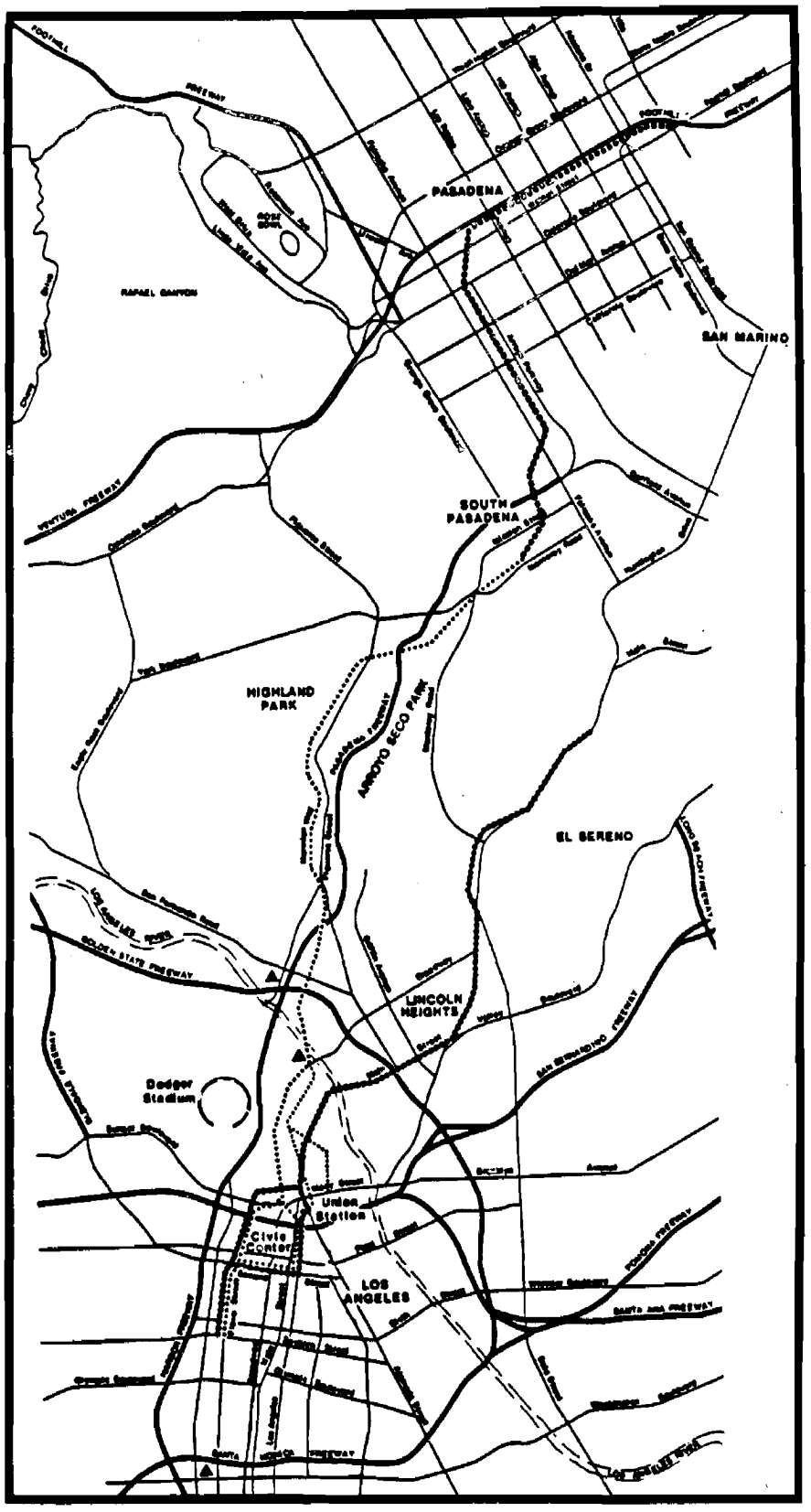
Final Environmental Impact Report



LACTC

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FEBRUARY 1990

Pasadena-Los Angeles Light Rail Transit Project

FINAL LACTC STAFF COMMENTS
PASADENA-LOS ANGELES RAIL TRANSIT PROJECT
FINAL ENVIRONMENTAL IMPACT REPORT (FEIR)
STATE CLEARINGHOUSE NO. 89082327

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February 1990

TABLE OF CONTENTS

SECTION 1
INTRODUCTION TO EIR

Purpose of EIR

Preparation of this EIR is in accord with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code, Section 21000 et. seq.), the California Environmental Quality Act - Law and Guidelines (as amended in 1986).

The determination that the Los Angeles County Transportation Commission is the lead agency was made in accordance with Section 21067 of the EIR guidelines which defines the lead agency as "the public agency which has the principal responsibility for carrying out or approving a project which may have a significant effect on the environment."

An effort was made to contact all affected agencies, organizations, and persons during the preparation of the revised draft EIR. A list of public agencies, organizations, and businesses/individuals commenting on the original and revised draft EIR are included in Section 6.

The revised draft EIR was completed in December 1989 and circulated for public review and comment for the mandatory period of time. During this review period, public agencies, responsible agencies, and interested parties were asked to comment on the adequacy of the EIR. The preparers of the draft EIR have responded to the written comments received and are included in Sections 3 and 4.

Format of FEIR

The FEIR consists of the revised DEIR and this volume which includes the following sections:

> Section 1: Introduction to the FEIR. This section described the purpose and format of the FEIR.

Section 2: Summary of Environmental Analysis. This section includes a summary description of the proposed light rail transit project and the environmental impacts anticipated to result from the construction and operation of the project.

Section 3: Response to Comments on Original DEIR. Individuals and agencies commenting on the original DEIR are identified along with their comments. The preparers of the DEIR and lead agency representatives have responded to the individual comments received.

Section 4: Response to Comments on Revised DEIR. Individuals and agencies commenting on the revised DEIR are identified along with their comments. The preparers of the revised DEIR and lead agency representatives have responded to the individual comments.

Section 5: Responses to Testimony Received in Public Hearings. Comments received from public testimony given at public hearings held for the origninal DEIR and the revised DEIR. The preparers and lead agency representatives have responded to individual comments received.

Section 6: List of Public Agencies, Organizations, and Businesses/Individuals Commenting. Persons commenting on the initial original DEIR and the revised DEIR are identified.

Section 7: Errata and Changes to the Revised DEIR. Corrected and updated information is provided in the FEIR.

SECTION 2
SUMMARY OF ENVIRONMENTAL IMPACT ANALYSIS

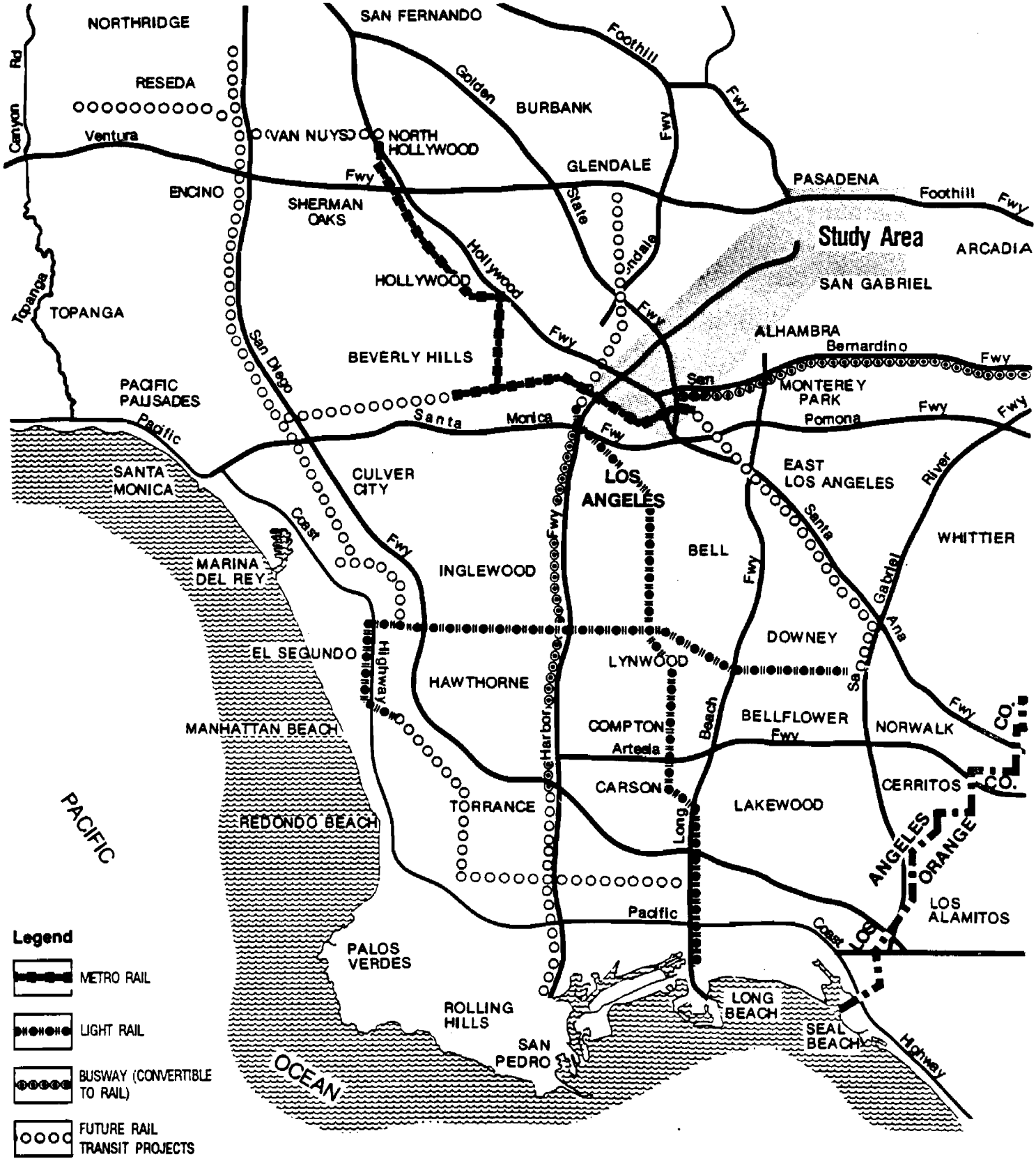
2.1 SUMMARY DESCRIPTION OF PROPOSED PROJECT

The proposed Pasadena-Los Angeles Rail Transit Project involves the extension of the Long Beach-Los Angeles Light Rail Transit (LRT) facility from downtown Los Angeles through Pasadena. The regional context of the proposed project is indicated in Exhibit 2-1. The proposed project considers two main alignment alternatives: the Highland Park alignment through Highland Park, South Pasadena, and Pasadena; and the North Main Street alignment through Lincoln Heights and El Sereno. In downtown Los Angeles, one of a number of downtown alignment options will connect the Highland Park or North Main Street alternative alignments with the Long Beach LRT or provide a Metro Rail connection with a station at Union Station. The downtown options for the Highland Park and North Main Street alignments are indicated in Exhibits 2-2. The Highland Park and North Main Street alignments are indicated in Exhibit 2-3. Yard sites and storage track locations are also indicated in Exhibit 2-3.

2.1.1 ALIGNMENT CHARACTERISTICS

Highland Park Alternative: From downtown Los Angeles, the Highland Park alignment alternative crosses under the Santa Ana Freeway (I-5) and continues in a subway configuration using one of the following three route options: Chinatown, Second Street, or Second Street-Union Station. Alternatively, this alignment can begin at Union Station using the Union Station "No Subway" option or a phased construction of the Second Street-Union Station option. The alignment then travels at-grade on an existing Santa Fe Railroad line through Mount Washington, Highland Park, and South Pasadena, continuing on into Pasadena. The line terminates in the vicinity of the Foothill Freeway (I-210) and Sierra Madre Villa in eastern Pasadena. The Highland Park alternative is illustrated in Exhibit 2-3.

North Main Street Alternative: The North Main Street alignment alternative traverses the downtown area by using either the Chinatown or Second Street options. It then surfaces to an elevated structure that follows the centerline of North Main Street crossing the Los Angeles River and I-5. It turns north on an elevated structure onto Mission Road near Lincoln Park, crosses the



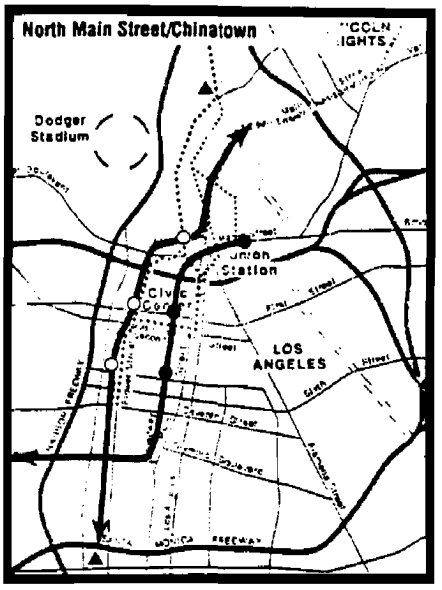
Regional Location

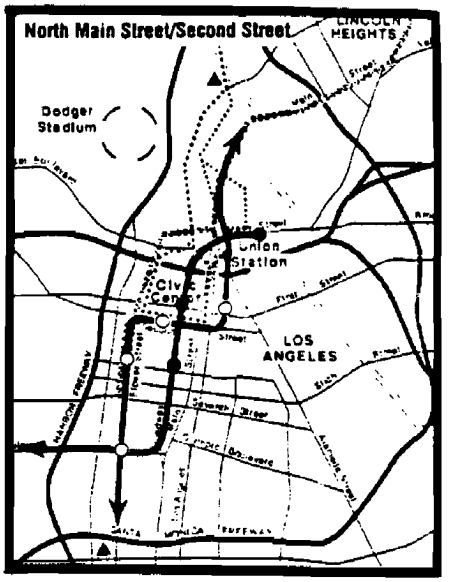
Pasadena-Los Angles Light Rail Transit Project

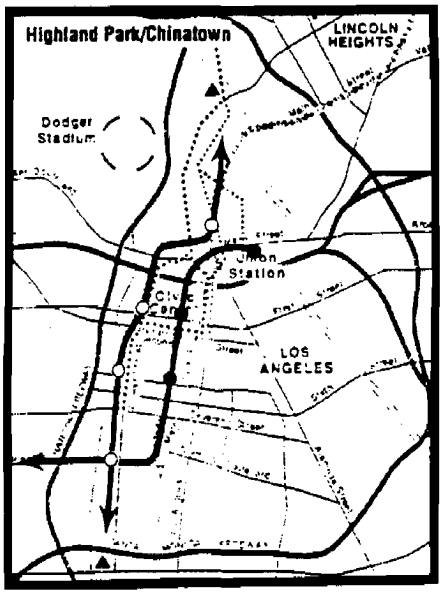
North

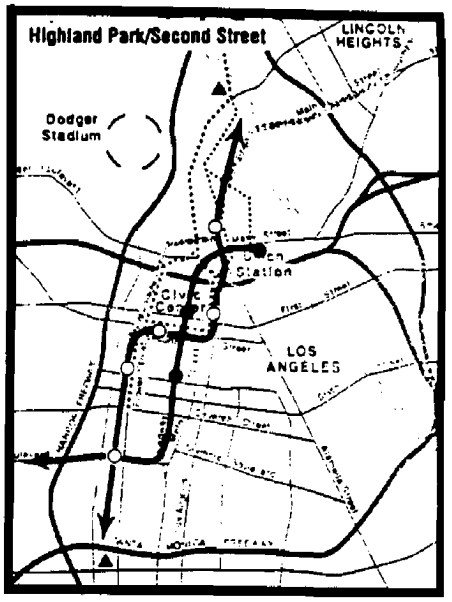
Michael Brandman Associates

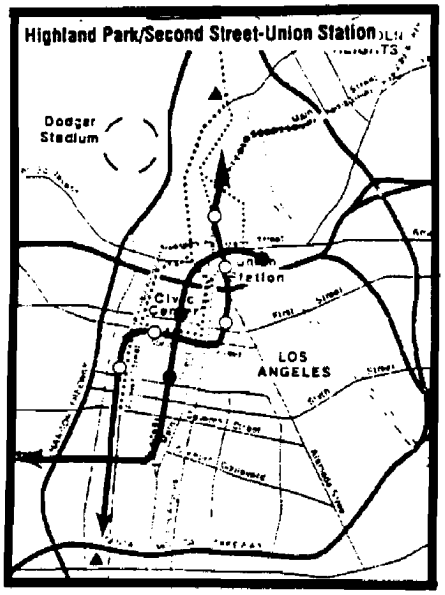
Exhibit 2-1

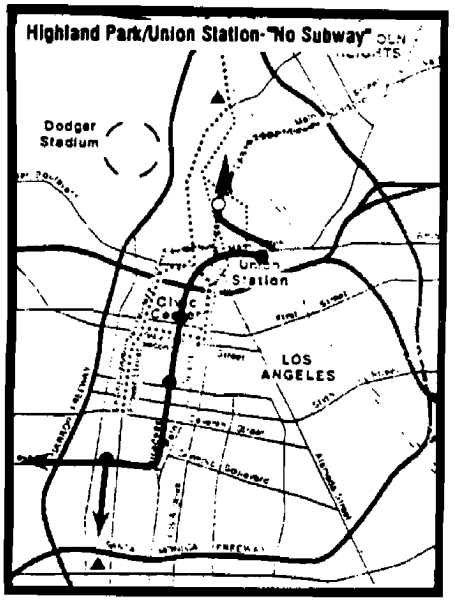






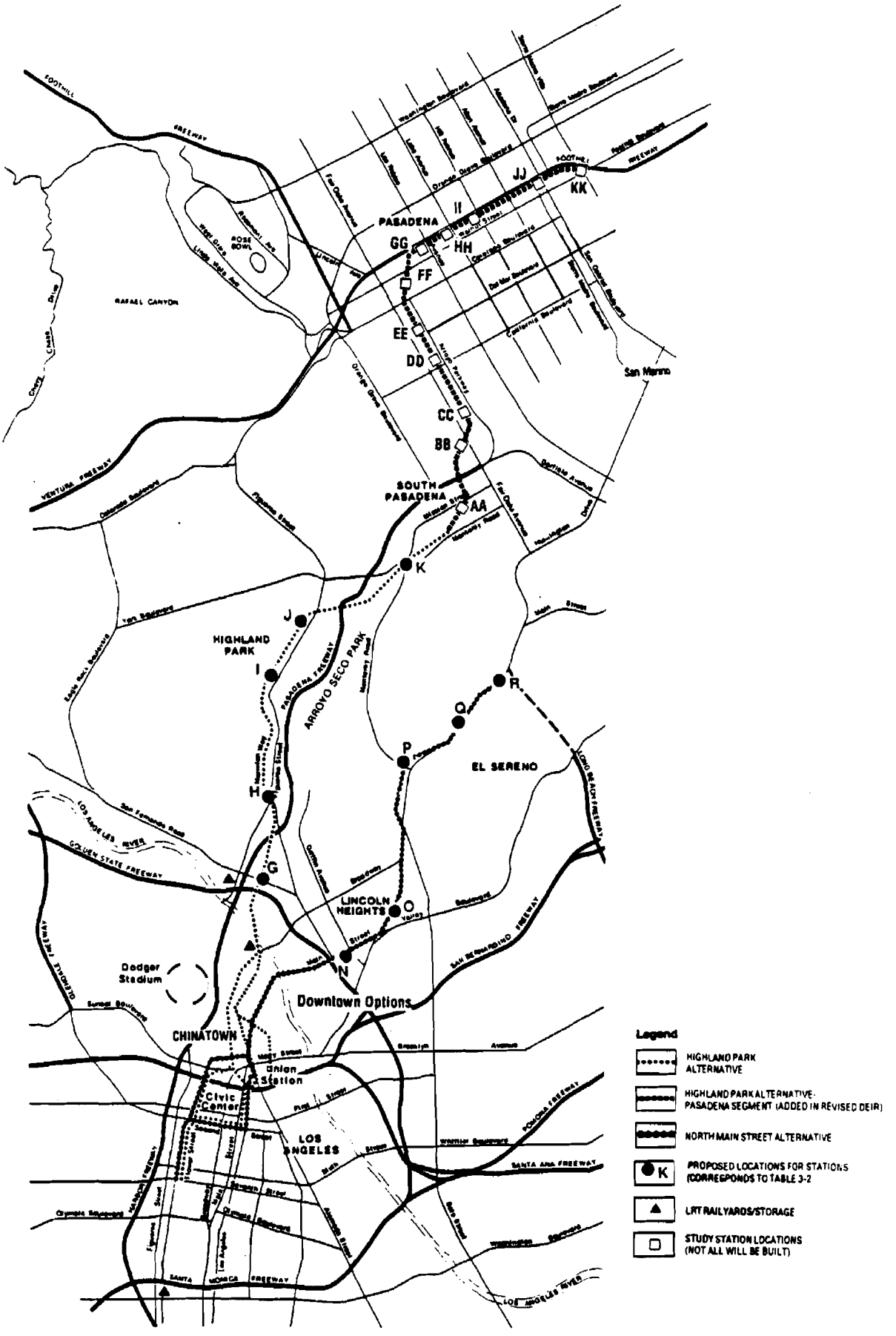






Summmary of Downtown Options
Pasadena-Los Angeles Light Rail Transit Project

Exhibit 2-2



Highland Park and North Main Street Alternatives
Pasadena-Los Angeles Light Rail Transit Project

NO SCALE

Exhibit 2-3

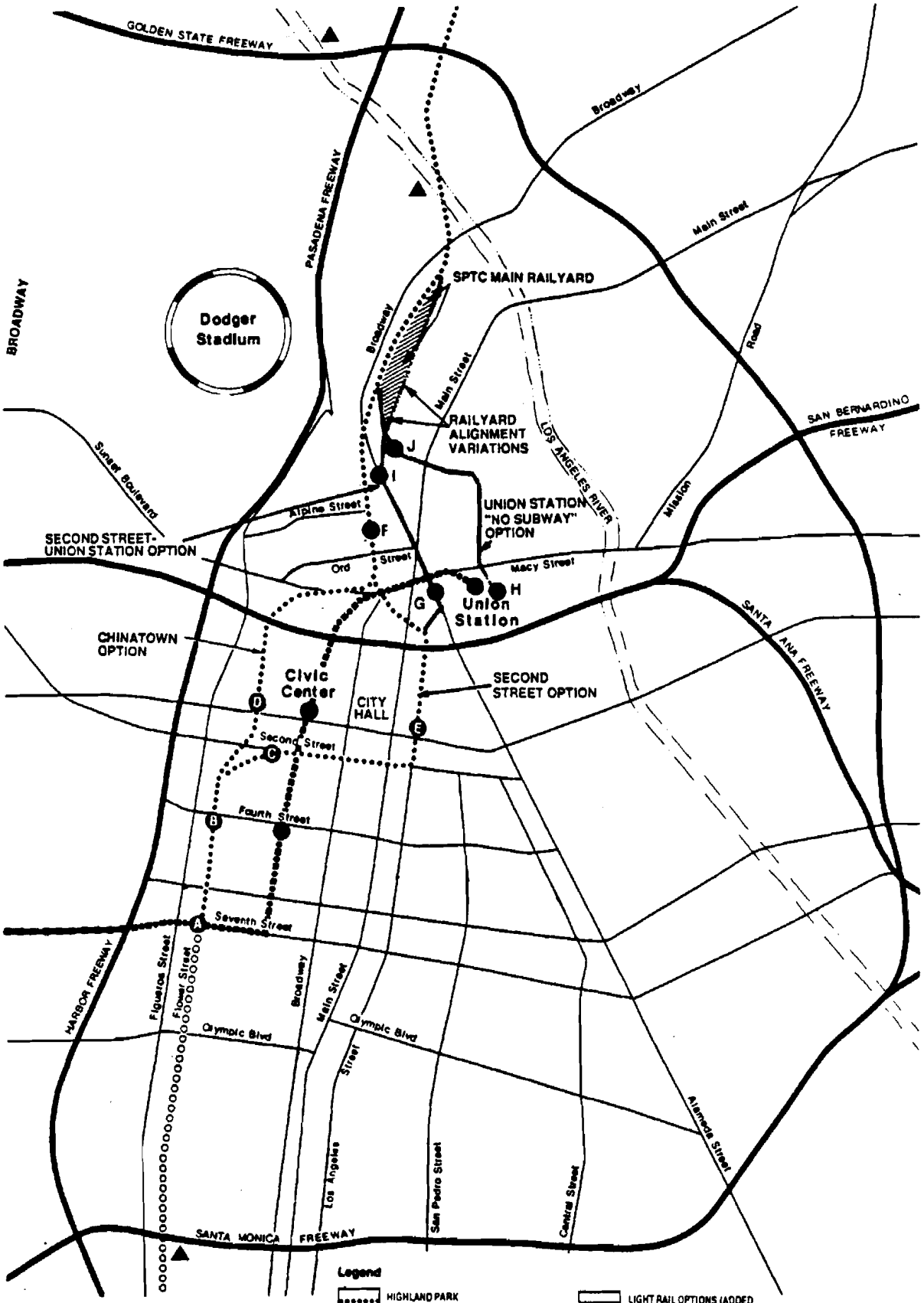
North Broadway/Mission intersection then descends to street level as it approaches Huntington Drive. The route aligns with Huntington Drive where it continues at-grade, terminating just before Poplar Boulevard in El Sereno. The North Main Street alternative is illustrated in Exhibit 2-2.

2.1.2 DOWNTOWN OPTIONS

Chinatown Option: The Chinatown option connects with the Long Beach line at the 7th/Flower Station and links with either the Highland Park or North Main Street alignments. The route runs in subway under Flower Street and Hope Street toward I-5 where it passes under the freeway and shifts eastward. For the Highland Park alignment, the route crosses under Sunset Boulevard and heads north to align with North Broadway, surfacing along the edge of the Southern Pacific (SPTC) rail yard north of Chinatown. The Chinatown option for the Highland Park alignment is shown in Exhibit 2-4. For the North Main Street alignment, the route crosses under Sunset Boulevard, aligning with Ord Street, crossing under North Broadway, and then surfacing to connect into the North Main Street elevated guideway structure. The Chinatown downtown option for the North Main Street alternative is indicated in Exhibit 2-5.

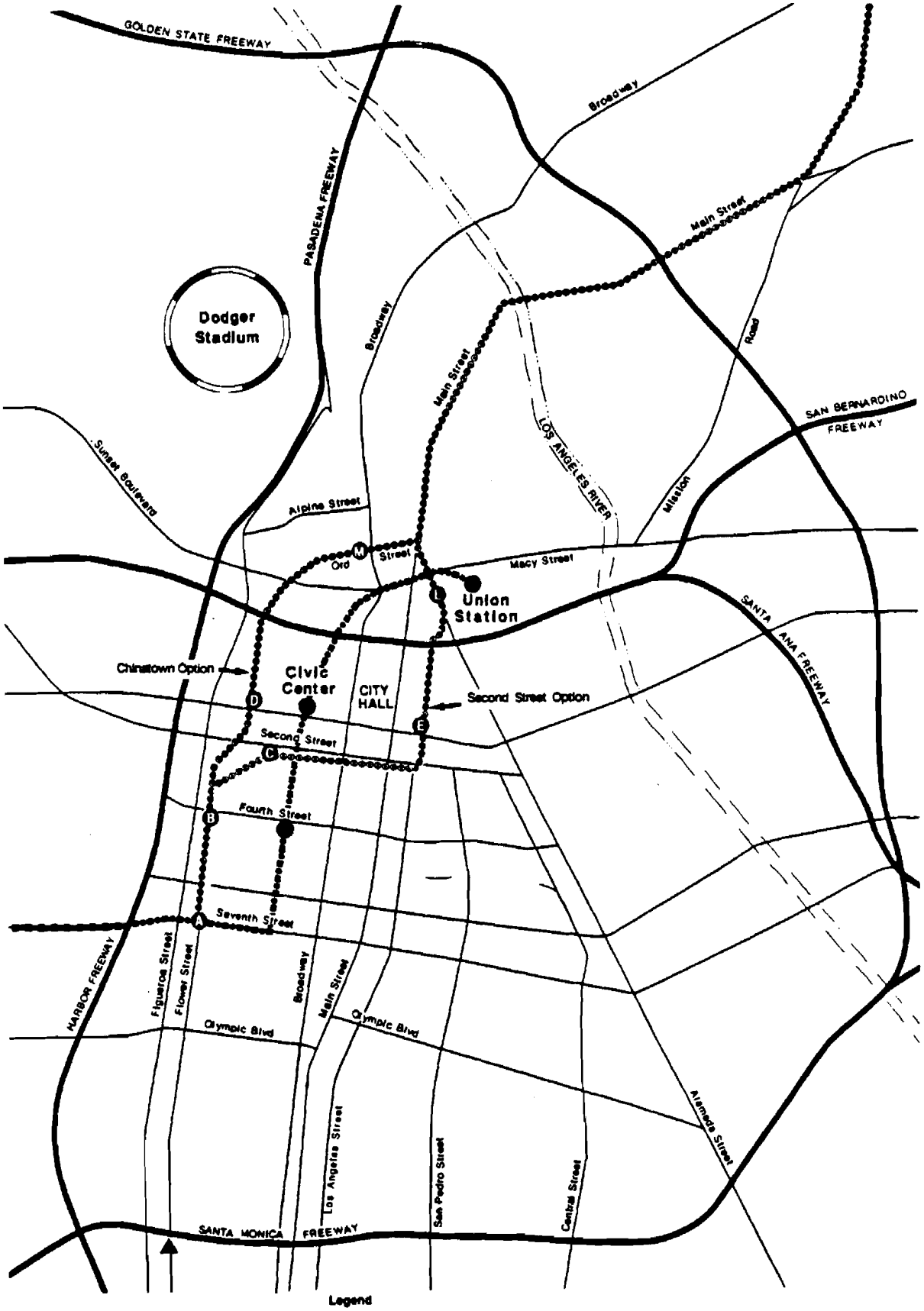
Second Street Option: This alignment option within downtown Los Angeles may connect with either the Highland Park or North Main Street alternative to the Long Beach line at 7th and Flower Streets. The alignment begins at the northern terminus of the Long Beach-Los Angeles LRT at the 7th/Flower Station and follows Flower north, turns east underneath Second Street, then turns again in a northerly direction beneath Los Angeles Street. The alignment continues northward beneath I-5 and then links to either North Broadway (for the Highland Park alignment) or North Main Street (for the North Main Street alignment). The Second Street option for the Highland Park and North Main Street alternatives are shown in Exhibits 2-3 and 2-4, respectively.

Originally, the Second Street option for the Highland Park alternative did not provide a direct connection with Union Station. As a result of the circulation of the original DEIR, an additional option was identified connecting the Second Street route to the Highland Park alternative via Union Station. To distinguish between the Second Street options linking with the Highland Park alignment, they have been identified separately as the Second Street option (original DEIR) and the Second Street-Union Station option as described below.



Downtown Options
Highland Park Alternative
Pasadena-Los Angeles Light Rail Transit Project

Exhibit 2-4



Downtown Options/
North Main Street Alternative
Pasadena-Los Angeles Light Rail Transit Project

Exhibit 2-5

Second Street-Union Station Option: This downtown option would serve the Highland Park alignment only. It is similar to the Second Street option described above except that the alignment allows for a connection with Union Station. Under this scenario, the Second Street-Union Station subway follows the same general subway alignment proposed for the Second Street option (refer to Exhibit 2-4). However, instead of turning west under El Pueblo Park, the alignment meets Alameda Street and provides a stop at Union Station near Macy Street. After leaving Union Station, the subway continues northward under Alameda Street where the line surfaces near the SPTC main freight yard. Two variations of this option are being considered in the vicinity of the SPTC main freight yard, where the alignment can proceed on either the north side or the south side of the yard (refer to Exhibit 2-4). Unlike the two previously described options, this option can be phased to begin construction at Union Station, extending toward Pasadena.

Union Station "No Subway" Option. This additional downtown option also applies only to the Highland Park alignment. The alignment begins at Union Station and connects with the Highland Park alternative, primarily using existing rail rights-of-way. In the vicinity of the SPTC main freight yard, two variations using either boundary of this yard are also being considered. The route of the proposed alignment is also shown in Exhibit 2-4. The selection of this option would mean that there would not be a direct connection between the proposed Pasadena-Los Angeles LRT line and the Long Beach-Los Angeles line which will terminate at the 7th Street and Flower Station in downtown Los Angeles. However, design of such a connection would not be precluded.

2.1.3 RAIL STORAGE YARDS

Two new alternative sites for rail storage yards are proposed for the Highland Park alignment depending on the downtown route option selected and are referred to as the Midway Yard and the Taylor Yard. The Midway Yard will involve placing the railyard north of the existing SPTC railyard along the west bank of the Los Angeles River north of Broadway. The Taylor yard proposal places the railyard north of the Pasadena Freeway along the east bank of the Los Angeles River. Finally, storage tracks are proposed for a location under the Santa Monica Freeway (I-10) which is unchanged from the previously issued DEIR.

The previous DEIR identified a rail storage yard adjacent to Chinatown for the North Main Street Alternative. Due to numerous concerns regarding the proposed yard site, it has been eliminated from consideration.

2.2 ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

Table 2-1, located at the end of Section 2, summarizes environmental impacts and mitigation measures for the alternative rail alignments. Impacts that remain after mitigation are noted in the summary as "unavoidable adverse impacts" if the project is approved as proposed (CEQA Section 21081).

Impacts of the project are rated in the table according to the following:

- Not significant. Adverse effects are not substantial according to CEQA, but should be mitigated to the extent feasible.
- Significant. Substantial adverse impacts or changes to the environment as defined by CEQA.
- Beneficial Impact. Beneficial impacts resulting from the implementation of the proposed project.

Mitigation measures are listed for each impact in Table 2-1; those that have been incorporated into the project design by the LACTC are noted with an asterisk (*). Others are recommended for incorporation into the project by the EIR prior to project approval. Finally, a number of additional mitigation measures were recommended by agencies reviewing and commenting on the revised DEIR and these are noted with a double asterisk (**).

The environmental analysis identified the three significant adverse environmental effects summarized below.

Parking Displacement: The loss of on-street parking is a significant effect which is unavoidable and cannot be mitigated. In this respect, the North Main Street alternative has a higher impact as all of the existing parking spaces along North Main Street, most of the parking spaces along Mission Road, and a large number along Huntington Drive South will have to be removed. In

comparison, the Highland Park route results in less of a parking loss (approximately six blocks of on-street parking) since it is primarily located in the existing AT&SF railroad right-of-way.

Aesthetics: The implementation of the proposed North Main Street alignment would result in significant aesthetic impacts along certain segments of the alignment since a portion of this route is on aerial structures. The major aesthetic impacts will occur in the vicinity of Parque de Mexico and Lincoln Park. Both of these sites are very important to the surrounding communities. While mitigation measures are identified in Section 4.12 of the EIR, they will not be totally effective in reducing these visual impacts.

Cultural Resources: The AT&SF railroad bridge over the Arroyo Seco has been designated as a cultural monument by the City of Los Angeles. The surface decking of the bridge will need to be widened to accommodate the LRT's double tracks. While the Santa Fe Station located within an area proposed for the Del Mar LRT station is a city-designated historic structure, no modifications to the structure are proposed as part of this project.

2.3 CUMULATIVE IMPACTS

This EIR analyzes the cumulative impacts from three types of related projects: (1) other mass transit projects in the Los Angeles area; (2) development planned, approved, or under construction immediately adjacent to the alignments under consideration; and (3) other development planned, approved, or under construction within one-half mile of the alignments. Cumulative impacts are discussed in Section 5 of the EIR. Included in this section is a discussion of a future extension of this project.

The rail line would not incrementally increase the level of impact anticipated to result from the related development projects. The rail transit line may present a number of possible growth-inducing impacts by which other jurisdictions could permit additional development beyond that which might be possible if no public rail mass transit project were provided.

2.4 ALTERNATIVES TO THE PROPOSED PROJECT

Previous route refinement studies considered five main alignment alternatives plus downtown route variations (LACTC 1987, 1988). The alternatives analysis in this EIR summarizes the evaluation of those alignment alternatives which were not selected for future study.

- Downtown Alignment Options: Three downtown route options were developed: the 1st Street, I-5, and Stadium options.
- Mission Road Rail Transit Alignment Alternative: This alternative considered locating the LRT alignment above the El Monte busway beside the San Bernardino Freeway (I-10) and then turning north onto Mission Road and Huntington Drive.
- Soto Street Rail Transit Alignment Alternative: This alternative involved locating the LRT alignment in the El Monte busway to Soto Street where it turned north and followed Soto Street to Huntington Drive.
- North Broadway Alternative: Once north of Chinatown, the alignment followed North Broadway through Lincoln Heights and then turned north onto Mission Road continuing to Huntington Drive.

In addition, a route refinement study was undertaken in 1988 in cooperation with the City of Pasadena to examine alignments within Pasadena's city limits. The first study identified several conceptual alignments with each one consisting of a north/south option which then connects with one of a number of east/west options. The conceptual alignment options included the following:

- Proposed I-710 extension (north south option)
- Santa Fe right-of-way (north/south option)
- I-210 (east/west option)
- Walnut Street (east/west option)
- Union Street (east/west option)
- Colorado Boulevard (east/west option)
- Green Street (east/west option)

The second stage of the study reduced the number of potential alternatives to three alternatives from which the preferred combination of the north/south Santa Fe right-of-way connecting with the east/west I-210 alignment reflected in this document was selected.

The environmental effects related to these alternatives are discussed in Section 6 of the EIR. The alignment alternatives considered in the earlier route refinement phases were removed from further consideration due to significant adverse impacts that are not acceptable. For example, some alignments were identified as impractical due to difficulties in linking to downtown Los Angeles. In other cases, engineering and design constraints were the primary reasons for removing an alignment from further consideration. Finally, many alternatives were dropped because of expected adverse environmental impacts.

Two other scenarios are discussed as alternatives to the proposed project:

- Bus Alternative: Under this project scenario, existing bus service would be expanded along the Pasadena-Los Angeles Corridor. No LRT facilities would be constructed for this project alternative.

- No Project Alternative: The No Project Alternative would assume that no new transit facilities or improvements would be constructed in the Pasadena-Los Angeles Corridor.

Neither of the above two alternatives serve the Commission's voter mandate to provide rail transit service between Pasadena and downtown Los Angeles.

2.5 IDENTIFIED AREAS OF CONTROVERSY AND ISSUES TO BE RESOLVED

The primary issue to be resolved is the selection of the project alignment and downtown option. Identification of the stations to be constructed in South Pasadena and Pasadena from the list of study stations is required. Also mitigation measures and a monitoring plan need to be identified.

A number of important issues were raised in community workshops held prior to the preparation of the DEIR. These issues included potential noise, traffic, safety, and visual impacts of the project on residences and businesses located in the vicinity of the proposed rail line. These appear to be the main areas of public concern.

Table 2-1 summarizes environmental impacts and mitigation measures identified for the alternative rail alignments. Impacts that remain after mitigation are noted as "unavoidable adverse impacts."

Mitigation measures that have been incorporated into the project design by LACTC are noted with an asterisk (*).

TABLE 2-1

SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Issue	Highland Park Alignment	North Main Street Alignment
LAND USE (SECTION 4.1)		
Environmental Impacts	The implementation of this proposed project would result in short-term parking and access impacts in the downtown in Los Angeles area.	The implementation of this proposed project would result in short-term parking and access impacts in the downtown Los Angeles area.
	Displacement of railroad right-of-way, several structures, and the removal of about six blocks of parking in Highland Park.	Displacement of several small residential and commercial structures at station locations for parking and minor dislocation in vicinity of traction powered substations.
	Other impacts detailed in Table 4-1 in Section 4.1 of the EIR include:	Removal of approximately 640 parking spaces.
	• Right-of-way and land acquisition at SPTC railyard.	• Acquisition of Southern Pacific tracks near Alameda and Main.
	• Acquisition of AT&SF Railroad right-of-way from Los Angeles River bridge through Pasadena.	• Land acquisition for traction power substation (TPS) west of Los Angeles River.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
LAND USE (continued)		
Environmental Impacts (continued)	• Land acquisition of mostly vacant property at Avenue 26 and on both sides of Avenue 50.	• Acquisition of additional right-of-way for bridge supports over the I-5.
	• Displacement of six residences next to AT&SF right-of-way near Avenue 61.	• Land acquisition for guideway supports at Gates Street.
	• Acquisition of land for traction power substations at Fair Oaks, Hill Avenue and Altadena.	• Displacement of vacant structure east of Lincoln Park Avenue for parking and station entrance.
	• Potential acquisition of non-residential land for parking at Glenarm, Del Mar, and Sierra Madre Villa stations; minor acquisition for potential stations at Mission, California, and Holly.	• Land acquisition for aerial guideway supports at Broadway.
		• Land acquisition north of Broadway.
	• Easement conflict with Stancliff School.	• Land acquisition for station and parking at Huntington and Monterey. Displacement of up to 25 residences and businesses.
	• Displacement of one house and one garage near Pasadena Avenue and Monterey.	• Parking removal on both sides of North Main Street and Mission Road, and one side of Huntington Drive South.
	• Parking displacement on Marmion Way between Avenues 51 and 59.	
	• Displacement of AT&SF freight service between Los Angeles and San Bernardino.	

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
LAND USE (continued)		
Environmental Impacts (continued)	• Displacement of Amtrak service between Los Angeles and San Bernardino (Pasadena Station).	
	Chinatown Downtown Option	Chinatown Downtown Option
	• Land acquisition required near 5th Street for station entrance.	• Land acquisition required near 5th Street for station entrance.
	• Land acquisition for proposed entrance at Music Center and for entrance at DWP.	• Land acquisition for proposed entrance at Music Center and for entrance at DWP.
	• Underground easements under Evans Community Adult School and other properties in Chinatown.	• Underground easements under Evans Community Adult School and other properties in Chinatown.
	• Land acquisition for station entrance on Broadway near Alpine.	• Land acquisition for station entrance at Ord and Hill and for underground construction at Ord and Alameda.
	Second Street-Downtown Option	Second Street-Downtown Option
	• Land acquisition required near 5th Street for station entrance.	• Land acquisition required near 5th Street for station entrance.
	• Subsurface easements between Hope and Olive and land acquisition for station entrance at Grand.	• Subsurface easements between Hope and Olive and land acquisition for station entrance at Grand.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
LAND USE (continued)		
Environmental Impacts (continued)	• Land acquisition for station entrances at southeast corner of 1st and Los Angeles Streets. • Subsurface easement under El Pueblo de Los Angeles Historic State Park and near Sunset and Broadway. • Land acquisition for station entrance at Alpine and Broadway. Second Street-Union Station • Land acquisition required near 5th Street for station entrance. • Subsurface easements between Hope and Olive and land acquisition for station entrance at Grand. • Land acquisition for station entrances at 1st and Los Angeles Streets. • Acquisition of land at Union Station for station site and portions of SPTC railyard for LRT right-of-way, and traction powered substation. • Acquisition of parcels bounded by Alameda, Alpine and North Main.	• Land acquisition for station entrances at southeast corner of 1st and Los Angeles Streets. • Subsurface easement under El Pueblo de Los Angeles Historic State Park. • Land acquisition for station entrance at Union Station.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
LAND USE (continued)		
Environmental Impacts (continued)	Union Station- "No Subway" Acquisiton of portion of Union Station, SPTC track and railyard sites for LRT storage and maintenance yard.	
Mitigation Measures	Property owners and tenants will be compensated for property acquired and to cover relocation costs as required by state law. *	Property owners and tenants will be compensated for property acquired and to cover relocation costs as required by state law. *
Significance After Mitigation	The implementation of the project will not result in any significant adverse impact after mitigation.	The implementation of the project will not result in any significant adverse impact after mitigation.
CIRCULATION (SECTION 4.2)		
Environmental Impacts	The proposed project will have a beneficial impact on a regional scale through an overall reduction in vehicle miles traveled. Adverse traffic impacts may occur in the vicinity of rail stations. Traffic impacts include loss of on-street parking on Marmion Way between Avenues 51 and 57, traffic delays at crossings, and a reduction in level of service (LOS) at the intersection of Avenue 57 and Figueroa. Along the Pasadena route segment with at-grade crossings, the LRT would	The proposed project will have a beneficial impact on a regional scale through an overall reduction in vehicle miles traveled. Adverse traffic impacts may occur in the vicinity of rail stations.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
CIRCULATION (continued)		
Environmental Impacts (continued)	impact five study intersections; and that portion of the Pasadena route within I-210 would impact two intersections at Hill and Sierra Madre Villa.	
Mitigation Measures	Roadway improvements, such as widening, restriping, and reconfiguration of turn lanes will lessen impacts on circulation in the vicinity of rail stations. Marmion Way would be converted to a one-way couplet between Avenues 51 and 57. Cross streets would be signalized. Peak hour parking would be prohibited at the intersection of Avenue 57 and Figueroa. * Mitigation measures that will be effective in reducing impacts along the Pasadena segment within I-210 during construction include limiting center lane closure to off-peak or late evening hours, closing one lane at a time, implementing a ramp metering program, and establishing a high-occupancy vehicle lane.	Use of straddle-bent columns instead of median columns, roadway widening, restriping, and reconfiguration of lanes and signalization. Potential redesign of Huntington Drive/Soto Street intersection to remove Soto Street bridge. Huntington Drive to Huntington Drive south would be converted to a one-way couplet between Soto and Eastern.
Significance After Mitigation	Some on-street parking loss remains. LOS impacts will be mitigated to not significant.	Parking spaces on North Main Street, Mission Road, and Huntington Drive South are a significant loss. LOS impacts mitigated.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
GEOLOGIC RESOURCES (SECTION 4.3		
Environmental Impacts	Potential seismic effects of earth shaking may impact construction or operations of LRT. The alignment will cross the fault trace of the Raymond Hill fault. Construction will involve tunneling, cut and cover tunneling, and grading.	Potential seismic effects of earth shaking may impact construction or operations of LRT. Construction will involve tunneling, cut and cover tunneling, and grading.
Mitigation Measures	Mitigation will be designed to support tunnel during construction. Construction methods and design will anticipate withstanding a major earthquake and conform to City of Los Angeles Seismic Safety Plan and Los Angeles Municipal Building and Safety Code. A transit evacuation plan will be prepared. The LACTC will follow appropriate emergency porcedures in the event of an earthquake and develop an emergency preparedness plan prior to the commencement of operations.**	Mitigation will be designed to support tunnel during construction. Construction methods and design will anticipate withstanding a major earthquake and conform to City of Los Angeles Seismic Safety Plan and Los Angeles Municipal Building and Safety Code. A transit evacuation plan will be prepared. The LACTC will follow appropriate emergency procedures in the event of an earthquake and develop an emergency preparedness plan prior to the commencement of operations.**
Significance After Mitigation	Potential for major earthquake remains significant though risk is no greater or no less than that for other areas considered as candidate alignments. Some earthen fill materials may require disposal at Class I or III landfills in the county.	Potential for major earthquake remains significant though risk is no greater or no less than that for other areas considered as candidate alignments. Some earthen fill materials may require disposal at Class I or III landfills in the county.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
AIR QUALITY (SECTION 4.4)		
Environmental Impacts	Short-term construction emissions of fugitive dust and equipment emissions; long-term mobile emissions from traffic traveling to and from the project, and long-term stationary emissions from off-site electrical power generation. The project will contribute to a reduction in vehicle emissions following implementation.	Short-term construction emissions of fugitive dust and equipment emissions; long-term mobile emissions from traffic traveling to and from the project, and long-term stationary emissions from off-site electrical power generation. The project will contribute to a reduction in vehicle emissions following implementation.
Mitigation Measures	Short-term dust emissions will be controlled in compliance with SCAQMD Rule 403; construction equipment will be maintained to reduce emissions; grading operations will be halted during first and second stage smog alerts. Long-term mobile emissions will be reduced by maintaining convenient access to transit stops and including transit improvements, such as bus shelters and pockets into the design of the project.	Short-term dust emissions will be controlled in compliance with SCAQMD Rule 403; construction equipment will be maintained to reduce emissions; grading operations will be halted during first and second stage smog alerts. Long-term mobile emissions will be reduced by maintaining convenient access to transit stops and including transit improvements, such as bus shelters and pockets into the design of the project.
Significance After Mitigation	Mobile and stationary emissions impacts will be offset by the overall reduction in vehicle miles travelled. There will be no significant adverse impacts on air quality.	Mobile and stationary emissions impacts will be offset by the overall reduction in vehicle miles travelled. There will be no significant adverse impacts on air quality.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
BIOLOGICAL RESOURCES (SECTION 4.5)		
Environmental Impacts	Elimination of three coast live oaks. Removal of trees in planters along Second Street.	Removal of mature palm trees in medians on Huntington Drive. Removal of trees in planters along Second Street.
Mitigation Measures	A permit for removal of oak trees must be requested from the City of Los Angeles Board of Public Works. Trees will be replaced. *	Palm trees will be transplanted or replaced along sides of Huntington Drive. *
	Landscaping shall be replaced in conformance with surrounding environment.*	Landscaping shall be replaced in conformance with surrounding environment.*
Significance After Mitigation	Removal of three coast live oaks will be mitigated by their replacement. No significant adverse impacts will result after mitigation.	Removal of palm trees will be mitigated by their replacement or transplanting. No significant adverse impacts will result after mitigation.
NOISE AND VIBRATION (SECTION 4.6)		
Environmental Impacts	Noise impacts to 121 residences along alignments and peak hour noise impacts at stations at Avenues 51 and 57. Noise impacts will occur to 27 additional residences along that portion of the route alignment which extends through Pasadena and South Pasadena. Mitigation measures will be effective in reducing level of impact.	No significant impact on noise-sensitive structures.
	No vibration impacts expected.	No vibration impact expected.
		Short-term construction noise impacts.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
NOISE AND VIBRATION (continued)		
Environmental Impacts (continued)	Short-term construction noise impacts.	
Mitigation Measures	Sound walls ranging from 4 to 8 feet high will be constructed at noise sensitive areas. * Mitigation of construction noise will be required of contractors to comply with local noise ordinances. A set of guidelines for the planning and operation of construction machinery will be provided. *	Mitigation of construction noise will be required of contractors to comply with local noise ordinances. A set of guidelines for the planning and operation of construction operations will be provided. *
Significance After Mitigation	Some noise impacts along this alignment will remain after mitigation, though these impacts will not be significant.	Some noise impacts along this alignment will remain after mitigation, though these impacts will not be significant.
LIGHT AND GLARE (SECTION 4.7)		
Environmental Impacts	Lighting at stations and station areas will introduce new sources of light and glare. Shadow impacts from temporary cut and cover construction.	Lighting at stations and station areas will introduce new sources of light and glare. Shadow impacts from temporary cut and cover construction Shadow impacts from aerial guideway structures.
Mitigation Measures	Lighting fixtures shall incorporate directional shielding where needed.* Traction power substations shall be shielded from adjacent sensitive land uses.*	Lighting fixtures shall incorporate directional shielding where needed.* Traction power substations shall be shielded from adjacent sensitive land uses.*

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
LIGHT AND GLARE (continued)		
Mitigation Measures (continued)	Noise walls and landscaping will also screen lighting from adjacent land uses.*	Noise walls and landscaping will also screen lighting from adjacent land uses.*
Significance after Mitigation	Localized impacts from lighting may remain after mitigation. No significant adverse impacts will remain.	Shadow impacts will remain on North Main Street and Mission Road due to aerial structures. These impacts are not considered to be significant.
RISK OF UPSET (SECTION 4.8)		
Environmental Impacts	Potential for encountering contaminated soils or hazardous waste during excavation or tunneling for downtown routes. Methane gas could be encountered or released in a number of areas through excavation.	Potential for encountering contaminated soils or hazardous waste during excavation or tunneling for downtown routes. Methane gas could be encountered or released in a number of areas through excavation.
Mitigation Measures	Detailed geotechnical and hazardous materials investigations will be conducted after the preferred alignment is selected during the final design stage. * All underground structures must be designed to include adequate ventilation to reduce the potential for methane gas accumulation. *	Detailed geotechnical and hazardous materials investigations will be conducted after the preferred alignment is selected during the final design stage. * All underground structures must be designed to include adequate ventilation to reduce the potential for methane gas accumulation. *

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
RISK OF UPSET (continued)		
Mitigation Measures (continued)	Where necessary, relief wells will be used to remove underground methane gas. *	Where necessary, relief wells will be used to remove underground methane gas. *
	High-density polyethylene (HDPE) gas barrier membranes shall be applied in underground construction. *	High-density polyethylene (HDPE) gas barrier membranes shall be applied in underground construction. *
	Ventilization features and systems will be incorporated into the operating system to prevent gas buildup. *	Ventilization features and systems will be incorporated into the operating system to prevent gas buildup. *
	A gas sensing system will be used to detect changes in level of gas and sources of gas infiltration. *	A gas sensing system will be used to detect changes in level of gas and sources of gas infiltration. *
Significance After Mitigation	Hazardous substances may be encountered during construction, but the level of risk is reduced to acceptable, less than significant levels through the proposed mitigation measures.	Hazardous substances may be encountered during construction, but the level of risk is reduced to acceptable, less than significant levels through the proposed mitigation measures.
POPULATION AND HOUSING (SECTION 4.9)		
Environmental Impacts	Seven housing units would be displaced and the residents would require relocation. Thirty-six housing units are located immediately adjacent to the Chinatown option and 760 are adjacent to this alignment in Highland Park, South Pasadena, and Pasadena.	Up to 28 housing units would be displaced and the residents would require relocation. Thirty-six housing units are located immediately adjacent to the Chinatown option and 408 are adjacent to this alignment.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
POPULATION AND HOUSING (SECTION 4.9)		
Mitigation Measures	Property owners and tenants will be compensated for property acquired and to cover relocation costs. *	Property owners and tenants will be compensated for property acquired and to cover relocation costs. *
Significance After Mitigation	The implementation of the project will not result in any significant adverse impact after mitigation.	The implementation of the project will not result in any significant adverse impact after mitigation.
PUBLIC SERVICES (SECTION 4.10)		
a. Police:		
Environmental Impacts	Increased commuter and pedestrian traffic may result in increased number of crimes or accidents and transit police may require back-up support from Los Angeles, South Pasadena, Pasadena Police Departments and the Los Angeles County Sheriff's Department.	Increased commuter and pedestrian traffic may result in increased number of crimes or accidents and transit police may require back-up support from Los Angeles Police Department and the Los Angeles County Sheriff's Department.
Mitigation Measures	Security of the LRT should be incorporated into the design features of the system. These design features should enhance the perceived, as well as the actual, security of the buildings, equipment, and patrons. In addition, the following mitigation measures should be implemented:	Security of the LRT should be incorporated into the design features of the system. These design features should enhance the perceived, as well as the actual, security of the buildings, equipment, and patrons. In addition, the following mitigation measures should be implemented:

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Mitigation Measures (continued)	• Two-way voice communication on-board the trains between the passengers and the train operator should be installed.*	• Two-way voice communication on-board the trains between the passengers and the train operator should be installed.*
	• Closed-circuit television should be provided at high-risk and security areas throughout the system.*	• Closed-circuit television should be provided at high-risk and security areas throughout the system.*
	• An alarm system shall be installed to prevent unauthorized entry and tampering with equipment, such as fare vending machines.*	• An alarm system shall be installed to prevent unauthorized entry and tampering with equipment, such as fare vending machines.*
	• In order to eliminate dark or obscured areas, the design of all passenger stations and shelter stops should be open with long, unbroken lines of sight.*	• In order to eliminate dark or obscured areas, the design of all passenger stations and shelter stops should be open with long, unbroken lines of sight.*
	• Where practical, rights-of-way shall be protected from encroachment of people, objects thrown, or unauthorized vehicles.*	• Where practical, rights-of-way shall be protected from encroachment of people, objects thrown, or unauthorized vehicles.*
	• At-grade street crossings provide access for emergency vehicles. *	• At-grade street crossings provide access for emergency vehicles. *
	• Power substation access shall be limited to authorized personnel only.*	• Power substation access shall be limited to authorized personnel only.*

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Mitigation Measures (continued)	• Parking lots associated with the LRT shall be designed to maximize visibility within the lots and from surrounding areas. *	• Parking lots associated with the LRT shall be designed to maximize visibility within the lots and from surrounding areas. *
	• Interior finish of the vehicle shall be of vandal-resistant materials. *	• Interior finish of the vehicle shall be of vandal-resistant materials. *
	• A "silent alarm" device shall be installed so the car operator may summon police or alert the central control to a problem on the train.*	• A "silent alarm" device shall be installed so the car operator may summon police or alert the central control to a problem on the train.*
	• Two-way voice and digital communications capability for LAPD personnel within the underground portion of the system should be provided.**	• Two-way voice and digital communications capability for LAPD personnel within the underground portion of the system should be provided.**
Significance After Mitigation	No significant adverse impacts are anticipated after mitigation.	No significant adverse impacts are anticipated after mitigation.
b. Fire Protection		
Environmental Impacts	The project will impact the Los Angeles, South Pasadena, and Pasadena Fire Departments due to the increased demand for firefighting and paramedic units, increased inspection load, and increased incidence of false alarms. Concentrations of traffic in and around stations during peak hours may lengthen	The project will impact the Los Angeles Fire Department due to the increased demand for firefighting and paramedic units, increased inspection load, and increased incidence of false alarms. Concentrations of traffic in and around stations during peak hours may lengthen response times, increase potentially hazardous

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Environmental Impacts (continued)	response times, increase potentially hazardous situations, and trains may interfere with the movement of emergency vehicles.	situations, and trains may interfere with the movement of emergency vehicles.
Mitigation Measures	Tracks, substations, power stations, storage, and maintenance yards will be designed and constructed in accordance with all applicable fire codes. The following mitigation measures shall be implemented.	Tracks, substations, power stations, storage, and maintenance yards will be designed and constructed in accordance with all applicable fire codes. The following mitigation measures shall be implemented.
	• As required by the fire department(s), access for fire equipment must be maintained during construction and operation of the transit system.*	• As required by the fire department access for fire equipment must be maintained during construction and operation of the transit system.*
	• Other fire prevention measures will be observed, such as use of smoke detectors in stations and on trains.*	• Other fire prevention measures will be observed, such as use of smoke detectors in stations and on trains.*
	• Use of fire retardant materials on trains and in stations.*	• Use of fire retardant materials on trains and in stations.*
	• Access to telephones in stations and parking areas to report emergencies to the fire departments.*	• Access to telephones in stations and parking areas to report emergencies to the fire departments. *
	• Communication devices onboard the trains to alert operators about emergencies. *	Communication devices onboard the trains to alert operators about emergencies.*

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Mitigation Measures (continued)	• Fire alarm systems shall be installed on trains, power stations, and storage areas.*	Fire alarm systems shall be installed on trains, power stations, and storage areas.*
	• Installation of automatic sprinkler systems within substations. *	• Installation of automatic sprinkler systems within substations.*
	• Installation of automatic fire fighting systems in power stations and storage areas commensurate to their fire hazards. *	• Installation of automatic fire fighting systems in power stations and storage areas commensurate to their fire hazards. *
	• Availability of hand-held fire extinguishers on trains and in substations. *	• Availability of hand-held fire extinguishers on trains and in substations. *
Significance After Mitigation	The implementation of the proposed project will not result in any significant adverse impacts.	The implementation of the proposed project will not result in any significant adverse impacts.
c. Schools		
Environmental Impacts	Five schools are located immediately adjacent to the alignment. Two will have sound walls to mitigate noise impacts. Since none are adjacent to stations, no traffic-related impacts are anticipated.	Two schools are located adjacent to the alignment, but neither will be impacted by noise generated by passing LRT vehicles nor by station-area traffic.
	Short-term construction activities will also impact local schools. The greatest potential for disruption will come from construction noise.	Short-term construction activities will also impact local schools. The greatest potential for disruption will come from construction noise.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Environmental Impacts (continued)	The following list of safety features shall be observed where applicable during the construction and operation of the proposed project. • Separation of rail line and pedestrian right-of-ways, by using curbs, fences, walls, and landscaping. * • Trespass attractions of construction sites, stations, and parking lots shall be reduced by security measures and barriers. * • Rail lines must be isolated from pedestrian routes used by school children, to prevent off-street walking along railways. * • Overhead power sources and power stations must be secured to prevent unauthorized access.* • Rail tracks on overhead bridges and grade separations shall be inaccessible to pedestrian traffic. * • Construction sites shall be secured by barriers or guards to discourage trespassing and vandalism. *	The following list of safety features shall be observed where applicable during the construction and operation of the proposed project. • Separation of rail line and pedestrian right-of-ways, by using curbs, fences, walls, and landscaping. * • Trespass attractions of construction sites, stations, and parking lots shall be reduced by security measures and barriers. * • Rail lines must be isolated from pedestrian routes used by school children, to prevent off-street walking along railways. * • Overhead power sources and power stations must be secured to prevent unauthorized access.* • Rail tracks on overhead bridges and grade separations shall be inaccessible to pedestrian traffic. * • Construction sites shall be secured by barriers or guards to discourage trespassing and vandalism. *

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Mitigation Measures (continued)	• Warning signs shall be posted around all crossings, overhead power sources, power stations, and construction sites. *	• Warning signs shall be posted around all crossings, overhead power sources, power stations, and construction sites. *
	• Phasing of construction, route alignments, and scheduling of trains should be coordinated with local communities in order to minimize conflicts with school buses, pedestrians, and automobile school routes.*	• Phasing of construction, route alignments, and scheduling of trains should be coordinated with local communities in order to minimize conflicts with school buses, pedestrians, and automobile school routes.*
	• The LACTC will provide a public outreach program that will describe potential hazards of the proposed project if proper safety procedures are not followed and provide a corresponding education program.*	• The LACTC will provide a public outreach program that will describe potential hazards of the proposed project if proper safety procedures are not followed and provide a corresponding education program.*
	• A fence or barrier shall be constructed between the rail line and any school located immediately adjacent to the alignment. This barrier will also lessen other types of disruption which may arise from passing trains every several minutes.*	• A fence or barrier shall be constructed between the rail line and any school located immediately adjacent to the alignment. This barrier will also lessen other types of disruption which may arise from passing trains every several minutes.*

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Mitigation Measures (continued)	• Construction detour plans will be provided to the LAUSD prior to construction. **	• Construction detour plans will be provided to the LAUSD prior to construction. **
Significance After Mitigation	Impact will be reduced to a level that is not significant after mitigation.	Impact will be reduced to a level that is not significant after mitigation.
a. **Electrical Consumption**		
Environmental Impacts	Chinatown option will use 368,903 kWh per day. Second Street option will use 381,511 kWh per day of electricity. The Second Street-Union Station option will use 379,069 kWh of electricity per day. The Union Station "No Subway" alternative will use 336,569 kWh of electricity per day.	Chinatown option will use 165,647 kWh of electricity per day. Second Street option will use 178,363 kWh per day of electricity.
Mitigation Measures	In order to reduce energy consumption as part of final design activities, energy conservation features and operating procedures shall be developed for operating systems and subsystems. Such features shall be made part of the normal operations of the systems, if practical and cost-effective. Examples of energy conservation measures which have been incorporated into system design include:	In order to reduce energy consumption as part of final design activities, energy conservation features and operating procedures shall be developed for operating systems and subsystems. Such features shall be made part of the normal operations of the systems, if practical and cost-effective. Examples of energy conservation measures which have been incorporated into system design include:

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Mitigation Measures (continued)	• "Chopper" rail vehicle motor speed controls.	• "Chopper" rail vehicle motor speed controls.
	• Regenerative braking.	• Regenerative braking.
	• Coordination of traffic and rail signal systems.	• Coordination of traffic ad rail signal systems.
	Other energy conservation measures which are under consideration include:	Other energy conservation measures which are under consideration include:
	• Separate electrical meters at major facilities.	• Separate electrical meters at major facilities.
	• Integrating stations with adjacent uses.	• Integrating stations with adjacent uses.
	• The use of solar power where practical.	• The use of solar power where practical.
	• Consolidation of yard vehicle movements.	• Consolidation of yard vehicle movements.
Significance After Mitigation	No adverse impacts are anticipated from the additional use of electrical energy by the system.	No adverse impacts are anticipated from the additional use of electrical energy by the system.
b. Underground Facilities and Infrastructure		
Environmental Impacts	Relocation of all utilities which would conflict with at-grade and underground track, stations, or other LRT facilities will be necessary. Some utilities will need to be upgraded to provide service to LRT stations. The utilities affected include sewer lines,	Relocation of all utilities which would conflict with at-grade and underground track, stations, or other LRT facilities will be necessary. Some utilities will need to be upgraded to provide service to LRT stations. The utilities affected include sewer lines,

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
PUBLIC SERVICES (continued)		
Environmental Impacts (continued)	water mains, storm drains, and electrical power ducts.	water mains, storm drains, and electrical power ducts.
Mitigation Measures	The relocation and in-place support of utilities will require coordination and careful design for construction phasing of the LRT. Each utility along all segments of the LRT will be examined in detail to determine the necessary utility requirements.*	The relocation and in-place support of utilities will require coordination and careful design for construction phasing of the LRT. Each utility along all segments of the LRT will be examined in detail to determine the necessary utility requirements.*
Significance After Mitigation	No significant adverse impacts are anticipated after mitigation.	No significant adverse impacts are anticipated after mitigation.
AESTHETICS (SECTION 4.12)		
Environmental Impacts	For subway portions, impacts will result from construction and station entrances. The at-grade portion will impact the aesthetic setting by the addition of stations, overhead catenary power system, and traction power substations.	For subway portions, impacts will result from construction and station entrance. The aerial guideway and overhead catenary system will affect the aesthetic setting and views, especially at Parque de Mexico and Lincoln Park. The use of straddle bents to support the aerial structure further affects the setting. The palms in the landscaped median of Huntington Drive will need to be moved, changing the appearance of the street. The aesthetic impacts of the aerial structure in the vicinity of Parque de Mexico and Lincoln Park should be considered a significant unavoidable adverse impact.

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
AESTHETICS (continued)		
Mitigation Measures	The following mitigation measures will help reduce the visual impacts of the proposed project: • Stations will be designed to be attractive and nonintrusive on surrounding areas. Station design and building materials used in their construction will emphasize low maintenance.* • Landscaping will be used to shield or enhance stations, traction power substation sites, the yards, and the right-of-way. Plants and ground cover that are compatible with the Southern California climate and the architecture of the surrounding area will be selected.* • Additional shielding of track and station structures will be accomplished by the construction of sound walls and fencing at points along the rail way.* • Art in Rail Transit Program will provide aesthetic design elements in station areas.*	The following mitigation measures will help reduce the visual impacts of the proposed project: • Stations will be designed to be attractive and nonintrusive on surrounding areas. Station design and building materials used in their construction will emphasize low maintenance.* • Landscaping will be used to shield or enhance stations, traction power substation sites, the yards, and the right-of-way. Plants and ground cover that are compatible with the Southern California climate and the architecture of the surrounding area will be selected.* • Additional shielding of track and station structures will be accomplished by the construction of sound walls and fencing at points along the rail way.* • Removed palms along medians on Huntington Drive will be replaced along sidewalks.* • Art in Rail Transit Program will provide aesthetic design elements in station areas.*

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
AESTHETICS (continued)		
Significance After Mitigation	Any adverse impacts will be mitigated to a level below significance.	Visual impacts on North Main Street, Mission Road, and the parks will remain. The impacts on views and aesthetics are judged to be a significant adverse impact.
RECREATION (SECTION 4.13)		
Environmental Impacts	The alignment will cross the Arroyo Seco on the existing AT&SF right-of-way. In addition, that portion of the alignment passing through Pasadena is located adjacent to Memorial Park.	Lincoln Park will be impacted by right-of-way requirements for a station planned adjacent to this park. The elevated LRT structure will reduce views of the park at street level, but will provide a scenic vista from the aerial structure.
Mitigation Measures	No mitigation required.	Station design measures described in Section 4.12 of the EIR will reduce aesthetic impacts on Lincoln Park.
Significance After Mitigation	None.	Acquisition of right-of-way and visual impact on Lincoln Park are unmitigable though judged not to be significant. Enhanced access to the park provides a beneficial impact.
CULTURAL RESOURCES (SECTION 4.14)		
a. Historical Resources		
Environmental Impacts	The Arroyo Seco Bridge will be impacted by physical alterations. The route passes within the South Pasadena	

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
	Historic Business District and	
CULTURAL RESOURCES (SECTION 4.14)		
	is located adjacent to the Santa Fe Station in Pasadena.	None.
Mitigation Measures	The degree of modification required for the Arroyo Seco Bridge will not be known until additional engineering studies are completed.	None required at this time.
Significance After Mitigation	The modification of the bridge will remain a significant adverse impact. However this impact is unavoidable to ensure public safety.	None.
b. Archaeological Resources		
Environmental Impacts	There is a potential for destruction of archaeological sites and/or artifacts in the downtown area where excavation for the LRT takes place.	Minor potential for destruction of archaeological sites and/or artifacts in the downtown area where excavation for the LRT takes place.
	Excavation in the vicinity of Union Station could result in the discovery of historic artifacts from "Old Chinatown" or prehistoric artifacts from "Yangna," a Gabrielino indian village.	Excavation in the vicinity of Union Station could result in the discovery of historic artifacts from "Old Chinatown" or prehistoric artifacts from "Yangna," a Gabrielino indian village.
CULTURAL RESOURCES (SECTION 4.14)		
Mitigation Measures	If archaeological sites and/or artifacts are discovered during excavation, CEQA law and guidelines will be followed to	If archaeological sites and/or artifacts are discovered during excavation, CEQA law and guidelines will be followed to

TABLE 2-1 (continued)

Issue	Highland Park Alignment	North Main Street Alignment
CULTURAL RESOURCES (continued)		
	insure proper protection of these resources.	insure proper protection of these resources.
Significance After Mitigation	No significant adverse impacts are anticipated following mitigation.	No significant adverse impacts area anticipated following mitigation.

SECTION 3

COMMENTS AND PREPARERS' RESPONSES TO COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT REPORT

This section contains a summation of comments received on the original DEIR circulated during January and February 1989. The lead agency and the preparers of the DEIR have responded to each individual comment.

A Comments and Responses on Project Design and Configuration
B Comments and Responses Related to Rail Storage Yards
C Comments and Responses Related to Land Use Impacts
D Comments and Responses Related to Traffic and Circulation Impacts
E Comments and Responses Related to Parking Impacts
F Comments and Responses on Construction Impacts
G Comments and Responses Related to Noise Impacts
H Comments and Responses Related to Air Quality Impacts
I Comments and Responses Related to Cultural Resource Impacts
J Comments and Responses Related to Utilities Impacts
K Comments and Responses Related to Safety Impacts
L Comments and Responses Related to Aesthetic Impacts
M Comments and Responses Related to Economic/Socioeconomic Impacts
N Comments and Responses Concerning Cumulative Impacts
O Comments and Responses Concerning Cost and Patronage

A. COMMENTS AND RESPONSES ON PROJECT DESIGN AND CONFIGURATION

The Honorable Art Torres, Senator, 24th District, Los Angeles County

A-1 Comment: Why doesn't the proposed LRT project extend all the way to Pasadena as its name suggests?

Response: At the time that comment was written, the proposed project did not extend to Pasadena. Concurrent with the preparation of the DEIR, a route refinement study was prepared to identify possible routes the LRT could take through the City of Pasadena. The alignments studied connected with either the Highland Park alignment or the North Main alignment and continued through the city in an easterly direction with a terminal station proposed in eastern Pasadena. The revised DEIR includes a lengthened Highland Park alignment alternative that extends through the City of Pasadena to a terminus at Sierra Madre Villa Drive.

A-2 Comment: The DEIR indicates that the proposed LRT would be constructed in a number of phases. For the Highland Park alternative, the LRT would terminate within the City of South Pasadena, which is unacceptable.

Response: As Section 3.6 of the revised DEIR indicates, the alignment would be constructed phases due to fiscal constraints. As funds become available, a phasing segment will be constructed. This approach will permit specific portions of the system to become operational as funds are available. The Commission is preparing a financial plan for the next 30 years to better understand the availability of future funding for rail projects. As identified in the revised DEIR, the Highland Park alternative now terminates in Pasadena. None of the proposed phasing segments terminate in South Pasadena.

A-3 Comment: A Community Advisory Committee should be created to participate in future decision-making and in the review of future plans.

Response: The LACTC will continue to work closely with the community following the selection of a preferred alternative, during final design and construction, and during project implementation. A mitigation monitoring and reporting program will be implemented. It is the LACTC's policy

that every effort should be made to include as many persons as possible into the decision-making and review process associated with the project's implementation.

The Honorable Richard Polanco, Assemblyman, 55th District

A-4 Comment: The Highland Park alignment is the preferred alternative because it offers more benefits to the community and will have less overall impact.

Response: Comment noted.

A-5 Comment: The LACTC should continue to consult with members of the community along the Highland Park alignment to ensure every possible measure is considered to reduce potential adverse impacts.

Response: The LACTC will continue to work closely with the community during all phases of project implementation.

Mr. Gilbert Lindsay, City of Los Angeles Councilman, 9th District

A-6 Comment: It is also imperative that the two downtown options interface with Metro Rail and the Long Beach-Los Angeles LRT at critical points to assure maximum coordination and linkage. Consistent with long standing policy, LACTC must also consider Union Station as a regional transportation center. Therefore, I urge that the EIR consider linking both downtown options instead of only one with Union Station.

Response: The revised DEIR was expanded to include two additional Highland Park alignment alternatives and one North Main Street alignment option that provide direct connections to Union Station.

Mr. Richard Alatorre, City of Los Angeles Councilman, 14th District

A-7 **Comment**: The DEIR fails to consider the Union Station as a transportation hub in its consideration of viable alternatives. The project description should be expanded in the DEIR to consider Union Station as the site for a station for all of the alternative alignments.

Response: The project description for the Second Street option for the Highland Park alignment was revised to reflect a station connection with Union Station. As a result, both the Highland Park and North Main alignments include alternatives which connect with Union Station. In addition, a Highland Park alternative beginning at Union Station was identified and evaluated.

Mr. James S. Woollacott, Mayor of City of South Pasadena

A-8 **Comment**: Initially the City of South Pasadena supported conversion of the existing Santa Fe Railroad right-of-way through Highland Park. If the Santa Fe Railway Company will not sell or abandon its San Bernardino via Pasadena to Los Angeles line in the foreseeable future, this could remove this route as a viable consideration. In light of this uncertainty, it is questionable that the LACTC's DEIR could use this as one of its two study lines.

Response: Comment noted. During the route refinement study phase, a number of additional alignments were evaluated. The Highland Park alignment, utilizing the AT&SF right-of-way represents less displacement and traffic impacts compared to the other alignments considered in the route refinement studies. Santa Fe (AT&SF) has expressed interest in selling this segment of their right-of-way. The Public Works Department of the County of Los Angeles is currently in the process of appraising it for purchase.

A-9 **Comment**: We also must strongly object to the North Main Street-El Sereno alternative because it is based on the proposed Meridian Route location for extension of the Long Beach Freeway through South Pasadena. The proposed route for the light rail system, ending as it does where the proposed Meridian Route Freeway is located, indicates the route planners intend to utilize the proposed Meridian alignment.

Response: Comment noted. The engineering and planning studies undertaken as part of this project for the proposed North Main Street alignment did not extend beyond the proposed terminus at the Poplar/Horne station. However, this does not imply the alignment is dependent on the future extension of I-710.

A-10 **Comment**: To assure sufficient funds for early construction of the Pasadena-Los Angeles route, the line should interface with Metro Rail at Union Station, in downtown Los Angeles, rather than at 7th and Flower Streets. Interfacing with Metro Rail at Union Station would eliminate the need for Phase I of this line, which involves undergrounding of the Second Street option or the Chinatown option. The high cost of construction for this short underground section would leave insufficient funds for an extension of the line to Pasadena. Construction of either of these options benefits the financial district of downtown Los Angeles at the expense of outlying areas. The downtown district will be served by the Metro Rail extension from 7th and Flower Streets to Union Station is possible at a future date.

Response: The revised DEIR was expanded to include a Highland Park "No Subway" option which terminates at Union Station (Section 3.4 of the EIR). The description of this option also indicates that a future connection between the 7th and Flower Station and Union Station is not precluded at a future date.

A-11 **Comment**: Additional alternative studies should be undertaken, and such studies should not be confined to ground rail lines. We need rapid transit as a solution to traffic congestion more than we need freeways; and the emphasis should be on rapid transit, along routes that can move the most people rapidly between Pasadena and downtown Los Angeles.

Response: Comment noted. The planning process, beginning with the route refinement phase, considered a wide range of alignment alternatives. The final alignments evaluated in the revised DEIR examine a variety of configurations for the proposed LRT, including at-grade, subway, and aerial. However, the number of possible alignments have been narrowed to those identified in the revised DEIR. Minor modifications to the alignments (precise station locations, right-of-way configuration, etc.) may occur in subsequent phases of engineering and planning though no significant deviation from those considered in the revised DEIR is anticipated.

A-12 Comment: A light rail line located within the I-710, originating at the current junction of Highways 210 and 134 that would connect with the 710 alignment with an alternative connection into Los Angeles or along the 710 to Huntington Drive, should be considered. There are alternatives and combinations of alternative locations in the Highland Park Corridor that are independent of the Santa Fe Railroad right-of-way that should be studied.

Response: Comment noted. Use of the AT&SF right-of-way was selected from a wide range of possible alignments because it represented the most cost-effective and least environmentally adverse of other possible alignments. It does not affect the Arroyo Seco park and it also results in the least displacement of residences and businesses.

A-13 Comment: South Pasadena is most concerned with any light rail line that would terminate within the city limits. Such items as rail car storage, station terminals, park-and-ride parking needs are beyond the ability of the city to accommodate.

Response: The Highland Park alignment, as described in the revised DEIR, extends through the City of South Pasadena on into the City of Pasadena (Section 3.4). The expanded Highland Park alignment will terminate in East Pasadena at Sierra Madre Villa. Section 3.6 of the EIR discusses a number of possible phasing alternatives, though none of these are anticipated to terminate within South Pasadena. No rail car storage or park-and-ride facilities are planned within South Pasadena.

Mr. Kenneth Topping, Director of Planning, City of Los Angeles

A-14 Comment: The "mix-and-match" project description is not presented in a manner that is understandable. We request that the project description be displayed in a format that is easily decipherable and that the FEIR address the cumulative impacts of the various "mix-and-match" options.

Response: A number of additional exhibits were incorporated into the revised DEIR to more clearly illustrate the alignment variations possible. The proposed LRT is a single transit project, that when completed, will serve as an important link in a regional transit system presently under development. The cumulative impacts focus on the development of the regional transit system and

the identification of projects planned, proposed, or under construction in the vicinity of the project are addressed in Section 5 of the revised DEIR.

A-15 Comment: The DEIR does not address all the viable alternatives to the proposed project. We request that two additional alternatives be added to the DEIR: (1) a "no downtown option" where the southern portion of the alignment would terminate at Union Station; and (2) a Highland Park-Second Street option with a stop at Union Station.

Response: The revised DEIR was expanded to include both of these suggested alternatives.

Mr. Jeffery Bingham, Chief, Environmental Planning Branch, Caltrans

A-16 Comment: The subject DEIR only analyzes the Los Angeles-Pasadena Rail Transit project up to the approximate location of the Route 710 corridor and not all the way to Pasadena as the name would seem to imply. It may be short-sighted not to evaluate this alternative in the DEIR.

Response: The revised DEIR considered an expanded Highland Park alignment that extends into the City of Pasadena terminating at Sierra Madre Villa. This alignment is presented in Section 3.4 of the revised DEIR.

A-17 Comment: Caltrans feels that an additional alternative deserves further analysis. The downtown Los Angeles Second Street option turns back to the Highland Park route avoiding Union Station. A link from Union Station to the Highland Park route from the Second Street option should be addressed in order to determine the costs, engineering, and design data, as well as the environmental considerations for comparison. It has been a concern expressed at the EIR Agency Review meetings by several parties that the Union Station link be included in order to place the environmental information in this document.

Response: The revised DEIR was expanded to include a Highland Park-Second Street alignment option that has a direct connection with Union Station (refer to Section 3.4).

Mr. John Tuite, Administrator, Community Redevelopment Agency, City of Los Angeles

A-18 Comment: The CRA and the city departments of transportation and planning recommended last May that the LACTC include a "Second Street subway option" in the environmental evaluation analysis and were assured that this east/west alignment traversing through Bunker Hill, Civic Center/Little Tokyo, Union Station/El Pueblo, and Chinatown would receive a thorough evaluation in the DEIR. We continue to feel that all feasible alignments and options identified by the inter-agency Downtown Review Committee should be reviewed for environmental impacts.

Response: The project alignment alternatives (Section 3.4) were expanded to include a Highland Park-Second Street option that connects with and has a station at Union Station, and serves the downtown areas mentioned.

A-19 Comment: The DEIR, as presently written, omits evaluation of a Highland Park/Union Station alternative. While we realize that the presence of the Metro Rail tunnel imposes engineering and financial constraints to a Highland Park alternative serving Union Station, we feel that such a connection is feasible and merits an environmental review. Union Station remains a major transportation facility with substantial long-term potential, and both the Highland Park and North Main Street alignment alternatives should include a thorough evaluation of service options to this important facility.

Response: See response under the previous comment. The revised DEIR has been expanded to include an analysis of a modified Highland Park-Second Street alignment that would have a connection at Union Station. In addition, a Union Station "No Subway" option starting at and running north from Union Station was identified and evaluated in the revised DEIR.

Mr. Gary Spivack, Director of Planning, Southern California Rapid Transit District

A-20 Comment: The district recommends that the LACTC consider deferring construction of the central business district segment of this project due to its high cost and the available capacity on the Metro Rail MOS-1, and study the impact of the alternative of short line operations from an origin point at Union Station. A temporary terminus at Union Station may facilitate the

development of lower cost, largely at-grade alternatives and the provision of longer station platforms. Longer station platforms would allow the use of longer light rail trains potentially reducing system operating costs per passenger carried due to reduce labor costs.

Response: The revised DEIR analysis evaluated a Highland Park alignment with a southern terminus at Union Station (see Section 3.4). Station platforms will be designed to accommodate three vehicle trains.

Mr. Donald F. McIntyre, City Manager, City of Pasadena

A-21 Comment: The DEIR should include a commitment to the development of environmental documentation for the remaining portion of the proposed light rail transit line within the City of Pasadena, as soon as possible following the city's adoption of a preferred route.

Response: The revised DEIR evaluated an alternative that extends through the City of Pasadena.

Mr. S. E. Rowe, General Manager, Department of Transportation, City of Los Angeles

A-22 Comment: Because it is city policy to develop Union Station as a multimodal transportation center, a station there, intermediate to those in Little Tokyo and Chinatown, should be evaluated for the Highland Park alignment/Second Street option in the DEIR.

Response: The revised DEIR included a Highland Park-Second Street alignment option that provides a station at Union Station.

Mr. J. E. Crother, General Manager, Amtrak Transit Systems, Southern Pacific Transportation Company

A-23 Comment: As part of a regional transportation plan, further consideration of a possible public transit alignment alternative adjacent to SPTCo's LAUPT to Burbank junction trackage needs to be studied in greater detail to determine if this predominantly at-grade system would provide a more economical system during construction and operation. Moreover, this proposed alignment adjacent to SPTCo's main track could also provide separate public rail extensions to

the San Fernando and Santa Clarita valleys, while providing public transit for a large portion of the Pasadena area ridership. This regional scope alternative would provide general coverage for three passenger areas by utilizing the common trunk from LAUPT to Burbank Junction. In addition, either a light rail or heavy commuter rail could operate on this separate transit alignment.

Response: The focus of the revised DEIR is to evaluate the impacts of possible alignments extending into the San Gabriel Valley. Future extensions toward the San Fernando and Santa Clarita Valleys are presently being evaluated or will be evaluated in separate environmental studies.

Mr. T. A. Nelson, Consulting Engineer, Transportation Consultant

A-24 **Comment**: Page 3-14--Phased development of the Highland Park alternative would exacerbate the problem of light rail/commuter rail interface, unless the light rail double track is designed to accept commuter trains. Inbound commuter trains from San Bernardino would leave the light rail line alignment immediately after crossing the Los Angeles River and continue to LAUPT. A number of world-wide metropolitan areas have trackage on which run a mix of equipment types providing both local and long distance passenger service and freight. The alternative, not to run commuter trains into LAUPT, is to terminate them at Pasadena. This means a transfer from each commuter train of several carloads of passengers to LRV's with insufficient capacity to handle them in one LRT train. If commuter service were to start in the early 1990s, the LRT construction would not yet be completed. Thus, a gap would result, unless the LRT track and way structures are configured to allow passage of commuter trains. If necessary, passing tracks could be built to allow the nonstop commuter trains to overtake LRV's similar to the Shinkasen operation in Japan.

Response: The LRT right-of-way as it is presently designed, will only accommodate the LRT vehicles, or commuter rail, not both. In many areas where the alignment is proposed, there is inadequate right-of-way width to accommodate both conventional heavy rail trains and the proposed light rail vehicles. LRT station platforms would block commuter trains since the commuter vehicles are wider than LRT vehicles. This operational constraint will be a key component in the Commission decision on how the light and commuter rail proposals will fit

together. Alternative alignments are being studied to provide commuter rail service between the San Gabriel Valley and downtown Los Angeles.

A-25 **Comment**: Page 4-10--The Santa Fe Railway running through Highland Park is no longer designated the Second Division (or District). Effective May 15, 1988, it became the Pasadena subdivision. Page 4-11--AT&SF's Third Division became the San Bernardino subdivision on the same date.

Response: Comment noted. The corrections have been noted in Section 7.

Ms. Luanna Allard, President, Hillside Village Property Owners Association

A-26 **Comment**: We feel that Main Street will not be the best route to be taken. This would disrupt many homes and small businesses. A route along Mission Road would provide better service to all communities. There needs to be a station at County USC Medical Center. Since Mission Road is much wider than Main Street and has direct access to the busway, we recommend the use of this road instead of Main Street.

Response: Comment noted. As discussed in Section 6 of the revised DEIR, an alignment alternative on Mission Road was considered in earlier route refinement studies. Further consideration of this alternative was discontinued because implementation of this alignment would require substantial road widenings and result in significant engineering-related problems, particularly in the vicinity of I-5, which resulted in significant environmental impacts.

Mr. Abraham Falick, Chairman, Coalition for Rapid Transit

A-27 **Comment**: From Union Station in subway, almost any part of Chinatown could be the site of the next station. It is the rather obvious location for a joint development project with a Chinatown consortium; a request for proposal should be issued for a commercial development--office building, hotel, shopping center--that would include the subway at its center.

Response: Comment noted. The Chinatown station of the Union Station "No Subway" alignment option is proposed in the area with future opportunities for joint development. System design will not preclude a future interface of transit and development facilities.

A-28 **Comment**: A stop should be provided at the Dodger Stadium in subway. In the 80-odd home games of the Dodgers, the fans create a congestion havoc on the Pasadena Freeway, usually at rush hour in late afternoon. Although we assume that a rail line paralleling the Pasadena Freeway for much of its length would have as an assumed objective the relief of journey-to-work congestion, as well as Dodger Stadium traffic, the EIR description of the Highland Park Line simply ignores the stadium as a congestion problem, does not even consider a station nearby.

Response: As the alignments are presently designed, no direct connection with Dodger Stadium is possible. An alignment alternative to Dodger Stadium was considered in earlier route refinement studies as discussed in Section 6.1 of the EIR. Further consideration of this alternative was discontinued due to the steep grades, or resulting deep station, displacement and severe traffic and roadway improvement impacts in Chinatown. The LACTC would support the L.A. Dodger organization's interest in the establishment of bus feeder connections and/or shuttle service to connect those stations nearest to Dodger Stadium with the stadium.

A-29 **Comment**: Union Station is the major transport hub of Southern California, being the terminal for Amtrak, Trailways, El Monte Busway, and Metro Rail. It is also the centerpiece for a major high rise office building/hotel complex being planned just east of the station itself. To deliberately by-pass Union Station is not comprehensible.

Response: The revised DEIR has been expanded so two additional Highland Park alignments and one North Main Street alignment with direct connections to Union Station are evaluated.

Ms. Hanna L. Ritzman

A-30 **Comment**: Avenue 57 is a poor location for a station and is one of the busiest corners in Highland Park. A better location for a station would be Avenue 59.

Response: Comment noted. The Avenue 57 station was selected for a variety of reasons including access onto Figueroa from Avenue 57, right-of-way configuration, and minimal potential displacement impacts associated with the provision of parking and station facilities. Locating the station between Avenues 58 and 59 is constrained by an existing manufacturing building that reduces the area available for provision of station facilities.

Mr. Richard Wright, Chairman Light Rail Committee, Mt. Washington Association

A-31 **Comment**: We ask that you study a possible station location at Marmion Way and Museum Drive, serving the Southwest Museum and the apartments in the area.

Response: The alignment right-of-way at this location is narrow and curving making locating a station at this site difficult and potentially dangerous. In addition, the right-of-way will be further reduced in most areas of this alignment section due to the need for sound walls.

Mr. Richard Willson AICP, Associate Professor, California State Polytechnic University, Pomona

A-32 **Comment**: A station should be added in the vicinity of Avenue 45. This area is important because it is a central entry point to Mount Washington, it contains commercial uses (e.g, a large Lucky's which is patronized by Highland Park residents), and it could serve patrons of the Southwest Museum. Linking the Southwest Museum to downtown would be especially advantageous for tourists.

Response: Comment noted. Several potential station sites were considered in earlier route refinement and planning studies. The portion of the Highland Park alignment in the vicinity of Avenue 45 is quite narrow and curving. Significant land acquisition would be required at Avenue 45 to provide the approximately 400 feet of straight track required for the station platforms. A straight alignment is available further south, but a station at this location would encroach on several sensitive land uses including a church, a residential health facility and a convalescent hospital.

A-33 **Comment**: I recommend that the LACTC and its staff do the following:

1. Issue a Final EIR based upon the present draft EIR, showing the Highland Park-Second Street Alternative as the preferred alternative.

2. Certify that FEIR as adequate.

3. Approve the Highland Park-Second Street Alternative with required Findings and Statement of Overriding Considerations.

4. Authorize staff to begin formal negotiations with the Atchison, Topeka and Santa Fe Railway Company, the Southern Pacific Transportation Company, and any incidentally affected entities with the view to acquiring the Santa Fe's Second Subdivision right-of-way (or westerly segment) and the Southern Pacific's Cornfield and Midway Yards.

5. Allocate funding toward those acquisitions.

6. Refrain from project preparations unrelated to the Highland Park route segment north of Chinatown based upon that FEIR.

7. Initiate the preparation of a Subsequent EIR for additional and improved alternatives for downtown Los Angeles generally similar to the Second Street and earlier First Street routes and an independently operable segment from the Los Angeles Union Passenger Terminal (Union Station) to or beyond Pasadena's Amtrak statio via Santa Fe's Second Subdivision right-of-way.

8. Coordinate the preparation, review, and finalization of this subsequent EIR with the Central Los Angeles Year 1995 Transit Plan study, and make decisions upon both concurrently.

Response: Comment noted. Upon completion, this FEIR will be environmentally certified by the Commission. In addition, a financial plan for the next 30 years is being prepared for the Commission to clarify funding availability for rail transit projects. The plan will be adopted by the Commission along with recommendations on transit projects to be funded.

This revised DEIR identifies and evaluates an additional Second Street route (the Second Street-Union Station Option) and an alignment alternative that originates at Union Station and terminates in Eastern Pasadena beyond Pasadena's Amtrak Station.

The Central Los Angeles Year 1995 Transit Plan Study addresses a complex set of issues that are beyond the scope and time frame of this project. The plan must integrate with other on-going downtown Los Angeles studies which have a much longer time schedule than this project. If an option with a downtown connection is selected, coordination between the transit plan study and this project may occur in the final engineering and deisgn phase.

B. COMMENTS AND RESPONSES RELATED TO RAIL STORAGE YARDS

The Honorable Art Torres, Senator, California 24th District, Los Angeles County

B-1 Comment: The merchants in the Chinatown District are opposed to any rail storage yard, as well as any other long-term parking facility which would add to the congestion of the area. Is there any way that this can be avoided?

Response: The revised DEIR eliminated the rail storage yard proposed earlier for the North Main Street alternative. If this alignment alternative is selected, LRT vehicles would be serviced and maintained in the Long Beach railyard. No project-related parking facility is planned for the Chinatown District.

Ms. Gloria Molina, City of Los Angeles Councilwoman, 1st District

B-2 Comment: The DEIR fails to sufficiently identify the design of the proposed rail storage yards and facilities, and their potential impacts on the community. In addition, the FEIR should identify possible alternatives other than the rail storage and maintenance yards considered thus far.

Response: A number of revisions have been made to both the text and exhibits included in Section 3 of the EIR to provide a more detailed explanation of the project. The design of the two rail storage yard options being considered for the Highland Park alignment are shown in Appendix F. Both alternatives are located along the Los Angeles River far to the north of Chinatown. The North Main Street option's rail storage yard has been eliminated.

Ms. Susan Hum, Chairperson, Chinatown Community Advisory Committee

B-3 Comment: The DEIR discusses locating a rail storage and maintenance yard either in or near Chinatown. However, the report is inadequate in describing the necessity and function of the light rail yard, let alone providing a discussion of its impact on the surrounding neighborhood. The North Main Street alternative, for example, proposes to locate the yard on the eastside of Chinatown project area in vicinity of Rondout and Main Streets. We feel that locating the yard so close to Chinatown would conflict with land use and redevelopment plans for the area. In addition, we have similar concerns regarding the Highland Park alternative's yard located in the existing Southern Pacific rail yard north of Chinatown.

Response: The project description for the North Main Street alignment has been revised so that the railyard serving the alignment (as discussed in the previous DEIR) has been eliminated from consideration. The two rail storage yards proposed for the Highland Park alignment are discussed in Section 3.4.B. Both sites are located along the Los Angeles River north of Broadway, far removed from the Chinatown community.

C. COMMENTS AND RESPONSES RELATED TO LAND USE

The Honorable Art Torres, Senator, 24th District, Los Angeles, County

C-1 Comment: The implementation of the North Main Street-Chinatown option would require the removal of Phillipe's Restaurant. Is it possible that the impacts on this establishment can be avoided?

Response: Preliminary engineering studies identified the need to remove Phillipe's to accommodate engineering constraints. At this site, the proposed alignment is transitioning from a subway configuration to an aerial structure. A substantial distance is required to accommodate the transition. In addition, the alignment is curving to follow the adjacent roadway, which further complicates the issue. The alignment could be moved to the east, but it would then adversely impact the Terminal Annex property which is both an historic structure and the future site of a large mixed-use development project.

The Honorable Edward Roybal, Member of the U.S. House of Representatives, 25th District

C-2 Comment: The DEIR does not clearly indicate how displacement impacts on housing will be mitigated. The EIR should indicate how relocation and compensation will be implemented.

Response: Section 4.1, addressing environmental impacts and mitigation measures, was expanded in the revised DEIR to include a discussion of those laws that apply to just compensation for residents, business tenants, and property owners dislocated by the proposed project. It is Commission policy to design and implement projects so as to minimize residential displacement.

Ms. Gloria Molina, City of Los Angeles Councilwoman, 1st District

C-3 Comment: What is the criteria used in determining which residences would require removal? Isn't it possible that additional homes would have to be removed if the LRT operation results in any additional adverse and unacceptable impacts?

Response: During the initial engineering stage, every effort was made to minimize residential displacement required to accommodate project facilities such as stations and power stations. On the Highland Park alignment, for example, the removal of only seven homes along the entire 15-mile long project is required. Three of those residential units are on one lot. During the final engineering study phase, further effort will be made to reduce residential takings.

The intent of the DEIR was to provide the most accurate analysis of what properties would require removal to allow for project facilities. Any substantial change in the project that would require the removal of additional residential unit would require additional environmental review.

Mr. Richard Alatorre, City of Los Angeles Councilman, 14th District

C-4 Comment: The Lead Agency must ensure that displaced residents and property owners receive sufficient compensation for their loss.

Response: The LACTC will comply with all state and federal regulations and laws regarding just and fair compensation of tenants and property owners. Mitigation measures in Section 4.1 of the revised EIR detail the measures that would be implemented relative to dislocation.

Mr. Kenneth Topping, Planning Director, City of Los Angeles

C-5 **Comment**: The DEIR should include an analysis of this project's consistency with the General Plans of the cities of Los Angeles and South Pasadena. In particular, we request that the land use section of this DEIR take into account existing and planned land uses along the routes, and any project related consistencies or inconsistencies with the appropriate city's land use element of the General Plan.

Response: Existing land uses are discussed in Section 4.1 of the revised DEIR. The general plan/community plan designations for the City of Los Angeles, City of South Pasadena, and City of Pasadena are described in Section 9 of the DEIR in the vicinity of the proposed stations. The implementation of the proposed transit project will not require a revision to existing general plan designations in those communities served by the LRT line. This project will fulfill the public transportation goal of the Northeast Los Angeles District Plan that the "existing Santa Fe rail line from downtown Los Angeles to Pasadena be considered as a future right-of-way for the rapid transit system."

Mr. Donald F. McIntyre, City Manager, City of Pasadena

C-6 **Comment**: The city supports the acquisition of the Santa Fe Railroad Company right-of-way from downtown Los Angeles to San Bernardino and its use for light rail transit to the City of Pasadena. This acquisition would result in: (1) timely completion of the entire downtown Los Angeles-Pasadena light rail line; (2) the selection of what appears to be the lowest cost alternative for the completion of the entire light rail line, from downtown Los Angeles-Pasadena; and (3) preservation of the right-of-way as a regional transportation corridor for various transportation uses, since the right-of-way's use for light rail transit to Pasadena would require its purchase to San Bernardino.

Response: Comment noted. Appraisal of the right-of-way is underway in process.

C-7 **Comment**: The cost of purchasing the Santa Fe Railway Division 2 right-of-way to San Bernardino should not be fully allocated to the Highland Park alignment alternative. At a minimum, the cost should be allocated along the entire length of the line from downtown Los Angeles to Pasadena. In addition, cost should be fairly allocated between light rail and commuter rail uses of the right-of-way is purchased for both purposes.

Response: The total estimated cost of purchasing the Santa Fe right-of-way to San Bernardino, which has been required by Santa Fe, has not been fully allocated to the Highland Park alignment alternative. In the revised DEIR, costs for this project as presented in Table 3-6 and 3-8 reflect only the estimated cost for the right-of-way segment from downtown Los Angeles to Pasadena required for the operation of this project. The remaining segment would be purchased with right-of-way protection funds.

C-8 **Comment**: The city's position is to acquire the Santa Fe right-of-way and use the right-of-way as its first choice to get to Pasadena, but that would not preclude the alternative lines following I-710 when that is constructed.

Response: Comment noted. Discussion of alternative or additional rail transit lines following I-710 is outside the scope of this project.

Mr. Robert Niccum, Director of Real Estate, Los Angeles Unified School District

C-9 **Comment**: Please provide details of the right-of-way which might be needed adjacent to the Evans Community Adult School. Subway alignments run close to both this school and the District's Administrative Office at 450 North Grand. Please provide details on the precise distance between the subway box structure and these building foundations. The distance must be adequate to prevent direct transmission of groundborne noise and vibration into the buildings.

Response: Preliminary engineering drawings indicate that the alignment proposed for the North Main Chinatown Option will pass between the Evans Adult School and the School District Administrative facilities and will be approximately 35 feet underground at the closest point to both facilities (refer to drawing number SC 103) of Appendix F. Transmission of groundborne noise

and vibration to buildings is discussed in Section 4.6 of the EIR. Analysis indicated that no impacts are expected to occur.

Mr. James Wong, President, Chinese Consolidated Benevolent Association

C-10 Comment: According to the summary of environmental impacts and mitigation measures, land acquisition will be required between Main, Alpine, Spring, and Rondout for the proposed rail yard. Coincidentally, that is the only possible direction for the future expansion of the Chinatown area.

Response: The railyard proposed for the North Main Street alignment alternative has been eliminated from further consideration.

Mr. Richard Binder, General Manager, Phillipe's Restaurant

C-11 Comment: Specific references to the demolition of Phillipe's The Original Restaurant should be inserted, at minimum, on pages 4-7, Table 4-1 "Displacement/Right-of-Way Impacts," Reference SC204/E; page 4-17, Table 4-3 "Sensitive Land Uses Adjacent to Proposed Project," Chinatown option; and page 6-6, Table 6-1, "Preliminary Evaluation of Pasadena-L.A. Corridor Alternatives," North Main Street/Chinatown-Ord Route/Displacement Section.

Response: Comments noted.

D. COMMENTS AND RESPONSES RELATED TO CIRCULATION AND TRAFFIC IMPACTS

Mr. S. E. Rowe, General Manager, City of Los Angeles Department of Transportation

D-1 Comment: Along the north and south roadways of Marmion Way between Avenue 50 and Avenue 58, where right-of-way would be acquired, consideration should be given to constructing the roadways as pedestrian walkways wherever the resultant roadway would be less than 18 feet, as an LACTC project responsibility. Below this width, vehicular passage becomes

impossible at times. Damage compensation to those properties that have parking and garage access from these roadways should be required as an LACTC project responsibility.

Response: The LACTC will provide just and fair compensation to property owners that lose use of and access to their property. Engineering plans at this time indicate that access to these properties can be maintained and that sufficient width exists for one-way streets. During the final engineering and design phase, LACTC will work with the community and city officials to identify and resolve concerns which may arise.

D-2 Comment: Grade separation underpasses at Pasadena Avenue (south of Figueroa Street), Figueroa Street (at Marmion Way) and Figueroa Street (at Avenue 61) require elevation, since at-grade operation would have long-term access, capacity, and safety consequences across these important city arterial streets.

Response: Regarding the crossing at Figueroa Street and Marmion Way, a detailed LOS analysis is given on page 4-49. Also refer to Table 4-7, Page 4-33 (where pre-LRT year 2010 conditions are shown) which states the future LOS if a full grade-separation was to be provided. This intersection was found only to be impacted under LRT phasing options 2 and 3. In each case, such impacts could be mitigated without grade-separation.

For the other two crossings, existing conditions reflect minor intersections, not signalized today, and operating with full railroad gate protection. Thus no detailed quantitative analysis was deemed necessary at either Pasadena Avenue (north of Figueroa Street) or at Figueroa Street (at Avenue 61). For both sites, an at-grade LRT crossing was not expected to have significant impacts. If the project description had called for full grade-separation, there would be no impacts. In fact, the removal of the freight rail crossing would result in an improvement at each site.

D-3 Comment: The widening of Figueroa Street from east of and to the west of Avenue 57, in order to provide dual left-turn capability for access to the park-and-ride lot should be identified as a project mitigation responsibility of LACTC, since removing parking in this business community would appear to have a severe adverse impact to retailers.

Response: The discussion on page 4-5 "Highland Park Route Mitigation Measures" in regard to the Avenue 57/Figueroa Street intersection recommends a peak hour parking restriction within 300 feet of both sides of the intersection. This should read "24 hour parking restriction on the south side of Figueroa Street (to accommodate eastbound traffic) and peak hour parking restriction on the north side of Figueroa Street. "To be consistent with the written description of this proposed mitigation measure, the diagram on the lower right corner of Exhibit 4-9 should show the following: two left-turn lanes (instead of a single one) for the east to northbound movement; two eastbound through lanes (instead of three); plus the corrected legend "24 Hour - No Parking" on the south side of Figueroa Street. As implementation of parking restrictions in this area falls within the jurisdiction of the City of Los Angeles, LACTC will work with the city to define an appropriate parking policy. There may be a significant adverse impact on the operation of this intersection if parking restrictions are not acceptable to the city and the community.

D-4 **Comment**: Additional right-of-way for transit-related parking should be acquired as an LACTC project responsibility outside of city parking lot 636, which originally was acquired for use by retail patrons shopping in the vicinity of Figueroa Street near Avenue 57.

Response: Comment noted. Please refer to response number D-3. During the week, this parking lot appears to be underutilized. Shopper access to Figueroa's retail stores will be enhanced by the project.

D-5 **Comment**: A park-and-ride lot for the terminal station near Monterey Road and Pasadena Avenue should be identified as a project responsibility of LACTC in order to provide a viable means for patrons to have access to the transit system without intruding into the local residential community.

Response: The terminus station proposed at this location has been eliminated from further consideration since the Highland Park alignment has been expanded so that it now extends the through the City of Pasadena where it terminates at Sierra Madre Villa in eastern Pasadena.

D-6 **Comment**: The DEIR should discuss the impacts of operating North Main Street with one lane in each direction during off-peak periods, since the all-day prohibition of parking would appear to severely impact the viability of certain fronting commercial land uses.

Response: As shown on Page 4-53 and Exhibit 4-8, the proposed mitigation at major intersections along North Main Street pertains to both peak and off-peak hours. In the case of minor intersections, all on-street parking would be prohibited and no widening of the roadway at the intersection approaches is contemplated (as stated on Page 4-38). If this all-day, on-street parking restriction is not acceptable, only peak period prohibition would apply. In such an event, North Main Street would operate with one lane in each direction during off-peak hours. Traffic capacity on North Main Street would be impacted; quantifying such impact could be done at the project development stage, if this option was to be recommended for actual implementation. LACTC will work with the city to define parking restrictions during the final engineering and design phase.

D-7 **Comment**: The LACTC should evaluate the impacts of a side-running, off-set cantilevered aerial structure along North Main Street and Mission Road in order to maintain adequate truck-turning capability, on-street parking, pedestrian amenities, local access, and capacity. This side-running alignment concept was proposed for the defunct downtown people mover project.

Response: The suggested option of side running, aerial structure would introduce other potentially significant impacts, namely new aesthetic and visual impacts, the need for relocating underground utilities and the risk of inadequate clearances from buildings abutting the elevated LRT structure. In addition, under this configuration, one lane of traffic would be lost due to the supporting column placement. Hence the side-running option was not recommended along North Main Street and Mission Road.

D-8 **Comment**: During the environmental analysis and design phases of this and other rail projects, the various city departments should be actively consulted by the LACTC.

Response: LACTC will continue to work closely with the City of Los Angeles and the various city departments to minimize any potential adverse impacts which may result from the construction

of the proposed LRT. A master cooperative agreement will be negotaiated with affected cities.

D-9 Comment: Since the channelized intersection of Mission Road, North Main Street, and Valley Boulevard near Lincoln Park is a community focal point, additional analysis/discussion is required in the DEIR to design the integration of the light rail project with the local landscaping, statues, and art work.

Response: Section 4-12 of the revised DEIR and Part L of this section identify community outreach programs that will be implemented to ensure that future station design is sensitive to the local community. These programs will be similar to existing programs being undertaken in the development, construction, and operation of the Long Beach line. In addition, the LACTC has committed to allocating 0.005 percent of the total construction cost of the this project towards art related projects. Specific design and engineering for individual stations and transit segments are beyond the scope of the project at its present stage.

D-10 Comment: An alternative of retaining the Soto Street/Mission Road/Huntington Drive grade separation bridge by having a trench for the LRT below Soto Street (in order to provide needed vertical clearances) should be analyzed/discussed in order to retain the interchange free-flow moves if possible.

Response: A detailed discussion of this proposed change is given under "North Main Route Mitigation Measures" (page 4-54, first paragraph) in the revised DEIR.

D-11 Comment: Grade separation at each signalized intersection along Huntington Drive require evaluation, since at-grade operation would have long-term access, capacity, and safety consequences across this important city arterial street.

Response: A written description of the proposed mitigation along the Huntington Drive segment of the North Main Street route is given on page 4-40 of the revised DEIR. A full-grade separation is not warranted for the LRT crossings as the light rail vehicles would observe traffic signals similar to vehicular traffic.

D-12 Comment: The DEIR and FEIR should provide explicit, graphic, and quantifiable information to assist technical staff and policy makers in assessing benefits, impacts, and mitigation of the proposed project in the following areas: cross-sections for each segment showing resultant dimensions for sidewalks, roadways, landscaping, raised islands, columns, vertical clearances, and striping; traffic circulation impacts due to transit diversion and park-and-ride access project cost; spot noise impacts (noise during train passage); patronage modeled on a local scale; mode split; parking and drop-off demand and supply at park-and-ride lots and air quality impacts.

Response: The revised DEIR and the attached appendices examine all of the above issues. The patronage figures are included in Appendix G included in this report.

D-13 Comment: Due to traffic circulation impacts, the cut-and-cover construction in the downtown should be proposed only at station sites and those locations where it is infeasible to bore for tunnel construction. Accordingly, alternative vertical profiles should be investigated in order to minimize cut-and-cover construction in the central business district.

Response: Comment noted. Cut-and-cover construction is costly and disruptive and was identified in the preliminary engineering plans only where necessary.

Mr. Robert Horii, Division Manager, Project Management Division, City of Los Angeles Department of Public Works

D-14 Comment: The DEIR indicates that the existing roadway capacity will not be impacted if straddle-bent columns are used on the sidewalk. The FEIR should provide a more detailed description of these columns and address the impacts on sidewalk capacity, as well as any potential secondary impacts. In addition, the location of these columns should be designed to permit future widening of the adjoining roadway.

Response: Straddle bend columns are illustrated in Exhibit 4-21 for the Mission/Lincoln Station. The land required to permit the construction of the straddle bent column is identified in the project site plan preliminary engineering drawings as provided in Appendix F. Sidewalk capacity will not be significantly impacted since the columns will not be located along the entire length of the alignment, but only at intersections with stations.

Mr. Richard Willson, Associate Professor, California State Polytechnic University, Pomona

D-15 Comment: The EIR should identify the amount of delay that will occur at intersections and the type of barriers to be used. The draft EIR concludes that there will not be significant impacts on LOS. What time delays will Mount Washington residents experience during the peak hour and the location of any aerial grade crossings sections needs to be identified.

Response: Section 4.2 of the revised DEIR details the anticipated LRT impacts on circulation and levels of service within the Mount Washington area. Overall, circulation within the Mount Washington area would benefit from the operation of the proposed LRT in that commuters that would otherwise be using busses and private vehicles would utilize the system. The Avenue 57/Figueroa intersection would experience a decline in the level of service (LOS) D to F during the a.m. peak hour and B to D during the p.m. peak hour due to traffic traveling to and from the station proposed in the vicinity of the intersection of Avenue 57 and Marmion Way. Implementation of identified mitigation measures would reduce the impact at this intersection. The Highland Park alignment will not include any aerial structures.

E. COMMENTS AND RESPONSES RELATED TO PARKING IMPACTS

Mr. Richard Alatorre, City of Los Angeles Councilman, 14th District

E-1 Comment: There is a need for a parking facility in the Highland Park and Mount Washington areas. Special consideration should be given to acquiring parking at Avenue 51 and at the Figueroa/Marmion Way station.

Response: In the implementation of its rail transit programs, the Commission makes efforts to minimize land acquisition and displacement. When identifying appropriate locations for the provision of station parking facilities, Commission staff looked for vacant or substantially underutilized land. Opportunities for provision of station-related parking in the Highland Park and Mount Washington areas are limited without substantial residential displacement. Provision of parking lots beyond those identified in this project, while not precluded from being added in the future by others, are outside the scope of this project.

Approximately 50 parking spaces can be provided at the Avenue 51 station due to adjacent underutilized land. Parking cannot be provided at the Figueroa/Marmion Way Station without substantial residential or commercial property acquisition and displacement. This station is intended to primarily serve the immediate neighborhood and will be accessed by walking , drop-off or bus feeders.

Ms Gloria Molina, City of Los Angeles Councilwoman, 1st District

E-2 Comment: The DEIR indicates that there will be a potential for parking to overflow onto adjacent streets and uses yet the nature and magnitude of these impacts are not discussed in detail.

Response: The revised DEIR (Section 4.2) was expanded to include additional analysis which examines potential parking impacts at selected station locations where such impacts may occur. The precise impacts associated with spillover parking are difficult to assess though it is likely that demand will exceed supply regardless of the number of spaces provided off-street. For this reason, Section 4.2 identifies mitigation measures that will be effective in reducing spillover parking. In addition, once operation of this project begins, LACTC will monitor the impacts and meet with local officials to identify future measures local officials would implement to mitigate spillover impacts if they occur. The most effective methods to mitigate spillover parking are implementation of parking restrictions and provision of alternative ways of accessing the stations. Parking restrictions fall under the jurisdiction of local city agencies and could include time restrictions in commercial districts and permit parking in residential areas.

Implementation of this transit project is intended to reduce the use of private automobiles. LACTC will work with the cities along the alignment to identify alternative ways to access the project. Proposition A funds are available to encourage and subsidize local efforts at implementing access programs such as feeder bus service.

Ms. Luanna Allard, President, Hillside Village Property Owners Association

E-3 Comment: We also recommend that additional off-street parking be provided to mitigate the loss of street parking and that sufficient parking for commuters be provided at all stations for a park-and-ride facility for the residents living in the southern El Sereno, Alhambra, and Monterey Park areas. Also that there be adequate feeder buses to bring passengers to the stations in the system.

Response: Comment noted. As the neighborhoods along the North Main Street alignment are substantially developed, it was difficult to identify parking sites that would not require substantial displacement. The project identifies parking facilities at three of the Huntington Drive stations including 300 spaces at the terminal station. The EIR does not address provision of satellite parking to serve communities at a distance from the project. Nor does it preclude it from being provided by others at a later date. A main objective of this project is to promote transit usage by the residents of this area. Support facilities such as feeder bus service would be established to encourage transit users to leave their cars at home rather than in neighborhoods adjacent to the station.

E-4 Comment: While the proposed Main Street route will benefit Lincoln Heights and El Sereno, the loss of parking along Mission Street and Main Street will adversely affect access to Lincoln Park. The proposed station in the vicinity of Lincoln Park will attract many drivers who will be coming from the residential areas along Valley Boulevard and they will also require parking facilities.

Response: Comment noted. The Main Street alignment will have a station adjacent to Lincoln Park which could be used by persons wishing to visit the park. A main objective is to promote transit usage among local residents and the station located at Lincoln Park will enable a number of persons presently using cars to access the park to take transit instead.

Mr. Richard Willson, Associate Professor, California State Polytechnic University, Pomona

E-5 Comment: The Draft EIR does not indicate that parking will be provided at stations. Many Mount Washington residents cannot take bus transit to the light rail stations because service

in the hilly areas is severely limited. The topography also limits their ability to walk to stations. If parking facilities are not provided, neighborhoods and commercial areas will be negatively impacted by all-day on-street parking of light rail patrons. The final EIR should address this issue.

Response: The EIR indicates that there is a potential for parking overflow in the vicinity of stations both where parking is and is not provided. As stated in previous responses, transit users will be encouraged to utilize alternate forms or transit (drop-off, buses, shuttles, etc.) to reach the stations. Regardless of the number of spaces provided initially, demand can be expected to grow beyond supply. This demand can be reduced by on-street parking policies implemented by local jurisdictions. The LACTC will cooperate with local agencies to reduce the impact of spill-over parking.

F. COMMENTS AND RESPONSES ON CONSTRUCTION IMPACTS

Ms. Gloria Molina, City of Los Angeles Councilwoman, 1st District

F-1 Comment: The DEIR fails to adequately address the construction impacts related to the implementation of this project.

Response: The revised DEIR discusses a range of construction related impacts including air quality, noise, safety, and others, and proposed mitigation measures. Construction impacts on transportation and circulation are discussed in Section 4.2, soils and geology in Section 4.3, air quality in Section 4.4, noise and vibration in 4.6, risk of upset in Section 4.8, and archaeological resources in Section 4.14.

Mr. Robert Niccum, Director of Real Estate, Los Angeles Unified School District

F-2 Comment: Please send construction detour plans to the school district prior to the start of construction. Ample time should be allowed for the district to review and provide input to these detour plans. The district will also have to provide adequate notice to students of any temporary alternate district bus stops. Also coordinate with the district prior to and during construction to ensure there are adequate guards at construction sites, and to ensure that noise

is not unduly interfering with teaching. Where noise proves to be a problem, we will request that you erect temporary sound barriers, or limit construction activities to nonschool hours.

Response: Comment noted. A mitigation measure will be added to Section 4.10 that involves the sending of construction detour plans to the impacted school districts prior to construction. The Commission will implement a school safety education program, to improve student understanding of LRT construction impacts. Extensive security will be provided at all construction sites.

G. COMMENTS AND RESPONSES RELATED TO NOISE IMPACTS

Ms. Gloria Molina, City of Los Angeles Councilwoman, 1st District

G-1 Comment: The DEIR indicates that the noise generated by the proposed LRT can be successfully mitigated. Because of the close proximity of the LRT line to these (Highland Park) residents, isn't it possible that actual noise and noise impacts will be greater than that documented in the DEIR?

Response: The noise analysis in Section 4.6 of the DEIR assumed worst-case conditions and, as a result, noise impacts overall are not expected to exceed those documented in the EIR. In certain instances, however, noise levels may differ from projections in the EIR or recommended mitigation measures may not be as effective as the analysis assumes. In response to this concern, the revised DEIR contains a number of mitigation measures to ensure that noise impacts will be reduced to acceptable levels.

Mr. James S. Woollacott, Mayor of City of South Pasadena

G-2 Comment: Consideration also should be given to quieter transit vehicles, using rubber-tired wheels, not metal; and because of the frequency of trips during the rush hours, lines should be routed through areas where noise will least disturb residents, e.g., through commercial, industrial, and less densely inhabited sections.

Response: Comment noted. The LRT's that will be operating on the proposed transit line will be relatively quiet. The major noise impact is related to frequency of trips, not the actual noise

generated by the individual vehicles. The technology has been assumed to be the same as the Long Beach/Los Angeles Blue Line, since the Blue Line may directly extend to Pasadena. As a result, using rubber wheeled vehicles would have little bearing on the noise impacts expected to result from the proposed project.

Mr. Robert Niccum, Director of Real Estate, Los Angeles Unified School District

G-3 Comment: Noise impacts will be substantial on several schools, including Loreto, Ann Street, Huntington Drive, Arroyo Seco, Griffin, and Hillside. We request that measures of ambient noise be taken in the classrooms of these schools which are located closest to the selected alignment before and after project implementation. Where soundwalls are not built for schools adjacent or within 250 feet of the light rail, and where noise levels rise above the recommended criteria for schools (65 Ldn) with the implementation of this project, other mitigation measures should be provided. Among measures to be considered, in conjunction with district staff, are construction of solid walls along school property, double glazing of classroom windows, and additional insulation of buildings for soundproofing.

Response: Comment noted. Potential noise impacts of the LRT operations on nearby schools were investigated as a part of the noise and vibration impact analysis. The only school where significant noise impacts were identified (due to project implementation) was the Stancliff school, a private school immediately adjacent to the right-of-way. Appropriate noise mitigation measures were recommended for this location.

Of the other schools to which the comment refers, distance to the rail line, the masking effect of traffic noise sources, and/or the shielding provided by intervening buildings will reduce LRT noise levels to insignificant at Hillside, Griffin, Huntington Drive, and Loreto schools. The buildings of the Ann Street school are set back nearly 200 feet from the proposed North Main Street alignment, resulting in no project noise impact. The Arroyo Seco Alternative school is located in a portion of the route where the alignment is in a cut some 15 feet deep. The natural noise barrier formed by the depressed rail configuration will adequately attenuate LRT noise levels, so that no soundwalls are needed in this area.

The ambient noise measurements obtained near the Ann Street school (location S3) and the Arroyo Seco school (location S5) were used as the baseline to access noise impact. No noise impacts were identified at these locations.

Mr. T. A. Nelson, Consulting Engineer, Transportation Consultant

G-4 Comment: Page 4-79 and elsewhere--Report writers persist in subverting the term "sound level" by labeling it "noise level" which has an undesirable connotation.

Response: Comment noted. Noise is defined as unwarranted sound and for this reason, the analysis utilizes the term noise level instead of sound level.

H. COMMENTS AND RESPONSES RELATED TO AIR QUALITY IMPACTS

Mr. Kenneth Topping, Planning Director, City of Los Angeles

H-1 Comment: The air quality analysis should be expanded. The air quality analysis focuses upon existing conditions, but fails to project the future conditions. This omission must be corrected in order to demonstrate the regional air quality impact of the project.

Response: Section 4.4 of the revised DEIR discusses air quality impacts associated with operation of the proposed LRT. The analysis in the revised DEIR quantifies future emissions due to power generation and mobile emissions in the vicinity of those stations where park and ride facilities will be required. Provision of this project will aid in improving regional air quality by reducing the total vehicle miles traveled.

Mr. T. A. Nelson, Consulting Engineer, Transportation Consultant

H-2 Comment: Page 2-8--The contribution of a light rail system to long-term stationary emissions from off-site electrical power generation will be small compared to that due to electrical load growth from a combination of other sources. Theoretically, there would be a reduction in electrical energy use and emissions at petroleum refineries due to decreased motor vehicle operation.

Response: Comment noted. While fuel oil would be consumed in those plants using fossil fuels providing power to the LRT, a substantial amount of fossil fuel savings would be realized as a result of reduced vehicle trips from those patrons using mass transit.

I. COMMENTS AND RESPONSES RELATED TO CULTURAL RESOURCE IMPACTS

Mr. Jay Oren, Architect, Cultural Affairs Department, City of Los Angeles

I-1 **Comment**: The proposed project will have some impacts on several existing Historic-Cultural Monuments (HCM). The Masonic Temple-HCM 282, the Morrell House-HCM 379, the Reeves House-HCM 380, and the Santa Fe Arroyo Seco Railroad Bridge-HCM 339 are all on or near the rail lines.

Response: Comment noted. The potential impacts on existing historic cultural monuments including the Santa Fe Arroyo Seco Railroad Bridge are clearly stated and discussed in Section 4.14 of the revised DEIR. LACTC will work with the Cultural Heritage Commission to ensure an acceptable solution to any required structual change to the bridge. No other historic/cultural monuments were found to be directly impacted by the LRT.

J. COMMENTS AND RESPONSES RELATED TO UTILITIES IMPACTS

Mr. T. A. Nelson, Consulting Engineer, Transportation Consultant

J-1 **Comment**: Page 4-113 and elsewhere--The term "energy consumption" is incorrect and should be "energy use." Energy can neither be created nor destroyed, only converted.

Response: Comment noted.

J-2 **Comment**: Page 4-114--By the time this project is completed, Los Angeles basin electrical power generation will most likely be significantly less than 20 percent due to the retirement of old generating units, new AQMD regulations, and new out-of-state power generation coming on line, such as the White Pine Project in Nevada.

Response: Comment noted. The revised DEIR assumed a worse case scenario where all of the electrical power generation is generated by existing plants.

Mr. Edward Karapetian, Manager of Environmental and Governmental Affairs, Department of Water and Power, City of Los Angeles

J-3 Comment: We would like to recommend the following clarification of Section A on page 4-113. The Los Angeles Department of Water and Power (Department) will provide power to those parts of the project within the City of Los Angeles. Areas outside Los Angeles will be supplied by the electrical utility franchised to that region.

Response: Comment noted. The above correction has been noted in the FEIR. Outside the City of Los Angeles, electricity will be provided by Southern California Edison and City of Pasadena.

J-4 Comment: Electric service within the City of Los Angeles will be provided according to the Department's rules and regulations. Distribution facility construction may cause limited temporary impact on the surrounding communities in the form of unavoidable noise, air pollution, and traffic congestion during construction.

Response: Comment noted.

K. COMMENTS AND RESPONSES RELATED TO SAFETY IMPACTS

Ms. Gloria Molina, City of Los Angeles Councilwoman, 1st District

K-1 Comment: The DEIR needs to more thoroughly discuss safety measures which will be effective in ensuring the safety of school children crossing the LRT tracks.

Response: Section 4.10.C (Schools) has been expanded to include a discussion of measures which will be implemented to ensure pedestrian safety at LRT crossings. The key component of any program to ensure the safety of school children interacting with the LRT will be an extensive student safety educational program. Similar to LACTC's Travis safety programs implemented for

LACTC's other rail projects, Commission staff will work closely with students, teachers, administration, and parents to improve their understanding of the LRT during construction and operation.

Along the Long Beach LRT, the school district's existing crossing guards program with the City of Los Angeles was revised to cover crossing at LRT tracks. A similar program revision could be implemented for this project.

Mr. S. E. Rowe, General Manager, Department of Transportation, City of Los Angeles

K-2 Comment: The provision of security personnel and lighting at stations and park-and-ride lots is essential and needs to be addressed in the DEIR.

Response: Section 4.10 of the EIR includes additional security measures which will be included at stations and park-and-ride facilities.

Mr. Garrett W. Zimmon, Captain, Planning and Research Division, Los Angeles Police Department

K-3 Comment: The following mitigation measure should be added to the DEIR to ensure the safety of police personnel within the underground portion of the system: two-way voice and digital communications capability for Los Angeles Police Department personnel within the underground portion of the system.

Response: The recommended mitigation measure has been added to the EIR (Section 4.10) and Table 2-1 of this document.

Mr. Robert Niccum, Director of Real Estate, Los Angeles Unified School District

K-4 Comment: Where at-grade alignments are unavoidable, please consider adding to your general safety-related mitigation measures a provision that light rail vehicles traveling at-grade reduce speed during hours that children are walking to and from school and to and from school bus stops.

Response: Comments noted. The vehicles will operate according to stringent safety guidelines and regulations established by the LACTC in compliance with the California Public Utilities Commission.

K-5 **Comment**: One area of particular concern is Marmion Way. Because many students will be crossing these tracks enroute to and from Monte Vista Elementary and other schools, we ask that you review your suggestion that railroad gates, flashers, and bells be removed. Sound walls at these locations seem necessary, but they might block visibility. Will crossing guards be needed at each of these intersections to mitigate the risk of a pedestrian/LRT accident? Are there other measures (i.e., gates placed along the sidewalks only) which could be implemented to mitigate this risk?

Response: Comment noted. The LACTC will continue to work with LAUSD to resolve this issue and any additional safety issues and problems which may arise in subsequent phases of design, construction and operation. Bells were omitted due to their adverse impacts on adjacent residences. Marmion Way and LRT intersections will be lighted like any other intersection with red/green lights and walk/don't walk indicators. Light rail vehicles will travel through this segment at speeds similar to an automobile for safety and noise reasons. LACTC recognizes that the sound walls may block visibility and will work with Marmion Way residents and school officials to identify an appropriate wall height and design. Crossing guards may be provided as part of the district's crossing guard program.

K-6 **Comment**: Once the alignment is selected, we request a meeting with LRT planners to jointly determine which student pedestrian routes will be affected, and to request crossing guard study for the intersections which are adversely impacted by the LRT.

Response: Commented noted. See responses K-1 and K-8.

K-7 **Comment**: Because the project, especially if it includes at-grade alignments, impacts so many schools and students, it is difficult to anticipate all safety-related impacts. We, therefore, request that you add to your list of mitigation measures the provision that once the LRT is put

into service, LRT planners meet annually with school district staff to assess problems, and to recommend the implementation of additional mitigation measures, if necessary.

Response: The LACTC will continue to meet with any affected agency to review project plans, proposals, and ongoing activities related to the construction of the proposed LRT facility. As with the Commission's Long Beach transit project, a formal process for meeting with the school district will be established. Operational impacts will be monitored by and responded to by the operator, Southern California Rapid Transit District.

K-8 Comment: Another factor of great concern to us is safety during tunneling. Because tunneling might disturb subsurface gas and trigger an explosion or fire, the school district wants to be specifically advised of the LRT's schedule for tunneling when it occurs within one-fourth mile of any school or other district property. Notification should be provided, in writing, if possible, to the California Environmental Quality Act Officer of the Los Angeles Unified School District and to the principal of any school impacted. It seems likely that such notice will be needed for tunneling near Castelar Elementary, Evans Community Adult School, and the Administrative Offices at 450 North Grand.

Response: A mitigation measure has been added to the Section 4.8 of the FEIR specifying appropriate notification of the LAUSD prior to tunneling activities along the corridor as stated above in the above comment.

L. COMMENTS AND RESPONSES RELATED TO AESTHETIC IMPACTS

Mr. S. E. Rowe, General Manager, Department of Transportation, City of Los Angeles

L-1 Comment: Since Huntington Drive is a beautifully landscaped, divided highway, integration of its features with LRT construction requires additional analysis, discussion, and design coordination with city staff.

Response: Comment noted. The revised DEIR recognized that the construction of the proposed North Main Street alignment will represent an unavoidable significant adverse impact in terms of

aesthetics. While that portion of the North Main alignment along Huntington Drive will be at grade, the alignment will be located in the median of the roadway.

Lincoln Heights Preservation Association

L-2 **Comment**: The DEIR does not adequately address aesthetic impacts created by such things as overhead wires, fences, soundwalls, landscaping and graffiti. Therefore, we suggest the following be included in your EIR and implemented:

1. All utility wires should be underground and where possible existing overhead ones should be converted to underground.
2. All sound walls and fences should have bushes and vines in front of them to function not only as landscaping but as an anti graffiti measure.
3. Wrought iron fencing rather than chain link should be used.
4. Any arroyo stone which is affected should be replaced.
5. The stations should reflect the character of the local neighborhood. To ensure that this is accomplished, a design-advisory committee should be formed with members from the Lincoln Heights Preservation Association, the Mt. Washington Association and the Highland Park Heritage Trust.

Response: Comments noted. LACTC has incorporated a number of the above recommended mitigation measures into those measures included in Section 4.12. Station design is the focus of mitigation measures 1 and 2 and landscaping is identified in measure 3. Additional design measures will be identified during the final engineering and design phase following the selection of the preferred alignment and related stations. In addition, the Commission's Art for Rail Transit Program will further enhance the stations. Station art works will be selected by a neighborhood based review process.

Mr. Richard Wright, Chairman, Light Rail Committee, Mt. Washington Association

L-3 **Comment**: The DEIR does not adequately address the aesthetic impacts, including the overhead wires, fences, and soundwalls. An irrigation system should be installed and plants placed to screen the industrial features. Vines or bushes must be planted in front of all sound walls as

graffiti prevention. Utility wires must be buried in every possible instance. The irrigation system and landscape mitigations (for the entire right-of-way, not just the stations) must be included in the project at this time. An excellent mitigation would be the planting of trees or tall bushes along the north/west of the right-of-way. This would create a parkway feeling along Marmion Way.

Response: The revised DEIR recognized that the LRT facility will require equipment (soundwalls, fences, etc.) which will represent localized aesthetic impacts. The mitigation measures identified in Section 4.12 will ensure that potential aesthetic issues and problems are identified and resolved as planning and engineering proceeds. LACTC staff will continue to work closely with the community during all phases of project implementation.

L-4 **Comment**: The modification on the retaining wall at the north corner of Marmion Way and Mt. Washington Drive must be done in a visually pleasing manner. The Arroyo stone wall must be replaced as it is historically significant.

Response: Comment noted. If the project impacts this wall, it will be replaced in an appropriate manner.

L-5 **Comment**: The design of the stations should reflect the character of the local neighborhood as much as possible. In order to mitigate the aesthetic impact, each station must harmonize with the immediate area. The local residents should have input into the station design.

Response: The LACTC will work with local communities to ensure station design is sensitive to the surrounding area. Mitigation measure number two in Section 4.12 states that, "Community workshops will be performed to provide input during the design of individual stations". See also response L-1.

Mr. Richard Willson, Associate Professor, California State Polytechnic University

L-6 **Comment**: The draft EIR does not provide the reader with enough detail about certain likely impacts. The type of fencing (if any) that will be provided along the route. Will it restrict pedestrian crossings? What will its visual impact be? Will there be significant community and/or visual impacts?

Response: The revised DEIR recognized that the LRT facility will require equipment, including fences and soundwalls, which will result in localized aesthetic impacts mitigation measures discussed. The mitigation measures identified in Section 4.12 will ensure that potential aesthetic issues are identified and resolved as planning and engineering proceeds. Fencing will be built to restrict pedestrian crossing to safe, controlled places. In addition soundwalls may be required along some right-of-way sections. The LACTC will work with the community to minimize the aesthetic impacts from all support facilities. Also refer to response L-1 above.

M. COMMENTS AND RESPONSES RELATED TO ECONOMICS/SOCIOECONOMICS IMPACTS

Mr. Abraham Falick, Chairman, Coalition for Rapid Transit

M-1 **Comment**: The EIR lacks socioeconomic analysis and a sense of transportation strategy. Engineers and physical planners are plainly making these socioeconomic decisions for which they are not well prepared.

Response: The revised DEIR addressed economic issues in the discussion of existing land uses in Section 4.1; the project impact on development projects in Section 5.0; and future land use impacts in Section 9.1.

M-2 **Comment**: Economic concerns are scarcely recognized in the EIR except as an excuse not to do something: "phased development," or construction of the Highland Park line in four short sections, is "due to fiscal constraints" (page 3-14). The avoidance of a crucial stop at Union Station is because the "station would be about 74 feet deep" and, therefore, more costly (pp 2-3 Initial Study, in appendix). No mitigation measures for these economic environmental impacts are offered, although the SCRTD letter of July 21, 1988 (in appendix) clearly suggests joint development as a means of supplementing (or "leveraging") the money obtained via Proposition A funding.

Response: Funding availability for a project of this scale is a crucial issue. A financial plan for the next 30 years is in the process of being developed and will address economic policies beyond the scope of this project. In implementing any rail project, the Commission will seek ways of supplementing or leveraging its funds.

N. COMMENTS AND RESPONSES RELATED TO CUMULATIVE IMPACTS

Mr. Gilbert Lindsay, City of Los Angeles, Councilman 9th District

N-1 **Comment**: The DEIR identified 25 development projects proposed, approved, or under construction located within a 1-block radius of the alignments considered. Seventeen of the 25 projects are located in the downtown area. Also an additional 57 projects identified within one-half mile of this 48 were located in the civic center. Of the potential adverse impacts of the LRT project, those relating to possible disruptions to existing facilities and proposed developments are of particular interest. A more thorough discussion of how these projects will be affected by the proposed project and alternative mitigations should be incorporated in the EIR. Also, a principal focus should be the cumulative impacts the project may have given the significantly high number of other construction projects.

Response: Until a final alignment is selected and additional engineering and design studies for the alignments are completed, the precise configuration of stations, traction power substations, and other facilities cannot be identified beyond the level of detail presented in the EIR and accompanying appendices. Direct impacts will only occur where stations and other facilities will be located on or near sites where a related project has been identified. These impacts are due to construction, land acquisition, or related to the integration of the station facility into the overall project design. The project site plan which is an appendix to the EIR indicated areas where property acquisition is anticipated as does Table 4.1 in Section 4-1. The sites identified in Table 4-1 are also cross-referenced with drawings included in the project site plan. This LRT project, along with other transit improvements, will be effective in reducing traffic and related impacts on mobility and air quality resulting from the implementation of the identified development project.

O. COMMENTS AND RESPONSES RELATED TO COST AND PATRONAGE IMPACTS

Mr. Gary Spivack, Director of Planning, Southern California Rapid Transit District

O-1 Comment: The District supports the Commission's decision to prepare supplementary information to provide the public and reviewing agencies with capital and operating cost and patronage data not contained in the DEIR. It is recommended that the patronage data include estimates of mode of arrival if possible.

Response: Comment noted. Ridership forecasts including mode of access were prepared for each station by SCAG and are included in the Appendix G to this report.

Mr. Donald F. McIntyre, City Manager, City of Pasadena

O-2 Comment: The cost of constructing the Main Street alignment from its terminus in El Sereno north of the junction of the Santa Fe right-of-way/I-710 (end point for the Highland Park alternative) should be included in the cost analysis to more accurately compare alternative alignment construction costs, since either alignment is to eventually end in Pasadena.

Response: Tables 3-6 and 3-8 in the revised DEIR indicated the estimated costs for the alignments presently under consideration. The engineering and planning studies undertaken as part of this project for the proposed North Main Street alignment did not extend beyond the proposed terminus at the Poplar/Horne station. Analysis of costs for alternative lines following I-710 is outside the scope of this project. Table 6-1 (Third column) includes a cost estimate of the various route alternatives considered in earlier route refinement studies.

O-3 Comment: An analysis of construction costs should be included for each segment of the alternative alignments so that the public and decision-makers are able to determine how far north from downtown Los Angeles the light rail line can be constructed with the limited funds available. Analysis should identify for each alignment, the least and most costly routings, and show the distance in miles of construction achieved by increments of $100 million.

Response: A detailed analysis of construction costs has been included in the revised DEIR in Tables 3-6 and 3-8 in Section 3. Total project costs and total costs per mile are identified for each alignment option facilitating cost comparisons. Line lengths are also presented so that construction miles achieved per $100 million or any other increment is easily derived.

Mr. Kenneth Topping, Director of Planning, City of Los Angeles

O-4 **Comment**: Cost and patronage data for all alternatives should be included in the DEIR in order to give the decision-makers and the public a more complete understanding of the project's long-term viability and its impacts.

Response: Patronage data has been included in the revised DEIR in Table 3-6 and 3-7 (see Response O-3).

Mr. John Tuite, Administrator, Community Redevelopment Agency, City of Los Angeles

O-5 **Comment**: Nowhere in the DEIR is there a discussion of the patronage and cost associated with each of the various alignments/options. Such information is vitally important for reviewers to assess the relative merits of each alignment alternative and/or option.

With specific regard to patronage forecasts, the patronage information developed by LACTC should accurately reflect the significant land use development that will occur in Downtown over the next 10 to 20 years. Bunker Hill, in particular, is planned to reach nearly 18 million square feet of both commercial and residential development by the year 2000. We are very concerned that your current patronage analyses does not factor in such significant land use changes and, therefore, may underestimate the patronage potential for proposed stations in the Bunker Hill vicinity. This concern about underestimated patronage applies likewise to proposed stations in other areas of downtown.

Response: Cost and patronage data have been included in the revised DEIR. In developing the project's patronage figures, SCAG used a regional model incorporating route elements including length of the route, number of stations, resulting travel times, and alignment characteristics. Area density was reflected in alignment characteristics. Each station's characteristics were also figured

into the patronage forecasts. Because the Bunker Hill station is 90 feet below street level, patronage was limited by the access time from platform to street level. This depth was viewed as impacting travel time and the station's perceived accessibility.

Mr. Kevin J. Murphy, City Manager, City of Alhambra

O-6 Comment: The City of Alhambra strongly supports the North Main Street alignment alternative. This alternative is considerably shorter than the Highland Park route and, according to best estimates, will cost approximately $79 million less to construct. Furthermore, the North Main Street route will tie in with the extension of the Long Beach Freeway, making this option more logical from a transportation planning point of view. Finally, the North Main Street option will better serve the City of Alhambra which is heavily dependent on public transportation.

Response: Comment noted. Cost estimates for all of the alignment options are presented in this revised DEIR. While the construction cost for the Highland Park alignment is greater overall when, compared to the proposed North Main alignment, the cost per mile is less for the Highland Park alignment (refer to Table 3-6). This is due to the fact that the Highland Park alternative is approximately 15 miles in length while the North Main Street alternative is only approximately 6.5 miles.

SECTION 4

COMMENTS AND PREPARERS RESPONSE TO COMMENTS ON THE REVISED DRAFT ENVIRONMENTAL IMPACT REPORT

This section contains a summation of comments received on the Revised DEIR circulated during December 1989 and January 1990. The revised DEIR contains an expanded Highland Park alignment which will now extend beyond South Pasadena (the earlier terminus) through Pasadena to Sierra Madre Villa. In addition, two downtown options for the Highland Park alignment were added which will connect with Union Station.

A Comments and Responses Related to Project Design Impacts and Configuration
B Comments and Responses Related to Land Use Impacts
C Comments and Responses Related to Circulation Impacts
D Comments and Responses Related to Parking Impacts
E Comments and Responses Related to Cultural Resource Impacts
F Comments and Responses Related to Utilities Impact
G Comments and Responses Related to Safety Impacts
H Comments and Responses Related to Aesthetics Impacts
I Comments and Responses Related to Patronage/Cost Estimates
J Comments and Responses Related to Noise Impacts
L Comments and Responses Related to Public Services Impacts
M Comments and Responses Related to Impacts on the Earth

A. COMMENTS AND RESPONSES RELATED TO PROJECT DESIGN IMPACTS AND CONFIGURATION

Ms. Gloria Molina, Los Angeles City Council Member

A-1 **Comment**: As I stated in my previous letter, a station within Chinatown must be included in this proposed regional transit system. The revised DEIR presents two options (No Subway and 2nd Street/Union Station) that place the light rail station away from the Chinatown commercial core. If the station is moved from Chinatown, who will benefit, and how does it encourage increased ridership for those who live and work in Chinatown, and those who wish to patronize its businesses? Finally, how will the station, the associated track, and the necessary parking, if any, be incorporated with any proposed development around the adjacent property?

Response: Both of these alternatives require moving the Highland Park alignment towards Union Station away from the existing commercial core of Chinatown. Chinatown would be served by Second Street/Union Station alignment with the station located at College and Spring and by the Union Station "No Subway" alignment with the station located north of College and Alameda. These two stations, are not as centrally located in Chinatown as is the station proposed at Broadway and Alpine which would serve the other Highland Park alignments. Locating a station at College and Alameda reflects alignment requirements, but also reflects a trade-off between serving both the existing core and future development of Chinatown. Any development of the currently vacant land should be required to accommodate the LRT track as well as a future station. No long-term parking is proposed at this station; drop-off parking would need to be accommodated.

A-2 **Comment**: The revised DEIR suggests in its two options that the rail line could be aligned along either the west or east boundary of the rail yard. Either alignment will have impact on the future development of this property which is currently for sale and is one of the last pieces of open space left for future growth in the Central City North area. Any evaluation on the placement of the rail alignment along either the west or east boundary of the rail yard needs to be discussed in conjunction with all the other related development issues in the area.

Response: The two alternatives for the Southern Pacific railyard were identified based on LACTC's understanding of future development that may occur on this site. During the DEIR and revised DEIR design phases, no development plans were available, so the alignments were indicated along either site boundary to leave a majority of the site intact for future development. The decision on the final location of the rail lines would be made during the final design phase of the transit project in consultation with the community and developer. Neither alignment alternative has significantly different impacts on this vacant site. Only after the proposed development is better defined will an environmentally superior alignment become evident.

A-3 **Comment**: The No Subway option requires the construction of a maintenance and overnight storage facility. My original letter detailed some of my concerns regarding this matter. I am concerned that this larger facility will have an even greater impact on the adjacent community. The impact this facility will have needs to be fully discussed, and all appropriate mitigations put forth. In addition, what are the costs versus the benefits in constructing and operating such a facility as opposed to having the Northeast Line connect with the Long Beach Line and to having a smaller light maintenance and overnight storage facility?

Response: The "No Subway" alternative will require full maintenance and storage facilities since there will not be a direct connection with the Long Beach line's maintenance and storage facilities. The two sites being considered to provide maintenance facilities for this option are discussed in Section 3.4.B of the EIR. Both sites are located along the Los Angeles River above North Broadway and far removed from Chinatown. The "No Subway" alternative would be primarily served by a maintenance facility to be located north of I-110 between the Los Angeles River and San Fernando Road. The proposed site is an existing railyard with adjacent industrial uses, so no conflict with surrounding uses is anticipated. The costs of the "No Subway" alignment are compared to the other alignment alternatives in Tables 3-6 and 3-8. There is some cost savings from connecting with the Long-Beach line and sharing maintenance facilities, but the savings is minimal when compared to overall project costs. The primary benefit of the connection between the two lines is that it provides more operational flexibility.

A-4 **Comment**: The two options discussed in the revised DEIR suggest that the two rail lines could be operated separately, with a connection added later. If we are attempting to develop a regional transit system, it must be explained how these two lines will be connected, where the

connector rail alignment will be located, when the connector route will be completed, and at what cost.

Response: During project scoping discussions, the Commission made the policy decision not to address the possible future extension of the Union Station-No Subway option to the Seventh and Flower station as part of this project. Connection options should be identified based on future transit needs. Preliminary engineering studies ensured that a future guideway crossing over the Santa Ana Freeway would not be precluded. Identification of project costs for this future connection requires detailed engineering analysis and environmental clearance which were considered to be outside the scope of this project. Construction of this connection is tied to future transit needs and to the availability of future funds. The Commission is preparing a financial plan for the next thirty years to better understand the availability of future funding for rail projects.

The connection between the two lines should be provided when downtown patronage approaches patron capacity available in existing stations and vehicles. As long as Union Station remains the first stop on the Red Line, station capacity due to Blue Line interface will not be a problem since vehicles beginning their run from Union Station will be empty. With the extension of Metro Rail to the east, Union Station capacity may become constrained. Red Line eastern extension studies will include a detailed patronage capacity analysis of Union Station Necessary improvements, including a potential connection to Seventh and Flower, will be identified.

A-5 **Comment**: With the elimination of the South Pasadena rail station, the Northeast line may end at the last stop in Highland Park. I am extremely concerned about using this stop as the end of the line, even on an interim basis. Before any discussion of using this site as the interim terminus, several important questions must be addressed. These include the availability of street access, adequate off-street parking, availability of sufficient space for the station, and adverse impact on the surrounding neighborhoods and businesses, i.e., increased noise and traffic congestion.

Response: Interim phasing impacts asociated with the phasing of each proposed route are discussed in Section 4.2 of the EIR. Based on this analysis, the phase 3 terminus at the Avenue 57 station is likely to result in additional traffic and traffic-related impacts than would be anticipated if the alignment continued on through Pasadena. This station was selected for a variety

of reasons including land availablity for future parking and access to Figueroa via Avenues 57 and 58. If the project is constructed through phase 3, all mitigation measures identified for the entire project plus mitigation of the Figueroa/Marmion/Pasadena intersection should be implemented to reduce traffic impacts, discourage spill over parking and encourage the use of alternate forms of transit to reach the LRT stations.

Mr. Samuel G. Knowles, Mayor, City of South Pasadena

A-6 Comment: The City of South Pasadena requests that development of the station serving the city, whether at the Mission/Meridian location or at the Fair Oaks War Memorial Hall site, be undertaken in full coordination with the proposed development of the proposed local circulation/feeder transit system to be developed by the city using Proposition A funds. This will encourage transit usage and provide mutual reinforcement for the two systems.

Response: Comment noted.

A-7 Comment: The city fully intends to work cooperatively with the Commission in the design of the proposed station structures and in the design for the traction power substation to be located on Monterey Road in order to assure design integrity and compatibility with adjacent development.

Response: Comment noted. Mitigation measures identified in Section 4.12 of the revised DEIR underscore the LACTC's desire to construct stations that are compatible with the surrounding community and to hold community workshops to obtain input concerning station design.

Mr. Donald F. McIntyre, City Manager, City of Pasadena

A-8 Comment: The City Board of Directors support acquisition and use of the Santa Fe right-of-way from downtown Los Angeles to Pasadena for light rail transit. The City restates its preference and support for the Santa Fe railroad/I-210 alignment as embodied in the Highland Park Alternative presented in the Revised DEIR. The City Board of Directors supports extension of the Pasadena-Los Angeles light rail transit line east of Pasadena at the earliest possible date. The City Board of Directors supports construction of the Pasadena-Los Angeles light rail transit

line from the 7th and Flower station north of Pasadena to protect the regional connectivity of the system and to facilitate passenger transfers.

The Board of Directors supports environmental clearance of all nine station sites in Pasadena with final selection of stations to be made in conjunction with the City. The Board of Directors also supports equal consideration of all nine passenger light rail transit stations in the DEIR and not eliminating any stations until all aspects of each station are fully evaluated. The Board of Directors note that security at stations and on vehicles continues to be a matter of considerable community concern in Pasadena, as reflected in the City's light rail route refinement final report. The City fully supports the development of the proposed light rail transit line along the Highland Branch alignment. This alignment shows the maximum benefit to the City of Los Angeles, as well as to the City of Pasadena to the north. Ridership is maximized on this alignment.

Response: Comments noted. All nine passenger transit stations will be environmentally certified in the FEIR. LACTC will work with the City of Pasadena to identify up to six stations that will be constructed as part of this project.

A-9 Comment: Further, the city would urge, funds permitting, that the Pasadena line be connected directly to the Los Angeles-Long Beach "Blue Line" to serve the significant number of potential riders from this part of the county working in the LAX/El Segundo area to be served by the Century Freeway, "Green Line." Ending the Pasadena line at Union Station would necessitate one or even two additional transfers, thereby effectively reducing or eliminating the attractiveness of rail transit for this lengthy commute.

Response: Comment noted. Connection of this project with the Los Angeles-Long Beach line is discussed in Sections 2 and 3 of the EIR.

Mr. William McCarley, Los Angeles City Council, Chief Legislative Analyst

A-10 Comment: Since the advent of the "No Subway" variation, the affected Council Members, City departments, and this office have repeatedly requested that the LACTC assure that this alignment can be connected to the 7th and Flower terminus of the Long Beach line, and how and were under the impression that the Commission agreed in June to address these questions. The

DEIR, however, only states that "a connection could untimately be constructed" and "the design would not preclude such a future connection."

These are not adequate responses to the City' concerns. In order for the City to consider the proposal to construct the line north from Union Station first, we must have adequate information as to how the line could be connected to 7th and Flower; and some idea of the circumstances and the funding alternatives and priorities under which is would be constructed.

Response: Selection of the preferred project alignment by the Commission must balance a complex set of regional and local issues including:

- Equitable provision of regional transportation improvements
- Funding constraints
- Ultimate responsibility to implement the Prop A corridor plan.

A financial plan for next 30 years is being prepared for the Commission which will clarify funding availability and provide a basis for defining project priorities. While each city is, and should be, a strong advocate for their own needs, the Commission must balance all of the transit requirements in a regional context.

When the Commission made the decision to reissue the DEIR with revised alignment alternatives, the Union Station "No Subway" option represented a surface transit route north to Pasadena with no subway alignment through downtown Los Angeles. Preliminary evaluation on extension of the "No Subway" option was intended to ensure that a connection through downtown could occur, but that extension was not intented to be part of this project. Under this option, the decision on the downtown routing would be deferred until the future when downtown's transit needs could be more clearly identified.

A-11 **Comment**: Both the "Second Street-Union Station" and the "No Subway" alternatives place a total of four variations on Chinatown stations in the freight yard area, far from the core of Chinatown. We believe that more design effort and, possibly, slightly higher costs on either of those alternatives could place a station at College and Alameda Streets with a pedestrian entrance oriented toward Broadway, thereby making the station proximate to, and identifying it with,

Chinatown. Should such alterations be made, they should be able to be accommodated with a slight subsequent modification to the EIR. We will work with your staff in the near future to refine these alternatives. Related to this issue, we reiterate Councilwoman Molina's concerns expressed in her September 22, 1989 letter, that the rail alignment through the rail yard area is crucial to future development of this property. The DEIR does not integrate the issue of rail alignment with future development of this area.

Response: The EIR analysis focused on those alignment variations that were selected during the route refinefinement phases and following circulation of the first DEIR. We concur that any alterations to those alignments analyzed in this DEIR, including relocating the Union Station alignments nearer to Chinatown, would require subsequent environmental review.
In siting the stations along the alignment variations suggested by other agencies, every effort was made to site and orient a station as close to the commercial core of Chinatown as possible within the engineering constraints. Final station siting will be addressed with input from the community and affected city agencies during the final engineering and design phase.

Future reuse of the existing railyard was considered by the Lead Agency and the engineering consultants in early phases of project design. The alignment may be located on either side of the railyard including the westernmost portion adjacent to Broadway. In this way, the remaining portion of the property will remain vacant and can be developed in the future.

A-12 Comment: As Councilman Alatorre has previously commented, there is a great deal of enthusiasm for all of this project, and it would be unfortunate for the region if the issues involved in this project become defined as "Los Angeles versus Pasadena" or "downtown versus the region." Proper treatment of the 7th and Flower connection, station location, system design and other issues referenced in this letter and the other city communications can help avoid problems and misunderstandings.

Response: Comment noted. Please see response A-10 above.

Mr. S.E. Rowe, General Manager, City of Los Angeles Department of Transportation

A-13 Comment: The construction of the Metro Blue Line and the Red Line necessitated a master cooperative agreement between the city, SCRTD and LACTC to manage and to minimize construction circulation impacts and expedite the city review and approval process. The revised DEIR should acknowledge the need for a similar master cooperative agreement.

Closer review and analysis of the specific construction activities and the phasing and staging of work are necessary in the revised DEIR. The impacts to traffic and the necessity to close major streets should be addressed in more detail. The construction of the Blue Line has significantly affected traffic circulation in the area and hindered pedestrian access beyond the initial estimates of the construction impacts. Many of the earlier detour plans had to undergo major revisions and exceptions to original agreements had to be provided to allow for the construction to proceeded in a timely manner.

Response: A mitigation measure has been added to the FEIR reflecting the need to adopt a Master Cooperative Agreement between the City of Los Angeles, and the LACTC similar to the cooperative agreement adopted for the Blue Line. The agreement would address construction circulation impacts on both traffic and pedestrians as well as definition of the city review and approval process.

A-14 Comment: The Pasadena-Los Angeles project has alignment alternatives near and adjacent to residential areas, night work and weekend work must be properly coordinated or even precluded to reduce impacts to the homes, churches and temples. After a master cooperative agreement is approved, an annual work program must be negotiated with various city departments for design approval, development of traffic control plans, coordination and monitoring of traffic conditions, and for deployment of Traffic Officers during certain critical stages of construction to minimize traffic impacts.

Response: Comment noted. Construction work will be scheduled to minimize impacts on residential areas. The LACTC will cooperate with the City in the development of an Annual Work Program in support of the Master Cooperative Agreement.

A-15 **Comment**: Cut-and-cover construction will have a significant impact on Second Street between Hill Street and Main Street since the street is generally only 36 feet wide. It will be difficult to maintain one lane in each direction with decking on the street, and will likely result in full closure, which is unacceptable. The conversion of Second Street to one-way should be addressed as a possible mitigation measure to accommodate the proposed cut-and-cover construction. As another way to minimize the construction impact, shifting the alignment to the south side of Second Street and extending the tunneling work from the Fourth and Flower Station all the way to the SPTC portal should be addressed in the revised DEIR.

Response: Second Street can be decked in such a way as to maintain some traffic. The extent that traffic can be maintained, or the feasibility of conversion to one-way, can appropriately be addressed during the final design phase, with agreement being reached with jurisdictions at that time as part of the Master Cooperative Agreement. It is beyond the scope of the EIR level of effort to develop specific construction staging and traffic circulation measures.

The tunnel was not extended under Second Street in an attempt to keep the already deep station at Second and Grand (90 feet to 100 feet) as shallow as possible in order to control construction costs and encourage ridership. To have remained in tunnel would have required gaining the sufficient depth to cross under Metro Rail at Hill Street, which would have dropped the Second and Grand Station significantly. In going over Metro Rail, we are shallow enough that the Second Street option remains in tunnel from Main and Second short of the yard in an attempt to reduce the cost of the added station.

Robert Tague, Chief of Operations, City of Los Angeles Community Redevelopment Agency

A-16 **Comment**: Exhibit 4-12 indicates that the subway segment under Flower and Hope Streets would be built using the "cut-n-cover" construction method. We have serious concerns about the potential disrupting impacts to traffic and commercial activities in the downtown core resulting from construction. Current construction of Metro Rail MOS-1 and Long Beach Light Rail has been very disruptive to some sections in downtown especially to retail activity and auto/pedestrian movement. Given this experience, the EIR should fully address these impacts and discuss a more comprehensive mitigation program.

Response: Comment noted. The Master Cooperative Agreement will refine the mitigation measures for construction impacts based on the alignment selected.

A-17 **Comment**: The preliminary station plan for the Hope Street Light Rail Transit Station locates an entrance in the Music Center plaza. We believe strong consideration should be given to the inclusion of a second entrance in the baseline system design because of the current and projected employment in nearby Bunker Hill and Civic Center Mall. If located near the intersection of First and Hope with an orientation primarily towards the First Street corridor, this entrance could attract more patronage to the system. Coordination with on-going plans for the Walt Disney Concert Hall will be necessary.

Response: Comment noted. Balancing of system-wide requirements and funding availability limits provision of a second portal at this location as part of the project. The station would be designed to allow for provision of additional entrances by future development. LACTC welcomes the cooperation of the Community Redevelopment Agency in the planning and development of an expanded station facility at this location.

A-18 **Comment**: The preliminary plan and profile supplement to the EIR identifies two alternative at-grade station locations for Chinatown. We realize that there are certain constraints limiting the location of the Chinatown station under this option and, should this option be selected, we would like to work with LACTC staff/consultants to improve the station design so that it will serve the commercial core of Chinatown. This could include other station profile configurations.

Response: Comment noted. The Commission will seek input from affected community members and city agencies in the design of stations in the final design and engineering phase of this project.

A-19 **Comment**: We are pleased that the Second Street option now incorporates an LRT station at Union Station. In reviewing the preliminary plan and profile supplement to the EIR, however, we were unable to locate the entrance to the LRT station (sheets 16 and 89). We continue to believe that Union Station will be an important regional transportation hub and that connections between modes at Union Station will require careful planning.

Response: Comment noted. The precise configuration of individual stations will be developed in subsequent phases of planning and engineering with input from affected property owners, city agencies and the community.

A-20 **Comment**: Concerning the No Subway option, there should be a complete discussion of how and when a direct connection between the proposed Pasadena-Los Angeles LRT line and the Long Beach-Los Angeles lines could be accomplished. Should this be accomplished by an extension from Union Station, a description and/or illustration of how the route alignment option would crossover the El Monte Busway and 101 Freeway and link into the 7th-Flower Station should be provided. Or, alternatively, identify how other alignment configurations could, under the No subway Option, allow for future connection the 7th and Flower Station from the Pasadena line. For example, some options which use an alignment northwest of the rail freight yard could allow for an extension which connects to the Chinatown option. Under this alternative, the No Subway link could become a spur, or be abandoned. The range planning options should be explored; it is important that viable options not be precluded by short-term decisions. There should also be included a projection or forecast as to when this direct connection to Seventh and Flower (if the no subway option is selected) would be necessary or desirable: determining if and when the Metro Rail subway segment from Union Station to Seventh and Flower would exceed a capacity threshold.

Response: Please refer to response A-4 and A-10 above.

A-21 **Comment**: The EIR should also examine the adequacy of the current Metro Rail station design at Union Station. As the Pasadena line reaches its estimate of 68,000 weekday passengers it could put significant pressure on points of access and loading for the Metro Rail Station. Increased passenger volumes at Union Station resulting from the LRT terminus should be evaluated in terms of both operations and facilities impacts.

Response: Please refer to response A-4 above.

A-22 **Comment**: To date, the actual performance of transportation agencies in mitigating rail transit construction impacts has been mixed. The measures described in previous Rail Transit EIRs have been adequate, but the commitment toward implementation has not been consistent.

There should be an additional mitigation measure committing the LACTC to a cooperative agreement with the City of Los Angeles establishing a schedule of performance for the measures described in the EIR.

Response: Comment noted. Cooperative Agreements with all jurisdictions that the project passes through will be entered into by LACTC. Please refer to response A-13 above.

Mr. Kenneth Topping, Director of Planning, City of Los Angeles

A-23 Comment: The City has prepared special studies in the City North area. Many of the assumptions made will be adversely affected by the proposed alternative alignments. A common component of these special studies is an intricate growth allocation process. The Los Angeles Design Action Planning Team identified several goals for Central City North's future development. These goals and objectives illustrate the dire need for cooperative, continual, and comprehensive planning. The Department of City Planning requests that LACTC establish the aforementioned committees that would have the responsibility of coordinating and integrating all have the responsibility of coordinating and integrating all responsible agencies' concerns and planning efforts. Please coordinate with the city as to how this can be accomplished.

Response: The special studies mentioned were prepared during the circulation of the revised DEIR. Planning studies for this transit project have been underway for over four years and while every effort has been made to access project impact on City plans, future plans are beyond the scope of this project. The comment is unclear in how the proposed LRT project will adversely impact proposals for the future development of the Central City North area. An operational mass transit light rail system will serve as a safe and efficient means of transport for large numbers of people that would work in the planning area. As indicated in previous responses the Lead Agency will continue to work with the City during planning and development phases and following the system's operation.

A-24 Comment: Elaborate on the visual impact of the LRT system in the Northeast Community Plan area, specifically Mount Washington and Highland Park areas. Discuss the socioeconomic impacts that the Pasadena LRT system will have on the neighborhood oriented serving commercial district Discuss the potential growth inducing impacts that could occur in the

areas planned for historical preservation and elaborate on mitigation measures that could be implemented to protect the area from unwanted growth.

Response: Aesthetic impacts are addressed in Section 4.12 of the revised DEIR. The proposed LRT will not be directly responsible for growth nor will it involve any changes in land use entitlements over that presently permitted under local general plans and zoning ordinances. A primary objective of the proposed LRT system is to provide an alternative to the private automobile for commuters and daily trips. Since the City has jurisdiction over zoning, including historic preservation overlay zones, as well as review of rezoning requests and building permits, they will have every opportunity to protect existing commercial districts and residential neighborhoods. Analysis of this project has identified that it will not adversely impact existing historic structures nor will it adversely impact historic preservation efforts.

Mr. Gary Spivack, Director of Planning, Southern California Rapid Transit District

A-25 **Comment**: The SCRTD staff previously reviewed and commented on the notice of preparation (NOP) for the raised DEIR in a letter dated October 25, 1989 at which time we supported the incorporation of the Union Station "No Subway" option as an alternative. The revised DEIR continues to show the Union Station "No Subway" option as an option, however, it is not given equal weight when being presented in various maps and charts. Table 4-3 "Sensitive Land Uses Adjacent to Proposed Project" compares all options except the Union Station "No Subway" option. The environmental impact section indicates that there are no sensitive land uses adjacent to the proposed project for the "No Subway" option. This should be reflected in Table 4-3.

Response: Comment noted. The Lead Agency and the environmental analysis gave equal weight to all of the alignments considered in the revised DEIR. The FEIR notes that the following footnote should be added to Table 4-3:

"No sensitive land uses were located adjacent to the proposed Union Station alignments."

A-26 **Comment**: All of the options that include subway and connect to the current Los Angeles/Long Beach LRT include the subway portion as part of Phase I. In addition to the

phasing included in the revised RDEIR, phasing alternatives that will allow for an even greater flexibility in the use of available funds need to be examined. The alternatives will allow for the construction of the less expensive aerial and at-grade portions before the more costly subway segments. This is especially true for the Highland Park/Second Street - Union Station and the Highland/Union Station - "No Subway" alternatives. The Highland Park/Second Street option would logically terminate a phase at Union Station leaving the subway segment through the downtown area as a final phase.

Response: As presented in Section 3.6, the revised DEIR did include a Second Street-Union Station option that would initially be constructed form Union Station north to Pasadena, allowing the downtown subway portion to be completed in a later phase. The description of the Highland Park "No Subway" alignment in Section 3.6 makes it clear that a future connection with the Long Beach line is possible following the completetion of this alignment alternative.

A-27 Comment: By terminating the early phases at Union Station, the alignment for a second subway system through the downtown area can be reexamined, in the future, with the possibility of extending rail service via subway to the Central City West Specific Plan area and the Central City North study area. Trips to destinations in the downtown area from Pasadena could be completed by bus or by a transfer to the existing Metro Rail system. Those through trips from Pasadena to Long Beach could be accomplished by a transfer at Union Station to Metro Rail and a second transfer at the Seventh/Flower Street Metro Rail/Los Angeles Long Beach Light Rail Station. Leaving the subway segments as a final phase does not preclude their construction in the future.

Response: Comment noted and is in agreement with description of the Highland Park Union Station No Subway alignment.

Mr. Ralph Melching, Resident

A-28 Comment: The Pasadena -- Los Angeles light rail line must, from the start, originate at 7th and Flower, and function as an extension of the Blue Line, now under construction. Terminating the line, even temporarily, at Union Station would reduce, significantly, the

attractiveness of this facility. The Second Street - Union Station option would serve the Union Station transportation center and would better serve downtown Los Angeles.

The choice between the Highland Park and the North Main Street alternatives is an easy one for a Pasadena resident to make, since the North Main route will reach Pasadena only when and if the missing segment of the Long Beach Freeway is completed. The Santa Fe right of way through Highland Park and South Pasadena is now available. The Highland Park Alternative will have significantly less adverse impact than the North Main routing.

There is, however, a possible conflict between the use of the Santa Fe line for an extension of the Blue Line, and its use as a commuter line serving the foothill cities between Pasadena and San Bernardino. In previous discussions of light rail, it was suggested that commuters originating in the cities east of Pasadena could transfer to the Blue line for the remainder of their trip into Los Angeles.

Response: See response A-17 in Section 3, and also A-31 in this section.

Mr. T. A. Nelson, P.E., Consulting Engineering, Transportation Consultant

A-29 Comment: Why was the Union Station "No Subway" option not included with the North Main alternative? A track connection to Union Station at Main Street just north of College Street appears to be possible.

Response: A "No Subway" alternative was selected for the Highland Park alignment primarily in response to requests received from the City of Los Angeles and the Southern California Rapid Transit District. The rationale for the "No Subway" alignment alternative was that it would represent a substantial cost savings by avoiding subway construction in downtown Los Angeles, thus permitting the remaining portion of the Highland Park alignment to be constructed in a more timely manner. It would also allow a project to be constructed to East Pasadena via the Santa Fe right-of-way, since no readily available right-of-way exists between El Sereno and Pasadena, studying a no subway alternative for the Main Street route would not have provided a longer option beyond the terminus included in the DEIR.

A-30 **Comment**: Reference to a yard site north of US-101 is curious (page 3-4). If a geographical tie to a freeway is necessary to describe the location, the vicinity of I-5 and the Pasadena Freeway would be more accurate.

Response: Comment noted. The rail yard in question is located in the vicinity of the Pasadena Freeway and the Golden State Freeway.

A-31 **Comment**: Section 4.2 (pages 4-19 to 4-55) on potential transportation impacts lacks any discussion of the impact caused by the loss of Amtrak train service to Pasadena due to conversion of the Highland Park route to LRT. Also absent is the potential impact from the loss of future commuter rail service between Los Angeles, Pasadena, and cities to the immediate east of Pasadena. Although some right-of-way improvement through Highland Park would be needed for effective commuter rail, eliminating the possibility of this service would be a serious action.

Response: The writer correctly points out that the selection of the Highland Park alignment will require existing freight and passenger rail service on the AT&SF tracks to be discontinued between East Pasadena and Union Station. The revised DEIR also discusses this in Section 4.1. There has been discussion in the past that commuter trains operating from San Bernardino could use the line. The relationship between the proposed LRT and conventional commuter rail service extending to San Bernardino is being considered by the LACTC and other agencies involved in providing regional transit service. It would be possible to re-route commuter and freight trains to other privately-owned railroad routes. See response A-24 in Section 3.

A-32 **Comment**: AT&SF changed the name of its Second Subdivision to the Pasadena Subdivision effective May 15, 1988.

Response: Comment noted. The FEIR will note the above revision.

A-33 **Comment**: The only alignment considered by this report for Pasadena is the one buried in the median of I-210. This route conveniently places the line where it will not bother the status quo, but it provides inadequate service to Pasadena's downtown, commercial center. Nonselected alignments with better local service, such as along Green Street, were rejected by the City of

Pasadena committee because of complaints by automobile-oriented merchants who lack an understanding of LRT's advantages to them.

Response: The Railroad-Foothill Freeway Corridor alignment considered in previous route refinement studies was selected by the LACTC as the revised DEIR alignment for the Highland Park extension through the City of Pasadena. The City of Pasadena along with a citizen's advisory committee, formed for the express purpose of selecting a preferred alignment, determined that the Railroad-Foothill Freeway Corridor alignment was superior due to less displacement impacts and the minimal disruption of the existing circulation compared to the other alignments considered. This alignment is also the most cost-effective and uses existing rights-of-way, a primary guideline for rail transit development adopted in 1980.

A-34 Comment: The I-210 route, as stated in the EIR, has the least disruptive impact; unfortunately, it provides LRT users the poorest local rail transit service.

Response: Comment noted. Final station locations for that portion of the Highland Park alignment in Pasadena have not been selected. Candidate stations are proposed at key locations throughout the city, and station design will attempt to maximize access to the LRT by transit patrons.

Mr. Allan K. Weeks

A-35 Comment: The following errors appear in the revised DEIR: In the "Executive Summary", page 7, Table 3, top of page, the first phase #3 should read phase #2. In the "Book Project Site Plan" (11x17) Sheet 60 is labeled North Main Street Alternative. This map ends on North Broadway so it can't be the North Main Street Alternative. Sheet #88 is labeled 2nd Street Option but I believe it should be labeled Chinatown Option.

Response: The error noted in the Executive Summary also appears in Table 3-8 in Section 3 of the revised DEIR. The heading at the top of column two should read "Phase 2" instead of "Phase 3." The author correctly points out the incorrect labeling of two sheets in the engineering drawings shown in Appendix F.

A-36 **Comment**: Exhibit 3 shows six routes through downtown and Chinatown. Three of them (the Second Street options) cross the Alameda-Macy intersection. One of these three (the Highland Park-Union Station option) shows a stop near Union Station, and the other two do not.

Since Union Station is the terminus of the subway now under construction and is otherwise being promoted as a downtown transportation center, I think all three of the Second Street options should include a Union Station stop.

Response: Comment noted. The LACTC expanded the project description for the Highland Park alignment alternative to include two additional alignment alternatives that would provide a direct connection with Union Station.

Dr. Steven D. Westbrook, M.D.

A-39 **Comment**: The North Main Street alternative should be revised to allow more convenient access to the LAC/USC Medical Center. I think that access to this facility should be a major priority of any mass transit system in this area.

Response: The LACTC, as stated in the revised DEIR, will encourage the development of bus feeder routes and/or shuttle service to and from those stations located nearest the USC Medical Center. LACTC will cooperate with SCRTD, local cities, county service providers, and hospital administrators to examine options for implementing such a system.

B. COMMENTS AND RESPONSES RELATED TO LAND USE IMPACTS

Mr. Samuel G. Knowles, Mayor, City of South Pasadena

B-1 **Comment**: The city recommends that any property acquired by the County Transportation Commission but located outside the sound walls proposed between Mission and Grevilia Streets be either deeded over to the abutting property owners or converted to a bicycle path or other similar use to avoid the creation of an area difficult to maintain and likely to become a nuisance.

Response: Comment noted. Acquisition of property between Mission and Grevilia Streets, other than railroad right-of-way, is not anticipated. LACTC will work with adjacent property owners to ensure residential access will be maintained, to ensure that any resulting impacts on adjacent residential properties will be identified and a visually acceptable solution for the soundwalls will be developed during final design in consultation with the adjacent communities.

Mr. Kenneth Topping, Director of Planning, City of Los Angeles

B-2 **Comment**: Further elaboration is needed to fully analyze the following urban setting issues: How should the Union Station development be related to the overall community as a regional transportation hub? Identify transportation barriers that separates El Pueblo from downtown, Union Station from Olvera Street, Olvera Street from Chinatown, Chinatown from Elysian Park, and the westside of the Los Angeles River from the eastside. How will the Light Rail system improve access between the above mentioned destinations? How should Dodger Stadium fit into the regional transportation planning context of Central City? Elaborate on the above transportation linkage questions.

Response: The visual setting of the light rail system was discussed in Section 4.12 of the revised DEIR. The City of Los Angeles has identified Union Station as the transportation hub of the region. Those alignment alternatives that involve a connection with Union Station will enhance Union Station's function as a transportation hub of the region.

Mr. Robert H. Huddy

B-3 **Comment**: Impacts from the proposed development of Union Station, the Terminal Annex Post Office, and the existing Southern Pacific Railroad Yard property should be factored into the planning process. The land use changes will have significant impacts upon long-term transportation needs in the CBD and present possible joint development opportunities.

Response: The city and county of Los Angeles have identified Union Station as the transportation hub for greater Los Angeles. The Metro Rail connection, the El Monte Busway, Amtrak intercity passenger trains, commuter train connections, and a potential LRT connection will establish Union

Station as a major transfer point in the region. All of these transit improvements will provide excellent regional access to existing and future development in the Union Station areas.

C. COMMENTS AND RESPONSES RELATED TO CIRCULATION IMPACTS

Mr. S.E. Rowe, General Manager, City of Los Angeles Department of Transportation

C-1 Comment: The department supports the installation of traffic signals at intersections crossing Marmion Way, from Avenue 51 to Avenue 60, for safety reasons, as well as to keep the noise down at an acceptable level for the residents in the area. Consideration should be given to closing some cross streets to minimize potential conflict points and signalization costs. In order to keep the noise levels down for the residents along Marmion Way, the LRT speedway must be reduced to street speed, or 30 MPH. However, at that speed, it may not be necessary to have a sound wall. Since the right-of-way is so narrow along Marmion Way, mitigation measures should consider possibilities of planting of bushes and shrubs adjacent to the buildings in lieu of installing walls in the median. Also, if a 6-foot high sound wall is going to be installed the wall heights must be reduced at and near the intersections to improve cross-street visibility of pedestrian and vehicle traffic.

Response: Provision of traffic signals at these locations and closing of streets is discussed in the EIR.

C-2 Comment: There was no specific reference to the VMT reductions for the various alignments; the VMT reductions should be included in the revised DEIR for comparison purposes.

Response: The actual reductions in VMT's can be extrapolated from reviewing patronage data and arrival mode splits for the various stations. Those individuals using parking lots, at a minimum, could be assumed to represent the VMT's reduction due to the operation of the proposed LRT while the total patronage represents the maximum potential reduction. It is likely that persons using the park and ride facilities would otherwise drive their vehicles while transit dependent individuals would use the LRT instead of the bus.

C-3 **Comment**: Although patronage per alignment and per phase had been included in the revised DEIR, boarding and alighting patronage estimates at each station are not included, nor are the estimates of the mode of access included in the revised DEIR. It is puzzling that the Chinatown Option with two less stations in downtown that the Second Street/Union Station Option should have more patronage, and a presentation of the station patronage will help to clarify the issue.

Response: Appendix G identifies station patronage and mode of access estimates. As discussed above, patronage is inversely proportional to length of route and travel time. While additional stations contribute to the patronage, from a regional access viewpoint the China town alignment would attract more patronage due to its shorter and more direct connection to Metro Rail at 7th/and Long Beach line Flower.

C-4 **Comment**: Additional right-of-way for transit-related parking should be acquired as an LACTC project responsibility outside of city parking lot 636, which originally was acquired for use by retail patrons shopping in the vicinity of Figueroa Street near Avenue 57.

Response: Comment noted. Please refer to response number D-3. During the week, this parking lot appears to be underutilized. Shopper access to Figueroa's retail stores will be enhanced by the project.

C-5 **Comment**: A park-and-ride lot for the terminal station near Montery Road and Pasadena Avenue should be identified as a project responsibility of LACTC in order to provide a viable means for patrons to have access to the transit system without intruding into the local residential community.

Response: The terminus station proposed at this location has been eliminated from further consideration since the Highland Park alignment has been expanded so that it now extends the through the City of Pasadena where it terminates at Sierra Madre Villa in eastern Pasadena.

C-6 **Comment**: The DEIR should discuss the impacts of operating North Main Street with one lane in each direction during off-peak periods, since the all-day prohibition of parking would appear to severely impact the viability of certain fronting commercial land uses.

Response: Please refer to comment/response D-7 in Section 3.

C-7 **Comment**: The Department is concerned about the surface street operation due to at-grade crossings for the LRT at both North Main Street and North Spring Street. There are already two at-grade crossings for North Main Street at the Los Angeles River for freight trains, and delays are significant during the peak period. A new at-grade crossing with more frequent LRT crossing would have a significant impact on traffic. To minimize this impact, an aerial configuration of the Union Station "No Subway" option should be addressed, including grade separation of North Spring Street as well. (Also the possibility of providing an aerial station either over the street or on the west side of North Spring Street at College Street should also be reviewed with a direct pedestrian link westerly to Chinatown.)

Response: While it is true that the existing at-grade freight train crossings on North Main Street have a major impact on traffic, the same would not be true for a light rail crossing. A light rail crossing will last approximately 30 seconds, less than a traffic signal change, with a maximum frequency of one passage every 6 minutes per direction during peak hours. Hence, the resulting impact of the LRT crossing should be no greater than that caused by a mid-block pedestrian protected crosswalk, as stated in Appendix C of the revised DEIR. (See page 14 of Traffic Impact Study, October 6, 1989.)

The Traffic Impact Study also addressed the potential traffic impacts created by the North Spring Street crossing. If an aerial line were proposed over North Main Street and North Spring Street, no impacts to traffic would result, provided that the guideway support columns are kept clear of the roadways. The LACTC did not introduce an aerial structure in the downtown area since the Chinatown community has voiced vigorous opposition to any aerial guideways in the area.

C-8 **Comment**: In order to minimize the impact of the at-grade crossing for the Second Street/Union Station option, the tunneling from the Union Station should be extended northerly and westerly, closer to Chinatown. The possibility of a subway or an at-grade station at the northwest corner area of College Street and North Spring Street should be addressed in the revised DEIR; a joint-use could be explored if right-of-way is restrictive. Even the traffic analysis

performed by DKS pointed to a potential problem of the at-grade crossing at this location, so a mitigation measure should be explored.

Response: The suggested change in the alignment configuration (lengthened subway instead of the portal transition) would help to mitigate the potential traffic operational issues associated with a contemplated at-grade crossing of North Spring Street. If this option is selected, the engineering feasibility of the required transition from an extended subway line to an at-grade station at the northwest corner of College Street and North Spring Street would have to be studied in more detail.

C-9 Comment: The two Marmion Way frontage roadways, between Avenues 51 and 57, are proposed to be converted to one-way couplet with each being about 17 feet wide. Since the sound wall is proposed, the roadway will have to be reduced to 16.5 feet. However, there are no sidewalks along Marmion Way, so the 16.5 feet is the total distance from the LRT tracks to the building lines and property lines for homes on the other side of Marmion Way. How the residents will access their homes by foot will need to be addressed. If sidewalks were to be provided, the roadways would have to reduced even narrower than 16.5 feet, making movement on the street very difficult. If there were to be any shuttle or other bus service provided between the two stations along Marmion Way or if busses have to use part of Marmion Way for a turnaround, the capacity for a single-lane roadway would be severely affected. The specific end treatment for the one-way pairs is also not addressed. Special considerations for the left-turners and the problems associated with crossing the LRT tracks are not addressed. These unique and serious operational and safety issues should be included in the revised DEIR.

Response: Installation of sound walls along the LRT rights-of-ways between Avenue 50 and Avenue 59 (as described on page 4-106 and shown on exhibit 4-17) will create two separate roadways. Each roadway would be 16 feet, 6 inches wide. These widths should be adequate for automobile traffic, provided that on-street parking is prohibited. Due to the presence of sound walls, vehicle turning movements and pedestrian movement across the LRT tracks would be restricted to intersections. Modification to driveway gates, longer curb returns, and relocation of utility poles may be required at some locations to maintain access. LACTC will work with the property owners to ensure access is maintained. Specific treatment of Marmion Way will be handled at the project design stage.

C-10 Comment: Along the north and south roadway segments of Marmion Way between Avenue 50 and Avenue 58, where right-of-way would be acquired, consideration should be given to constructing the roadway as a pedestrian walkway where the resultant roadway (width) would be less than 18 feet, as an LACTC project responsibility. Beyond this width, vehicular passage becomes impossible at times. Damage compensation to those properties that have parking and garage access from these roadways should be required as an LACTC project responsibility.

Response: The suggested option of a pedestrian walkway treatment along some blocks of Marmion Way might be explored further with the adjacent property owners as one potential final design element.

C-11 Comment: The Department recommends that the traffic signals on Marmion Way be operated with a limited priority for the LRT. The Department also recommends that the signals along Marmion Way and Figueroa Street be interconnected and linked to the City's Automated Traffic Surveillance and Control System (ATSAC). The revised DEIR should acknowledge LACTC's financial responsibility to install the ATSAC system as a mitigation measure to reduce traffic congestion in the area.

Response: Based on the LADOT guidelines, the introduction of an ATSAC system typically improves intersection capacity by 7 percent. However, intersections along Marmion Way are not expected to have capacity problems with or without LRT operations. The proposed implementation of LRT will provide reconstruction of both roadways of Marmion Way as well as the installation of traffic signals. Further improvement by installation of an ATSAC system is not be justified as an LRT mitigation. Along Figueroa Street, the intersection of Avenue 57 would be impacted by LRT station-generated traffic; implementation of the mitigation measures identified in Section 4.2 of the revised DEIR will be sufficient to mitigate those impacts.

C-12 Comment: A queue length storage analysis of the intersection of Figueroa Street and Marmion Way/Pasadena Avenue should be performed. Currently the intersection runs as a four-phase operation, so an at-grade crossing for the LRT could cause a serious traffic congestion at this location, contrary to the traffic analysis performed by your consultant. Thus, the Department recommends that this intersection be considered for a grade separation as a mitigation measure.

Response: Grade separation is not appropriate for this intersection. The recommended signal phasing at this intersection is a two-phase operation: Phase 1 for Figueroa Street, Phase 2 for Marmion Way and Pasadena Avenue. When LRT vehicles pass through this intersection, a "limited service" phase should be provided allowing movements along Marmion Way and Pasadena Avenue. The intersection movements which would be impacted by LRT preemption are southbound left from Marmion Way and Northbound right from Marmion Way. Volumes for these movements are predicted to be very light (less than 25 vehicles per hour), so queuing will be minimal at each approach.

C-13 **Comment**: On Huntington Drive at Monterey Road and South Edloft, the subject of the fire station egress onto a one-way street has not been addressed, nor has the fact that there is a blind corner there without a traffic light.

Response: Fire station egress onto Huntington Drive should not be impacted by the introduction of the one-way couplet. Fire trucks and other emergency vehicles can go against the flow of traffic, as is often the case in downtown Los Angeles. Emergency operations will be coordinated with affected jurisdication during final design.

The operations of the "blind corner" is handled today with stop signs. The one-way couplet should improve intersection safety by reducing the number of conflicting vehicular movements. The revised DEIR assumed that by the year 2010 the intersection of Huntington Drive South, Monterey Road and Edloft Street would be signalized (See footnote to Table 4-8, Page 4-34) as part of the project or by LADOT, as the need develops.

D-14 **Comment**: A future station in the Southern Pacific yard next to Chinatown would require a bus shuttle for riders to reach Dodger Stadium. Why not eliminate consideration of this station and run the shuttle from the Hope Street Station? The presently planned station locations in Chinatown are in areas too congested to add bus loading and running, but Hope Street is relatively congestion free.

Response: Hope Street can be a very busy north-south access route to both the Hollywood and the Pasadena Freeways, especially in the PM peak period. The suggested bus access to Dodger

Stadium may be feasible, but will probably warrant some alternate routing away from Hope Street. Site-specific provisions for shuttle bus loading bays and peak versus off-peak routing would be dealt with during the service activation phase as the construction is completed. The future station in the Southern Pacific yard has been identified as an optional future station intended to serve and to be provided by future developers of that site.

Mr. Clifford L. Benedict, President, Lower Hastings Ranch Association

C-15 **Comment**: It is interesting to observe that the intended parking facilities at the terminus have almost tripled to a now estimated 1,000 spaces. Is this to be off-street parking? If so, where will it be located and who will provide it?

Response: The 1,000 stall supply was used to predict "worst case" traffic impacts near the Sierra Madre Villa terminus. The projected 1,000 spaces would have to occur in a parking structure as enough space does not exist for surface parking. A more detailed review of site-specific requirements would need to be made at the project development stage. It might include local circulation, access and egress points for feeder buses and kiss-and-ride patrons, as well as opportunities for shared use of other parking lots within walking distance to the terminus.

C-16 **Comment**: We are unable to find in the traffic study any inclusion of the potential impact on the intersection of Rosemead Boulevard with Foothill and Colorado Boulevards. These two intersections are approximately one-quarter mile east of the proposed terminus at Sierra Madre Villa. At present peak periods, these two major intersections are heavily congested. What is the potential impact on traffic at these intersections once the project is constructed and operational?

Response: Both Rosemead Boulevard at Foothill and Rosemead Boulevard at Colorado were not included on the working list of study intersections. This list was forwarded to the City of Pasadena for their review and concurrence. No suggestions or modifications to the original working list were made or found to be necessary.

At this stage of planning, it would be premature to analyze all major intersections within a half-mile radius of the proposed terminus site. As this project evolves, a more detailed evaluation

could be made of the Sierra Madre Villa terminal site, including potential traffic impacts at additional intersections. As the eastern terminus, the Sierra Madre Villa station is intended to primarily serve commuters arriving by car and bus from communities further to the east. At this location, the City of Pasadena plans new freeway on- and off-ramps, extension of Kinneloa under the freeway and provision of a new frontage roads that will keep circulation to this station along the freeway and away from residential neighborhoods.

C-17 **Comment**: LOS interpretation in Table 4-4 on page 4-22 describes six levels of service (A to F) ranging from excellent to forced flow. Table 4-6 on page 4-28 describes the volume/capacity ratios (V/C) and LOS of the intersections immediately adjacent to the proposed terminus at Sierra Madre Villa as falling within the acceptable levels of the C and B categories. Unfortunately, Table 4-10 on page 4-47 which projects the LOS and V/C by year 2010 casts a pretty dim (some would say unacceptable) picture of the probable congestion at these same intersections with a projected level of 0.94 V/C (after mitigation) and an LOS rating of E--Poor Operation.

Table 4-4 states that LOS D--Fair Operation--is the level typically associated for peak periods. How, then can the preparers of the revised DEIR state on page 4-49 that "For intersections within the City of Pasadena, acceptable V/C ratios and corresponding LOS vary from 0.79 to 0.99?" Is LOS E acceptable? We think not. It has been our experience that EIRs have tended to underestimate the impact of such time expended from inception to completion of a project. We believe that upon completion we could be faced with unacceptable traffic congestion at or near the terminus at an LOS F or worse. We, therefore, request that further mitigation measures be considered to ensure that we are not faced with gridlock situations when the project is completed.

Response: The year 2010 impact criteria, given on Page 4-31 for the City of Pasadena was originally developed by the City of Pasadena Public Works Departments during the Route Refinement Study. These criteria were meant to be meaningful in the context of year 2010 predictions for the sole purpose of the LRT impact evaluation. It is irrelevant to compare existing V/C ratios in today's operating environment to long-term projections (approximately 20 years from now). The traffic impact analysis focused on the relative magnitude of change between year 2010 estimates without LRT (base case) and year 2010 estimates with LRT. Looking at projected V/C

ratios as absolute estimates was not at all intended from this long-range planning perspective. See also response C-16 above.

D. COMMENTS AND RESPONSES RELATED TO PARKING IMPACTS

Mr. S.E. Rowe, General Manager, City of Los Angeles, Department of Transportation

D-1 Comment: Potential parking overflow and traffic circulation problems at the Avenue 57 Station are a major concern in the community and to the department due to the limited access and circulation capability in the area. Furthermore, if phasing of the project produces a temporary terminus at this station, LACTC's responsibility for financing shuttle bus service, additional parking facilities, and any required street widening as mitigation measures should be addressed. Bus interface at this station should be elaborated upon since this location is the northern-most and the last LRT station within Los Angeles, with possibly the largest station patronage for the line.

Response: The LACTC will not be operating bus service or shuttle busses to the stations. The LACTC will support the efforts of the cities that will be direct beneficiaries of the regional LRT system to provide bus and shuttle service to the stations. The LACTC is responsible for the financing of the regional transit system through Proposition A revenue and other funds. The use of the Proposition A funds are restricted to the development of the rail lines. Local cities, may use their share of Proposition A revenue for a wide range of transit-related programs including local transit service, dial-a-ride-programs, and shuttle service. LACTC will work with the City as much as possible on appropriate planning.

Mr. Robert H. Huddy

D-2 Comment: The current draft environmental impact report (DEIR) is flawed because of inadequate parking for park-n-ride operations on either the El Sereno or Highland Park option. This inadequacy should be dealt with by increasing the number of stations on the Highland Park alignment by two. This increased frequency of stations would allow for much easier access by walking, bicycling, and local feeder transit service.

Response: Comment noted. Provision of project-related parking was evaluated in detail for both alignments, both from an operational and a land use impact viewpoint. From an operational point, the optimal spacing between stations generally averages one station per mile. It is not appropriate from a regional service viewpoint to double the number of stations since this would result in longer travel times, making use of the system less effective and attractive overall.

As discussed in Section 3.4.B of the revised DEIR, many land use factors were used in the evaluation of potential station parking sites. Care was taken to select parking locations that would minimize land-takings and other impacts. Since the primary purpose of this project is to reduce the use of the private automobile, the LACTC recognizes the importance of encouraging walk-on, bicycle and bus feeder trips. Station design and location will attempt to maximize these types of arrivals.

E. COMMENTS AND RESPONSES TO CULTURAL RESOURCE IMPACTS

Mr. Jerry T. Smart, Park Director, El Pueblo de Los Angeles State Historic Park

E-1 **Comment**: I understand that all of the six routes in Exhibit 3 will be underground in the block between I-5 and Macy. If this is the case, I support it. If this is not the case, I reiterate our earlier position. Above-grade installations, especially of modern systems, detract from a historic park's civic values and atmosphere. The visual impact can be profound.

Response: Comment noted. All alignments would be underground in the block between I-5 and Macy except the Union Station "No Subway" option which would be located on the track platform behind Union Station. Under the Second Street-Union Station option, a station entrance to the subway would be located in the northern porition of the parking lot in front of Union Station. This facility would have a minimal visual impact and would be designed to be compatible with the historic context.

Mr. Alan K. Weeks

E-2 **Comment**: The SF railroad bridge over the Arroyo Seco is a cultural monument, but converting this bridge from single track to double track in my opinion does not make a significant

impact on the bridge. It will be much more useful by carrying many more passengers than the SEP Railroad does now. Passengers on the light rail and drivers on the Pasadena Freeway certainly won't notice the changes.

Response: Comment noted.

F. COMMENTS AND RESPONSES RELATED TO UTILITIES IMPACTS

Mr. David Rubin, Resident

F-1 Comment: In reference to public utilities (Section 4.11) page 32, I suggest that a comprehensive study be done to investigate the greater use of solar power during daylight hours to provide electrical power to not only the generating stations, but also the stations along the route. The use of solar power could help to cut down on the costs of generating electrical power for the route as well as help to keep a lid on the amount spent on heating, lighting, etc. at the various stations.

Response: Comment noted.

Mr. T. A. Nelson, P.E., Consulting Engineering, Transportation Consultant

F-2 Comment: Electrical "consumption" is a misnomer. It is a premise in physics that energy can be neither created nor destroyed. Thus, electrical energy can be used while being converted to other energy forms, but it cannot be consumed.

Response: Comment noted. The term consumed does not necessarily apply to the "energy" consumed but rather the finite natural resources required to generate the power.

G. COMMENTS AND RESPONSES RELATED TO SAFETY IMPACTS

Mr. Samuel G. Knowles, Mayor, City of South Pasadena

G-1 Comment: It is noted in the DEIR that the development of the line will impose an (undefined) additional requirement for services on the police and fire departments of the city. The city notes that such additional services would not be compensated and is concerned that, should there be a significant demand, already strained budgets for city services, constrained as they are by limitations imposed by Proposition 13 and the Proposition 6 Gann Limits, hardships could be imposed upon the city.

Response: The LACTC appreciates that additional service demands may be placed on those cities that will be directly served by the proposed project. A major portion of the anticipated security responsibilities will be borne by the project's transit police. Local jurisdictions will be asked to provide mutual aid as needed in keeping with usual inter-governmental police practices.

G-2 Comment: The DEIR identifies the Raymond Hill fault along the approximate alignment of the existing Pasadena Freeway which will be traversed by the line. It is recommended that special precautions be taken to assure seismic integrity of the line and the service to be provided as the light rail services may some day serve as the major link to downtown in the event of earthquake damage to the aging Pasadena Freeway structures, just as BART provided the only link across the San Francisco Bay following the recent earthquake and the collapse of a portion of the Bay Bridge.

Response: Comment noted. As discussed in Section 4.3.A, the entire project will be constructed to withstand the maximum probable earthquake predicted for the area and to comply with current engineering and construction guidelines and regulations relative to seismic safety.

Mr. Clifford L. Benedict, President, Lower Hastings Ranch Association

G-3 Comment: Security is and always has been of prime concern to the residents of this area. As your report states, the Pasadena Police Department presently operates from a single station located in the civic center (which is some distance away from our area). This organization will

have jurisdiction over law enforcement for those portions of the light rail transit line located in the City of Pasadena. We are concerned that the proposed terminus at Sierra Madre Villa with its major attendant parking facilities, increased traffic, etc., will increase the rate of crime in our area and thus increase the requirement for general police services. Has the Pasadena Police Department prepared any studies or produced any reports to indicate how they will intend to staff and handle this proposed new responsibility?

Response: Transit police will have the primary responsibility for maintaining security within the LRT system as the revised DEIR points out in Section 4.10. The implementation of the mitigation measures listed in Section 4.10 will be effective in reducing any additional service demands that may arise during the construction and operation of the proposed project. The Lead Agency will work with all responsible and affected agencies, including the City of Pasadena Police Department, to identify and resolve any security problems that may arise.

Mr. Garrett W. Zimmon, Captain, Commanding Officer Planning and Research Division, Los Angeles Police Department

G-4 Comment: The revised DEIR has omitted the following mitigation measure that appeared in the previous DEIR:

> "Two way voice and digital communications capability for the LAPD personnel serving the system must be provided in the underground portion of the system."

Response: Comment noted. The FEIR includes the above mitigation measure.

G-5 Comment: Due to expanded traffic in the vicinity of the station, it is likely that there will be an increase in the theft from persons, burglary from vehicle, and auto theft. To maintain the current levels of service within the central area, an additional nine sworn officers will be needed.

Response: The LACTC will work with the Los Angeles Police Department or other appropriate police authorities, to determine additional security and deployment measures that will be required to supplement the transit security force in order to maintain security for transit patrons and personnel on transit vehicles and within station areas.

Comment: The FEIR should distinguish between the responsibilities of the LAPD and transit police.

Response: A security program will be identified including the responsibilities of local jurisdictions through which the project passes. The jurisdictional responsibilities between the LAPD and Transit Police are proposed to be identical to those that are now being implemented with the Long Beach LRT line where the Los Angeles County Sheriff's Department would have primary responsibility for security of the line, but would coordinate with local law enforcement agencies for back up in emergencies.

H. COMMENTS AND RESPONSES RELATED TO AESTHETICS IMPACTS

Mr. David R. Rubin, Resident

H-1 **Comment**: In reference to light and glare (Section 4.7) Page 5, I suggest that the lighting to be used at stations and along the routes be of an "environmentally friendly" design such as low-sodium vapor, high sodium vapor, etc. These type of lighting I believe have been proven not to have as great an impact on the ozone layer as perhaps other types of lighting. The sodium vapor type of lighting has been in use for about 9-10 years now and has been touted as being less destructive to the ozone layer while providing better lighting.

Response: Comment noted. Type of lighting decisions will be made in the final engineering and design phase.

H-2 **Comment**: In reference to Aesthetics (Section 4.12) page 34, I suggest that all buildings be designed as historically accurate as possible to the surrounding architecture of the various cities along the route. For instance, in Pasadena and South Pasadena, the styles could encompass anything form Mission to Craftsman. Designing stations and service buildings in such a way would go a long way to mollifying peoples concerns about architectural aesthetics and hopefully remove a potential headache once construction commences.

Response: Comment noted. Refer to response L-7 in Section 3.

I. COMMENTS AND RESPONSES RELATED TO PATRONAGE/COST ESTIMATES

I-1 Mr. Robert Tague, Chief of Operations, City of Los Angeles Community Redevelopment Agency

Comment: An appendix on patronage forecasting would be useful to explain the station-by-station patronage estimates and the differences between the several alternatives. This would provide the reader with a better understanding of the relative operational/policy trade-offs associated with each of the alignment alternatives. It would also explain the assumptions used to arrive at these patronage figures; i.e., whether mode of access assumed park-n-ride at stations or the amount of bus interface, etc.

Response: Patronage forecasts including mode of access were prepared by SCAG for each alignment option on a station-by-station basis. Patronage information is presented in Appendix G. The full report will be available upon request.

Patronage forecasts were projected based on a regional model incorporating the following characteristics of each alignment:

- Number of stations per mile -- model balances the issue that more stations results in a larger capture of ridership, but increases travel time which may negatively impact ridership.
- Length of route -- model again must balance between the route length and resulting travel time. A longer route may serve more areas and result in higher patronage totals, but a longer route results in a longer travel time making it less attractive to potential transit users.
- Alignment characteristics -- reflecting factors such as density, transit dependency or or desired destinations of the areas served by a particular alignment.
- Headway assumptions -- more frequent service makes a transit system more attractive to potential patrons and frequently results in a larger capture of riderships.

I-2 Comment: There are unexplained variations in the Total Daily Patronage figures among the four Highland Park Alternative listed in Tables 3-6, Page 3-22. The basis for such variations needs to be explained.

Respones: Please refer to the detailed explanation in response I-7 in this section.

Mr. Gary Spivack, Director of Planning, Southern California Rapid Transit District

I-3 Comment: The options for the downtown alignment should also include an analysis of their impact on Metro Rail ridership. The patronage estimations given for the Pasadena Line indicate that a substantial portion of the line patrons are currently transit users. The 2010 projections for the downtown area include people who would otherwise use the Metro Rail or bus system for completion of their trips. It would be useful to evaluate the impacts of a second subway system on Metro Rail patronage, especially as a determinant for justifying the second line.

Response: All of the patronage projection modeling performed by SCAG incorporated Metro Rail and its projected ridership. The travel demand-person trip table was also a constant input to the model. The analysis that identified the Metro Rail and the proposed Pasadena LRT will be serving two different geographical areas: Metro Rail serves the area's east-west corridors while the Pasadena project will serve the north-south corridor reaching into the San Gabriel Valley. There is little chance that the operation of the proposed LRT will affect patronage on the Metro Rail line, and in fact patronage modeling identified that this project will enhance use of the Metro Rail system. If the Highland Park "No Subway" alternative were selected, Metro Rail patronage would increase due to transfers from the Highland Park lines to the Long Beach line via the downtown Metro Rail link between Union Station and the Seventh and Flower station.

I-4 Comment: Cost per mile is highlighted as an important decision criteria as indicated in Table 1, "Summary of Patronage and Costs" of the Executive Summary. Cost per mile should not be given as much weight in the decision criteria. A discussion of the attainment of land uses objectives along the alignment as an equal determinant should be incorporated into the environmental impacts section.

Response: Cost per mile is presented as only one descriptive element for each alignment alternative in Table 7 or Table 3-6 "Summary of patronage and cost." Along with total patronage, project length and total project cost, cost per mile provides a valid unit cost comparison between the alternatives. Selection of the preferred project alignment by the Commission will be based on a complex set of regional and local issues of which cost is only one element. A discussion of land use objectives along the alignment is presented in Sections 4.1 and 9.1 of the EIR.

Mr. Donald F. McIntyre, City Manager, City of Pasadena

I-5 **Comment**: Include the accurate costs of construction of the North Main Street alignment from its terminus in El Sereno north to the junction of the Santa Fe right-of-way to facilitate more accurate comparison of construction costs with the Highland Park alignment.

Response: The cost estimates included in Tables 3-6 and 3-8 refer specifically to project as it is presently proposed. A segment of the North Main alignment that would extend from its present terminus northward to the AT & SF right-of-way was never considered a part of this project. A comparison of costs between the various alignments is possible from reviewing Table 3-6 which provides a cost per mile estimate (in terms of current dollars and projected 1994 costs).

Mr. S.E. Rowe, General Manager, City of Los Angeles Department of Transportation

I-6 **Comment**: Although patronage per alignment and per phase had been included in the revised DEIR, boarding and alighting patronage estimates at each station are not included, nor are the estimates of the mode of access included in the revised DEIR. It is puzzling that the Chinatown Option with two less stations in downtown that the Second Street/Union Station Option should have more patronage, and a presentation of the station patronage will help to clarify the issue.

Response: Appendix G identifies station patronage and mode of access estimates. As discussed in response I-7, patronage is inversely proportional to length of route and travel time. While additional stations contribute to an option's patronage, from a regional access viewpoint the Chinatown alignment would attract more patronage due to its shorter and more direct connection to Metro Rail and the Long Beach line at 7th/Flower.

Mr. Allan K. Weeks

I-7 **Comment**: Referring to Table 3-7, if all options use the same route in Phases 2 through 5 how do you explain the different (patronage) totals between Phase 1 and Phase 2? Also, the different totals between Phase 2 and 3? Please explain why the total for Phases 1 through 5 is lowest. This option has the most stations and I believe it should have the highest ridership total.

Response: While some of the segments do appear to be similar, there are slight differences between the alignment configurations that lead to the differences in patronage estimates. Patronage forecasts were prepared for each alignment alternative using a regional gravity model where ridership is inversely proportional to distance and travel time. Ridership projections for the second phases of the Chinatown and Second Street options are close with 33,000 and 32,800 passengers respectively. Based on the patronage model, the Chinatown alignment is more attractive to transit riders due to a more direct regional connection both north and south, and east and west as well as providing a shorter travel time. The Second Street - Union Station option attracts the highest phase 1 patronage due to its direct connection with the future Union Station transportation center. Without the Union Station transfers, this option would attract less patronage than the Second Street option due to its longer, more circuitous route and resulting longer travel times which is reflected in the lowest patronage projections for phase 2. In addition, differences in alignment patronage are more pronounced in the project's earlier phases when a shorter segment is in operation. The potential transit patron is seen as having a harder decision to make on whether to drive or to use the transit system.

K. COMMENTS AND RESPONSES RELATED TO NOISE IMPACTS

Mr. William Freese, Resident

K-1 **Comment**: On page 4-106, Mitigation Measures, in the first paragraph, it says "The effectiveness of a soundwall is dependent upon the degree to which the wall breaks line-of-sight between the wheel/rail noise source and the sensitive receptors."

I realize that knowledgeable people must have prepared this, and that the concern I have may be due to a miscommunication or misunderstanding. That said, my exception is this: sound is not like a laser light beam, or even an ordinary light bulb, which when used may have their impact effectively occulted by the use of a barrier crossing the line-of-sight from eye to light source. I'm sure everyone is aware of a case similar to being outside a dwelling, opposite a window, below which, on the inside of the room, is a loud stereo set. Even though the top of the loudspeaker is below sight level it has comparatively minor mitigating effect on the impact of the sound, compared to the speaker being in view. What I'm saying is that I believe that the walls would have to be substantially higher than line-of-sight to be very effective.

Response: The effectiveness of a noise barrier is dependent upon the path length difference introduced by the barrier. Sound walls will be designed to appropriate design standards to create an effective noise barrier.

L. COMMENTS AND RESPONSES RELATED TO PUBLIC SERVICES IMPACTS

Ms Elizabeth Harris, Los Angeles Unified School District

L-1 Comment: The revised draft EIR did not incorporate several of the concerns and requested mitigation measures which were contained in our previous comments of February 2, 1989. Though we note that page 1-4 of the Revised Draft EIR states that the preparers of the DEIR will respond, in writing, to those comments received on both the initial DEIR and the revised DEIR, the fact that every few of our concerns and requested mitigation measures were incorporated into the Revised Draft may imply that most will not be. We attach the previous comments submitted in our letter on the previous draft and look forward to working with you on mitigating measures so as to minimize adverse impacts of the light rail transit (LRT) project on students and staff of the Los Angeles Unified School District.

Response: Mitigation measures for potential impacts identified by the school district were evaluated and reviewed carefully. Those mitigation measures appropriate to this project were incorporated into this project. The Commission has worked closely with the school district on similar issues on the Long Beach project and will continue to work cooperatively with the district on this transit project.

L-2 **Comment**: Subsequent to our comments on the Draft EIR, the building committee of the Board of Education has authorized feasibility studies on three alternative sites for the construction of a high school to serve the Belmont Complex. We anticipate board approval to undertake these studies on January 29, 1990. Two of these three sites would be adversely impacted by a proposed LRT alternative alignment. These two sites, under consideration for a high school, are the Carnation facility (adjacent to the North Main Street alternative), and the SPTC main railyard site (adjacent to the portal and alignment variations for the Highland Park Alternative). Depending on which alternative light rail and school sites are approved, we may need to coordinate planning and construction so as to mitigate any possible incompatibilities. Please change the text at the middle of page 4-135 to reflect our consideration of these two sites.

Response: Comment noted. Section 7 of this report reflects the change. The potential interest in a school site was not evaluated since details of the proposed use were too speculative to evaluate.

L-3 **Comment**: Will the elimination of the station at Pasadena Avenue and Monterey Road result in a larger, temporary or permanent, terminus station at 57th and Marmion Way, near our Monte Vista Elementary School?

Response: A phasing alternaive for the Highland Park alignment does call for an interim terminus station at Marmion Way and Avneue 57. The temporary terminus station will not likely to involve any additional displacement impacts or be expanded beyond that identified in the EIR.

L-4 **Comment**: Both the initial draft EIR, and the revised draft EIR include exhibits illustrating "guidelines for compatible land use for the City of Los Angeles," yet the Exhibit in the revised EIR is not the same as was previously included, and it has different standards for acceptable/conditionally "conditionally acceptable" range (cf. Exhibit 4-13 in initial EIR, with Exhibit 4-14 in revised EIR).

Response: The nose compatibility guidelines illustated in the revised DEIR are correct.

L-5 **Comment**: We note that field measurement surveys of noise and vibration were taken at Stancliff School (private school in South Pasadena), and that p. 4-137 concluded that there be implementation of mitigation measures at Stancliff School. Under this same section, "Unavoidable Significant Adverse Effects," it was stated that the LRT project "may result in increased noise which may affect classroom activities in those classrooms immediately adjacent to and facing the rail line." Several of our schools are identified on page 4-17 as being located immediately adjacent to the LRT tracks; these are Ann Elementary, Huntington Drive Elementary, El Sereno Elementary, El Sereno Jr. High, Arroyo Seco Alternative, and Evans Adult (above subway alignment). However, despite the request in our February 1989 letter that measures of noise be made at several of these adjacent schools this has not been done. We therefore, repeat this request. The results may indicate, as they did at Stancliff School, that the project noise will be significant enough to necessitate mitigation measures.

Response: Majority of noise impact will occur along Marmion Way segment in Highland Park. No public schools are immediately adjacent tot he LRT right-of-way in this area. See response G-3 in section 3.

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M. COMMENTS AND RESPONSES RELATED TO IMPACTS ON THE EARTH

Dr. Gordon F. Snow, Assistant Secretary for Resources, State of California Resources Agency

M-1 **Comment**: The revised DEIR, under earthquake mitigation measures (page 4-62), proposes that the stability of subsurface materials where the subway is to be located will be evaluated in subsequent geotechnical analysis. Future studies are not, by themselves, appropriate mitigations, since they remove the results of the investigation from public scrutiny and review by other agencies. It is recognized that detailed geotechnical work is not warranted before the final route location is chosen. However, preliminary subsurface investigations would benefit the project by recognizing potentially adverse soil and/or geologic conditions which could affect the route location decision. DMG recommends that a preliminary geological/geotechnical investigation be undertaken for each alternate route location. The results of the investigation should be included in the Final EIR.

Response: Comment noted. Preliminary geotechnical investigations were completed during the route refinement phases. The preparers recognize that future studies are not adequate mitigation. More detailed geotechnical studies will be undertaken once the Lead Agency has selected a route alignment. Subsurface investigation is appropriate in the downtown area where the alignment is in subway. Extensive subsurface testing in this area has already been completed in conjunction with the construction of the Long Beach line (which terminates at Seventh and Flower) and the Metro Rail line (which will connect the Seventh and Flower station with Union Station).

M-2 **Comment**: The earthquake mitigations section also states that, should fault rupture or a major earthquake occur, all rail activities should be halted. This statement is a policy goal statement rather than a proposed mitigation measure. No discussion as to how this policy will be incorporated into the rail system is included in the revised DEIR. DMG recommends that a plan or mechanism for stopping the light rail trains in the event of an earthquake or surface rupture be included in the list of mitigations.

Response: Comment is noted. A mitigation measure will be added to section 7 indicating that the LACTC and the appropriate responsible agencies will formulate a comprehensive emergency preparedness plan that will be implemented in the event of a major earthquake.

M-3 **Comment**: The revised DEIR discusses several faults which have the potential to impact the project. Two of these faults, the Raymond Hill and the San Raphael faults, are indicated to cross the Highland Park Route, yet the proposed route maps do not show the location of these faults. DMG recommends, as part of the above recommended preliminary geologic/geotechnical investigation, that the location of all known faults be shown on a map in relation to the propose light rail routes. This information may be particularly significant for underground or elevated sections of the light rail system. Finally, it should be recognized that evidence for fault movement on the Raymond Hill fault within the last 3,000 years (Bryant, 1978), although not conclusive, would suggest that the Raymond Hill fault is active rather than potentially active as stated on page 4-57.

Response: Comment noted. The noted correction has been identified in Section 7 of the EIR.

SECTION 5

PUBLIC COMMENTS FROM THE PUBLIC HEARING HELD ON THURSDAY, JANUARY 19, 1989, AT THE LINCOLN HEIGHTS SENIOR CITIZENS CENTER 2323 WORKMAN AVENUE, LINCOLN HEIGHTS, CALIFORNIA

FIRST SESSION COMMENTS

Mr. Michael Diaz

Comment: The DEIR does not adequately address aesthetic impacts so we are suggesting five things: (1) all utility wires should be underground and, where possible, existing overhead ones should be converted to underground; (2) all soundwalls and fences should have bushes and vines in front of them to function not only as landscaping, but as an anti-graffiti measure; (3) wrought iron fencing rather chain link should be used; (4) in the Arroyo stone, which is affected should be replaced; and (5) the stations should reflect the character of the local neighborhood.

Response: Comment noted. Please refer to response number L-1 in Section 3.

Mr. Charles Suddeth, Vice President of Hillside Village Property Owners Association

Comment: We are basically concerned with loss of current parking and access to the area around Lincoln Park due to the removal of parking. The board took the position that the Main Street alternative should not be selected because of its potential interference with existing traffic patterns which is a major problem in the area right now.

Response: Comment noted. Parking and access issues for the North Main Street alignment and particularly the Lincoln Park area are discussed in Section 2.1 of the EIR.

Mr. Soo Hoo, representing Chinese Historical Society of Southern California

Comment: The DEIR indicates the Second Street option in the downtown area will be directly underneath the El Pueblo Historic Monument area, which is the site of the original Chinatown settlement, Chinatown, the area that the Chinese immigrants settled in. This area also has a

number of historical and culturally significant buildings, which include the Pico House, the Garnier Building, and the Los Angeles Fire Engine Company No. 1 and also the Garnier Building is scheduled to, eventually house the Museum of Chinese American History. These brick buildings may be subject to vibrations generated by the underground rail which may lead to irreparable harm. This analysis appears to be lacking in the DEIR.

Response: The proposed Second Street options will not pass directly under any of the existing structures located in the El Pueblo Historic Monument. Current engineering plans call for the Highland Park-Second Street option alignment to traverse the site under the existing plaza between Los Angeles Street and Main Street at a depth of approximately 60 feet. The Second Street option for the North Main alignment will be located to the east of the site and will follow Los Angeles Street and Alameda at a depth of approximately 60 feet. An analysis of ground bourne vibration and its impact on existing buildings was performed and no potential impact to existing buildings was indicated. Refer to page 4-100 in Section 4.6 of the EIR for a detailed discussion.

Comment: Any and all necessary measures must be taken to protect and preserve any historical and/or cultural material which may lie in the right-of-way, as required by the various laws, regardless of which alignment is selected.

Response: Comment noted. The mitigation measures included in Section 4.14 of the revised DEIR focus on the preservation and protection of significant cultural material.

Mr. Don Toy, Representing Chinatown Advisory Committee and Cathay Manor, Inc.

Comment: The DEIR is inadequate in describing the necessity, and function of the light rail yard that is proposed in Chinatown. Additional analysis should be provided in the FEIR describing the characteristics and function of this facility.

Response: The railyard proposed for the North Main alignment alternative has been eliminated from further consideration. The North Main alignment will be served by the same railyard and maintenance facilities serving as the Long Beach line.

Ms. Alicia Brown, Representing Saleno Community Improvement Organization

Comment: We are concerned about potential negative impacts of the rail storage yard proposed for the Highland Park alignment and its potential impacts, particularly on Elysian Park.

Response: Comment noted. The proposed rail storage yards for the Highland Park alignment will be located within existing rail yards. The conversion of a single portion of the yard for LRT use will not alter the existing park environment. The proposed rail yard is illustrated in drawings 75 and 76 in the project site plans presented in Appendix F.

Mr. Chi Kin Nuye, Private Citizen

Comment: In Exhibit 2, the rail storage yard next to Main Street on the Main Street alternative, is identified as a little rectangular box about one-eighth inch by area located south of Alpine Street. The location is incorrect; actually the yard should be a rectangular strip about 1 inch long running from Alpine Street all the way to Bernard. The other storage yard, located just next to the Los Angeles River on the Highland Park alternative, is also depicted as a little, little square box. This yard actually runs from Broadway all the way to the Pasadena Freeway and that is also a massive storage yard.

Response: Comment noted. Engineering drawings that are included as an appendix to the DEIR provide a detailed illustration of the proposed alignment.

Mr. Richard Binder, Representing Phillipe's Restaurant

Comment: In Section 4, page 7 on the DEIR, Table 4.1, displacement and right-of-ways, I quote here, "Acquisition of one business for underground construction business can be replaced upon completion." I had a meeting with Mr. Lantz last week and engineering staff from the real estate department, and according to that meeting, it is not possible to be put back on, because of the way that the subway will come out, at that point right there. For the record, let this show that this business is Phillipe's Restaurant, also Table 4.3 sensitive land uses adjacent to the proposed project, please identify Phillipe's Restaurant.

Response: Comment noted. Please refer to response C-11 in Section 3.

Mr. Evan Kramer, Highland Park Resident

Comment: The lead agency should consider placing the LRT through Highland Park below grade to reduce aesthetic, noise, and other impacts.

Response: The project mitigations were considered adequate without subway segments.

Mr. J. Miasnick, El Sereno Resident

Comment: The DEIR does not adequately address the impacts of removing palm trees in light of the fact that this section of Huntington Drive is our town center.

Response: Section 4.5 of the revised DEIR indicates those portions of the Huntington Drive where palm trees would be removed to accommodate the proposed LRT. As indicated in this section, an estimated 32 trees between Eastern Avenue and Van Horne Avenue would be removed, but would be transplanted or replaced along both sides of Huntington Drive as noted in Table 2-1.

Comment: The DEIR does not address the subject of Long Beach Freeway overflow traffic on Huntington Drive. Have traffic projections been made for the year 2010 for example to show what the impact of a sigalert on anyone of our major freeways would cause on Huntington Drive?

Response: The traffic analysis assumed a scenario where the Long Beach freeway would not be extended. The traffic analysis did not assume a scenario where one of the local freeways were closed.

Comment: The subject of the fire station on Huntington Drive at Monterey Road and South Edloft egress onto a one-way street has not been addressed in the DEIR, nor the fact that there is a blind corner there without a traffic light.

Response: See response D-10 in Section 3.

Comment: Exhibit 4.7 in the DEIR is incorrect and should be corrected.

Response: Comment noted. The exhibit has been corrected in the revised DEIR. Several roadways shown south of the downtown area were mislabeled in the DEIR. The base map has been corrected in the revised DEIR.

Mr. Richard Wright, Representing Mt. Washington Association

Comment: Our main concern is with the aesthetic impact, and we feel that it has not been adequately addressed in the DEIR. The overhead wires were not addressed in the DEIR, and the soundwalls and the fences were not adequately addressed. These impacts will be major on our community as far as changing the view along streets. And we would like as a mitigation to have an irrigation system, and a landscaping plan or a design development also included in the EIR process at this point as a mitigation to the major visual and aesthetic impacts.

Response: Comment noted. Please refer to responses L-1 and L-2 in Section 3.

Comment: The analysis of transportation and circulation, should consider the projects impact on Avenue 45 crossing which is one of the major ways to Mt. Washington. It is rather congested now at times due to passing trains, and we are hoping that there can be other mitigations. There is a vacant lot that could be purchased at the north corner of Marmion Way and Avenue 45 which would make it possible to realign Avenue 45 to improve circulation in the area.

Response: In light of the low traffic volumes at this site, the proposed Avenue 45 crossing is not expected to be significantly impacted by LRT operations. No increase in local traffic volumes is expected due to LRT stations along this route segment. Furthermore, any traffic delay caused by LRT vehicles at this crossing, though more frequent than the current freight train crossings, will be much shorter in duration-approximately 30 seconds. Therefore, the LACTC project is not be responsible for the realignment of Avenue 45 at Marmion Way.

Ms. Louise Padden, Resident of Mt. Washington

Comment: The DEIR needs to consider the fact that sound carries differently in hillsides. I can often hear things almost a half mile away better than I can hear close things and it is an odd sense of acoustics. Also the appearance of these soundwalls are a concern to the community.

Response: The noise impact analysis conducted for this project compares traffic noise sources to the proposed LRT noise source. The effect that hillsides might have on sound propagation in some areas for LRT compares favorably to roadway traffic noise sources as well as the LRT noise sources. Therefore, although the absolute noise levels from traffic and the LRT might differ slightly in hillside areas as opposed to other areas, the relationship between the two noise sources remains essentially the same.

Comment: The lead agency should consider locating a station/stop at the Southwest Museum.

Response: Comment noted. For a discussion of this issue, refer to response A-31 in Section 3.

Mr. Mark Nakata, Resident

Comment: The lead agency should consider operating a shuttle bus service instead of having parking lots near the stations. These van shuttles would provide service near the residential neighborhoods that are adjacent to the, either two alignments, such as a shuttle would operate locally for the residents who live near the stations, however, even then it could still be a very far walking distance to get to them.

Response: Comment noted. Realignment of existing bus and shuttle lines to serve the stations and the provision of feeder bus service by others will add to the benefits of this project and will be coordinated during the rail activation phase of the project.

Mr. Bob Matire, Resident

Comment: The LRT along Marmion Way should be placed below grade to reduce potential aesthetic, noise, and other impacts.

Response: The project mitigations were considered adequate without subway segments.

Mr. Chip Johanson, Resident

Comment: I understand this project will be financed largely or entirely by Proposition A funds. I am concerned that without seeing exactly how the project is going to be funded that there will be a temptation to convert areas that are now zoned residential along the route to commercial in order to either just generally increase the tax base or to have an additional area against which a special assessment can be levied. If a zoning conversion is being considered, the impacts should be analyzed in the DEIR.

Response: The project will be funded entirely by Proposition A funds. No zoning revision or changes in land use designations are anticipated or planned by LACTC in conjunction with the proposed LRT project. The LACTC does not have the power to change zoning or land use designations in those areas through which the LRT will pass. Only local governments are empowered with the authority to zone and designate land uses.

Mr. William Lim, Representing the Chinese Consolidated Benevolent Association and the Lim Family Association

Comment: The community should be provided additional time to consider the potential impacts of a rail storage yard in Chinatown, such as the one which will serve the North Main alignment.

Response: The rail storage yard proposed for the North Main alignment has been removed from further consideration.

Mr. Henry Lozano, Representing Congressman Edward Roybal

Comment: Based on information contained in the Executive Summary of the DEIR, there are many unresolved issues related to the displaced residents. The relocation compensation expenses which are to be used in the project must be fully disclosed to the community and representatives.

The compensation and relocation awards should be commensurate with fair market value, and taken into consideration additional costs of relocation outside of northeast Los Angeles.

Response: Sections 4.1 and 4.9 of the DEIR describe the mitigation measures applicable in compensating property owners of real property that is required for public projects.

Mr. John Hisserich, Representing Lincoln Heights Chamber of Commerce

Comment: We would like to reiterate what we feel was our original position, as the Mission Road alternative which for a variety of reasons seems to have dropped out of the matrix but, nonetheless, remains very high in our favor, would like to consider that be again looked at, given the two routes that are presently here.

Response: Comment noted.

SECOND SESSION COMMENTS

Mr. Michael Diaz, Resident

Comment: The DEIR does not address the use of a shuttle bus system, which would more adequately serve the Lincoln Heights business district and perhaps a larger portion of the residents. In addition, the Mission Road alignment needs to be examined once again.

Response: The development of shuttle bus and feeder bus lines that would serve the stations is beyond the scope of this project and EIR analysis.

Comment: The Highland Park route, because of the acquisitions that you need to acquire the railroad lines, and from what I understand is you need to acquire the lines all the way to San Bernardino unless I am mistaken about that.

Response: The precise nature and extent of the acquisition is undetermined at this time.

PUBLIC COMMENTS FROM THE PUBLIC HEARING HELD ON TUESDAY, DECEMBER 12, 1989 AT LUTHER BURBANK JUNION HIGH SCHOOL, 6460 NORTH FIGUEROA, HIGHLAND PARK CALIFORNIA

Mr. Alan K. Weeks, Resident

Comment: Mr. Weeks' comments were not directed towards the DEIR or the analysis, but rather, a statement of support for the Highland Park alignment alternative.

Response: None required.

Mr. Mike Sitzman, Resident

Comment: Mr. Sitzman's comments were directed towards his support for the Highland Park alignment alternative.

Response: None required.

Mr. John Marquette, Resident

Comment: My comments are directed towards support of the Highland Park alignment. I would like to make five points:

1. Soundwalls along Marmion Way should be properly landscaped to ensure harmony with the community and to prevent grafitti.
2. Residents living in the Marmion-Monte Vista residential corridor should be protected from spill-over parking.
3. The proposed Avenue 57 station should recreate the original Highland Park Santa Fe station.
4. I believe the "No Subway" option should be constructed immediately.
5. Express bus service should be provided from South Pasadena to downtown and park and rides should be established at the various station locations.

Response: Comments noted. The issues raised in this comment have been addressed in Sections 3 and 4 under aesthetics, parking, and project impacts.

PUBLIC COMMENTS FROM THE PUBLIC HEARING ON SATURDAY, JANUARY 6, 1990 PLAZA PASADENA, 300 EAST GREEN STREET, PASADENA, CALIFORNIA

FIRST SESSION COMMENTS

Mr. Samuel Knowles, Mayor of the City South Pasadena

Comment: We fully support the proposed Highland Branch alignment which we believe will provide maximum benefit to our city, and also the City of Pasadena, resulting in maximum ridership of the line.

The DEIR notes that development of the line will impose an undefined additional demand for services on our South Pasadena police and fire departments. And there is no provision for compensating the city for such additional services.

With our already overstrained budgets and the limitations imposed by proposition 13 and the Gann Amendment, we are concerned that any significant demand for such additional services could impose a serious hardship on our city. And we would like this taken into consideration.

Also, the DEIR identifies the Raymond Hill fault along the approximate alignment of the existing Pasadena freeway. And we recommend special precautions to assure seismic integrity of the line, looking to the very real probability that the light rail service may some day serve as our major link to downtown in the event of an earthquake, just as BART provided the only link across the San Francisco Bay following the recent earthquake and collapse of a portion of the Bay Bridge.

Response: See responses G-1, G-2, M-1, and M-2 in Section 4.

Mr. Robert Jamieson, Representative of the Mount Washington Association

Comment: As at previous hearings, the Association enthusiastically supports the adoption of the Highland Park route alternative. With the incorporation of mitigation measures outlined in the revised DEIR, the Association welcomes this proposed transportation system to our community. The consensus of our membership is that this system will be well utilized by residents of Mount Washington and neighboring areas. Please review our letter submitted to the LACTC on January 19, 1989. The association's aesthetic and traffic circulation suggestions are still pertinent. The Association hopes to see these suggestions incorporated into the final draft of the environmental impact report.

Response: Comment noted. Please see responses to Mr. Jamieson's written comments in Section L of Section 3.

Mr. Robert Huddy, President of Heather Heights Neighborhood Association

Comment: We have a number of concerns involving specific parking mitigation measures at or near all the stations. We believe that this is necessary especially at the non-park and ride stations in order to avoid neighborhood spill-over impacts and that we need to develop a program with the city staff to work with the neighborhood associations to help possible permitting for residents and the restrictions on all-day parking in residential areas near the stations.

Response: Comment noted. Please refer to response D-1 in Section 3 and 4.

Ms Jeannine Gregory, Representative for Senator Torres

Comment: With traffic congestion soaring to unmanageable proportions, the Senator strongly supports focusing our attention on alternative transportation solutions rather than building more freeways. Expanding these light rails through the regional service is an important step in improving our regional mobility. He looks forward to working with the commission in doing so.

A majority of the Senator's constituents have told the Senator that they favor the Highland Park alignment which utilizes the Santa Fe Railroad Line. The Senator urges that the Los Angeles

County Transportation Commission pursue acquisition of available rights-of-way throughout the entire county because he feels that this is a unique opportunity to allow Los Angeles to develop cost-effective and environmentally sensitive alternative modes of transportation.

It is the Senator's hope that the Commission will approve the Pasadena/Los Angeles light rail transit project in a timely fashion because he believes that these communities need and deserve this commuter rail service.

Response: Comment noted.

Mr. Pat Moser, Los Angeles Transit League

Comment: The Los Angeles Transit League supports the Pasadena line as the next rail start, with the following provisions: It should be an extension of the Long Beach line and should be elevated structure on Second Street to Union Station continued, elevated over the air rights of Union Station, to the Los Angeles River. Surface route north of the river. The following stations should be included: north of the river, Avenue 26 transit center; Avenue 50 with access to the Sycamore Road Avenue 57, with transit center; two stations in South Pasadena and Mayor Knowles has already outlined them; Glenarm Street, California Boulevard, Amtrak Station; a station on colorado Boulevard, because Colorado Boulevard is an important business street and it is ridiculous to have people go all the way down to the Amtrak station.

It should have been built on an elevated structure over Green Street but that's history. But certainly, Pasadena, the City of Pasadena should make sure that when the stations are built on the freeway right-of-way, that they provide bus shuttle service to those stations from downtown Pasadena.

Response: Comment noted. The final station selection for the portion of the alignment in Pasadena will be made in subsequent phases of planning and engineering.

Mrs. Mary Meyer, Resident

Comment: I think the proposed LRT is exciting. I've been listening to the speakers. I heard Mr. Huddy and these gentlemen. It sounds great. I have no prejudice where it goes just so it gets there and we have this, because we really need it, if anyone has driven those freeways to work every day.

Response: Comment noted.

SECOND SESSION COMMENTS

Mr. Clifford L. Benedict, Representative of the Lower Hastings Ranch Association

Comment: I've just submitted to the table a letter dated this date, which is from the Loser Hastings Ranch Association, which is in East Pasadena. After having read your revised report, we're concerned that certain potential problems are either being overlooked or neglected. Four areas of primary concern to our committee are:

One, we are unable to find in the traffic study, any inclusion of the potential impact on the intersection of Rosemead Boulevard with Foothill and Colorado Boulevards. These two intersections are approximately one quarter mile east of the proposed terminus at Sierra Madre Villa. At present peak periods, these major two intersections are heavily congested. What is the potential impact on traffic at these intersections once the project is constructed and operational? Two, the level of service, LOS, interpretation in Table 4.4 on page on 4.22 describes six levels of service, A to F, ranging from excellent to forced flow. Table 4.6 on page 4.28 describes the volume capacity ratios and the LOS of intersections immediately adjacent to the proposed terminus at Sierra Madre Villa as falling respectively within acceptable levels of the C and B categories.

Tabie 4.4 states that the LOS D, Fair operation, is a level typically associated for design of peak periods. How then can the preparers of the revised report state on page 4.49 that, quote, "for intersections within the City of Pasadena, acceptable V/C rations and corresponding LOS vary from .79 to .99." Is level E acceptable? We think not. It has been our experience that environmental impact reports have tended to underestimate the impact of such projects. This is somewhat understandable considering the time expended from conception to completion of a

project. We believe that upon completion we could be faced with unacceptable traffic congestion at or near the terminus at an LOS level of the F or worse. We, therefore, require that further mitigation measures be considered to insure that we are not going to be faced with gridlock situations when the project is completed.

Three, it is interesting to observe that the intended parking facilities at the terminus have now almost tripled to an estimated 1,000 spaces. Is there to be off-the-street parking? If so, where will it be located and who will provide it?

Response: Comments noted. See Section C of Section 4 which responds to a letter received from Mr. Benedict.

Mr. Richard Binder, representing Philippe's Restaurant

Comment: I sent in my written comments yesterday to Paula Willins. And our position is well known that if the North Main Street route is selected, our restaurant will be demolished, by eminent domain. I'm not going to go into that today. I would like to commend the commission on the revised report. I think it has a lot of benefits to the Pasadena sections, the added routes at the Union depot. I would like to see the Union depot included in any routes that are selected.

I would also like to present today the petition that some people have signed down at the restaurant and I'd like to read it if I may.

"The undersigned petition the Los Angeles County Transportation Commission not to consider the use of the site of Philippe the Original, 1001 North Alameda Street, for any part of the light rail system based on the following: 'Philippe the Original', a downtown Los Angeles landmark serving California since 1908, is a local institution which serves the public interest and which is an important part of your city's cultural heritage."

"We are customers and business patrons of Philippe the Original and will be users of the light rail system serving downtown Los Angeles. We desire to have institutions such as Philippe the Original preserved as we make progress in solving our transportation problems, and urge the Los

Angeles County Transportation Commission to reject any proposals calling for the condemnation and/or closing of the restaurant."

Responses: Comment noted. The petitions are on file with the lead agency.

Mr. James C. Ushi

Comment: I was looking at some drawings and I noticed that, I wonder if they can double track the Santa Fe route -- where Santa Fe runs between California and Del Mar through intersection, it's only a single track. You must have the line go from the blue line, Long Beach line and continue on. You have to have the one train, straight through train. Long Beach to Los Angeles to -- Los Angeles to Long Beach to Pasadena. You have to have one through train.

Response: The LRT line will have double tracks.

Mr. Ron Begley

Comment: Well, among my concerns is the enormous cost of the project. I believe it's been estimated at something like a billion and a half dollars for a line to go from Pasadena to downtown Los Angeles. Now, this city is getting very familiar with something called a business improvement district. If you prorated the number of houses in Pasadena, East Los Angeles, Highland Park, you would come with a monthly cost, over ten years of $300 a house just for the capital improvement itself, never mind the cost of running this boondoggle.

As a matter of fact, on the interest alone on this money, you could send a jitney or some kind of a cab for everybody who wanted to get to Los Angeles. It doesn't really make much sense. I believe the optimism over the ridership is gross. The idea of 35,000, 50,000, 80,000 people traveling which might meet some of the costs I think is wild optimism. The way to prove it, of course, would be simply to have freeway flier buses, allow jitney services to take you to the onramp, pick up in your driveway by the free market, free enterprise pursuit, which we're all very good at, allow that to happen and then we'd prove whether people would actually leave their cars to get on this railroad line.

Response: Comment noted.

Mr. Bill Hunter

Comment: I don't understand why Philippe's has to be removed. Its a small little block down there, why you can't find another location for the entrance of the proposed station.

I want to comment about why there's no Colorado Boulevard station being planned. I have lived in Pasadena for two years. I now live in Los Angeles. I know Pasadena. As the train leaves Los Angeles and stops, after it stops at the main station which is going to be a park and ride which is not Amtrak, there is a small little area perfectly suited for a small, what I call mini-station, on Colorado.

Response: Philippe's would be removed only if the Chinatown option of the North Main alignment is selected. The Memorial Park station, as proposed, will serve both the civic center district and the main downtown commercial areas in Old Town and Plaza Pasadena. In addition, the station is well situated to serve commuters employed in the nearby offices.

Mr. Tom Chung, Chinatown Advisory Committee

Comment: We want to speak up in strong support of the Broadway alignment, strongly urge that it become a preferred route to hook downtown Los Angeles and Pasadena together. We realize that there are a number of other routes that are being looked at but we would like for the Commission to be able to address any reasoning why they would pick one of the other routes when it appears that the other routes, would duplicate services, since the Union Station is going to be a rail stop already.

Response: Comment noted.

SECTION 6

LIST OF AGENCIES AND INDIVIDUALS COMMENTING ON DRAFT EIR AND REVISED DEIR

The following Table (6-1) identifies those individuals that have commented on either the DEIR or the revised DEIR. Those comments received during January and February of 1989 were commenting on the original DEIR. Those comments received during December 1989 and January 1990 were commenting on the revised DEIR.

TABLE 6-1
LIST OF AGENCIES AND INDIVIDUALS

Elected Officials, Group or Individual	Comment Date
Written Comments	
• Alatorre	2.1.89 9.21.89 12.12.89
• Lindsay	2.23.89
• Molina	2.2.89 9.22.89
• Polanco	1.25.89
• Roybal	1.19.89
• Torres	1.31.89 1.6.90
• Schabarum	5.8.89
State Agencies	
• Caltrans (J. Bingham) (G. McSweeney)	2.21.89 9.15.89
• Dept. of Conservation (O'Bryant)	12.28.89
Local Agencies	
City of Los Angeles	

TABLE 6-1 (continued)

• Bureau of Engineering (Horii)	1.27.89
• CLA (McCarley)	1.8.90
• Community Redevelopment Agency (Tuite, Tague)	2.2.89
• Cultural Heritage Commission	2.1.89
• Department of Planning (Topping)	1.26.89
(Sircusa)	9.22.89
(Topping)	1.6.90
• Department of Transportation (Rowe)	2.2.89
• Department of Water and Power (Karapetian)	1.31.89
• El Pueblo de Los Angeles State Historic Park (Smart)	12.8.89
• Police Department (Zimmon)	2.2.89
Other Local Agencies	1.2.90
• SCRTD (Spivack)	1.30.89
• Los Angeles Unified School District (Niccum, Harris)	2.2.89 1.5.90
<u>City Agencies (others)</u>	
• Alhambra (Murphy)	2.13.89
• Pasadena (McIntyre)	2.23.89 1.4.90
• South Pasadena (Knowles)	12.21.89
• South Pasadena Transportation Commission	1.24.89
<u>Organizations</u>	
• Chinatown CAC (Hum, Toy)*	1.19.89 1.6.90
• Chinese Consolidated Benevolent Association (Wong)	1.20.89
• Chinese Historical Society of Southern California (Hoo) *only	
• Coalition for Rapid Transit	2.2.89
• Highland Park Heritage Trust	1.6.90
• Highland Park Neighborhood Association (Freese)	1.6.90
• Hillside Village Property owners Associaiton (Allard, Suddeth)	1.19.89
• Lincoln Heights Chamber of Commerce*	3.7.89
• Lincoln Heights Preservation Association (Diaz, no name)	1.19.89
• Lower Hastings Ranch Association	1.6.90

TABLE 6-1 (continued)

• Mt. Washington Association, Light Rail Committee (Wright, Jamieson)	1.5.90
• Saleno Community Improvement Organization (Brown) *only	1.19.89

Businesses, Others

• Phillipe's Restaurant*	2.1.89 6.7.89 1.5.90
• Southern Pacific Transportation Company (Crother)	2.1.89

Citizens

• T.A. Nelson	1.23.89 12.22.89
• William Bennett	11.30.89
• Alan Weeks	1.30.89 12.31.89
• Richard Willson	1.19.89
• Bryan Allen	2.2.89
• Vincent Hodge	1.6.90
• David Rubin	1.2.90
• Ralph Melching	1.3.90
• William Freese	1.6.90
• Steven Westbrook	12.20.89
• Robert Huddy	1.12.89

Public Hearing Comments

- Chi Kin Nuyi
- Evan Kramer
- J. Miasnick
- Bill Hunter
- Louise Padden
- Mark Nakata
- Michael Diaz
- Chip Johanson
- Jon Wong
- Bob Matire
- Rob Bush
- Pat Moser
- William Lim
- Yan Yee Yeh
- Rosemarie Stasella

TABLE 6-1 (continued)

- Samuel Knowles (South Pasadena Mayor)
- Bob Jamieson
- Bob Huddy
- Pat Moser
- Mary Meyer
- Clifford Benedict (Lower Hastings Ranch)
- James Guski
- Roy Begley
- Bill Hunter
- Tom Chung (CAC)
- Laura Ingman

Citizen Input Cards:

- Hanna Ritzman
- Mildred Knop
- Eugene Eltchi
- Jan Erba
- Thelma James
- Robert Scholfield
- Grant Smith
- Rosemarie Stasella
- Linda Valasquez
- Yan Yee Yeh
- Richard Wright
- Lawrence Zempel

The following list of individuals submitted response cards supporting the Highland Park alignment:

Susan Stocks Jerkins
Liz Johnson
Lynette Kampe
Dan William Kelso
Roger and Ellen Kempler
William R. Kensel
Lawrence Lott
Edmund B. McCormick
V. Mendoza
Jeanne M. Nichols
Sheila Gam
Ken Boros
Rosemary Braui
Susan Castor
Warren and Liz Christensen
Matthew Engeler
Richard W. Fahler
Irene Fertik
Keith Harold
Juanita Garber

Earl E. Pirtle
William Potter
Lillie B. Raymond
Tom and Mildred Sather
Chris Schlosser
William Schreiner
Robert B. Scholfield
Eric and Laura Shaw
Ben Sobin
Paula Southeick
P. A. Tomporowski
Cora Solis Villegas
Sharon G. Watson
Jack Wiart
Dorothy Balsee
Susan and Kenneth Barnes
Pamela Becher
Fanda Bender
Robert Conner
Grayson D. Cook
Aeline De Sanctis
Dea Davis
John L. Denney, M.D.
Charles A. Dow
Edgar and Susan Ewing
Peter J. Faller
Joseph Farah
Michael Fenney
Douglas Flynn
Rubin Garcia
Charissa Gering
Michele De Onate
Galen Gering

Robin Edel Gaudielle
J. E. Harris
Jonathan B. Hartman
Dorothy Baker
Robert Jamieson
Helen Ajay
Tony M. Aguilar
Naomi Alquist
Virginia Armon
Donald Battjes, Jr.
Lee Birch
Jenna Blaustein
Robert D. Brody
David A. Bouyed
Norman Brunell
Patricia M. Clayberger
Dale E. Correll
Peter M. Clemens
Helen Lewis
Linda Licht
Marth Lindberg
Ulf Lindberg
Ralph Lopez
Charles Hover
Deborah E. McAfee
Alan Meade
Patrushkha Mierzwa
William T. Moore
Sandra P. Nielsen
Salvador Nunez
Doris Olson
Dr. Eva Schindler-Rainman
John H. Rieth

Steve Gorden
Alan Goldman
Eric Gotthelf
Suzanne Geary
Robin L. Grogan
Donald and Delores Hamilton
Nancy Hartwell
Patricia Jacobson
Linda Javier
Graham Johnson
Virginia Johnston
Carolyn Kirven
Carmon Kotta
John Laud
Burus W. Lee
Lucille Lennmon
Paula Sias
Robert Sias
Vincent Shepherd
John Schubier
Stella Sias
Suzanne Siegel
Robert A. Skinner
Victor M. Snow
Charlene Suneson
Martin Steele
Ann Terrell
Francis Thronson
Robert D. Tribble
Mr. and Mrs. Greg Williams
Gregory D. Wright
Richard Wright

The following letter was received in support of the north Main Street alignment alternative:
Kevin J. Murphy

SECTION 7

ERRORS AND CHANGES TO THE REVISED DRAFT EIR

This section indicates those portions of the Revised DEIR that should be revised to reflect recommended changes arising from the review of the document. These changes to the document will not in anyway alter the conclusions documented in the Revised DEIR regarding the nature and extent of environmental effects.

Section 3: Project Description

1. Page 3-13, Table 3-2: The following corrections should be made to Table 3-2:

   The College Alameda/Station (station I) configuration is an "at grade/side platform" instead of an "at-grade/center platform."

   Station AA on page 3-14 will also include kiss-and-ride drop-off facilities.

   Station BB on page 3-14 is mislabeled "Oak Lawn." The station name should be "Fair Oaks." This station will also have park-and-ride facilities.

   Station CC on page 3-14 may include park-and-ride facilities.

   Station EE on page 3-14 may include a transit center with bus bays and park-and-ride facilities.

   Station FF on page 3-14 is an "at-grade/side platform instead of an at-grade/center platform." (Revised drawings are included in this document.)

   Stations GG through JJ on page 3-14 will all include space for bus drop-offs.

   Station KK on page 3-14 will include kiss-and-ride and park-and-ride facilities.

2. Page 3-18, table 3-4: The reference to "To Orlin/Brway" is incorrect; "Orlin" should be "Ord."

Section 4

3. A mitigation measure should be added calling for a Master Cooperative Agreement and supporting work program between the City of Los Angeles and the LACTC. Similar agreements will be negotiated with South Pasadena and Pasadena.

4. Page 4-9, Table 4-1: Possible land acquisition may be necessary following a review of parking needed to serve a station located at California Street if this station is selected for construction. (reference follows SCR112/HH).

5. Page 4-10: The Santa Fe (AT&SF) Railway operating through Highland Park is no longer designated the "Second Division." Effective May 15, 1988, the line become the "Pasadena Subdivision."

6. Page 4-11: The AT&SF's Third Division became the San Bernardino subdivision effective May 15, 1988.

7. Page 4-17, Table 4-3: The following note should appear at the bottom of this table: "b. No sensitive land uses were identified immediately adjacent to the downtown options connecting with Union Station."

8. Page 4-20: The following mitigation measure should be added to the mitigation measures identified in the revised DEIR for the Highland Park Route in regard to the Avenue 57/Figueroa Street intersection: "24 hour parking restriction on the south side of Figueroa Street (to accomodate eastbound traffic) and peak hour parking restriction on the north side of Figueroa Street."

9. Page 4-113: The following correction should be made to the discussion under Environmental impacts: "The Los Angeles Department of Water and Power will provide power to those parts of the project written the City of Los Angeles. Areas outside of Los Angeles will be served by the electrical utility franchised to that region."

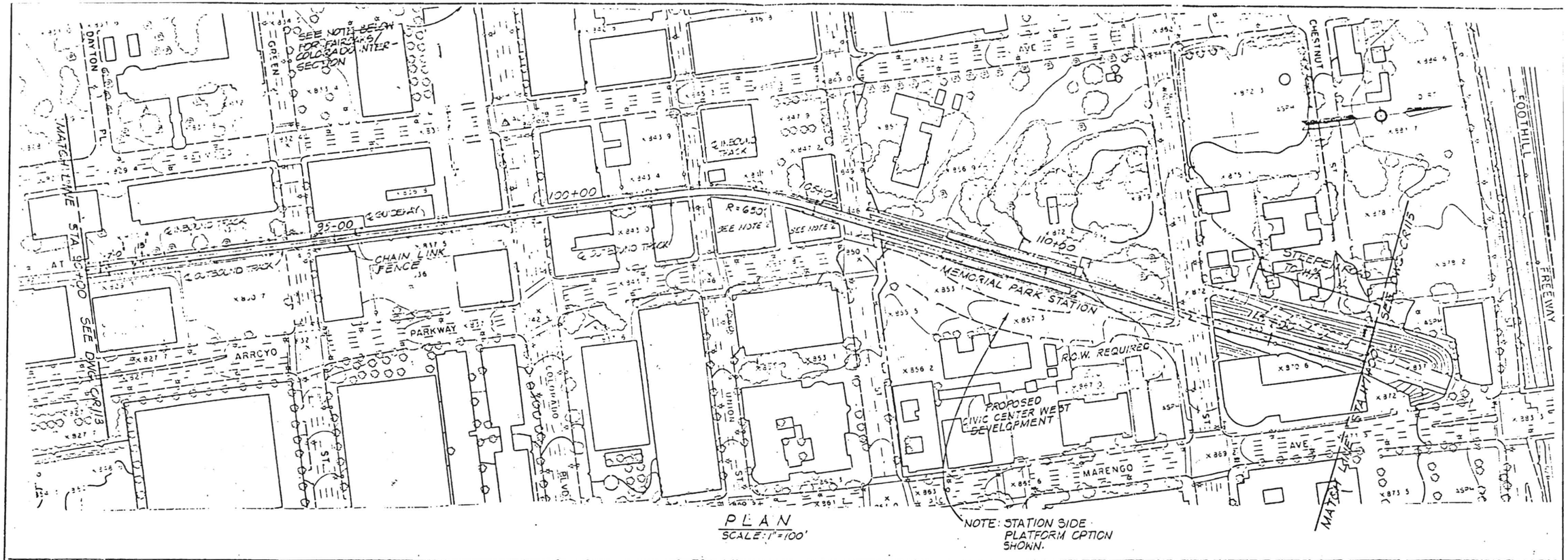
10. Page 4-65: The folllowing mitigation measure should be added to the EIR: "The LACTC together with the appropriate agencies will prepare a comprehensive emergency preparedness plan that will indicate appropriate actions that should be followed in the event of an earthquake."

11. Page 4-125: The following mitigation measure should be added to the EIR: "Two way voice and digital communications capability for LAPD personnel within the underground portion of the system."

12. Page 4-135: The LAUSD does have plans for additional schools. The statement in the revised DEIR to the contrary is incorrect. Alternative sites are presently being evaluated for the construction of a high school that would serve the Belmont complex.

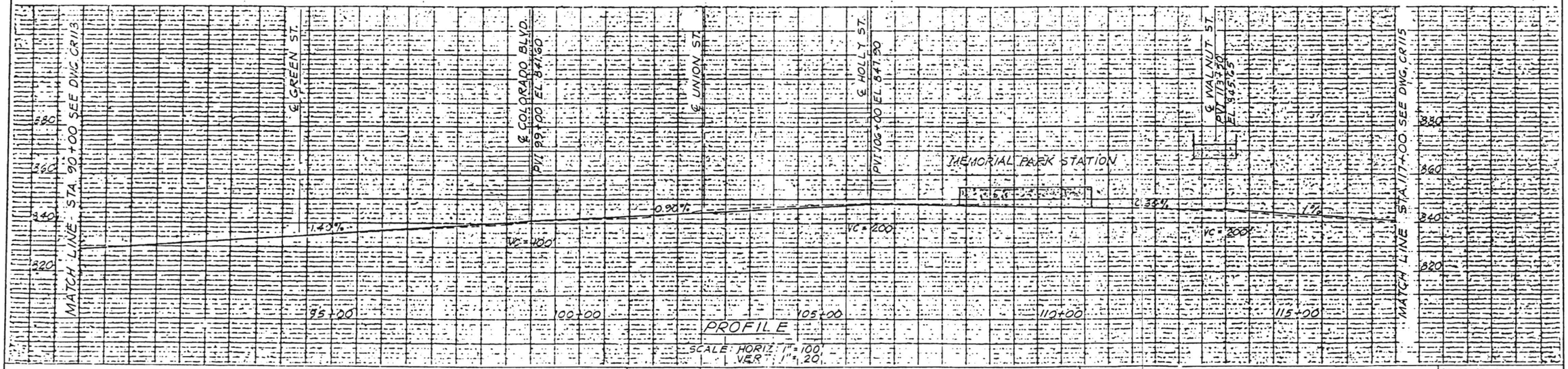
13. Mr. Richard Binder, general manager requested that the following text be inserted in the EIR that make specific reference to Phillipe's Original Restaurant:

References to the demolition of Phillipe's The Original restaurant should be inserted, at minimum, on pages 4-7, Table 4-1 "Displacement/Right-of-Way Impacts," Reference SC204/E; page 4-17, Table 4-3 "Sensitive Land Uses Adjacent ot Proposed Project," Chinatown option; and page 6-6, Table 6-1, "Preliminary Evaluation of Pasadena-L.A. Corridor Alternatives," North Main Street/Chinatown-Ord Route/Displacement Section."



PLAN
SCALE: 1"=100'

NOTE: STATION SIDE PLATFORM OPTION SHOWN.



PROFILE
SCALE: HORIZ. 1"=100'
VER. 1"=20'

NOTE:
1. FOR ADDITIONAL LANE REQUIREMENTS - (WHICH DOES NOT REQUIRE ADDITIONAL R.O.W.) AT THIS INTERSECTION PLEASE REFER TO DKS REPORT (SEE NOTE 2 ON DRAWING INDEX)
2. TO AVOID HISTORIC BUILDINGS AND AVOID PARTIAL R.O.W. ACQUISITION OF MEMORIAL PARK THE TRANSITION CURVES SOUTH OF THE STATION DO NOT HAVE SPIRAL TRANSITIONS OR SUPER ELEVATION.

DRAWN: R. DE LEON
DESIGNED: J. FLANNIGAN
APPROVED: B. BEASLEY

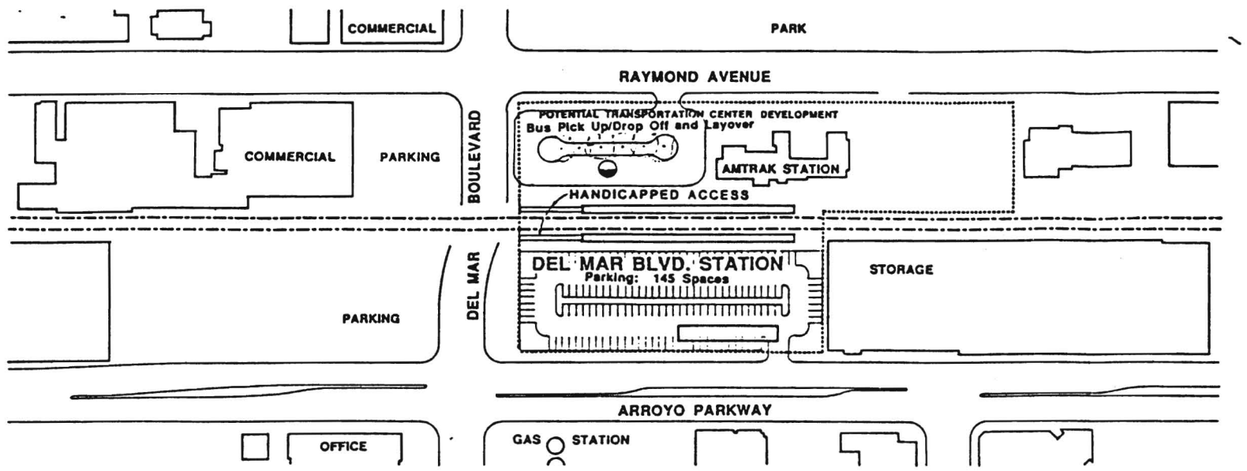
LACTC — LOS ANGELES COUNTY TRANSPORTATION COMMISSION
PASADENA - LOS ANGELES ROUTE REFINEMENT STUDY

BECHTEL CIVIL, INC.

IN ASSOCIATION WITH:
ANIL VERMA ASSOCIATES
ACOUSTICAL ANALYSIS ASSOCIATES
DKS ASSOCIATES
MICHAEL BRANDMAN ASSOCIATES, INC
PSW WONG ENGINEERING, INC.
RALPH STONE AND COMPANY, INC.

PLAN AND PROFILE
HIGHLAND PARK ALTERNATIVE
STA 90+00 TO STA. 117+00

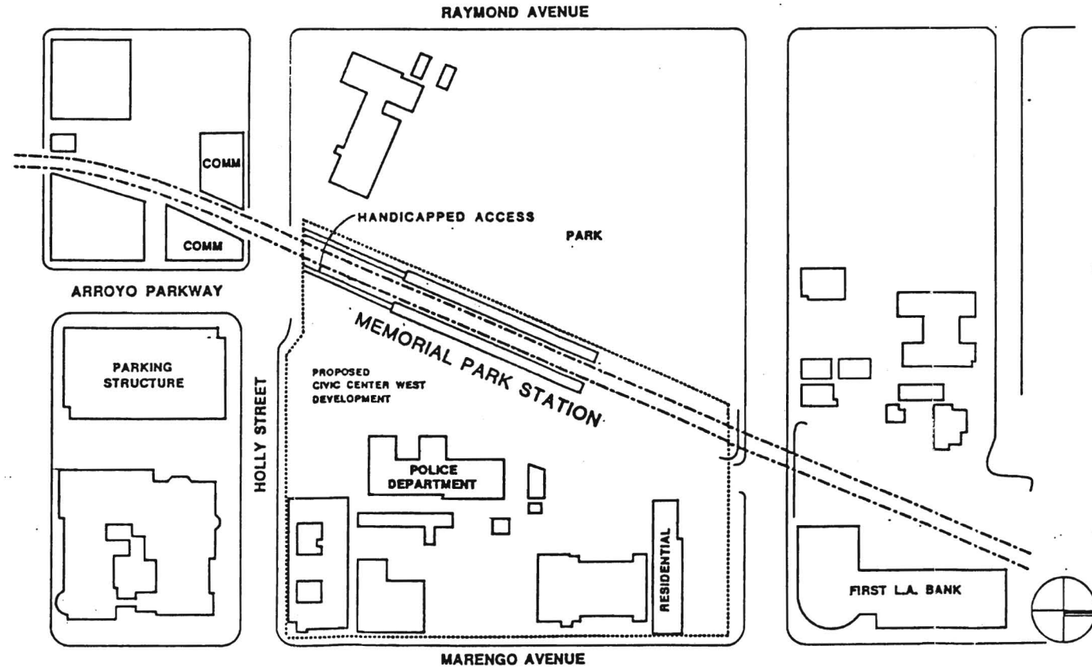
CONTRACT NO.
DRAWING NO. SCR114
SCALE AS NOTED
DATE MAY 1, 1989
SHEET NUMBER 43



DEL MAR BLVD. STATION

AT GRADE - SIDE PLATFORM

N



NOTE: STATION SIDE PLATFORM OPTION SHOWN.

N

MEMORIAL PARK STATION

AT GRADE - CENTER PLATFORM

DRAWN:	LOS ANGELES COUNTY TRANSPORTATION COMMISSION (LACTC)	HIGHLAND PARK ALTERNATIVE DEL MAR BOULEVARD AND MEMORIAL PARK STATIONS	CONTRACT NO.
DESIGNED:	PASADENA-LOS ANGELES ROUTE REFINEMENT STUDY		DRAWING NO. SP-17
APPROVED:	BECHTEL CIVIL, INC.		SCALE 1"=100' DATE 10/13/89
	IN ASSOCIATION WITH: AMIL VERMA ASSOCIATES BBN LABORATORIES, INC. DKS ASSOCIATES MICHAEL BRANDMAN ASSOCIATES, INC. PGH WONG ENGINEERING, INC. RALPH STONE AND COMPANY, INC.		SHEET NUMBER 100

APPENDIX G

SCAG RIDERSHIP FORECASTS FOR PASADENA - LOS ANGELES CORRIDOR

INTRODUCTION

The following patronage tables were generated by the Southern California Association of Governments (SCAG) for analysis of EIR alternatives. These tables will be included in a final report expected February 1990, entitled "Ridership Forecasts for the Pasadena and Coastal Corridors Light Rail Line EIR Studies."

Each model run includes 3 parts: [1] a.m. peak hour home-work trips by station; [2] a.m. peak period mode of access; and [3] a.m. peak period station arrivals by auto. In some cases, mode of access and station arrivals by auto were not generated if the only variation occurred in the downtown Los Angeles area. For all alternatives except the Union Station "No Subway" option, a.m. peak hour trip tables are generated for two operating "lines" along the corridor. One line basically is a subset of a longer line operating from Long Beach, allowing "doubling up" of service for the more passenger-intensive segments closer to downtown. In the case of this high-ridership corridor, both lines operate through the majority of this corridor. Hence, for those line segments that overlap, boardings on each line must be added together to obtain the station total.

The following key describes which model runs apply to the alternatives. Please note that model runs are not necessarily provided for every variation in the EIR: in many cases, patronage for a segment of one alternative is extrapolated from what was found for another alternative. Daily ridership, as presented in the EIR, is determined by comparing daily trip totals with a "null project" run.

MODEL RUN	LB-LA/ LA-PASADENA
1	Highland Park/Chinatown
3	North Main/Chinatown
6	Highland Park/2nd Street
7	N. Main/2nd Street
8	Highland Park/2nd St./Union Station
11	Union Station to Del Mar Amtrak Station
12	Union Station to East Pasadena
13	Highland Park/Chinatown to East Pasadena

RD:3
SR:APP.G

TABLE 6-1A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #1
PASADENA ALTERNATIVE A: HIGHLAND PARK ALIGNMENT VIA CHINATOWN/CBD
#LB-HPK1

A M P E A K H O U R P A S S E N G E R L O A D I N G S
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	VOLUME (RD UP) IN	ON	OFF
1	1ST ST/LONG BCH BL	2268	0	329	0	1	2268	289	0	289
2	1ST ST/PACIFIC AVE	2263	329	3	0	2	2263	0	0	0
3	4TH ST/PACIFIC AVE	2327	332	0	0	3	2327	0	0	0
4	6TH ST/LONG BCH BL	2334	0	0	0	4	2334	456	0	167
5	ANAHEIM ST	8012	332	143	0	4	8012	597	12	152
6	PACIFIC COAST HWY	8013	475	342	39	5	8013	756	113	272
7	WILLOW ST	8015	778	387	6	6	8015	760	71	75
8	WARDLOW RD	8018	1159	157	50	7	8018	759	66	65
9	DEL AMO BL	8017	1265	733	34	8	8017	854	95	190
10	ARTESIA BL	8018	1965	341	80	9	8018	1020	29	201
11	COMPTON BL	8019	2228	547	177	10	8019	1264	115	353
12	IMPERIAL HIGHWAY	8003	2597	1817	734	11	8003	988	671	394
13	103RD ST	8021	3680	312	47	12	8021	952	72	37
14	FIRESTONE BL	8022	3945	180	53	13	8022	902	58	8
15	FLORENCE AVE	8023	4072	345	78	14	8023	784	188	28
16	SLAUSON AVE	8024	4339	395	164	15	8024	708	120	65
17	VERNON AVE	8025	4570	159	384	16	8025	745	112	148
18	WASHINGTON BL	8026	4345	131	188	17	8026	781	58	74
19	SAN PEDRO ST	8027	4288	207	1044	18	8027	1113	121	474
20	GRAND AVE	4509	3452	188	379	19	4509	994	332	212
21	PICO BL	8030	3241	202	425	20	8030	1232	57	295
22	7TH/FLOWER	8031	3018	392	1644	21	8031	1391	616	778
23	4TH/FLOWER	4871	1768	7	1148	22	4871	1969	21	599
24	FIRST/GRAND	4912	625	20	173	23	4912	2291	14	337
25	ALPINE/BROADWAY	8069	472	38	223	24	8069	1820	709	237
26	AVENUE 26/SF ROW	5184	287	7	45	25	5184	1581	249	10
27	MARMION WAY/FIGUEROA	5310	249	11	72	26	5310	1420	208	47
28	MARMION WAY/AVE 50	5319	188	19	21	27	5319	1044	380	5
29	MARMION WAY/AVE 57	5325	186	13	51	28	5325	461	587	3
30	MONTEREY/PASADENA	5332	149	0	149	29	5332	0	461	0

S U M M A R Y

LRT	VEHICLE TYPE
8.0	HEADWAY
29.5	ROUTE MILES
29	NUMBER OF STATIONS
25.9	AVERAGE SPEED
4570	AM PEAK LOAD
99300	AVERAGE WEEKDAY TRIPS
689000	DAILY PASSENGER MILES

TABLE 6-1B

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #1
LA CBD TO PASADENA VIA HIGHLAND PARK
#LB=HPK1

A M P E A K H O U R P A S S E N G E R L O A D I N G S
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	PICO BL	8030	0	240	0	1	8030	328	0	328
2	7TH/FLOWER	8031	240	429	8	2	8031	1022	93	790
3	4TH/FLOWER	4871	663	15	413	3	4871	1633	2	812
4	FIRST/GRAND	4912	265	42	12	4	4912	1977	5	349
5	ALPINE/BROADWAY	8089	295	56	83	5	8089	1813	608	244
6	AVENUE 26/SF ROW	5184	288	14	48	6	5184	1418	211	17
7	MARMION WAY/FIGUEROA	5310	234	19	73	7	5310	1284	191	55
8	MARMION WAY/AVE 50	5319	180	20	24	8	5319	956	338	8
9	MARMION WAY/AVE 57	5325	176	18	58	9	5325	428	534	8
10	MONTEREY/PASADENA	5332	136	0	136	10	5332	0	428	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
8.5	ROUTE MILES
10	NUMBER OF STATIONS
30.9	AVERAGE SPEED
1970	AM PEAK LOAD
25000	AVERAGE WEEKDAY TRIPS
93000	DAILY PASSENGER MILES

TABLE 7-1A

LACTC PASADENA & COASTAL CORRIDOR LIGHT RAIL PROJECTS

MODEL RUN #1
PASADENA LINES: HIGHLAND PARK ALIGNMENT VIA CHINATOWN/CBD
#LB-HPK1

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH PNR CAPACITY-RESTRAINED ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	2268	FIRST ST/LONG BCH BL	0	0	682	425	(62.3)	257	(37.7)	0	(0.0)	0	(0.0)
2	2283	FIRST/PACIFIC	0	0	7	0	(0.0)	7	(100.0)	0	(0.0)	0	(0.0)
3	2327	4TH/PACIFIC	0	0	0	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
4	2334	6TH ST/LONG BCH BL	0	0	0	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
5	8012	ANAHEIM ST.	0	0	322	277	(86.0)	45	(14.0)	0	(0.0)	0	(0.0)
6	8013	PACIFIC COAST HWAY	0	0	944	684	(72.5)	260	(27.5)	0	(0.0)	0	(0.0)
7	8015	WILLOW ST.	250	0	950	216	(22.7)	216	(22.7)	519	(54.6)	0	(0.0)
8	8016	WARDLOW ROAD	50	0	463	232	(50.1)	0	(0.0)	231	(49.9)	0	(0.0)
9	8017	DEL AMO BLVD.	300	0	1718	0	(0.0)	1305	(76.0)	413	(24.0)	0	(0.0)
10	8018	ARTESIA BLVD.	425	0	788	53	(6.9)	11	(1.4)	704	(91.7)	0	(0.0)
11	8019	COMPTON BLVD.	300	0	1374	479	(34.9)	448	(32.6)	447	(32.5)	0	(0.0)
12	8003	IMPERIAL HWAY	1000	0	5163	255	(4.9)	191	(3.7)	961	(18.6)	3757	(72.8)
13	8021	103RD STREET	0	0	797	659	(82.7)	138	(17.3)	0	(0.0)	0	(0.0)
14	8022	FIRESTONE BLVD.	0	0	494	460	(93.1)	34	(6.9)	0	(0.0)	0	(0.0)
15	8023	FLORENCE AVE.	0	0	1059	665	(62.8)	394	(37.2)	0	(0.0)	0	(0.0)
16	8024	SLAUSON AVE.	0	0	1070	446	(41.6)	625	(58.4)	0	(0.0)	0	(0.0)
17	8025	VERNON AVE.	0	0	562	335	(59.5)	228	(40.5)	0	(0.0)	0	(0.0)
18	8026	WASHINGTON BLVD.	0	0	394	328	(83.2)	66	(16.8)	0	(0.0)	0	(0.0)
19	8027	SAN PEDRO	0	0	681	86	(12.6)	596	(87.4)	0	(0.0)	0	(0.0)
20	4509	GRAND AVE.	0	0	1036	17	(1.6)	1019	(98.4)	0	(0.0)	0	(0.0)
21	8030	PICO BLVD.	0	0	1035	71	(6.9)	964	(93.1)	0	(0.0)	0	(0.0)
22	8031	7TH/FLOWER	0	0	3178	0	(0.0)	88	(2.7)	0	(0.0)	3090	(97.3)
23	4871	4TH/FLOWER	0	0	93	8	(8.5)	88	(91.5)	0	(0.0)	0	(0.0)
24	4912	FIRST/GRAND	0	0	169	6	(3.6)	163	(96.4)	0	(0.0)	0	(0.0)
25	8069	ALPINE/BROADWAY	0	0	2926	378	(12.9)	2548	(87.1)	0	(0.0)	0	(0.0)
26	5184	AVENUE 26/SF ROW	100	0	997	372	(37.3)	5	(0.5)	620	(62.2)	0	(0.0)
27	5310	MARMION WAY/FIGUEROA	0	0	889	638	(71.7)	252	(28.3)	0	(0.0)	0	(0.0)
28	5319	MARMION WAY/AVE. 50	50	0	1568	1334	(85.1)	0	(0.0)	234	(14.9)	0	(0.0)
29	5325	MARMION WAY/AVE. 57	100	0	2387	677	(28.4)	1048	(43.9)	662	(27.7)	0	(0.0)
30	5332	MONTEREY/PASADENA	0	0	1843	392	(21.3)	1452	(78.7)	0	(0.0)	0	(0.0)

TABLE 7-6A

LACTC PASADENA & COASTAL CORRIDOR LIGHT RAIL PROJECTS

MODEL RUN #1
PASADENA LINES: HIGHLAND PARK ALIGNMENT VIA CHINATOWN/CBD
#LB-HPK1

AM PEAK PERIOD STATION ARRIVALS BY AUTO
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
2268	0	0	0	0	0	0	0	0	0	0.0
2283	0	0	0	0	0	0	0	0	0	0.0
2327	0	0	0	0	0	0	0	0	0	0.0
2334	0	0	0	0	0	0	0	0	0	0.0
8012	0	0	0	0	0	0	0	0	0	0.0
8013	0	0	0	0	0	0	0	0	0	0.0
8015	250	519	286	0	0	519	286	117	117	114.40
8016	50	231	128	0	0	231	128	52	52	256.00
8017	300	431	239	18	10	413	229	96	93	79.67
8018	425	704	389	0	0	704	389	159	158	91.53
8019	300	453	250	6	3	447	247	101	101	83.33
8003	1000	1502	832	542	300	981	532	338	218	83.20
8021	0	0	0	0	0	0	0	0	0	0.0
8022	0	0	0	0	0	0	0	0	0	0.0
8023	0	0	0	0	0	0	0	0	0	0.0
8024	0	0	0	0	0	0	0	0	0	0.0
8025	0	0	0	0	0	0	0	0	0	0.0
8026	0	0	0	0	0	0	0	0	0	0.0
8027	0	0	0	0	0	0	0	0	0	0.0
4509	0	0	0	0	0	0	0	0	0	0.0
8030	0	0	0	0	0	0	0	0	0	0.0
8031	0	0	0	0	0	0	0	0	0	0.0
4871	0	0	0	0	0	0	0	0	0	0.0
4912	0	0	0	0	0	0	0	0	0	0.0
8069	0	0	0	0	0	0	0	0	0	0.0
5184	100	652	381	32	18	620	343	148	139	381.00
5310	0	0	0	0	0	0	0	0	0	0.0
5319	50	234	129	0	0	234	129	52	52	258.00
5325	100	662	368	0	0	662	368	149	149	368.00
5332	0	0	0	0	0	0	0	0	0	0.0

TABLE 6-3A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #3
PASADENA ALT. B: NORTH MAIN STREET ALIGNMENT VIA CHINATOWN/CBD
#LB-NMN1

AM PEAK HOUR PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	VOLUME (RD UP) IN	ON	OFF
1	1ST ST/LONG BCH BL	2266	0	332	0	1	2266	292	0	292
2	1ST ST/PACIFIC	2263	332	4	0	2	2263	0	0	0
3	4TH ST/PACIFIC	2327	335	0	0	3	2327	0	0	0
4	6TH ST/LONG BCH BL	2334	0	0	0	4	2334	462	0	170
5	ANAHEIM ST	8012	335	143	0	5	8012	602	12	151
6	PACIFIC COAST HWAY	8013	478	344	39	6	8013	776	113	287
7	WILLOW ST	8015	783	388	8	7	8015	788	71	83
8	WARDLOW RD	8016	1164	158	50	8	8016	785	65	62
9	DEL AMO BL	8017	1270	724	37	9	8017	870	102	187
10	ARTESIA BL	8018	1957	349	81	10	8018	1048	22	198
11	COMPTON BL	8019	2225	546	173	11	8019	1291	117	381
12	IMPERIAL HIGHWAY	8003	2599	1811	742	12	8003	1000	687	398
13	103RD ST	8021	3667	311	51	13	8021	969	72	41
14	FIRESTONE BL	8022	3928	180	48	14	8022	923	58	11
15	FLORENCE AVE	8023	4060	343	82	15	8023	780	170	28
16	SLAUSON AVE	8024	4321	388	162	16	8024	721	118	58
17	VERNON AVE	8025	4547	159	391	17	8025	772	113	164
18	WASHINGTON BL	8026	4315	133	189	18	8026	791	60	78
19	SAN PEDRO ST	8027	4259	200	1033	19	8027	1125	118	452
20	GRAND AVE	4509	3425	157	364	20	4509	1015	325	215
21	PICO BL	8030	3218	194	433	21	8030	1243	53	281
22	7TH/FLOWER	8031	2979	382	1608	22	8031	1366	615	739
23	4TH/FLOWER	4871	1754	4	1148	23	4871	1842	20	498
24	1ST/GRAND	4912	610	18	178	24	4912	2154	12	323
25	ORD/BROADWAY	8052	449	11	121	25	8052	2034	282	162
26	NORTH MAIN/GRIFFIN	5198	338	14	127	26	5198	1794	279	39
27	MISSION/LINCOLN PK	5185	225	4	31	27	5185	1560	248	14
28	HUNTINGTON/MONTEREY	5205	198	19	8	28	5205	1310	253	3
29	HUNTINGTON/EASTERN	5209	209	9	17	29	5209	1133	180	3
30	HUNTINGTON/RTE 710	6778	202	0	202	30	6778	0	1133	0

SUMMARY

LRT	VEHICLE TYPE
6.0	HEADWAY
28.8	ROUTE MILES
30	NUMBER OF STATIONS
25.0	AVERAGE SPEED
4540	AM PEAK LOAD
96900	AVERAGE WEEKDAY TRIPS
694000	DAILY PASSENGER MILES

TABLE 6-38

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #3
PASADENA ALT. B: NORTH MAIN STREET ALIGNMENT VIA CHINATOWN/CBD
#LB-NMN1

AM PEAK HOUR PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.		TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	PICO BL	8030	0	228	0	1	8030	306	0	306
2	7TH/FLOWER	8031	228	405	5	2	8031	972	81	747
3	4TH/FLOWER	4871	628	7	410	3	4871	1473	2	503
4	1ST/GRAND	4912	225	28	11	4	4912	1797	5	329
5	ORD/BROADWAY	8052	242	25	34	5	8052	1745	219	168
6	NORTH/GRIFFIN	5198	233	25	71	6	5198	1571	218	44
7	MISSION/LINCOLN PK	5185	187	5	29	7	5185	1372	218	19
8	HUNTINGTON/MONTEREY	5205	183	20	13	8	5205	1155	223	8
9	HUNTINGTON/EASTERN	5209	170	12	21	9	5209	998	185	8
10	HUNTINGTON/RTE 710	6778	160	0	160	10	6778	0	998	0

SUMMARY

LRT	VEHICLE TYPE
6.0	HEADWAY
7.8	ROUTE MILES
10	NUMBER OF STATIONS
27.1	AVERAGE SPEED
1790	AM PEAK LOAD
22200	AVERAGE WEEKDAY TRIPS
91000	DAILY PASSENGER MILES

TABLE 7-3A

LACTC PASADENA & COASTAL CORRIDOR LIGHT RAIL PROJECTS

MODEL RUN #3
PASADENA ALT. 8: NO MAIN ST ALIGNMENT VIA CHINATOWN/CBD
#L8-NMN1

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH PAR CAPACITY-RESTRAINED ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	2268	FIRST ST/LONG BCH BL	0	0	689	427(	62.0)	262(	38.0)	0(	0.0)	0(	0.0)
2	2283	FIRST/PACIFIC	0	0	8	0(	0.0)	8(	100.0)	0(	0.0)	0(	0.0)
3	2327	4TH/PACIFIC	0	0	0	0(	0.0)	0(	0.0)	0(	0.0)	0(	0.0)
4	2334	6TH/LONG BEACH BL	0	0	0	0(	0.0)	0(	0.0)	0(	0.0)	0(	0.0)
4	8012	ANAHEIM ST.	0	0	320	278(	86.9)	42(	13.1)	0(	0.0)	0(	0.0)
5	8013	PACIFIC COAST HWAY	0	0	948	683(	72.0)	265(	28.0)	0(	0.0)	0(	0.0)
6	8015	WILLOW ST.	250	0	947	216(	22.8)	212(	22.4)	519(	54.8)	0(	0.0)
7	8016	WARDLOW ROAD	50	0	449	227(	50.6)	0(	0.0)	222(	49.4)	0(	0.0)
8	8017	DEL AMO BLVD.	300	0	1714	0(	0.0)	1229(	71.7)	485(	28.3)	0(	0.0)
9	8018	ARTESIA BLVD.	425	0	789	54(	7.0)	10(	1.3)	705(	91.7)	0(	0.0)
10	8019	COMPTON BLVD.	300	0	1378	480(	34.8)	450(	32.7)	448(	32.4)	0(	0.0)
11	8003	IMPERIAL HWAY	1000	0	5182	251(	4.8)	193(	3.7)	954(	18.4)	3784(	73.1)
12	8021	103RD STREET	0	0	794	660(	83.1)	134(	16.9)	0(	0.0)	0(	0.0)
13	8022	FIRESTONE BLVD.	0	0	494	465(	94.1)	29(	5.9)	0(	0.0)	0(	0.0)
14	8023	FLORENCE AVE.	0	0	1065	666(	62.5)	399(	37.5)	0(	0.0)	0(	0.0)
15	8024	SLAUSON AVE.	0	0	1050	447(	42.6)	603(	57.4)	0(	0.0)	0(	0.0)
16	8025	VERNON AVE.	0	0	564	333(	59.0)	231(	41.0)	0(	0.0)	0(	0.0)
17	8026	WASHINGTON BLVD.	0	0	400	334(	83.5)	66(	16.5)	0(	0.0)	0(	0.0)
18	8027	SAN PEDRO	0	0	659	84(	12.7)	575(	87.3)	0(	0.0)	0(	0.0)
19	4509	GRAND AVE.	0	0	999	13(	1.3)	986(	98.7)	0(	0.0)	0(	0.0)
20	8030	PICO BLVD.	0	0	986	73(	7.4)	913(	92.6)	0(	0.0)	0(	0.0)
21	8031	7TH/FLOWER	0	0	3080	0(	0.0)	81(	2.6)	0(	0.0)	2999(	97.4)
22	4871	4TH/FLOWER	0	0	69	8(	12.1)	61(	87.9)	0(	0.0)	0(	0.0)
23	4912	FIRST/GRAND	0	0	126	5(	4.0)	121(	96.0)	0(	0.0)	0(	0.0)
24	8052	ORD/BROADWAY	0	0	1115	829(	74.3)	286(	25.7)	0(	0.0)	0(	0.0)
25	5198	NORTH MAIN/GRIFFIN	0	0	1112	323(	29.0)	789(	71.0)	0(	0.0)	0(	0.0)
26	5185	MISSION/LINCOLN PK	115	0	988	345(	34.9)	1(	0.1)	642(	65.0)	0(	0.0)
27	5205	HUNTINGTON/MONTEREY	50	0	1067	321(	30.1)	141(	13.2)	605(	56.7)	0(	0.0)
28	5209	HUNTINGTON/EASTERN	0	0	760	750(	98.7)	10(	1.3)	0(	0.0)	0(	0.0)
29	6778	HUNTINGTON/RTE 710	300	0	4417	0(	0.0)	3615(	81.8)	802(	18.2)	0(	0.0)

TABLE 7-8A

LACTC PASADENA & COASTAL CORRIDOR LIGHT RAIL PROJECTS

MODEL RUN #3
PASADENA ALTERNATIVE B: N MAIN ST ALIGNMENT VIA CHINATOWN/CBD
#LB-NMN1

AM PEAK PERIOD STATION ARRIVALS BY AUTO
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
2288	0	0	0	0	0	0	0	0	0	0.0
2283	0	0	0	0	0	0	0	0	0	0.0
2327	0	0	0	0	0	0	0	0	0	0.0
2334	0	0	0	0	0	0	0	0	0	0.0
8012	0	0	0	0	0	0	0	0	0	0.0
8013	0	0	0	0	0	0	0	0	0	0.0
8015	250	519	288	0	0	519	288	118	117	115.20
8016	50	228	126	6	3	222	123	51	50	252.00
8017	300	503	279	18	10	485	269	113	109	93.00
8018	425	705	391	0	0	705	391	158	159	92.00
8019	300	452	250	6	3	448	247	101	100	83.33
8003	1000	1512	837	558	309	954	528	340	215	83.70
8021	0	0	0	0	0	0	0	0	0	0.0
8022	0	0	0	0	0	0	0	0	0	0.0
8023	0	0	0	0	0	0	0	0	0	0.0
8024	0	0	0	0	0	0	0	0	0	0.0
8025	0	0	0	0	0	0	0	0	0	0.0
8028	0	0	0	0	0	0	0	0	0	0.0
8027	0	0	0	0	0	0	0	0	0	0.0
4509	0	0	0	0	0	0	0	0	0	0.0
8030	0	0	0	0	0	0	0	0	0	0.0
8031	0	0	0	0	0	0	0	0	0	0.0
4871	0	0	0	0	0	0	0	0	0	0.0
4912	0	0	0	0	0	0	0	0	0	0.0
8052	0	0	0	0	0	0	0	0	0	0.0
5198	0	0	0	0	0	0	0	0	0	0.0
5185	115	642	355	0	0	642	355	144	144	308.70
5205	50	608	336	4	2	605	334	137	136	672.00
5209	0	0	0	0	0	0	0	0	0	0.0
8778	300	848	469	47	28	802	443	191	180	156.33

TABLE 6 6A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #8

PASADENA ALTERNATE A: HIGHLAND PARK ALIGNMENT VIA 2ND STREET WITH 4TH/FLOWER STATION

A M P E A K H O U R P A S S E N G E R L O A D I N G S

(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	1ST ST/LONG BCH BL	2268	0	322	0	1	2268	282	0	282
2	6TH ST/LONG BCH BL	2334	0	0	0	2	2334	448	0	168
3	1ST ST/PACIFIC	2263	322	3	0	3	2263	0	0	0
4	4TH ST/PACIFIC	2327	324	0	0	4	2327	0	0	0
5	ANAHEIM ST	8012	324	144	0	5	8012	597	12	181
6	PACIFIC COAST HWAY	8013	468	339	38	6	8013	747	112	262
7	WILLOW ST	8015	770	379	6	7	8015	787	65	85
8	WARDLOW RD	8016	1143	154	52	8	8016	758	87	58
9	DEL AMO BLVD	8017	1245	723	37	9	8017	840	98	178
10	ARTESIA BLVD	8018	1931	341	74	10	8018	1003	26	189
11	COMPTON BLVD	8019	2198	553	158	11	8019	1219	127	343
12	IMPERIAL HIGHWAY	8003	2594	1879	739	12	8003	1001	629	411
13	103RD ST	8021	3534	337	50	13	8021	940	98	38
14	FIRESTONE BLVD	8022	3821	179	44	14	8022	895	55	10
15	FLORENCE AVE	8023	3958	337	73	15	8023	752	183	20
16	SLAUSON AVE	8024	4220	392	169	16	8024	701	112	80
17	VERNON AVE	8025	4443	157	371	17	8025	748	110	155
18	WASHINGTON BLVD	8026	4229	131	177	18	8026	785	58	78
19	SAN PEDRO ST	8027	4184	184	1036	19	8027	1042	123	400
20	GRAND AVE	4509	3332	157	371	20	4509	884	332	154
21	PICO BLVD.	8030	3117	224	420	21	8030	1072	55	283
22	7TH/FLOWER	8031	2922	380	1682	22	8031	993	637	558
23	4TH/FLOWER	4871	1639	8	1224	23	4871	1607	21	638
24	2ND/GRAND	8050	421	0	0	24	8050	1607	0	0
25	1ST ST/LOS ANGELES	4948	421	48	95	25	4948	2055	83	512
26	ALPINE/BROADWAY	8069	374	33	133	26	8069	1734	419	98
27	AVENUE 26/SF ROW	5184	274	8	44	27	5184	1508	238	10
28	MARMION WAY/FIGUEROA	5310	237	9	76	28	5310	1365	195	51
29	MARMION WAY/AVE. 50	5319	170	16	16	29	5319	1000	370	5
30	MARMION WAY/AVE. 57	5325	170	13	47	30	5325	437	587	4
31	MONTEREY/PASADENA	5332	136	0	136	31	5332	0	437	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
29.9	ROUTE MILES
31	NUMBER OF STATIONS
25.7	AVERAGE SPEED
4440	AM PEAK LOAD
95500	AVERAGE WEEKDAY TRIPS
672100	DAILY PASSENGER MILES

TABLE 6 6B

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #6

PASADENA ALTERNATE A: HIGHLAND PARK ALIGNMENT VIA 2ND STREET WITH 4TH/FLOWER STATION

A M P E A K H O U R P A S S E N G E R L O A D I N G S

(WITH PNR CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	PICO BLVD.	8030	0	281	0	1	8030	290	0	290
2	7TH/FLOWER	8031	281	414	6	2	8031	770	93	573
3	4TH/FLOWER	4871	689	14	411	3	4871	1418	1	847
4	2ND/GRAND	8050	273	0	0	4	8050	1418	0	0
5	1ST ST/LOS ANGELES	4948	273	66	72	5	4948	1878	58	520
6	ALPINE/BROADWAY	8089	268	61	58	6	8089	1821	383	108
7	AVENUE 26/SF ROW	5184	269	13	46	7	5184	1419	219	17
8	MARMION WAY/FIGUEROA	5310	236	20	73	8	5310	1290	188	57
9	MARMION WAY/AVE. 50	5319	182	18	24	9	5319	956	343	9
10	MARMION WAY/AVE. 57	5325	176	16	59	10	5325	422	539	5
11	MONTEREY/PASADENA	5332	133	0	133	11	5332	0	422	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
8.9	ROUTE MILES
11	NUMBER OF STATIONS
29.8	AVERAGE SPEED
1870	AM PEAK LOAD
23900	AVERAGE WEEKDAY TRIPS
98200	DAILY PASSENGER MILES

TABLE 7-6A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #6
PASADENA ALTERNATIVE A: HIGHLAND PARK ALIGNMENT VIA 2ND STREET WITH 4TH/FLOWER STATION

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	2268	1ST ST/LONG BCH BL	0	0	668	418	62.6	250	37.4	0	0.0	0	0.0
2	2334	6TH ST/LONG BCH BL	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
3	2283	1ST ST/PACIFIC	0	0	6	0	0.0	6	100.0	0	0.0	0	0.0
4	2327	4TH ST/PACIFIC	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
5	8012	ANAHEIM ST	0	0	323	277	85.8	46	14.2	0	0.0	0	0.0
6	8013	PACIFIC COAST HWAY	0	0	937	671	71.6	266	28.4	0	0.0	0	0.0
7	8015	WILLOW ST	250	0	923	215	23.3	215	23.3	493	53.4	0	0.0
8	8016	WARDLOW RD	50	0	459	231	50.3	0	0.0	228	49.7	0	0.0
9	8017	DEL AMO BLVD	300	0	1700	0	0.0	1289	75.8	411	24.2	0	0.0
10	8018	ARTESIA BLVD	425	0	760	54	7.1	12	1.6	695	91.3	0	0.0
11	8019	COMPTON BLVD	300	0	1411	476	33.7	477	33.8	458	32.5	0	0.0
12	8003	IMPERIAL HIGHWAY	1000	0	4789	250	5.2	311	6.5	681	13.6	3587	74.5
13	8021	103RD ST	0	0	902	716	79.3	187	20.7	0	0.0	0	0.0
14	8022	FIRESTONE BLVD	0	0	487	459	94.1	29	5.9	0	0.0	0	0.0
15	8023	FLORENCE AVE	0	0	1037	659	63.5	379	36.5	0	0.0	0	0.0
16	8024	SLAUSON AVE	0	0	1045	443	42.4	603	57.6	0	0.0	0	0.0
17	8025	VERNON AVE	0	0	554	336	60.6	218	39.4	0	0.0	0	0.0
18	8026	WASHINGTON BLVD	0	0	391	327	83.6	64	16.4	0	0.0	0	0.0
19	8027	SAN PEDRO ST	0	0	636	86	13.5	550	86.5	0	0.0	0	0.0
20	4509	GRAND AVE	0	0	1016	16	1.6	1000	98.4	0	0.0	0	0.0
21	8030	PICO BLVD.	0	0	1121	75	6.7	1045	93.3	0	0.0	0	0.0
22	8031	7TH/FLOWER	0	0	3162	0	0.0	101	3.2	0	0.0	3060	96.8
23	4871	4TH/FLOWER	0	0	90	10	11.1	80	88.9	0	0.0	0	0.0
24	8050	2ND/GRAND	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
25	4948	1ST ST/LOS ANGELES	0	0	488	0	0.0	488	100.0	0	0.0	0	0.0
26	8089	ALPINE/BROADWAY	0	0	1817	71	3.9	1747	96.1	0	0.0	0	0.0
27	5184	AVENUE 26/SF ROW	100	0	988	368	37.2	7	0.7	613	62.0	0	0.0
28	5310	MARMION WAY/FIGUEROA	0	0	849	633	74.6	216	25.4	0	0.0	0	0.0
29	5318	MARMION WAY/AVE. 50	50	0	1550	1321	85.2	0	0.0	229	14.8	0	0.0
30	5325	MARMION WAY/AVE. 57	100	0	2354	675	28.7	1024	43.5	656	27.9	0	0.0
31	5332	MONTEREY/PASADENA	0	0	1783	390	21.9	1393	78.1	0	0.0	0	0.0

TABLE 6 7A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #7

PASADENA ALTERNATE B: NORTH MAIN STREET ALIGNMENT VIA 2ND STREET WITH 4TH/FLOWER STATION

A M P E A K H O U R P A S S E N G E R L O A D I N G S

(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	FIRST ST/LONG BCH BL	2266	0	326	0	1	2266	282	0	282
2	6TH ST/LONG BCH BL	2334	0	0	0	2	2334	450	0	168
3	1ST ST/PACIFIC	2263	326	3	0	3	2263	0	0	0
4	4TH ST/PACIFIC	2327	329	0	0	4	2327	0	0	0
5	ANAHEIM ST.	8012	329	144	0	5	8012	596	11	157
6	PACIFIC COAST HWAY	8013	473	338	39	6	8013	764	112	281
7	WILLOW ST.	8015	772	376	5	7	8015	782	65	84
8	WARDLOW ROAD	8016	1143	152	51	8	8016	780	68	66
9	DEL AMO BLVD.	8017	1244	693	37	9	8017	857	108	185
10	ARTESIA BLVD.	8018	1901	368	75	10	8018	1017	22	182
11	COMPTON BLVD.	8019	2194	528	152	11	8019	1241	131	355
12	IMPERIAL HWAY	8003	2569	1699	727	12	8003	1010	643	412
13	103RD STREET	8021	3541	335	51	13	8021	950	99	39
14	FIRESTONE BLVD.	8022	3824	181	46	14	8022	906	50	6
15	FLORENCE AVE.	8023	3959	336	80	15	8023	765	188	28
16	SLAUSON AVE.	8024	4215	384	160	16	8024	708	114	57
17	VERNON AVE.	8025	4438	155	373	17	8025	745	112	148
18	WASHINGTON BLVD.	8026	4221	133	174	18	8026	770	57	82
19	SAN PEDRO	8027	4180	184	998	19	8027	1141	33	404
20	GRAND AVE.	4509	3386	183	374	20	4509	995	330	184
21	PICO BLVD.	8030	3155	252	421	21	8030	1264	52	320
22	7TH/FLOWER	8031	2985	299	1618	22	8031	912	591	239
23	4TH/FLOWER	4871	1668	6	1215	23	4871	1488	19	593
24	2ND/GRAND	8050	459	0	0	24	8050	1488	0	0
25	1ST ST/LOS ANGELES	4948	459	8	122	25	4948	1732	79	325
26	UNION STATION	8047	343	157	168	26	8047	1876	417	561
27	NORTH MAIN/GRIFFIN	5196	334	7	101	27	5196	1672	234	31
28	MISSION/LINCOLN PK	5185	240	9	28	28	5185	1428	261	15
29	HUNTINGTON/MONTEREY	5205	222	15	13	29	5205	1178	254	4
30	HUNTINGTON/EASTERN	5209	224	8	22	30	5209	999	181	4
31	HUNTINGTON/RTE 710	6776	210	0	210	31	6776	0	999	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
28.8	ROUTE MILES
31	NUMBER OF STATIONS
24.7	AVERAGE SPEED
4440	AM PEAK LOAD
95800	AVERAGE WEEKDAY TRIPS
673900	DAILY PASSENGER MILES

TABLE 6-78

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #7
PASADENA ALTERNATE B: NORTH MAIN STREET ALIGNMENT VIA 2ND STREET WITH 4TH/FLOWER STATION

A M P E A K H O U R P A S S E N G E R L O A D I N G S
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	PICO BLVD.	8030	0	284	0	1	8030	341	0	341
2	7TH/FLOWER	8031	284	309	6	2	8031	545	48	249
3	4TH/FLOWER	4871	588	11	409	3	4871	1142	1	598
4	2ND/GRAND	8050	190	0	0	4	8050	1142	0	0
5	1ST ST/LOS ANGELES	4948	180	14	71	5	4948	1415	58	331
6	UNION STATION	8047	133	193	49	6	8047	1721	258	584
7	NORTH MAIN/GRIFFIN	5196	277	13	67	7	5196	1558	202	37
8	MISSION/LINCOLN PK	5185	223	12	34	8	5185	1334	240	19
9	HUNTINGTON/MONTEREY	5205	201	18	19	9	5205	1098	243	7
10	HUNTINGTON/EASTERN	5209	201	12	27	10	5209	927	178	7
11	HUNTINGTON/RTE 710	6776	185	0	185	11	6776	0	927	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
7.8	ROUTE MILES
11	NUMBER OF STATIONS
26.0	AVERAGE SPEED
1720	AM PEAK LOAD
23200	AVERAGE WEEKDAY TRIPS
88900	DAILY PASSENGER MILES

TABLE 7 7A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #7
PASADENA ALTERNATIVE B: NORTH MAIN STREET ALIGNMENT VIA 2ND STREET WITH 4TH/FLOWER STATION

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	2266	FIRST ST/LONG BCH BL	0	0	676	419	62.0	257	38.0	0	0.0	0	0.0
2	2334	6TH ST/LONG BCH BL	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
3	2283	1ST ST/PACIFIC	0	0	7	0	0.0	7	100.0	0	0.0	0	0.0
4	2327	4TH ST/PACIFIC	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
5	8012	ANAHEIM ST.	0	0	322	278	86.1	45	13.9	0	0.0	0	0.0
6	8013	PACIFIC COAST HWAY	0	0	934	671	71.8	264	28.2	0	0.0	0	0.0
7	8015	WILLOW ST.	250	0	917	215	23.4	211	23.0	491	53.5	0	0.0
8	8016	WARDLOW ROAD	50	0	458	232	50.7	0	0.0	226	49.3	0	0.0
9	8017	DEL AMO BLVD.	300	0	1663	0	0.0	1012	60.8	652	39.2	0	0.0
10	8018	ARTESIA BLVD.	425	0	809	55	6.8	13	1.6	742	91.6	0	0.0
11	8019	COMPTON BLVD.	300	0	1367	478	34.9	435	31.8	455	33.3	0	0.0
12	8003	IMPERIAL HWAY	1000	0	4859	244	5.0	307	6.3	661	13.6	3648	75.1
13	8021	103RD STREET	0	0	899	714	79.4	185	20.6	0	0.0	0	0.0
14	8022	FIRESTONE BLVD.	0	0	479	454	94.8	25	5.2	0	0.0	0	0.0
15	8023	FLORENCE AVE.	0	0	1042	663	63.6	379	36.4	0	0.0	0	0.0
16	8024	SLAUSON AVE.	0	0	1033	447	43.3	588	56.7	0	0.0	0	0.0
17	8025	VERNON AVE.	0	0	555	331	59.6	224	40.4	0	0.0	0	0.0
18	8026	WASHINGTON BLVD.	0	0	393	333	84.7	60	15.3	0	0.0	0	0.0
19	8027	SAN PEDRO	0	0	450	86	19.1	364	80.9	0	0.0	0	0.0
20	4509	GRAND AVE.	0	0	1022	15	1.5	1007	98.5	0	0.0	0	0.0
21	8030	PICO BLVD.	0	0	1220	75	6.1	1145	93.9	0	0.0	0	0.0
22	8031	7TH/FLOWER	0	0	2584	0	0.0	124	4.8	0	0.0	2460	95.2
23	4871	4TH/FLOWER	0	0	78	10	13.0	67	87.0	0	0.0	0	0.0
24	8050	2ND/GRAND	0	0	0	0	0.0	0	0.0	0	0.0	0	0.0
25	4948	1ST ST/LOS ANGELES	0	0	325	0	0.0	325	100.0	0	0.0	0	0.0
26	8047	UNION STATION	200	0	2128	123	5.8	1271	59.8	98	4.6	634	29.8
27	5198	NORTH MAIN/GRIFFIN	0	0	949	332	35.0	617	65.0	0	0.0	0	0.0
28	5185	MISSION/LINCOLN PK	115	0	1088	348	31.9	1	0.1	739	68.0	0	0.0
29	5205	HUNTINGTON/MONTEREY	50	0	1101	321	29.2	148	13.4	632	57.4	0	0.0
30	5209	HUNTINGTON/EASTERN	0	0	785	777	99.0	8	1.0	0	0.0	0	0.0
31	8778	HUNTINGTON/RTE 710	300	0	3998	0	0.0	3210	80.3	788	19.7	0	0.0

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #8: LINE 31832: LONG BEACH TO PASADENA INTERIM TERMINUS
VIA UNION STATION

AM PEAK HOUR PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA	TRAN	NB VOLUME (RD DN)			STA	TRAN	SB VOLUME (RD UP)		
NO.	NODE	IN	ON	OFF	NO.	NODE	IN	ON	OFF
1	2266	0	328	0	1	2266	292	0	292
2	2334	328	0	0	2	2334	464	0	172
3	2263	328	3	0	3	2263	464	0	0
4	2327	331	0	0	4	2327	464	0	0
5	8012	331	144	0	5	8012	603	12	151
6	8013	475	341	38	6	8013	764	111	272
7	8015	777	374	6	7	8015	788	67	91
8	8016	1146	153	53	8	8016	778	67	57
9	8017	1246	714	36	9	8017	854	104	181
10	8018	1924	345	79	10	8018	1019	22	187
11	8019	2190	552	159	11	8019	1246	131	358
12	8003	2583	1691	728	12	8003	1014	636	403
13	8021	3546	334	51	13	8021	960	99	44
14	8022	3829	182	45	14	8022	911	58	9
15	8023	3967	344	71	15	8023	778	161	28
16	8024	4239	389	167	16	8024	727	111	60
17	8025	4462	157	384	17	8025	770	109	151
18	8026	4235	130	171	18	8026	791	60	81
19	8027	4195	184	1003	19	8027	1155	31	395
20	4509	3376	186	379	20	4509	1027	332	204
21	8030	3183	268	418	21	8030	1341	53	367
22	8031	3033	314	1579	22	8031	988	587	233
23	4871	1768	6	570	23	4871	1432	21	465
24	8050	1204	0	680	24	8050	1969	7	545
25	4948	524	10	89	25	4948	2206	85	321
26	8047	445	307	219	26	8047	1896	849	540
27	8069	534	21	251	27	8069	1724	322	150
28	5184	304	7	57	28	5184	1497	236	9
29	5310	254	9	80	29	5310	1343	197	43
30	5319	183	16	19	30	5319	978	369	4
31	5325	179	12	50	31	5325	409	571	2
32	5332	141	0	141	32	5332	0	409	0

SUMMARY

LRT	VEHICLE TYPE
6.0	HEADWAY
30.0	ROUTE MILES
32	NUMBER OF STATIONS
25.5	AVERAGE SPEED
4462	AM PEAK LOAD
102500	AVERAGE WEEKDAY TRIPS
686800	DAILY PASSENGER MILES

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #8: LINE 8-33: PICO TO PASADENA INTERIM TERMINUS
VIA UNION STATION

AM PEAK HOUR PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA	TRAN	NB VOLUME (RD DN)			STA	TRAN	SB VOLUME (RD UP)		
NO.	NODE	IN	ON	OFF	NO.	NODE	IN	ON	OFF
1	8030	0	311	0	1	8030	392	0	392
2	8031	311	332	6	2	8031	590	48	246
3	4871	637	13	6	3	4871	1067	0	477
4	8050	644	1	419	4	8050	1632	8	573
5	4948	226	22	71	5	4948	1884	80	332
6	8047	177	355	68	6	8047	1792	645	554
7	8069	464	35	198	7	8069	1649	302	159
8	5184	301	14	64	8	5184	1439	227	17
9	5310	251	19	77	9	5310	1296	190	47
10	5319	193	17	28	10	5319	953	351	8
11	5325	182	13	58	11	5325	407	552	6
12	5332	138	0	138	12	5332	0	407	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
9.0	ROUTE MILES
12	NUMBER OF STATIONS
29.0	AVERAGE SPEED
1884	AM PEAK LOAD
30300	AVERAGE WEEKDAY TRIPS
100400	DAILY PASSENGER MILES

TABLE 6.1-118

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #11
UNION STATION TO DEL MAR AVENUE IN PASADENA VIA HIGHLAND PARK ALIGNMENT

A M P E A K H O U R P A S S E N G E R L O A D I N G S
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	UNION STATION	8047	0	1118	0	1	8047	4465	0	4465
2	COLLEGE/SPRING	8069	1118	82	307	2	8069	4907	162	605
3	AVENUE 26/SF ROW	5184	893	31	118	3	5184	4492	450	35
4	MARMION WAY/FIGUEROA	5310	806	66	162	4	5310	4288	368	163
5	MARMION WAY/AVE. 50	5319	710	47	43	5	5319	3602	701	16
6	MARMION WAY/AVE. 57	5325	714	98	110	6	5325	2412	1238	47
7	MISSION/AT&SF R-O-W	6770	702	38	75	7	6770	1982	451	21
8	GLENARM/AT&SF R-O-W	6993	665	72	114	8	6993	1813	214	45
9	DEL MAR/AT&SF R-O-W	6991	623	0	623	9	6991	0	1813	0

S U M M A R Y

LRT	VEHICLE TYPE
4.0	HEADWAY
10.0	ROUTE MILES
9	NUMBER OF STATIONS
38.7	AVERAGE SPEED
4900	AM PEAK LOAD
53400	AVERAGE WEEKDAY TRIPS
330800	DAILY PASSENGER MILES

TABLE 7.1-11A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #11
UNION STATION TO DEL MAR STATION IN PASADENA VIA HIGHLAND PARK ALIGNMENT

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	8047	UNION STATION	200	0	2319	0	(0.0)	519	(22.4)	50	(2.2)	1750	(75.5)
2	8069	COLLEGE/SPRING	0	0	506	28	(5.5)	479	(94.5)	0	(0.0)	0	(0.0)
3	5184	AVENUE 26/SF ROW	100	0	999	388	(38.8)	6	(0.6)	605	(60.6)	0	(0.0)
4	5310	MARMION WAY/FIGUEROA	0	0	899	658	(73.2)	241	(26.8)	0	(0.0)	0	(0.0)
5	5319	MARMION WAY/AVE. 50	50	0	1553	1344	(86.5)	0	(0.0)	209	(13.5)	0	(0.0)
6	5325	MARMION WAY/AVE. 57	100	0	2771	692	(25.0)	1445	(52.1)	634	(22.9)	0	(0.0)
7	6770	MISSION/AT&SF R-O-W	0	0	1015	1015	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
8	6993	GLENARM/AT&SF R-O-W	200	0	593	409	(68.9)	0	(0.0)	185	(31.1)	0	(0.0)
9	6991	DEL MAR/AT&SF R-O-W	600	0	3761	817	(21.7)	1877	(49.9)	1068	(28.4)	0	(0.0)

TABLE 7.2-11A

LACTC PASADENA & COASTAL CORRIDORS LIGHT RAIL LINE EIR

STUDIES

MODEL RUN #11
FROM UNION STATION TO DEL MAR STATION IN PASADENA VIA HIGHLAND PARK ALIGNMENT
AM PEAK PERIOD STATION ARRIVALS BY AUTO
(WITH P&R CAPACITY-RESTRAINED ASSIGNMENT)

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
8047	200	440	243	390	216	50	27	99	11	121.50
8069	0	0	0	0	0	0	0	0	0	0.0
5184	100	635	351	31	17	605	334	143	136	351.00
5310	0	0	0	0	0	0	0	0	0	0.0
5319	50	209	116	0	0	209	116	47	47	232.00
5325	100	634	351	0	0	634	351	142	143	351.00
6770	0	0	0	0	0	0	0	0	0	0.0
6993	200	185	102	0	0	185	102	41	41	51.00
6991	600	1068	591	0	0	1068	591	240	240	98.50

TABLE 6.1-128

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #12
UNION STATION TO EAST PASADENA TERMINUS VIA HIGHLAND PARK ALIGNMENT GNMENT

AM PEAK HOUR PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	UNION STATION	8047	0	1239	0	1	8047	4851	0	4851
2	COLLEGE/SPRING	8069	1239	86	303	2	8069	5345	162	656
3	AVENUE 26/SF ROW	5184	1022	34	118	3	5184	4931	451	38
4	MARMION WAY/FIGUEROA	5310	938	82	153	4	5310	4765	367	201
5	MARMION WAY/AVE. 50	5319	867	51	42	5	5319	4080	700	15
6	MARMION WAY/AVE. 57	5325	876	121	114	6	5325	2907	1235	62
7	MISSION/AT&SF R-O-W	6770	883	43	70	7	6770	2483	451	27
8	GLENARM/AT&SF R-O-W	6993	856	91	111	8	6993	2375	208	101
9	DEL MAR/AT&SF R-O-W	6991	836	147	483	9	6991	1578	1064	266
10	HOLLY/LOS ROBLES	8103	499	52	195	10	8103	1354	334	110
11	LAKE/HILL	8102	356	33	79	11	8102	1035	349	30
12	ALTADENA	8101	310	14	50	12	8101	898	159	22
13	SIERRA MADRE VILLA	8100	275	0	275	13	8100	0	898	0

SUMMARY

LRT	VEHICLE TYPE
4.0	HEADWAY
14.5	ROUTE MILES
13	NUMBER OF STATIONS
37.7	AVERAGE SPEED
5345	AM PEAK LOAD
64300	AVERAGE WEEKDAY TRIPS
434700	DAILY PASSENGER MILES

12C

TABLE 7.1-118

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #12
UNION STATION VIA HIGHLAND PARK TO EAST PASADENA TERMINUS NEAR SIERRA MADRE VILLA AVENUE

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	8047	UNION STATION	200	0	2571	0	(0.0)	639	(24.8)	55	(2.1)	1878	(73.0)
2	8069	COLLEGE/SPRING	0	0	514	29	(5.6)	485	(94.4)	0	(0.0)	0	(0.0)
3	5184	AVENUE 26/SF ROW	100	0	1006	389	(38.7)	6	(0.6)	611	(60.7)	0	(0.0)
4	5310	MARMION WAY/FIGUEROA	0	0	932	657	(70.5)	275	(29.5)	0	(0.0)	0	(0.0)
5	5319	MARMION WAY/AVE. 50	50	0	1558	1348	(86.5)	0	(0.0)	211	(13.5)	0	(0.0)
6	5325	MARMION WAY/AVE. 57	100	0	2812	695	(24.7)	1472	(52.3)	645	(22.9)	0	(0.0)
7	6770	MISSION/AT&SF R-O-W	0	0	1026	1026	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
8	6993	GLENARM/AT&SF R-O-W	200	0	621	444	(71.5)	0	(0.0)	177	(28.5)	0	(0.0)
9	6991	DEL MAR/AT&SF R-O-W	600	0	2511	947	(37.7)	469	(18.7)	1095	(43.6)	0	(0.0)
10	8103	HOLLY/LOS ROBLES	0	0	801	529	(66.0)	272	(34.0)	0	(0.0)	0	(0.0)
11	8102	LAKE/HILL	0	0	795	795	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
12	8101	ALTADENA	0	0	361	253	(70.1)	108	(29.9)	0	(0.0)	0	(0.0)
13	8100	SIERRA MADRE VILLA	1000	0	1863	429	(23.0)	232	(12.4)	1203	(64.5)	0	(0.0)

TABLE 7.2-11B

LACTC PASADENA & COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #12
UNION STATION VIA HIGHLAND PARK TO EAST PASADENA TERMINUS NEAR SIERRA MADRE VILLA AVENUE

AM PEAK PERIOD STATION ARRIVALS BY AUTO
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
8047	200	443	245	389	215	55	30	99	12	122.50
8069	0	0	0	0	0	0	0	0	0	0.0
5184	100	642	355	31	17	611	338	144	137	355.00
5310	0	0	0	0	0	0	0	0	0	0.0
5319	50	211	116	0	0	211	116	47	47	232.00
5325	100	645	357	0	0	645	357	145	145	357.00
6770	0	0	0	0	0	0	0	0	0	0.0
6993	200	177	98	0	0	177	98	39	40	49.00
6991	600	1095	606	0	0	1095	606	246	246	101.00
8103	0	0	0	0	0	0	0	0	0	0.0
8102	0	0	0	0	0	0	0	0	0	0.0
8101	0	0	0	0	0	0	0	0	0	0.0
8100	1000	1203	666	0	0	1203	666	271	271	66.60

TABLE 6.1-13A

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #13
LONG BEACH TO DEL MAR AVENUE IN PASADENA VIA HIGHLAND PARK ALIGNMENT

AM PEAK HOUR PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	1ST ST/LONG BCH BL	2266	0	342	0	1	2266	293	0	293
2	6TH ST/LONG BCH BL	2334				2	2334	466	0	173
3	1ST ST/PACIFIC	2263	342	4	0	3	2263			
4	4TH ST/PACIFIC	2327	346	0	0	4	2327			
5	ANAHEIM ST	8012	346	148	0	5	8012	618	12	163
6	PACIFIC COAST HWAY	8013	494	359	37	6	8013	797	110	289
7	WILLOW ST	8015	815	389	5	7	8015	824	63	91
8	WARDLOW RD	8016	1199	160	54	8	8016	822	68	65
9	DEL AMO BLVD	8017	1305	764	32	9	8017	925	98	201
10	ARTESIA BLVD	8018	2037	354	80	10	8018	1100	26	201
11	COMPTON BLVD	8019	2311	557	153	11	8019	1345	130	375
12	IMPERIAL HIGHWAY	8003	2715	1925	892	12	8003	1098	771	524
13	103RD ST	8021	3748	339	53	13	8021	1027	107	37
14	FIRESTONE BLVD	8022	4035	179	47	14	8022	969	68	10
15	FLORENCE AVE	8023	4166	344	85	15	8023	813	185	29
16	SLAUSON AVE	8024	4425	404	175	16	8024	763	126	76
17	VERNON AVE	8025	4655	159	425	17	8025	818	109	164
18	WASHINGTON BLVD	8026	4389	130	197	18	8026	843	62	87
19	SAN PEDRO ST	8027	4321	210	1083	19	8027	1198	131	486
20	GRAND AVE	4509	3447	167	344	20	4509	1141	306	248
21	PICO BLVD.	8030	3270	215	408	21	8030	1381	94	334
22	7TH/FLOWER	8031	3077	422	1620	22	8031	1753	615	987
23	4TH/FLOWER	4871	1879	8	509	23	4871	2414	20	681
24	1ST/HOPE	4912	1378	45	825	24	4912	2780	21	387
25	COLLEGE/SPRING	8069	598	39	232	25	8069	2389	697	306
26	AVENUE 26/AT&SF ROW	5184	404	10	46	26	5184	2146	254	12
27	MARMION WAY/FIGUEROA	5310	368	17	80	27	5310	2008	209	71
28	MARMION WAY/AVE. 50	5319	305	19	15	28	5319	1629	383	4
29	MARMION WAY/AVE. 57	5325	309	35	55	29	5325	979	666	15
30	MISSION/AT&SF R-O-W	6770	289	13	29	30	6770	744	242	7
31	GLENARM/AT&SF R-O-W	6993	274	26	47	31	6993	644	124	23
32	DEL MAR/AT&SF R-O-W	6991	252	0	252	32	6991	0	644	0

SUMMARY

LRT	VEHICLE TYPE
6.0	HEADWAY
32.2	ROUTE MILES
32	NUMBER OF STATIONS
26.4	AVERAGE SPEED
4655	AM PEAK LOAD
108500	AVERAGE WEEKDAY TRIPS
774800	DAILY PASSENGER MILES

TABLE 6.1-13B

LACTC PASADENA/COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #13
PICO BOULEVARD TO SIERRA MADRE VILLA AVENUE IN EAST PASADENA VIA HIGHLAND PARK ALIGNMENT

A M P E A K H O U R P A S S E N G E R L O A D I N G S
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	PICO BLVD.	8030	0	276	0	1	8030	537	0	537
2	7TH/FLOWER	8031	276	536	5	2	8031	1909	86	1458
3	4TH/FLOWER	4871	807	22	5	3	4871	2788	0	879
4	1ST/HOPE	4912	824	102	429	4	4912	3308	13	533
5	COLLEGE/SPRING	8069	497	84	89	5	8069	3151	594	436
6	AVENUE 26/SF ROW	5184	493	25	45	6	5184	2960	221	30
7	MARMION WAY/FIGUEROA	5310	472	65	75	7	5310	2921	192	152
8	MARMION WAY/AVE. 50	5319	462	36	23	8	5319	2598	337	15
9	MARMION WAY/AVE. 57	5325	475	86	58	9	5325	2039	603	43
10	MISSION/AT&SF R-O-W	6770	502	29	37	10	6770	1835	222	19
11	GLENARM/AT&SF R-O-W	6993	495	59	62	11	6993	1794	116	75
12	DEL MAR/AT&SF R-O-W	6991	492	154	215	12	6991	1480	567	253
13	HOLLY/LOS ROBLES	8103	430	49	161	13	8103	1280	307	106
14	LAKE/HILL	8102	318	29	66	14	8102	990	314	24
15	ALTADENA	8101	282	12	47	15	8101	879	133	22
16	SIERRA MADRE VILLA	8100	247	0	247	16	8100	0	879	0

S U M M A R Y

LRT	VEHICLE TYPE
4.0	HEADWAY
15.7	ROUTE MILES
16	NUMBER OF STATIONS
32.7	AVERAGE SPEED
3308	AM PEAK LOAD
47200	AVERAGE WEEKDAY TRIPS
302800	DAILY PASSENGER MILES

TABLE 7.1-13A

LACTC PASADENA & COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #13
LONG BEACH TO PASADENA TERMINUS AT DEL MAR AVENUE; PICO BOULEVARD TO SIERRA MADRE VILLA AVENUE

AM PEAK PERIOD STATION MODE OF ACCESS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	2266	1ST ST/LONG BCH BL	0	0	709	437	(61.6)	272	(38.4)	0	(0.0)	0	(0.0)
2	2334	6TH ST/LONG BCH BL	0	0	0	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
3	2263	1ST ST/PACIFIC	0	0	8	0	(0.0)	8	(100.0)	0	(0.0)	0	(0.0)
4	2327	4TH ST/PACIFIC	0	0	0	0	(0.0)	0	(0.0)	0	(0.0)	0	(0.0)
5	8012	ANAHEIM ST	0	0	332	282	(84.9)	50	(15.1)	0	(0.0)	0	(0.0)
6	8013	PACIFIC COAST HWAY	0	0	973	695	(71.4)	278	(28.6)	0	(0.0)	0	(0.0)
7	8015	WILLOW ST	250	0	939	226	(24.0)	221	(23.5)	493	(52.4)	0	(0.0)
8	8016	WARDLOW RD	50	0	473	240	(50.6)	0	(0.0)	234	(49.4)	0	(0.0)
9	8017	DEL AMO BLVD	300	0	1788	0	(0.0)	1361	(76.1)	428	(23.9)	0	(0.0)
10	8018	ARTESIA BLVD	425	0	788	52	(6.6)	12	(1.5)	724	(91.9)	0	(0.0)
11	8019	COMPTON BLVD	300	0	1425	497	(34.9)	472	(33.1)	457	(32.0)	0	(0.0)
12	8003	IMPERIAL HIGHWAY	1000	0	5593	228	(4.1)	244	(4.4)	577	(10.3)	4545	(81.2)
13	8021	103RD ST	0	0	927	733	(79.1)	194	(20.9)	0	(0.0)	0	(0.0)
14	8022	FIRESTONE BLVD	0	0	512	482	(94.1)	30	(5.9)	0	(0.0)	0	(0.0)
15	8023	FLORENCE AVE	0	0	1096	670	(61.1)	426	(38.9)	0	(0.0)	0	(0.0)
16	8024	SLAUSON AVE	0	0	1101	449	(40.8)	652	(59.2)	0	(0.0)	0	(0.0)
17	8025	VERNON AVE	0	0	556	339	(61.0)	217	(39.0)	0	(0.0)	0	(0.0)
18	8026	WASHINGTON BLVD	0	0	397	332	(83.6)	65	(16.4)	0	(0.0)	0	(0.0)
19	8027	SAN PEDRO ST	0	0	707	84	(11.9)	623	(88.1)	0	(0.0)	0	(0.0)
20	4509	GRAND AVE	0	0	980	14	(1.4)	966	(98.6)	0	(0.0)	0	(0.0)
21	8030	PICO BLVD.	0	0	1213	74	(6.1)	1054	(86.8)	0	(0.0)	86	(7.1)
22	8031	7TH/FLOWER	0	0	3441	0	(0.0)	108	(3.1)	0	(0.0)	3333	(96.9)
23	4871	4TH/FLOWER	0	0	105	2	(1.9)	103	(98.1)	0	(0.0)	0	(0.0)
24	4912	1ST/HOPE	0	0	374	39	(10.4)	336	(89.6)	0	(0.0)	0	(0.0)
25	8069	COLLEGE/SPRING	0	0	2932	391	(13.3)	2542	(86.7)	0	(0.0)	0	(0.0)
26	5184	AVENUE 26/AT&SF ROW	100	0	1058	377	(35.6)	12	(1.1)	670	(63.3)	0	(0.0)
27	5310	MARMION WAY/FIGUEROA	0	0	1003	651	(64.9)	352	(35.1)	0	(0.0)	0	(0.0)
28	5319	MARMION WAY/AVE. 50	50	0	1609	1372	(85.3)	0	(0.0)	237	(14.7)	0	(0.0)
29	5325	MARMION WAY/AVE. 57	100	0	2883	699	(24.2)	1526	(52.9)	659	(22.9)	0	(0.0)
30	6770	MISSION/AT&SF R-O-W	0	0	1049	1049	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
31	6993	GLENARM/AT&SF R-O-W	200	0	674	442	(65.6)	0	(0.0)	232	(34.4)	0	(0.0)
32	6991	DEL MAR/AT&SF R-O-W	600	0	2830	943	(33.3)	701	(24.8)	1148	(40.6)	39	(1.4)
33	8103	HOLLY/LOS ROBLES	0	0	739	505	(68.3)	234	(31.7)	0	(0.0)	0	(0.0)
34	8102	LAKE/HILL	0	0	712	712	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
35	8101	ALTADENA	0	0	300	172	(57.3)	128	(42.7)	0	(0.0)	0	(0.0)
36	8100	SIERRA MADRE VILLA	1000	0	1825	410	(22.5)	227	(12.4)	1188	(65.1)	0	(0.0)

TABLE 7.2-13A

LACTC PASADENA & COASTAL CORRIDORS LIGHT RAIL LINE EIR STUDIES

MODEL RUN #13
LONG BEACH TO DEL MAR AVENUE; PICO BOULEVARD TO SIERRA MADRE VILLA AVENUE

AM PEAK PERIOD STATION ARRIVALS BY AUTO
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
2266	0	0	0	0	0	0	0	0	0	0.0
2334	0	0	0	0	0	0	0	0	0	0.0
2263	0	0	0	0	0	0	0	0	0	0.0
2327	0	0	0	0	0	0	0	0	0	0.0
8012	0	0	0	0	0	0	0	0	0	0.0
8013	0	0	0	0	0	0	0	0	0	0.0
8015	250	493	273	0	0	493	273	111	111	109.20
8016	50	234	129	0	0	234	129	52	52	258.00
8017	300	444	245	17	9	428	236	100	96	81.67
8018	425	724	401	0	0	724	401	162	163	94.35
8019	300	460	255	3	2	457	253	103	103	85.00
8003	1000	959	531	383	212	577	319	216	130	53.10
8021	0	0	0	0	0	0	0	0	0	0.0
8022	0	0	0	0	0	0	0	0	0	0.0
8023	0	0	0	0	0	0	0	0	0	0.0
8024	0	0	0	0	0	0	0	0	0	0.0
8025	0	0	0	0	0	0	0	0	0	0.0
8026	0	0	0	0	0	0	0	0	0	0.0
8027	0	0	0	0	0	0	0	0	0	0.0
4509	0	0	0	0	0	0	0	0	0	0.0
8030	0	0	0	0	0	0	0	0	0	0.0
8031	0	0	0	0	0	0	0	0	0	0.0
4871	0	0	0	0	0	0	0	0	0	0.0
4912	0	0	0	0	0	0	0	0	0	0.0
8069	0	0	0	0	0	0	0	0	0	0.0
5184	100	702	389	32	18	670	371	158	151	389.00
5310	0	0	0	0	0	0	0	0	0	0.0
5319	50	237	131	0	0	237	131	53	53	262.00
5325	100	659	365	0	0	659	365	148	148	365.00
6770	0	0	0	0	0	0	0	0	0	0.0
6993	200	232	128	0	0	232	128	52	52	64.00
6991	600	1148	636	0	0	1148	636	258	258	106.00
8103	0	0	0	0	0	0	0	0	0	0.0
8102	0	0	0	0	0	0	0	0	0	0.0
8101	0	0	0	0	0	0	0	0	0	0.0
8100	1000	1188	658	0	0	1188	658	267	267	65.80