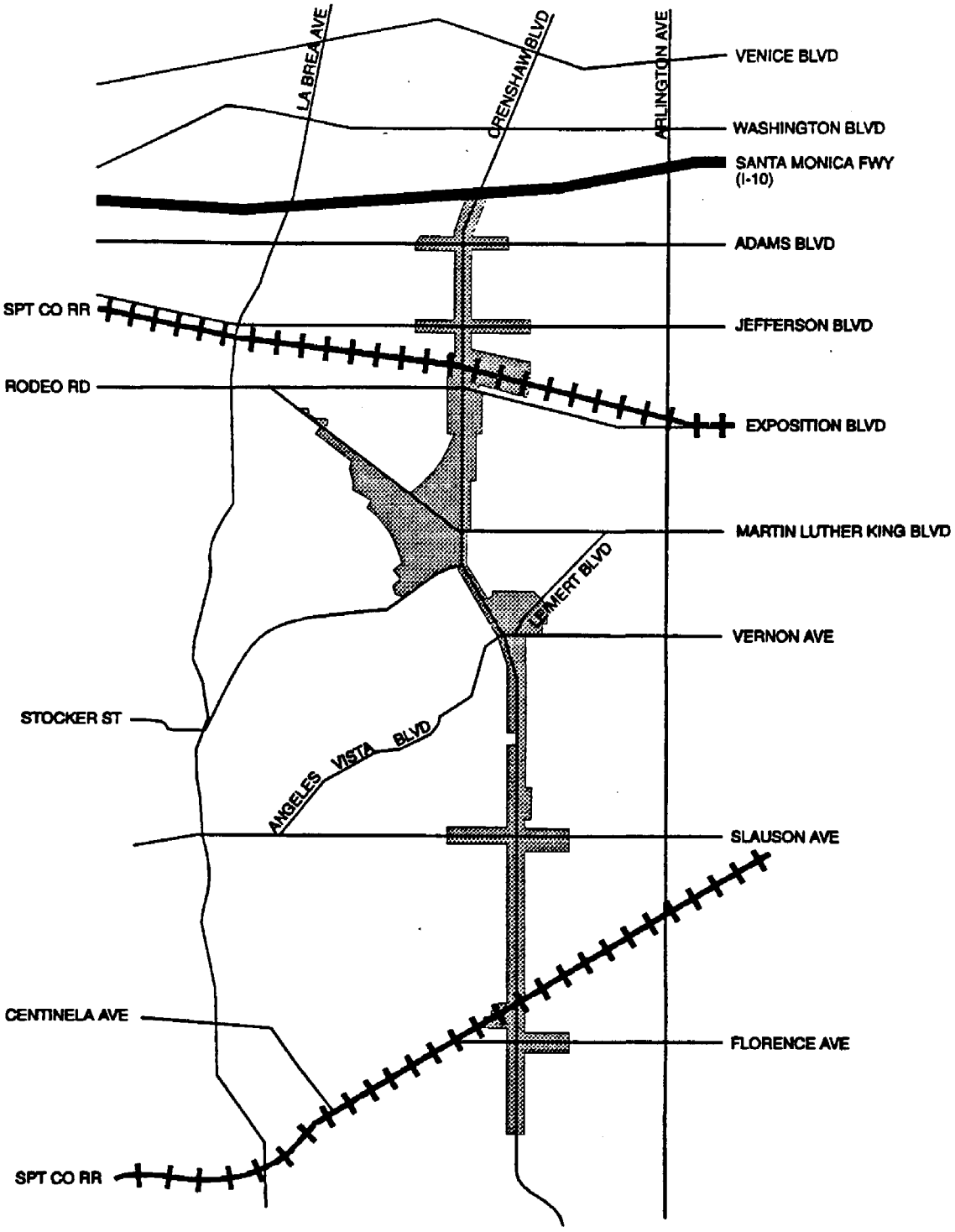
SOURCE: Terry A. Hayes Associates

CRENSHAW REVITALIZATION AND RECOVERY AREA EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 1

REGIONAL LOCATION OF CORRIDOR



APPROX. SCALE:

N

1" = 0.5 miles

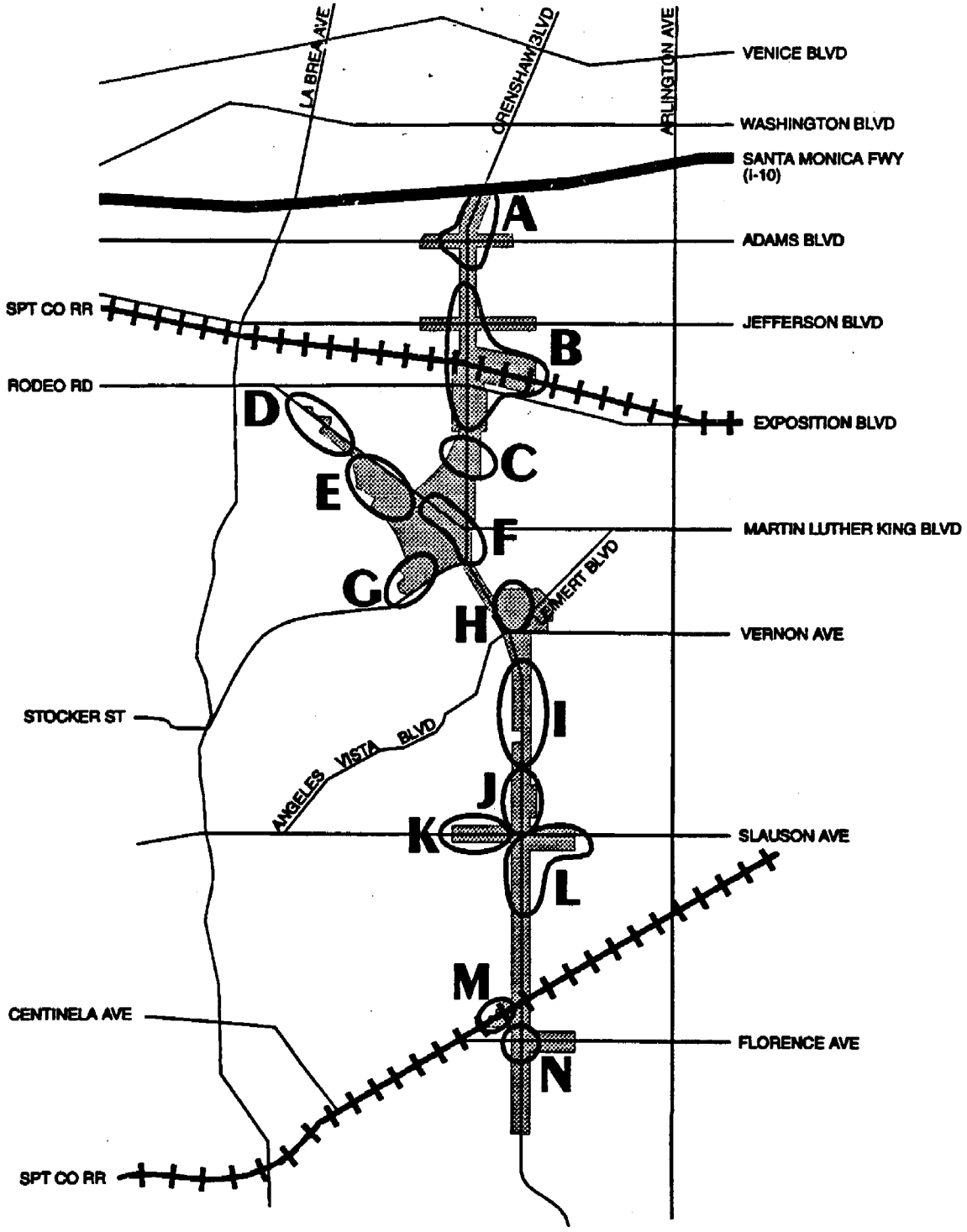
SOURCE: Terry A. Hayes Associates

CRENSHAW REVITALIZATION AND RECOVERY AREA EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 2

CORRIDOR MAP



LEGEND:

CORRIDOR AREA

OPPORTUNITY SITE

APPROX. SCALE:

N

1" = 0.5 miles

SOURCE: Terry A. Hayes Associates

CRENSHAW REVITALIZATION AND RECOVERY AREA EIR

COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES

FIGURE 3

CORRIDOR OPPORTUNITY AREAS

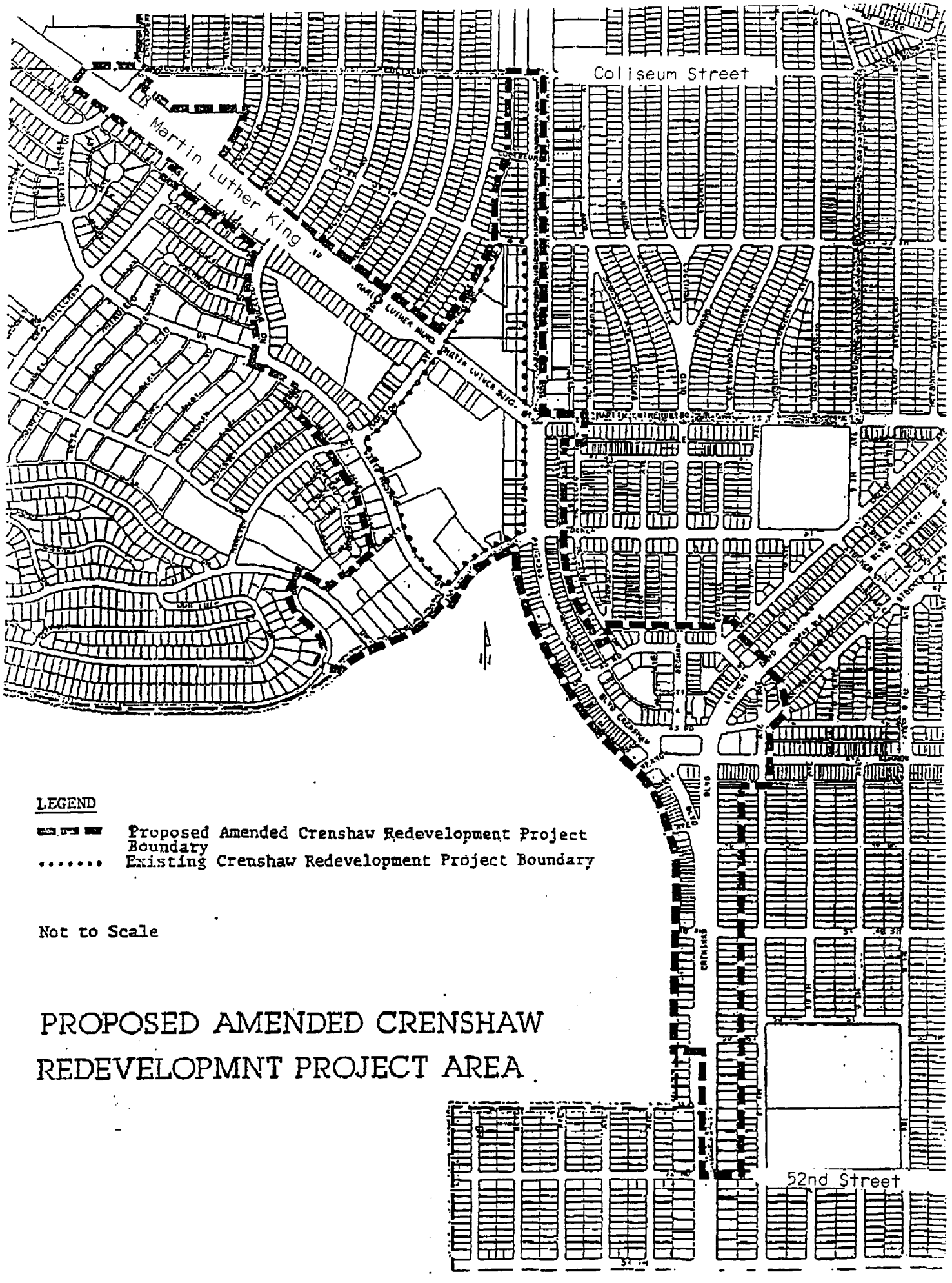

Coliseum Street
Martin Luther King
52nd Street
LEGEND
Proposed Amended Crenshaw Redevelopment Project Boundary
Existing Crenshaw Redevelopment Project Boundary
Not to Scale
PROPOSED AMENDED CRENSHAW REDEVELOPMNT PROJECT AREA

Figure 4

ATTACHMENT TO NOTICE OF PREPARATION PAGE 1
PROPOSED CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM AREA

Project Area and Purpose of the Environmental Impact Report

In April, 1993, the City Council of the City of Los Angeles directed the Community Redevelopment Agency of the City of Los Angeles (Agency) to initiate revitalization and recovery efforts in areas affected by the April 29, 1992 civil unrest. The Crenshaw Corridor (see Figures 1 and 2), which extends approximately 4.7 miles from the Santa Monica Freeway on the north to the City of Los Angeles/Inglewood limits on the south, is one of the areas specifically identified as a priority by the City Council. Pursuant to City Council directive to focus on commercial and industrial areas, the corridor has been specifically defined to encompass primarily commercially or industrially zoned parcels that adjoin Crenshaw Boulevard. There are also portions of the corridor that extend west of the Baldwin Hills Crenshaw Plaza and include commercially zones properties along Martin Luther King Jr. Boulevard and Stocker Street. The Crenshaw Corridor encompasses approximately 340 acres and includes portions of City Council Districts 6, 8 and 10.

Under the provisions of the California Environmental Quality Act (CEQA) and the Community Redevelopment Law, environmental impact documentation of any proposed revitalization and/or recovery plans is required. In this regard, it is the intent of the Agency to prepare a programmatic Environmental Impact Report (EIR) for the Crenshaw Corridor Revitalization and Recovery Area. A Program EIR is not project site specific, but rather addresses policy interventions and the broad land use changes that may be incorporated into a revitalization or recovery plan. Under CEQA, specific projects may "tier" off of a Program EIR and further reduce and expedite environmental review processing time when actual projects to stimulate revitalization and recovery are proposed by private and/or public entities.

The Program EIR for the Crenshaw Corridor Revitalization and Recovery Area is intended to be an Alternatives EIR where there is a range of optional proposals that the City and the Agency may wish to pursue. The purpose of the alternatives approach is to bracket a range of probable options to ensure that the environmental review process at the Program EIR level can be used to its maximum extent to reduce administrative reviews when actual projects are proposed. Alternatives for the Crenshaw Revitalization and Recovery Area have been based on the extensive planning and community participation efforts that have taken and continue to take place in the Crenshaw Corridor. Specifically, the alternatives have incorporated findings from the following:

o Crenshaw Neighborhood Plan (Draft) prepared by the Crenshaw Neighborhood Cluster

o West Adams-Baldwin Hills-Leimert District Plan Revision (Draft) prepared by the Department of City Planning

o Crenshaw-Prairie Corridor Preliminary Planing Study (Draft) prepared by the Metropolitan Transportation Authority

/rdw 4/6//92

- o Leimert Park Community Planning Charrette (Draft)
- o Crenshaw Redevelopment Project Expansion Economic Feasibility Study

Project Description

The purpose of the alternatives to be evaluated in the Program EIR is to bracket the range of possible or probable revitalization and development options. The Program EIR will evaluate three development alternative scenarios and the "no project" alternative. The "no project" alternative - the option of doing nothing - is specifically required to be addressed by CEQA. For purposes of defining the development scenario alternatives, the Crenshaw Corridor has been divided into Opportunity Areas. These Areas, shown in Figure 3, are labeled A through N. Opportunity Areas are defined as locations where change is most likely to take place and encompass portions of blocks or multiple blocks within the Crenshaw Corridor. Areas have been identified as Opportunity Areas if they satisfy one or more of the following criteria:

- o Site(s) are undeveloped (vacant lot)
- o Site(s) contain vacant buildings
- o Site(s) contain buildings that are structurally damaged
- o Site(s) contain buildings that were damaged during the civil unrest
- o Site(s) exhibit a shifting of uses such as a commercial use in a residential building or vice versa
- o Site(s) and adjacent public areas are poorly maintained and require major repairs and/or upgrading
- o Site(s) contain uses that are not consistent with the adopted zoning and planned land use, e.g., single family homes in a commercial or industrial zone
- o Site(s) are developed at a density not comparable with surrounding properties and indicate economic underutilization
- o Building facades and exterior spaces are not conducive to commercial activity
- o Site(s) that may have redevelopment potential due to proximity (1/4 mile or less) to a possible rail transit station and subject to the City of Los Angeles Draft Transportation and Land Use Policy

Infill/Rebuild Alternative

This alternative is intended to address the theoretical minimum probable level of change that would be necessary to support and stimulate reinvestment, revitalization and recovery in the Crenshaw Corridor. This alternative would primarily focus on providing in-fill development on vacant sites within the corridor. In-fill development would include neighborhood oriented commercial services and new residential development. These in-fill actions would be complemented by streetscape improvements along Crenshaw Boulevard to include repairs to public areas as well as landscaping and improvements to participating private properties to upgrade the appearance of corridor businesses (e.g., awnings, painting, graffiti removal, etc.). In addition, it is envisioned that public parking areas would be enhanced to include resurfacing, landscaping, lighting and signage. This alternative could result in approximately 917,000 gross square feet of new development, which may include but is not limited to retail commercial, office and manufacturing uses, and the addition of approximately 244 residential units. Since only vacant sites or

vacant buildings are used by this alternative, no displacement of existing occupied uses is anticipated. This alternative would represent approximately 18 percent growth in development over existing levels.

Moderate Development Alternative

This alternative is intended to address the theoretical probable level of development that could occur if economically underutilized properties were used in addition to vacant sites. This alternative also considers the possibility that redevelopment of the underutilized properties would increase development densities in certain areas and/or convert a proportion of developable properties from single use commercial projects to mixed use or residential uses. Commercial development levels would assume floor area ratios consistent with newer neighborhood and community-oriented projects currently being built in the City of Los Angeles. Anticipated residential densities would be 20 units per acre or less. New development on currently developed properties could take the form of gradual conversion over time or through the use of land assembly and/or eminent domain powers that may be applied to commercially or industrially zoned properties. This alternative assumes that rail transit improvements along the Crenshaw Corridor would not be implemented during the lifetime of any revitalization or recovery plan that may be adopted for all or portions of the Crenshaw Corridor and as a result there would not be greater commercial development or residential densities in station areas.

It should be recognized that some degree of displacement of existing uses is implied by this alternative. Under this option, approximately 615,000 gross square feet of existing developed space and 9 dwelling units are assumed to be converted to higher density new development. Under this option a net increase of approximately 1.2 million gross square feet of non-residential development and approximately 425 dwelling units is projected. This change would represent a 24 percent growth over the existing level of development.

Maximum Probable Development Alternative

This alternative is intended to address the theoretical maximum probable level of change that could be achieved within the land use capacity of the Crenshaw Corridor established by the West Adams-Baldwin Hills-Leimert District Plan. This alternative would include cosmetic improvements to streetscapes and building facades similar to the Infill/Rebuild Alternative, however, this alternative would consider new development on both vacant sites and on sites that are considered economically underutilized or physically dilapidated. New development on currently developed properties could take the form of gradual conversion over time or through land assembly and/or the use of eminent domain powers that may be applied to commercially or industrially zoned properties. It should be recognized that a larger degree of displacement of existing uses is implied by this alternative. Under this option, approximately one million square feet of existing developed space and 137 dwelling units is assumed to be converted to higher density new development.

It is envisioned that larger mixed use projects and residential densities around 40 dwelling units per acre would be facilitated by this alternative. While it is assumed that the primary focus of the Agency will be to stimulate commercial and industrial expansion and growth in the Crenshaw Corridor, it is anticipated that other public agencies or private entities would contribute significantly to establishing the expanded residential component of possible mixed use projects.

The theoretical maximum probable level of change that could occur as part of this alternative would be consistent with maximum floor area ratios and residential densities permitted by the West Adams-Baldwin Hills-Leimert District Plan. Under ideal circumstances the highest densities are also considered in the rail transit station areas that may result from the implementation of the City of Los Angeles/Metropolitan Transportation Authority (MTA) Transportation and Land Use Policy. The assumption of higher densities within one quarter mile of possible rail transit stations is contingent upon the MTA's possible future adoption of a rail transit alignment along the Crenshaw-Prairie Corridor. This alternative would represent a net growth of approximately 1.9 million square feet of non-residential development and approximately 1,700 dwelling units. This change would result in a 38 percent growth over existing levels of development in the Crenshaw Corridor.

Existing Crenshaw Redevelopment Project and Proposed Amendment Area

The Crenshaw Corridor includes the Crenshaw Redevelopment Project Area, located approximately one and one-half miles south of the Santa Monica Freeway along Crenshaw Boulevard. Adopted by the City Council in 1984, the Redevelopment Project is bounded generally by 39th Street on the north, Crenshaw Boulevard on the east, Stocker Street and Santa Rosalia Drive on the south and southwest and Marlton Avenue on the west. Martin Luther King Jr. Boulevard, which runs diagonally in the northwesterly direction, bisects the Baldwin Hills Crenshaw Plaza.

On November 1991, the City Council of the City of Los Angeles directed the Agency to proceed with the process of amending the existing Crenshaw Redevelopment Plan to include Santa Barbara Plaza and a commercial strip on the south side of Martin Luther King Jr, Boulevard between Buckingham Road and Hillcrest Drive. The Plan Amendment process included the preparation of an EIR. In September 1992, work on the EIR was suspended to allow Agency staff to work with the community and the Council District 8 office to reassess land use options in light of the effect of the April 1992 civil disturbance on the Plan Amendment Area and the surrounding community. The Community Advisory Committee for the Council District 8 area of the Crenshaw Corridor has voted to pursue feasibility studies for expansion of the existing Crenshaw Redevelopment Project to encompass the middle of the Crenshaw Corridor, located within Council District 8 and bounded generally by Coliseum Street on the north and 52nd Street on the south. (Please refer to Figure 4.) The proposed expanded Crenshaw Redevelopment Project Area would include Opportunity Areas D through H.

Probable Environmental Effects of the Proposed Actions

Implementation of the proposed recovery and revitalization options, including development under the proposed Amendment to the Crenshaw Redevelopment Plan, will or may have the following significant effects, either by itself or cumulatively with existing and proposed development in the area:

1. Land use/neighborhood impacts
2. Soils (hazardous materials) and seismic impacts
3. Increase in noise levels
4. Increase in traffic which is substantial in relation to the capacity of the roadway systems.

FORM GEN. 160 (Rev. 6-80)

CR. 999.00

CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE

DATE: JAN 10 1994

TO: Rich Macias
Principal Environmental Planner
Community Redevelopment Agency

ATTN: Ms. Ileana Liel
Senior Planner

FROM: Andres Santamaria
Division Engineer
Project Management Division
Public Works Bureau of Engineering

BY: Ara Kasparian
Director
Environmental Management Section

RECEIVED
94 JAN 12 P12:44

SUBJECT: **PROPOSED CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM AREA**

Environmental Management Section (EMS) staff have reviewed the subject project against environmental data on file for the project area. Our database indicates the following areas of potential concern that you may wish to consider in your environmental review:

- FEMA Flood Zone "B" between Martin Luther King Boulevard and Jefferson Boulevard; and on 71st St.
- Alquist-Priolo Seismic Zones from 71st St. south, and along Martin Luther King Blvd.
- Crenshaw Boulevard is a designated Scenic Highway.
- Several cultural historic monuments, archaeological and paleontological sites are located within the project boundaries or nearby.
- An oil field underlies the northern part of the project.

These items will not necessarily require discussion in your environmental document. The information is transmitted to your attention to aid in your staff's determination of significant impact.

Environmental documents for urban projects of this nature generally focus on "neighborhood nuisance" impacts, to the exclusion of any ecological discussion. It could be argued that a successful inner city revitalization project may help to slow the urban sprawl, which continues to cause significant losses of wildlife habitats at the urban periphery. Any project that slows or reduces the urban sprawl clearly provides an overall ecological benefit, which would probably not be realized under the "no project" alternative.

If you need any additional information, please contact Doug McPherson at 847-8696.

AS:AK:DSM

Action:
Info: Macias

Los Angeles Unified School District

Facilities Services

SIDNEY A. THOMPSON
Superintendent of Schools

DAVID W. KOCH
Business Manager

C. DOUGLAS BROWN
Interim Coordinator

BOB NICCUM
Director of Real Estate

Environmental Review File
Redevelopment Projects-Miscellaneous

January 13, 1994

Ms. Ileana Liel
Senior Planner
The Community Redevelopment Agency
of the City of Los Angeles
354 South Spring Street, Suite 700
Los Angeles, CA 90013

Dear Ms. Liel:

Re: Crenshaw Redevelopment Project Area Plan Amendment

Thank you for the opportunity to comment on the scope and content of the environmental impact report (EIR) for the above-referenced project.

Please consider the impacts of the residential portion of the project on student generation. This can be done by comparing the school capacities with enrollments for schools that serve the project area. Please also calculate the secondary impacts of student generation that will result from the commercial/retail/office portion of the project. Such development encourages new employees to move into the area, thus creating a demand for housing and new school facilities. This office will be able to provide you material to assist in this analysis.

In addition, please consider the impacts of the project on schools located within one quarter mile of the project site. These schools may be sensitive receptors in relation to air and noise impacts. We are also concerned about the methodologies used to determine these impacts on schools. Therefore, we strongly recommend you use the attached guidelines provided by the District's Environmental Health and Safety Branch to determine a project's impact on local schools.

The following outlines more specifically those areas we would like addressed:

1. Air Quality. Quantify short term emissions from demolition and construction-related activities [including especially fugitive dust (PM10)] and determine ground level concentrations achieved at District schools. Quantify emissions created by project-generated traffic, including the reentrainment of road dust. Emission from vehicular sources such as carbon monoxide may create "hot spots" with concentrations exceeding ambient air quality standards.

   The EIR should incorporate the appropriate microscale analysis to determine the impact of project related emissions on the affected school-based populations.

2. Noise. Quantify ambient noise levels at affected District sites and compare them to predicted or projected levels resulting from project-related construction activities, and from project-related traffic.

3. Traffic. Please consider increases in traffic and circulation patterns as they relate to safe pedestrian routes to and from schools. Also of concern is that sufficient unloading zones remain available near schools, and that street parking not be reduced.

Thank you for your consideration of our concerns. Please do not hesitate to contact me or Alex Alexander at (213) 742-7581 if we can provide further information.

Very truly yours,

Elizabeth J. Harris
California Environmental Quality Act Officer
for the Los Angeles Unified School District

EJH:ldf

Attachments

c: Mr. Brown
Mr. Shambra
Ms. Wong

FUGITIVE DUST (PM10)

Currently, there are no California Ambient Air Quality Standards (AAQS) for short term (<24 hour) exposures to PM10. Nevertheless, the South Coast Air Quality Management District reports that exposure to PM10 can result "in both short and long term reductions in lung function" and cites children as "especially sensitive" to its effects. The California Air Resources Board additionally states that when inhaled, these particles expose children to adverse health effects such as "increased risk of asthma attacks, reduced pulmonary function and increased risk of respiratory illnesses."

To account for short term exposures, the Los Angeles Unified School District has established a "significance threshold" for short term exposure levels by utilizing the U.S. Environmental Protection Agency approach for short term averaging time adjustments (U.S. EPA-450/4-77-001). A short term one hour concentration was established by dividing the 24 hour AAQS of 50 ug/m3 by the averaging time adjustment value of 0.4. The resulting concentration of 125 ug/m3 is used to represent the maximum concentration an individual may experience within one hour without impact or exacerbation of symptoms in sensitive individuals.

To approximate an acceptable daily (8 hour) school based exposure, the above referenced approach was again used and a multiplying factor of 0.7 applied to the adjusted one hour concentration. The resulting product of 88 ug/m3 is used to represent the maximum concentration an individual may experience throughout the school day without impact or exacerbation of symptoms in sensitive individuals.

Assessment Methodology

The following methodology is presented to ensure that short term and intermittent source-receptor concentrations are quantified and impacts on the school based population defined.

The air quality analysis should quantify construction and related emissions generated from the following soils handling and dust generating activities:

- Structural demolition
- Grading
- Excavation
- Aggregate loading and unloading
- Transportation of heavy equipment and haul trucks on paved and unpaved roadways (reentrainment)
- Aggregate stockpiling and storage

The District recommends that appropriate project scheduling reports and standard operating variables be used with the above soils handling and dust generating activities to produce credible emission estimates.

The following guidance documents are recommended to assist in the quantification of PM10 emissions:

1. U.S. Environmental Protection Agency, 1985. Compilation of Air Pollutant Emission Factors, Volume I: Stationary Point and Area Sources, Fourth Edition. AP-42. Supplement A to the Fourth Edition, 1986. Supplement B to the Fourth Edition, 1988. Supplement C to the Fourth Edition, 1990. Supplement D to the Fourth Edition, 1991.

2. U.S. Environmental Protection Agency, 1988. Control of Open Fugitive Dust Sources. EPA-450/3-88-008.

3. U.S. Environmental Protection Agency, 1989. Air/Superfund National Technical Guidance Study Series, Volume III: Estimation of Air Emissions from Cleanup Activities at Superfund Sites (Interim Final). EPA-450/1-89-003.

4. U.S. Environmental Protection Agency, 1992. Fugitive Dust Background Document and Technical Information Document for Best Available Control Technology. EPA-450/2-92-004.

5. South Coast Air Quality Management District, 1993. CEQA Air Quality Handbook, Chapter 9: Emission Calculation Procedures.

Air Dispersion Models

Once emissions have been quantified, air dispersion modeling utilizing sequentially processed meteorological data is necessary to determine the maximum ground level concentrations experienced at the school. Ground level concentrations for both one and eight hour averaging times should be generated to account for school based exposures (i.e. 8:00 a.m. to 4:00 p.m.). The following air dispersion models are recommended:

1. Industrial Source Complex Short Term (ISCST2)
2. Fugitive Dust Model (FDM)

To ensure a viable modeling effort, all appropriate input variables should be based on the above referenced assessment methodology.

To permit a technical review, the District requests that all emission calculations and assumptions used to perform the analysis, including model input and output files, be provided.

CARBON MONOXIDE

The current California short term ambient air quality standards (AAQS) for one and eight hour exposures to carbon monoxide are 20 ppm and 9 ppm, respectively. The South Coast Air Quality Management District (SCAQMD) has also established emergency episode criteria for carbon monoxide exposure. The first-stage one hour concentration is 40 ppm. The SCAQMD reports that concentrations at this level may "endanger or cause significant harm to the public."

Modeling Methodology

Where appropriate, the District recommends that the carbon monoxide microscale analysis be conducted in accordance with the methodology and protocol presented in the following guidance documents:

1. California Department of Transportation, 1989. CALINE 4 - A Dispersion Model for Predicting Air Pollutant Concentrations Near Roadways.

2. California Department of Transportation, 1988. Air Quality Technical Analysis Notes.

3. California Air Resources Board, 1989. Air Quality Analysis Tools*.

4. U.S. Environmental Protection Agency, 1992. EPA User's Guide for CAL3QHC: A Modeling Methodology for Predicting Pollutant Concentrations Near Roadway Intersections. EPA-454/R-92-006.

5. U.S. Environmental Protection Agency, 1992. Guideline for Modeling Carbon Monoxide from Roadway Intersections. EPA-454/R-92-005.

* Input parameters for the following variables should be made in accordance with the following approach:

- vehicles/lane/cycle (NCYC):

$$\frac{\textit{vehicle approach volume (VPH)}}{\textit{number of traffic lanes x (3600/total cycle time)}}$$

- vehicles delayed/lane/cycle (NDLA):

$$\frac{\textit{vehicles/lane/cycle x red cycle time}}{\textit{total cycle time}}$$

- last vehicle idle time (IDT2): values should be based on the average stopped delay time per vehicle (seconds/vehicle) for each respective lane group or movement. A value of zero in not appropriate when delay times exceed the green cycle time.

Air Dispersion Models

The District recommends use of the following air dispersion models to determine school based exposures:

1. CALINE4: Preferred for all roadway and traffic conditions.
2. CAL3QHC: May be used for free flow links. Signalized intersections may also be considered when the following conditions are met:

- all vehicles clear an intersection during the respective green time (average delay < green cycle time).

- vehicle capacity (V/C) ratios predicted by the model are consistent with the values presented in the project's traffic study.

To ensure a viable modeling effort, all appropriate input variables should be based on data presented in the project's traffic study (e.g. traffic volumes, cycle and delay times).

To permit a technical review, the District requests that all data collected pursuant to the above requirement, including model input and output files, be provided.

NOISE STUDY GUIDELINES FOR ENVIRONMENTAL DOCUMENTS

Noise control is important in determining appropriate land use near educational facilities. These guidelines and standards were intended for use for proposed projects that may result in significant and measurable increases in ambient noise levels at Los Angeles Unified School District sites.

The attached is designed to assist those who prepare noise study reports by providing some consistency to the way noise information is presented in environmental documents.

RECOMMENDED COMPONENTS OF A NOISE STUDY

I. Project Description

Provide a brief description of the project in terms of its effect on the noise environment and a brief description of the existing noise environment and its impact on the District.

II. A Detailed Survey of Existing Noise Environment

A. Provide a map showing existing setting in relation to the proposed project with adjacent land uses, receptors, identified noise sources, and proposed sample locations. Pertinent distances should be noted.

B. Survey must encompass the proposed project area and include all noise sensitive receptors (i.e. schools). Survey should establish the existing ambient noise level which may be used to establish compliance with District Noise Standards (See attached). Noise survey sites should include school sites within a quarter mile radius of the proposed project. Rationale for sampling location on District sites should be included in report.

C. Survey should cover the time period when the school may be affected by the proposed project. Identify dates, times and duration of sampling (a minimum of 1 hour recommended).

D. Survey should encompass a representative number of days to determine the existing "typical" noise environment.

E. For time periods measured, the noise data should include Leq, L_1, L_{10}, L_{50}, L_{90}, and identification of typical noise levels emitted by existing sources. If day-night measurements are made, report Ldn or CNEL also.

F. Summarize the present environment by providing a noise contour map showing lines of equal noise level in 5dB increments.

G. Follow the recommended sampling protocol

1. Utilize the "A" weighted scale of the sound level meter and the "slow" meter response (use fast response for impulsive type sounds).

2. The noise measurements should be taken at all impacted District sites, both interior and exterior noise levels. Impacted sites are those which may be affected by construction noise and/or post construction.

3. Microphone should be located four to five feet above the ground; ten feet or more from the nearest reflective surface, where possible. However, in cases where another

elevation is deemed appropriate, that elevation should be utilized and the rationale for the change discussed.

4. Measurements should be made at a point at least four feet from walls, ceilings, or floors nearest the noise source, with windows in the normal seasonal configuration.

5. Exterior noise measurements should be taken at the school property line at the point nearest the source.

6. Calibration of noise measurement equipment should be performed immediately prior to recording any noise data.

III. Future Noise Environment

A. Provide a brief description of predicted future noise environment, for both short term (i.e., during project construction) and long term (i.e., after project) impacts. The scope of analysis will vary depending upon the type of project, but at a minimum the following must be provided for short term and long term impacts.

1. Discuss types of noise sources and their proximity to the potentially impacted school site(s).

2. Description of Operations and Activities

a. Average daily level of activity (e.g., traffic, equipment operations in hours per day).

b. Distribution of activity over day and nighttime periods, days of week, etc.

c. Description of noise sources (i.e., percent truck; percent construction equipment; percent machinery).

d. Identify any unusual noise characteristics (impulsive, tone).

B. Method Used to Predict Future Levels

1. Identify computer model used

2. State any modifications to standard model in detail and rationale for changes.

3. Show noise levels at District sites in Leq L_1, L_{10}, L_{50}, L_{90}.

4. Give any other information/data yielded by model used.

C. Provide contours of Predicted Future Levels

IV. Impacts

A. Quantify anticipated changes in noise by comparing ambient noise levels to predicted or projected noise levels with project. Evaluate the impact on District sites.

B. Discuss effects of increased noise on school environment (e.g., speech interference).

V. Mitigations

A. Discuss how adverse noise impacts can be mitigated. List any alternative technologies for mitigation, their relative effectiveness and feasibility. If noise barriers are proposed for mitigation, specify attenuation.

B. Outline responsibilities of the lead agency.

C. Provide a discussion of noise impacts that cannot be mitigated.

DISTRICT NOISE STANDARDS

	L_{10}*	L_{eq}**
EXTERIOR NOISE LIMITS	70 dBA	67 dBA
INTERIOR NOISE LIMITS	55 dBA	52 L_{eq}

In those cases where the existing ambient noise levels exceeds the District Noise Standards, maximum measured ambient noise level will be considered the standard.

*L_{10}: Sound level that is exceeded 10 percent of the time for the time period under consideration.

**L_{eq}: A measure of the exposure resulting from the accumulation of A-weighted sound levels over a particular period of interest.

CR.999.00

COUNTY OF LOS ANGELES

DEPARTMENT OF PUBLIC WORKS

900 SOUTH FREMONT AVENUE
ALHAMBRA, CALIFORNIA 91803-1331
Telephone: (818) 458-5100

THOMAS A. TIDEMANSON, Director

ADDRESS ALL CORRESPONDENCE TO:
P.O.BOX 1460
ALHAMBRA, CALIFORNIA 91802-1460

January 12, 1994

IN REPLY PLEASE
REFER TO FILE: P-4

'94 JAN 14 P12:08

RECORDS CENTER

Ms. Ileana Liel, Senior Planner
Community Redevelopment Agency
of the City of Los Angeles
354 South Spring Street, Suite 700
Los Angeles, CA 90013

Dear Ms. Liel:

RESPONSE TO A NOTICE OF PREPARATION (NOP)
CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM AREA

Thank you for the opportunity to provide comments on the NOP for the Draft Environmental Impact Report (DEIR) for the proposed Crenshaw Corridor Recovery and Revitalization Program Area. We have reviewed the NOP and offer the following comments:

The California Solid Waste Reuse and Recycling Access Act of 1991, as amended, requires each jurisdiction to adopt an ordinance by September 1, 1994, requiring each "development project" to provide an adequate storage area for collection and removal of recyclable materials. The DEIR should discuss standards to provide adequate "waste storage areas" for collection/storage of recyclable and green waste materials for this project.

Current estimates indicate that a shortfall in permitted daily land disposal capacity in Los Angeles County will occur within the next four years. The proposed development and demolition of the existing structures will increase the generation of solid waste and will negatively impact solid waste management facilities in the County. Therefore, the proposed DEIR must identify what measures the project proponent will implement to mitigate the impact. These measures may include, but are not limited to, implementation of waste reduction, recycling, and composting programs, as well as programs to divert the construction and demolition waste from the landfills.

The existing hazardous waste management facilities in this County are inadequate to handle the hazardous waste currently being generated. The proposed multi-use development may generate hazardous waste which could adversely impact existing HWM facilities. This issue should be addressed and mitigation measures provided.

Action: .....
Info: .....
.....
.....

This DEIR needs to fully assess the impact, if any, on the quality of stormwater as the result of the project. Mitigation measures, if necessary, should be incorporated into the goals and implementation measures of the project. The document should reference National Pollutant Discharge Elimination System (NPDES) Permit CA0061654 issued by the California Regional Water Quality Control Board to the County and local agencies. The document should indicate compliance with all relevant stormwater quality management programs of the Federal, State, County, and local agencies.

If you have any questions regarding these comments, please contact Mr. Thomas S. Brachko of our Waste Management Division at (818) 458-3567.

If you have any questions regarding the environmental reviewing process of this Department, please contact Ms. Clarice Nash at the previous page address or at (818) 458-4334.

Very truly yours,

T. A. TIDEMANSON
Director of Public Works

Michael H. Hogan

for BRIAN T. SASAKI
Assistant Deputy Director
Planning Division

MA:my/333

FORM GEN. 160 (Rev. 6-80)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

Date: JAN 5 1994

To: Illeana Liel
Community Redevelopment Agency
354 South Spring Street, Suite 700
Los Angeles, CA 90013

RECEIVED '94 JAN -7 P1:06

From: Ed Ebrahimian, Division Manager
Project Management Division
Bureau of Street Lighting

Ed Ebrahimian

Subject: **DRAFT ENVIRONMENTAL IMPACT REPORT - PROPOSED CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM AREA**

This is in reply to the comments you requested for this Environmental Report.

The following comment should be incorporated in section "Infill/Rebuild Alternative" (following 5th sentence):

> **To enhance vehicular and pedestrian security, roadway and sidewalk lighting will be upgraded to current City Standards.**

If you have any questions, please contact Raashi Jhota of my staff at (213) 847-5406.

RJ:rm (FPMDPM1D/1555)

W.A. 9312-034

Liel

State of California

Business, Transportation and Housing Agency

Memorandum

To :

Mr. Tom Loftus
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814

Wilford Melton-District 7

From : **DEPARTMENT OF TRANSPORTATION**

Date : December 27, 1993

File No.:

IGR/CEQA/NOP
City of Los Angeles
PROPOSED CRENSHAW
CORRIDOR RECOVERY AND
REVITALIZATION
PROGRAM AREA

Vic. LA-10-R11.39

Subject: Project Review Comments

SCH No.93121029

Caltrans has reviewed the above-referenced document in regards to the proposed Environmental Impact Report for the recovery and revitalization program for the Crenshaw Corridor.

To assist us in our efforts to completely evaluate and assess the impacts of the program on the State Transportation System, a Transportation/Circulation study should be prepared to analyze the following information:

1. Trip generation/distribution including the method used to develop the percentages and assignment.

2. ADT, AM and PM peak-hour volumes for both the existing and future (Year 2015) conditions. This should include the Freeways/Highways and affected ramps, streets, crossroads and controlling intersections, as well as an analysis of existing and future conditions on mainline freeway/highway.

3. An analysis of future (Year 2015) conditions which include project traffic and the cumulative traffic generated for all approved developments in the area.

4. Discussion of mitigation measures appropriate to alleviate anticipated traffic impacts. These discussions should include, but not be limited to, the following:

   * financing
   * scheduling considerations
   * implementation responsibilities
   * monitoring plan

5. I.C.U. and level of service (LOS) analysis for affected freeway ramp intersections on the State Highway indicating existing + project LOS, and existing + project + other projects LOS (Existing and Future).

6. Developer's percent share of the cost, as well as a plan of realistic mitigation measures under the control of the developer should be addressed. What this means is that any assessment fees for mitigation should be of such proportion as to not only cover local impacts but should be extended to cover mainline freeway/highway deficiencies that occur as a result of the additional traffic generated by the project.

Any transportation related mitigation measures (freeway, on/off ramp widening, signalization, grading, drainage, etc...) which involve State right-of-way will require a Caltrans encroachment permit. Any measures that exceeds $300,000.00 in cost will also require a Caltrans Project Study Report (PSR).

Any transport of heavy construction equipment which requires the use of oversize transport vehicles on State Freeway/Highways will require a Caltrans transportation permit. We recommend that truck trips be limited to off-peak commute periods.

We look forward to reviewing the DEIR. We expect to receive a copy from the State Clearinghouse. However, to expedite the review process, you may send two copies in advance to the undersigned at the following address.

Wilford Melton
District 7 IGR\CEQA Coordinator
Advance Planning Branch 4-11G
120 So. Spring Street
Los Angeles, CA 90012

Thank you for this opportunity to comment. If you have any questions regarding these comments, please call me at (213) 897-1338.

Original Signed By

WILFORD MELTON
Senior Transportation Planner
IGR\CEQA Coordinator
Advance Planning Branch

cc: Ms. Ileana Liel, Senior Planner ✔
CRA of the City of Los Angeles
354 South Spring Street
Suite 700
Los Angeles, CA 90012

nh\12017

MWD

METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

RECEIVED

'93 DEC 29 A10:01

December 27, 1993

Action:
Info: E. Liel
Macias
B. Price

Ms. Lleana Liel
Senior Planner
The Community Redevelopment Agency
of the City of Los Angeles
Suite 700
354 South Spring Street
Los Angeles, California 90013

Dear Ms. Liel:

Notice of Preparation of a Program
Draft Environmental Impact Report for the
Proposed Crenshaw Corridor Recovery and Revitalization Program Area

We have received the Notice of Preparation (NOP) of a Program Draft Environmental Impact Report (PDEIR) for the Proposed Crenshaw Corridor Recovery and Revitalization Program Area. The project proposes to evaluate three development alternatives and the "no project" alternative for the Crenshaw Corridor. The comments herein represent Metropolitan's response as a potentially affected public agency.

Our review of the NOP indicates that Metropolitan has two facilities in the area of your proposed project site. Metropolitan's Culver City Feeder and Sepulveda Feeder cross the project area and travel in a westerly direction. The attached map shows Metropolitan's facilities in relation to your proposed project. It will be necessary to consider these facilities in your project planning.

In order to avoid potential conflicts with Metropolitan's facilities, we request that preliminary prints of all improvement plans for any activity in the area of Metropolitan's pipelines and rights-of-way be submitted for our review and written approval. You may obtain detailed prints of drawings of Metropolitan's pipelines and rights-of-way by calling Metropolitan's Substructures Information Line at (213) 217-6564. A statement of guidelines for development in Metropolitan's facilities area, fee properties or easements has been attached for your information.

Metropolitan requests that the PDEIR analyze the consistency of the proposed project with the population forecasts adopted by the Southern California Association of Governments (SCAG).

Metropolitan uses SCAG's population projections to determine future water demand. Development above these forecast provisions may increase demand on Metropolitan's resources and facilities beyond that anticipated.

Additionally, Metropolitan encourages projects within its service area to include water conservation measures. While Metropolitan continues to build new supplies and develop means for more efficient use of current resources, projected population and economic growth will increase demands on the current system. Water conservation, reclaimed water use, and groundwater recharge programs are integral components to regional water supply planning. Metropolitan supports mitigation measures such as using water efficient fixtures, drought tolerant landscaping, and reclaimed water to offset any increase in water use associated with your proposed project.

We appreciate the opportunity to provide input to your planning process. If we can be of further assistance, please contact me at (213) 217-6272.

Very truly yours,

Kathleen M. Kunysz

Kathleen M. Kunysz
Manager, Environmental Affairs

DW:led/crenshaw (D4)

Attachments

Guidelines for Developments in the Area of Facilities, Fee Properties, and/or Easements of The Metropolitan Water District of Southern California

1. Introduction

a. The following general guidelines should be followed for the design of proposed facilities and developments in the area of Metropolitan's facilities, fee properties, and/or easements.

b. We require that 3 copies of your tentative and final record maps, grading, paving, street improvement, landscape, storm drain, and utility plans be submitted for our review and written approval as they pertain to Metropolitan's facilities, fee properties and/or easements, prior to the commencement of any construction work.

2. Plans, Parcel and Tract Maps

The following are Metropolitan's requirements for the identification of its facilities, fee properties, and/or easements on your plans, parcel maps and tract maps:

a. Metropolitan's fee properties and/or easements and its pipelines and other facilities must be fully shown and identified as Metropolitan's on all applicable plans.

b. Metropolitan's fee properties and/or easements must be shown and identified as Metropolitan's with the official recording data on all applicable parcel and tract maps.

c. Metropolitan's fee properties and/or easements and existing survey monuments must be dimensionally tied to the parcel or tract boundaries.

d. Metropolitan's records of surveys must be referenced on the parcel and tract maps.

3. Maintenance of Access Along Metropolitan's Rights-of-Way

a. Proposed cut or fill slopes exceeding 10 percent are normally not allowed within Metropolitan's fee properties or easements. This is required to facilitate the use of construction and maintenance equipment, and provide access to its aboveground and belowground facilities.

b. We require that 16-foot-wide commercial-type driveway approaches be constructed on both sides of all streets crossing Metropolitan's rights-of-way. Openings are required in any median island. Access ramps, if necessary, must be at least 16-feet-wide. Grades of ramps are normally not allowed to exceed 10 percent. If the slope of an access ramp must exceed 10 percent due to the topography, the ramp must be paved. We require a 40-foot-long level area on the driveway approach to access ramps where the ramp meets the street. At Metropolitan's fee properties, we may require fences and gates.

c. The terms of Metropolitan's permanent easement deeds normally preclude the building or maintenance of structures of any nature or kind within its easements, to ensure safety and avoid interference with operation and maintenance of Metropolitan's pipelines or other facilities. Metropolitan must have vehicular access along the easements at all times for inspection, patrolling, and for maintenance of the pipelines and other facilities on a routine basis. We require a 20-foot-wide clear zone around all above-ground facilities for this routine access. This clear zone should slope away from our facility on a grade not to exceed 2 percent. We must also have access along the easements with construction equipment. An example of this is shown on Figure 1.

d. The footings of any proposed buildings adjacent to Metropolitan's fee properties and/or easements must not encroach into the fee property or easement or impose additional loading on Metropolitan's pipelines or other facilities therein. A typical situation is shown on Figure 2. Prints of the detail plans of the footings for any building or structure adjacent to the fee property or easement must be submitted for our review and written approval as they pertain to the pipeline or other facilities therein. Also, roof eaves of buildings adjacent to the easement or fee property must not overhang into the fee property or easement area.

e. Metropolitan's pipelines and other facilities, e.g. structures, manholes, equipment, survey monuments, etc. within its fee properties and/or easements must be protected from damage by the easement holder on Metropolitan's property or the property owner where Metropolitan has an easement, at no expense to Metropolitan. If the facility is a cathodic protection station it shall be located prior to any grading or excavation. The exact location, description and way of protection shall be shown on the related plans for the easement area.

4. Easements on Metropolitan's Property

a. We encourage the use of Metropolitan's fee rights-of-way by governmental agencies for public street and utility purposes, provided that such use does not interfere with Metropolitan's use of the property, the entire width of the property is accepted into the agency's public street system and fair market value is paid for such use of the right-of-way.

b. Please contact the Director of Metropolitan's Right of Way and Land Division, telephone (213) 250-6302, concerning easements for landscaping, street, storm drain, sewer, water or other public facilities proposed within Metropolitan's fee properties. A map and legal description of the requested easements must be submitted. Also, written evidence must be submitted that shows the city or county will accept the easement for the specific purposes into its public system. The grant of the easement will be subject to Metropolitan's rights to use its land for water pipelines and related purposes to the same extent as if such grant had not been made. There will be a charge for the easement. Please note that, if entry is required on the property prior to issuance of the easement, an entry permit must be obtained. There will also be a charge for the entry permit.

5. Landscaping

Metropolitan's landscape guidelines for its fee properties and/or easements are as follows:

a. A green belt may be allowed within Metropolitan's fee property or easement.

b. All landscape plans shall show the location and size of Metropolitan's fee property and/or easement and the location and size of Metropolitan's pipeline or other facilities therein.

c. Absolutely no trees will be allowed within 15 feet of the centerline of Metropolitan's existing or future pipelines and facilities.

d. Deep-rooted trees are prohibited within Metropolitan's fee properties and/or easements. Shallow-rooted trees are the only trees allowed. The shallow-rooted trees will not be permitted any closer than 15 feet from the centerline of the pipeline, and such trees shall not be taller than 25 feet with a root spread no greater than 20 feet in diameter at maturity. Shrubs, bushes, vines, and ground cover are permitted, but larger shrubs and bushes should not be planted directly over our pipeline. Turf is acceptable. We require submittal of landscape plans for Metropolitan's prior review and written approval. (See Figure 3).

e. The landscape plans must contain provisions for Metropolitan's vehicular access at all times along its rights-of-way to its pipelines or facilities therein. Gates capable of accepting Metropolitan's locks are required in any fences across its rights-of-way. Also, any walks or drainage facilities across its access route must be constructed to AASHTO H-20 loading standards.

f. Rights to landscape any of Metropolitan's fee properties must be acquired from its Right of Way and Land Division. Appropriate entry permits must be obtained prior to any entry on its property. There will be a charge for any entry permit or easements required.

6. Fencing

Metropolitan requires that perimeter fencing of its fee properties and facilities be constructed of universal chain link, 6 feet in height and topped with 3 strands of barbed wire angled upward and outward at a 45 degree angle or an approved equal for a total fence height of 7 feet. Suitable substitute fencing may be considered by Metropolitan. (Please see Figure 5 for details).

7. Utilities in Metropolitan's Fee Properties and/or Easements or Adjacent to Its Pipeline in Public Streets

Metropolitan's policy for the alinement of utilities permitted within its fee properties and/or easements and street rights-of-way is as follows:

a. Permanent structures, including catch basins, manholes, power poles, telephone riser boxes, etc., shall not be located within its fee properties and/or easements.

b. We request that permanent utility structures within public streets, in which Metropolitan's facilities are constructed under the Metropolitan Water District Act, be placed as far from our pipeline as possible, but not closer than 5 feet from the outside of our pipeline.

c. The installation of utilities over or under Metropolitan's pipeline(s) must be in accordance with the requirements shown on the enclosed prints of Drawings Nos. C-11632 and C-9547. Whenever possible we request a minimum of one foot clearance between Metropolitan's pipe and your facility. Temporary support of Metropolitan's pipe may also be required at undercrossings of its pipe in an open trench. The temporary support plans must be reviewed and approved by Metropolitan.

d. Lateral utility crossings of Metropolitan's pipelines must be as perpendicular to its pipeline alinement as practical. Prior to any excavation our pipeline shall be located manually and any excavation within two feet of our pipeline must be done by hand. This shall be noted on the appropriate drawings.

e. Utilities constructed longitudinally within Metropolitan's rights-of-way must be located outside the theoretical trench prism for uncovering its pipeline and must be located parallel to and as close to its rights-of-way lines as practical.

f. When piping is jacked or installed in jacked casing or tunnel under Metropolitan's pipe, there must be at least two feet of vertical clearance between the bottom of Metropolitan's pipe and the top of the jacked pipe, jacked casing or tunnel. We also require that detail drawings of the shoring for the jacking or tunneling pits be submitted for our review and approval. Provisions must be made to grout any voids around the exterior of the jacked pipe, jacked casing or tunnel. If the piping is installed in a jacked casing or tunnel the annular space between the piping and the jacked casing or tunnel must be filled with grout.

g. Overhead electrical and telephone line requirements:

1) Conductor clearances are to conform to the California State Public Utilities Commission, General Order 95, for Overhead Electrical Line Construction or at a greater clearance if required by Metropolitan. Under no circumstances shall clearance be less than 35 feet.

2) A marker must be attached to the power pole showing the ground clearance and line voltage, to help prevent damage to your facilities during maintenance or other work being done in the area.

3) Line clearance over Metropolitan's fee properties and/or easements shall be shown on the drawing to indicate the lowest point of the line under the most adverse conditions including consideration of sag, wind load, temperature change, and support type. We require that overhead lines be located at least 30 feet laterally away from all above-ground structures on the pipelines.

4) When underground electrical conduits, 120 volts or greater, are installed within Metropolitan's fee property and/or easement, the conduits must be incased in a minimum of three inches of red concrete. Where possible, above ground warning signs must also be placed at the right-of-way lines where the conduits enter and exit the right-of-way.

h. The construction of sewerlines in Metropolitan's fee properties and/or easements must conform to the California Department of Health Services Criteria for the Separation of Water Mains and Sanitary Services and the local City or County Health Code Ordinance as it relates to installation of sewers in the vicinity of pressure waterlines. The construction of sewerlines should also conform to these standards in street rights-of- way.

i. Cross sections shall be provided for all pipeline crossings showing Metropolitan's fee property and/or easement limits and the location of our pipeline(s). The exact locations of the crossing pipelines and their elevations shall be marked on as-built drawings for our information.

j. Potholing of Metropolitan's pipeline is required if the vertical clearance between a utility and Metropolitan's pipeline is indicated on the plan to be one foot or less. If the indicated clearance is between one and two feet, potholing is suggested. Metropolitan will provide a representative to assists others in locating and identifying its pipeline. Two-working days notice is requested.

k. Adequate shoring and bracing is required for the full depth of the trench when the excavation encroaches within the zone shown on Figure 4.

l. The location of utilities within Metropolitan's fee property and/or easement shall be plainly marked to help prevent damage during maintenance or other work done in the area. Detectable tape over buried utilities should be placed a minimum of 12 inches above the utility and shall conform to the following requirements:

1) Water pipeline: A two-inch blue warning tape shall be imprinted with:

"CAUTION BURIED WATER PIPELINE"

2) Gas, oil, or chemical pipeline: A two-inch yellow warning tape shall be imprinted with:

"CAUTION BURIED _____ PIPELINE"

3) Sewer or storm drain pipeline: A two-inch green warning tape shall be imprinted with:

"CAUTION BURIED _____ PIPELINE"

4) Electric, street lighting, or traffic signals conduit: A two-inch red warning tape shall be imprinted with:

"CAUTION BURIED _____ CONDUIT"

5) Telephone, or television conduit: A two-inch orange warning tape shall be imprinted with:

"CAUTION BURIED _____ CONDUIT"

m. Cathodic Protection requirements:

1) If there is a cathodic protection station for Metropolitan's pipeline in the area of the proposed work, it shall be located prior to any grading or excavation. The exact location, description and manner of protection shall be shown on all applicable plans. Please contact Metropolitan's Corrosion Engineering Section, located at Metropolitan's F. E. Weymouth Softening and Filtration Plant, 700 North Moreno Avenue, La Verne, California 91750, telephone (714) 593-7474, for the locations of Metropolitan's cathodic protection stations.

2) If an induced-current cathodic protection system is to be installed on any pipeline crossing Metropolitan's pipeline, please contact Mr. Wayne E. Risner at (714) 593-7474 or (213) 250-5085. He will review the proposed system and determine if any conflicts will arise with the existing cathodic protection systems installed by Metropolitan.

3) Within Metropolitan's rights-of-way, pipelines and carrier pipes (casings) shall be coated with an approved protective coating to conform to Metropolitan's requirements, and shall be maintained in a neat and orderly condition as directed by Metropolitan. The application and monitoring of cathodic protection on the pipeline and casing shall conform to Title 49 of the Code of Federal Regulations, Part 195.

4) If a steel carrier pipe (casing) is used:

(a) Cathodic protection shall be provided by use of a sacrificial magnesium anode (a sketch showing the cathodic protection details can be provided for the designers information).

(b) The steel carrier pipe shall be protected with a coal tar enamel coating inside and out in accordance with AWWA C203 specification.

n. All trenches shall be excavated to comply with the CAL/OSHA Construction Safety Orders, Article 6, beginning with Sections 1539 through 1547. Trench backfill shall be placed in 8-inch lifts and shall be compacted to 95 percent relative compaction (ASTM D698) across roadways and through protective dikes. Trench backfill elsewhere will be compacted to 90 percent relative compaction (ASTM D698).

o. Control cables connected with the operation of Metropolitan's system are buried within streets, its fee properties and/or easements. The locations and elevations of these cables shall be shown on the drawings. The drawings shall note that prior to any excavation in the area, the control cables shall be located and measures shall be taken by the contractor to protect the cables in place.

p. Metropolitan is a member of Underground Service Alert (USA). The contractor (excavator) shall contact USA at 1-800-422-4133 (Southern California) at least 48 hours prior to starting any excavation work. The contractor will be liable for any damage to Metropolitan's facilities as a result of the construction.

8. Paramount Right

Facilities constructed within Metropolitan's fee properties and/or easements shall be subject to the paramount right of Metropolitan to use its fee properties and/or easements for the purpose for which they were acquired. If at any time Metropolitan or its assigns should, in the exercise of their rights, find it necessary to remove any of the facilities from the fee properties and/or easements, such removal and replacement shall be at the expense of the owner of the facility.

9. Modification of Metropolitan's Facilities

When a manhole or other of Metropolitan's facilities must be modified to accommodate your construction or reconstruction, Metropolitan will modify the facilities with its forces. This should be noted on the construction plans. The estimated cost to perform this modification will be given to you and we will require a deposit for this amount before the work is performed. Once the deposit is received, we will schedule the work. Our forces will coordinate the work with your contractor. Our final billing will be based on actual cost incurred, and will include materials, construction, engineering plan review, inspection, and administrative overhead charges calculated in accordance with Metropolitan's standard accounting practices. If the cost is less than the deposit, a refund will be made; however, if the cost exceeds the deposit, an invoice will be forwarded for payment of the additional amount.

10. Drainage

a. Residential or commercial development typically increases and concentrates the peak storm water runoff as well as the total yearly storm runoff from an area, thereby increasing the requirements for storm drain facilities downstream of the development. Also, throughout the year water from landscape irrigation, car washing, and other outdoor domestic water uses flows into the storm drainage system resulting in weed abatement, insect infestation, obstructed access and other problems. Therefore, it is Metropolitan's usual practice not to approve plans that show discharge of drainage from developments onto its fee properties and/or easements.

b. If water must be carried across or discharged onto Metropolitan's fee properties and/or easements, Metropolitan will insist that plans for development provide that it be carried by closed conduit or lined open channel approved in writing by Metropolitan. Also the drainage facilities must be maintained by others, e.g., city, county, homeowners association, etc. If the development proposes changes to existing drainage features, then the developer shall make provisions to provide for replacement and these changes must be approved by Metropolitan in writing.

11. Construction Coordination

During construction, Metropolitan's field representative will make periodic inspections. We request that a stipulation be added to the plans or specifications for notification of Mr. _____ of Metropolitan's Operations Services Branch, telephone (213) 250-____, at least two working days prior to any work in the vicinity of our facilities.

12. Pipeline Loading Restrictions

a. Metropolitan's pipelines and conduits vary in structural strength, and some are not adequate for AASHTO H-20 loading. Therefore, specific loads over the specific sections of pipe or conduit must be reviewed and approved by Metropolitan. However, Metropolitan's pipelines are typically adequate for AASHTO H-20 loading provided that the cover over the pipeline is not less than four feet or the cover is not substantially increased. If the temporary cover over the pipeline during construction is between three and four feet, equipment must restricted to that which

imposes loads no greater than AASHTO H-10. If the cover is between two and three feet, equipment must be restricted to that of a Caterpillar D-4 tract-type tractor. If the cover is less than two feet, only hand equipment may be used. Also, if the contractor plans to use any equipment over Metropolitan's pipeline which will impose loads greater than AASHTO H-20, it will be necessary to submit the specifications of such equipment for our review and approval at least one week prior to its use. More restrictive requirements may apply to the loading guideline over the San Diego Pipelines 1 and 2, portions of the Orange County Feeder, and the Colorado River Aqueduct. Please contact us for loading restrictions on all of Metropolitan's pipelines and conduits.

b. The existing cover over the pipeline shall be maintained unless Metropolitan determines that proposed changes do not pose a hazard to the integrity of the pipeline or an impediment to its maintenance.

13. Blasting

a. At least 20 days prior to the start of any drilling for rock excavation blasting, or any blasting, in the vicinity of Metropolitan's facilities, a two-part preliminary conceptual plan shall be submitted to Metropolitan as follows:

b. Part 1 of the conceptual plan shall include a complete summary of proposed transportation, handling, storage, and use of explosions.

c. Part 2 shall include the proposed general concept for blasting, including controlled blasting techniques and controls of noise, fly rock, airblast, and ground vibration.

14. CEQA Requirements

a. When Environmental Documents Have Not Been Prepared

1) Regulations implementing the California Environmental Quality Act (CEQA) require that Metropolitan have an opportunity to consult with the agency or consultants preparing any environmental documentation. We are required to review and consider the environmental effects of the project as shown in the Negative Declaration or Environmental Impact Report (EIR) prepared for your project before committing Metropolitan to approve your request.

2) In order to ensure compliance with the regulations implementing CEQA where Metropolitan is not the Lead Agency, the following minimum procedures to ensure compliance with the Act have been established:

a) Metropolitan shall be timely advised of any determination that a Categorical Exemption applies to the project. The Lead Agency is to advise Metropolitan that it and other agencies participating in the project have complied with the requirements of CEQA prior to Metropolitan's participation.

b) Metropolitan is to be consulted during the preparation of the Negative Declaration or EIR.

c) Metropolitan is to review and submit any necessary comments on the Negative Declaration or draft EIR.

d) Metropolitan is to be indemnified for any costs or liability arising out of any violation of any laws or regulations including but not limited to the California Environmental Quality Act and its implementing regulations.

b. <u>When Environmental Documents Have Been Prepared</u>

If environmental documents have been prepared for your project, please furnish us a copy for our review and files in a timely manner so that we may have sufficient time to review and comment. The following steps must also be accomplished:

1) The Lead Agency is to advise Metropolitan that it and other agencies participating in the project have complied with the requirements of CEQA prior to Metropolitan's participation.

2) You must agree to indemnify Metropolitan, its officers, engineers, and agents for any costs or liability arising out of any violation of any laws or regulations including but not limited to the California Environmental Quality Act and its implementing regulations.

15. <u>Metropolitan's Plan-Review Cost</u>

a. An engineering review of your proposed facilities and developments and the preparation of a letter response

giving Metropolitan's comments, requirements and/or approval that will require 8 man-hours or less of effort is typically performed at no cost to the developer, unless a facility must be modified where Metropolitan has superior rights. If an engineering review and letter response requires more than 8 man-hours of effort by Metropolitan to determine if the proposed facility or development is compatible with its facilities, or if modifications to Metropolitan's manhole(s) or other facilities will be required, then all of Metropolitan's costs associated with the project must be paid by the developer, unless the developer has superior rights.

b. A deposit of funds will be required from the developer before Metropolitan can begin its detailed engineering plan review that will exceed 8 hours. The amount of the required deposit will be determined after a cursory review of the plans for the proposed development.

c. Metropolitan's final billing will be based on actual cost incurred, and will include engineering plan review, inspection, materials, construction, and administrative overhead charges calculated in accordance with Metropolitan's standard accounting practices. If the cost is less than the deposit, a refund will be made; however, if the cost exceeds the deposit, an invoice will be forwarded for payment of the additional amount. Additional deposits may be required if the cost of Metropolitan's review exceeds the amount of the initial deposit.

16. Caution

We advise you that Metropolitan's plan reviews and responses are based upon information available to Metropolitan which was prepared by or on behalf of Metropolitan for general record purposes only. Such information may not be sufficiently detailed or accurate for your purposes. No warranty of any kind, either express or implied, is attached to the information therein conveyed as to its accuracy, and no inference should be drawn from Metropolitan's failure to comment on any aspect of your project. You are therefore cautioned to make such surveys and other field investigations as you may deem prudent to assure yourself that any plans for your project are correct.

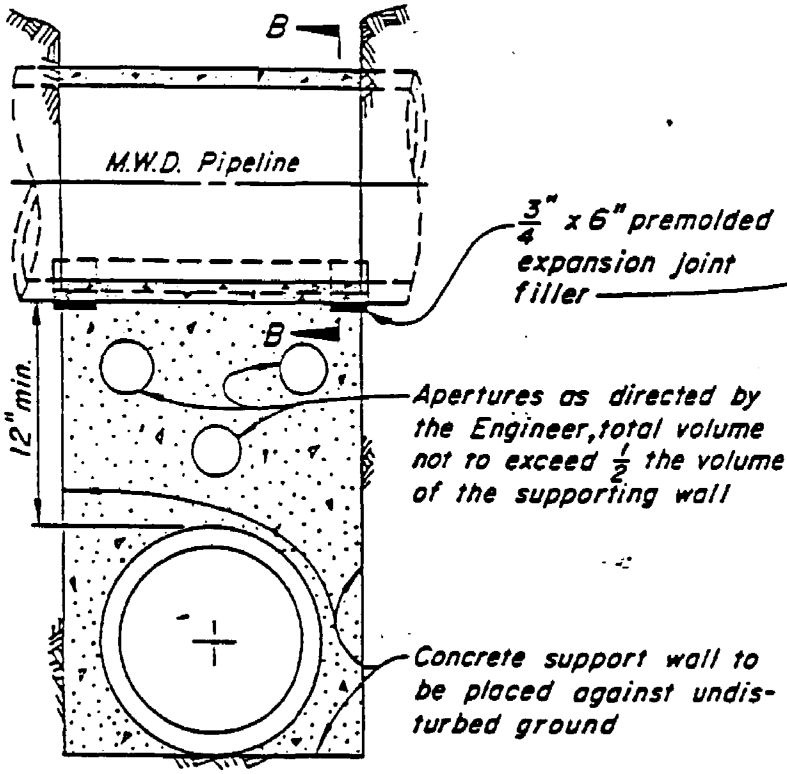
17. Additional Information

Should you require additional information, please contact Mr. Jim Hale, telephone (213) 250-6564.

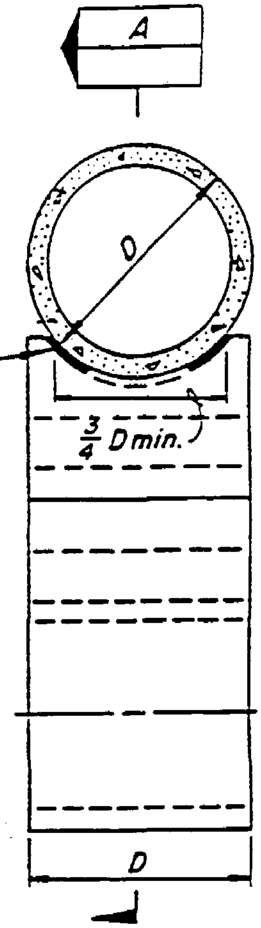
JEH/MRW/lk

Rev. January 22, 1989

Encl.

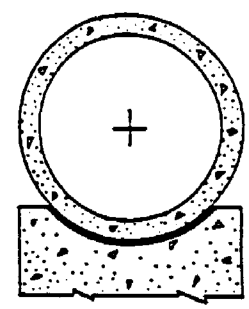


SECTION "A-A"



CROSS SECTION

1. Supporting wall shall have a firm bearing on the subgrade and against the side of the excavation.
2. Premolded expansion joint filler per ASTM D-1751-73 to be used in support for steel pipe only.
3. If trench width is 4 feet or greater, measured along centerline of M.W.D. pipe, concrete support must be constructed.
4. If trench width is less than 4 feet, clean sand backfill, compacted to 90% density in accordance with the provisions of ASTM Standard D-1557-70 may be used in lieu of the concrete support wall.



SECTION "B-B"

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

TYPICAL SUPPORT FOR M.W.D. PIPELINE

DRAWN ______ RECOMMENDED ______
TRACED ______
CHECKED ______ APPROVED ______

C-9547

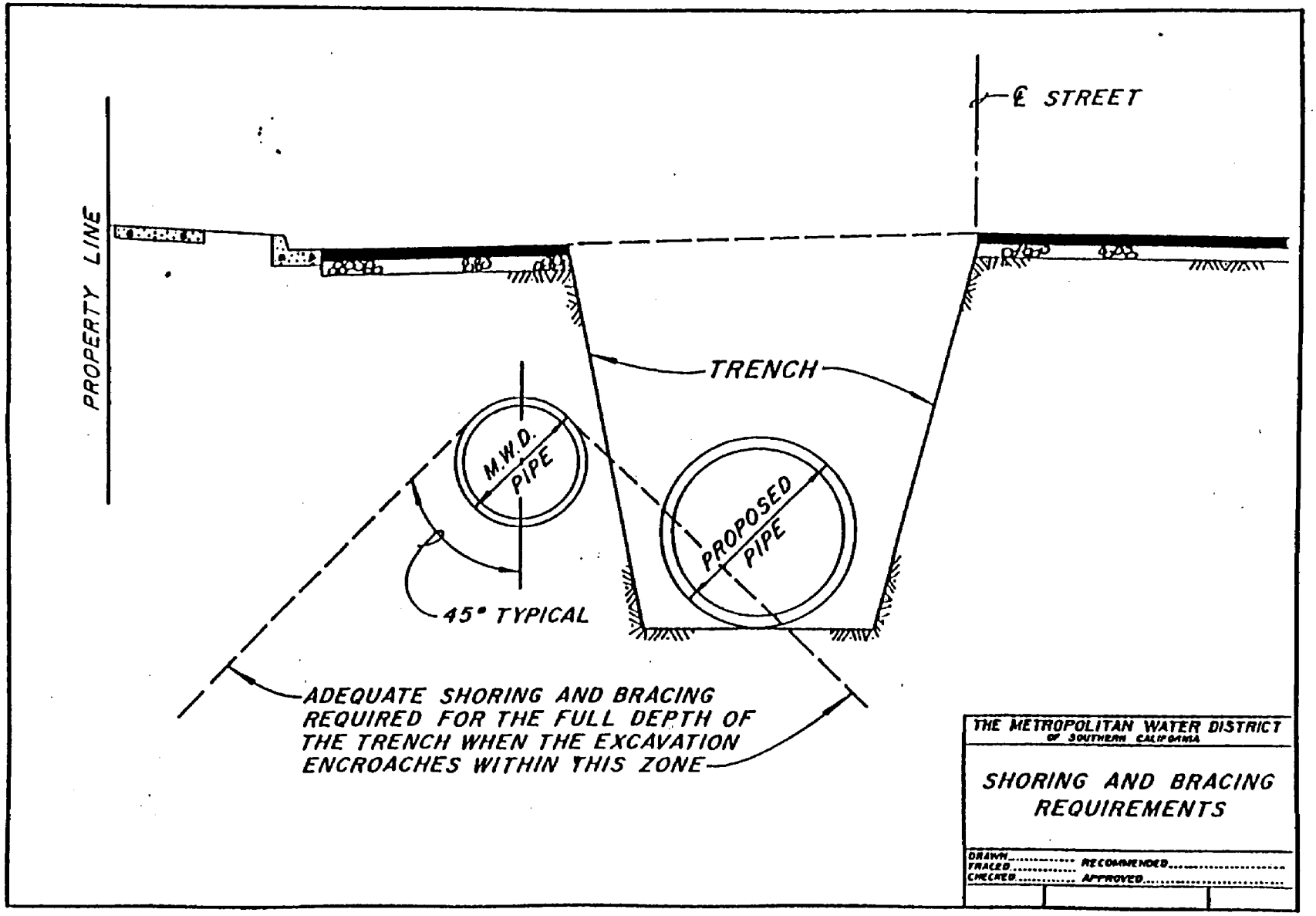
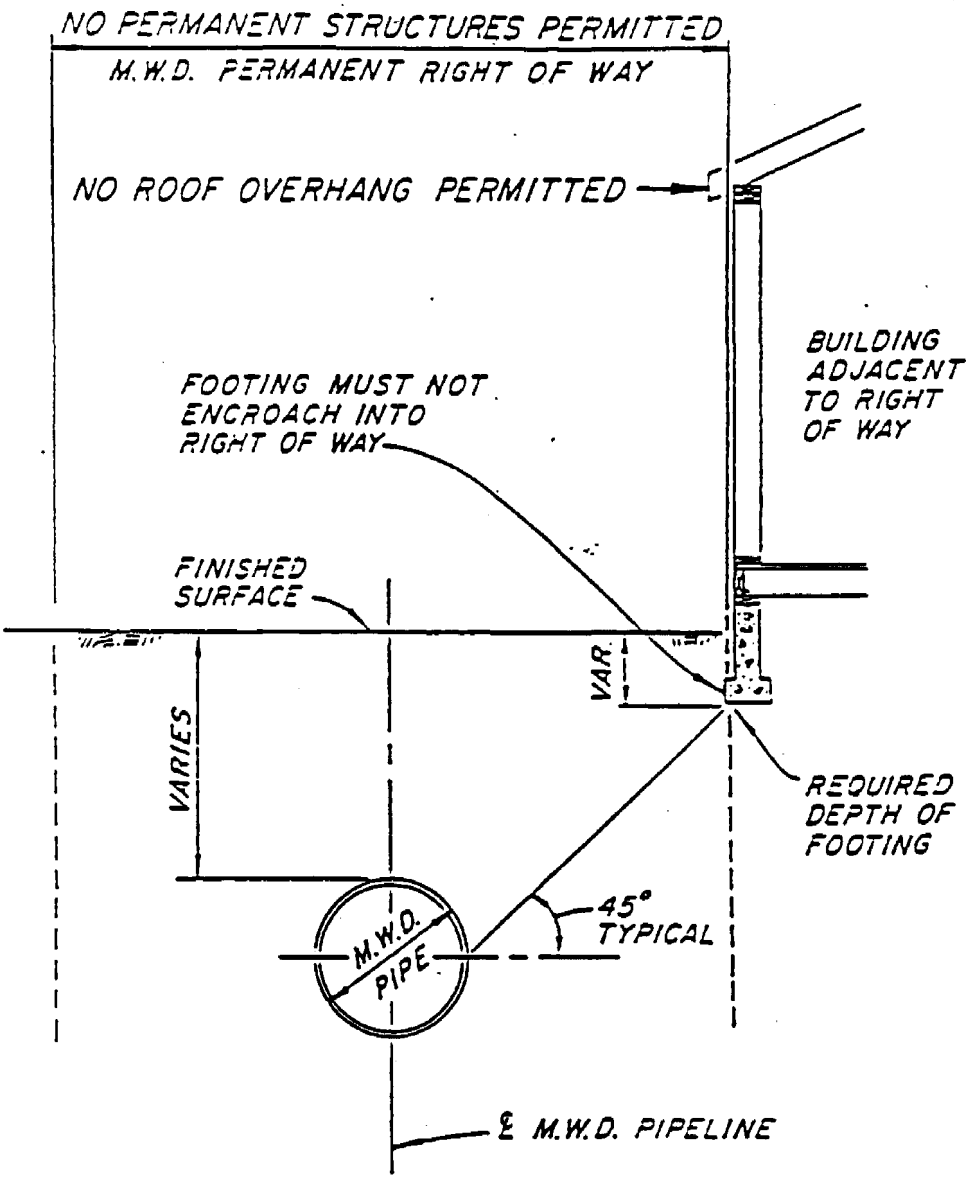

℄ STREET
PROPERTY LINE
TRENCH
M.W.D. PIPE
PROPOSED PIPE
45° TYPICAL
ADEQUATE SHORING AND BRACING REQUIRED FOR THE FULL DEPTH OF THE TRENCH WHEN THE EXCAVATION ENCROACHES WITHIN THIS ZONE
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
SHORING AND BRACING REQUIREMENTS
DRAWN
TRACED
CHECKED
RECOMMENDED
APPROVED

FIGURE 4



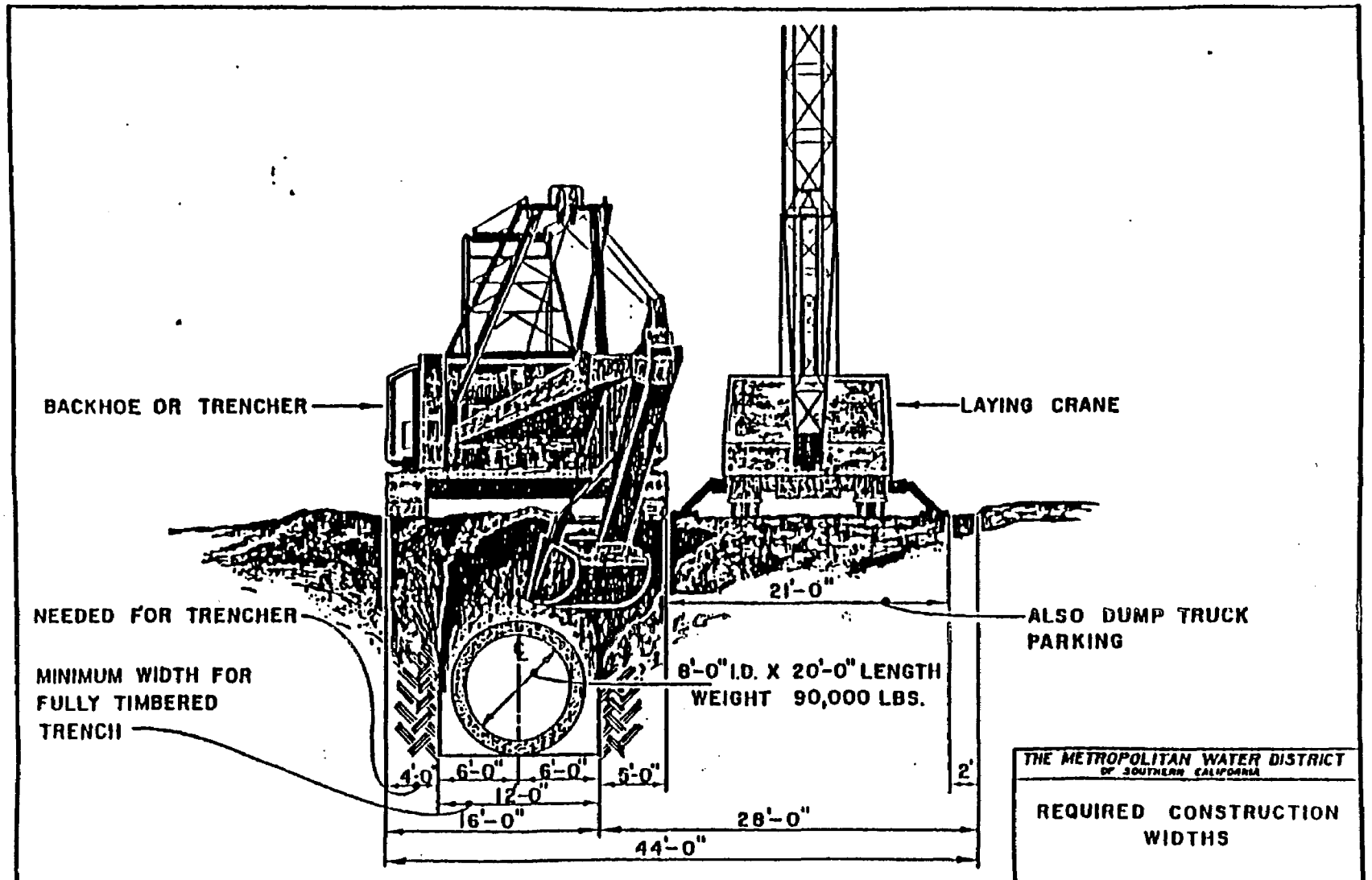
NOTE: M.W.D. PIPELINE SIZE, DEPTH, LOCATION AND WIDTH OF PERMANENT RIGHT OF WAY VARIES.

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

REQUIREMENTS FOR BUILDINGS AND FOOTINGS ADJACENT TO M.W.D. RIGHT OF WAY

DRAWN _____ RECOMMENDED _____
TRACED _____
CHECKED _____ APPROVED _____

FIGURE 2

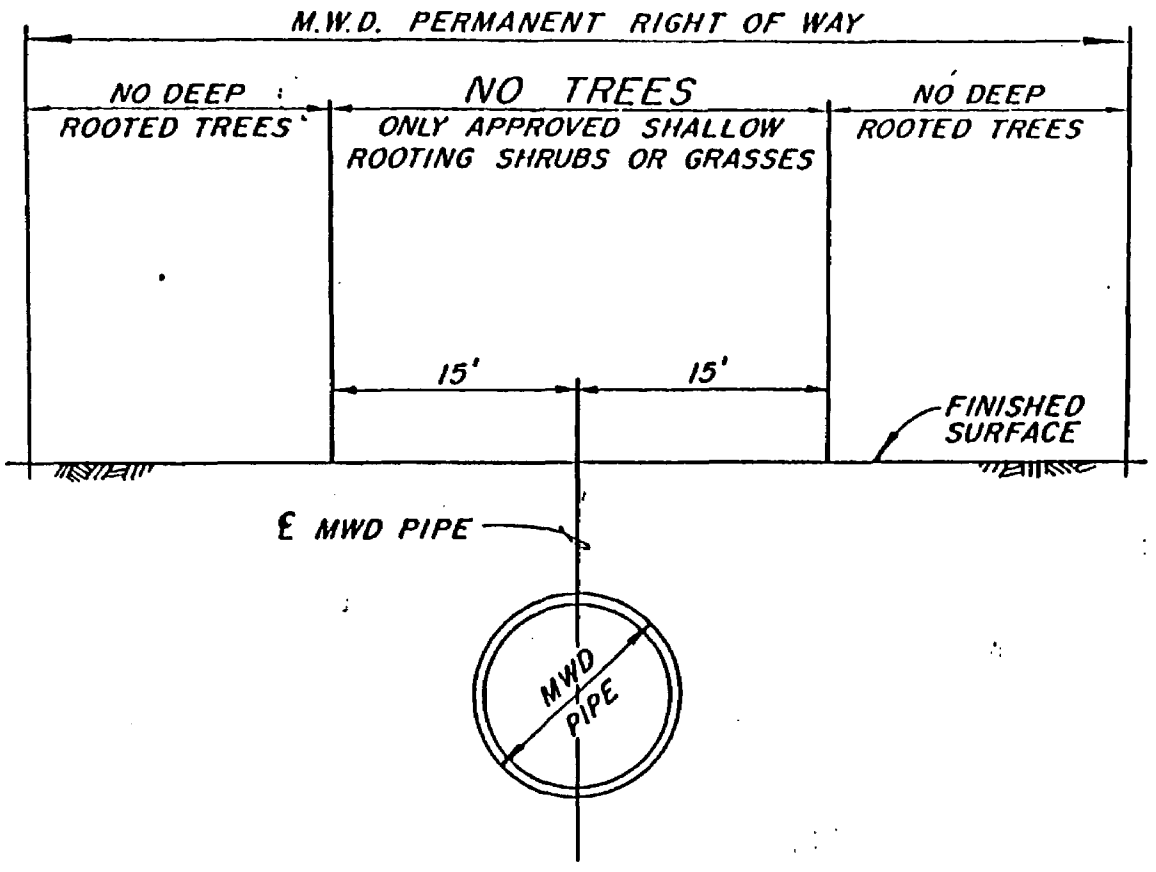


THE METROPOLITAN WATER DISTRICT
OF SOUTHERN CALIFORNIA

REQUIRED CONSTRUCTION
WIDTHS

DRAWN..... RECOMMENDED.....
TRACED.....
CHECKED..... APPROVED.....

FIGURE 1



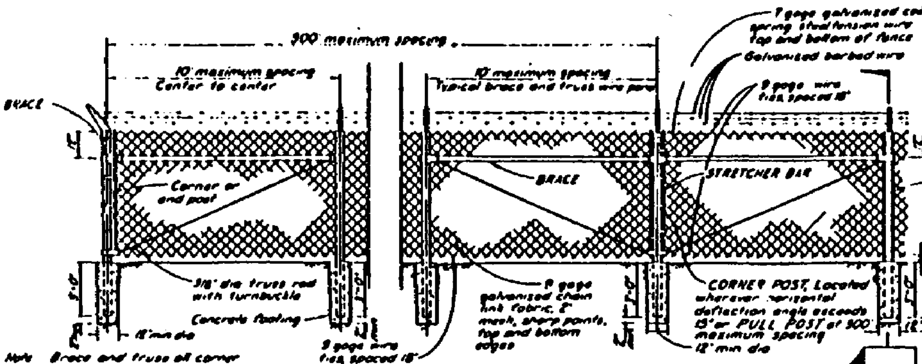
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

LANDSCAPE GUIDELINES FOR M.W.D. RIGHT OF WAY

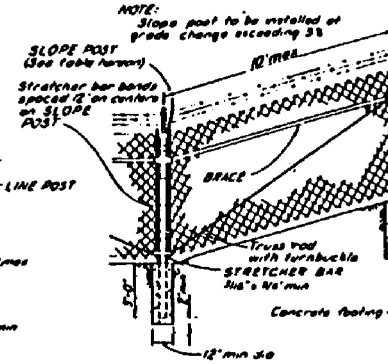
DRAWN ..... RECOMMENDED .....
TRACED ....
CHECKED ..... APPROVED .....

FIGURE 3

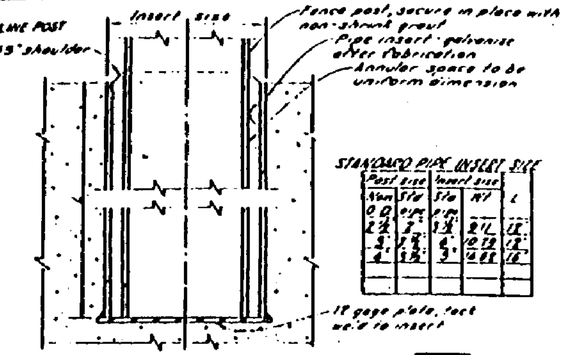
SPECIFICATIONS NO. SHEET NO.



END, CORNER AND PULL POST BRACING
(Not to scale)

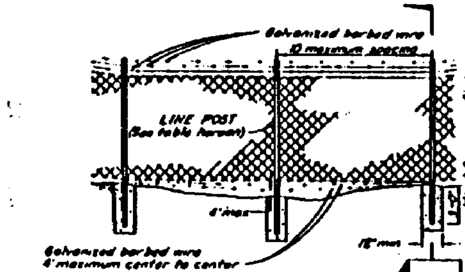


TYPICAL FENCE ON SLOPE
(Not to scale)

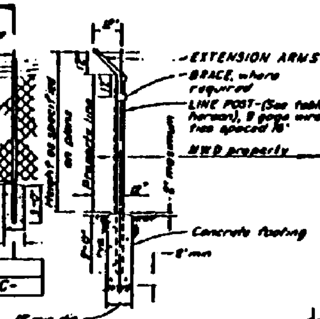


FENCE POST INSERT FOR CONCRETE WALL AND CONCRETE CURB | 1
(Not to scale)

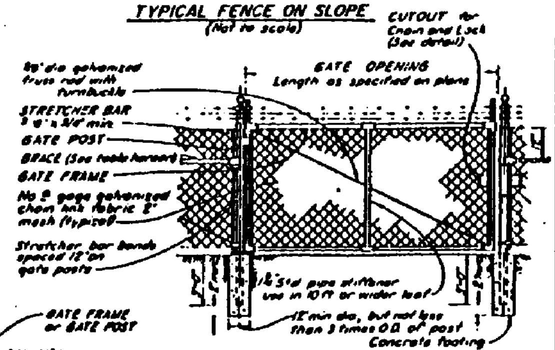
Use	Type	Nominal Size (Inches)	Actual O.D. (Inches)	Weight per foot (Pounds)
End, corner, slope, pull and gate posts (for single gates 6 feet or less in width and double gates 12 feet or less in width) for chain link fabric 72 inches or higher	Pipe	2½	2.875	5.79
End, corner, slope, pull and gate posts (for single gates 6 feet or less in width and double gates 12 feet or less in width) for chain link fabric less than 72 inches height	Pipe	2	2.375	3.65
Gate posts for single swing gates over 6 feet but not over 13 feet in width and double swing gates over 12 feet but not over 26 feet in width.	Pipe	3½	4.000	9.11
Gate posts for single swing gates over 13 feet but not over 18 feet in width and double swing gates over 26 feet but not over 36 feet in width	Pipe	6	6.625	18.97
Gate posts for single swing gates over 18 feet in width and double swing gates over 36 feet in width	Pipe	8	8.625	24.70
Line posts for chain link fabric 72 inches or higher	Pipe / H-Section	2 / 2¼x 1⅞	2.375	3.65 / 4.10
Line posts for chain link fabric less than 72 inches in height	Pipe / H-Section	1½ / 1⅞x 1⅝	1.900	2.72 / 2.80
Braces	Pipe / H-Section	1¼ / [illegible]	1.660	2.27 / 2.10
Frame for gates	Pipe	1½	1.900	2.72
Stiffeners for gates	Pipe	1¼	1.660	2.27



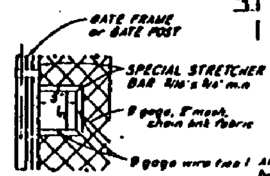
ELEVATION AT SHALLOW DRAIN CROSSINGS
(Not to scale)



LINE POST SECTION | C-
(Not to scale)



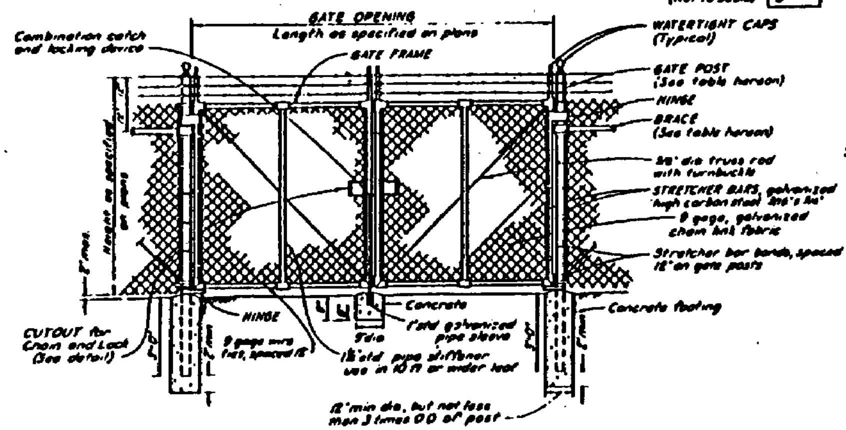
SINGLE SWING GATE DETAIL
(Not to scale)



DETAIL OF CUTOUT FOR CHAIN AND LOCK
(Not to scale)

GENERAL NOTES

1. All ferrous parts and materials shall be galvanized after fabrication
2. Adjustable tighteners shall be turnbuckle or equivalent, having minimum 6" take-up
3. Extension arms for barbed wire shall be steel, malleable iron or wrought iron and shall be attached to the top of the post with a ¼ inch round head rivet. The extension arms shall carry three wires each at approximately 5 inch centers in a plane approximately 45° from the vertical.
4. All gate hinges shall be heavy duty malleable iron or steel, industrial service type, 270 degree swing, of approved quality and design
5. Secure cap to post with ¼ inch round head rivet



DOUBLE SWING GATE DETAIL
(Not to scale)

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA
DISTRIBUTION SYSTEM

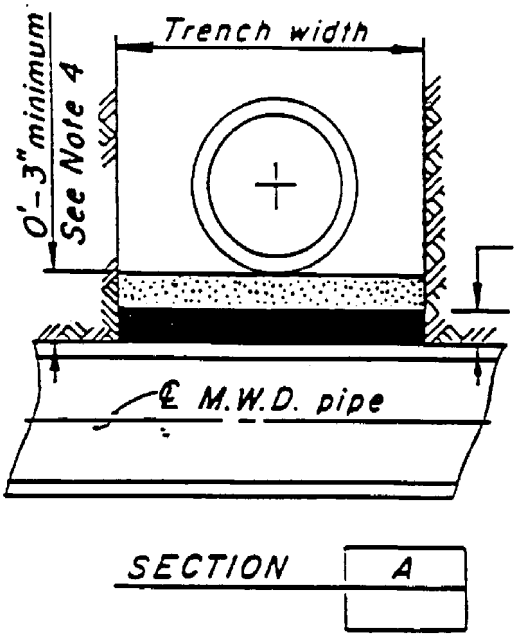
CHAIN LINK FENCE DETAILS

DESIGNED | RECOMMENDED
DRAWN |
CHECKED | APPROVED
WORK ORDER NO | LOS ANGELES

NO.	DATE	DWN	CKD.	REVISION	REC.	APP.

REVISION COORDINATION CHECK
ORIGINAL RELEASE | MECH | STRUCT | ELEC | CIVIL | SPECS | DATE
INTERSECTIONAL COORDINATION CHECK

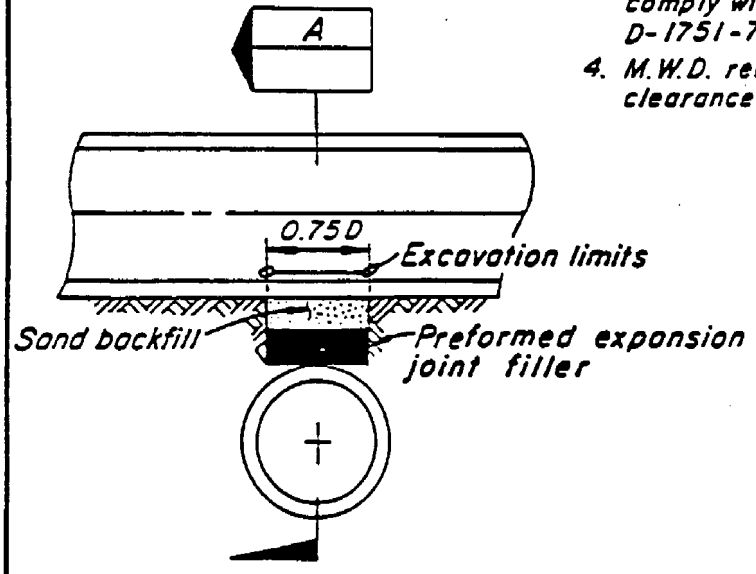
FIGURE



SECTION A

NOTES

1. This method to be used where the utility line is 24" or greater in diameter and the clearance between the utility line and M.W.D. pipe is 12" or less.
2. Special protection may be required if the utility line diameter is greater than M.W.D. pipe or if the cover over the utility line to the street surface is minimal and there is 12" or less clearance between M.W.D. pipe and the utility line.
3. Preformed expansion joint filler to comply with ASTM designation D-1751-73.
4. M.W.D. requests 12" minimum clearance whenever possible.



CROSS SECTION

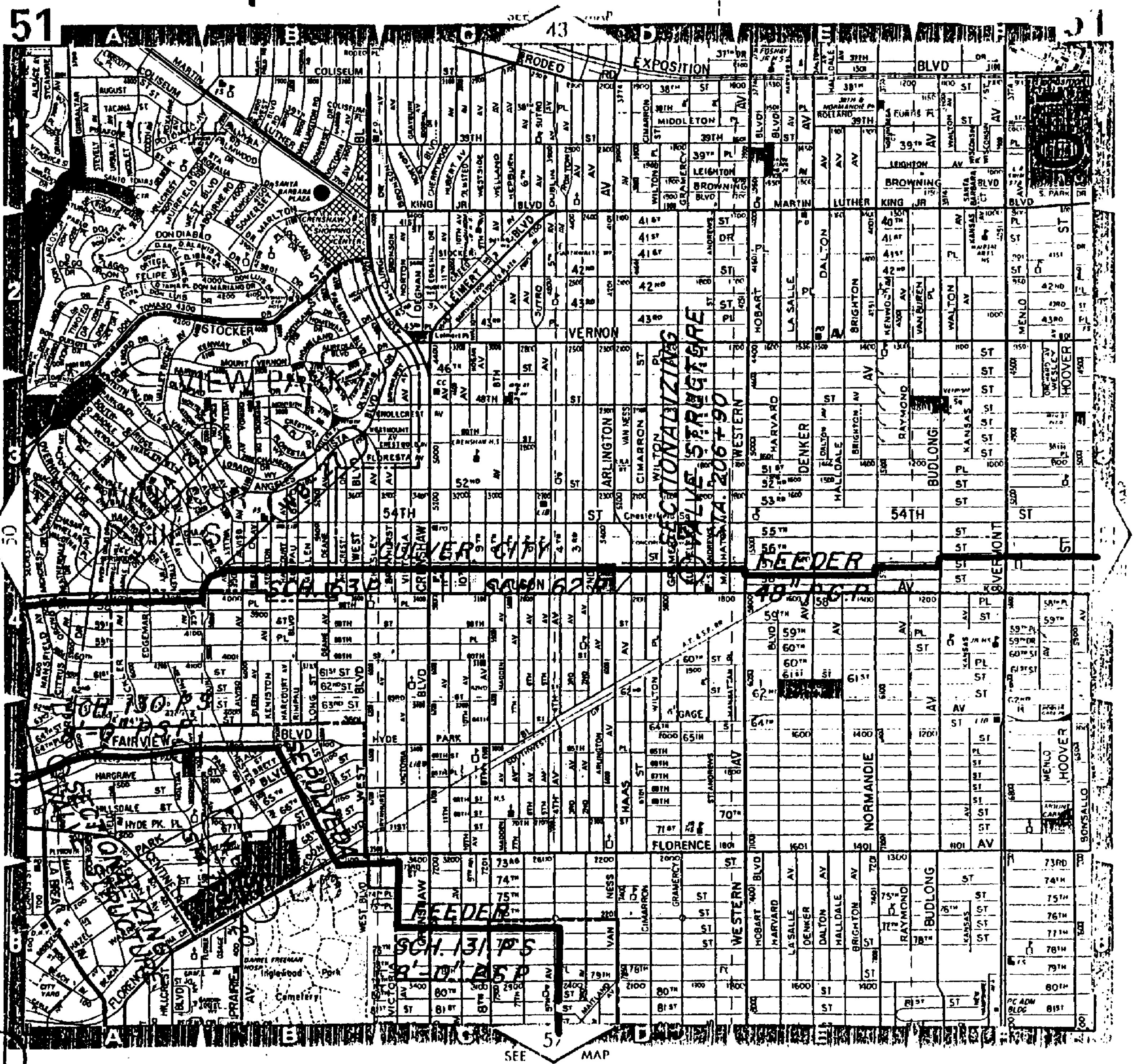
THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

TYPICAL EXPANSION JOINT FILLER PROTECTION FOR OVERCROSSING OF M.W.D. PIPELINE

DRAWN _____ RECOMMENDED _____
TRACED _____
CHECKED _____ APPROVED _____

C-11632

LOS ANGELES CO.



recv'd 1/25/9
R

Los Angeles County
Metropolitan
Transportation
Authority

425 South Main Street
Los Angeles, CA
90013-1393

213.972.6000

January 14, 1994

Ms. Ileana Liel
Senior Planner
The Community Redevelopment Agency
of the City of Los Angeles
354 South Spring Street, Suite 700
Los Angeles, California 90013

Dear Ms. Liel:

Re: Notice of Preparation of a Draft Environmental Impact Report for the Crenshaw Corridor Recovery and Revitalization Program Area

The Los Angeles County Metropolitan Transportation Authority (MTA) appreciates the opportunity to comment on the Notice of Preparation (NOP) of a Draft Environmental Impact Report (DEIR) for the proposed Crenshaw Corridor Recovery and Revitalization Program Area.

General Comments

As a regional transportation planning and operating agency, MTA subscribes to the idea of reducing public dependence on the personal automobile through land use planning, project design standards and traffic mitigation strategies which encourage the use of transportation alternatives to the single-occupant automobile such as transit, ridesharing, biking and walking.

We also believe that ultimately, the solution to the regional traffic problem lies not in expanding roadways, but in diverting additional trips to higher capacity modes and avoiding as many vehicle trips as possible.

The environmental impact review process provides an opportunity to develop an effective traffic mitigation program consistent with the current efforts of the South Coast Air Quality Management District and Los Angeles County's Congestion Management Program to reduce auto trips.

Specific Comments

1. **The DEIR should include a discussion of the project's traffic impacts, including mode split analysis.**

   In order to develop an effective traffic mitigation program, it is important that the analysis of the project's traffic impacts include estimates of the number of project-generated person trips that would use alternative transportation modes. This requires that the number of project-generated trips also be expressed in terms of person trips besides the number of project-generated vehicle trips. Besides allowing for mode split analysis, *total person trips* provides a more accurate reflection of the project's trip generation.

2. **The DEIR should include traffic impact mitigation measures designed to encourage the use of alternative transportation modes.**

   An effective traffic mitigation program should be multimodal and include strategies which encourage the use of transportaton modes other than the single-occupant automobile.

   MTA recommends the following strategies, among others:

   - Institute a comprehensive TDM program and coordinate TDM activities of employers in the area through a Transportation Management Association (TMA).

   - Institute a development standards review policy which would provide the opportunity to review individual projects in the Redevelopment Area for their traffic impacts and compatibility with transit and other transportation alternatives to the single-occupant vehicle. It would also provide incentives such as density bonuses, reduced parking requirements, or traffic mitigation fees (see attached, "*A Transit Based Approach to Land use Design*").

   - Develop specific policies and strategies to take advantage of the transit linkage opportunities provided by the proximity of the project area to existing and future transit services.

   - Encourage a mixture of land uses. Mixed uses create opportunities to substitute walking for driving. Diverse uses along a street also create activity and a sense of security for those waiting for a bus.

- Create a pedestrian-friendly environment. Convenient pedestrian access including wide and well-illuminated sidewalks tends to encourage pedestrian activity and also promotes a sense of security for transit patrons.

- Provide convenient transit amenities such as covered bus shelters set back from the street with benches and adequate lighting.

3. Adopt a transit-oriented development concept for the Redevelopment Area

The proposed project has the potential to generate a high volume of vehicle trips on both a daily and peak hour basis, resulting in significant adverse impacts on the existing and planned transportation network. Along with these traffic impacts, adverse and often significant air quality and noise impacts would occur along the affected roadways, both within and outside the project area. To reduce the severity of traffic-related impacts, MTA recommends that the City/CRA adopt a transit-oriented development concept for the Redevelopment Area. This concept would help provide a "critical mass" of transit ridership and optimize the use of transit services available within the area by concentrating high density residential and commercial development within walking distance of transit stations and encouraging mixed use development.

4. The DEIR should include an economic parking management program.

The DEIR should include an economic parking management program as a traffic impact mitigation measure. Economic parking management should be considered an important aspect of an effective traffic mitigation program because the ample availability of free parking tends to encourage dependence on the personal automobile. Economic parking management differs from traditional parking management in that, while traditional parking management tends to ask the questions Is there enough? Is it convenient? Is it free?, economic parking management views the space used for parking as a limited economic resource. Thus, it seeks to make the most efficient use of space by making explicit the full cost of parking and limiting supply. Under traditional parking management parking is oversupplied and underpriced. Examples of economic parking management strategies are "cash out", consolidated or shared parking, and maximum limits on the number of required parking spaces.

5. The DEIR should address Congestion Management Program requirements

The Congestion Management Program (CMP) for Los Angeles County was adopted in November, 1992. One element of CMP legislation requires that local agencies adopt a program to analyze the impact of land use decisions on the CMP regional highway system. This analysis is to be accomplished in conjunction with the preparation of EIRs. The adopted 1992 CMP requires EIRs to address several key issues. The Transportation Impact Analysis (TIA) guidelines contained in the adopted CMP (Appendix D) provide the specific requirements for this EIR analysis.

In general, the TIA guidelines contained in the CMP require that EIR's provide:

- an examination of the affected geographic area as defined in the TIA guidelines;
- documentation and estimation of background traffic conditions as described in the TIA guidelines;
- estimates of proposed project traffic generation;
- projections of trip distribution patterns consistent with the TIA procedures;
- project impact analysis;
- identification and evaluation of mitigation measures for significant identified impacts on the CMP system, including fair share cost estimates; and
- coordination with transit operators to ensure that anticipated demand generated by the project can be accommodated. Worksheets intended to facilitate this discussion are contained in the TIA guidelines.

We do recommend that for an EIR of this type (i.e. a program EIR) where the nature of the proposed land uses may not be fully defined, that the level of detail in the TIA guidelines be adjusted accordingly. Specifically, where the project definition is insufficient for meaningful intersection level of service analysis, CMP link analysis of an equivalent

study area should be substituted. The resulting study area should be the same as that indicated in the TIA guidelines, with emphasis on evaluation of the impact of the project on broader arterial segments rather than on specific intersections.

6. The DEIR should provide information on all transit facilities and services serving the project area.

The MTA is willing to cooperate with the Community Redevelopment Agency on any transportation related aspects of the project. We look forward to receiving the DEIR when it becomes available. If you need additional information, please contact Karen Heit, Director, South Bay Area Team, at (213) 244-7208.

Sincerely,

Patricia V. McLaughlin
Deputy Executive Officer,
Multimodal Planning

Attachment

cc: Karen Heit, MTA
Kendra Morries, MTA (CMP)

Recvd 12/27/93 rw

STATE OF CALIFORNIA

Pete Wilson, Governor

CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD
1020 Ninth Street, Suite 100
Sacramento, California 95814

December 16, 1992

Ileana Liel
CRA of the City of L.A.
354 South Spring Street, Suite 70
L.A., CA 90013

Subject: SCH # 93121029- Notice of Preparation (NOP) for the Crenshaw Corridor recovery & revitalization program area, L.A. County.

Dear Ms. Liel:

The California Integrated Waste Management Board (CIWMB) staff have reviewed the NOP for the proposed project cited above. In consideration of the California Environmental Quality Act (CEQA), Section 15205(c) CIWMB staff will focus the following comments on specific issues involving waste generation and disposal.

In order to help decision-makers 1) identify potential impacts from construction/demolition projects, 2) determine whether any such impacts are significant, and 3) ascertain whether significant impacts can be mitigated to a level of insignificance, CIWMB staff request that the DEIR include the following information:

A.) Identification of the final disposal site(s) for the proposed project's anticipated waste generation, both during construction phases and after project implementation, including, potential alternative methods for disposal (i.e. shredding of wood for hog fuel, composting of wood waste for beneficial reuse, agricultural amendment of sludge to land, etc.).

B.) Identification of the anticipated types of solid waste (i.e. wood waste, concrete, metal, municipal solid waste, etc.) and estimated quantities of these wastes to be disposed; both during construction phases and at project completion, including additional sludge from the wastewater treatment plant servicing the project, and mitigation(s) in the event that some of the waste generated by the project are determined to be hazardous.

C.) Identification of the potential impacts of these quantities on the permitted average and peak daily tonnages of the intended disposal site(s). Including the calculated impact upon the landfill's remaining capacity and associated site-life if quantities are determined to be significant.

D.) Identify any past or present areas of permitted or unpermitted landfilling and/or dumping at the proposed project's site location and how these areas will be remediated/mitigated.

Developments of commercial complexes and residential units increase the amount of waste being sent to landfills. To minimize the amount of solid waste going into landfills, recycling and reduction efforts should be incorporated into the City's and/or County's Solid/Integrated Waste Management Plans. This will help to preserve the finite landfill space within the waste management jurisdiction, as well as to help achieve the mandates of the California Integrated Waste Management Act (AB 939) of 1989. CIWMB staff suggest that the following measures be incorporated into the project and considered in the DEIR:

A.) Implementation of a recycling program at the proposed construction site and commercial/industrial development complex.

B.) Provide information to incoming businesses and industrial facilities about the recycling services in the project area (i.e. office paper pick-up, cardboard pick-up, etc.). Identify buy-back/recycling centers and possible markets for recyclables in the area. Inform construction workers and future tenants of the need to recycle aluminum, glass, metal, paper, cardboard, plastic, tin cans, and other materials to the maximum extent feasible.

C.) Inform the developer(s) of the benefits of utilizing products made from recycled materials in construction of project structures.

D.) Promote the use of insulation and other products made of recycled materials in the construction of the proposed development structures.

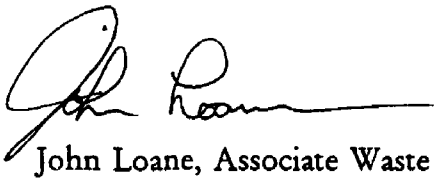
E.) Promote the inclusion of a recycle storage area(s) into the design of the project's structures (i.e. storage receptacles for recyclable materials generated by employees).

F) Develop a composting area/program at the site to recycle grass clippings and greenwaste from the development's landscapes to be used as soil amendments and mulches for landscape maintenance and water conservation.

Thank you for the opportunity to review and comment on this project in the early planning phases. CIWMB staff ask that you keep the Board apprised of solid waste generation, disposal, and source reduction/recycling issues associated with the planned development.

For assistance with local planning issues concerning compliance with AB 939 requirements, please contact Judith Friedman at (916) 255-2302 of the CIWMB's Office of Local Assistance; or if you have any questions regarding these comments or would like additional assistance from CIWMB staff, please contact me at (916) 255-2654.

Sincerely,



John Loane, Associate Waste Management Specialist
Environmental Review Section
Permitting and Enforcement Division

cc: State Clearinghouse

Recvd 12/16/93

South Coast
AIR QUALITY MANAGEMENT DISTRICT
21865 E. Copley Drive, Diamond Bar, CA 91765-4182 (909) 396-2000

December 14, 1993

Ms. Lleana Liel
The Community Redevelopment Agency
of the City of Los Angeles
354 South Spring Street, Suite 700
Los Angeles, CA 90013

Dear Ms. Liel:

Subject: **Notice of Preparation of a Draft Environmental Impact Report for the Proposed Crenshaw Corridor Recovery and Revitalization Program Area Redevelopment Plan**

SCAQMD# LAC931207-02

The South Coast Air Quality Management District (SCAQMD) appreciates the opportunity to comment on the Notice of Preparation for a Draft EIR for the Proposed Crenshaw Corridor Recovery and Revitalization Program Area Redevelopment Plan. SCAQMD is responsible for adopting, implementing, and enforcing air quality regulations in the South Coast Air Quality Management District, which includes the project location. As a responsible agency, SCAQMD reviews and analyzes environmental documents for projects that may generate significant adverse air quality impacts. In this capacity, SCAQMD advises lead agencies in addressing and mitigating the potential adverse air quality impacts caused by projects.

To assist the Lead Agency in the preparation of the air quality analysis for the EIR the following is a summarization for evaluating air quality impacts.

Baseline Information: Describe existing climate and air quality of the region and study area from the District Monitoring station located in the project source receptor area.

Identify and quantify all project **Emission Sources.**

Compare and assess anticipated project emissions with the District's **Thresholds of Significance** and the existing air quality of the region and study area.

Identify and assess **Toxic Source Emissions** within the study area.

Assess **Cumulative Air Quality Impacts** from the regional area.

Assess **Consistency of the General Plan** with the AQMP.

Identify and quantify **Project Alternatives** that may attain goals of the project with substantially fewer or less significant impacts.

Identify **Mitigation Measures** necessary to reduce air quality impacts substantially.

For additional information please refer to the SCAQMD CEQA Air Quality Handbook (April 1993) to assess and mitigate adverse air quality impacts. Attached is a list of potential policies and strategies to reduce air quality impacts if incorporated into the Redevelopment Plan.

If you have any questions, please call me at (909) 396-3055

Sincerely,

Connie Day
Program Supervisor
Local Government - CEQA

Attachment
(redevnop)

ATTACHMENT

POTENTIAL POLICIES AND IMPLEMENTATION STRATEGIES

POLICY 1

To reduce particulate emissions from paved and unpaved roads, construction activities, and agriculture operations.

STRATEGIES:

- o Use low emission mobile construction equipment (e.g., tractor, scraper, dozer etc.).
- o Develop trip reduction plan to achieve 1.5 AVR for construction employees.
- o Water site and clean equipment morning and evening.
- o Spread soil binders on site, unpaved roads and parking areas.
- o Apply District approved chemical soil stabilizers according to manufacturers specifications, to all inactive construction areas (previously graded areas which remain inactive for 96 hours).
- o Reestablish ground cover on construction site through seeding and watering.
- o Implement or contribute to an urban tree planting program to off-set the loss of existing trees at the construction site.
- o Employ construction activity management techniques, such as: extending the construction period; reducing the number of pieces of equipment used simultaneously; increasing the distance between the emission sources; reducing or changing the hours of construction; and scheduling activity during off-peak-hours.
- o Pave construction roads, and sweep streets if silt is carried over to adjacent public thoroughfares.
- o Reduce traffic speeds on all unpaved road surfaces to 15 miles per hour or less.
- o Require a phased-schedule for construction activities to minimize emissions.
- o Suspend grading operations during first and second stage smog alerts.
- o Suspend all grading operations when wind speeds (as instantaneous gusts) exceed 25 miles per hour.
- o Wash off trucks leaving the site.
- o Maintain construction equipment engines by keeping them tuned.
- o Use low sulfur fuel for stationary construction equipment.
- o Utilize existing power sources (e.g., power poles) or clean fuel generators rather than temporary power generators.
- o Use low emission on-site stationary equipment.

POLICY 2

To reduce automobile emissions by reducing the number of vehicles driven to a work site on a daily basis:

STRATEGIES

- o Provide local shuttle and regional transit systems and transit shelters.
- o Provide bicycle lanes, storage areas, and amenities.
- o Ensure efficient parking management.
- o Provide dedicated parking spaces with electrical outlets for electric vehicles.
- o Provide peripheral park-n-ride lots.
- o Provide preferential parking to high occupancy vehicles and shuttle services.
- o Charge parking lot fees to low occupancy vehicles.

POLICY 3

To reduce automobile emissions by reducing the number of persons who must drive to a work site on a daily basis:

STRATEGIES

- o Promote Transportation Management Associations (TMAs).
- o Establish telecommuting programs, alternative work schedules, and satellite work centers.
- o Work with cities/developers/citizens in the region to implement TDM goals.

POLICY 4

To reduce vehicular emissions through traffic flow improvements:

STRATEGIES

- o Configure parking to minimize traffic interference.
- o Minimize obstruction of through-traffic lanes.
- o Provide a flagperson to guide traffic properly and ensure safety at construction sites.
- o Schedule operations affecting traffic for off-peak hours.
- o Develop a traffic plan to minimize traffic flow interference from construction activities. Plan may include advance public notice of routing, use of public transportation, and satellite parking areas with a shuttle service.
- o Schedule goods movements for off-peak traffic hours.
- o Synchronize traffic signals.
- o Provide adequate ingress and egress at all entrances to public facilities to minimize vehicle idling at curbsides.
- o Provide dedicated turn lanes as appropriate.

POLICY 5

To reduce the length of work trips while expanding the supply of affordable housing and creating an urban form that efficiently utilizes urban infrastructure and services.

STRATEGIES

- o Achieve a job/housing balance compatible with the Regional Growth Management Plan.
- o Encourage growth in and around activity centers, transportation nodes and corridors.
- o Promote future patterns of urban development and land use , making better use of existing facilities, and promoting mixed use development involving commercial and residential uses.

POLICY 6

To reduce stationary emissions of operation related activities.

STRATEGIES:

- o Require development practices which maximize energy conservation as a prerequisite to permit approval.
- o Improve the thermal integrity of buildings, and reduce the thermal load with automated time clocks or occupant sensors.
- o Introduce window glazing, wall insulation, and efficient ventilation methods.
- o Introduce efficient heating and other appliances, such as water heaters, cooking equipment, refrigerators, furnaces and boiler units.
- o Incorporate appropriate passive solar design, and solar heaters.
- o Use devices that minimize the combustion of fossil fuels.
- o Capture waste heat and reemploy it in nonresidential buildings.
- o Landscape with native drought-resistant species to reduce water consumption and to provide passive solar benefits.

POLICY 7

To protect sensitive land uses from major sources of air pollution.

STRATEGIES:

- o Integrate additional mitigation measures into site design such as the creation of buffer zones between a potential sensitive receptor's boundary and potential pollution source.
- o Require design features, operating procedures, preventive maintenance, operator training, and emergency response planning to prevent the release of toxic pollutants.

SOUTHERN CALIFORNIA ASSOCIATION OF GOVERNMENTS
818 West Seventh Street,12th Floor • Los Angeles, California 90017-3435 □ (213) 236-1800 • FAX (213) 236-1825

December 8, 1993

Ms. Ileana Liel
Community Redevelopment Agency City of Los Angeles
354 South Spring Street
Suite 800
Los Angeles, CA 90013-1258

RE: SCAG Clearinghouse #: I9300579
Project Title: Crenshaw Corridor Recoveryj and Revitalization Program Area.

Dear Ms. Liel:

We have reviewed the above referenced document for regional significance and determined that no comments will be submitted at this time. Should there be a change in the scope of the project, we would appreciate the opportunity to review and comment at that time.

A description of the project will be published in the December 15, 1993 Intergovernmental Review Report for public review and comment.

The project title and SCAG number should be used in all correspondence with SCAG concerning this project. Correspondence should be sent to the attention of the Clearinghouse Coordinator. If you have any questions, please contact Ricardo Pedroza at (213) 236-1886.

Sincerely,

Eric H. Roth

ERIC H. ROTH
Manager, Intergovernmental Review

CITY OF LOS ANGELES
CALIFORNIA

CULTURAL AFFAIRS
DEPARTMENT
433 S. SPRING ST., 10TH FLOOR
LOS ANGELES, CA 90013
(213) 485-2433
(213) 485-6835 FAX

ADOLFO V. NODAL
GENERAL MANAGER

RICHARD J. RIORDAN
MAYOR

December 8, 1993

Ms. Ileana Liel, Senior Planner
The Community Redevelopment Agency
of the City of Los Angeles
354 South Spring Street, Suite 700
Los Angeles, CA 90013

SUBJECT: NOTICE OF PREPARATION OF DRAFT ENVIRONMENTAL IMPACT REPORT PROPOSED CRENSHAW CORRIDOR RECOVERY AND REVITALIZATION PROGRAM AREA

Dear Ms. Liel,

Thank you for the opportunity to comment on the document referenced above.

Although it is difficult to be certain from the maps provided in the Notice of Preparation it appears that Los Angeles City Historic-Cultural Monument 487, Sanchez Ranch, is in the Program Area. Its address is 3725 Don Felipe Drive.

In May of 1990 when the City Council declared the site to be a landmark, the Councilmembers limited the designation to the adobe structures only. However, during the preceding presentations before the Cultural Heritage Commission it became clear that there are other possibly significant structures on the property as well. It is, therefore, important for the Draft Environmental Impact Report to address the historic significance issues of the Sanchez Ranch in full.

If you or your designee wish to review our file on Historic-Cultural Monument 487, please contact me or Nancy Fernandez, Commission Executive Assistant, at (213)485-5343.

Very truly yours,

CULTURAL HERITAGE COMMISSION

Jay M. Oren
Staff Architect

JMO:lm

cc: Nancy Fernandez
Historic-Cultural Monument 487

Doc:JMO702.ltr/Disk:LM11

FORM GEN 160 (Rev. 6-80)

CITY OF LOS ANGELES

INTER-DEPARTMENTAL CORRESPONDENCE

DATE: DEC 22 1993

TO: Rich Macias, Principal Environmental Planner
The Community Redevelopment Agency

FROM: Wayne M. Savaria, Division Engineer
Wastewater Program Management Division

RECORDS CENTER
93 DEC 30 A9:37

SUBJECT: PRE-DRAFT COMMENTS - CRENSHAW RECOVERY AND REVITALIZATION PROGRAM AREA

Staff of this Division's Environmental Coordination Unit (ECU) have reviewed the above referenced document, and submit the following wastewater related comments in relation to Phase II of the proposed project.

The proposed facility would generate wastewater flows that would be treated within the Hyperion Service Area (HSA). Available treatment capacity within HSA is presently limited and the City has enacted ordinances to restrict new connections to the system. In July, 1990 the City Council approved Ordinance No. 166060, the Sewer Permit Allocation Ordinance, and project sponsors should be aware that treatment capacity may not be immediately available for the proposed project and that a building permit will not be issued until capacity is available.

The Draft Environmental Impact Report (DEIR) should include the following information:

- a comprehensive analysis of the wastewater generation potential of the entire proposed project, assuming build-out, to include estimates of the quantity and quality of anticipated wastewater flows;
- verification that sufficient hydraulic capacity exists, within local and interceptor sewers, to accommodate the proposed project;
- the estimated sewer connection date of the proposed project;
- the most recent Thomas Guide page number showing the location of the proposed project;
- the Wye (Sewer) Map number showing the location of the proposed project; and

Action:
Info: Macias

To verify the capacity within the sewer, obtain the Wye Map, and maintenance hole numbers, contact the Bureau of Engineering, Central Engineering district at 200 North Main Street, Los Angeles.

If off-site sewer work is required to connect the proposed project to a sewer with available capacity, the document must discuss the associated construction activity as if it were part of the proposed project and include an analysis of the environmental effects likely to be associated with required corrective activities.

The DEIR should also discuss water conservation measures to be undertaken by the project sponsors which could result in reduced wastewater generation characteristics. Document authors should be aware that the City has enacted comprehensive water conservation requirements for new development. Adherence to these requirements is mandatory and not considered to be mitigation.

In addition to concerns associated with wastewater, all wastewater management providers within the South Coast Air Basin must meet the 1989 Regional Air Quality Management Plan requirements for conformity. The Conformity Review process is designed to ensure that land uses within HSA meet regional targets for growth and jobs/housing balance. The target ratio (computed by dividing added jobs by added dwelling units from 1984 through 2010) is 1.65 for the Central Los Angeles subregion where the proposed project would be located. The DEIR should include detailed analysis of the number of additional jobs and housing demands to be generated by the proposed project. Additional vehicle trips resulting from the project would also need to be calculated in order to determine whether the proposed project is regionally significant. The DEIR for the proposed project should address all project-related impacts to air quality and measures which will be undertaken by project sponsors to reduce these effects.

If you have any questions, please contact D. Diane Rowland at 847-9505.

WMS/WES:ddr
(h:\PRVT_DEV\MANCHSTR.WP)
ENV-2-1

cc: Jim Doty-PMD

APPENDIX B

TRAFFIC AND CIRCULATION

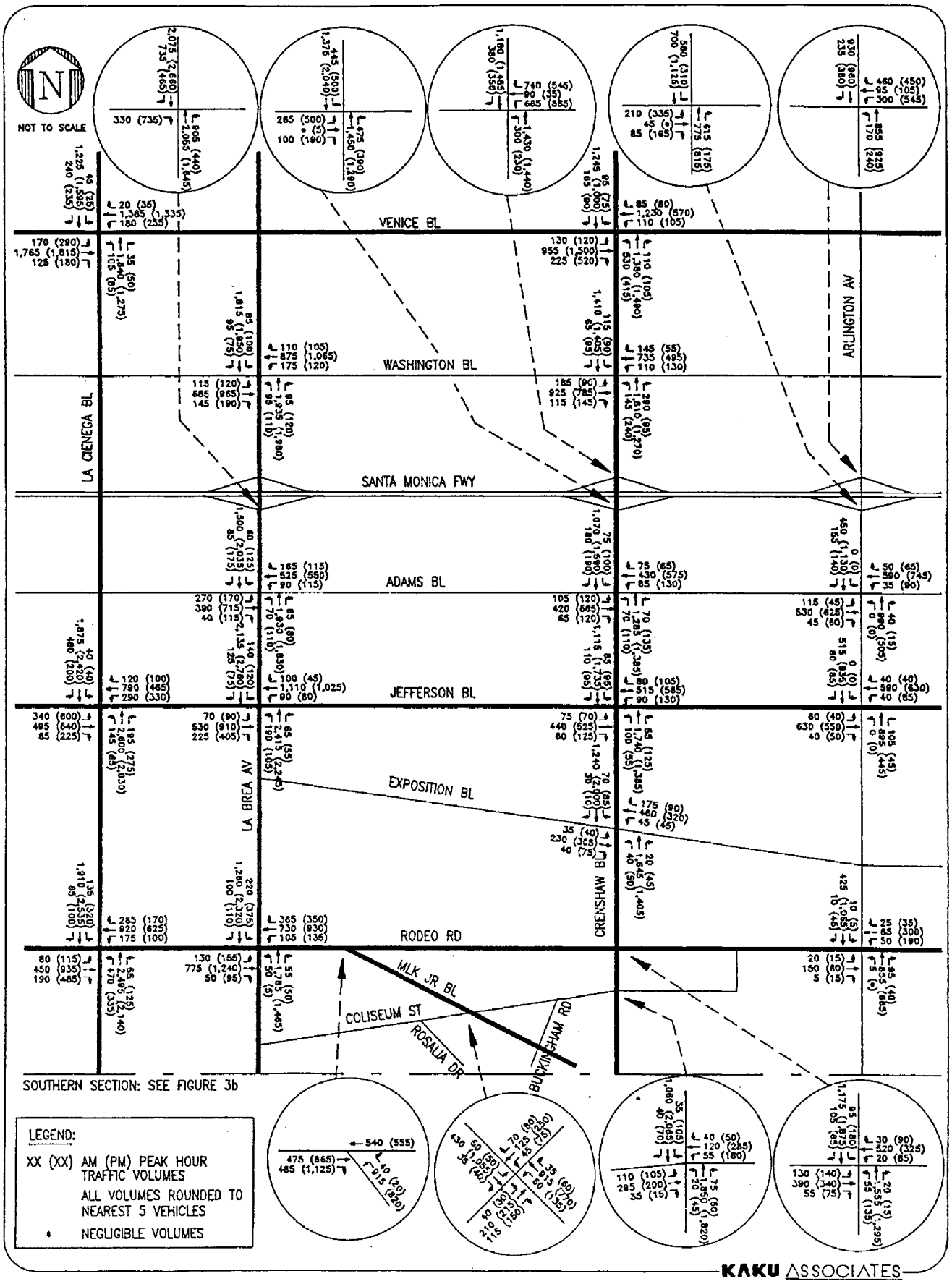


FIGURE 3a
EXISTING PEAK HOUR TRAFFIC VOLUMES

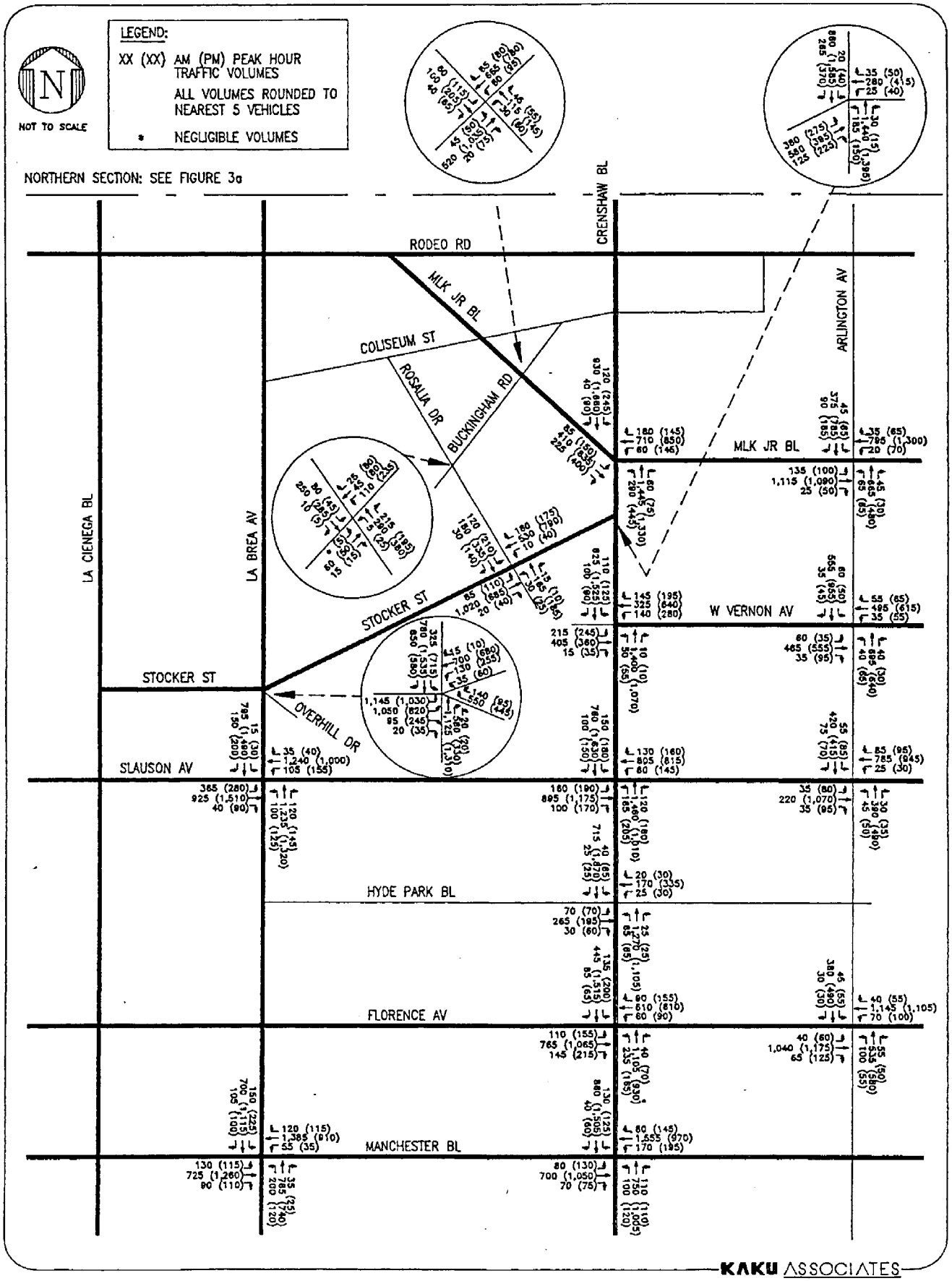


FIGURE 3b
EXISTING PEAK HOUR TRAFFIC VOLUMES

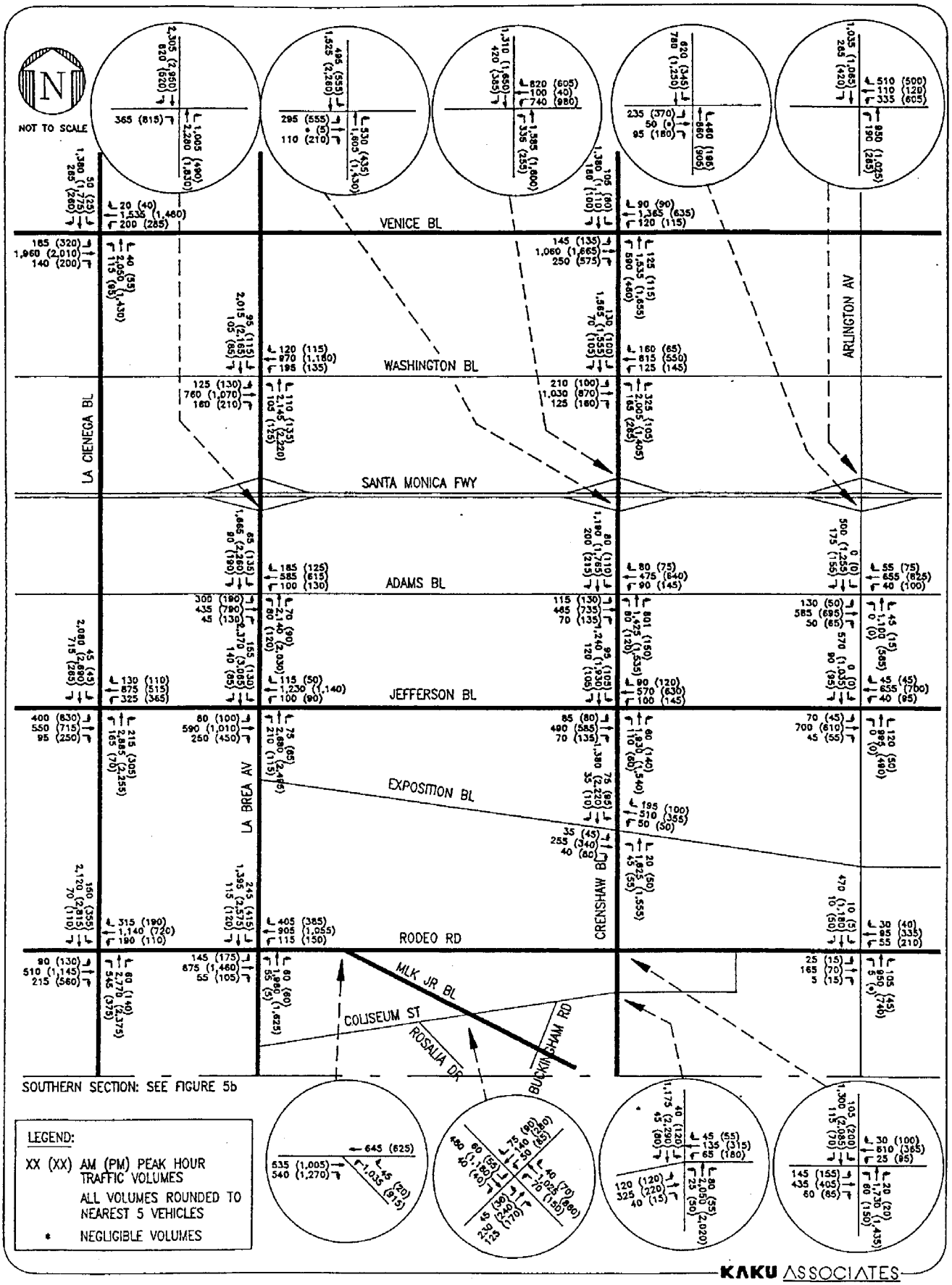


FIGURE 5a
YEAR 2005 CUMULATIVE BASE PEAK HOUR TRAFFIC VOLUMES

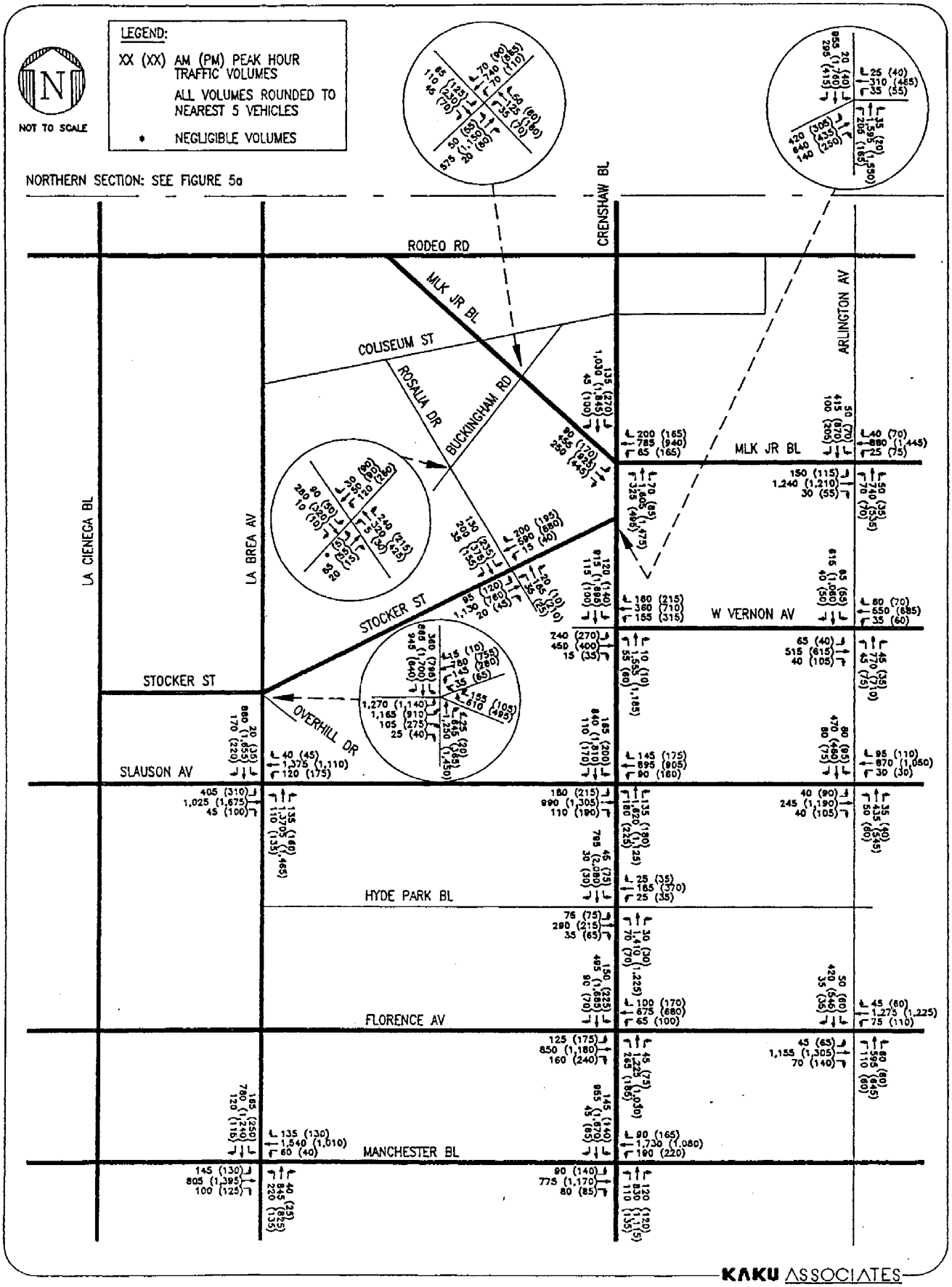


FIGURE 5b
YEAR 2005 CUMULATIVE BASE PEAK HOUR TRAFFIC VOLUMES

TABLE 4
TRIP GENERATION RATES

Land Use	Average Daily Rate	AM Peak Hour			PM Peak Hour		
		Rate	%In	%Out	Rate	%In	%Out
Single Family Residential (Trips per du)	9.55	0.74	26%	74%	1.01	65%	35%
Retail (Trips per 1,000 gfa)	[1]	[1]	63%	37%	[1]	50%	50%
Apartment (Trips per du)	6.47	0.51	17%	83%	0.63	68%	32%
Office (Trips per 1,000 gfa)	[1]	[1]	89%	11%	[1]	17%	83%

Notes on Trip Generation Rates:

[1] Office and retail rates vary according to the size of the development. Trip generation for general office buildings were calculated using the following formulas:

Daily Rate: $Ln(T) = 0.756 \times Ln(A) + 3.765$

AM Rate: $Ln(T) = 0.777 \times Ln(A) + 1.674$; 89% inbound/11% outbound
(where A is less than 800,000 gfa)

PM Rate: $Ln(T) = 0.737 \times Ln(A) + 1.831$; 17% inbound/83% outbound
(where A is less than 800,000 gfa)

Trip generation for retail were calculated using the following formulas:

Daily Rate: $Ln(T) = 0.625 \times Ln(A) + 5.985$
(where A is less than 570,000 gla)

Daily Rate: $Ln(T) = 0.756 \times Ln(A) + 5.154$
(where A is greater than 570,000 gla)

AM Rate: $Ln(T) = 0.589 \times Ln(A) + 2.378$; 63% inbound/37% outbound

PM Rate: $Ln(T) = 0.637 \times Ln(A) + 3.553$; 50% inbound/50% outbound
(where A is less than 600,000 gla)

PM Rate: $Ln(T) = 0.725 \times Ln(A) + 2.987$; 50% inbound/50% outbound
(where A is greater than 600,000 gla)

Ln = Natural logarithm
T = Two-way volume of traffic (total trip ends)
A = Area in 1,000 gross floor area (or gross square feet of leasable area)

Source:
Institute of Transportation Engineers, "Trip Generation (5th Edition)," 1991.

TABLE 5
TRIP GENERATION OF PROPOSED ALTERNATIVE A

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
A	Retail	113,400 sf	7,650	110	65	175	355	355	710
	Pass-by (retail)	25%	-1915	-30	-15	-45	-90	-90	-180
	Transit	5%	-385	-5	-5	-10	-20	-20	-35
	Subtotal (retail)		5,350	75	45	120	245	245	495
	Apartment	14 du	90	0	5	5	5	5	10
	Transit		-5	0	0	0	0	0	0
	Subtotal (Apt)		85	0	5	5	5	5	10
	Subtotal		5,435	75	50	125	250	250	505
B	Retail	342,300 sf	15,250	210	125	335	720	715	1,435
	Pass-by (retail)	20%	-3050	-40	-25	-65	-145	-145	-285
	Transit	5%	-765	-10	-5	-15	-35	-35	-70
	Subtotal (retail)		11,435	160	95	255	540	535	1080
	Apartment	73 du	470	5	30	35	30	15	45
	Transit		-25	0	0	0	0	0	0
	Subtotal (Apt)		445	5	30	35	30	15	45
	Subtotal		11,880	165	125	290	570	550	1,125
C	Retail	68,800 sf	5,590	80	50	130	260	255	515
	Pass-by (retail)	30%	-1675	-25	-15	-40	-80	-75	-155
	Transit	5%	-280	-5	-5	-5	-15	-15	-25
	Subtotal (retail)		3,635	50	30	85	165	165	335
	Apartment	18 du	120	0	10	10	5	5	10
	Transit		-5	0	0	0	0	0	0
	Subtotal (Apt)		115	0	10	10	5	5	10
	Subtotal		3,750	50	40	95	170	170	345
D	Retail	41,800 sf	4,100	60	35	95	190	185	375
	Pass-by (retail)	30%	-1230	-20	-10	-30	-55	-55	-115
	Transit	5%	-205	-5	0	-5	-10	-10	-20
	Subtotal (retail)		2,665	35	25	60	125	120	240
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		2,665	35	25	60	125	120	240
E	Retail	15,700 sf	2,220	35	20	55	100	100	200
	Pass-by (retail)	30%	-665	-10	-5	-15	-30	-30	-60
	Transit	5%	-110	0	0	-5	-5	-5	-10
	Subtotal (retail)		1,445	25	15	35	65	65	130
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		1,445	25	15	35	65	65	130

TABLE 5 (CONTINUED)
TRIP GENERATION OF PROPOSED ALTERNATIVE A

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
F	Retail	0 sf	0	0	0	0	0	0	0
	Pass-by (retail)	0%	0	0	0	0	0	0	0
	Transit	5%	0	0	0	0	0	0	0
	Subtotal (retail)		0	0	0	0	0	0	0
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		0	0	0	0	0	0	0
G	Retail	31,200 sf	3,410	50	30	80	155	155	310
	Pass-by (retail)	30%	-1025	-15	-10	-25	-45	-45	-95
	Transit	5%	-170	-5	0	-5	-10	-10	-15
	Subtotal (retail)		2,215	30	20	50	100	100	200
	Apartment	50 du	320	5	20	25	20	10	30
	Transit		-15	0	0	0	0	0	0
	Subtotal (Apt)		305	5	20	25	20	10	30
	Subtotal		2,520	35	40	75	120	110	230
H	Retail	47,700 sf	4,450	65	40	105	205	205	410
	Pass-by (retail)	30%	-1335	-20	-10	-30	-60	-60	-125
	Transit	5%	-225	-5	0	-5	-10	-10	-20
	Subtotal (retail)		2,890	40	30	70	135	135	265
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		2,890	40	30	70	135	135	265
I	Retail	0 sf	0	0	0	0	0	0	0
	Pass-by (retail)	0%	0	0	0	0	0	0	0
	Transit	5%	0	0	0	0	0	0	0
	Subtotal (retail)		0	0	0	0	0	0	0
	Apartment	13 du	80	0	5	5	5	5	10
	Transit		-5	0	0	0	0	0	0
	Subtotal (Apt)		75	0	5	5	5	5	10
	Subtotal		75	0	5	5	5	5	10
J	Retail	57,200 sf	4,980	70	45	115	230	230	460
	Pass-by (retail)	30%	-1495	-20	-15	-35	-70	-70	-140
	Transit	5%	-250	-5	0	-5	-10	-10	-25
	Subtotal (retail)		3,235	45	30	75	150	150	295
	Apartment	45 du	290	5	20	25	20	10	30
	Transit		-15	0	0	0	0	0	0
	Subtotal (Apt)		275	5	20	25	20	10	30
	Subtotal		3,510	50	50	100	170	160	325

TABLE 5 (CONTINUED)
TRIP GENERATION OF PROPOSED ALTERNATIVE A

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
L	Retail	22,500 sf	2,780	40	25	65	130	125	255
	Pass-by (retail)	30%	-835	-10	-10	-20	-40	-40	-75
	Transit	5%	-140	0	0	-5	-5	-5	-15
	Subtotal (retail)		1,805	30	15	40	85	80	165
	Apartment	4 du	30	0	0	0	5	0	5
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		30	0	0	0	5	0	5
	Subtotal		1,835	30	15	40	90	80	170
M	Retail	156,900 sf	9,370	130	80	210	440	435	875
	Pass-by (retail)	25%	-2345	-35	-20	-55	-110	-110	-220
	Transit	5%	-470	-5	-5	-10	-20	-20	-45
	Subtotal (retail)		6,555	90	55	145	310	305	610
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		6,555	90	55	145	310	305	610
N	Retail	19,400 sf	2,540	40	20	60	115	115	230
	Pass-by (retail)	30%	-760	-10	-5	-20	-35	-35	-70
	Transit	5%	-125	0	0	-5	-5	-5	-10
	Subtotal (retail)		1,655	30	15	35	75	75	150
	Apartment	27 du	170	5	10	15	10	5	15
	Transit		-10	0	0	0	0	0	0
	Subtotal (Apt)		160	5	10	15	10	5	15
	Subtotal		1,815	35	25	50	85	80	165
	Total		44,375	630	475	1,090	2,095	2,030	4,120

TABLE 6
TRIP GENERATION OF PROPOSED ALTERNATIVE B

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
A	Retail	112,500 sf	7,610	110	65	175	355	350	705
	Pass-by (retail)	25%	-1905	-30	-15	-45	-90	-90	-175
	Transit	5%	-380	-5	-5	-10	-20	-20	-35
	Subtotal (retail)		5,325	75	45	120	245	240	495
	Apartment	54 du	350	5	25	30	25	10	35
	Transit		-20	0	0	0	0	0	0
	Subtotal (Apt)		330	5	25	30	25	10	35
	Subtotal		5,655	80	70	150	270	250	530
B	Retail	320,300 sf	14,630	200	120	320	690	685	1,375
	Pass-by (retail)	20%	-2925	-40	-25	-65	-140	-135	-275
	Transit	5%	-730	-10	-5	-15	-35	-35	-70
	Subtotal (retail)		10,975	150	90	240	515	515	1030
	Apartment	91 du	590	10	35	45	35	20	55
	Transit		-30	0	0	0	0	0	-5
	Subtotal (Apt)		560	10	35	45	35	20	50
	Subtotal		11,535	160	125	285	550	535	1,080
C	Retail	68,800 sf	5,590	80	50	130	260	255	515
	Pass-by (retail)	30%	-1675	-25	-15	-40	-80	-75	-155
	Transit	5%	-280	-5	-5	-5	-15	-15	-25
	Subtotal (retail)		3,635	50	30	85	165	165	335
	Apartment	15 du	100	0	10	10	5	5	10
	Transit		-5	0	0	0	0	0	0
	Subtotal (Apt)		95	0	10	10	5	5	10
	Subtotal		3,730	50	40	95	170	170	345
D	Retail	64,500 sf	5,370	80	45	125	250	245	495
	Pass-by (retail)	30%	-1610	-25	-15	-40	-75	-75	-150
	Transit	5%	-270	-5	0	-5	-15	-10	-25
	Subtotal (retail)		3,490	50	30	80	160	160	320
	Apartment	136 du	880	10	60	70	60	25	85
	Transit		-45	0	-5	-5	-5	0	-5
	Subtotal (Apt)		835	10	55	65	55	25	80
	Subtotal		4,325	60	85	145	215	185	400
E	Retail	436,000 sf	17,740	245	140	385	840	835	1,675
	Pass-by (retail)	20%	-3550	-50	-30	-75	-170	-165	-335
	Transit	5%	-885	-10	-5	-20	-40	-40	-85
	Subtotal (retail)		13,305	185	105	290	630	630	1255
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		13,305	185	105	290	630	630	1,255

TABLE 6 (CONTINUED)
TRIP GENERATION OF PROPOSED ALTERNATIVE B

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
F	Retail	0 sf	0	0	0	0	0	0	0
	Pass-by (retail)	0%	0	0	0	0	0	0	0
	Transit	5%	0	0	0	0	0	0	0
	Subtotal (retail)		0	0	0	0	0	0	0
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		0	0	0	0	0	0	0
G	Retail	0 sf	0	0	0	0	0	0	0
	Pass-by (retail)	0%	0	0	0	0	0	0	0
	Transit	5%	0	0	0	0	0	0	0
	Subtotal (retail)		0	0	0	0	0	0	0
	Apartment	56 du	360	5	25	30	25	10	35
	Transit		-20	0	0	0	0	0	0
	Subtotal (Apt)		340	5	25	30	25	10	35
	Subtotal		340	5	25	30	25	10	35
H	Retail	47,700 sf	4,450	65	40	105	205	205	410
	Pass-by (retail)	30%	-1335	-20	-10	-30	-60	-60	-125
	Transit	5%	-225	-5	0	-5	-10	-10	-20
	Subtotal (retail)		2,890	40	30	70	135	135	265
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		2,890	40	30	70	135	135	265
I	Retail	0 sf	0	0	0	0	0	0	0
	Pass-by (retail)	0%	0	0	0	0	0	0	0
	Transit	5%	0	0	0	0	0	0	0
	Subtotal (retail)		0	0	0	0	0	0	0
	Apartment	10 du	60	0	5	5	5	0	5
	Transit		-5	0	0	0	0	0	0
	Subtotal (Apt)		55	0	5	5	5	0	5
	Subtotal		55	0	5	5	5	0	5
J	Retail	51,200 sf	4,650	70	40	110	215	215	430
	Pass-by (retail)	30%	-1395	-20	-10	-35	-65	-65	-130
	Transit	5%	-235	-5	0	-5	-10	-10	-20
	Subtotal (retail)		3,020	45	30	70	140	140	280
	Apartment	37 du	240	5	15	20	15	10	25
	Transit		-10	0	0	0	0	0	0
	Subtotal (Apt)		230	5	15	20	15	10	25
	Subtotal		3,250	50	45	90	155	150	305

TABLE 6 (CONTINUED)
TRIP GENERATION OF PROPOSED ALTERNATIVE B

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
L	Retail	22,500 sf	2,780	40	25	65	130	125	255
	Pass-by (retail)	30%	-835	-10	-10	-20	-40	-40	-75
	Transit	5%	-140	0	0	-5	-5	-5	-15
	Subtotal (retail)		1,805	30	15	40	85	80	165
	Apartment	4 du	30	0	0	0	5	0	5
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		30	0	0	0	5	0	5
	Subtotal		1,835	30	15	40	90	80	170
M	Retail	147,300 sf	9,000	130	75	205	420	420	840
	Pass-by (retail)	25%	-2250	-35	-20	-50	-105	-105	-210
	Transit	5%	-450	-5	-5	-10	-20	-20	-40
	Subtotal (retail)		6,300	90	50	145	295	295	590
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		6,300	90	50	145	295	295	590
N	Retail	19,400 sf	2,540	40	20	60	115	115	230
	Pass-by (retail)	30%	-760	-10	-5	-20	-35	-35	-70
	Transit	5%	-125	0	0	-5	-5	-5	-10
	Subtotal (retail)		1,655	30	15	35	75	75	150
	Apartment	23 du	150	0	10	10	10	5	15
	Transit		-10	0	0	0	0	0	0
	Subtotal (Apt)		140	0	10	10	10	5	15
	Subtotal		1,795	30	25	45	85	80	165
	Total		55,015	780	620	1,390	2,625	2,520	5,145

TABLE 7
TRIP GENERATION OF PROPOSED ALTERNATIVE C

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
A	Retail	112,500 sf	7,610	110	65	175	355	350	705
	Pass-by (retail)	25%	-1905	-30	-15	-45	-90	-90	-175
	Transit	5%	-380	-5	-5	-10	-20	-20	-35
	Subtotal (retail)		5,325	75	45	120	245	240	495
	Apartment	142 du	920	10	60	70	60	30	90
	Transit		-45	0	-5	-5	-5	0	-5
	Subtotal (Apt)		875	10	55	65	55	30	85
	Subtotal		6,200	85	100	185	300	270	580
B	Retail	640,400 sf	22,910	305	180	485	1,075	1,070	2,145
	Pass-by (retail)	20%	-4580	-60	-35	-95	-215	-215	-430
	Transit	5%	-1145	-15	-10	-25	-55	-55	-105
	Subtotal (retail)		17,185	230	135	365	805	800	1610
	Apartment	449 du	2,910	40	190	230	195	90	285
	Transit		-145	0	-10	-10	-10	-5	-15
	Subtotal (Apt)		2765	40	180	220	185	85	270
	Subtotal		19,950	270	315	585	990	885	1,880
C	Retail	68,800 sf	5,590	80	50	130	260	255	515
	Pass-by (retail)	30%	-1675	-25	-15	-40	-80	-75	-155
	Transit	5%	-280	-5	-5	-5	-15	-15	-25
	Subtotal (retail)		3,635	50	30	85	165	165	335
	Apartment	30 du	190	5	10	15	15	5	20
	Transit		-10	0	0	0	0	0	0
	Subtotal (Apt)		180	5	10	15	15	5	20
	Subtotal		3,815	55	40	100	180	170	355
D	Retail	64,500 sf	5,370	80	45	125	250	245	495
	Pass-by (retail)	30%	-1610	-25	-15	-40	-75	-75	-150
	Transit	5%	-270	-5	0	-5	-15	-10	-25
	Subtotal (retail)		3,490	50	30	80	160	160	320
	Apartment	270 du	1,750	25	115	140	115	55	170
	Transit		-90	0	-5	-5	-5	-5	-10
	Subtotal (Apt)		1660	25	110	135	110	50	160
	Subtotal		5,150	75	140	215	270	210	480
E	Retail	436,000 sf	17,740	245	140	385	840	835	1,675
	Pass-by (retail)	20%	-3550	-50	-30	-75	-170	-165	-335
	Transit	5%	-885	-10	-5	-20	-40	-40	-85
	Subtotal (retail)		13,305	185	105	290	630	630	1255
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		13,305	185	105	290	630	630	1,255

TABLE 7 (CONTINUED)
TRIP GENERATION OF PROPOSED ALTERNATIVE C

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
F	Retail	191,400 sf	10,600	150	90	240	495	495	990
	Pass-by (retail)	25%	-2650	-40	-25	-60	-125	-125	-250
	Transit	5%	-530	-10	-5	-10	-25	-25	-50
	Subtotal (retail)		7,420	100	60	170	345	345	690
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		7,420	100	60	170	345	345	690
G	Retail	0 sf	0	0	0	0	0	0	0
	Pass-by (retail)	0%	0	0	0	0	0	0	0
	Transit	5%	0	0	0	0	0	0	0
	Subtotal (retail)		0	0	0	0	0	0	0
	Apartment	79 du	510	5	35	40	35	15	50
	Transit		-25	0	0	0	0	0	-5
	Subtotal (Apt)		485	5	35	40	35	15	45
	Subtotal		485	5	35	40	35	15	45
H	Retail	47,700 sf	4,450	65	40	105	205	205	410
	Pass-by (retail)	30%	-1335	-20	-10	-30	-60	-60	-125
	Transit	5%	-225	-5	0	-5	-10	-10	-20
	Subtotal (retail)		2,890	40	30	70	135	135	265
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		2,890	40	30	70	135	135	265
I	Retail	69,300 sf	5,620	80	50	130	260	260	520
	Pass-by (retail)	0%	-1685	-25	-15	-40	-80	-80	-155
	Transit	5%	-280	-5	-5	-5	-15	-15	-25
	Subtotal (retail)		3,655	50	30	85	165	165	340
	Apartment	348 du	2,250	30	145	175	150	70	220
	Transit		-115	0	-5	-10	-10	-5	-10
	Subtotal (Apt)		2135	30	140	165	140	65	210
	Subtotal		5,790	80	170	250	305	230	550
J	Retail	113,800 sf	7,660	110	65	175	360	355	715
	Pass-by (retail)	25%	-1915	-30	-15	-45	-90	-90	-180
	Transit	5%	-385	-5	-5	-10	-20	-20	-35
	Subtotal (retail)		5,360	75	45	120	250	245	500
	Apartment	115 du	740	10	50	60	50	20	70
	Transit		-35	0	-5	-5	-5	0	-5
	Subtotal (Apt)		705	10	45	55	45	20	65
	Subtotal		6,065	85	90	175	295	265	565

TABLE 7 (CONTINUED)
TRIP GENERATION OF PROPOSED ALTERNATIVE C

AREA	PROPOSED LAND USE	NET NEW SIZE	DAILY TRIPS	AM PEAK HOUR IN	AM PEAK HOUR OUT	AM PEAK HOUR TOTAL	PM PEAK HOUR IN	PM PEAK HOUR OUT	PM PEAK HOUR TOTAL
L	Retail	61,100 sf	5,190	75	45	120	240	240	480
	Pass-by (retail)	30%	-1555	-25	-15	-35	-70	-70	-145
	Transit	5%	-260	-5	0	-5	-10	-10	-25
	Subtotal (retail)		3,375	45	30	80	160	160	310
	Apartment	216 du	1,400	20	90	110	90	45	135
	Transit		-70	0	-5	-5	-5	0	-5
	Subtotal (Apt)		1330	20	85	105	85	45	130
	Subtotal		4,705	65	115	185	245	205	440
M	Retail	147,300 sf	9,000	130	75	205	420	420	840
	Pass-by (retail)	25%	-2250	-35	-20	-50	-105	-105	-210
	Transit	5%	-450	-5	-5	-10	-20	-20	-40
	Subtotal (retail)		6,300	90	50	145	295	295	590
	Apartment	0 du	0	0	0	0	0	0	0
	Transit		0	0	0	0	0	0	0
	Subtotal (Apt)		0	0	0	0	0	0	0
	Subtotal		6,300	90	50	145	295	295	590
N	Retail	20,400 sf	2,620	40	25	65	120	120	240
	Pass-by (retail)	30%	-785	-10	-10	-20	-35	-35	-70
	Transit	5%	-130	0	0	-5	-5	-5	-10
	Subtotal (retail)		1,705	30	15	40	80	80	160
	Apartment	46 du	300	5	20	25	20	10	30
	Transit		-15	0	0	0	0	0	0
	Subtotal (Apt)		285	5	20	25	20	10	30
	Subtotal		1,990	35	35	65	100	90	190
	Total		84,065	1,170	1,285	2,475	4,125	3,745	7,885

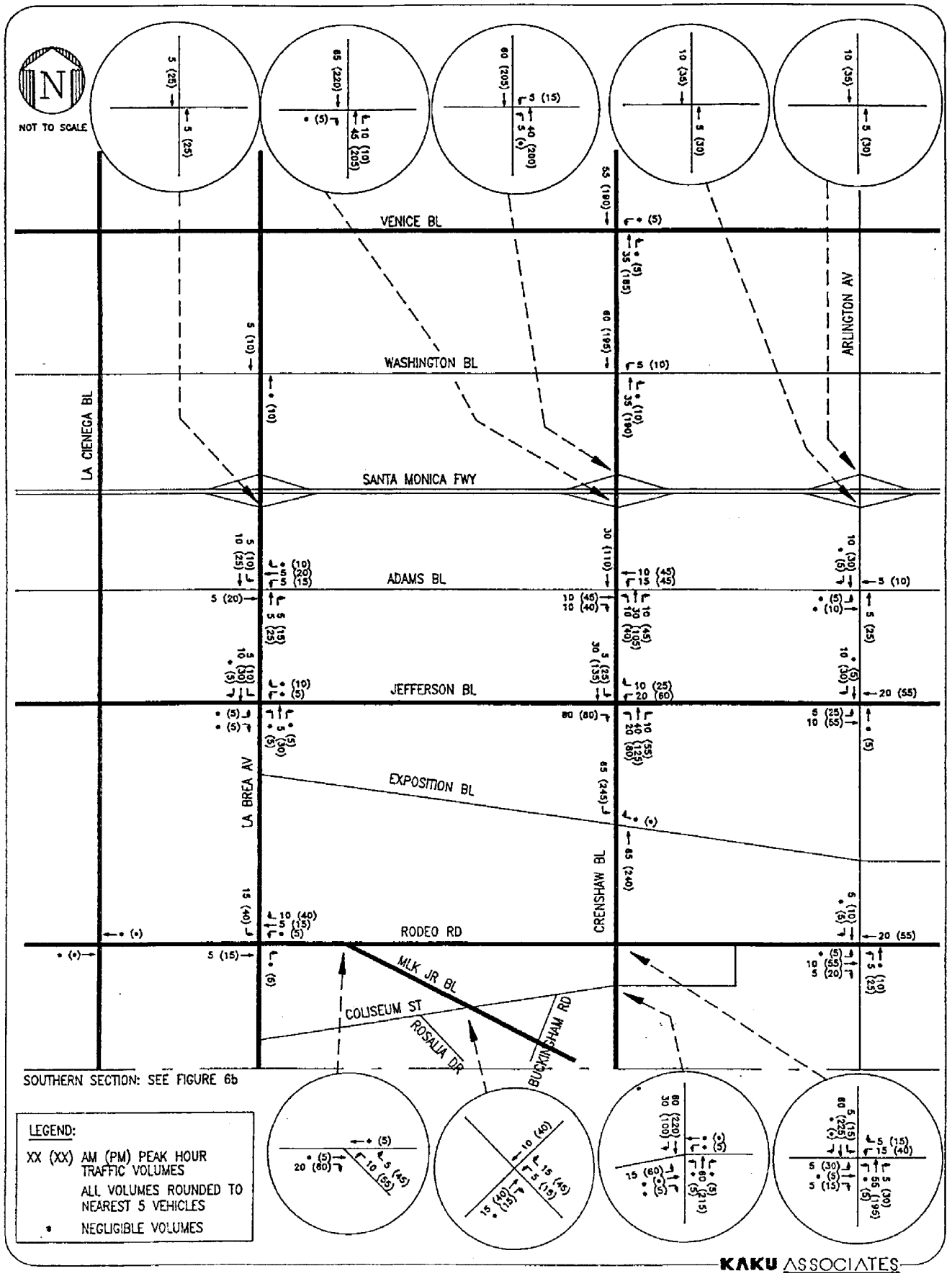


FIGURE 6a
ALTERNATIVE A PROJECT GENERATED PEAK HOUR TRAFFIC VOLUMES

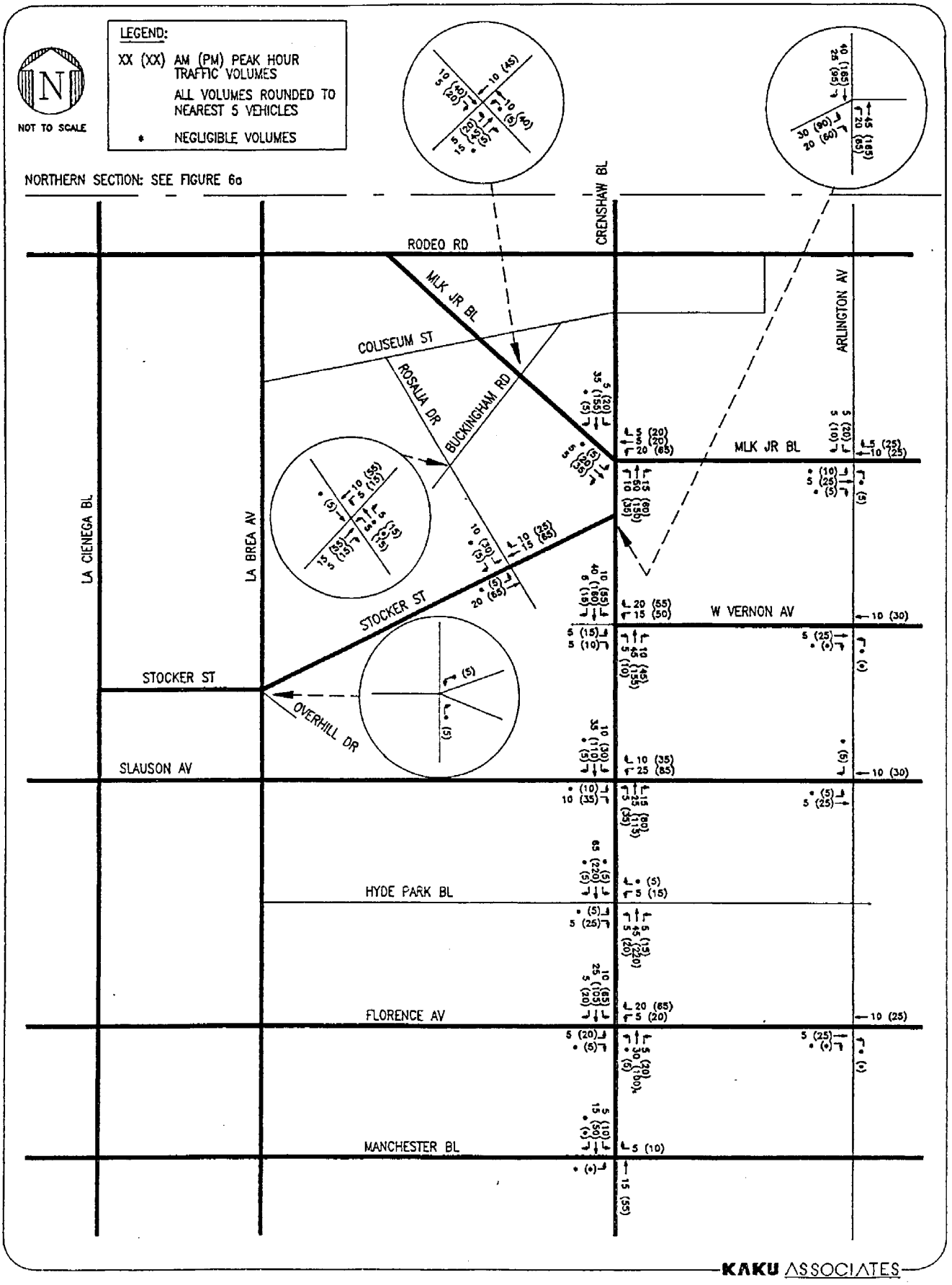


FIGURE 6b
ALTERNATIVE A PROJECT GENERATED PEAK HOUR TRAFFIC VOLUMES

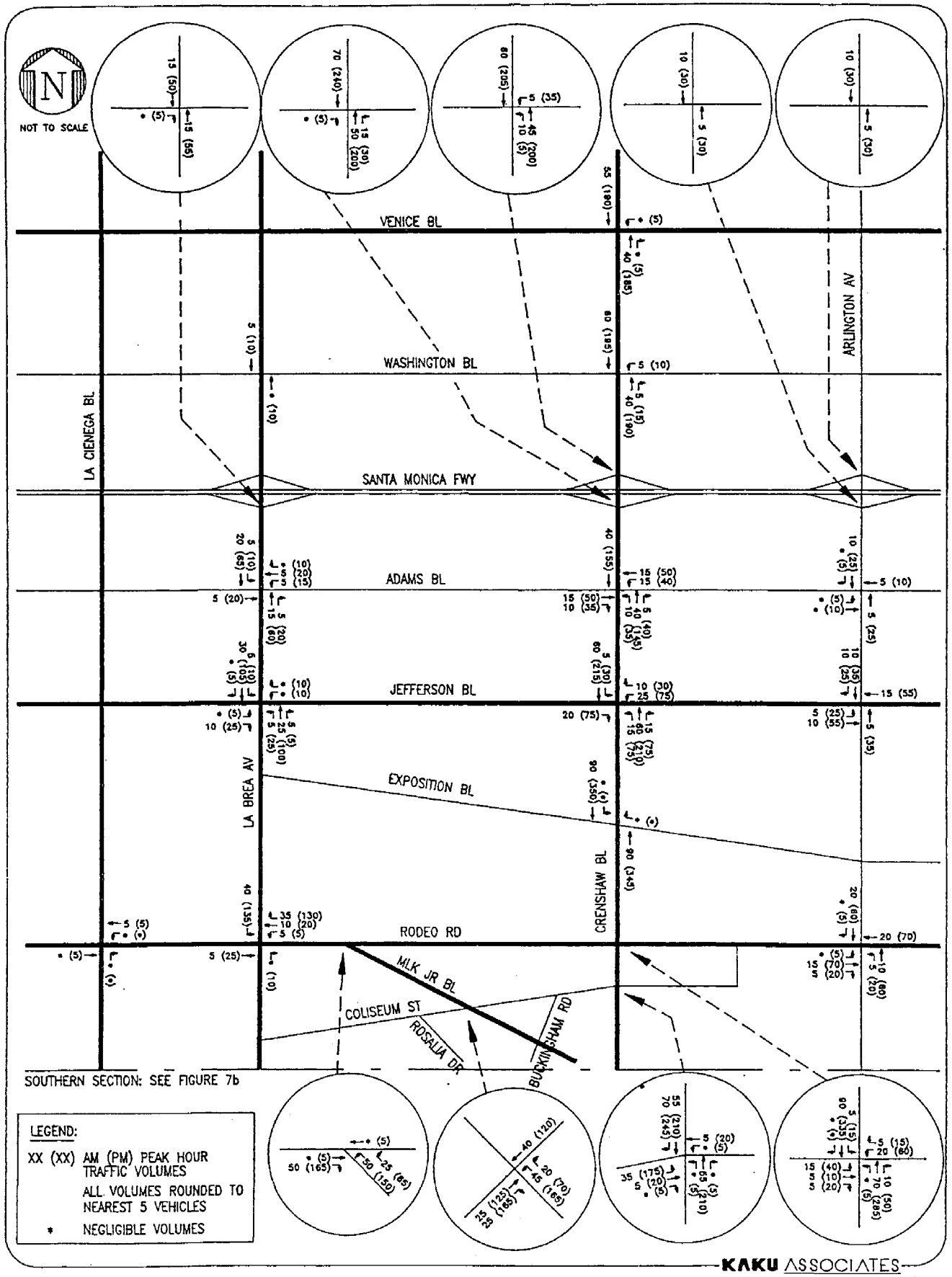


FIGURE 7a
ALTERNATIVE B PROJECT GENERATED PEAK HOUR TRAFFIC VOLUMES

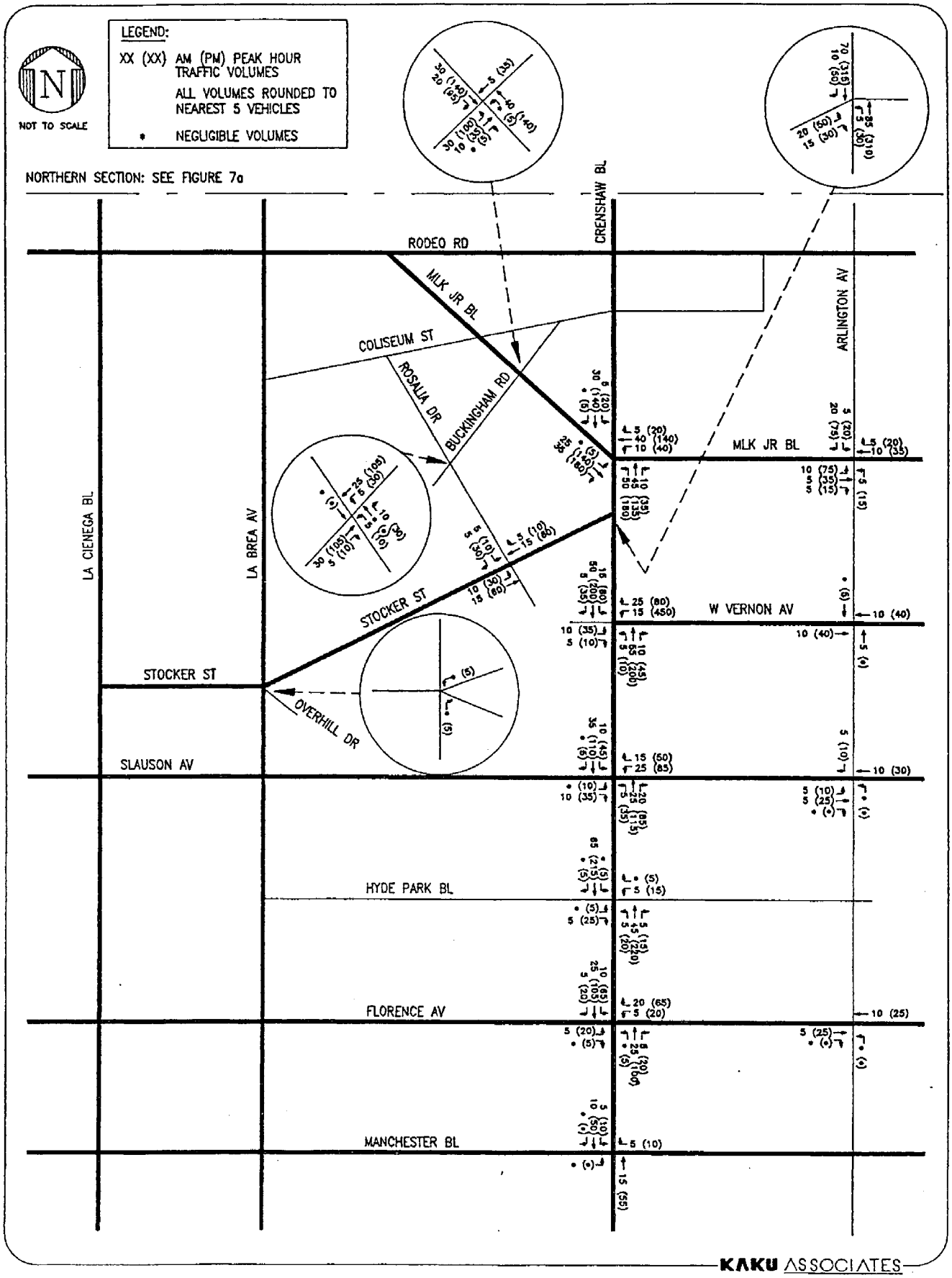


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FIGURE 7b
ALTERNATIVE B PROJECT GENERATED PEAK HOUR TRAFFIC VOLUMES

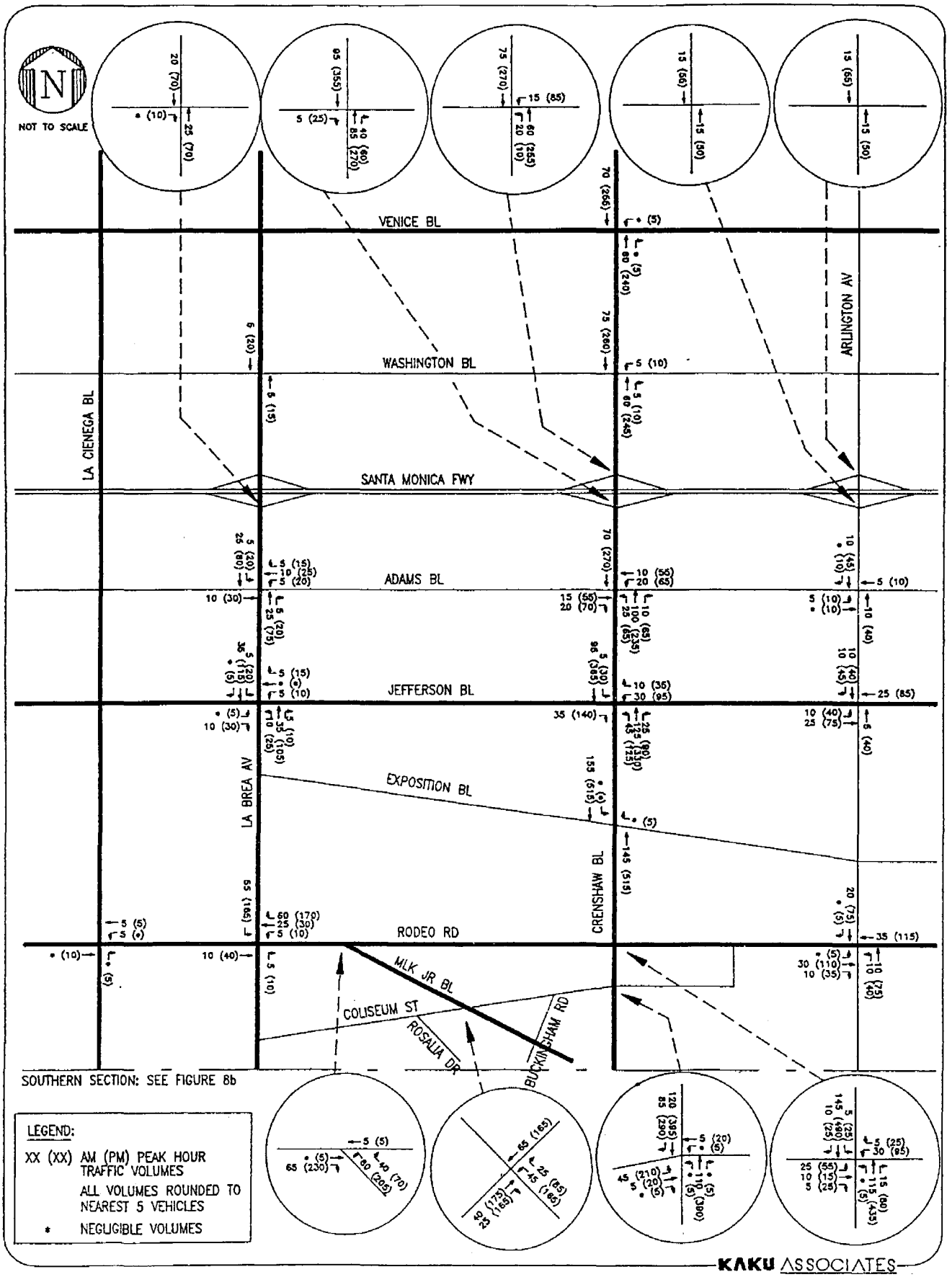

FIGURE 8a
ALTERNATIVE C PROJECT GENERATED PEAK HOUR TRAFFIC VOLUMES

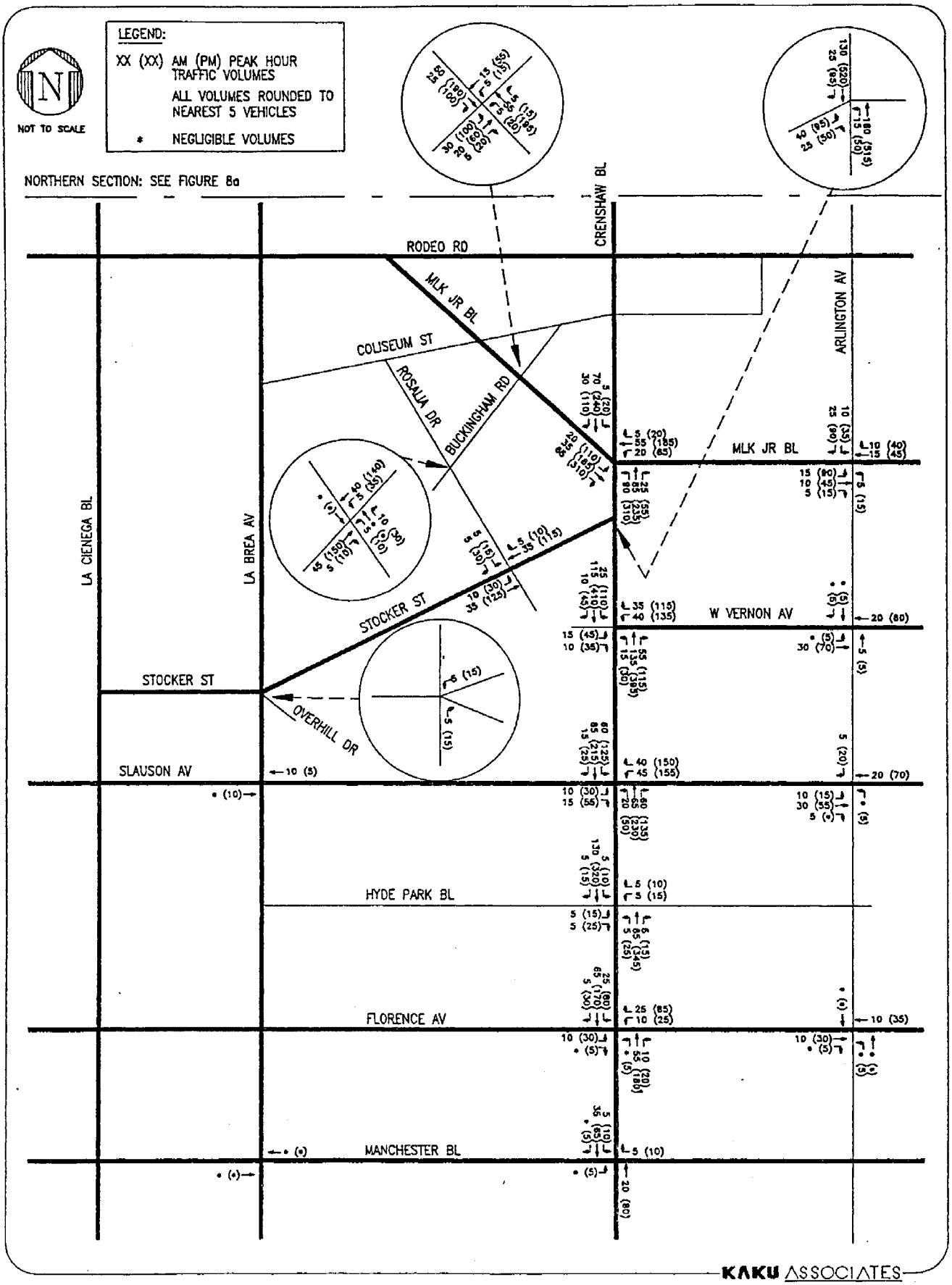

FIGURE 8b
ALTERNATIVE C PROJECT GENERATED PEAK HOUR TRAFFIC VOLUMES

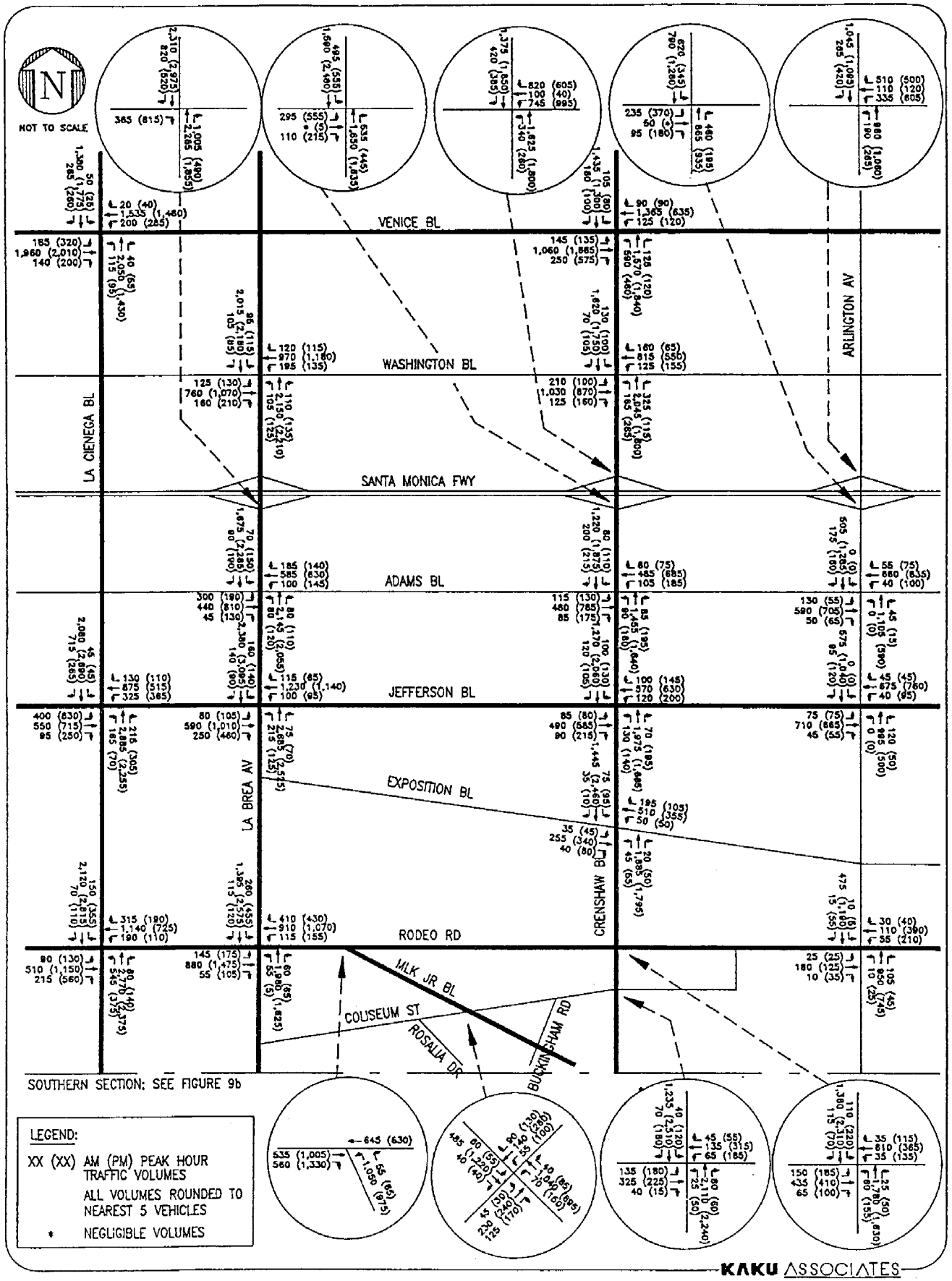

FIGURE 9a
YEAR 2005 CUMULATIVE PLUS PROJECT ALTERNATIVE A PEAK HOUR TRAFFIC VOLUMES

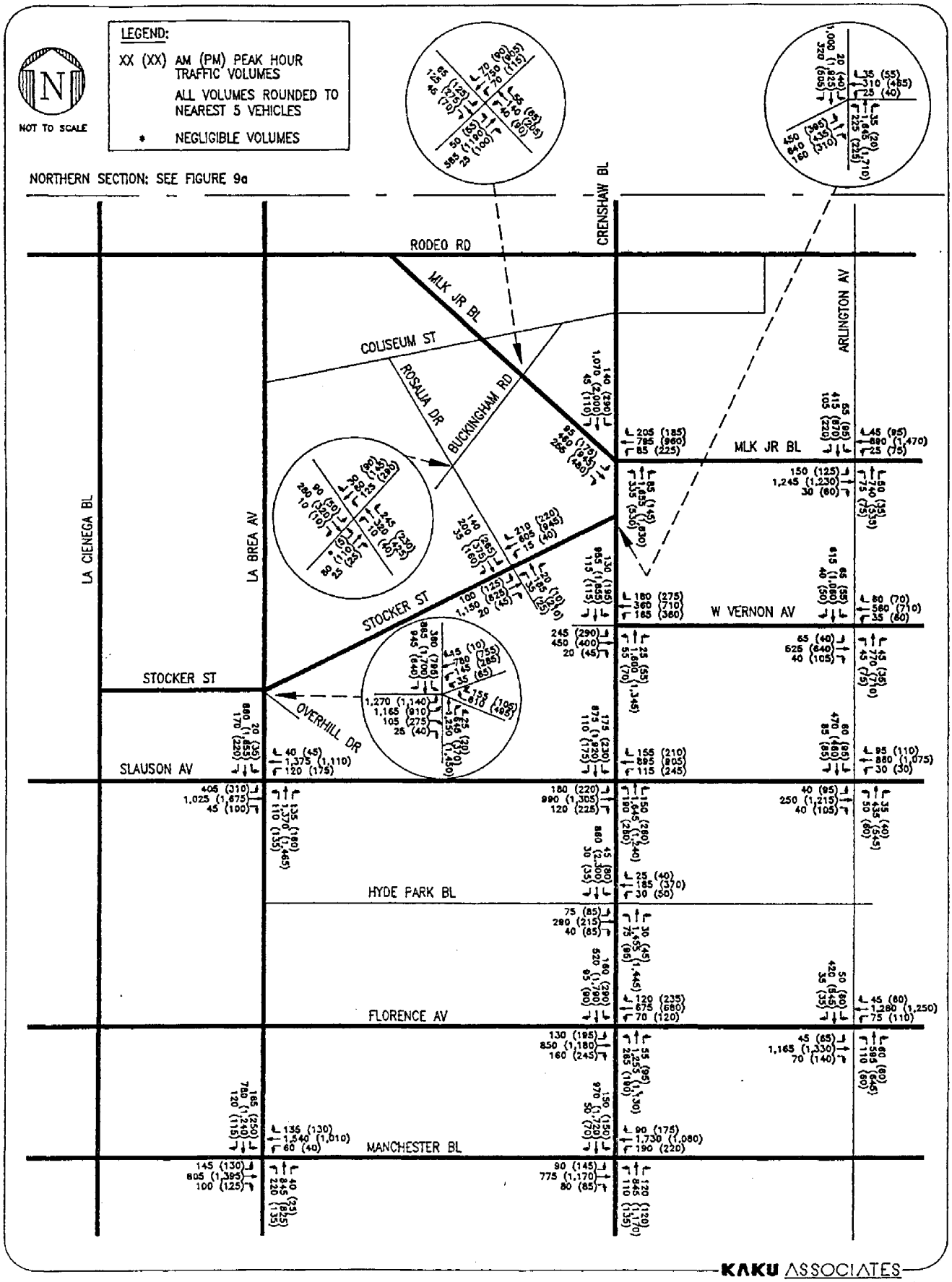

FIGURE 9b
YEAR 2005 CUMULATIVE PLUS PROJECT ALTERNATIVE A PEAK HOUR TRAFFIC VOLUMES

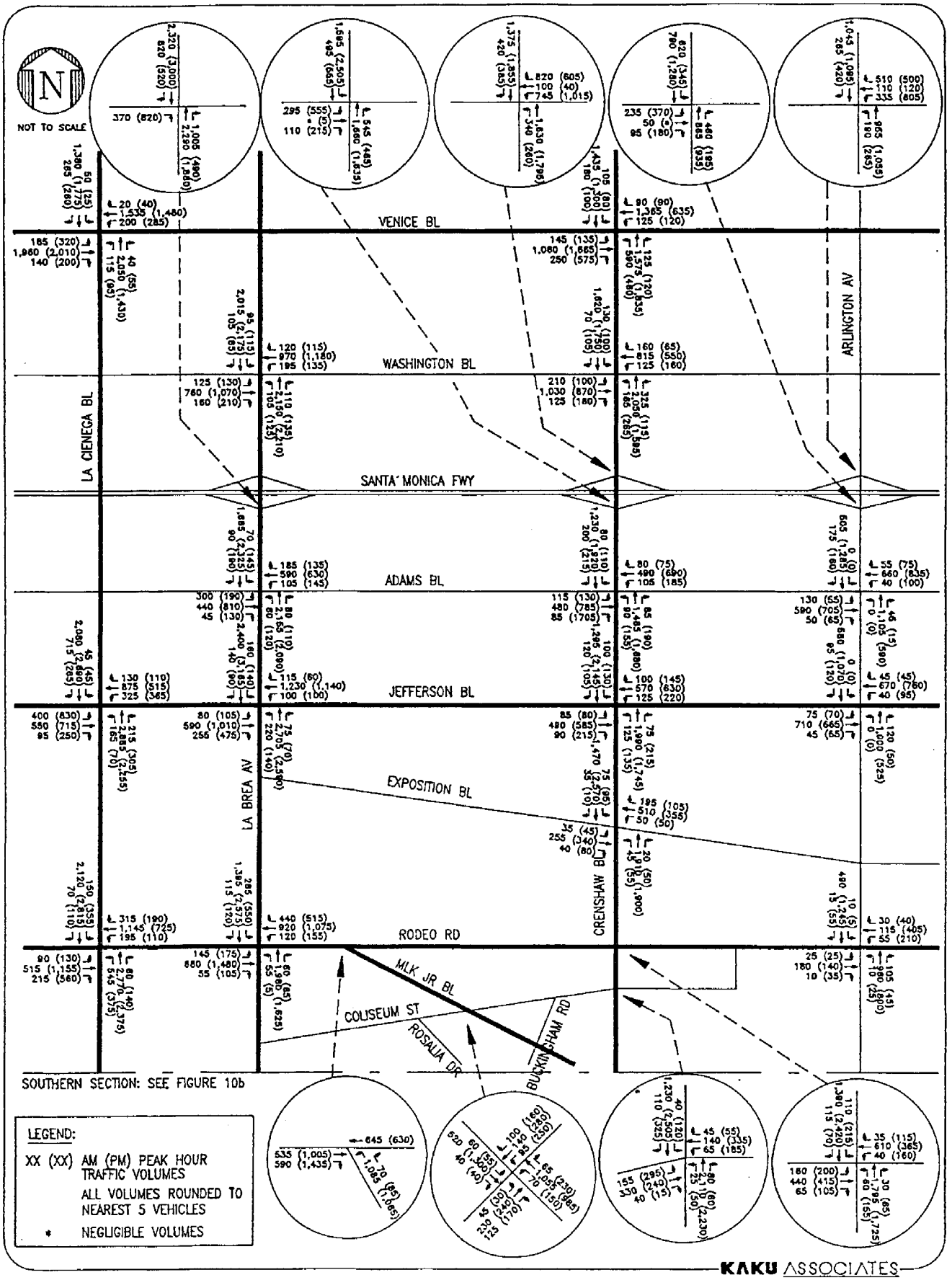

FIGURE 10a
YEAR 2005 CUMULATIVE PLUS PROJECT ALTERNATIVE B PEAK HOUR TRAFFIC VOLUMES

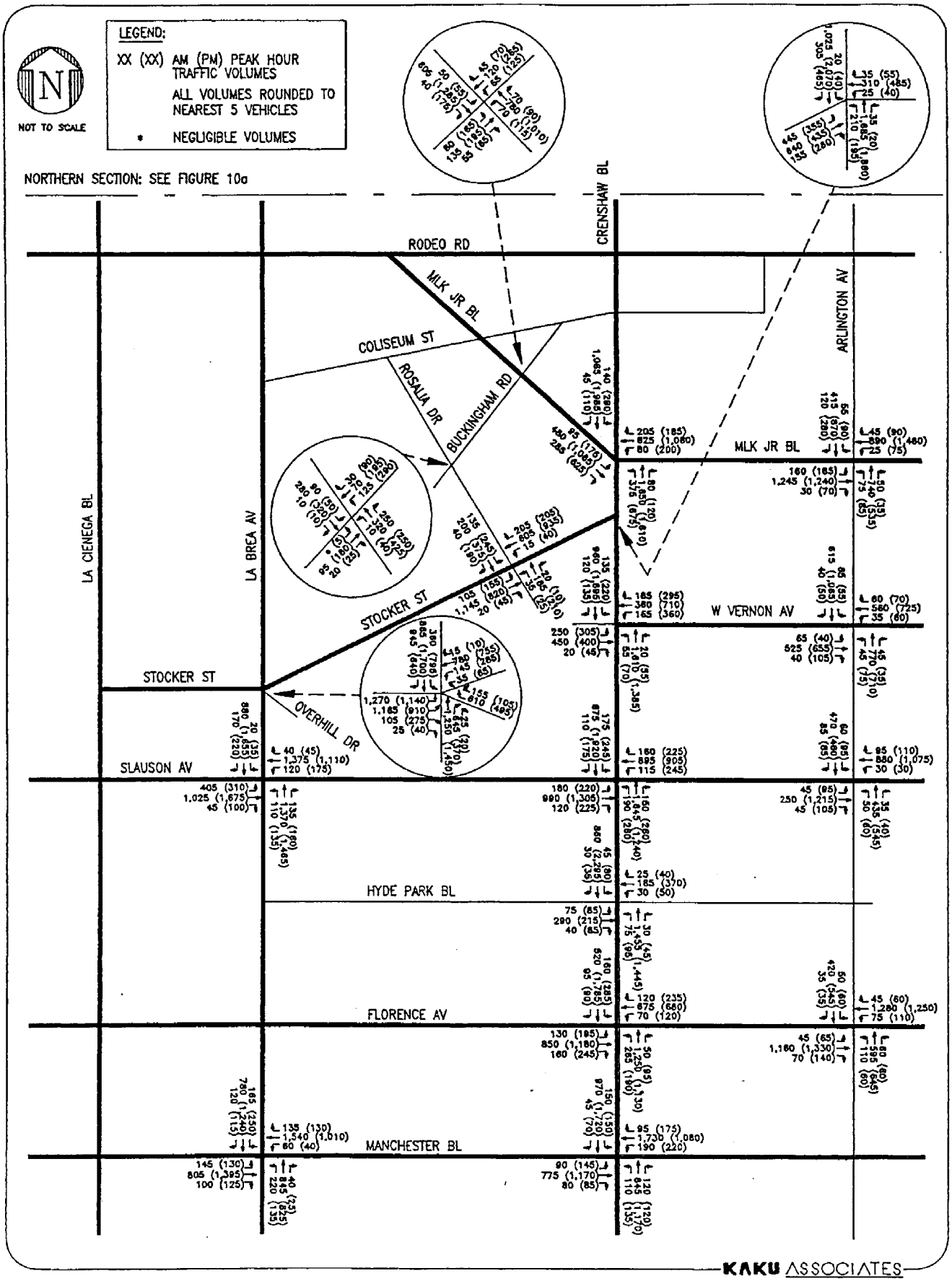

FIGURE 10b
YEAR 2005 CUMULATIVE PLUS PROJECT ALTERNATIVE B PEAK HOUR TRAFFIC VOLUMES

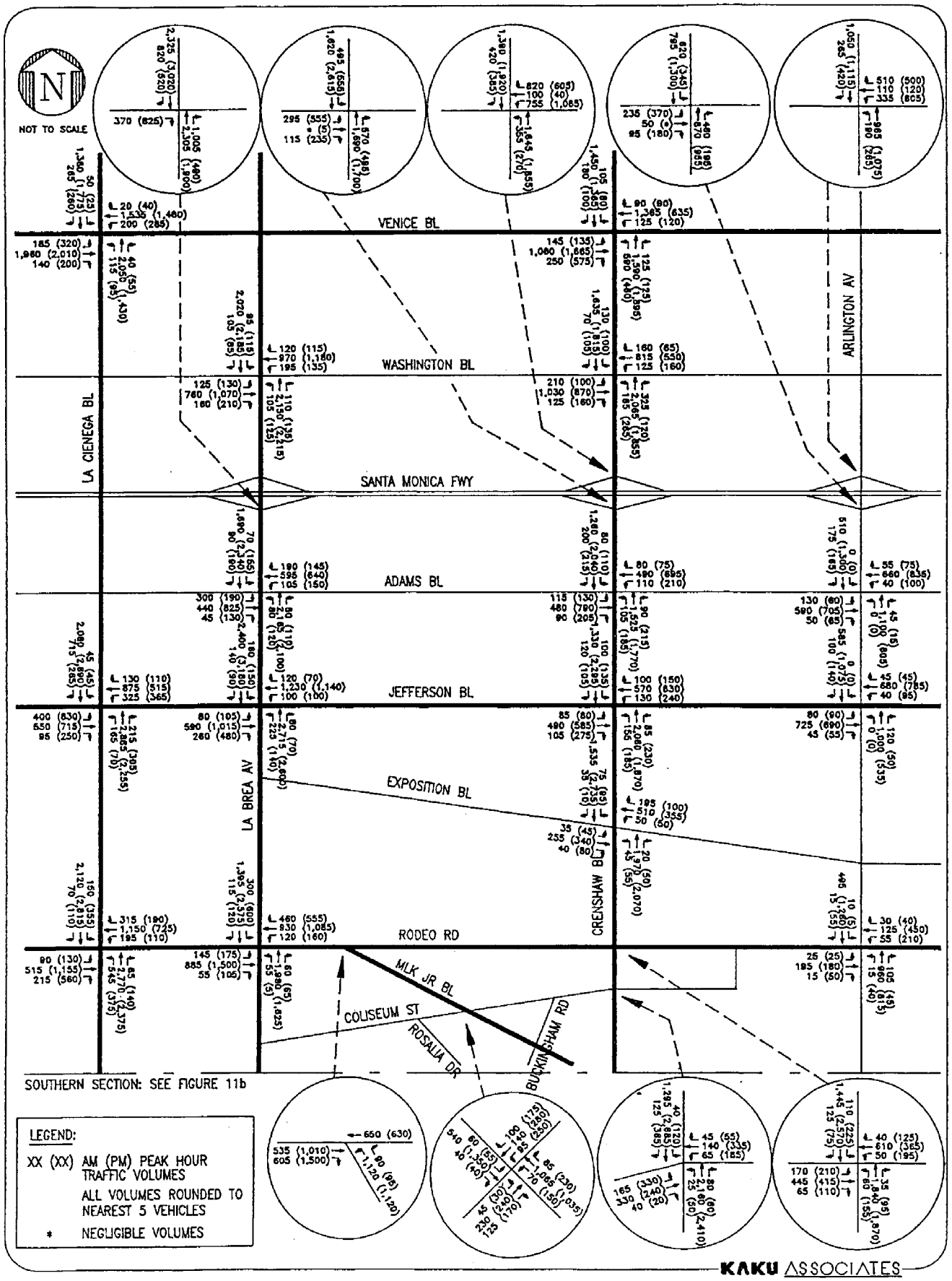

FIGURE 11a
YEAR 2005 CUMULATIVE PLUS PROJECT ALTERNATIVE C PEAK HOUR TRAFFIC VOLUMES

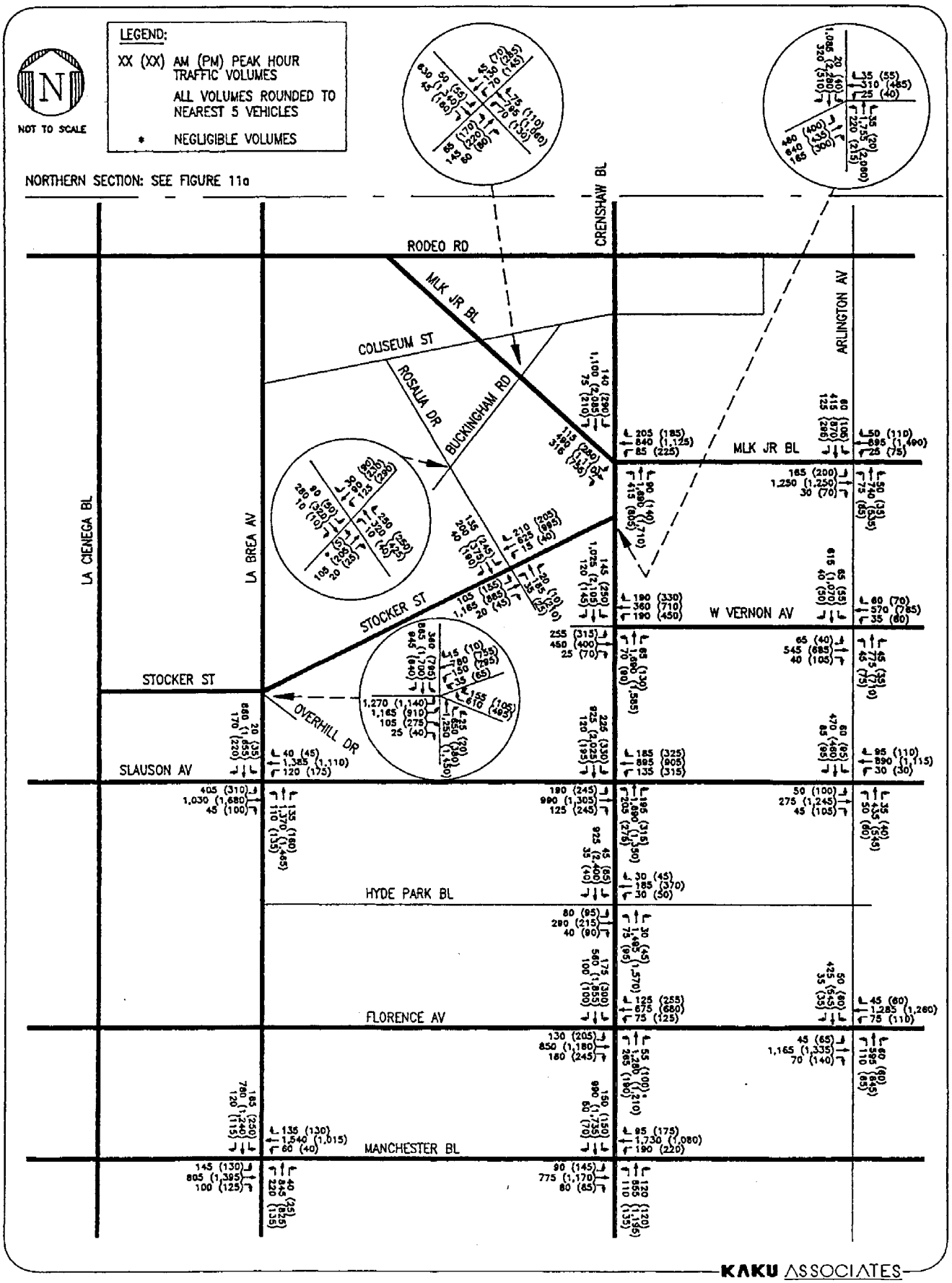

FIGURE 11b
YEAR 2005 CUMULATIVE PLUS PROJECT ALTERNATIVE C PEAK HOUR TRAFFIC VOLUMES

APPENDIX C

AIR QUALITY

INFILL/REBUILD ALTERNATIVE DAILY CONSTRUCTION EMISSIONS BY PHASE (Typical Single Site)

PHASE SOURCE	Pounds Per Day				
	CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	0.00	0.00	0.00	0.00	0.00
Area Source/b/	0.00	0.00	0.00	0.00	0.00
Haul Trucks/c/	0.00	0.00	0.00	0.00	0.00
Vehicles/d/	0.00	0.00	0.00	0.00	0.00
TOTAL	0.00	0.00	0.00	0.00	0.00
Excavation					
Equipment/e/	25.76	3.86	30.91	2.58	3.86
Area Source/f/	0.00	0.00	0.00	0.00	224.80
Haul Trucks/g/	0.00	0.00	0.00	0.00	0.00
Vehicles/h/	0.00	0.00	0.00	0.00	0.12
TOTAL	25.76	3.86	30.91	2.58	228.78
Foundation					
Equipment/i/	51.52	7.73	61.82	5.15	7.73
Area Source	0.00	0.00	0.00	0.00	0.00
Cement Trucks/j/	0.00	0.00	0.00	0.00	0.60
Vehicles/k/	0.00	0.00	0.00	0.00	0.12
TOTAL	51.52	7.73	61.82	5.15	8.45
Erection					
Equipment/l/	51.52	7.73	61.82	5.15	7.73
Area Source	0.00	0.00	0.00	0.00	0.00
Haul Trucks	0.00	0.00	0.00	0.00	0.00
Worker Vehicles/m/	0.00	0.00	0.00	0.00	0.88
Other Vehicles/n/	0.00	0.00	0.00	0.00	5.63
TOTAL	51.52	7.73	61.82	5.15	14.24
Finishing					
Equipment/o/	25.76	3.86	30.91	2.58	3.86
Area Source/p/	0.00	9.04	0.00	0.00	0.00
Haul Trucks	0.00	0.00	0.00	0.00	0.00
Worker Vehicles/q/	0.00	0.00	0.00	0.00	1.18
Other Vehicles/r/	0.00	0.00	0.00	0.00	5.63
TOTAL	25.76	12.90	30.91	2.58	10.67
Worst Case Phase	51.52	12.90	61.82	5.15	228.78
SCAQMD Daily Threshold	550	75	100	150	150
Percent of Threshold	9%	17%	62%	3%	153%

Note: Assumptions and General Data follow Infill/Rebuild Alternative tables.
Source: Terry A. Hayes Associates.

INFILL/REBUILD ALTERNATIVE TOTAL CONSTRUCTION EMISSIONS BY PHASE (Typical Single Site)

PHASE SOURCE	Total Pounds Per Phase				
	CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	0.0	0.0	0.0	0.0	0.0
Area Source/b/	0.0	0.0	0.0	0.0	0.0
Haul Trucks/c/	0.0	0.0	0.0	0.0	0.0
Vehicles/d/	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0
Excavation					
Equipment/e/	386.4	58.0	463.7	38.6	58.0
Area Source/f/	0.0	0.0	0.0	0.0	3372.0
Haul Trucks/g/	0.0	0.0	0.0	0.0	0.0
Vehicles/h/	0.0	0.0	0.0	0.0	1.8
TOTAL	386.4	58.0	463.7	38.6	3431.7
Foundation					
Equipment/i/	1030.4	154.6	1236.5	103.0	154.6
Area Source	0.0	0.0	0.0	0.0	0.0
Cement Trucks/j/	0.0	0.0	0.0	0.0	12.1
Vehicles/k/	0.0	0.0	0.0	0.0	2.4
TOTAL	1030.4	154.6	1236.5	103.0	169.0
Erection					
Equipment/l/	1030.4	154.6	1236.5	103.0	154.6
Area Source	0.0	0.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/m/	0.0	0.0	0.0	0.0	17.6
Other Vehicles/n/	0.0	0.0	0.0	0.0	112.7
TOTAL	1030.4	154.6	1236.5	103.0	284.9
Finishing					
Equipment/o/	515.2	77.3	618.2	51.5	77.3
Area Source/p/	0.0	180.8	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/q/	0.0	0.0	0.0	0.0	23.5
Other Vehicles/r/	0.0	0.0	0.0	0.0	112.7
TOTAL	515.2	258.1	618.2	51.5	213.5
Total Emissions (pounds)	2962.40	625.14	3554.88	296.24	4099.03
Pounds per Quarter	2533.63	534.66	3040.36	253.36	3505.75
Tons Per Quarter	1.27	0.27	1.52	0.13	1.75
SCAQMD Quarter Threshold	24.75	2.5	2.5	6.75	6.75
Percent of Threshold	5%	11%	61%	2%	26%

Note: Assumptions and General Data follow all of the Infill/Rebuild Alternative tables.
Source: Terry A. Hayes Associates.

INFILL/REBUILD ALTERNATIVE PHASE QUARTERLY CONSTRUCTION EMISSIONS (All Sites)

PHASE SOURCE	Pounds per Quarter CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	0.0	0.0	0.0	0.0	0.0
Area Source/b/	0.0	0.0	0.0	0.0	0.0
Haul Trucks/c/	0.0	0.0	0.0	0.0	0.0
Vehicles/d/	0.0	0.0	0.0	0.0	0.0
TOTAL	0.0	0.0	0.0	0.0	0.0
Excavation					
Equipment/e/	6576.6	986.5	7891.9	657.7	986.5
Area Source/f/	0.0	0.0	0.0	0.0	57392.1
Haul Trucks/g/	0.0	0.0	0.0	0.0	0.0
Vehicles/h/	0.0	0.0	0.0	0.0	30.0
TOTAL	6576.6	986.5	7891.9	657.7	58408.6
Foundation					
Equipment/i/	17537.6	2630.6	21045.1	1753.8	2630.6
Area Source	0.0	0.0	0.0	0.0	0.0
Cement Trucks/j/	0.0	0.0	0.0	0.0	205.1
Vehicles/k/	0.0	0.0	0.0	0.0	40.0
TOTAL	17537.6	2630.6	21045.1	1753.8	2875.8
Erection					
Equipment/l/	17537.6	2630.6	21045.1	1753.8	2630.6
Area Source	0.0	0.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/m/	0.0	0.0	0.0	0.0	300.2
Other Vehicles/n/	0.0	0.0	0.0	0.0	1917.7
TOTAL	17537.6	2630.6	21045.1	1753.8	4848.5
Finishing					
Equipment/o/	8768.8	1315.3	10522.6	876.9	1315.3
Area Source/p/	0.0	3077.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/q/	0.0	0.0	0.0	0.0	400.3
Other Vehicles/r/	0.0	0.0	0.0	0.0	1917.7
TOTAL	8768.8	4392.3	10522.6	876.9	3633.3
Total emissions during 1 year Tons during average year	50,421	10,640	60,505	5,042	69,766
Average pounds per Quarter	12,605	2,660	15,126	1,261	17,442
Average Tons per Quarter	6.3	1.3	7.6	0.6	8.7
SCAQMD Quarter Threshold	24.75	2.5	2.5	6.75	6.75
Percent of Threshold	25%	53%	303%	9%	129%

Note: Assumptions and General Data follow Infill/Rebuild Alternative tables.
Source: Terry A. Hayes Associates.

INFILL/REBUILD ALTERNATIVE ASSUMPTIONS AND GENERAL DATA

Assumptions:

a.	0	diesel equipment horsepower-hours per day
b.	0	cubic feet of demolition per day.
c.	0	truck vehicle miles of travel per day
d.	0	demolition worker vehicle travel miles/day
e.	14,490	diesel equipment horsepower-hours per day
f.	16	dozer grading hours per day
g.	0	truck vehicle miles per day
h.	11	worker and other vehicle miles per day
i.	2,576	diesel equipment horsepower-hours per day
j.	24	truck vehicle miles per day
k.	11	worker and other vehicle miles per day
l.	2,576	diesel equipment horsepower-hours per day
m.	84	worker vehicle miles per day.
n.	320	delivery and inspection vehicle miles per day
o.	1,288	diesel equipment horsepower-hours per day
p.	3	gallons of paint per day
q.	112	worker vehicle miles per day.
r.	320	delivery and inspection vehicle miles per day

General Data:

Duration of Construction	76	Work Days
Demolition Phase	1	Work Days
Earthwork/Excavate Phase	15	Work Days
Foundation Phase	20	Work Days
Erection Phase	20	Work Days
Finishing Phase	20	Work Days
Site to be Graded	0.3	Acres
Buildings Demolished	0	Square Feet
Buildings Constructed	6,534	Square Feet

Source: Terry A. Hayes Associates.

MODERATE DEVELOPMENT ALTERNATIVE CONSTRUCTION EMISSIONS (Typical Single Site)

PHASE SOURCE	Pounds Per Day				
	CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	25.76	3.86	30.91	2.58	3.86
Area Source/b/	0.00	0.00	0.00	0.00	1.93
Haul Trucks/c/	0.31	0.07	0.28	0.01	0.20
Vehicles/d/	0.15	0.02	0.02	0.00	0.16
TOTAL	26.22	3.95	31.21	2.59	6.15
Excavation					
Equipment/e/	25.76	3.86	30.91	2.58	3.86
Area Source/f/	0.00	0.00	0.00	0.00	224.80
Haul Trucks/g/	0.31	0.07	0.28	0.01	0.02
Vehicles/h/	0.02	0.00	0.00	0.00	0.40
TOTAL	26.09	3.93	31.20	2.59	229.09
Foundation					
Equipment/i/	51.52	7.73	61.82	5.15	7.73
Area Source	0.00	0.00	0.00	0.00	0.00
Cement Trucks/j/	0.31	0.07	0.28	0.01	2.52
Vehicles/k/	0.02	0.00	0.00	0.00	0.40
TOTAL	51.85	7.80	62.11	5.16	10.65
Erection					
Equipment/l/	51.52	7.73	61.82	5.15	7.73
Area Source	0.00	0.00	0.00	0.00	0.00
Haul Trucks	0.00	0.00	0.00	0.00	0.00
Worker Vehicles/m/	0.15	0.01	0.02	0.00	3.00
Other Vehicles/n/	0.23	0.03	0.04	0.00	7.97
TOTAL	51.90	7.76	61.88	5.16	18.69
Finishing					
Equipment/o/	25.76	3.86	30.91	2.58	3.86
Area Source/p/	0.00	17.36	0.00	0.00	0.00
Haul Trucks	0.00	0.00	0.00	0.00	0.00
Worker Vehicles/q/	0.21	0.01	0.02	0.00	3.99
Other Vehicles/r/	0.23	0.03	0.04	0.00	7.97
TOTAL	26.20	21.26	30.97	2.58	15.83
Worst Case Phase	51.90	21.26	62.11	5.16	229.09
SCAQMD Daily Threshold	550	75	100	150	150
Percent of Threshold	9%	28%	62%	3%	153%

Note: Assumptions and General Data follow Moderate Development Alternative tables.
Source: Terry A. Hayes Associates.

MODERATE DEVELOPMENT ALTERNATIVE TOTAL EMISSIONS PER PHASE (Typical Single Site)

PHASE SOURCE	Total Pounds Per Phase CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	386.4	58.0	463.7	38.6	58.0
Area Source/b/	0.0	0.0	0.0	0.0	28.9
Haul Trucks/c/	4.7	1.0	4.3	0.1	3.0
Vehicles/d/	2.2	0.2	0.3	0.0	2.4
TOTAL	393.3	59.2	468.2	38.8	92.3
Equipment/e/	386.4	58.0	463.7	38.6	58.0
Area Source/f/	0.0	0.0	0.0	0.0	3372.0
Haul Trucks/g/	4.7	1.0	4.3	0.1	0.3
Vehicles/h/	0.3	0.0	0.0	0.0	6.0
TOTAL	391.4	59.0	468.0	38.8	3436.3
Foundation					
Equipment/i/	772.8	115.9	927.4	77.3	115.9
Area Source	0.0	0.0	0.0	0.0	0.0
Cement Trucks/j/	4.7	1.0	4.3	0.1	37.8
Vehicles/k/	0.3	0.0	0.0	0.0	6.0
TOTAL	777.8	117.0	931.7	77.4	159.7
Erection					
Equipment/l/	1030.4	154.6	1236.5	103.0	154.6
Area Source	0.0	0.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/m/	3.1	0.2	0.3	0.0	59.9
Other Vehicles/n/	4.6	0.5	0.8	0.1	159.4
TOTAL	1038.1	155.3	1237.6	103.1	373.8
Finishing					
Equipment/o/	644.0	96.6	772.8	64.4	96.6
Area Source/p/	0.0	433.9	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/q/	5.1	0.3	0.5	0.0	99.9
Other Vehicles/r/	5.8	0.7	1.0	0.1	199.2
TOTAL	654.9	531.5	774.3	64.5	395.7
Total Emissions (pounds)	3255.47	921.96	3879.73	322.70	4457.86
Pounds per Quarter	2351.17	665.86	2802.03	233.06	3219.57
Tons Per Quarter	1.18	0.33	1.40	0.12	1.61
SCAQMD Quarter Threshold	24.75	2.5	2.5	6.75	6.75
Percent of Threshold	5%	13%	56%	2%	24%

Note: Assumptions and General Data follow Moderate Development Alternative tables.
Source: Terry A. Hayes Associates.

MODERATE DEVELOPMENT ALTERNATIVE QUARTERLY EMISSIONS (All Sites)

PHASE SOURCE	Pounds Per Quarter CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	5218.6	782.8	6262.3	521.9	782.8
Area Source/b/	0.0	0.0	0.0	0.0	390.9
Haul Trucks/c/	63.4	13.8	57.7	2.0	40.9
Vehicles/d/	29.6	3.2	3.4	0.3	32.2
TOTAL	5311.5	799.8	6323.4	524.2	1246.8
Excavation					
Equipment/e/	5218.6	782.8	6262.3	521.9	782.8
Area Source/f/	0.0	0.0	0.0	0.0	45541.0
Haul Trucks/g/	63.4	13.8	57.7	2.0	4.5
Vehicles/h/	4.2	0.3	0.4	0.0	80.9
TOTAL	5286.1	796.9	6320.5	523.9	46409.2
Foundation					
Equipment/i/	10437.2	1565.6	12524.6	1043.7	1565.6
Area Source	0.0	0.0	0.0	0.0	0.0
Cement Trucks/j/	63.4	13.8	57.7	2.0	510.9
Vehicles/k/	4.2	0.3	0.4	0.0	80.9
TOTAL	10504.7	1579.7	12582.8	1045.7	2157.4
Erection					
Equipment/l/	13916.2	2087.4	16699.5	1391.6	2087.4
Area Source	0.0	0.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/m/	41.7	2.6	4.3	0.3	809.3
Other Vehicles/n/	62.2	7.3	10.4	1.0	2152.3
TOTAL	14020.1	2097.3	16714.2	1392.9	5049.0
Finishing					
Equipment/o/	8697.6	1304.6	10437.2	869.8	1304.6
Area Source/p/	0.0	5859.9	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/q/	69.5	4.4	7.2	0.6	1348.8
Other Vehicles/r/	77.7	9.1	13.0	1.2	2690.4
TOTAL	8844.8	7178.0	10457.4	871.6	5343.9
Total Pounds per Year for all projects	43,967	12,452	52,398	4,358	60,206
Average Pounds per Quarter	10,992	3,113	13,100	1,090	15,052
Average Tons per Quarter	5.5	1.6	6.5	0.5	7.5
SCAQMD Quarter Threshold	24.75	2.5	2.5	6.75	6.75
Percent of Threshold	22%	62%	262%	8%	111%

Note: Assumptions and General Data follow Moderate Development Alternative tables.
Source: Terry A. Hayes Associates.

MODERATE DEVELOPMENT ALTERNATIVE ASSUMPTIONS AND GENERAL DATA

Assumptions:

a.	1,288	diesel equipment horsepower-hours per day
b.	4,594	cubic feet of demolition per day.
c.	13	truck vehicle miles of travel per day
d.	11	demolition worker vehicle travel miles/day
e.	14,490	diesel equipment horsepower-hours per day
f.	16	dozer grading hours per day
g.	0	truck vehicle miles per day
h.	27	worker and other vehicle miles per day
i.	2,576	diesel equipment horsepower-hours per day
j.	71	truck vehicle miles per day
k.	27	worker and other vehicle miles per day
l.	2,576	diesel equipment horsepower-hours per day
m.	202	worker vehicle miles per day.
n.	320	delivery and inspection vehicle miles per day
o.	1,288	diesel equipment horsepower-hours per day
p.	5	gallons of paint per day
q.	269	worker vehicle miles per day.
r.	320	delivery and inspection vehicle miles per day

General Data:

Duration of Construction	90	Work Days
Demolition Phase	15	Work Days
Earthwork/Excavate Phase	15	Work Days
Foundation Phase	15	Work Days
Erection Phase	20	Work Days
Finishing Phase	25	Work Days
Site to be Graded	0.6	Acres
Buildings Demolished	4,594	Square Feet
Buildings Constructed	15,682	Square Feet

Source: Terry A. Hayes Associates.

MAXIMUM PROBABLE DEVELOPMENT ALTERNATIVE CONSTRUCTION EMISSIONS (Typical Single Site)

PHASE SOURCE	Pounds Per Day CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	51.52	7.73	61.82	5.15	7.73
Area Source/b/	0.00	0.00	0.00	0.00	3.27
Haul Trucks/c/	0.53	0.12	0.48	0.02	0.37
Vehicles/d/	0.25	0.03	0.03	0.00	0.29
TOTAL	52.30	7.87	62.34	5.17	11.66
Excavation					
Equipment/e/	51.52	7.73	61.82	5.15	7.73
Area Source/f/	0.00	0.00	0.00	0.00	224.80
Haul Trucks/g/	0.53	0.12	0.48	0.02	4.97
Vehicles/h/	0.03	0.00	0.00	0.00	0.84
TOTAL	52.09	7.85	62.31	5.17	238.34
Foundation					
Equipment/i/	51.52	7.73	61.82	5.15	7.73
Area Source	0.00	0.00	0.00	0.00	0.00
Cement Trucks/j/	0.53	0.12	0.48	0.02	3.74
Vehicles/k/	0.03	0.00	0.00	0.00	0.84
TOTAL	52.09	7.85	62.31	5.17	12.31
Erection					
Equipment/l/	51.52	7.73	61.82	5.15	7.73
Area Source	0.00	0.00	0.00	0.00	0.00
Haul Trucks	0.00	0.00	0.00	0.00	0.00
Worker	0.26	0.02	0.03	0.00	6.29
Vehicles/m/	0.39	0.05	0.07	0.01	8.61
Other Vehicles/n/	52.17	7.79	61.92	5.16	22.63
TOTAL					
Finishing					
Equipment/o/	51.52	7.73	61.82	5.15	7.73
Area Source/p/	0.00	33.75	0.00	0.00	0.00
Haul Trucks	0.00	0.00	0.00	0.00	0.00
Worker	0.35	0.02	0.04	0.00	8.39
Vehicles/q/	0.39	0.05	0.07	0.01	8.61
Other Vehicles/r/	52.26	41.54	61.93	5.16	24.72
TOTAL					
Worst Case Phase	52.30	41.54	62.34	5.17	238.34
SCAQMD Daily Threshold	550	75	100	150	150
Percent of Threshold	10%	55%	62%	3%	159%

Note: Assumptions and General Data follow Maximum Probable Development Alternative tables.
Source: Terry A. Hayes Associates.

MAXIMUM PROBABLE DEVELOPMENT ALTERNATIVE TOTAL CONSTRUCTION EMISSIONS PER PHASE (Typical Single Site)

PHASE SOURCE	Total Pounds Per Phase				
	CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/e/	772.8	115.9	927.4	77.3	115.9
Area Source/b/	0.0	0.0	0.0	0.0	49.1
Haul Trucks/c/	8.0	1.7	7.2	0.3	5.5
Vehicles/d/	3.7	0.4	0.4	0.0	4.4
TOTAL	784.5	118.1	935.0	77.6	174.9
Excavation					
Equipment/e/	1288.0	193.2	1545.6	128.8	193.2
Area Source/f/	0.0	0.0	0.0	0.0	5620.0
Haul Trucks/g/	13.3	2.9	12.1	0.4	124.2
Vehicles/h/	0.9	0.1	0.1	0.0	21.0
TOTAL	1302.1	196.2	1557.8	129.2	5958.4
Foundation					
Equipment/i/	1030.4	154.6	1236.5	103.0	154.6
Area Source	0.0	0.0	0.0	0.0	0.0
Cement Trucks/j/	10.6	2.3	9.7	0.3	74.8
Vehicles/k/	0.7	0.0	0.1	0.0	16.8
TOTAL	1041.7	156.9	1246.2	103.4	246.2
Erection					
Equipment/l/	1545.6	231.8	1854.7	154.6	231.8
Area Source	0.0	0.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/m/	7.9	0.5	0.8	0.1	188.8
Other Vehicles/n/	11.7	1.4	2.0	0.2	258.2
TOTAL	1565.2	233.7	1857.5	154.8	678.8
Finishing					
Equipment/o/	1288.0	193.2	1545.6	128.8	193.2
Area Source/p/	0.0	843.7	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/q/	8.7	0.5	0.9	0.1	209.7
Other Vehicles/r/	9.8	1.1	1.6	0.2	215.2
TOTAL	1306.5	1038.6	1548.1	129.0	618.1
Total Emissions (pounds)	5999.96	1743.39	7144.66	594.01	7676.36
Pounds per Quarter	3391.28	985.39	4038.29	335.75	4338.81
Tons Per Quarter	1.70	0.49	2.02	0.17	2.17
SCAQMD Quarter Threshold	24.75	2.5	2.5	6.75	6.75
Percent of Threshold	7%	20%	81%	2%	32%

Note: Assumptions and General Data follow Maximum Probable Development Alternative tables.
Source: Terry A. Hayes Associates.

MAXIMUM PROBABLE DEVELOPMENT ALTERNATIVE QUARTERLY CONSTRUCTION EMISSIONS (All Sites)

PHASE SOURCE	Pounds Per Quarter CO	ROC	NOX	SOX	PM_{10}
Demolition					
Equipment/a/	10660.8	1599.1	12793.0	1066.1	1599.1
Area Source/b/	0.0	0.0	0.0	0.0	677.1
Haul Trucks/c/	109.8	24.0	100.0	3.5	75.9
Vehicles/d/	51.2	5.5	5.9	0.6	60.2
TOTAL	10821.8	1628.6	12898.9	1070.1	2412.4
Excavation					
Equipment/e/	17768.1	2665.2	21321.7	1776.8	2665.2
Area Source/f/	0.0	0.0	0.0	0.0	77528.4
Haul Trucks/g/	183.0	39.9	166.7	5.8	1713.6
Vehicles/h/	12.0	0.8	1.2	0.1	289.3
TOTAL	17963.1	2705.9	21489.6	1782.7	82196.5
Foundation					
Equipment/i/	14214.5	2132.2	17057.4	1421.4	2132.2
Area Source	0.0	0.0	0.0	0.0	0.0
Cement Trucks/j/	146.4	32.0	133.4	4.6	1032.5
Vehicles/k/	9.6	0.6	1.0	0.1	231.5
TOTAL	14370.5	2164.7	17191.7	1426.1	3396.1
Erection					
Equipment/l/	21321.7	3198.3	25586.0	2132.2	3198.3
Area Source	0.0	0.0	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker	108.3	6.8	11.2	0.9	2603.8
Vehicles/m/	161.6	18.9	27.0	2.6	3562.2
Other Vehicles/n/	21591.6	3224.0	25624.3	2135.6	9364.3
TOTAL					
Finishing					
Equipment/o/	17768.1	2665.2	21321.7	1776.8	2665.2
Area Source/p/	0.0	11638.4	0.0	0.0	0.0
Haul Trucks	0.0	0.0	0.0	0.0	0.0
Worker Vehicles/q/	120.3	7.6	12.5	1.0	2893.2
Other Vehicles/r/	134.6	15.8	22.5	2.1	2968.5
TOTAL	18023.0	14327.0	21356.7	1779.9	8526.8
Total Pounds per Year	82,770	24,050	98,561	8,194	105,896
Average Pounds per Quarter	20,692	6,013	24,640	2,049	26,474
Average Tons per Quarter	10.3	3.0	12.3	1.0	13.2
SCAQMD Quarter Threshold	24.75	2.5	2.5	6.75	6.75
Percent of Threshold	42%	120%	493%	15%	196%

Note: Assumptions and General Data follow Maximum Probable Development Alternative tables.
Source: Terry A. Hayes Associates.

MAXIMUM PROBABLE DEVELOPMENT ALTERNATIVE ASSUMPTIONS AND GENERAL DATA

Assumptions:

a.	2,576	diesel equipment horsepower-hours per day
b.	7,790	cubic feet of demolition per day.
c.	22	truck vehicle miles of travel per day
d.	18	demolition worker vehicle travel miles/day
e.	14,490	diesel equipment horsepower-hours per day
f.	16	dozer grading hours per day
g.	130	truck vehicle miles per day
h.	52	worker and other vehicle miles per day
i.	2,576	diesel equipment horsepower-hours per day
j.	97	truck vehicle miles per day
k.	52	worker and other vehicle miles per day
l.	2,576	diesel equipment horsepower-hours per day
m.	392	worker vehicle miles per day.
n.	320	delivery and inspection vehicle miles per day
o.	2,576	diesel equipment horsepower-hours per day
p.	11	gallons of paint per day
q.	523	worker vehicle miles per day.
r.	320	delivery and inspection vehicle miles per day

General Data:

Duration of Construction	115	Work Days
Demolition Phase	15	Work Days
Earthwork/Excavate Phase	25	Work Days
Foundation Phase	20	Work Days
Erection Phase	30	Work Days
Finishing Phase	25	Work Days
Site to be Graded	0.7	Acres
Buildings Demolished	7,790	Square Feet
Buildings Constructed	30,492	Square Feet

Source: Terry A. Hayes Associates.