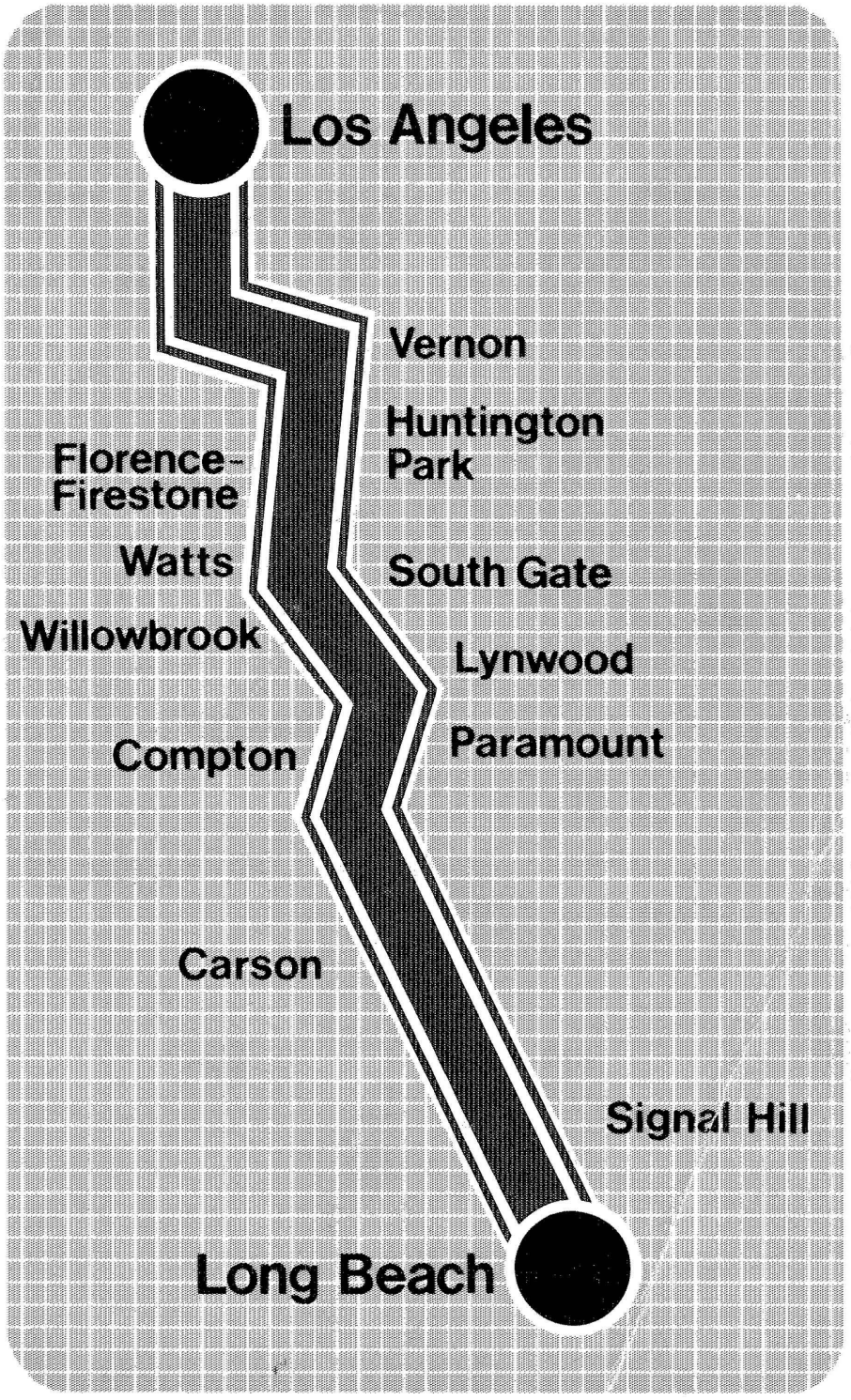
Draft Environmental Impact Report

(SCH No. 85061910)

THE MEALY STREET FREIGHT RAIL DIVERSION

The Long Beach-Los Angeles Rail Transit Project

October 1985



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The Long Beach-Los Angeles Rail Transit Project

October 1985

Southern California Rail Consultants in association with:

- MYRA L. FRANK & ASSOCIATES
- PARSONS BRINCKERHOFF QUADE & DOUGLAS
- BBN LABORATORIES, INC.
- DKS ASSOCIATES
- KADISON, PFAELZER, WOODARD, QUINN & ROSSI

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

LACTC

LACTC

Los Angeles County Transportation Commission
403 West Eighth Street
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Los Angeles
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October 7, 1985

Community Organizations
Elected Officials
Government Agencies
Interested Persons and Businesses

The Los Angeles County Transportation Commission has prepared this draft Subsequent Environmental Impact Report (EIR) addressing an additional alignment alternative for the mid-corridor segment of the Long Beach-Los Angeles rail transit project.

In March, 1985, LACTC certified its Final EIR for the Long Beach-Los Angeles rail transit project, and authorized construction of the project to be accommodated alongside the existing Southern Pacific Wilmington branch within the mid-corridor segment. This Subsequent EIR addresses an additional alternative requested by the of Compton, which would enhance the rail transit project in the Compton area, by relocating the Southern Pacific Wilmington branch away from the central Compton area and the rail transit line.

A public hearing on the adequacy of this EIR is scheduled for 7:00 p.m. November 13, 1985, at Compton City Hall, 205 South Willowbrook Avenue. Written comments on this EIR should be received by the Commission no later than November 21, 1985. During December, 1985, and January, 1986. the Commission will consider the contents of this EIR and all comments received, in its evaluation of this additional alternative. The Commission plans to issue a Final Subsequent EIR for this alternative in February, 1986, and formally decide whether to adopt the alternative at that time.

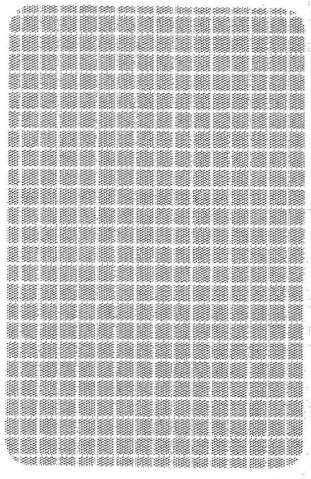
Sincerely,

Jacki Bacharach

JACKI BACHARACH
Chairwoman

JB:vb

Summary



SUMMARY

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SUMMARY

S-100 PURPOSE OF PROJECT

The Long Beach-Los Angeles Rail Transit Project is the first rail transit construction project to be undertaken by the Los Angeles County Transportation Commission (LACTC) as part of a transit improvement program funded by the one-half cent sales tax increase approved by county voters in 1980. A major portion of the project route would be essentially the same as that of the last line operated by the Pacific Electric Railway's "Red Cars" which ceased operation in 1961.

The project has undergone preliminary engineering, and three environmental documents have been issued by the LACTC, culminating with the certification of the Final Environmental Impact Report (FEIR) on March 13, 1985. On March 27, 1985, the LACTC adopted the project for construction, utilizing mid-corridor segment Alternative MC-1, which would accommodate light rail transit tracks alongside existing freight rail tracks in the median of Willowbrook Avenue in the City of Compton area. However, in May 1985, the LACTC authorized preparation of a subsequent EIR to analyze an additional alternative within the City of Compton. This alternative, known as MC-5, the Mealy Street Freight Rail Diversion (and shown in Figure S-1), is the subject of this document.

S-200 PROJECT DESCRIPTION

With the proposed MC-5 alternative, light rail transit (LRT) would continue to follow the Southern Pacific Transportation Company (SPTC) Wilmington Branch rail line. Freight rail traffic would be relocated at Mealy Street in north Compton from the Wilmington Branch right-of-way (ROW) to the San Pedro Branch ROW, thereby consolidating freight rail traffic onto the San Pedro Branch ROW. Slightly north of Rosecrans Avenue, the LRT would rise on an aerial structure to allow passage of the rerouted freight rail traffic underneath. The LRT would then continue in an exclusive ROW on the Wilmington Branch (which lies between the east and west roadways of Willowbrook Avenue) south to Compton Creek. Consolidated freight rail traffic would continue on new track in the San Pedro Branch ROW (which lies between the east and west roadways of Alameda Street) to south of Dominguez Junction.

The MC-5 alternative is comprised of four major elements, which are described in the following sections.

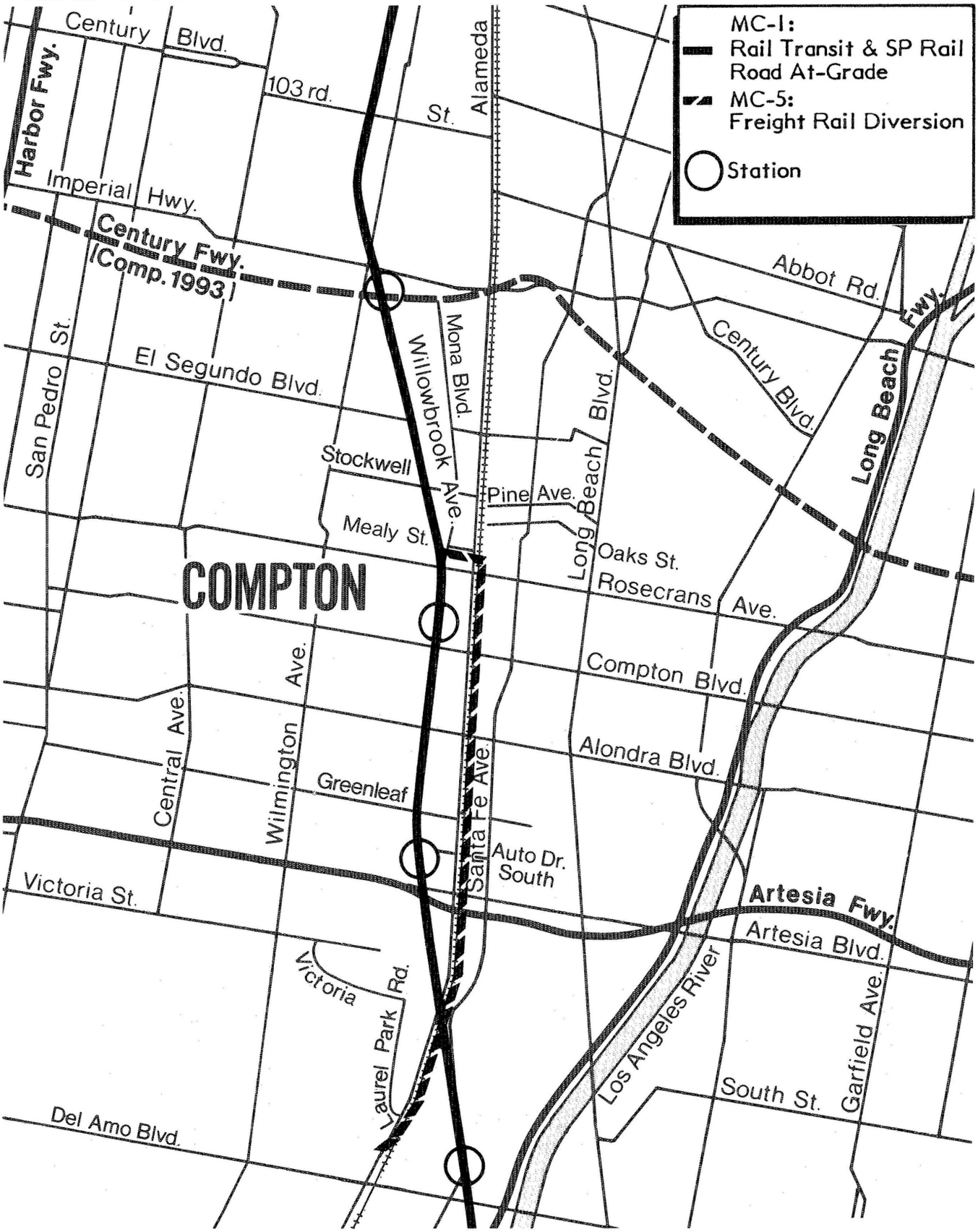


Figure S-1

Long Beach - Los Angeles RAIL TRANSIT PROJECT
LOS ANGELES COUNTY TRANSPORTATION COMMISSION

MC-5, Mealy Street Freight Rail Diversion
SOUTHERN CALIFORNIA RAIL CONSULTANTS

S-210 AERIAL SEGMENT FOR THE LRT

At a point approximately 2,000 feet north of Rosecrans, the two LRT tracks would rise on an aerial structure, continue along the existing SPTC right-of-way passing over Rosecrans, and then gradually descend to grade prior to the next grade crossing at Elm Street. The aerial structure would reach a maximum elevation of 29 feet above the track bed at a point approximately 1,200 feet north of Rosecrans Avenue. At Rosecrans, the underside of the aerial structure would be about 15 feet above street level.

S-220 SPTC TRACK RELOCATION - MEALY STREET CONNECTOR

At a point approximately 1,200 feet north of Rosecrans, within the existing right-of-way, the relocated SPTC track would curve to the southeast and pass under the elevated LRT structure. Leaving the existing right-of-way, new SPTC track would curve alongside the south side of Mealy Street. The alignment would then cross the west roadway of Alameda Street at-grade and turn south into the San Pedro Branch right-of-way, crossing Rosecrans Avenue. In this right-of-way, the relocated SPTC track would be placed approximately 15 feet west of and parallel to the existing track between the east and west roadways of Alameda Street from a point just north of Rosecrans Avenue south to Dominguez Junction.

In addition, implementation of MC-5 would require slight changes in the relocation of an existing team track (freight siding with loading dock) to accommodate the connector track. This team track is currently located in the Willowbrook Avenue railroad ROW just north of Compton Boulevard and was planned for relocation to the Mealy Street area under MC-1. The MC-5 location for the team track would begin just west of Alameda, where the track would diverge from and then parallel the Mealy Street Connector track for a distance of approximately 800 feet. The new industrial spur connection would branch off from the team track and curve to the north to connect with the existing industrial spur at the Owens-Corning plant. The relocated SPTC track and team track would be located within a right-of-way corridor that varies in width from 50 to 80 feet.

S-230 EAST ALAMEDA EXTENSION AND OTHER STREET IMPROVEMENTS

The Mealy Street Connector would affect access and change traffic circulation patterns within the immediate area by prohibiting through traffic on Mona Boulevard and Tamarind Avenue north of Rosecrans. To mitigate the effect of these street closures and to provide local

access, a two-lane street would be constructed parallel to and just south of the connector track, linking Mona, Mulberry Street and Tamarind.

The east roadway of Alameda Street is discontinuous from just north of Rosecrans Avenue to Oaks Street. Under MC-5, the east roadway would be extended north to Oaks Street to provide through access. Final design of this element would include traffic signing to encourage diversion of through traffic from west Alameda to east Alameda.

S-240 ROSECRANS/ALAMEDA INTERSECTION

There are three options for Rosecrans Avenue at Alameda, two of which provide for grade separation. For each of the grade-separated options, frontage roads would be provided on both sides of the new alignment for local traffic circulation. The two frontage roads would provide right-turn-in/right-turn-out movements for Tamarind Avenue, Mulberry Street, Rose Avenue, and Spring Avenue. Both east and west Alameda would remain as through streets under all options.

Under Option A, Rosecrans Avenue would remain at-grade. Both Rosecrans and Alameda would be widened at the intersection approaches to provide additional lanes for turning movements.

With Option B, an underpass would be constructed commencing approximately 800 feet west of the west roadway of Alameda Street and 800 feet east of the east roadway. This would allow four lanes of through traffic (two in each direction) on Rosecrans to pass under both the east and west roadways of Alameda Street and the San Pedro Branch of the railway which is located between them.

Option C would be an overpass providing improvements similar to those of the Option B underpass.

S-300 SIGNIFICANT ENVIRONMENTAL CONSEQUENCES AND MITIGATION MEASURES

S-310 SIGNIFICANT EFFECTS

The significant environmental effects of the proposed project are as follows:

° Noise and Vibration

The diversion of freight rail traffic would result in a shift of the noise environment; there would be a noticeable decrease in noise impact in those communities along the Wilmington Branch south of Rosecrans and an increase in noise exposure along the San Pedro Branch. Diversion of freight rail traffic along Mealy Street would significantly increase noise and vibration above current and No Project future levels. Noise levels at some residences would increase 4-15 dBA CNEL; however, the mean vibration levels are expected to be below CHABA day and night standards.

Mitigation: Noise impacts would be mitigated by soundproofing residences where feasible, or they would be legally resolved by the purchase of noise easements. However, significant adverse noise impacts are likely to remain after all feasible mitigation has been applied.

Alternatives: MC-1 would continue noise exposure (along the Wilmington Branch ROW) for a larger number of people than MC-5, but those adversely affected by noise with MC-5 would experience more severe impacts due to greater noise levels.

° Land Use, Population, and Housing

Implementation of MC-5 would encourage achievement of Compton's redevelopment goals around the Compton Civic Center by eliminating the freight rail operation on the Wilmington Branch in central Compton. However, it would also require the permanent dislocation of 123-147 people in the Mealy Street area, require the acquisition of five commercial structures on Rosecrans, and create significant business disruption along Rosecrans Avenue during construction, which could lead to some business failures for small enterprises dependent on walk-in trade. Introduction of freight rail operations through the Mealy Street neighborhood is an incompatible land use that could contribute to a shift in land uses in the area. In addition, all of the Rosecrans/Alameda crossing options would require

narrower sidewalks and elimination of parking on Rosecrans between east Willowbrook and Spring Avenues.

Mitigation: All of those displaced would receive relocation assistance under the California Uniform Relocation Assistance and Real Property Acquisition Policies Act. This assistance would constitute partial mitigation, but the net impact would still be significantly adverse. Business disruption during construction would be mitigated by maintaining one traffic lane in each direction and maintaining pedestrian access as much as possible. Incompatibilities in land use would be minimized by noise and vibration mitigation measures outlined above, by visual impact mitigation, and by creating a new local access street to maintain internal circulation and to act as a buffer between residential and rail uses. Ultimately, zoning and planning actions by the City of Compton may be required to reduce the incompatibilities. Depending on the availability of off-street parking and the strength of the business, small businesses on Rosecrans could be permanently affected by the combined effects of construction and permanently reduced access.

Alternatives: In comparison, MC-1 would reduce the adverse land use impacts of MC-5 in the Mealy Street and Rosecrans Avenue areas but would not enhance revitalization efforts south of Rosecrans in central Compton to the extent that removal of freight traffic (with MC-5) could induce such efforts.

° Economic Activity

Options B and C would create a 20-28 month period of heavy construction activity with associated disruption for businesses on Rosecrans. Acquisition of businesses for construction and operational changes in access, visibility, and parking could result in business failures with a resulting loss of between $11,000 and $28,000 in annual property tax ($11,000 because of right-of-way acquisitions on Mealy Street). This local loss is to some extent offset by predicted increases in property and sales taxes because of new development associated with the light rail project in the mid-corridor, some portion of which would occur in Compton.

Mitigation: To mitigate disruption of local businesses during construction, block closures would be minimized, one traffic lane kept open in each direction through most of the construction period, and special measures taken to encourage pedestrian access.

Property tax impacts would be reduced by minimizing property acquisition. Also, any loss could be offset by the positive economic impacts of the project on redevelopment. This would also be true of tax revenues.

Alternatives: Option A would reduce construction impacts associated with Options B or C. However, it would also require sidewalk and parking reductions and would not improve the operation of the Alameda/Rosecrans intersection; resulting queues could create access problems for adjacent businesses on Rosecrans.

In comparison, MC-1 would eliminate these localized impacts on Rosecrans businesses at the cost of the opportunity to remove freight rail operations from the Wilmington corridor in central Compton, with the attendant prospects for revitalization.

° Visual

The LRT overpass on Willowbrook and the auto overpass for Option C at Alameda create visual incompatibilities with adjacent neighborhoods, including associated shade and shadow impacts. The introduction of freight rail operations in the Mealy Street area would be a visual intrusion on the adjacent residential neighborhood.

Mitigation: During construction, visual disruption can be minimized by maintaining construction areas and siting storage in industrial areas. The visual impacts of aerial structures can be partially mitigated by careful consideration of their design, materials used, and dimensions.

Alternatives: The visual impacts of Option C (Rosecrans overpass) would be eliminated by the selection of Options A (at-grade) or B (Rosecrans underpass).

° Traffic and Transportation

By removing freight rail traffic from the Wilmington ROW, MC-5 would have a very significant beneficial impact on the operation of intersections of Willowbrook Avenue south of Mealy Street. East/west traffic flows would be significantly improved because autos would not have to queue during freight train crossings. The potential for rail/auto conflicts would be significantly reduced.

Conversely, MC-5 would increase congestion, vehicle delays, and rail/auto hazards on Alameda at intersections south of Mealy Street because of the increased number of freight trains on the San Pedro Branch ROW. Under Option A, the Rosecrans/Alameda intersection would be significantly affected; effects at other intersections would be less severe. Options B and C (underpass and overpass) would have a significant beneficial impact on the operation of the Alameda/ Rosecrans intersection with substantial savings in vehicle delay and a reduction in rail/auto hazards.

Mitigation: During construction, traffic control procedures and appropriate timing of construction activity can mitigate traffic impacts. Also, a detour plan and traffic engineering improvements would help accommodate increased traffic volumes without significant delays. Though implementation of the project should provide a net benefit to traffic in the project area, several site-specific mitigation measures such as signing, striping or signal modification may be found necessary.

Other optional mitigation may be done in conjunction with the City of Compton and Los Angeles County. This mitigation would include a reconfigured crossing of the San Pedro Branch right-of-way at Pine Avenue, facilitating through traffic diversion from the west to the east roadway of Alameda Street in the City of Compton. This traffic diversion would reduce the volume of traffic across the relocated Wilmington Branch grade crossing of west Alameda, just north of Rosecrans, thereby reducing auto delays caused by the passage of freight trains. Implementation of this option, however, would require that the City of Compton independently provide improvements to the east roadway of Alameda south from Rosecrans Avenue to the Artesia Freeway (Route 91). This action would create a through traffic routing via east Alameda Street, Auto Drive and Santa Fe Avenue, and would

be accomplished in conjunction with a Los Angeles County Department of Public Works project to extend State Route 47 via Alameda Street in the City of Carson and to improve Santa Fe Avenue in the Rancho Dominguez area north to the Artesia Freeway.

Alternatives: A widening of the Rosecrans/Alameda approaches under Option A would increase vehicular storage and intersection capacity and reduce congestion. However, the overall impact on traffic would still be adverse.

The adverse effects of Options B and C (reduced access to local businesses and adverse visual impacts) would not occur with MC-1; however, MC-1 would not improve the operation of intersections along the Wilmington Branch ROW.

S-320 SUMMARY OF PROJECT IMPACTS

The following summary outlines anticipated project impacts in each category, a brief description of the impact (and a determination of whether it is significant or minor), mitigation that has been incorporated into the project or which the LACTC is prepared to undertake if the project is selected, and a determination whether the net remaining impact would be significantly adverse. Detailed discussion of each of these impacts can be found in the Draft Environmental Impact Report for the Mealy Street Freight Rail Diversion (MC-5).

SUMMARY OF PROJECT IMPACTS
MEALY STREET FREIGHT RAIL DIVERSION

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Topography, Soils, Geography				
Construction:	Cut-and-cover soil excavation	Minor Adverse	Proper disposal of excess material	None
Operation:	General Southern California seismic risk	Minor Adverse	Soils testing to ensure conformance to codes; operating safety systems	None
Floodplains, Hydrology, Water Quality				
Construction:	Possible siltation and water runoff during construction	Minor Adverse	Control by catch basin, settling pond, other standard techniques	Very Minor Adverse
Operation:	Slight increase in runoff	Very Minor Adverse	Construct supplemental catch basins if necessary	None
Vegetation and Wildlife				
Construction:	Removal of some trees and existing vegetation; displacement of animals; no endangered species	Minor Adverse	Replace landscaping where appropriate and feasible	Minor Adverse

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Noise and Vibration				
Construction:	Temporary increase around construction sites	Minor Adverse	Use of alternative construction methods, proper scheduling, noise barriers	Minor Adverse
Operation:	Mealy Street - noise increases up to 15 dBA CNEL at residences	Significant Adverse	Soundproofing; purchase of noise easements	Significant Adverse
	Wilmington Branch - removal of freight rail noise south of Mealy St.*	Significant Beneficial		Significant Beneficial
	San Pedro Branch - noise increases of 3.5 dBA CNEL south of Rosecrans*	Minor Adverse	None Feasible	Minor Adverse
Air Quality				
Construction:	Slight increase in particulates; slight increase in auto emissions	Minor Adverse	Control dust at construction sites	Very Minor Adverse

* Interrelated impacts: the benefit in one area is at the cost of adverse impacts in the other.

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Air Quality (cont.)				
Operation:	Slight reduction in pollutant burden for region	Minor Beneficial		Minor Beneficia
	Slight increase in carbon monoxide concentrations at Rosecrans/Alameda	Minor Adverse	None Feasible	Minor Adverse
Energy				
Operation:	Little change in regional energy consumption	Very Minor Beneficial		Very Minor Beneficial
Land, Use, Population, Housing				
Construction:	Mealy Street - Acquisition of 26 parcels including 8 single-family units, 27 multi-family units, 5 industrial parcels, 5 vacant parcels; potential relocation of 123-147 residents.	Significant Adverse	Relocation Assistance	Significant Adverse

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Land Use, Population and Housing (cont.)				
Construction:	Rosecrans Ave. - Option B - Acquire and relocate five businesses and 40-50 employees, relocate gas station pump island	Adverse	Relocation Assistance	Adverse
	Rosecrans Ave. - Option C requires ROW at some corners for curb widening	Minor Adverse	None Feasible	Minor Adverse
	Rosecrans Ave. - Options B and C reduce access to businesses on north and south sides of street	Significant Adverse	Limit number of blocks closed at one time; maintain one travel lane in each direction for most of the construction period	Major Adverse
	Increased jobs and purchases in region	Minor Beneficial		Minor Beneficial
Operation:	Some encouragement to revitalization efforts in central Compton and elsewhere on the Wilmington Branch	Minor Beneficial		Minor Beneficial

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Land Use, Population and Housing (cont.)				
Operation:	Increased noise and traffic, reduced pedestrian access to residential and commercial properties on San Pedro Branch	Minor Adverse	None Feasible	Minor Adverse
	Slight increase in population, employment, housing	Minor Beneficial		Minor Beneficial
	Reduced attractiveness of Mealy Street as a residential neighborhood and reduction of property values due to increased noise, vibration and reduced access	Significant Adverse	Soundproofing, purchase of noise easements	Significant Adverse
	Reduction of business activity because of turning restrictions, loss of on-street parking, and reduced sidewalks	Adverse	None Feasible	Adverse

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Community Services				
Construction:	Temporary obstruction of emergency vehicle access	Minor Adverse	Signage, definition of alternative routes	Minor Adverse
	Temporary reduction of accessibility to services	Minor Adverse	Signage, maintain pedestrian paths	Minor Adverse
Operation:	Option A would unavoidably increase delays for emergency vehicles at Rosecrans/Alameda	Adverse	Emergency services would need to simulate responses (tests) and develop alternate routes/contingency plans	Adverse
	Options B and C would significantly reduce delays for emergency vehicles at Rosecrans/Alameda	Beneficial		Beneficial
	Reduction in emergency vehicle delays at Willowbrook/Rosecrans	Beneficial		Beneficial
	Reduced pedestrian access to services because of reduced sidewalks on Rosecrans and fencing along Mealy Street	Minor Adverse	None Feasible	Minor Adverse

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Economic Activity				
Construction:	Option A - Disruption at Alameda/Rosecrans reduces access to neighboring businesses.	Adverse	Limit number of blocks closed at a time; maintain minimum access	Adverse
	Options B & C - 20-28 month period of heavy construction reduces access to businesses	Significant Adverse	Maintain minimum access by keeping one travel lane open in each direction for most of the construction period and via intersecting streets	Significant Adverse
	Slight increase in jobs and purchases in region	Minor Beneficial		Minor Beneficia
Operation:	Loss of property tax revenue because of acquisitions or potential business failures, for all options, would be from $11,000 to $28,000	Adverse	Minimize acquisition; dispose of excess property	Adverse
	Loss in retail taxes along Rosecrans	Minor Adverse	Minimize acquisition	Minor Adverse

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Economic Activity (cont.)				
Operation:	Increases in property and sales taxes because of new development in mid-corridor	Minor Beneficial		Minor Beneficial
Visual Quality				
Construction:	Temporary disruption and clutter	Minor Adverse	Maintain construction sites	Minor Adverse
Operation:	LRT overpass and Option C create visual incompatibilities	Significant Adverse	Materials and design to reduce bulk of structure	Significant Adverse
	Visual intrusion into Mealy St. neighborhood	Adverse	None Feasible	Adverse
Traffic and Transportation				
Construction:	Increased congestion; traffic delays to autos, buses, pedestrians	Adverse	Schedule street closures to reduce impacts; directional signing; traffic control plans and detours; relocate bus stops	Minor Adverse

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Traffic and Transportation (cont).				
Operation:	Reduced congestion, vehicle delays and rail/auto hazards at Willowbrook intersections south of Mealy St.*	Very Significant Beneficial		Very Significant Beneficial
	Increased congestion, vehicle delays, and rail/auto hazards at Alameda St. intersections south of Mealy St.*	Significant Adverse on Rosecrans; other intersections Adverse	Options B & C mitigate Rosecrans significantly	Option A - Significant Adverse; Options B & C - Beneficial for Rosecrans; other intersections remain adverse
	New congestion and auto/rail hazards at west Alameda and Mealy St. RR crossing	Adverse	Divert west Alameda traffic to east Alameda via Pine Ave. crossing and extend east Alameda north of Rosecrans. A secondary impact of this diversion would be increased congestion on east Alameda. (continued)	Beneficial

* Interrelated impacts: the benefit in one area is at the cost of adverse impacts in the other.

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Traffic and Transportation (cont).				
Operation:			Mitigation measures still to be agreed upon include: reconfiguration of Pine Ave. crossing by LACTC; City of Compton and L.A. County to improve east Alameda, Auto Drive and Santa Fe to Dominguez St.	
	Option A - Increased congestion, vehicle delays and rail/auto conflicts at Alameda/ Rosecrans	Significant Adverse	LACTC to widen Rosecrans/ Alameda to increase vehicular storage and intersection capacity	Adverse
	Options B & C - reduced congestion, vehicle delays and rail/auto conflicts at Alameda/Rosecrans*	Significant Beneficial		Significant Beneficial
	Options B & C - reduce access to local streets north and south of Rosecrans between east Willowbrook and Spring*	Minor Adverse	Construct local access street adjacent to new rail tracks along Mealy Street	Very Minor Adverse

* Interrelated impacts: The benefit in one area is at the cost of adverse impacts in the other.

SUMMARY OF PROJECT IMPACTS (cont.)

Environmental Factor	Description of Impact	Impact Determination	Mitigation	Net Impact
Traffic and Transportation (cont).				
Operation:	Reduction in sidewalk widths on both sides of Rosecrans between east Willowbrook and Spring	Minor Adverse	None Feasible	Minor Adverse
	Options B & C - Reduction in number of pedestrian crossings between east Willowbrook and Spring	Minor Adverse	Reduction in at-grade auto volumes improves safety at remaining pedestrian crossings	Minor Adverse
	Permanent reduction of 50 on-street parking places	Minor Adverse	None Feasible	Minor Adverse
	Option A - RTD Line 125 would incur additional delays	Minor Adverse	None Feasible	Minor Adverse
	Options B & C - Additional delays at-grade or elimination of bus stop at Alameda for RTD Line 125.	Minor Adverse	Relocate bus stop	Minor Adverse

S-400 AREAS OF CONTROVERSY

Areas of controversy for this project include issues previously raised during the planning and consultation process, both formally and informally, and potential issues that have become apparent during the environmental analysis conducted for the project.

Construction of MC-5 would achieve, or partially achieve, a number of regional objectives at the cost of some significant localized impacts. There are potential areas of controversy associated with both the regional objectives and localized construction and operational impacts. The following discussion outlines regional goals and areas of controversy and discusses potentially controversial local issues.

Regional

- Implementation of MC-5 would achieve the City of Compton's goal of removing existing freight rail traffic from the center of the city. Incorporating this revision into the adopted rail transit project, however, would increase project costs and the time necessary to complete construction of the project.

- Adoption of MC-5 would also be the first step in achieving the goal of the Southern California Association of Governments (SCAG) of consolidating freight rail movements to and from the Ports of Los Angeles and Long Beach on the San Pedro Branch. However, there is controversy over the issue of whether this public investment for partial consolidation would hinder achievement of complete consolidation sometime in the future by possibly creating physical conflicts to facilities required for future consolidation.

- Removing through freight trains from the Wilmington Branch south of Mealy Street would significantly improve the operation of all Willowbrook/cross street intersections south of that point at the cost of increased auto congestion and traffic hazards at Alameda Street intersections.

- Diverting through traffic from the west roadway of Alameda Street to east Alameda via a reconfigured Pine Avenue crossing (an optional LACTC measure), and revision of east Alameda to a four-lane roadway by the City of Compton to connect Santa Fe Avenue (via Auto Drive) at the Artesia Freeway would reinforce the County of Los Angeles' proposed Industrial Expressway for ports' truck traffic.

Local

Localized impacts of the project can be broken down into those associated with the freight rail diversion along Mealy Street and those associated with the Rosecrans/Alameda intersection. Each of these project elements has controversy associated with it, as follows:

- Mealy Street

  Construction of the Mealy Street diversion would: 1) introduce incompatible land uses into the residential area south of the proposed diversion, adversely affecting this residential neighborhood; 2) potentially displace 123-147 residents; and 3) significantly increase noise levels for residents adjacent to the relocated railroad tracks. The type and feasibility of mitigation measures needed to reduce these noise impacts could be an area of controversy.

- Alameda/Rosecrans

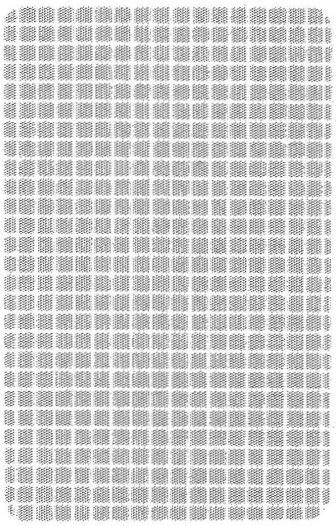
  Shifting Wilmington Branch freight rail operations to the San Pedro Branch ROW would increase traffic congestion, vehicle delay, and rail/auto hazards at the Alameda/Rosecrans intersection. Each of the three options for traffic improvements at this intersection includes the potentially controversial elimination of parking and reduction of sidewalk widths along Rosecrans between east Willowbrook and Spring Avenues.

  Option A would widen the approaches to the Rosecrans/Alameda intersection to provide more vehicle storage capacity while trains pass; however, it would not reduce future congestion, vehicle delay, or rail/auto hazards at this intersection below current levels, due to the projected growth in freight train movements. East/west emergency vehicle access would be more restricted with this option than with either the No Project alternative or Options B or C.

  Options B (underpass) and C (overpass) would require significantly longer periods of heavy and extensive construction activity. Extra costs would be built into the price of construction of either Option B or C in order to maintain one lane of traffic in each direction for most of the construction period. A circuitous detour would also be required for a considerable period of time (see Chapter III, Figure III-31A). Some smaller businesses could fail as a result.

After construction, Options B and C would reduce access to all businesses along Rosecrans by prohibiting left-turn movements into and out of local streets. Option C would introduce potentially controversial shade/shadow and visual incompatibilities into the area.

Report



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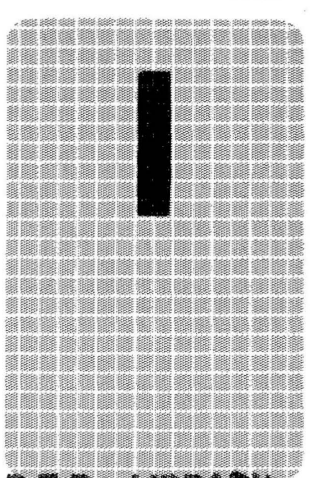
LIST OF FIGURES (cont'd.)

Chapter



I PROJECT DESCRIPTION

I-100 DESCRIPTION OF PROPOSED ACTION

The proposed project addresses itself to a portion of the mid-corridor segment of the Long Beach-Los Angeles Rail Transit Project. It would entail a relocation of Southern Pacific Transportation Company (SPTC) Wilmington Branch freight rail operations to the Alameda Street rail corridor from Mealy Street (Compton) on the north to Dominguez Junction (Los Angeles County) on the south. Relocation of these freight operations would remove all through freight service on the Wilmington Branch ROW between Mealy Street and Dominguez Junction and consolidate it on the Alameda Street railroad corridor. The proposed alignment, to be known as MC-5, the Mealy Street Freight Rail Diversion, is shown in Figure I-10A.

The relocation of these freight rail operations is being considered as an alternative to the existing routing in order to improve environmental conditions in central Compton in conjunction with construction of the Long Beach-Los Angeles Rail Transit Project. The LRT project, as currently approved, would share right-of-way on the Wilmington Branch ROW with SPTC freight operations.

I-110 BACKGROUND

The Long Beach-Los Angeles Rail Transit Project is the first light rail project to be undertaken by the Los Angeles County Transportation Commission (LACTC) as part of a transit improvement program (see Regional Map Figure I-10B). This program consists of 150 miles of heavy and light rail in 13 separate corridors throughout the county and is funded by a one-half percent sales tax increase approved by county voters in 1980. Most of the project route would be essentially the same as the last line operated by the Pacific Electric Railway's "Red Cars," which ceased operation in 1961.

The project has undergone preliminary engineering and a Draft Environmental Impact Report (DEIR) was issued by the LACTC on May 30, 1984. This DEIR analyzed the impacts of the project in three geographical areas of the Long Beach-Los Angeles corridor, i.e., downtown Los Angeles, the mid-corridor (Florence-Firestone, Watts and Compton) and Long Beach. A Supplement to the DEIR (SEIR), defining and evaluating additional alternatives for the Long Beach segment, was issued on December 3, 1984. The Final EIR containing responses to comments on both the DEIR and SEIR was certified on March 13, 1985.

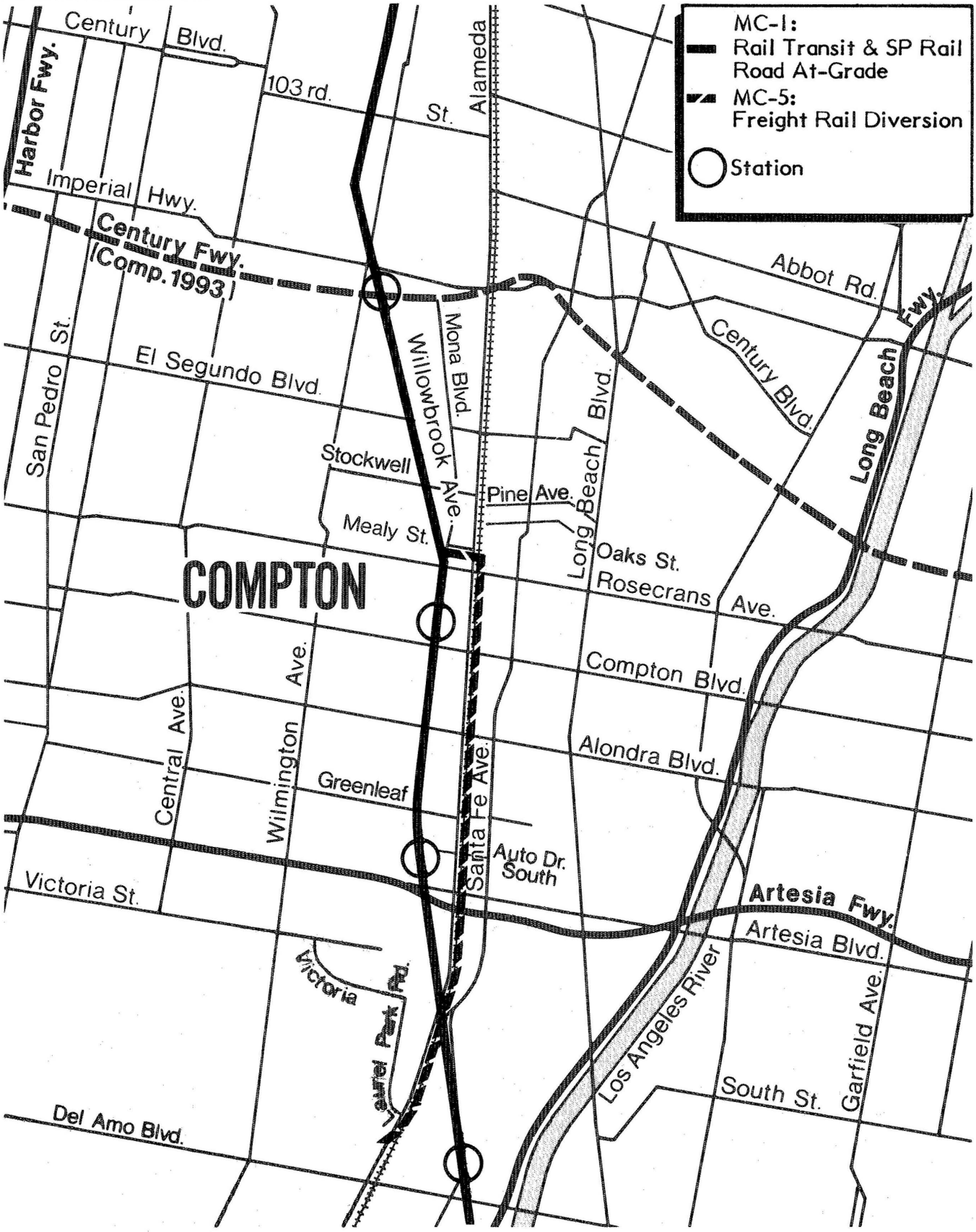


Figure I-10A

Long Beach - Los Angeles
RAIL TRANSIT PROJECT
LOS ANGELES COUNTY TRANSPORTATION COMMISSION

MC-5, Mealy Street
Freight Rail Diversion
SOUTHERN CALIFORNIA RAIL CONSULTANTS

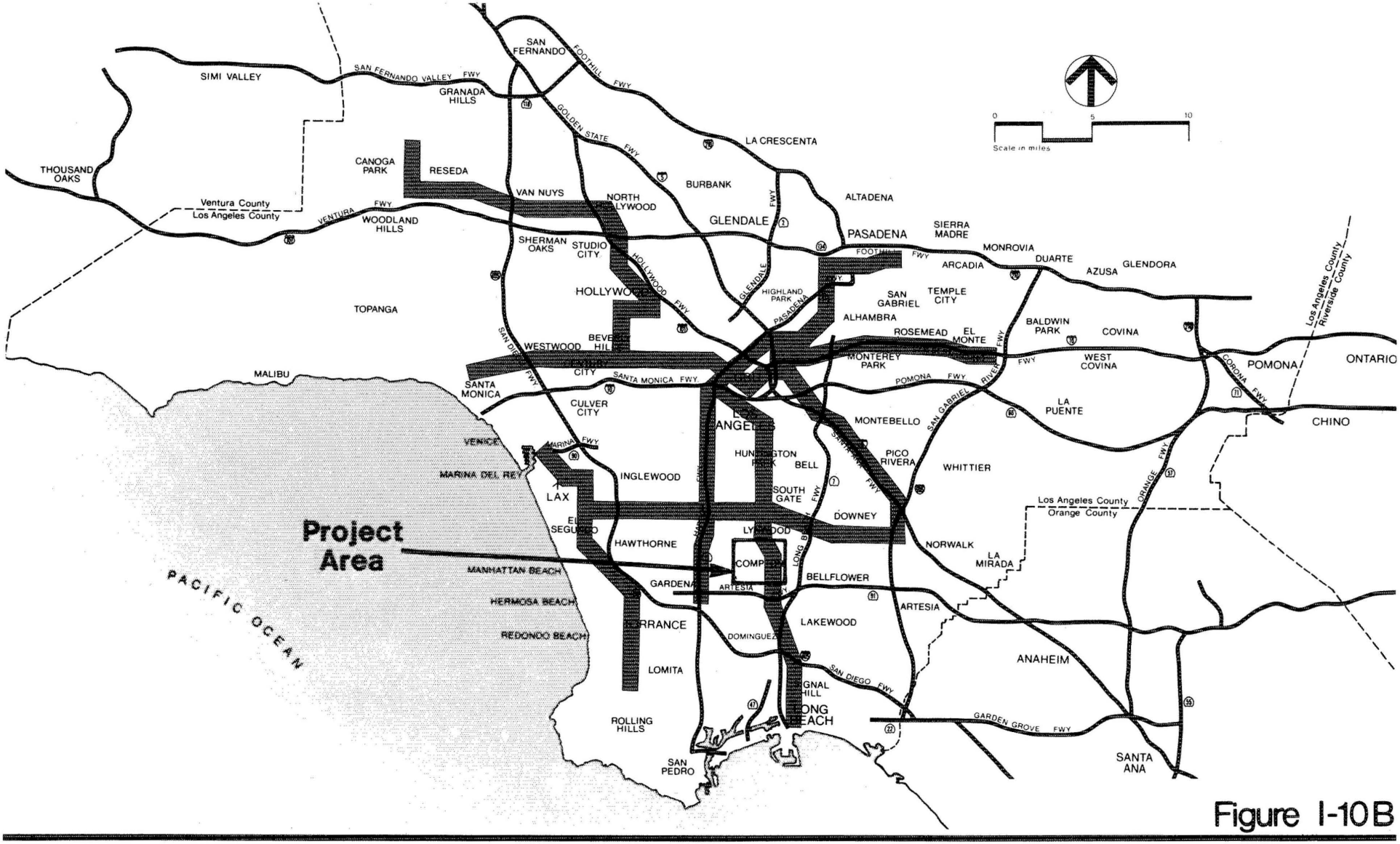


Figure I-10B

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Los Angeles County Transit Corridors

Regional Rail Transit Program

SOUTHERN CALIFORNIA RAIL CONSULTANTS

In order to gain consensus for the mid-corridor segment, the LACTC decided to prepare this subsequent EIR to give similar analysis to an additional alternative within the City of Compton, the Mealy Street Freight Rail Diversion (MC-5). This current environmental document focuses on the relocation of freight rail traffic at Mealy Street and the ways in which that relocation would affect the project area. It compares the proposed relocation against existing conditions and, in some cases, the adopted project for the mid-corridor segment, MC-1.

The MC-5 freight rail diversion is very much like a previous alternative considered in the DEIR. This alternative, known as MC-3 (SP Railroad Relocation), proposed relocating the freight rail along the West Santa Ana Branch ROW from 107th Street in Watts to the San Pedro Branch ROW along Alameda Street, continuing south to Dominguez Junction. At Dominguez Junction, MC-3 plans called for the tracks carrying the relocated Wilmington Branch freight traffic along the San Pedro corridor to cross the west roadway of Alameda Street and reconnect with the Wilmington Branch main line, which is located on the west side of the west roadway of Alameda Street in the Rancho Dominguez area.

If MC-5 is implemented, and in order to coordinate with the county's Ports Access Highway improvements, the LACTC would extend the relocated Wilmington track (in the San Pedro corridor) to south of a reconstructed Laurel Park Road/west Alameda intersection that would include a new grade crossing of the San Pedro Branch ROW, connecting west Alameda to east Alameda. The county has plans to vacate west Alameda south of the Laurel Park Road intersection, eliminating an existing railroad crossing at Dominguez Street.

Alternative MC-3 was not adopted by the LACTC in part due to significant adverse impacts in the vicinity of the Watts Towers and along the West Santa Ana Branch ROW. However, in examining MC-3 for the DEIR, the effects of relocating freight train traffic south of Rosecrans to Dominguez Junction were explored. In general, the current document confines its discussion to impacts specific to the project area and does not reexamine issues dealt with in the previous environmental documentation.

I-120 DESCRIPTION OF ALTERNATIVE ALIGNMENT

The proposed light rail alignment follows the same general right-of-way as the other mid-corridor alternatives described in the previous environmental documents, i.e., the SPTC Wilmington Branch rail line. The MC-5 alternative would include an aerial segment for the light

rail slightly north of Rosecrans Avenue to allow passage of rerouted freight rail traffic under the proposed light rail guideway structure. The light rail transit system would then return to grade and continue south, operating in the Wilmington Branch right-of-way. The SPTC Wilmington Branch freight rail operation would move from the ROW which lies between the east and west roadways of Willowbrook Avenue, to the San Pedro Branch ROW, which lies between the east and west roadways of Alameda Street, on a new track to the west of the existing San Pedro Branch, beginning at Mealy Street on the north and extending south to Dominguez Junction and the new Laurel Park Road grade crossing to be constructed by Los Angeles County.

The four major elements of the MC-5 alternative will be described in the following sections and are shown in Figures I-12A through I-12J immediately following the description. These drawings are based on conceptual engineering and are subject to change during final engineering and design.

I-121 Aerial Segment for the LRT

At a point approximately 2,000 feet north of Rosecrans, the two LRT tracks would rise on an aerial structure, continue along the existing SPTC right-of-way passing over Rosecrans and then gradually descend to grade prior to the next grade crossing at Elm Street. The aerial structure would reach a maximum elevation of 29 feet above the track bed at a point approximately 1,200 feet north of Rosecrans Avenue. At Rosecrans, the underside of the aerial structure would be 15 feet above street level.

I-122 SPTC Track Relocation - Mealy Street Connector

At a point approximately 1,200 feet north of Rosecrans, within the existing Wilmington Branch right-of-way, the SPTC track would be relocated to curve southeast and pass under the elevated LRT structure. Leaving the existing right-of-way, new SPTC track would pass through the southeast corner of Mona Boulevard and Mealy Street and cross Tamarind Avenue at a point approximately 600 feet north of Rosecrans. The alignment would then cross the west roadway of Alameda Street at-grade and turn south into the San Pedro Branch right-of-way, crossing Rosecrans Avenue. In this right-of-way, the relocated Wilmington Branch SPTC track would be placed approximately 15 feet west of and parallel to the existing track between the east and west roadways of Alameda Street, from a point just north of Rosecrans Avenue south to Dominguez Junction and the new Laurel Park crossing.

In addition, the project as adopted on March 27, 1985 provided that the existing "team track" (rail spur with a loading platform where freight is transferred between rail cars and trucks) on the Wilmington Branch and the industrial spur for the Owens-Corning plant be relocated to the vacant land just south of Mealy Street between Mona Avenue and Tamarind Street. Implementation of MC-5 would require slight changes in the location of these tracks to accommodate the connector track. The MC-5 location for the team track would begin just west of Alameda, where the track would diverge from and then parallel the Mealy Street Connector track for a distance of approximately 800 feet. The new industrial spur connection would branch off from the team track and curve to the north to connect with the existing industrial spur at the plant. The relocated SPTC track and team track would be located within a right-of-way corridor that varies in width from 50 to 80 feet.

I-123 East Alameda Extension and Other Street Improvements

The east roadway of Alameda Street is currently discontinuous, ending at a point approximately 450 feet north of Rosecrans and resuming from Oaks Street north to Pine Avenue. Under MC-5, this gap would be closed by extending east Alameda north to Oaks Street to provide through access. Final design of this alternative is expected to include traffic signing to encourage diversion of traffic from west Alameda to east Alameda.

The Mealy Street Connector would affect access and change traffic circulation patterns within the immediate area. The acquired right-of-way and connector track would prohibit through traffic on a north/south basis on Mona Boulevard and Tamarind Avenue. To mitigate the effect of those street closures and to provide local access, a two-lane road would be constructed parallel to and just south of the connector track, linking Mona, Mulberry Street and Tamarind Avenue.

Mealy Street would continue to operate north of the new connector track. Mona Boulevard would end at Mealy Street. Thus, southbound traffic on Mona Boulevard would be directed east onto Mealy Street and westbound traffic on Mealy directed north onto Mona Boulevard.

I-124 Rosecrans/Alameda Intersection

In the Notice of Preparation, four options for improving the Rosecrans/Alameda intersection were identified. The fourth option (an offset overpass) was dropped from consideration in July 1984 due to the large amounts of right-of-way which would have had to be acquired.

The project now has three options for Rosecrans Avenue at Alameda, two of which provide for grade separation. For each of the grade-separated options, frontage roads would be provided on both sides of the new alignment for local traffic circulation. The two frontage roads would provide right-turn-in/right-turn-out movements for Tamarind Avenue, Mulberry Street, Rose Avenue, and Spring Avenue. Both the east and west roadways of Alameda would remain as through streets for all options.

I-124.1 Option A - At-Grade

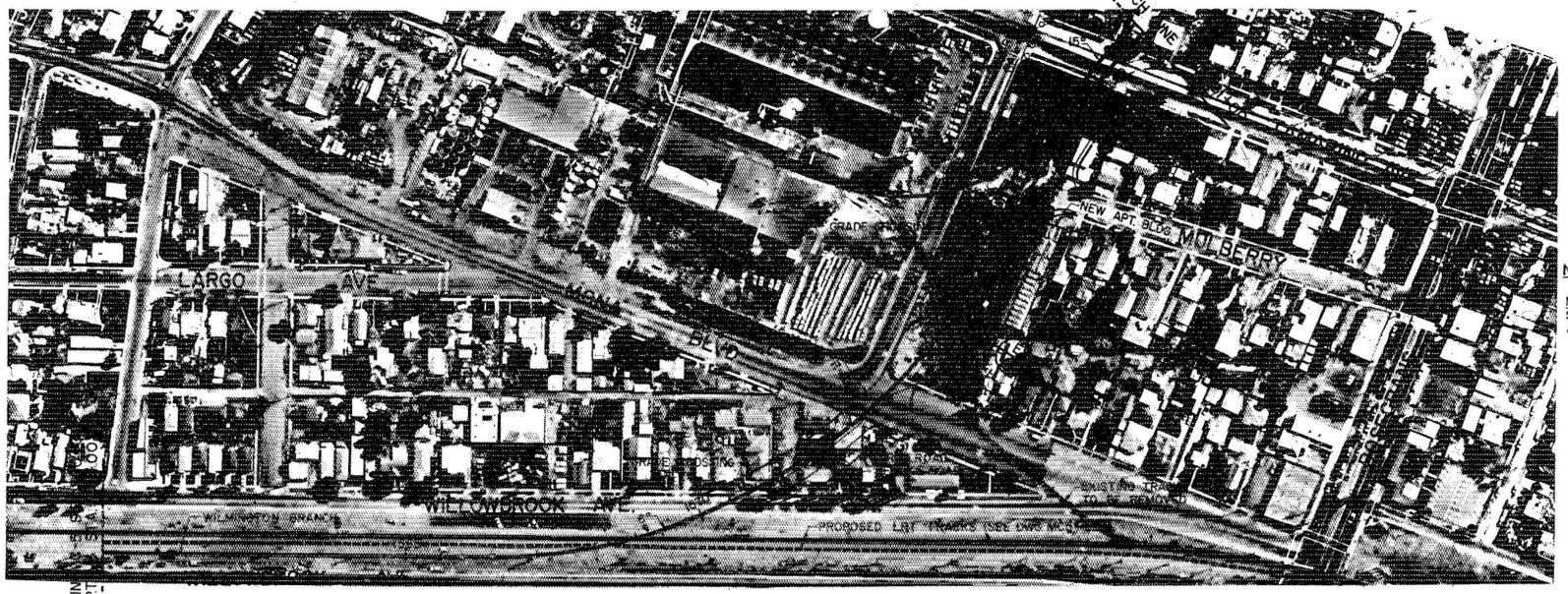
Under this option, Rosecrans Avenue would remain at-grade. Both Rosecrans and Alameda would be widened at the intersection approach to provide additional lanes for turning movements.

I-124.2 Option B - Rosecrans Underpass

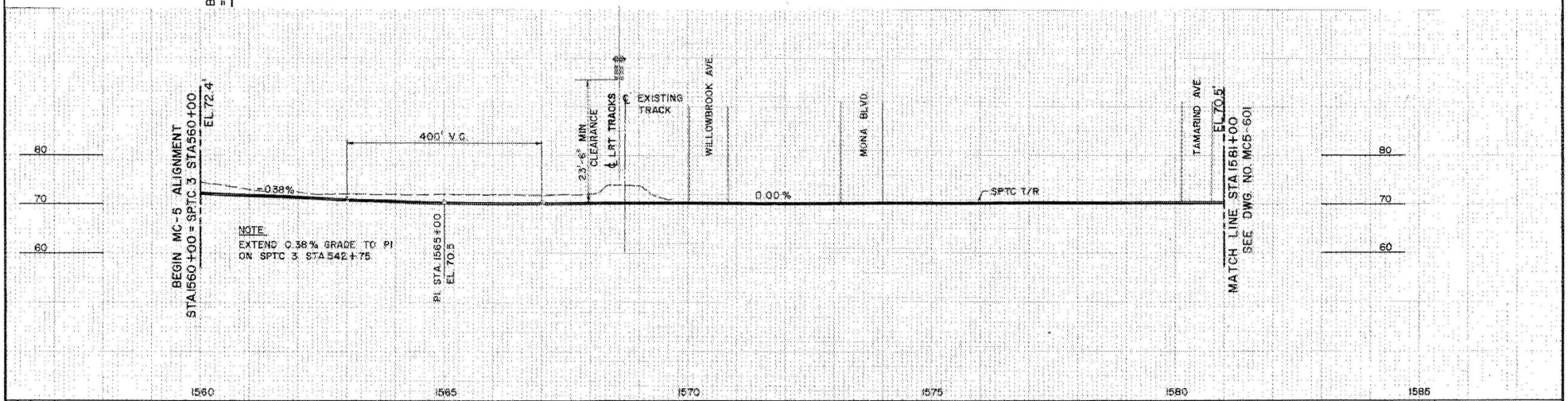
An underpass would be constructed commencing approximately 800 feet west of the west roadway of Alameda Street and 800 feet east of east roadway, allowing four lanes of through traffic (two in each direction) on Rosecrans to pass under both the east and west roadways of Alameda Street and the railroad right-of-way which is located between them.

I-124.3 Option C - Rosecrans Overpass

An overpass would be constructed commencing approximately 800 feet west of the roadway of Alameda Street and 800 feet east of the east roadway, allowing four lanes of through traffic (two in each direction) on Rosecrans to pass over both the east and west roadways of Alameda Street and the railroad right-of-way which is located between them.



NOTE:
GRADE CROSSINGS ARE NOT TO BE PROVIDED ACROSS SPTC TRACKS AT MONA BLVD. AND TAMARIND AVE.



REV	DATE	DESCRIPTION	BY	APP

Information contained on all plans, drawings, specifications, and/or information furnished herewith shall remain the property of the Los Angeles County Transportation Commission; shall be held confidential; and shall not be used for any purposes not provided for in agreements with the Los Angeles County Transportation Commission.

DESIGNED BY: W. HOUPPERMANS
DRAWN BY: F.K. MACAVINTA
CHECKED BY:
APPROVED BY:
DATE:

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project

Southern California Rail Consultants

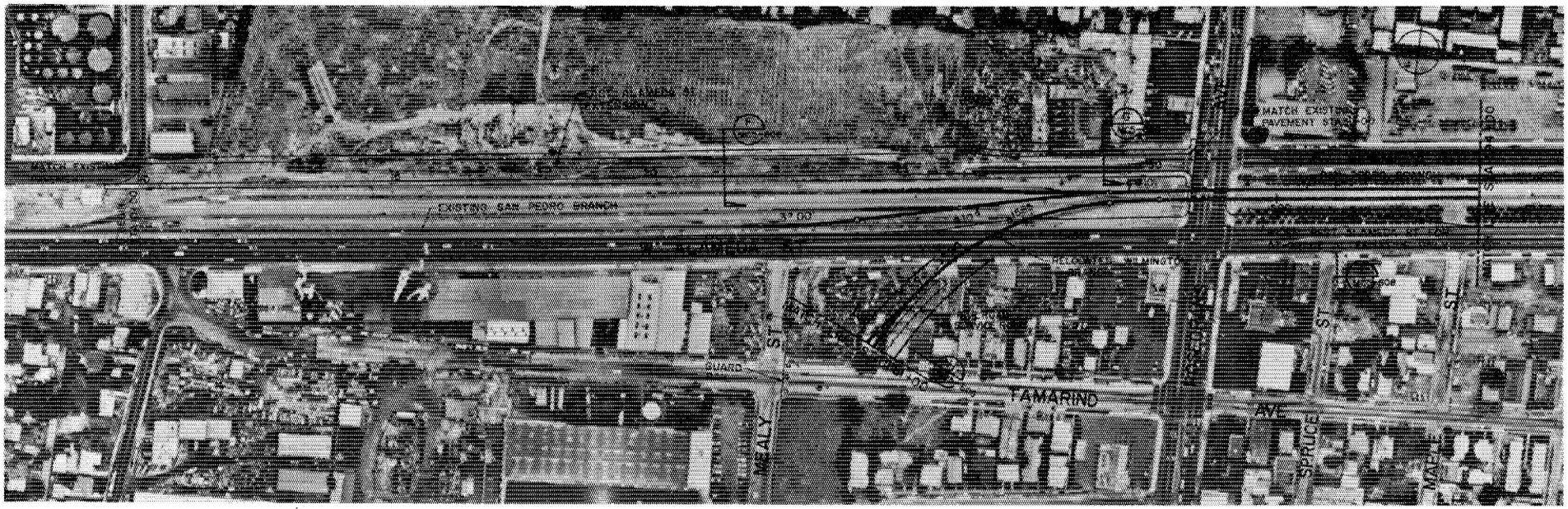
SUBMITTED:

Southern California Rail Consultants
A Joint Venture of
- Parsons Brinckerhoff Quade & Douglas, Inc.
- Kaiser Engineers (California) Corporation
- Daniel, Mann, Johnson, & Mendenhall

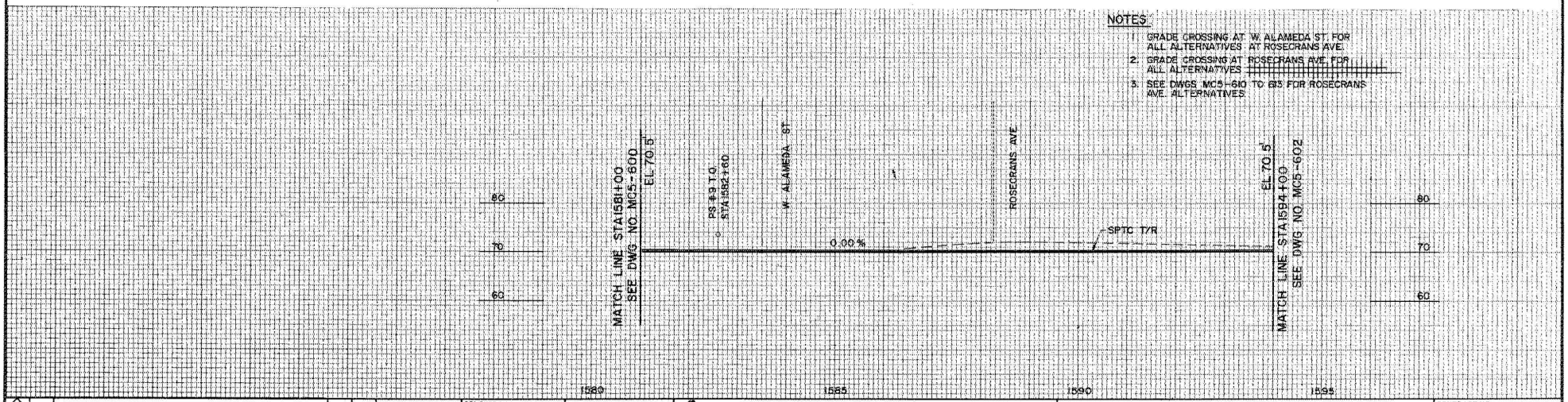
APPROVED:

MC-5 SPTC RAILROAD RELOCATION
PLAN AND PROFILE

CONTRACT NO.
DRAWING NO. MC5-600
REV. 0
SHEET NO. I-12A
SCALE H. 1" = 100'
V. 1" = 10'



NOTES:
1. GRADE CROSSING AT W. ALAMEDA ST. FOR ALL ALTERNATIVES AT ROSECRANS AVE.
2. GRADE CROSSING AT ROSECRANS AVE. FOR ALL ALTERNATIVES
3. SEE DWGS MC5-610 TO 615 FOR ROSECRANS AVE. ALTERNATIVES



REV.	DATE	DESCRIPTION	BY	APP.

DESIGNED BY	W. HOUPPERMANS
DRAWN BY	F.K. MACAVINTA
CHECKED BY	
APPROVED BY	
DATE	

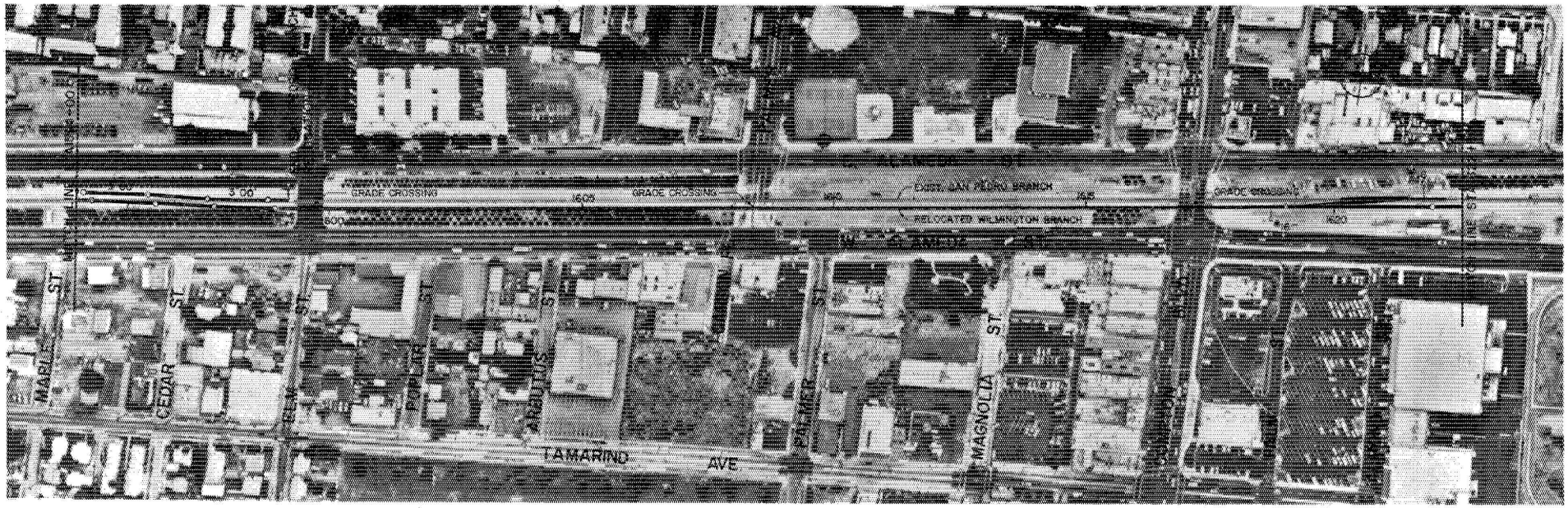
LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project
LACTC

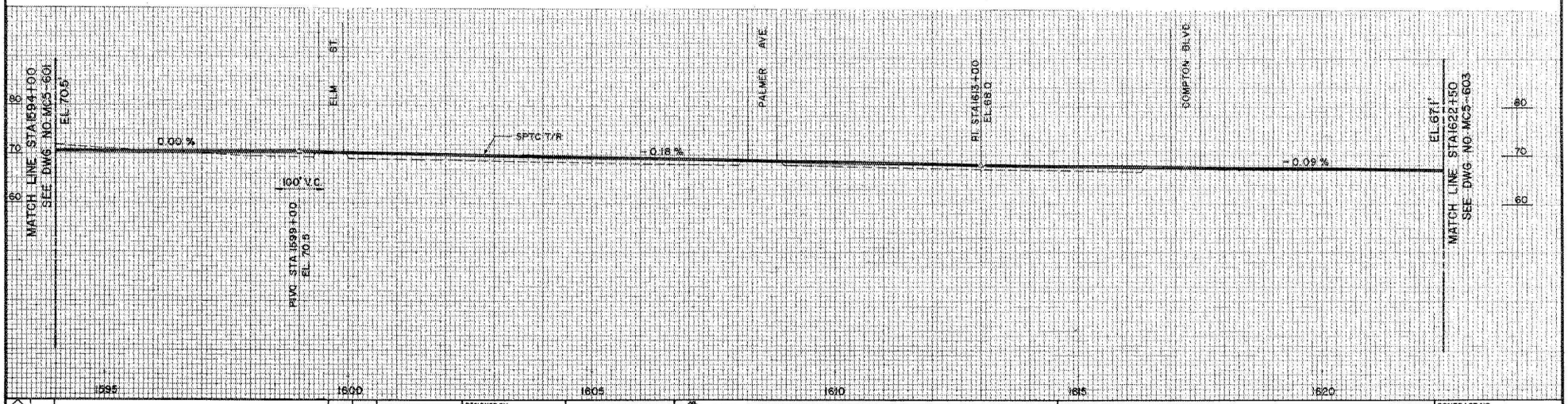
Southern California Rail Consultants
A Joint Venture of
- Parsons Brinckerhoff Quade & Douglas, Inc.
- Kaiser Engineers (California) Corporation
- Daniel Mann, Johnson & Mendenhall

SUBMITTED: _____ APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
PLAN AND PROFILE

CONTRACT NO.	
DRAWING NO.	MC5-601
REV.	0
SHEET NO.	I-12B
SCALE H	1"=100'
SCALE V	1"=10'





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DESIGNED BY	W. HOUPPERMANS
DRAWN BY	F.K. MACAVINTA
CHECKED BY	
APPROVED BY	
DATE	

LACTC

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project

SUBMITTED: _____

Southern California Rail Consultants
A Joint Venture of
- Parsons Brinckerhoff Quade & Douglas, Inc.
- Kaiser Engineers (California) Corporation
- Daniel, Mann, Johnson & Mendenhall

APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
PLAN AND PROFILE

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REV. 0	SHEET NO. I-12 C
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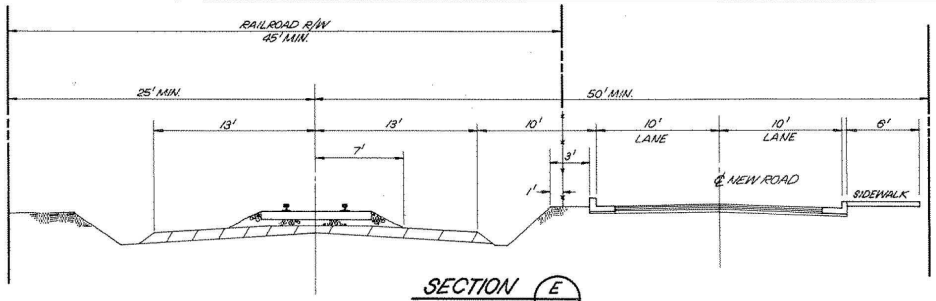

SECTION (E) MC-5-601
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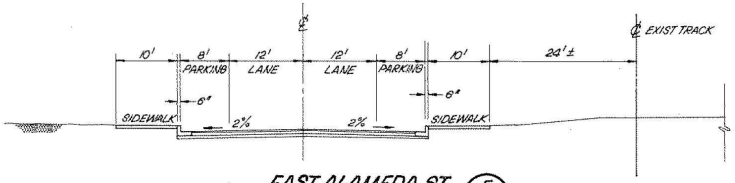
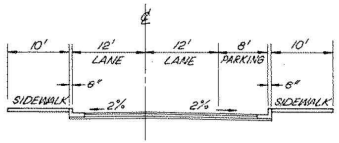


EAST ALAMEDA ST. (F) MC-5-601
SCALE: 1"=10'



EAST ALAMEDA ST. (G) MC-5-601
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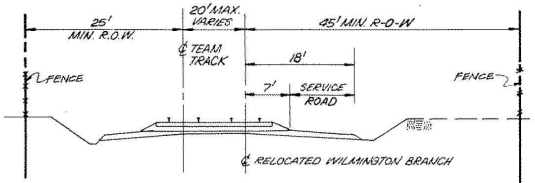

SECTION (H) MC-5-601
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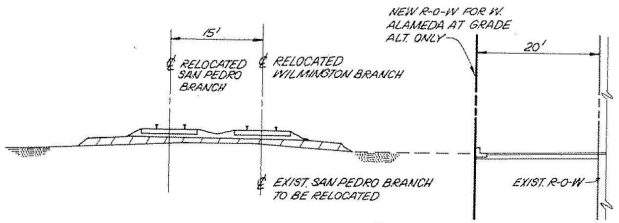

SECTION (I) MC-5-601
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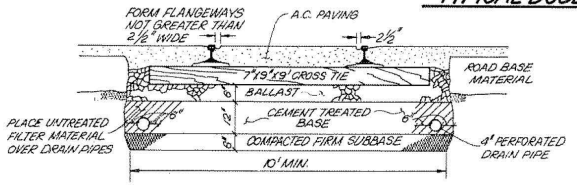
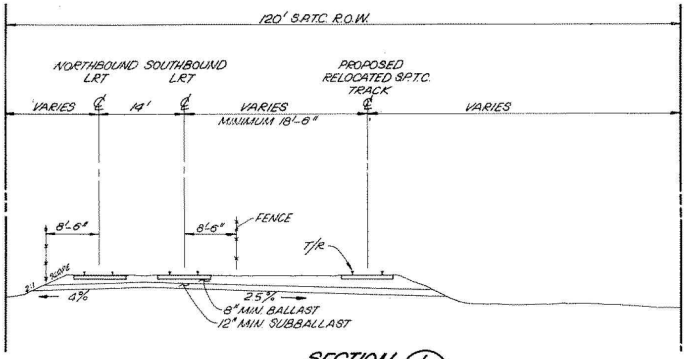


TYPICAL GRADE CROSSING DETAIL
SCALE: ½"=1'



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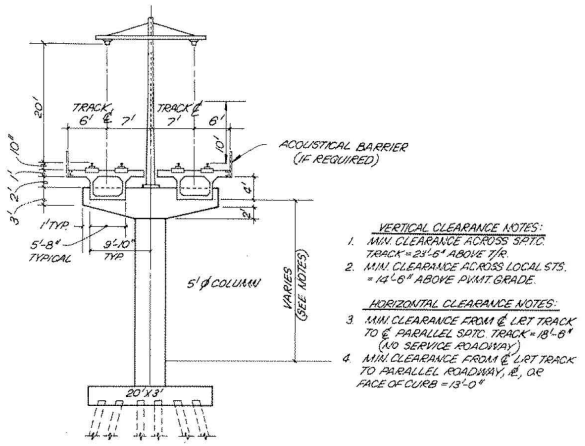

VERTICAL CLEARANCE NOTES:
1. MIN. CLEARANCE ACROSS S.P.T.C. TRACK = 23'-6" ABOVE T/R.
2. MIN. CLEARANCE ACROSS LOCAL STS. = 14'-6" ABOVE PVMT. GRADE.

HORIZONTAL CLEARANCE NOTES:
3. MIN. CLEARANCE FROM ℄ LRT TRACK TO ℄ PARALLEL S.P.T.C. TRACK = 18'-6" (NO SERVICE ROADWAY)
4. MIN. CLEARANCE FROM ℄ LRT TRACK TO PARALLEL ROADWAY, R, OR FACE OF CURB = 13'-0"

TYPICAL DOUBLE TRACK AERIAL LRT SECTION
SCALE: 1"=10'

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DESIGNED BY	W.W.H.
DRAWN BY	R.E.K.
CHECKED BY	
APPROVED BY	
DATE	

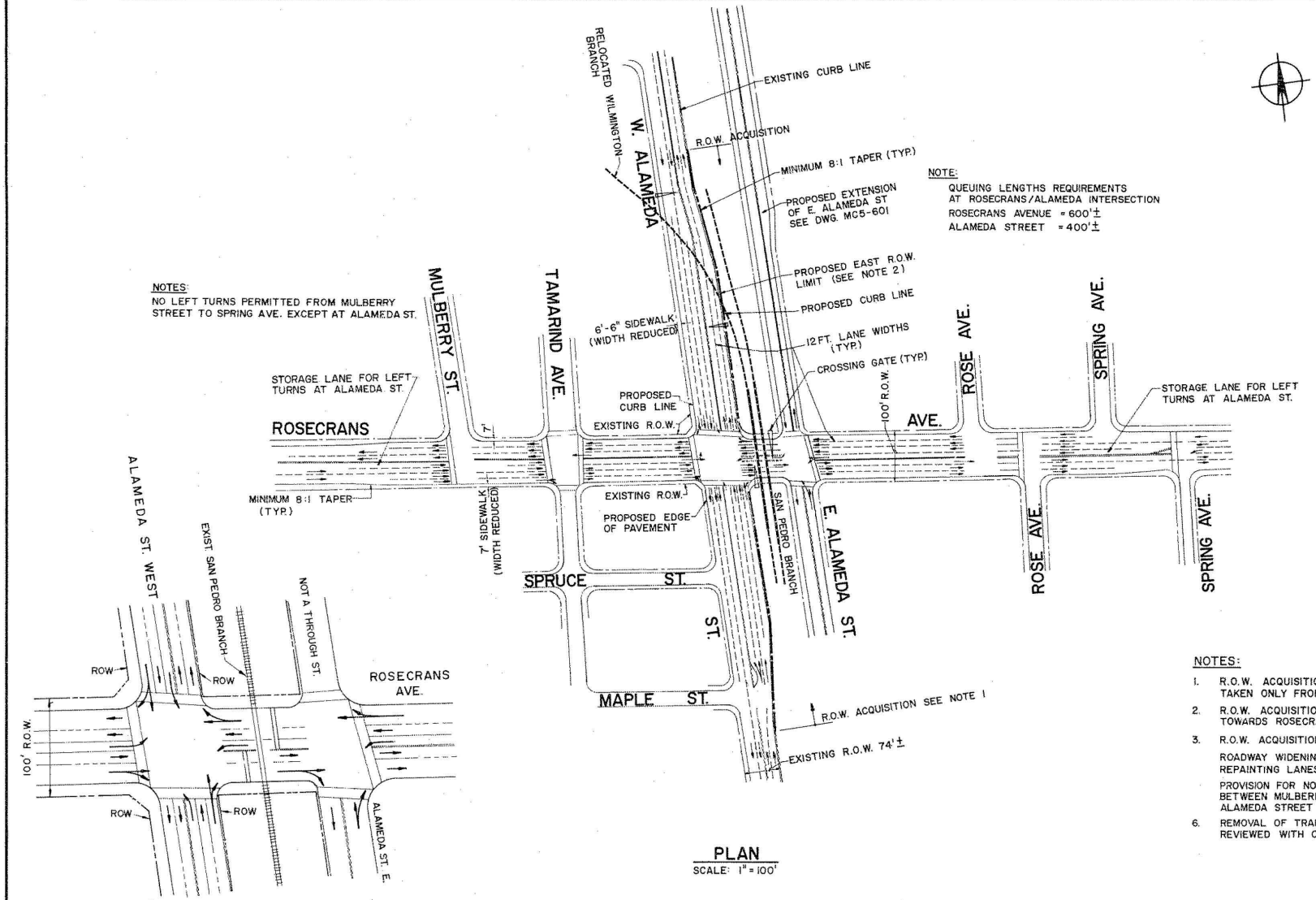
LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project

Southern California Rail Consultants
A Joint Venture of
• Parsons Brinckerhoff Quade & Douglas, Inc.
• Kaiser Engineers (California) Corporation
• Daniel, Mann, Johnson & Mendenhall

SUBMITTED: _____
APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION SECTIONS

CONTRACT NO.	
DRAWING NO.	MC5-608
REV.	0
SHEET NO.	I-12 D
SCALE	AS SHOWN



PLAN
SCALE: 1" = 100'

EXISTING ROSECRANS AVE. – ALAMEDA ST. INTERSECTION
PLAN – N.T.S.

NOTES:

1. R.O.W. ACQUISITION ALONG W. ALAMEDA STREET IS TO BE TAKEN ONLY FROM THE EAST SIDE (WEST SIDE OF SPTC R.O.W.).
2. R.O.W. ACQUISITION ALONG W. ALAMEDA STREET INCREASES TOWARDS ROSECRANS AVENUE TO A MAXIMUM R.O.W. OF 94'±.
3. R.O.W. ACQUISITION IS NOT REQUIRED ALONG ROSECRANS.
   ROADWAY WIDENING ALONG ROSECRANS IS TO BE DONE BY REPAINTING LANES AND REDUCING SIDEWALK WIDTHS TO 7'-0".
   PROVISION FOR NO LEFT TURNS ALONG ROSECRANS AVENUE BETWEEN MULBERRY STREET AND SPRING AVENUE EXCEPT AT ALAMEDA STREET TO BE REVIEWED WITH CITY OF COMPTON.
6. REMOVAL OF TRAFFIC LIGHTS AT TAMARIND AVENUE TO BE REVIEWED WITH CITY OF COMPTON.

REV.	DATE	DESCRIPTION	BY	APP.

DESIGNED BY	R. BALL
DRAWN BY	FK.MACAVINTA
CHECKED BY	
APPROVED BY	
DATE	

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project
LACTC

Southern California Rail Consultants
A Joint Venture of
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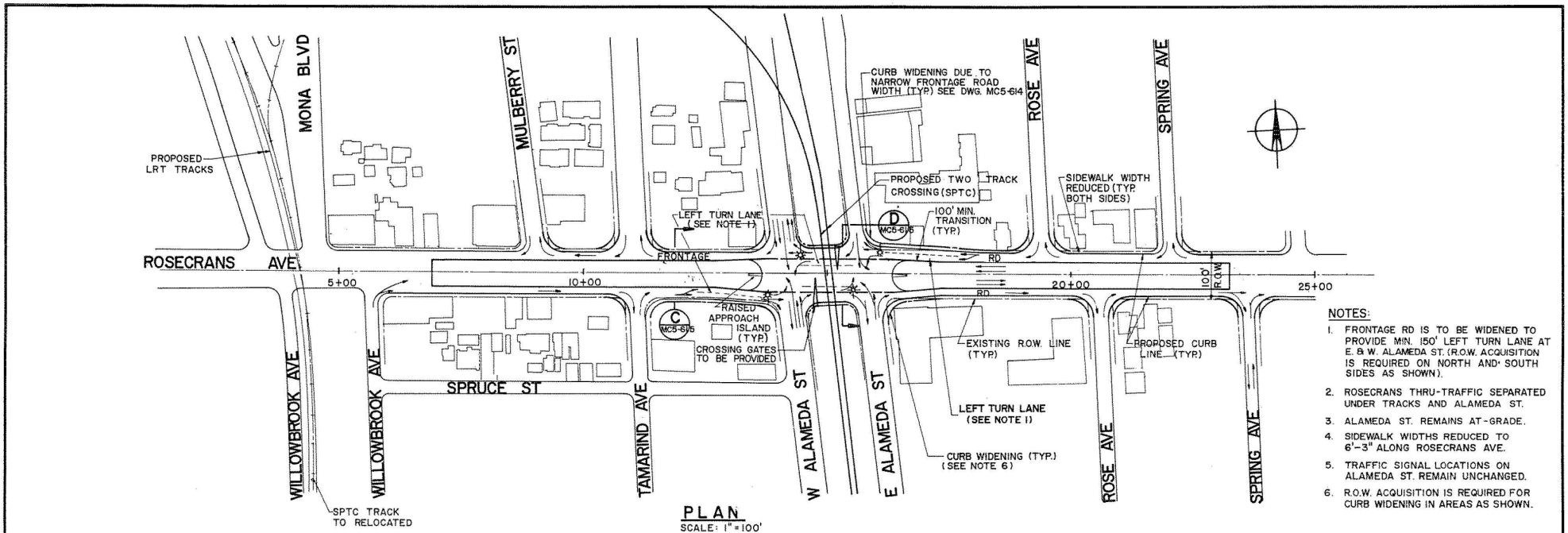
• Kaiser Engineers (California) Corporation
• Daniel, Mann, Johnson, & Mendenhall

SUBMITTED: _____
APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
ROSECRANS AVE./ALAMEDA ST INTERSECTION IMPROVEMENTS OPTION A (AT-GRADE)

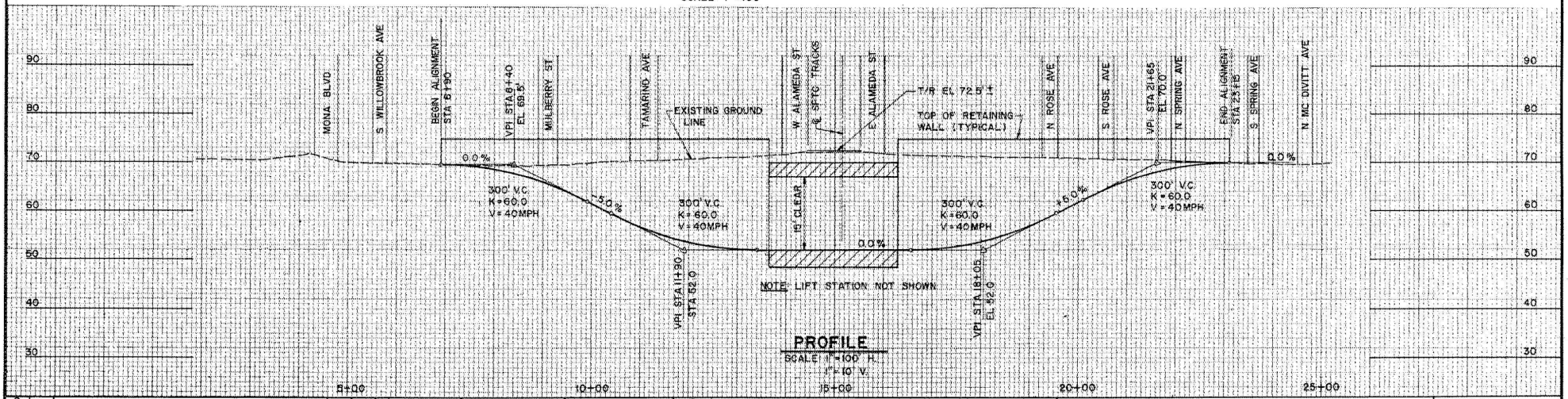
CONTRACT NO.	
DRAWING NO.	MC5-610
REV.	0
SHEET NO	I-12 E
SCALE	1" = 100'



PLAN
SCALE: 1" = 100'

NOTES:

1. FRONTAGE RD IS TO BE WIDENED TO PROVIDE MIN. 150' LEFT TURN LANE AT E. & W. ALAMEDA ST. (R.O.W. ACQUISITION IS REQUIRED ON NORTH AND SOUTH SIDES AS SHOWN).
2. ROSECRANS THRU-TRAFFIC SEPARATED UNDER TRACKS AND ALAMEDA ST.
3. ALAMEDA ST. REMAINS AT-GRADE.
4. SIDEWALK WIDTHS REDUCED TO 6'-3" ALONG ROSECRANS AVE.
5. TRAFFIC SIGNAL LOCATIONS ON ALAMEDA ST. REMAIN UNCHANGED.
6. R.O.W. ACQUISITION IS REQUIRED FOR CURB WIDENING IN AREAS AS SHOWN.



PROFILE
SCALE: 1" = 100' H.
1" = 10' V.

REV.	DATE	DESCRIPTION	BY	SUB	APP.

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DESIGNED BY	R. BALL
DRAWN BY	F.K. MACAVINTA
CHECKED BY	
APPROVED BY	
DATE	

LACTC
LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project

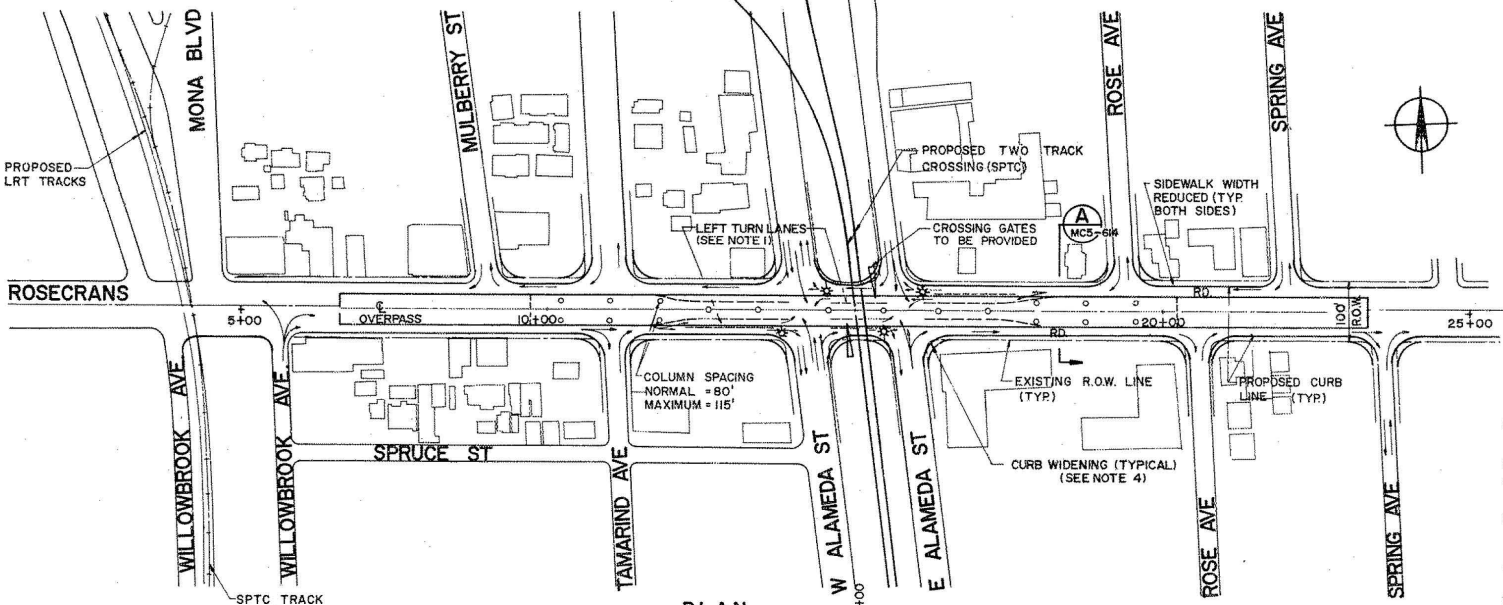
SUBMITTED: _____

Southern California Rail Consultants
A Joint Venture of
• Parsons Brinckerhoff Quade & Douglas, Inc.
• Kaiser Engineers (California) Corporation
• Daniel, Mann, Johnson & Mendenhall

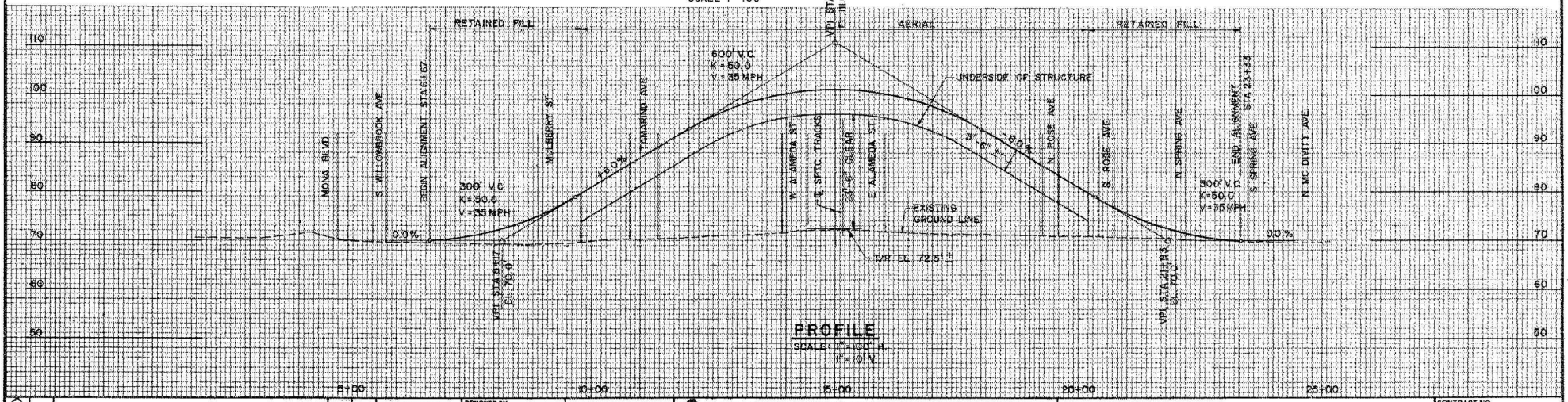
APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
ROSECRANS AVENUE UNDERPASS
OPTION B

CONTRACT NO.	
DRAWING NO.	MC5-611
REV.	0
SHEET NO.	I-12F
SCALE	AS SHOWN.



PLAN
SCALE: 1"=100'



PROFILE
SCALE: 1"=100' H.
1"=10' V.

NOTES:
1. FRONTAGE ROAD IS TO BE WIDENED TO PROVIDE MIN. 150' LEFT TURN LANE AT E. & W. ALAMEDA ST. AS SHOWN. (NO R.O.W. ACQUISITION IS REQUIRED.)
2. ROSECRANS SEPARATED OVER ALAMEDA ST. AND OVER S.P. TRACKS.
3. ALAMEDA ST. REMAINS AT-GRADE.
4. R.O.W. AQUISITION IS REQUIRED FOR CURB WIDENING IN AREAS AS SHOWN.
5. SIDEWALK WIDTHS REDUCED TO 5'-10" ALONG ROSECRANS AVENUE.
6. TRAFFIC SIGNAL LOCATIONS ON ALAMEDA STREET REMAIN UNCHANGED.
7. MIN. 15' CLEARANCE TO ℄ SPTC TRACK FROM COLUMN FACE.

REV.	DATE	DESCRIPTION	BY	APP.

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DESIGNED BY	R. BALL
DRAWN BY	F.K. MACAVINTA
CHECKED BY	
APPROVED BY	
DATE	

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project
LACTC

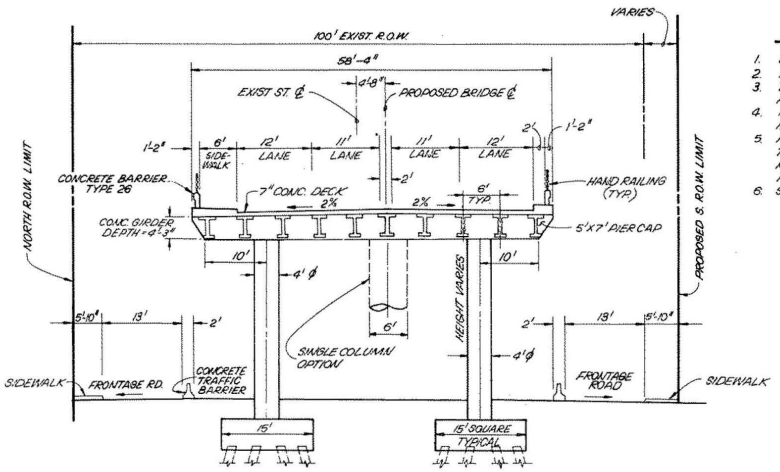
SUBMITTED: _____

Southern California Rail Consultants
A Joint Venture of
Parsons Brinckerhoff Quade & Douglas, Inc.
Kaiser Engineers (California) Corporation
Daniel, Mann, Johnson & Mendenhall

APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
ROSECRANS AVENUE OVERPASS
OPTION C

CONTRACT NO.	
DRAWING NO.	MC5-612
REV.	0
SHEET NO.	I-12G
SCALE	AS SHOWN



ROSECRANS AVENUE OVERPASS STRUCTURE

TYPICAL SECTION (A)

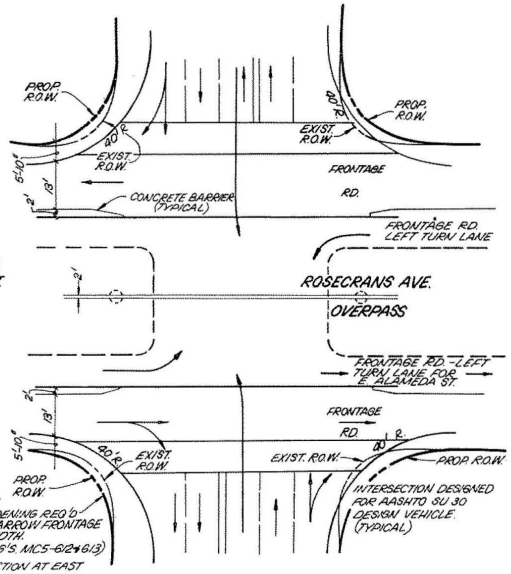
SCALE: 1"=10'

GENERAL NOTES:

1. LANE WIDTHS FOLLOW AASHTO REQUIREMENTS.
2. MIN 2' MEDIAN DIVIDER (PAINTED LINES) TO BE USED.
3. TURNING RADII REQUIRED FOR STREETS INTERSECTING FRONTAGE ROADS ARE TO BE CONFIRMED.
4. R.O.W. ACQUISITION DUE TO CURB WIDENING AT STREETS INTERSECTING FRONTAGE ROADS IS TO BE CHECKED.
5. FRONTAGE RD. IS TO BE WIDENED TO ACCOMODATE 150' LEFT TURN LANE ONTO ALAMEDA ST. (R-O-W ACQUISITION IS REQUIRED ON UNDERPASS ALTERNATE ONLY. SEE DWG'S MC-5-611 AND 612)
6. SIDEWALK REQUIREMENTS ON BRIDGE TO BE CONFIRMED.

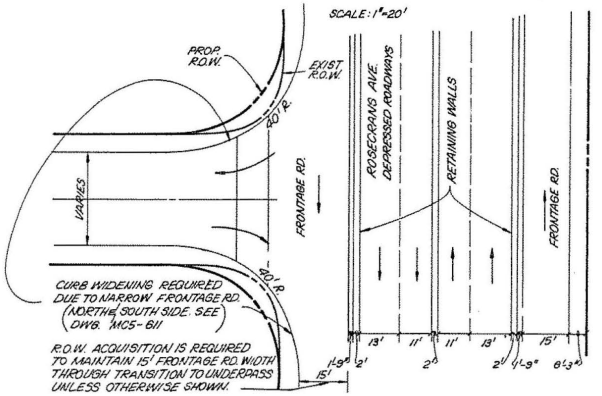
NOTES: (FOR TANGENT O/H ALIGNMENT)

1. INTERSECTION AT EAST AND WEST ALAMEDA ST. ARE SIMILAR FOR OFFSET O.H. ALIGNMENT.
2. OTHER INTERSECTIONS WILL HAVE "T" SHAPE



NOTES:
CURB WIDENING REQ'D DUE TO NARROW FRONTAGE ROAD WIDTH. (SEE DWG'S. MC5-612 & 613)
INTERSECTION AT EAST ALAMEDA IS SIMILAR.

ROSECRANS AVENUE - W. ALAMEDA ST. INTERSECTION WITH OVERPASS



ROSECRANS AVENUE - TYPICAL INTERSECTION ALONG DEPRESSED ROADWAY

SCALE: 1"=20'

REV.	DATE	DESCRIPTION	BY	SUB	APP.

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DRAWN BY	R.E.K.
CHECKED BY	
APPROVED BY	
DATE	

LACTC
LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project

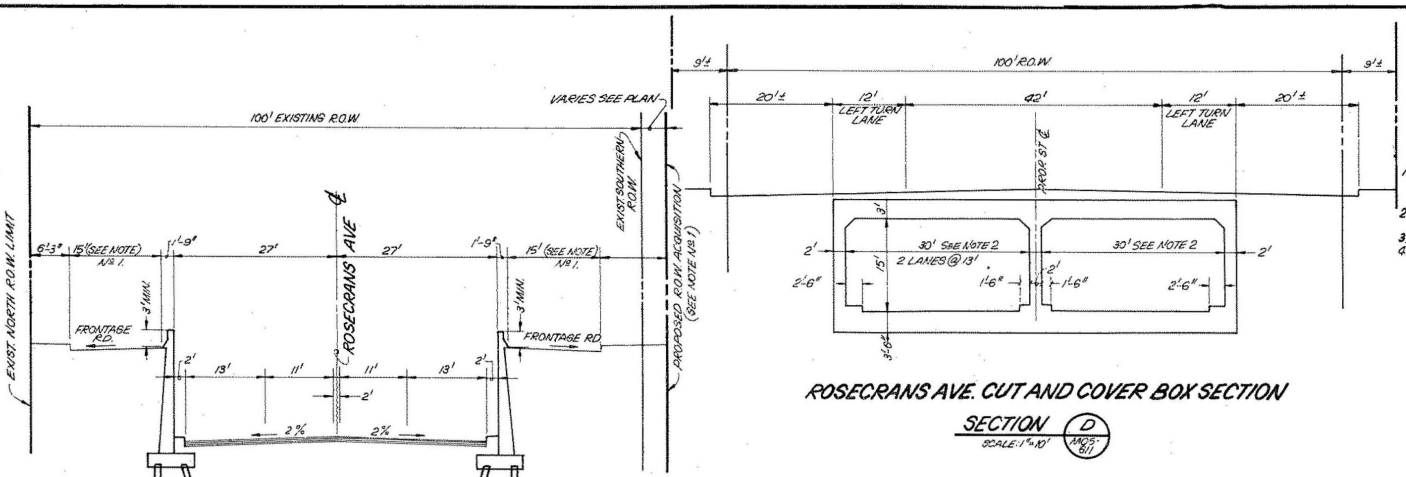
SUBMITTED: _____

Southern California Rail Consultants
A Joint Venture of
- Parsons Brinckerhoff Quade & Douglas, Inc.
- Kaiser Engineers (California) Corporation
- Daniel, Mann, Johnson & Mendenhall

APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
ROSECRANS AVENUE
SECTIONS AND DETAILS

CONTRACT NO.	
DRAWING NO.	MC5-614
REV.	0
SHEET NO.	I-12H
SCALE	AS SHOWN



ROSECRANS AVE. RETAINED CUT WEST OF ALAMEDA STREET

SECTION C (MC-5-611)

SCALE: 1"=10'

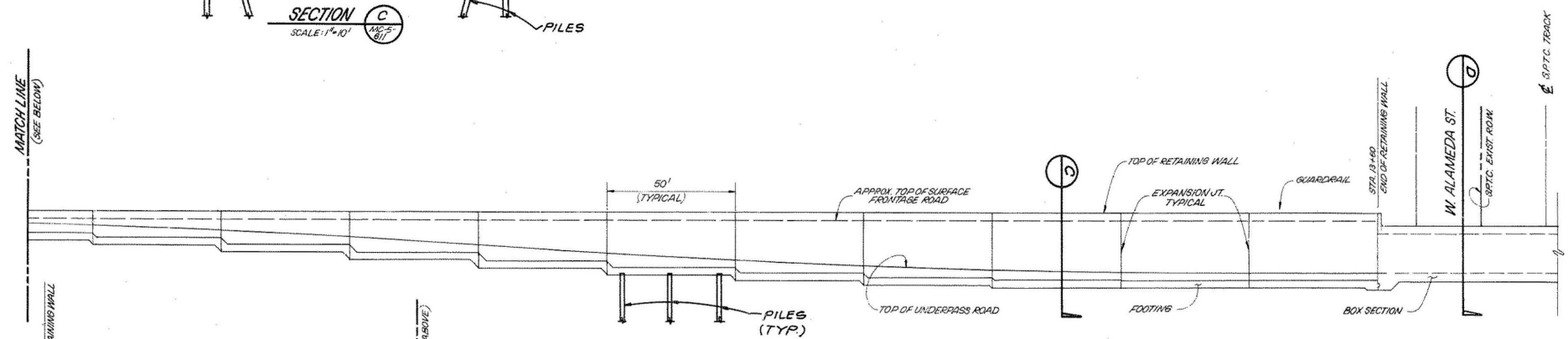
ROSECRANS AVE. CUT AND COVER BOX SECTION

SECTION D (MC-5-611)

SCALE: 1"=10'

NOTES:

1. R-O-W ACQUISITION IS REQUIRED FOR WIDENING OF FRONTAGE RD. THROUGH TRANSITION TO UNDERPASS TO PROVIDE MIN. 150' LEFT TURN LANE ONTO ALAMEDA ST. → (SEE DWG. MC5-611.)
2. MIN. 30' CLEARANCE OPENING REQUIRED IN BOX SECTIONS AS SPECIFIED BY AASHTO.
3. LANE WIDTHS FOLLOW AASHTO REQUIREMENTS.
4. DRAINAGE OF UNDERPASS TO BE HANDLED BY A LIFT STATION (NOT SHOWN).



TYPICAL RETAINING WALL ELEVATION

SCALE: 1"=20'

REV.	DATE	DESCRIPTION	BY	APP.

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DESIGNED BY	R.B.-J.Y.
DRAWN BY	R.E.K.
CHECKED BY	
APPROVED BY	
DATE	

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project
LACTC

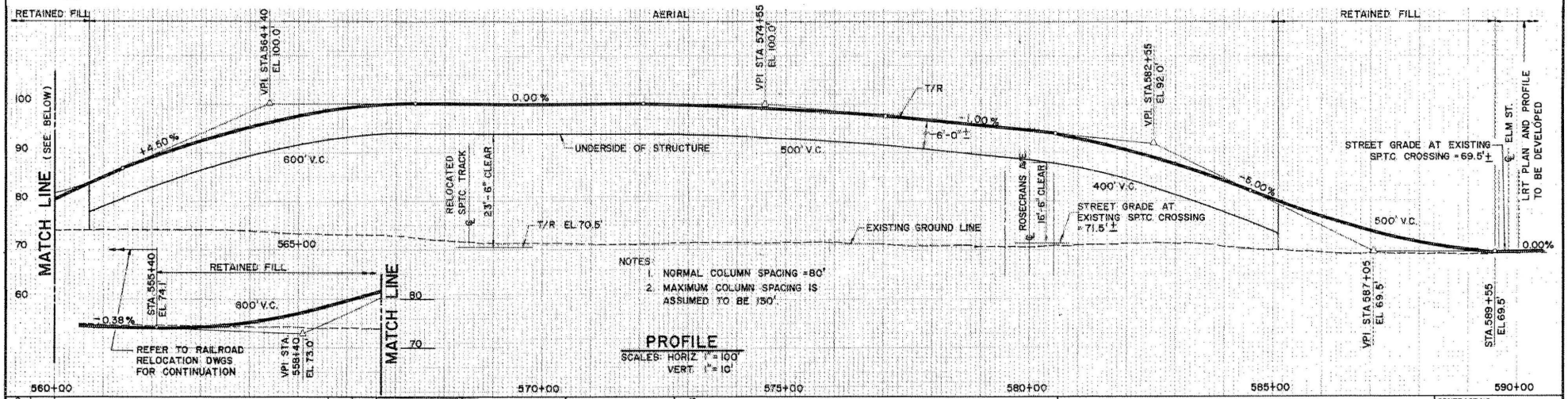
Southern California Rail Consultants
A Joint Venture of
Parsons Brinckerhoff Quade & Douglas, Inc.
Kaiser Engineers (California) Corporation
Daniel, Mann, Johnson & Mendenhall

SUBMITTED: _____

APPROVED: _____

MC-5 SPTC RAILROAD RELOCATION
ROSECRANS AVE. UNDERPASS
SECTIONS

CONTRACT NO.	
DRAWING NO.	MC5-615
REV.	0
SHEET NO.	I-121
SCALE	AS SHOWN



PROFILE
SCALES: HORIZ 1" = 100'
VERT 1" = 10'

REV.	DATE	DESCRIPTION	BY	SUB	APP.

Information confidential: all plans, drawings, specifications, and/or information furnished herewith shall remain the property of the Los Angeles County Transportation Commission; shall be held confidential; and shall not be used for any purposes not provided for in agreements with the Los Angeles County Transportation Commission.

DESIGNED BY R. BALL
DRAWN BY R. KITT
F.K. MACAVINTA
CHECKED BY
APPROVED BY
DATE

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
The Long Beach-Los Angeles Rail Transit Project
LACTC
SCRC Southern California Rail Consultants
SUBMITTED:

Southern California Rail Consultants
A Joint Venture of
■ Parsons Brinckerhoff Quade & Douglas, Inc.
■ Kaiser Engineers (California) Corporation
■ Daniel, Mann, Johnson, & Mendenhall
APPROVED:

MC-5 SPTC RAILROAD RELOCATION
GRADE SEPARATION OVER SPTC TRACK AND ROSECRANS AVENUE

CONTRACT NO.
DRAWING NO. MC5-620
REV. 0
SHEET NO. I-12J
SCALE H. 1"=100' V. 1"=10'

I-130 PATRONAGE

The Southern California Association of Governments (SCAG) has conducted patronage modeling for the Long Beach-Los Angeles Rail Transit Project. In order to estimate the year 2000 ridership, SCAG used the Los Angeles Regional Transportation System (LARTS) in conjunction with the system and service characteristics provided by LACTC and a background transit network based on SCAG's Regional Transportation Plan (RTP).

For all of the modeling, the full RTP was used as a background transit network. The RTP assumes that a number of major transit projects proposed for the Los Angeles metropolitan region will be completed by the year 2000. Those RTP projects which would affect ridership on the Long Beach-Los Angeles rail transit system are described as follows:

- Century Freeway (I-105) from Sepulveda Boulevard to the San Gabriel River Freeway (I-605) with a Light Rail Transitway in the center median.

- Artesia Freeway (Route 91) extension to the Harbor Freeway (I-110).

- A Santa Ana Freeway (I-5) transitway from Newport Avenue (Tustin) to Esperanza Street (1 mile south of the Santa Monica Freeway, I-10).

- A Harbor Freeway (I-110) transitway from Washington Boulevard to Artesia Boulevard.

During the initial modeling it was found that the choice of mid-corridor segments did not appreciably change the patronage for the system. Changes in the number of patrons were affected by the choice of Los Angeles and/or Long Beach segments. This result is due to the fact that the major difference in the mid-corridor alternatives, including MC-5, is in the alignment of the freight rail. The passenger light rail alignment remains the same.

I-140 STATIONS

The proposed Mealy Street Freight Rail Diversion would not require any changes in station locations from those sites described in the DEIR.

I-200 SYSTEM OPERATIONS

I-210 PRELIMINARY SYSTEM OPERATING CHARACTERISTICS FOR LIGHT RAIL TRANSIT

I-211 Frequency of Service and Train Length

In order to provide a high quality of service as well as accommodate the projected ridership demand, trains would run approximately every 12 to 15 minutes during normal service hours. With a peak hour patronage estimate of 12 percent of the daily total (6,534 riders), six-minute interval service is proposed during the AM and PM commuting periods. It is anticipated that reduced services (15- to 20-minute intervals) would be offered at night and on holidays and weekends. At full operation the system would provide service 20 hours a day (5:30 AM until 1:30 AM), 365 days a year. Year 2000 patronage estimates indicate that two-car train lengths would adequately carry the peak period demand for the system.

I-212 Average Operating Speeds

The average peak hour operating speed for the mid-corridor is estimated to be 32.6 mph for both MC-1 (the adopted project segment) and MC-5. This speed assumes 20-second dwell times with an additional five percent added to running times to provide for uncertainty factors. With the grade separation at Rosecrans, the end-to-end running time would be about two minutes faster for MC-5 in comparison to MC-1. This difference is not considered significant in the context of 50- to 60-minute run times.

I-220 COMPLEMENTARY BUS NETWORK

Because MC-5 would not change either station locations or the LRT alignment, the proposed bus route and frequency modification for local and express bus services remain as defined in the DEIR.

I-230 ELECTRIFICATION

The electrical system for the LRT under MC-5 would be the same as that detailed for MC-1. An overhead wire distribution system would collect power from the traction power substations and deliver it to the vehicles. In the mid-corridor, including Compton, a simple catenary system would be used, consisting of a contact wire suspended from a messenger wire by means of hangers spaced about 30 feet apart.

Aesthetic appearance of the catenary system elements will be a prime consideration during the final design process.

I-240 SIGNALING AND COMMUNICATIONS

In the mid-corridor (Washington Boulevard to Willow Street), which includes the proposed MC-5 alignment, a conventional rail transit signal system, similar to freight rail signal systems, would be installed within the railroad right-of-way to govern movements of the light rail trains. All road crossings in the mid-corridor, including those constructed for MC-5, would have automatic gate protection.

I-250 OTHER SYSTEM CHARACTERISTICS

Implementation of MC-5 would not change the safety and security elements of the system, nor would the proposed method of self-service barrier-free fare collection change if MC-5 is selected. The fare structure and pricing would also remain unchanged.

I-260 STREET AND UTILITIES

Construction of MC-5 would require some modification to existing streets. In the case of east Alameda from north of Rosecrans to Oaks Street, where no roadway presently exists, the street and the utility system beneath would be constructed.

The proposed optional grade separation for the intersection of Rosecrans and Alameda Streets would require a total reconstruction of Rosecrans and, in the case of Option B (underpass), extensive relocation of the utilities currently under the surface of each of the streets.

I-270 FREIGHT RAIL OPERATIONS

From the City of Los Angeles to Mealy Street, the light rail transit project would share the Wilmington Branch right-of-way with the freight operations of the SPTC. The MC-5 Mealy Street Freight Rail Diversion would allow the SPTC to reroute its Wilmington Branch operations to the San Pedro Branch ROW between Mealy Street and Dominguez Junction to serve all long-haul through freight traffic. In order to implement this diversion, an additional grade separation would be built permitting LRT trains to pass over the rerouted Wilmington Branch traffic.

The previous EIR for the project used 1983 SCAG figures which showed three through train movements on the Wilmington Branch between Watts and Dominguez Junctions. In 1985 this number has increased to an average of six through trains on weekdays. Shifting freight rail operations to the San Pedro Branch ROW with the MC-5 diversion would increase the number of through freight movements on the Alameda Street rail corridor from two to eight now. Forecasts of future traffic indicate that the majority of freight rail traffic growth on the line would be unit (container) trains operating between classification yards in Los Angeles and the Ports of Los Angeles and Long Beach. In the year 2000, projections from the San Pedro Bay Ports Access Study call for through freight traffic on the San Pedro Branch with the MC-5 diversion to be between 17 and 35 train movements per day. These numbers are subject to changes in economic conditions, particularly in the number of coal trains projected.

The anticipated merger of the Southern Pacific and Santa Fe railrods in 1986 could result in the addition of ports-related Santa Fe through trains to the Southern Pacific ports access rail lines, as noted in Section II-420 of this EIR.

I-300 CONSTRUCTION SCENARIO

I-310 GENERAL

This subsection generally discusses the overall construction process for MC-5. Construction and operational impacts are discussed in Chapters III and IV, respectively.

MC-5 would be constructed during a 36-month period concurrent with overall Long Beach-Los Angeles LRT project. Construction of MC-5 would begin simultaneously with other segments of the overall rail transit project. In the final engineering of the project, every effort would be made to have construction of all the light rail transit elements completed at the same time, i.e., October 1989, whichever mid-corridor alternative (MC-1 or MC-5) is built.

Several contractors specializing in various methods of construction would be working on MC-5 during the entire construction period. The physical construction would involve the method that is most suitable for each aspect of the project. A typical sequence of construction activities for the entire rail transit project is shown in Table I-31A. MC-5 would entail a number of these same construction activities.

Construction of MC-5 would follow all applicable local, state, and federal laws for building and safety. Equipment used would be fitted with mufflers and spark arresters. Standard construction methods would be used for traffic, noise, vibration, and dust control, consistent with all applicable laws. Working hours would be varied to meet special circumstances. Disposal sites for excess or contaminated materials are exhibited in Table I-31B.

Haul routes to disposal sites would be predetermined by agreement with local authorities prior to construction. They would follow streets and highways forming the safest or shortest route with the least adverse effect on traffic, residences, and businesses.

Each of the options for the proposed alternative would require differing construction materials and methods. See Table I-31C for estimated construction quantities for each option.

TABLE I-31A

TYPICAL SEQUENCE OF CONSTRUCTION ACTIVITIES*

	Activity	Tasks	Average Time Required (Months)
1.	Survey	Locate utilities, establish R/W and protect control points and center lines, relocate survey monuments.	4-6
2.	Site Preparation	Relocate utilities and railroad (both temporarily and permanently), clear and grub ROW (demolition), establish detours/ haul routes, erect safety devices and special construction equipment, construct equipment yards, stockpile materials.	12-14
3.	Heavy Construction	Construct bridges, aerial structures, street guideways, trenches, piles, piers and columns, and dispose of excess material. Rebuild roadways and sidewalks.	20-28
4.	Medium Construction	Lay ballast and track, drainage, girders, backfill, build noise walls, and pave streets.	12-24
5.	Light Construction	Conduct finish work, install all system elements (electrical, signals, and communication), landscaping, signing and striping, close detours, clean up and test system (debug).	6-12

* Most of these activities would overlap or be conducted simultaneously, which would decrease construction time.

Source: PBQ&D, 1985.

TABLE I-31B

DISPOSAL SITES

Material	Class of Site	Location
Toxic (hazardous)	Class I*	Santa Barbara County-Casmalia site; Imperial County-Westmoreland; Kings County-Kettleman; Kern County-Bakersfield (petroleum related wastes only)
Unusable (organic mixed)	Class II	Puente Hills
Usable backfill	Class III	Clean backfill material not used on the proposed project can be disposed of at the following locations: LA Harbor for land reclamation purposes; Century Freeway Project and LA County landfills for covering rubbish
Asphalt, Concrete	Class III	Same as above, or can be deposited at Irwindale recycling facility

* The Class I BKK site in West Covina, Los Angeles County has recently closed for toxic wastes.

Source: PBQ&D, 1985.

TABLE I-31C

ESTIMATED CONSTRUCTION QUANTITIES FOR MC-5[1]

Alternative	Excavation Material Excess	Backfill	Ballast-Subballast	Concrete	Concrete Beams Precast	Pavement Restoration Asphalt/Concrete	Walkway-Decking	Rebar	Steel Rails	Timber-Formwork Shoring	Timber Ties
	IN CUBIC YARDS							IN POUNDS		IN CUBIC FEET	
MC-1	265,000	39,000	881,000	8,000	58,000	10,000	4,000	1,891,000	12,454,000	46,000	233,000
MC-5											
Option A (at-grade)	269,000	62,000	1,048,000	8,000	58,000	11,000	4,000	1,891,000	14,814,000	46,000	277,000
Option B (underpass)	359,000	85,000	1,048,000	11,000	58,000	11,000	4,000	2,520,000	14,814,000	61,000	277,000
Option C (overpass)	274,000	65,000	1,048,000	8,200	60,000	11,000	4,000	1,930,000	14,814,000	50,000	277,000

[1] Does not include materials for electrical equipment and miscellaneous fixtures made of glass, brick, stone, wire, plastic, fabric, and aluminum. These materials make up between 5 and 15 percent of all materials used on project.

Source: SCRC, 1985.

I-320 TYPICAL CONSTRUCTION METHODS

I-321 Utility Relocation and Street Closures

Prior to beginning construction it would be necessary to relocate or modify all utilities and underground structures which would conflict with laying track and building the aerial guideway, underpass and/or overpass. The utilities would be modified and generally relocated away from the area underneath the proposed facilities. Utility relocation would typically take approximately 12 to 14 months to complete. During this time, relocation work would occupy at least two traffic lanes at one time. In some instances, it is possible that block-long sections of Rosecrans Avenue, Alameda Street, and Willowbrook Avenue would be closed temporarily, probably in the late-night/early-morning hours. Pedestrian access (sidewalks) would remain open. Special facilities, such as handrails, fences, and walkways, would be provided for the safety of pedestrians.

For the LRT aerial guideway over the SPTC tracks and Rosecrans Avenue, it may be possible to intentionally locate foundation sites for support columns in areas where there are minimal or no utilities below. Where it is not possible to avoid existing utilities, they would have to be modified or relocated. Utilities located above ground would be moved away from the aerial guideway and overpass. They could be moved from one side of the street to the other, placed underground, or relocated to another right-of-way, whichever is most appropriate.

Generally relocation of utilities would be limited to those that cross perpendicularly to the proposed alignment, a few overhead power and communication lines, and minor underground drains and pipelines existing parallel to the SPTC track in the ROW. Most of these utilities could be relocated during the actual construction phase.

Construction of all MC-5 options would create traffic congestion and reduced access which could potentially require detours during construction for most through traffic. Every effort would be made to maintain one lane of through traffic in each direction. However, there would be brief periods of time (two to three hours per day, two to three times per week) during heavy construction, when these lanes would have to be closed. Extensive use of shoring and falsework would provide safe passage for local traffic. Temporary detours around the overpass and embankments would need to be established during the construction period. Special working hours and techniques, such as partially constructing the proposed structure and utilizing it while construction on the remainder continues, could be

implemented to further minimize traffic impacts. Such special techniques would raise construction costs substantially.

Excess traffic which could not be accommodated on Rosecrans Avenue would be rerouted. After the structures are complete, they would be open to east/west through traffic while construction on the remainder of the facility continued. These structures alone could take between 18 and 28 months to complete.

Minor streets and alleyways would be temporarily closed. Major cross streets would require partial closure, half the street at a time, while utilities are being relocated and rail trackbed constructed. Two-way access would be allowed on the other half of the street. Once trackbed construction across a local street is completed and the roadway restored to its permanent condition, vehicles could resume original traffic patterns.

Equipment used for the utility relocation phase of work would include diamond saws, pavement breakers, jackhammers, compressors, backhoes, small cranes, front-end loaders, compactors, dump trucks, and welding machines.

I-322 Trackwork

SPTC relocation would first involve the construction of the SPTC tracks at their new temporary or permanent location. When these tracks are completed, train operation would be switched onto them to maintain freight service during the remainder of construction. All trackwork construction would involve the same techniques of clearing, grading, and lowering each new trackbed. Staged construction could be used to minimize impacts for both the new and rebuilt SPTC tracks.

Construction of at-grade sections of the SPTC freight line (including Option A) would involve the clearing and grading of a new roadbed for the new and/or rebuilt tracks. After rough grading is completed, a foundation would be dug and subballast, ballast, and ties would be put in place for the rail track. All tracks would be welded as feasible. Cross streets would be improved and repaired after installation of the tracks. A fence would be erected on both sides of the rail tracks on Mealy Street, except at street intersections which would be controlled by automatic gates.

The relocation of the SPTC track would require the closure of Mona Boulevard and Tamarind Avenue south of the proposed rail right-of-way. A two-lane street would be constructed to provide local access between Mona and Tamarind. The east roadway of

Alameda Street presently ends at a point approximately 450 feet north of Rosecrans. Under MC-5, it would be extended north to Oaks Street to provide through access and better circulation on the existing street system. For the existing east roadway of Alameda, utility poles would have to be relocated, the new roadbed graded, subbase material installed, curbs and gutters constructed, and the roadway paved curb-to-curb from Rosecrans Avenue to Oaks Street.

Equipment used for construction of the tracks would be similar to that required for relocation of the utilities with the addition of track-laying equipment, paving machines, concrete mixers, and finishers.

I-323 LRT Aerial Guideway

An aerial structure would be required for the light rail portion of the alternative. Generally, foundations for aerial guideway columns would be spaced approximately 80 feet apart, although actual distances may vary considerably. Major construction activities would take place at these locations. Construction of the half-mile segment of aerial guideway could require 12 months to 18 months to complete, depending on subsurface geology and the type of construction methods used. Three or more columns could be erected simultaneously with work occurring in more than one block at a time.

Typical construction methods for the aerial segment would involve three phases of work: foundation construction, installation of guideway columns, and attachment of interlinking concrete girders.

Construction on the column foundations could begin at the same time the utilities are being relocated. Depending upon the subsurface geology at a particular site, individual decisions would be made to use either drilled caissons or deep-set piles to support the column foundations. The minimum working area required for installation of the caissons would be 12 feet (one traffic lane width) with an additional 24 feet (two lanes) required for ingress and egress during working hours. This method of constructing the foundation is the least disruptive.

Where soil conditions are poor (too much groundwater or unstable materials), deep-set piles which must be impact driven or drilled into place are necessary. Attached to these piles would be widespread column footings (20 feet by 20 feet) which require a minimum of 36 feet (three traffic lanes) of working space at all times during installation. The deep-set pile method is one of the most disruptive techniques available for constructing foundations, but since the Los Angeles Basin is potentially subject to strong groundshaking and

liquefaction during a major seismic event, it could be necessary to use this method.

Once the foundations are in place, the columns would be attached. The columns would be cast-in-place reinforced concrete or pre-cast concrete. Pre-cast columns would be formed off-site and brought to the foundations by truck, hoisted into place with cranes, and bolted down. Cast-in-place columns would be erected by attaching steel reinforcing to the foundations and framing a wooden falsework into which the concrete could be poured.

As soon as the columns are set, "T" heads would be attached atop each one, and two concrete box girders would be placed linking the individual columns. The concrete box girders would be transported to the site by truck and put into place by cranes. It may be possible to conduct most of the column construction and girder placement during late night hours to minimize disruption on local streets.

Fitting the aerial structure in and over Rosecrans Avenue and the SPTC tracks would require special construction methods. Staged construction would undoubtedly have to be used to ease the access and detour problems on Rosecrans Avenue. It is likely that four-foot-square guideway support columns would be used within the shoulder and median areas of the roadway to minimize potential conflict with automobiles.

Equipment used for construction of the aerial guideway would include drill rigs/augers, cranes, pile drivers, jackhammers, compressors, pumps, dump trucks, front-end loaders, paving machines, and large tractor-trailer rigs to carry girders and miscellaneous tools.

I-324 Underpass, Retaining Wall, Overpass, and Fill Construction

Generally, digging trenches for an underpass, filling depressions, and building retaining walls and an overpass would require a very intense effort over the entire construction period. Therefore, it is assumed that construction activities would cause disruption for up to 28 months.

For the underpass (Option B), Rosecrans Avenue would be approximately 15-20 feet below-grade. One-way frontage (access) roads would be included at-grade on either side of Rosecrans Avenue (also for Option C). A concrete box structure and retained cuts for approaches would generally be constructed to accommodate automobile cross traffic. Cut-and-cover construction would be used to build the

concrete box structure. The retaining walls which must be built to support the sides of the cut would extend between 500 and 600 feet on either side of the underpass structure. Freight rail traffic on the San Pedro line would be maintained by constructing half the undercrossing at a time, with rail traffic on the other track until construction on the first is completed.

Excavation would be done using standard heavy-duty structural equipment; blasting would not be used. The excavated material would be removed at an average rate of between 800 and 900 cubic yards per day and hauled away by trucks along predesignated disposal routes. The excess material could be disposed of at either an approved landfill site or a concurrent construction project where a large amount of fill would be needed.

The cut-and-cover excavation and temporary decking would need to be fully supported. The excavated cut could require dewatering during the construction period, in which case excess water would be pumped out of sump pits as the excavation proceeded downward. Gravity flow would be used to force the water into the low-lying sumps. Then it would be passed into a settling basin to remove solids before being pumped into the local drainage system.

Portland cement concrete (PCC) mix would be used for concreting the underpass. When the concrete structures are completed, they would be waterproofed and backfilled.

When the underground work is completed, one roadway of Alameda Street and the SPTC tracks would be restored at a time to maintain traffic flow. The backfill material would be trucked in over the same haul route used to remove excess material, then dumped in place and compacted. Due to soil characteristics, it might not be possible to use excavated material for backfill. A local source of borrow material would have to be located.

The construction of the overpass (Option C) would potentially require some additional right-of-way acquisition to establish approach embankments. The ROW requirements are expected to be minor and would be acquired from the public right-of-way. Option C, which would require bringing the local cross traffic overhead above Alameda Street and the SPTC freight tracks, would involve the construction of a bridge structure and approach embankments.

Approach embankments would be approximately 75 feet wide and begin between 500-600 feet to the east and west of the overpass structure. This would bring the total length of the overpass to about 1,600 feet. The embankments would rise on a maximum six percent grade to the overpass decks, which would be 23.5 feet above the freight rail roadbed and streets.

Construction of the overpass and embankments could begin at the same time that the utilities are being relocated. Depending upon the subsurface geology at a particular site, individual decisions would be made to use either drilled caissons or deep-set piles to support the overpass abutments. Retaining walls would be used to support the sides of the approach embankment to minimize right-of-way acquisition on Rosecrans.

The construction of new grade separations would create excess material from the underpass (Option B) or require additional fill for the overpass (Option C). A typical four-lane overpass would need approximately 60,000 cubic yards of fill material to construct the embankments for the approaches to the bridge structures over the freight tracks and west and east Alameda. A typical four-lane underpass (Option B) would require the removal of approximately 50,000 cubic yards of excess material to go under the freight tracks and Alameda Street.

Any of the options would require construction of some minor drainage structures, such as down drains and small culverts.

With the underpass, the SPTC freight tracks would remain at existing grade with vehicles in a subway below. The construction of the underpass would create a localized sump that would need to be drained into the local drainage system by pumps during heavy rains.

I-325 Safety and Security During Construction

Safety and security during construction would consist of providing for the safe passage of vehicles and pedestrians through the construction area and protecting construction sites and equipment/material storage areas from vandalism and theft.

All standard construction procedures would be implemented to ensure the safety of the public. Detours and existing roadways through and around construction zones would be well-lighted and signed. Barriers would be used to separate the public from work areas where necessary. Pedestrian pathways would be cordoned off and protected

from traffic and construction activities. Standard traffic control procedures would be used, including flaggers, cones, and flashing lights. Construction areas would be fenced and lighted wherever appropriate. Some areas, such as material and equipment storage sites, would require perimeter patrols and nighttime security personnel.

I-400 COSTS

I-410 CAPITAL

Estimated additional capital costs for the various MC-5 options (above those estimated for MC-1) are shown in Table I-40A. These costs reflect current (1985) dollars and include construction costs, services, contingency, escalation, project reserve and right-of-way acquisitions. Costs for construction of the freight rail diversion are the same for all options. Cost differences among the options occur only for the construction of the grade separations, with the underpass being the most expensive.

TABLE I-40A

ESTIMATED ADDITIONAL CAPITAL COSTS[1] OF MC-5 OVER MC-1

	MC-5		
Description	Option A	Option B	Option C
Railroad Diversion	$ 28.1	$ 28.1	$ 28.1
Freight/Auto Conflict Resolution	0.8	14.5	8.9
TOTAL	$ 28.9	$ 42.6	$ 37.0

[1] All costs shown are in millions of unescalated February 1985 dollars. The costs of special mitigation measures are not included in this table, but are discussed in the appropriate impact sections.

Source: SCRC, 1985.

I-420 OPERATIONS AND MAINTENANCE

Annual costs for operating and maintaining the rail transit system were estimated in the DEIR for MC-1. These costs were calculated using existing 1984 unit costs of labor, materials, and energy. It is expected that there would be no significant difference in the overall cost of operating and maintaining MC-5 over that estimated for MC-1.

I-500 RELATED PROJECTS

For purposes of this document, related projects include those major development activities scheduled for completion before the year 2000 which, when combined with MC-5 (as part of the Long Beach-Los Angeles rail transit system), could produce significant cumulative impacts.

I-501 INTERSTATE 105 - CENTURY FREEWAY/TRANSIT CORRIDOR

Responsible Agencies: Caltrans, Federal Highway Administration (FHWA).

Description/Location: When constructed, the I-105 Freeway/Transitway will be a six-lane, fully access-controlled highway extending from the City of Norwalk on the east to El Segundo on the west. The project length is 17.2 miles and has a basic right-of-way width of 320 feet. The median area of the project will contain a light rail facility.

Relationship to the Project: The I-105 Freeway/Transitway would intersect the Long Beach-Los Angeles line at 117th Street in the community of Willowbrook. A dual station would be located at this point where patrons could transfer from one rail system to the other. According to Caltrans, most of the riders transferring from the I-105 facility to the Long Beach-Los Angeles line would have come from an easterly direction. Riders coming from the west would have an intervening opportunity at the Harbor Freeway Transitway.

Status: A Final Environmental Impact Statement (FEIS) for the I-105 Freeway/Transitway was approved in 1977. Acquisition of the right-of-way has been underway, and preliminary construction activities are beginning on portions of it. Overall completion of I-105 is expected by 1993. Construction of the segment of I-105 that would intersect with the Long Beach-Los Angeles line is scheduled to begin in 1986.

I-502 TERMINAL ISLAND COAL FACILITY

Responsible Agencies: Los Angeles Harbor Department, Army Corps of Engineers.

Description/Location: This 150-acre transshipment facility would be located on the southern part of Terminal Island immediately to the east of Earle Street. The function of this facility would be to transfer coal, or possibly other dry bulk items, from unit trains to cargo ships. When completed, the terminal would be capable of transferring 15 million tons of coal annually.

Relationship to the Project: A number of alternative access routes are being considered to accommodate the additional coal train passages expected as a result of the proposed facility. The preferred alternative is a consolidation plan proposed by SCAG which would route all SPTC, Union Pacific (UP), and Atchison Topeka and Santa Fe (ATSF) freight rail traffic along the current SPTC San Pedro Branch. Without consolidation, a large majority of the coal train traffic would be expected to use the UP route to and from the ports area. If the selected access route parallels or intersects the proposed Long Beach-Los Angeles line (which is not anticipated), significant auto traffic impacts may result with the increased frequency of freight rail movement.

Status: Due to recent drastic reductions in the demand for coal, this project is currently on hold.

I-503 INTERSTATE 110 FREEWAY TRANSITWAY - HARBOR FREEWAY CORRIDOR

Responsible Agencies: Caltrans, FHWA.

Description/Location: The proposed transitway would be a bi-directional two-lane bus/HOV facility constructed in the Harbor Freeway corridor (I-110) between San Pedro and the Convention Center in the City of Los Angeles, a distance of 22 miles. The bus/HOV transitway would function as a limited service trunk line with a bus feeder system. Access would be provided at nine locations. The transitway would be constructed to allow conversion to rail service when patronage warrants a change.

Relationship to the Project: The two systems would eventually be interlinked by means of an east/west rail transitway to be constructed as part of the Century Freeway (I-105) project. Transit stations built along I-105 would provide access to both the light rail transit line and the I-110 transitway.

Status: A final EIS was approved by FHWA on March 20, 1985. Because of a shortfall in federal funding, initial construction on the project has been delayed.

I-504 INTERMODAL CONTAINER TRANSFER FACILITY (ICTF)

Responsible Agencies: Los Angeles Harbor Department, Long Beach Harbor Department, and the Southern Pacific Transportation Company (SPTC).

Description/Location: The ICTF will provide a closer, more centralized location for the transfer of marine-oriented containers from the container terminals to the rail transfer yards. At present these containers are trucked 22 to 28 miles from the ports area to downtown Los Angeles railyards. With construction of the ICTF, containers transported by SPTC would be trucked only four to six miles. The site proposed for the ICTF would, in its ultimate development, encompass 260 acres bounded by Sepulveda Boulevard and Willow Street on the south, 223rd Street on the north, the Los Angeles and Long Beach city limits on the east, and the Los Angeles and Carson city limits on the west. The ICTF is expected to be operational by mid-1986. It is to be built in stages corresponding to increases in demand.

Relationship to the Project: Containers that were once trucked to downtown Los Angeles railyards would be transported by so-called "unit" trains operating in the same SPTC right-of-way (the Wilmington Line) to be occupied by the Long Beach-Los Angeles LRT line. At present, there are on average six through train movements daily on the Wilmington Branch and two on the San Pedro Branch. With construction of the ICTF, through train movements could reach 14 per day overall, according to Port of Los Angeles planners. Recommended ICTF mitigation measures include routing as many trains as possible on the San Pedro Branch.

Status: An FEIR was certified in October 1982 by the Los Angeles and Long Beach Boards of Harbor Commissioners. The first phase of construction will run from fall 1984 to summer 1986. Expansion of the facility will occur during two additional construction phases scheduled for 1991 and 1996, respectively.

I-505 LONG BEACH INTERNATIONAL COAL PROJECT

Responsible Agency: Port of Long Beach.

Description/Location: This project would involve the construction of a coal transshipment terminal in the northwest portion of the Port of Long Beach on the north bank of the Cerritos channel between Berths 89 and 94. The function of this facility would be to transfer coal from unit trains originating from mines located throughout the western United States to ships bound for Pacific Rim countries. It is

expected that when completed the terminal would transfer 15 million tons of coal per year.

Relationship to the Project: The proposed coal train access to the Port of Long Beach would be principally via the Union Pacific railroad. If, however, a railroad consolidation plan currently being considered by SCAG is implemented, all freight rail traffic bound for the ports of Long Beach and Los Angeles would use the SPTC San Pedro Branch.

Status: Due to recent drastic reductions in demand for coal, this project has been postponed. Demand levels suitable to warrant the project's construction may recur in the 1990s.

I-506 SAN PEDRO BAY PORTS ACCESS STUDY

Responsible Agency: Southern California Association of Governments (SCAG).

Description/Location: In order to accommodate the projected increase in freight rail traffic to the Ports of Long Beach and Los Angeles, SCAG is investigating various alternatives for routing SPTC, UP, and ATSF rail traffic from their respective main lines to the two ports.

Relationship to the Project: One of the above-mentioned alternatives is to consolidate all through train movements of the three railroads to a single rail corridor from the main lines to the ports. Of the alternative rail corridors considered for consolidated freight movement, the SPTC San Pedro Branch has been selected as the preferred alternative. The SPTC San Pedro Branch parallels the proposed light rail transit project alignment from Washington Boulevard to the Dominguez Junction, where a grade-separated intersection would occur. If the consolidation alternative is implemented in the SPTC San Pedro Branch corridor, the number of through trains using the San Pedro Branch would increase significantly, impeding east/west auto traffic patterns. (A discussion of freight rail traffic and its impacts can be found in Sections I-270, II-420, III-320, and IV-320 of this report.)

Status: Currently under study by SCAG. Alternatives and potential projects are being coordinated with the LACTC.

I-507 PORTS HIGHWAY ACCESS STUDY

Responsible Agencies: SCAG, City of Long Beach, City of Los Angeles, Caltrans.

Description/Location: As part of the overall program to improve the flow of goods from the ports, and specifically to facilitate their transfer to the ICTF, a number of highway improvement projects have been identified. They are to be funded through a $58 million demonstration grant. These projects are to be implemented in two phases; the first phase is to be completed over the next four to five years and the second phase extends to 1990. Phase I projects consist of roadway widenings, interchange improvements, and grade separations on Seaside Avenue and Ocean Boulevard, Anaheim Street, and Henry Ford Avenue. Phase II projects include additional improvements to these streets and a segment of Alameda Street.

Relationship to the Project: The various Ports Highway Access roadway improvements are designed to improve traffic flow, and in particular truck traffic, from the ports area to destinations in the north. Since these projects are focused on the ports area itself, they do not have a direct influence on the light rail transit project, except insofar as they contribute to additional vehicular traffic in the mid-corridor area.

Status: This project is currently being planned, designed, and subjected to environmental analysis.

I-508 PORTS "2020 PLAN"

Responsible Agencies: Port of Los Angeles, Port of Long Beach, and the U.S. Army Corps of Engineers.

Description/Location: Under this land use plan, the combined port area is to be expanded over the next 40 years by 2,600 acres of new landfill. More than 12 percent of this area would be devoted to bulk commodities, and 50 percent would be used for container terminals.

Relationship to the Project: The expansion of the ports area for purposes of container and bulk commodities ties in directly with the ICTF, the San Pedro Bay Ports Access Study, and associated Port Access roadway projects. It would become an integral part of the movement of goods from the ports to the ICTF and other destinations. Transportation impacts resulting from the "2020 Plan" are discussed in the San Pedro Bay Port Transportation Study prepared by the Army Corps of Engineers.

Status: Draft programmatic environmental documents have been prepared and circulated for public review. Final documents will be available in October 1985.

I-509 PORTS ACCESS-RELATED HIGHWAY IMPROVEMENTS

Responsible Agencies: SCAG, Various Jurisdictions.

Description/Location: A number of additional highway projects have been identified for purposes of improving commodity flows to and from the ports area. Three of these have been identified by the SCAG-Ports Advisory Committee (PAC) as first priority projects. These include grade separation at Alameda/Carson and Alameda/Del Amo, and widening of Alameda from Lomita Boulevard to Route 91. As a part of the Industrial Expressway (colloquially known as the "truckway") project, implementation of various improvements between Lomita Boulevard and Route 91 would move all truck traffic to Alameda Street East (recently designated as the continuation of State Route 47) and eliminate at-grade railroad crossings in this reach. The expressway would provide ports-related truck traffic with a route free from railroad operations between the 405 Freeway and the Artesia Freeway. A portion of the reach from Lomita Boulevard to Route 405 is currently involved in a land exchange between the SPTC and the County of Los Angeles/City of Carson. This exchange, which is currently under review, would use a portion of federal demonstration funds to widen east Alameda Street to six lanes from Dominguez Street north to Laurel Park Road, and resurface the four existing lanes. These projects have been selected for implementation by 1989-1990. Second priority projects to be implemented by 1990-1991 include grade separations at Rosecrans/Alameda (currently under study by the LACTC), Alondra/Alameda, and Compton/Alameda.

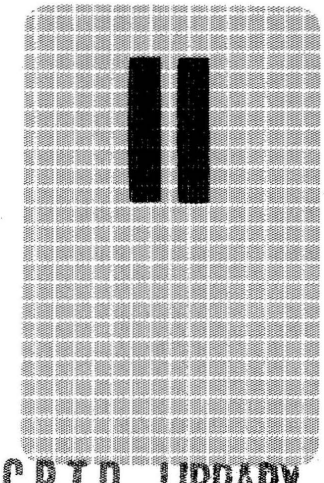
Relationship to the Project: Depending upon the actual design of these projects, they would contribute to reduced automobile queue lengths and thus generally improve automobile operating conditions, as well as reduce auto/rail conflicts. This should contribute to the overall improved functioning of the freight rail, light rail transit, and automobile systems operating in the project corridor.

Status: Currently under study by the PAC and affected jurisdictions. Los Angeles County, the City of Carson and the SPTC have been working together on the proposed Alameda Street improvement, and the overall project has been field reviewed with representatives of Caltrans and FHWA. A Project Report, a NEPA Environmental Assessment and an Opportunity for a Public Hearing will be required before design and right-of-way acquisition can begin.

I-600 INTENDED USE OF EIR

This subsequent Environmental Impact Report on additional Alternative MC-5 for the mid-corridor portion of the Long Beach-Los Angeles Rail Transit Project will be used by the Los Angeles County Transportation Commission in deciding whether to substitute MC-5 for the currently approved MC-1 segment in the mid-corridor. If local funds other than those generated by Proposition A are used to fund the project, agencies such as the State of California Transportation Commission could also use the EIR as part of the funding approval process.

Chapter



II ENVIRONMENTAL SETTING

II-100 INTRODUCTION

This chapter provides an overview of existing and projected environmental conditions in the MC-5 project area. All significant physical, biological, and socioeconomic characteristics of the area are described generally for the current year and the year 2000 to provide a baseline for determining and evaluating the probable local environmental impacts of the project. The discussions of probable local environmental impacts are contained in Chapters III and IV.

Setting descriptions and impact discussions are generally grouped into three categories: natural environment, socioeconomic environment, and traffic and transportation. The final area is separated from the socioeconomic discussion due to the nature of the proposed project and the importance of its impact on traffic and other transportation issues.

Throughout this chapter and the remining chapters in this subsequent Environmental Impact Report (EIR), treatment of existing conditions and probable impacts will generally refer to the area within an approximate one-half mile radius of the Mealy Street Connector and will not reexamine issues dealt with in the previous environmental documentation.

Some information may be presented on a county, city, or neighborhood level, as appropriate. These study areas, as well as special air quality or water management districts, are defined as they are presented.

II-200 NATURAL ENVIRONMENT

II-210 GEOLOGY AND HYDROLOGY

II-211 Geology

The proposed Mealy Street Freight Rail Diversion (MC-5) is located within the corporate boundaries of the City of Compton, which is situated in the Los Angeles Basin in southwestern Los Angeles County (see Figure II-21A). The Los Angeles Basin slopes from north to south with an elevation ranging from nearly 400 feet above sea level north of downtown Los Angeles to approximately 20 feet above sea level in Long Beach. The City of Compton is approximately 65 feet above sea level.

The Compton area contains three soil types: the Hanford, the Chino, and the Tujunga-Soboba associations. Hanford soils are well drained, very deep, moderately dense, and have good available water-holding capacities. Erosion hazards are moderate and water runoff slow for this soil association. Chino soils occur only in the Compton area proximate to the Los Angeles River and Compton Creek. This soil is somewhat poorly drained, variable in depth, and has a high water holding capacity. Erosion hazards are slight and water runoff slow for this soil association.

Tujunga and Soboba soils occur in combination, making up one association. These soils are excessively drained, with slow runoff potential, and are rapidly permeable, indicating only a minimal erosion hazard. They are also subject to occasional overflow.

The Los Angeles Basin was formerly a marine embayment that subsided and has been successively accumulating sediments eroded from the surrounding highlands, eventually forming the present coastal plain. It contains many oil fields; however, only the Dominguez Oil Field is within five miles of the proposed alternative.

The Los Angeles region is a seismically active area. The basin continues to be folded and faulted, as evidenced by numerous earthquakes recorded during historic time. A high level of earthquake activity is considered to be normal for the Southern California region. The last major earthquake to affect the Compton area was the 1971 San Fernando/Sylmar quake, which registered a magnitude of 6.5 on Richter Scale.

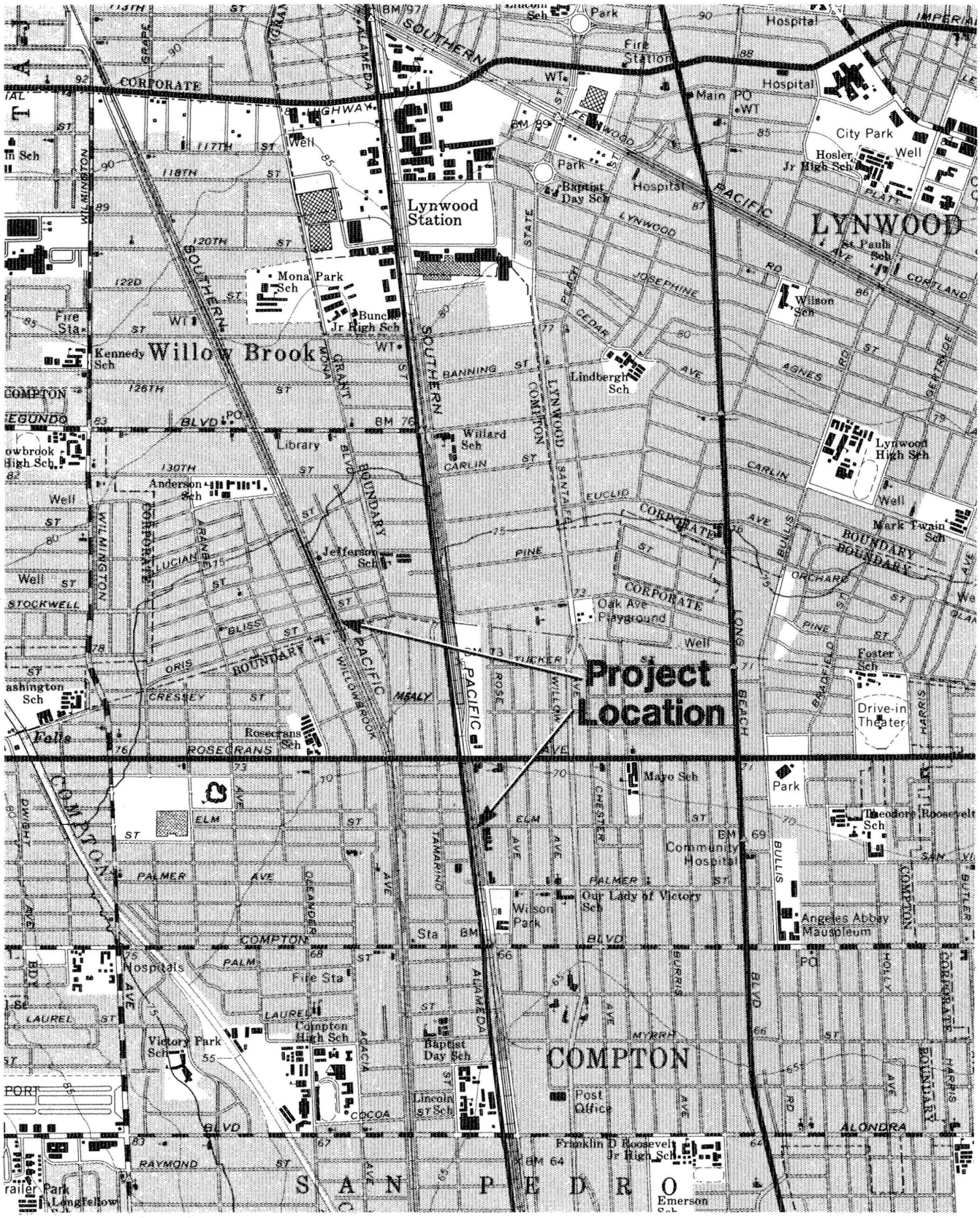


Figure II-21A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Compton Area USGS Topographic Features Map

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Major faults which may affect Alternative MC-5 are the Newport-Inglewood/Cherry Hill, Raymond Hill-Santa Monica, Whittier-Elsinore, and San Andreas (see Table II-21A and Figure II-21B).

TABLE II-21A

MAJOR FAULTS NEAR THE PROPOSED ALTERNATIVE

Fault Zone Name	Maximum Possible Earthquake Magnitude (Richter Scale)	Proximity to Compton (Miles)
Newport-Inglewood/ Cherry Hill	7.0	3
Raymond Hill-Santa Monica	7.5	10
Whittier-Elsinore	7.5	12
San Andreas	8.3	42

Source: California Division of Mines & Geology, Map Sheet 23, R.W. Greensfelder, 1976.

Potential for liquefaction exists throughout the proposed project area. Liquefaction occurs where saturated, loosely compacted, granular soil lies within 30 feet of the ground surface, and saturation of soils develops from perched groundwater and percolation of winter storm runoff.

II-212 Hydrology

Due to the high level of urbanization in the Los Angeles Basin, the majority of the surface hydrology is a function of precipitation and storm runoff into drainage channels. Federal Insurance Rate Maps (FIRM) produced by the Federal Emergency Management Agency are not published in the immediate Compton area because it is classified as Zone C (area of minimal flooding). Contours indicate storm runoff flows parallel to the existing Southern Pacific (SPTC) Wilmington Branch.

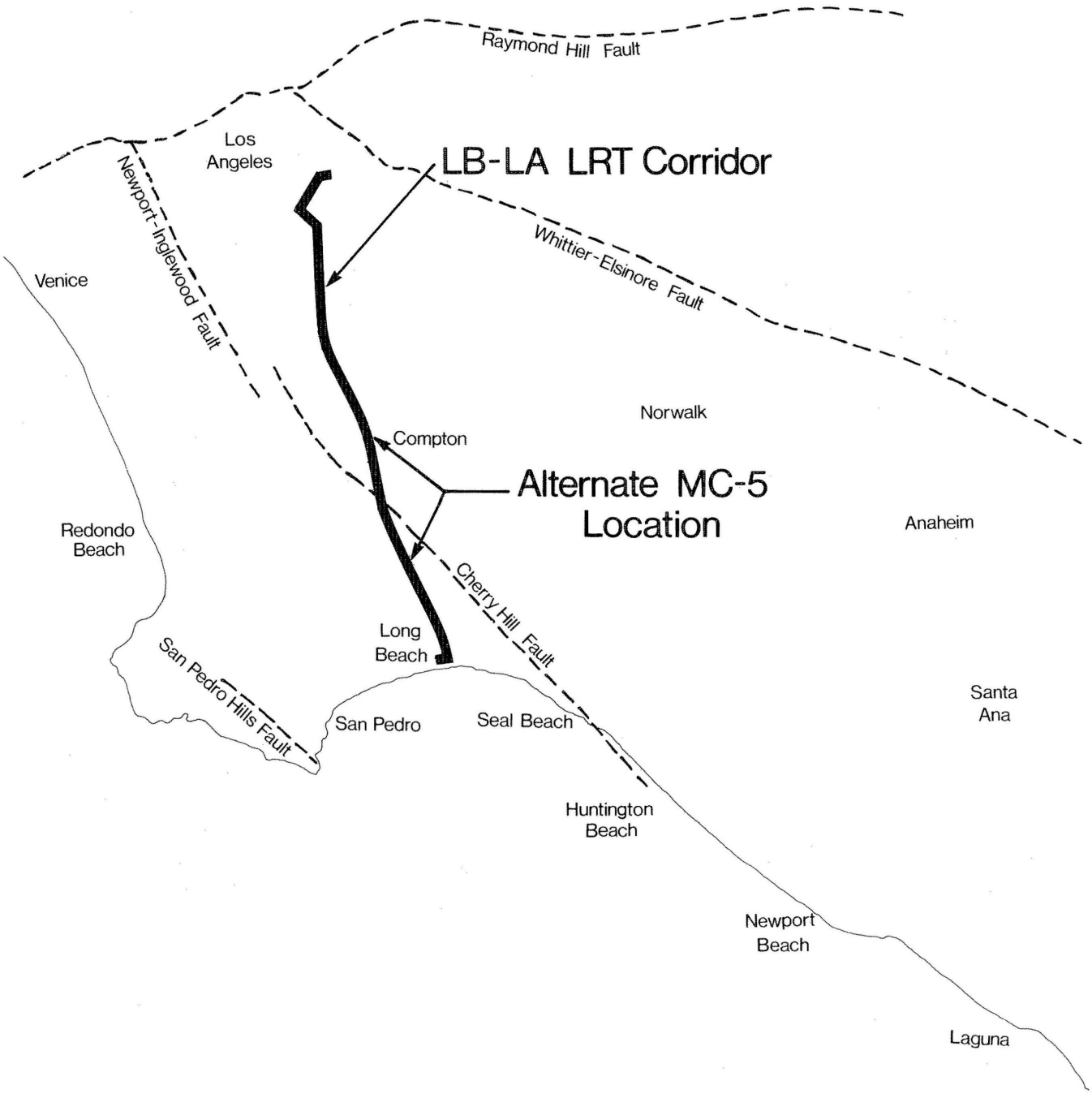


Figure II-21B

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Earthquake Faults

SOUTHERN CALIFORNIA RAIL CONSULTANTS

Surface waters in and near the City of Compton are primarily limited to runoff from storms and commercial/domestic use. The majority of surface flow is eventually directed toward the Los Angeles River flood control channel via storm drains. Large volumes of water and debris, litter, and sediment are carried by the Los Angeles River during major storms. However, surface flow during dry weather consists mainly of runoff of excess irrigation water applied in urban areas and some municipal and industrial wastewater.

The Compton area is not subject to inundation by coastal flooding from seasonal wave action or a tsunami caused by an earthquake.

II-220 VEGETATION AND WILDLIFE

Originally, the Los Angeles Basin was predominantly a coastal sage scrub habitat and/or native Southern California grassland, now long removed by several decades of agricultural and urban activities. Existing vegetation expected to be found in undeveloped areas of the project area consists of native and naturalized species adapted to constant disturbance (ruderal species): mustard (Brassica sp.), vinegar weed (Trichostema lanceolatum), telegraph weed (Heterotheca grandiflora), tumbleweed (Salsola iberica), horehound (Marrubium), matchweed (Guterrezia brachteata), goldbush (Haplopappus sp.), buckwheat (Eriogonum fasciculatum), coyote bush (Bacharis pilularis var. consaguinea), and sunflower (Helianthus annus). The majority of flora existing in developed areas consists of introduced species used for landscaping and ornamentation. No rare or endangered species of plants are known to exist within the overall project area.

Specifically, the northern and southern sections of the MC-5 alternative and all of the LRT line would follow existing SPTC rights-of-way (along Willowbrook Avenue and Alameda Street). The existing rail right-of-way is barren for much of its length due to treatment with herbicides.

Between Willowbrook Avenue and Alameda Street, where the Mealy Street Connector would be situated, the north side of the proposed right-of-way (ROW) is heavily industrialized (owned primarily by Owens-Corning) and is not landscaped. Along the south side of the proposed right-of-way, the yards of some residential units would abut the rail corridor. Introduced ornamental trees and landscaping exist in these yards. Most of the actual right-of-way, however, consists of ruderal growth (weeds).

Many urban-adapted bird species and occasional migratory birds have been observed in the Compton area. Ornamental trees and landscaping provide roosts and habitat for common city-dwelling birds

such as house sparrows, finches, mockingbirds, starlings, scrub jays and pigeons. Wildlife that could be expected to be found in the Compton area would generally be burrowing rodents including mice, rats, gophers, and ground squirrels. No rare or endangered species of wildlife are known to exist within the overall project area.

II-230 NOISE AND VIBRATION

The noise environment throughout the study area is dominated by traffic on Willowbrook Avenue and Alameda Street. Rail traffic on the Southern Pacific Wilmington Branch and San Pedro Branch is of less importance to the existing noise environment since rail operations are variable and intermittent at present (six and two through trains per day, respectively). Additional sources of noise in the study area include aircraft overflights and the noise of commercial and industrial activities which have an effect in localized areas.

A field survey was conducted in June and August 1985 to document existing noise levels. The measurement results from this survey, and from a survey conducted in November 1983 in conjunction with the EIR for the entire rail transit project, are listed in Table II-23A. Measurement locations are shown in Figure II-23A. Three of the five measurement sites were used to obtain long-term (24-hour) noise measurements, while short-term (10- to 15-minute) measurements were obtained at two of the locations. The measurements at the long-term locations are expressed in terms of the Community Noise Equivalent Level (CNEL), while the short-term measurement results are expressed in terms of the average sound level (L_{eq}) at these locations.

The CNEL represents an average of the A-weighted noise levels occurring over a 24-hour period. The A-weighted scale incorporates a frequency weighting of the sound signal which simulates the sensitivity of the human ear to sounds of different frequencies. For CNELs, adjustments are applied to those levels occurring during evening and nighttime hours to account for the greater sensitivity of people to noise levels during these hours. Specifically, the noise levels occurring between 7 PM and 10 PM include an adjustment of 5 dBA, while noise levels occurring between 10 PM and 7 AM include an adjustment of 10 dBA. These weighted evening and nighttime noise levels are then averaged together with the unweighted daytime noise levels to provide an equivalent hourly average.

At all locations except Location 3, the measured noise levels result primarily from traffic on nearby streets. At Location 3, the noise of a nearby factory dominates the noise environment. Residents indicate that this factory operates 24 hours a day.

TABLE II-23A

MEASURED NOISE DATA IN COMPTON

Map Key	Location	Measured Sound Levels (dBA) CNEL/L_{eq}	Comments
1.	Unoccupied condominium 307 S. Tamarind Avenue	60 CNEL	Long-term (24-hr.) measurement June 1985
2.	Compton Special Services Center 303 N. Alameda Street	66 CNEL	Long-term (24-hr.) measurement June 1985
3.	Across from apartments 1311 Mulberry Street (across from factory)	61 L_{eq}	Short-term non-peak period measurement August 1985
4.	Residence 700 block of N. Willowbrook Avenue	67 CNEL	Long-term (24-hr.) measurement Nov. 1983
5.	Northwest corner of Compton Boulevard and Willowbrook Avenue	66 L_{eq}	Short-term non-peak measurement Nov. 1983

Source: BBN Laboratories, Inc., 1985

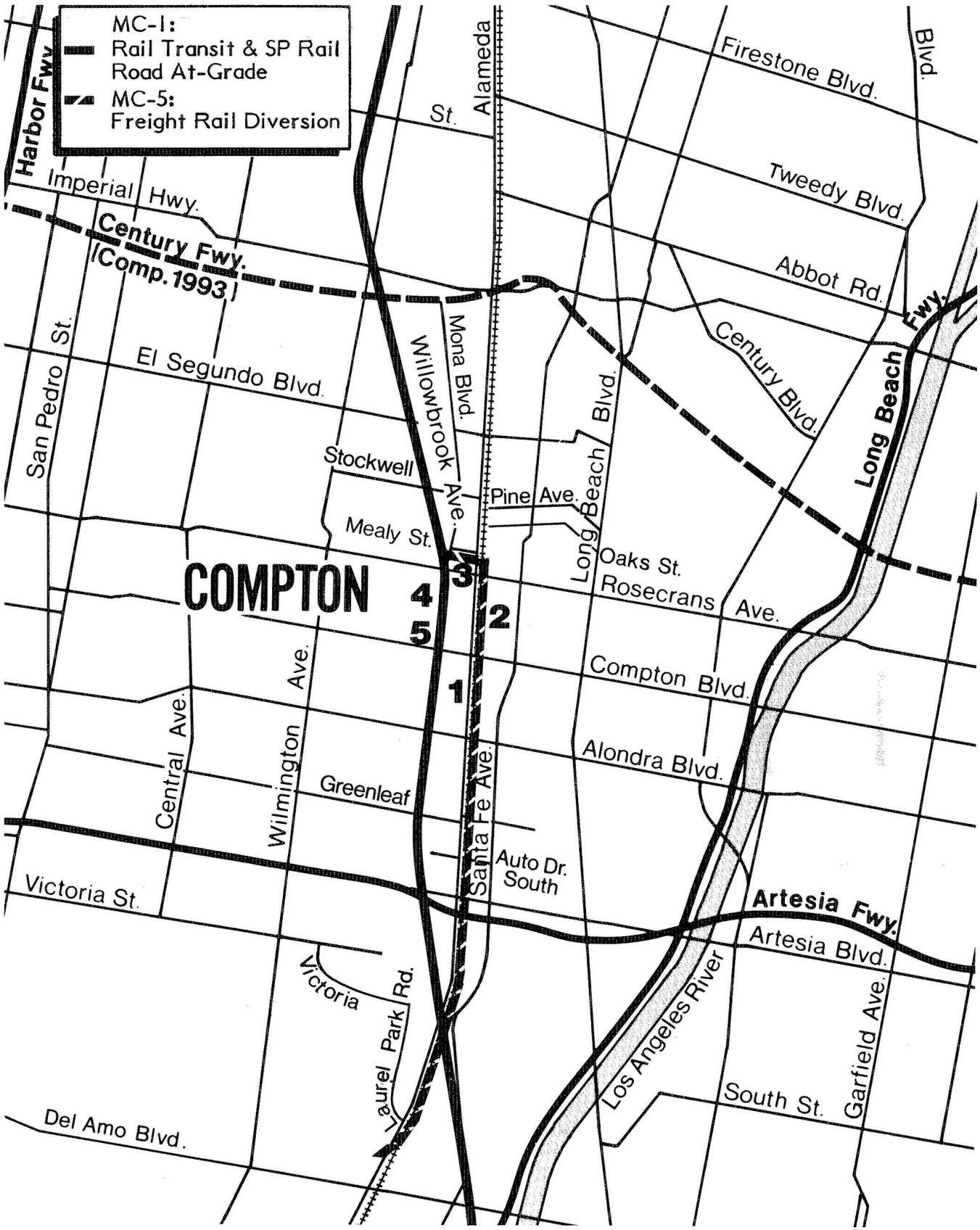


Figure II-23A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Noise Measurement Locations in Compton

SOUTHERN CALIFORNIA RAIL CONSULTANTS

A CNEL of 65 dBA or above is generally considered to be an unacceptable noise environment for noise-sensitive land uses, such as residential. These levels are currently exceeded at locations 2 and 4, and probably at locations 3 and 5. Thus, there are areas along Willowbrook Avenue and Alameda Street where sensitive land uses are currently exposed to excessive noise levels. The land use section in this chapter identifies residential areas and other noise-sensitive facilities in the study area.

Although occurring intermittently at present, the noise of freight train and switcher operations is likely to be noticeable at sensitive locations near the tracks. In addition, measurements taken in the earlier survey indicate that vibration levels from switcher and freight train activities can be perceived by people in residences near the tracks.

II-240 AIR QUALITY

Air quality is an issue which is pertinent to the South Coast Air Basin, within which the proposed project is located. Because of this, the air quality setting is provided in the regional context with additional localized information where available.

The South Coast Air Basin (SCAB) consists of Los Angeles County south of the crest of the San Gabriel Mountains, all of Orange County, and Riverside and San Bernardino counties west of Banning Pass. Although significant progress has been made in reducing high concentrations of pollutants in the SCAB, air pollution still remains a serious problem. Federal and state air quality standards are frequently exceeded in many areas of the basin, with oxidants (ozone) and carbon monoxide standards most frequently violated. While the annual average nitrogen dioxide standard continues to be violated, the number of violations of the one-hour standard decreased in the 1970s. Sulfur dioxide standards have been violated only infrequently in recent years.

Table II-24A summarizes the most recent violation of standards at the three air quality monitoring sites nearest the entire rail corridor. The air quality study area, the location of the monitoring sites, and the project area are shown in Figure II-24A. When reviewing the data shown in Table II-24A, it should be noted that the Lynwood monitoring station is located very close to a freeway, and, as a result, the readings obtained there would likely be higher than those encountered in other areas of the surrounding community.

TABLE II-24A

1983 VIOLATIONS OF FEDERAL AND STATE

AIR QUALITY STANDARDS IN SOUTH COAST AIR BASIN

Pollutant by Monitoring Site	Times Exceeding Standards State	Times Exceeding Standards Federal	Annual Max. Con.	State Standard	Federal Standard
Ozone				0.10 ppm (1 hr.)	0.12 ppm (1 hr.)
Downtown Los Angeles	114	69	0.26 ppm		
Lynwood	57	27	0.23 ppm		
Long Beach	35	16	0.30 ppm		
Nitrogen Dioxide				0.25 ppm (1 hr.)	0.05 ppm (annual average)
Downtown Los Angeles	5	1	0.33 ppm		
Lynwood	1	0	0.27 ppm		
Long Beach	3	0	0.37 ppm		
Carbon Monoxide				20 ppm (1 hr.)	35.0 ppm (1 hr.)
Downtown Los Angeles	10	8	17 ppm		
Lynwood	34	31	24 ppm		
Long Beach	7	7	14 ppm		
Sulfur Dioxide				0.05 ppm (24 hr.)	0.14 ppm (24 hr.)
Downtown Los Angeles	0	0	0.027 ppm		
Lynwood	0	0	0.035 ppm		
Long Beach	0	0	0.035 ppm		
Particulate Matter				100 ug/m^3 (24 hr.)	260 ug/m^3 (24 hr.)
Downtown Los Angeles	22	0	173 ug/m^3		
Lynwood	22	0	232 ug/m^3		
Long Beach	16	0	212 ug/m^3		
Lead				1.5 ug/m^3 (30 day avg.)	1.5 ug/m^3 (calendar qtr.)
Downtown Los Angeles	0	0	1.04 ug/m^3		
Lynwood	0	0	1.36 ug/m^3		
Long Beach	0	0	1.08 ug/m^3		

Note: ppm - parts per million
ug - micrograms
m^3 - cubic meters

Source: Southern California Association of Government, "Air Quality: Long Beach-Los Angeles Rail Transit Project" (Tables 1, 2, 6), February 2, 1984.

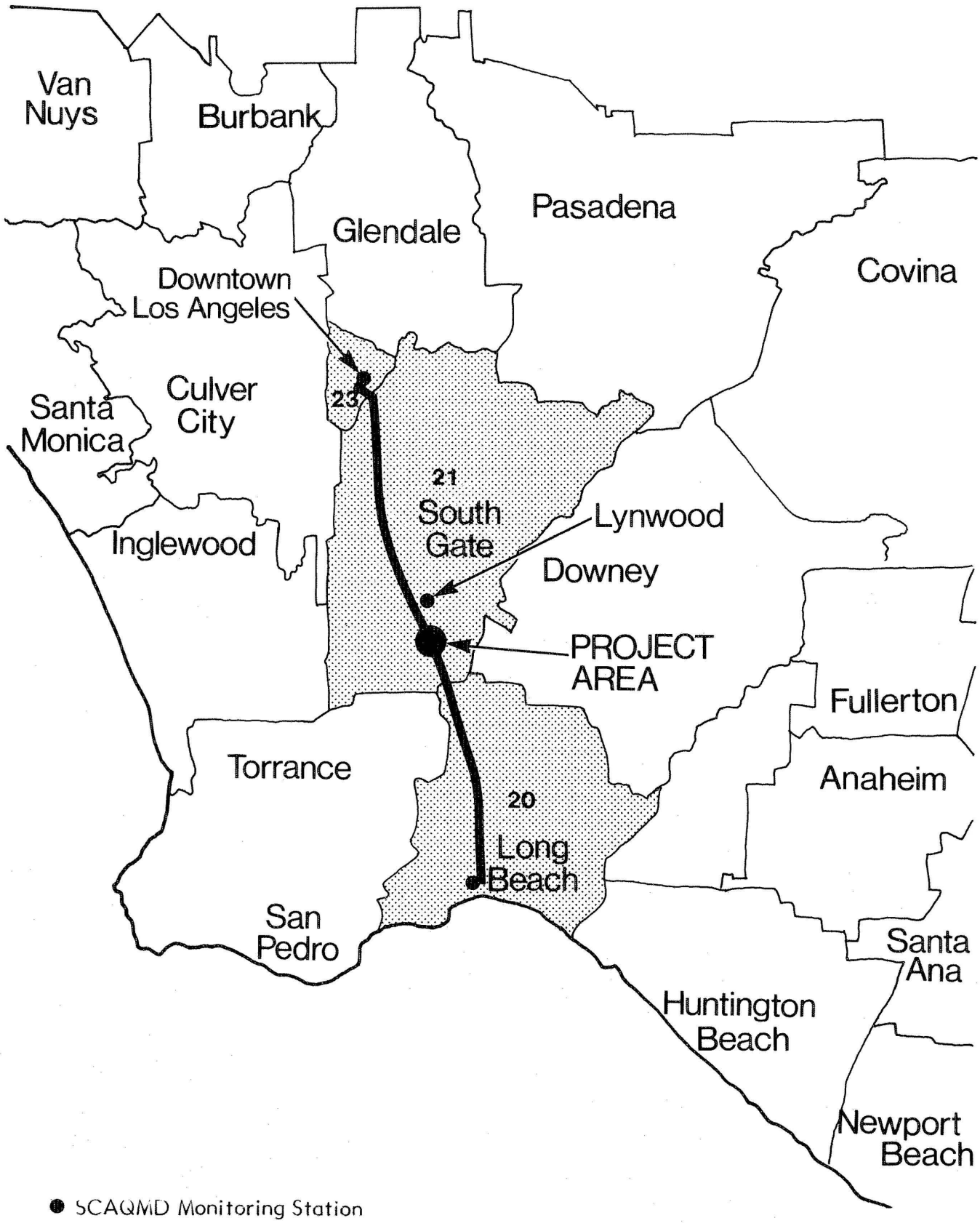


Figure II-24A

Long Beach - Los Angeles RAIL TRANSIT PROJECT
LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Air Quality Analysis Area And Monitoring Stations
SOUTHERN CALIFORNIA RAIL CONSULTANTS

II-241 Air Quality Planning in the South Coast Air Basin

The entire basin is a designated Air Quality Maintenance Area (AQMA) for the five federally regulated pollutants: oxidants (reactive organic gases or ROG, measured as ozone - O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), and particulates (TSP). The air basin is currently a nonattainment area for all pollutants except sulfur dioxide. Photochemical oxidants are the most serious air pollution problem, with maximum ozone readings regularly exceeding the federal air quality standard of 12 parts per million (ppm) by a significant factor.

Because the South Coast Air Basin is designated an AQMA, federal law requires the preparation of an Air Quality Management Plan, the purpose of which is to present strategies and tactics for reducing pollution in the basin. The most recent version of this plan is dated 1982 and was produced by the Southern California Association of Governments (SCAG). The strategies and tactics contained in this plan are summarized in the May 1984 DEIR.

II-242 Existing Air Quality in the Project Study Area

The distribution of emissions by pollutant type is listed in Table II-24B. Los Angeles County itself produces about 67 percent of total air pollutants generated in the entire SCAB. Sources of man-made air pollution are categorized as either mobile or stationary sources. Mobile sources (which include motor vehicles, aircraft, trains, ships, and any off-road vehicles) predominantly emit reactive organic gases, nitrogen oxides, and carbon monoxide. Passenger cars produce about 69 percent of the total pollutants from mobile sources.

Stationary sources include industrial and commercial facilities. The major stationary sources of air pollution in the basin are power plants and refineries. On-road mobile emissions occurring in the geographical areas known as Regional Statistical Areas (RSAs) have been calculated using the Direct Travel Impact Model (DTIM).

TABLE II-24B
1980 BASE YEAR EMISSIONS IN THE SOUTH COAST AIR BASIN
AND LOS ANGELES COUNTY

(Average Annual Day, Tons/Day)

Source Category	Emittant				
	ROG[2]	CO	NO_x[2]	SO_x[2]	TSP
Mobile Sources					
On-Road Vehicles					
Light-Duty Passenger	335.0	2,773	339	15.4	41.0
Light- and Medium-Duty Trucks	88.6	775	90.2	3.14	9.02
Heavy-Duty Gas Trucks	17.5	409	32.8	1.76	3.87
Heavy-Duty Diesel Trucks	12.5	33.6	140	18.4	11.4
Motorcycles	6.6	25.4	0.92	0.05	0.2
Total On-Road Vehicles	460.2	4,016.0	602.92	38.75	65.49
Total Other Mobile	39.5	266	63.10	20.2	4.07
Total Mobile Sources	499.7	4,282	666.02	58.95	69.56
Total Stationary Sources	460	168	311	144	226
Total LA County	959.7	4,450	997.02	202.95	295.5
TOTAL SOUTH COAST AIR BASIN	1,423	6,781	1,362	273	619

[1] On-road mobile emissions are for 1980, as derived from the LARTS Travel Forecast Summary prepared by SCAG in March 1983. Other mobile emissions and stationary emissions are for 1979, as derived from the Final Air Quality Management Plan published jointly by SCAG and the South Coast Air Quality Maintenance Management District.

[2] ROG - Reactive Organic Gas
NO_x - Combination of NO and NO_2
SO_x - Sulfur oxides, primarily SO_2

Source: SCAG, "Air Quality: Long Beach-Los Angeles Rail Transit Project" (Table 3), February 2, 1984.

The DTIM results indicate that within the study area, on-road vehicular traffic in 1980 generated the following level of emissions, as shown in Table II-24C below.

TABLE II-24C

1980 MOTOR VEHICLE EMISSIONS IN THE VICINITY OF

LONG BEACH-LOS ANGELES RAIL TRANSIT PROJECT

	Pollutant, Tons/Average Annual Day					
	ROG	NO_x	CO	SO_x	TSP	VMT
Light-Duty Vehicles	85.4	76.5	704	3.53	9.55	24,888,992
Heavy-Duty Vehicles*	5.7	32.8	84	3.83	2.90	1,431,117
TOTAL	91.1	109.3	788	7.36	12.5	26,320,109

*VMT (vehicle miles traveled) for heavy-duty vehicles is assumed to be 5.75 percent of the light-duty vehicle VMT. Emissions were calculated based upon emission factors (EMFAC 6C) provided by the California Air Resources Board.

Source: Southern California Association of Governments, 1984.

II-250 ENERGY USE

II-251 Transportation Fuel Use in the SCAG Region

The SCAG region's consumption of gasoline (5.5 billion gallons) and diesel fuel (530 million gallons) in 1980 was about half that used for on-road transportation in all of California. The distribution of this consumption among various categories of vehicles is shown in Table II-25A, along with vehicle miles traveled (VMT) per year for each class of vehicle and average fuel economy. Effective average fuel economy was about 13.9 mpg for light-duty and medium-duty vehicles and 5.2 mpg for heavy-duty vehicles. Diesel fuel use was almost entirely by heavy-duty vehicles and was negligible for light-duty vehicles.

TABLE II-25A

TOTAL 1980 ON-ROAD TRANSPORTATION VEHICLE FUEL CONSUMPTION

SCAG REGION

Economy	Gasoline Consumption (Billions of Gallons)	Gasoline Consumption (Percent)	Diesel Consumption (Millions of Gallons)	Annual VMT (Millions)	Annual VMT Percent	Fuel (MPG)
Auto	4,063	74.2	Negligible*	58,916	77.3	14.5
Light-duty truck	635	11.6	*	8,386	11.0	13.2
On-road motorcycle	14	0.3	*	719	1.0	51.6
Medium-duty truck	471	8.6	*	3,909	5.1	8.3
Heavy-duty truck						
Gasoline	290	5.3	-	1,509	2.0	5.2
Diesel	-	-	530	2,756	3.6	5.2
TOTAL	5,473	100.0	530	76,195	100.0	12.7

* Based on Air Resources Board (ARB) Report: "Light-duty diesel powered vehicles constitute a negligible amount of vehicular diesel emissions" (ARB, 1981).

Note: 1980 VMT is based on South Coast Air Basin, Ventura County Air Basin, and Southeast Desert Air Basin estimates. Fuel economy is based on California Energy Commission 1980 estimates (CEC, 1983).

Source: Southern California Association of Governments, "Energy Analysis for Long-Beach-Los Angeles Rail Transit Project," February 1984.

Within the South Coast Air Basin, light-duty cars and trucks used 4.7 billion gallons of gasoline per year; heavy-duty vehicles required 253 million gallons of gasoline and 470 million gallons of diesel fuel. All vehicles traveling in the Long Beach and southern Los Angeles areas in the vicinity of the Long Beach-Los Angeles rail corridor were calculated to use 649 million gallons of gasoline and 64.5 million gallons of diesel fuel in 1980.

II-300 SOCIOECONOMIC ENVIRONMENT

II-310 LAND USE, POPULATION, AND HOUSING

II-311 Land Use

The basic principle guiding the organization and planning of land use in the Los Angeles area is the "Centers Concept." The County General Plan reflects this concept for the entire county, and SCAG's Regional Development Guide applies the concept to the entire Southern California region. The Concept Plan envisions a series of regional centers connected by a regional rapid transit system with low to medium building intensity between centers. Within the area of the project, downtown Compton is identified as a growth center. The Long Beach-Los Angeles Rail Transit Project would provide a major system of linkage between this center and others in the greater Southern California region. Compton is designated as a Level 3 center, which gives it a regional and multi-purpose function, but one not necessarily appropriate for high-rise structures.

The Compton General Plan designation for the portion of the project area between the Wilmington and San Pedro Branches of the railroad on the west and east, the city limits at Oris Street on the north, and Rosecrans Avenue on the south is Manufacturing/Industrial. Current zoning in the area is a mixture of manufacturing, multi-family residential, and commercial. Between Willowbrook Avenue and Mona Boulevard, the zone is C2, Limited Commercial. Along Rosecrans there is an area of CM (Commercial/Manufacturing). Between Alameda Street and Mona Boulevard north of Mealy Street, the zoning is M2, Heavy Manufacturing. The blocks between Mona Boulevard and Alameda south of Mealy Street are a mixture of Light Manufacturing, R3 (Multi-family Residential), PR3 (Multi-family Residential and Automobile Parking), which allows parking lots for industrial uses in close proximity, and the Commercial Manufacturing previously mentioned which fronts Rosecrans Avenue.

Taking into account an area within 1,000 feet of the project area, the following generalized land uses occur. Along Willowbrook Avenue and to the south of Mealy Street, the area is predominantly a mix of single-family and multi-family housing. North of Mealy Street and along Alameda, the primary land use is industrial as typified by the Owens-Corning plant and the Compton Foundry.

The existing strip commercial and retail on both the north and south sides of Rosecrans Avenue generally consists of a mixture of low-rise buildings and a few vacant parcels, some of which are used as

parking lots. Building setbacks are typical for this type of commercial district, with structures located at or near the rear line of the sidewalk. A few of the existing buildings have greater setbacks but these are the exception.

The Compton central business district (CBD), which is a designated redevelopment area, includes portions of the Mealy Street project area, specifically the Willowbrook LRT corridor and the intersections of Rosecrans with the east and west roadways of Alameda Street.

II-312 Population/Demographics

For purposes of demographic analysis, the study area consisted of an approximately one-half mile radius centered about the Mealy Street Connector. This area encompasses about one-half of one census tract (5426), and a small portion of three others (5415, 5416.01, and 5416.02). Several selected demographic statistics are discussed as they pertain to the study area and in comparison with similar statistics for the City of Compton as a whole. The 1980 U.S. Census provided the data for this discussion.

The study area contains a total of 5,418 individuals. Forty-five percent are black, and, of the remainder, a significant portion are Spanish-surnamed. Less than two percent of the area's population is composed of individuals not falling into one of these two groups. This is somewhat different from the City of Compton as a whole, which is 74 percent black, 22 percent Spanish-surnamed and 26 percent white and others. The study area thus has a significantly higher proportion of Spanish-surnamed individuals then the city as a whole. Age distribution in the study area is of similar proportion to the city's. Approximately 42 percent are under 18 years of age, and three percent are over 65.

The study area has a total of 1,355 housing units, approximately 69 percent of which are single-family detached homes. Using census tract totals as a guide, it is expected that about 40 percent of the total housing units are owner-occupied. This proportion is less than the 56 percent owner-occupied units found in the city as a whole.

Using census tract totals as an indicator, the study area has a median family income of $13,081, as compared with $14,292 for the entire City of Compton. Approximately 29 percent of the study area's families have income below the federally defined poverty level. Of those persons in the study area between the ages of 16 and 64, approximately 3.5 percent are defined as having a work disability, and 3.7 percent as having a public transportation disability. Of those persons 65 years of age or over, 27 percent were classified as

being transit disabled. Nearly two-thirds of workers over the age of 16 indicated that they drive to work alone.

II-320 COMMUNITY SERVICES

Community facilities and services within a 2,000-foot radius of MC-5 are shown on Figure II-32A and described in the following sections.

II-321 Schools, Libraries, and Churches

There are a number of community service facilities in the vicinity of MC-5. Rosecrans Elementary School is located at 1301 N. Acacia and the Dickison Lighted School is located at 600 N. Alameda. Approximately 11 churches are located within a 2,000-foot radius of MC-5. Some of these churches are small, independent storefront churches, though included in this number are regionally based churches representing nationally recognized denominations.

There are no libraries in the immediate area of the MC-5.

II-322 Medical Facilities

There is one public clinic within the project area. The Los Angeles County Health Department Clinic, located at the southeast corner of Alameda and Rosecrans, serves the local community by providing several specialized health care programs.

II-323 Parks and Other Recreational Facilities

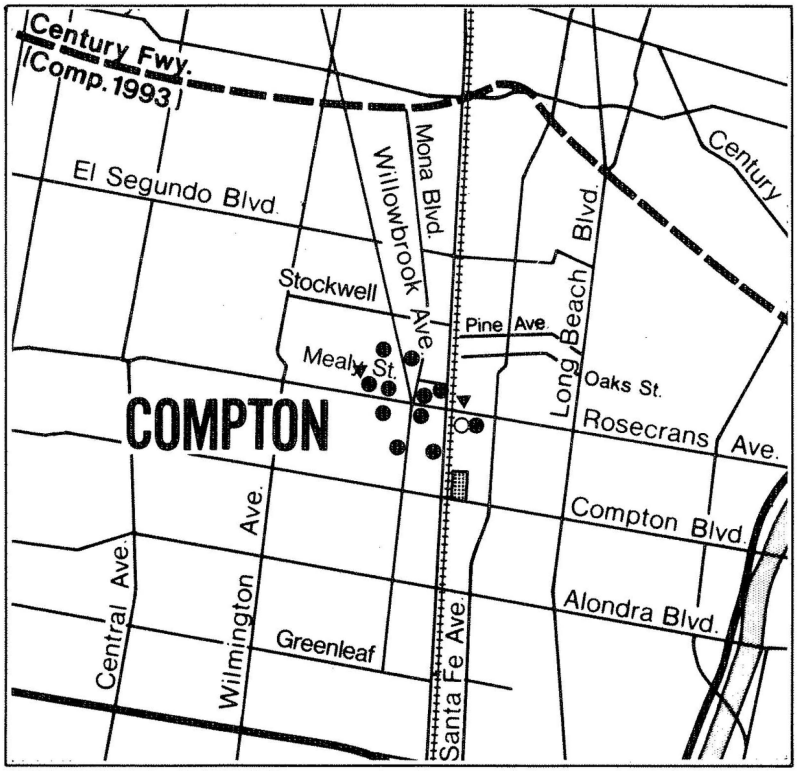
There are no parks in the immediate vicinity of MC-5, though just outside the study area is Wilson Park at the northeast corner of Alameda Street and Compton Boulevard.

II-324 Other Social Service Facilities

Other social service facilities in the immediate study area include a county senior citizen information center at 1108 N. Oleander Avenue, the Compton Parks and Recreation headquarters at 600 N. Alameda Street, and the Compton YWCA, also at 600 N. Alameda Street.

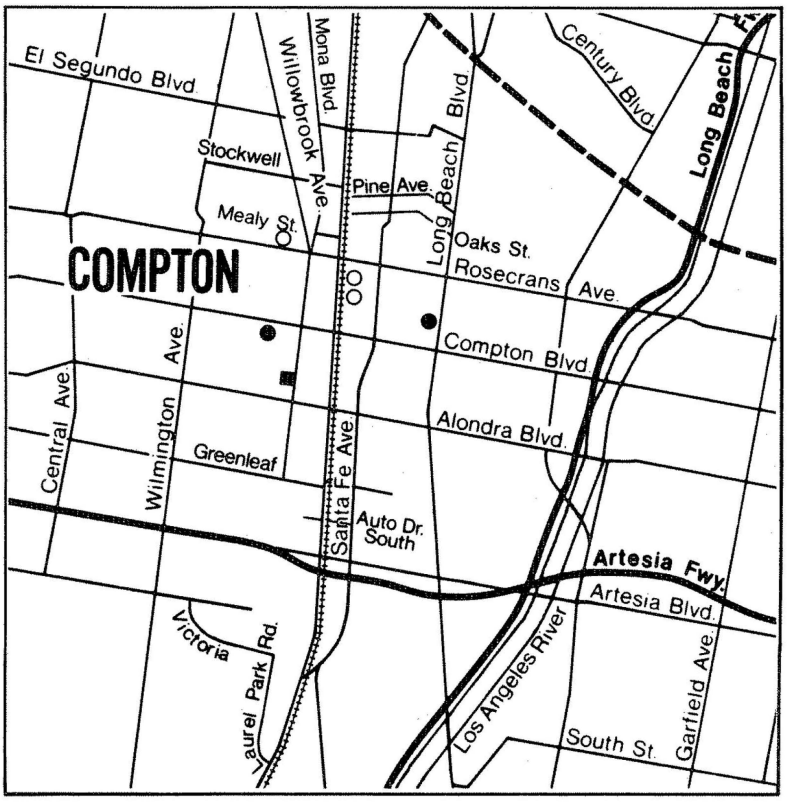
II-325 Law Enforcement

The City of Compton has its own police department with its headquarters in the Compton Civic Center at 301 S. Willowbrook. This station serves the entire Compton area and is approximately one-quarter mile west of Alameda and 2,800 feet south of Rosecrans. The area north of Compton between Watts and Compton is within the Lynwood Policing Area.



School ▼
Church ●
Hospital/Clinic ○
Park ▣

Community Facilities



Police ■
Fire ●
Social Service ○

Community Services

Figure II-32A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Community Facilities and Services

SOUTHERN CALIFORNIA RAIL CONSULTANTS

II-326 Fire Protection

The Compton Fire Department maintains four stations as listed below:

Station	Location	Comments
CFD 1	201 S. Acacia	Paramedics
CFD 2	1320 E. Palmer	Paramedics
CFD 3	1133 W. Rosecrans	
CFD 4	950 W. Walnut	

The two stations immediate to the study area are stations 1 and 2. Station 1 is situated approximately 2,000 feet west of Alameda and 3,000 feet south of Rosecrans. Station 2, which serves the east Compton area, is located approximately 3,500 feet east of Alameda and 2,000 feet south of Rosecrans.

II-327 Public Utilities

Utility services in the vicinity of the Mealy Street Connector are provided by the following organizations:

- Gas: Southern California Gas Company
- Electricity: Southern California Edison
- Water: The following water purveyors serve the area in the immediate vicinity of Rosecrans and Alameda:
  - Park Water Company (from 130th Street to Oris Street)
  - Compton Municipal Water Company (in the City of Compton)

  Most supplies are obtained from the California Aqueduct, the Metropolitan Water District, and local groundwater sources.
- Telephone: Pacific Bell
- Solid Waste Disposal:

  In Compton and in the unincorporated county area to the south, both residential and commercial service is contracted to private companies. Refuse is dumped primarily at the Puente Hills landfill.

- Wastewater Disposal (Sewers): The Compton area is within Los Angeles County Sanitation District No. 1. Wastewater from this district is treated at the Joint Water Pollution Control Plant in Carson.

II-330 ECONOMIC ACTIVITY

II-331 Employment and Income Characteristics of Residents

In 1980, an estimated 81,286 persons resided in the City of Compton, of whom 30,783 were available for work. Active labor force participants numbered 26,971; 12.4 percent (or 3,817 persons) were unemployed as of April 1980 (U.S. Bureau of the Census).

Of the Compton residents employed in 1980, 35.6 percent were engaged in manufacturing activities. The second highest number of the resident labor force, 26.5 percent, was employed in professional and related services, including health and education. Table II-33A presents 1980 employment of residents by industry.

The 1980 per capita income for the City of Compton was estimated at $4,360 by the U.S. Bureau of the Census. Median household income was estimated at $14,292. These figures are below the 1980 Los Angeles County averages of $8,303 and $21,125, respectively.

TABLE II-33A

1980 EMPLOYMENT OF RESIDENTS BY INDUSTRY

CITY OF COMPTON AND MID-CORRIDOR

Industry	City of Compton		Mid-Corridor*	
	Number	Percent	Number	Percent
Agriculture	162	0.6	1,547	1.1
Construction	540	2.0	4,945	3.6
Manufacturing	9,604	35.6	50,750	36.6
Transportation, Communications, and Public Utilities	3,017	11.2	10,816	7.9
Wholesale and Retail Trade	3,971	14.7	21,528	15.6
Finance	540	2.0	5,066	3.7
Business/Repair	701	2.6	6,448	4.7
Personal	647	2.4	5,973	4.3
Professional and Related Services	7,142	26.5	25,081	18.1
Government	647	2.4	6,340	4.4
TOTAL	26,971	100.0	138,494	100.0

* For comparison. Mid-corridor is defined as the area stretching from Washington Boulevard in the City of Los Angeles on the north to the City of Long Beach corporate boundary on the south for purposes of the Long Beach-Los Angeles Rail Transit project analysis.

Source: U.S. Bureau of the Census, 1980.

II-332 Retail Sales

The City of Compton had total taxable retail sales in 1980 of $136.7 million. Assuming a continuation of historic growth trends in retail sales, the volume of taxable retail transactions between 1984 and 2000 would be as shown in Table II-33B below:

TABLE II-33B

TAXABLE RETAIL SALES

Area	1984	2000	Average Annual Growth
Compton[1]	139.1	161.4	1.0%
3.0 Mile Ring[2] (surrounding Compton)	397.6	467.6	1.0%

[1] State of California Board of Equalization, 1984.
[2] Estimated by City of Compton/Urban Decision Systems, 1984.

Source: PBQ&D, 1985.

During the period 1984 to 2000, total taxable retail sales in Los Angeles County are projected to grow from $37.3 billion (1984) to $53.6 billion (2000), approximately a three percent average annual growth rate.

II-340 VISUAL QUALITY

The visual environment can be divided into three major areas for purposes of discussion.

- Willowbrook Avenue between El Segundo Boulevard and Compton Boulevard

The visual character of this segment is established by Willowbrook Avenue. A wide right-of-way (160 feet) divided by a broad and barren raised dirt median strip with a single SPTC track separates Willowbrook Avenue into two narrow two-way roadways. Predominantly single-family residences with 50-foot width lots front the street. The low scale of this housing in comparison to the wide

right-of-way establishes the median as the dominant visual element. The median contains the SPTC railroad tracks and is distinguished by highly visible utility poles, overhead wires, and a few deteriorating billboards. A small stand of mature palms bordering Willowbrook Avenue to the east just north of Rosecrans Avenue provides the only visual focal point along this segment. At the intersection of Willowbrook and Rosecrans Avenues, the median is broken to allow for cross traffic on Rosecrans Avenue. A relatively new three-story apartment complex is the dominant visual element at the northwest corner of the intersection, though all the apartment units themselves face Rosecrans Avenue.

The other corners of the intersection contain older and much smaller scale commercial uses. Additional single- and multi-family residential units, mostly of 1940s and 1950s vintage, intermixed with vacant land continue along Willowbrook Avenue to Compton Boulevard, with the median strip again being the primary visual element.

o Mealy Street between Willowbrook Avenue and Alameda Street

This section of the proposed alignment is characterized by the visual contrast of a residential area to the south of Mealy Street and the Owens-Corning industrial complex to the north of Mealy Street. A chain link fence with wood slats partially screens the view of the industrial complex at the street right-of-way, although the industrial plant's structures rise above the fence and are visible in the background. The plant is relatively old and undistinguished, with a scattering of horizontal and vertical elements. The buildings which make up the complex appear to be ad hoc additions with no overall visual coherence. Opposite the industrial plant across Mealy Street is a recent two-story apartment building and older single-family residences buffered from the street by a wide strip of vacant land which is part of the plant property. The large-scale industrial plant imposes a much stronger visual influence to the area in relationship to the residential uses. Although not landscaped, the width of the open space between Mealy Street and the residences provides a good visual separation from the industrial complex. A dilapidated quonset hut and recycling yard farther down Mealy Street also establish the visual character of this section of the proposed alignment. The lack of recent resurfacing and maintenance of the existing concrete paved streets also contribute to the visual impression of the area.

o Rosecrans Avenue between Willowbrook Avenue and Santa Fe

The visual tone of this section is established by the storefronts, signs, and off-street parking lots of the strip commercial uses along Rosecrans Avenue. The low-rise buildings are punctuated by varying

setbacks, wide side yard separations, and parking lots. The street space east along Rosecrans Avenue is not strongly defined and is interrupted by the wide intersection at Alameda Street. Alameda's large right-of-way, bisected with a wide median for the SPTC railway, visually separates the two sections of Rosecrans Avenue on either side of the intersection. The streetscape image of Rosecrans Avenue east of Alameda Street is one of more vital strip commercial activity with a higher density of buildings and signs. These buildings, however, are of varying heights, scale, and style, and as a result do not present a strong image of continuity or cohesiveness.

II-350 HISTORIC AND CULTURAL RESOURCES

The City of Compton and the defined project area around Mealy Street have been subject to development and real estate speculation since the 1880s. Extensive development did not take place until after the turn of the century. Contributing to the growth of the area was the institution of the Long Beach Line of the Pacific Electric Railway, which began service in 1904 in the right-of-way along what is now the Wilmington Branch of the SPTC.

The Wilmington Branch was surveyed by Caltrans and the State Office of Historic Preservation in 1983 for the previous environmental documents for the Long Beach-Los Angeles Light Rail Project. They found two buildings in Compton which had historic potential: the Heritage House at 205 S. Willowbrook Avenue, and the Dominguez Adobe located at 18127 S. Alameda. Neither of these buildings is within the area of concern for the Mealy Street Freight Rail Diversion.

The area of direct concern to MC-5, i.e., Rosecrans Avenue and east and west Alameda Streets, was surveyed in June 1985 by a member of the team who had done the previous survey work. No structures were found which appeared to meet the National Register criteria for either historical significance or architectural merit.

II-400 TRAFFIC AND TRANSPORTATION

II-410 TRAFFIC, TRANSIT, AND PARKING

II-411 Traffic

The Mealy Street Freight Rail Diversion lies within the jurisdiction of both the City of Compton and Los Angeles County. The street system in this area is basically a grid pattern consisting of major and minor arterials and local access streets. The Artesia Freeway (Route 91) also provides for regional east/west movements in this area.

Excluding Route 91, which would pass over the proposed freight rail diversion, there are four major east/west arterial crossings of the Alameda Street rail corridor. These intersections at Rosecrans Avenue, Compton Boulevard, Alondra Boulevard, and Greenleaf Boulevard are shown in Figure II-41A. In addition, the west roadway of Alameda, which is a major north/south arterial and truck route, would be crossed at-grade by the proposed freight rail diversion just north of Rosecrans Avenue. Alternative north/south routes to Alameda in the immediate vicinity are limited to Willowbrook Avenue, which passes in front of Compton City Hall to the west of Alameda, and Santa Fe Avenue to the east of Alameda. Though both of these thoroughfares contribute significantly to local and sub-regional travel needs, Alameda Street is the primary north/south corridor in this immediate area.

Results of evaluations of 1984 and year 2000 base conditions of the major signalized intersections to be affected by the project are shown in Table 11-41A. Year 2000 traffic volumes for major arterials affected were projected based on a one percent annual growth factor applied to existing traffic (provided by the agencies involved). The only intersection experiencing congestion problems under 1984 traffic levels is Alameda Street and Rosecrans Avenue, which currently operates at level of service (LOS) "D" during peak periods. Two intersections are anticipated to experience congestion from vehicular traffic during peak periods by year 2000: the intersection of Alameda Street and Rosecrans Avenue is projected to operate at LOS "E," and the intersection of Alondra Boulevard and Alameda Street is estimated to function at LOS "D."

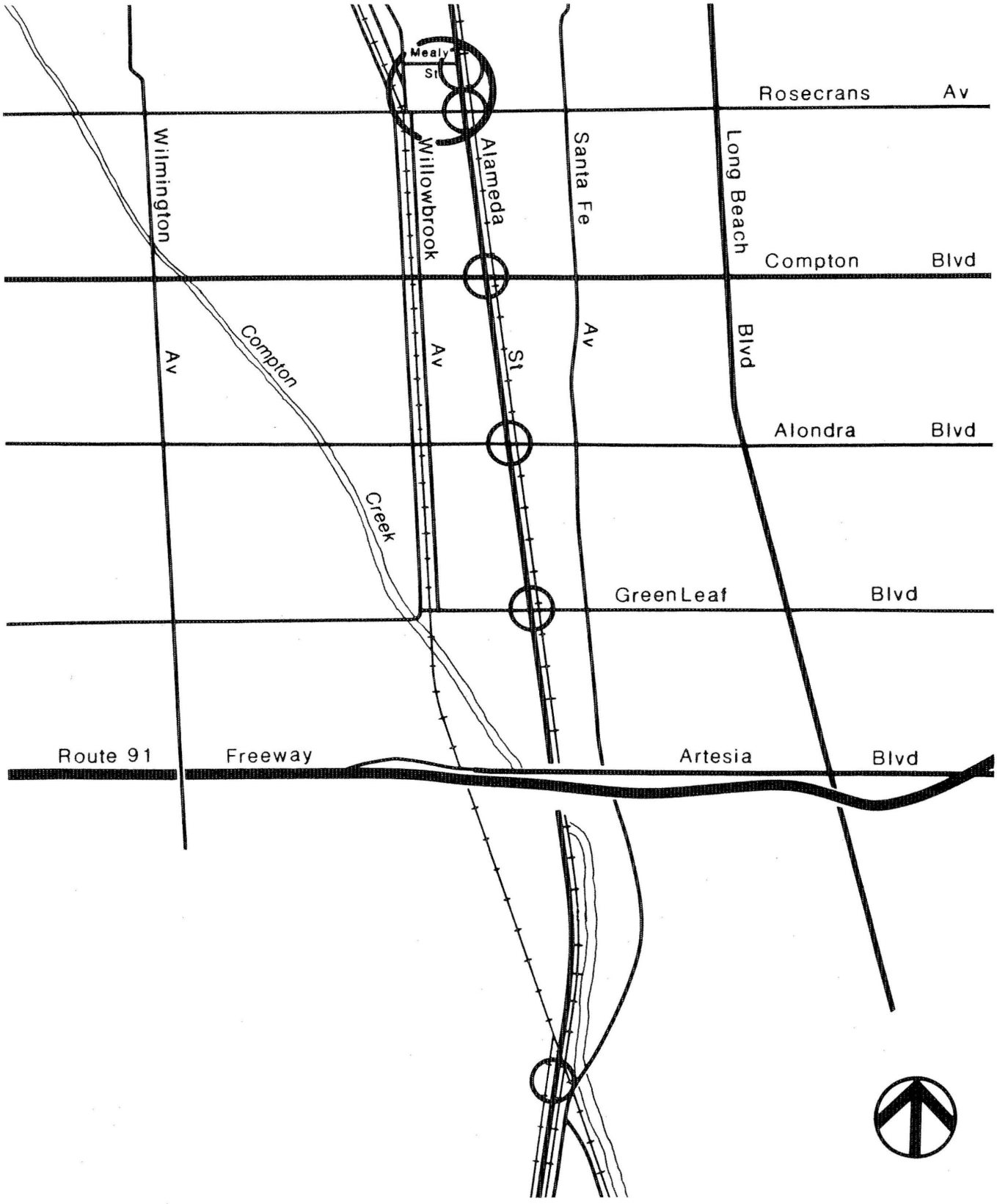


Figure II-41A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Intersections and Areas Affected

SOUTHERN CALIFORNIA RAIL CONSULTANTS

TABLE II-41A

BASE OPERATING CONDITIONS
(PM PEAK PERIOD - NO TRAIN MOVEMENTS)

Intersection	1984 V/C Ratio	LOS	Year 2000 No Project Condition V/C Ratio	LOS
Rosecrans/Alameda	0.83	D	0.99	E
Compton/Alameda	0.57	A	0.68	B
Alondra/Alameda	0.68	B	0.81	D
Greenleaf/Alameda	0.36	A	0.43	A
Alameda/SP (Dominguez RR Junction) Crossing	0.15	A	0.18	A

Source: DKS Associates, 1985.

II-412 Transit

Excluding freeway express service, existing public transit lines serving the study area are illustrated on Figure II-41B. Most of the routes are operated by the Southern California Rapid Transit District (SCRTD); one line connecting central Compton with Redondo Beach is operated by Gardena Municipal Bus Lines. In addition, Long Beach Transit's (LBT) Line No. 5 extends close to the study area but would not be affected by the Mealy Street diversion. The six SCRTD lines which do cross the San Pedro Branch of the Southern Pacific and could potentially be affected by the increased train operations on that branch from the Mealy Street diversion include:

1) Route 124, which travels east from downtown Compton on Compton Boulevard, then north on Santa Fe Boulevard, then west on El Segundo Boulevard to the City of El Segundo;

2) Route 125, which extends from Manhattan Beach to La Mirada via Rosecrans Avenue;

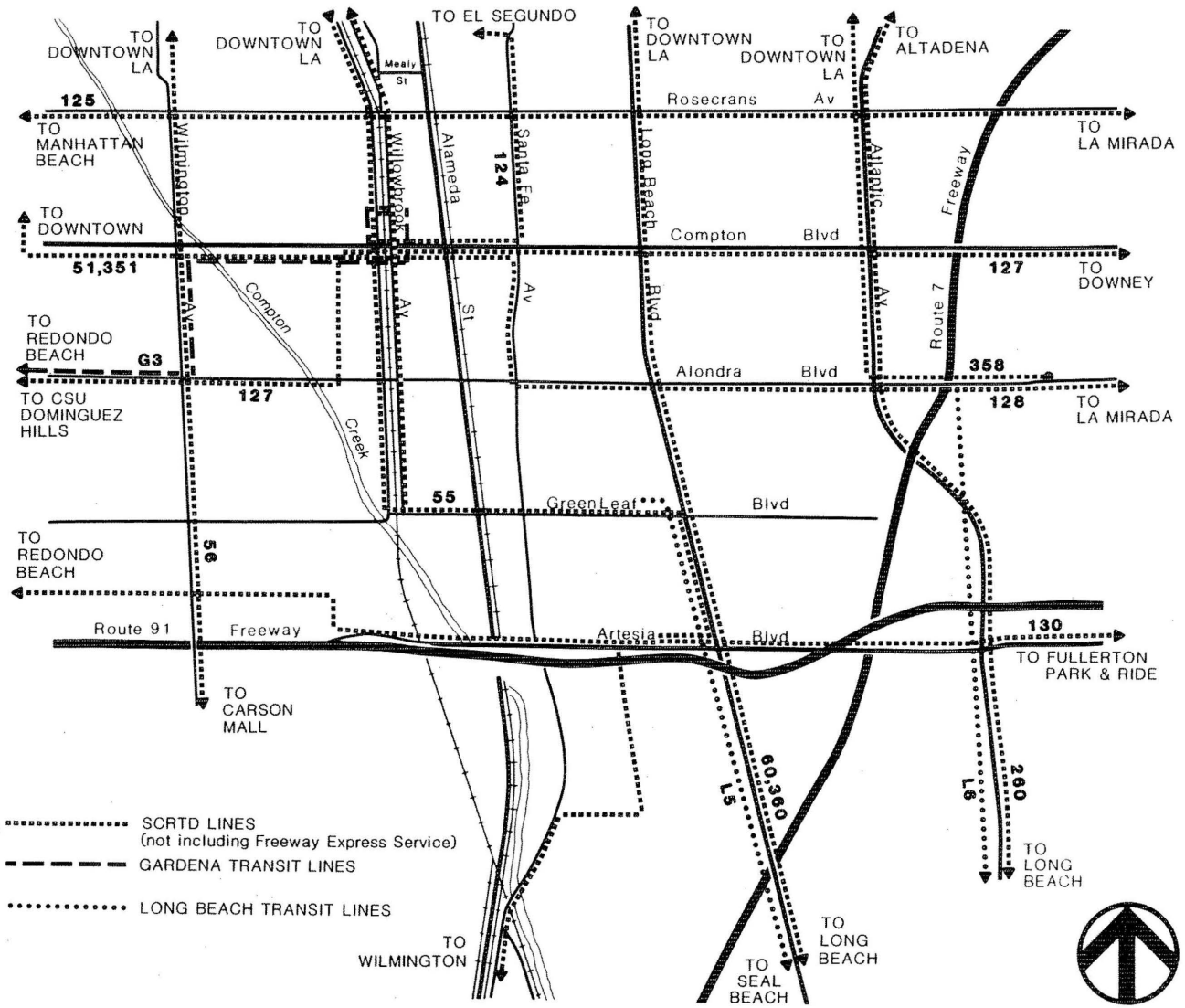


Figure II-41B

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Existing Public Transit Service

SOUTHERN CALIFORNIA RAIL CONSULTANTS

3) Route 127, which provides service from downtown Compton to Downey along Compton Boulevard;

4) Route 128, which also extends east from downtown Compton to La Mirada, traveling along Compton Boulevard, Santa Fe Avenue and Alondra Boulevard; and

5) Route 130, which connects Redondo Beach with the Fullerton park-and-ride lot via Artesia Boulevard. (Since Artesia Boulevard is grade separated from the San Pedro Line, there would be no impacts to this route.)

6) Route 55, the only north/south transit line which crosses the San Pedro Branch of the Southern Pacific in this area, extends from Wilmington to downtown Los Angeles, primarily along Alameda Street and Willowbrook Avenue, crossing the San Pedro Branch of the Southern Pacific at Greenleaf Boulevard. The northbound service on this line would also cross the Mealy Street Diversion on Willowbrook Avenue east, just north of Rosecrans.

Operating speeds for these routes generally exceed SCRTD's system-wide average of 14.1 miles per hour. Service schedules are typically maintained on both north/south and east/west streets in this area.

II-413 Parking

Parking in the immediate vicinity of the Mealy Street diversion is limited to open lots provided by local businesses and on-street parking. No commercial parking lots or regional park-and-ride facilities exist within the immediate project area.

II-420 FREIGHT RAIL TRAFFIC

There are three types of freight rail traffic on this corridor: unit trains, carload trains and local switchers. The first two types are considered through trains because once they enter a branch line they continue to their final destination with their original number of cars and without interruption, except for passes or meets with other trains. These train sets typically consist of up to 100 cars or more. Local switchers, however, for which train sets typically consist of only a few cars, pick up and drop off cars for customers, often moving back and forth over a particular line and making numerous stops. Freight rail impacts on vehicular traffic typically originate from through freight train movements, due to limitations on train speeds (into the project area, not more than 19 mph) and the time required for the long freight trains to clear each roadway crossing.

Existing (1985) freight rail through movements on the Wilmington and San Pedro Branches of the Southern Pacific average six and two per day, respectively. Future through freight rail traffic on these lines is dependent on the level of the San Pedro Bay Ports development; it could be significantly higher than current freight traffic levels.

The San Pedro Bay Ports Access Study completed by SCAG in October 1984 presents several alternative routing scenarios for projected future through freight train movements to and from the ports area. The Mealy Street diversion would relocate the connecting point of the Wilmington and San Pedro Lines of the Southern Pacific from Dominguez Junction (south of Compton) to a point just north of Rosecrans Avenue in north Compton. These lines are two of the several possible alternative routes to accommodate anticipated increased port access freight rail traffic. Alternative future through traffic routing scenarios investigated by SCAG included:

1) Status Quo - the Union Pacific, Southern Pacific and Santa Fe would continue their own lines without any sharing of tracks;

2) One-Way Loop - Union Pacific and Santa Fe trains to and from the ports would use the Union Pacific San Pedro Branch Line through Paramount and north Long Beach in the southbound direction and the Santa Fe Harbor District in the northbound direction. Southern Pacific operations would be the same as under the Status Quo alternative;

3) Consolidation - all through trains of the three railroads would use an upgraded Southern Pacific San Pedro Branch along an at-grade or grade-separated alignment in the median of Alameda Street.

Two levels of projected ports-related freight train movement for the planning horizon year 2000 were estimated in the 1984 SCAG report based on ranges of projected port development. Data for the Wilmington and San Pedro Branches are shown in Table II-42A.

These projections indicate that the highest level of potential freight train movement in the study area would occur if the Consolidation alternative were implemented. Under this scenario, no traffic would use the Wilmington ROW, but Southern Pacific and other freight traffic would use the San Pedro Line.

The high port development scenario indicates that up to 67 trains per day would utilize the San Pedro ROW of the Southern Pacific under the Consolidation alternative. Under both the Status Quo and

TABLE II-42A

YEAR 2000 FREIGHT RAIL THROUGH TRAFFIC PROJECTIONS[1]

Freight Routing Alternative	Range of Projected Train Activity	Daily Freight Train Movements Wilmington Branch	San Pedro Branch
Total Existing (1985)[2]		10	4
Switcher		4	2
Through		6	2
Status Quo	low	13	4
With SP/SF Merger[3]	low	19	4
One-Way Loop[4]	low	13	4
Consolidation[5]	low	0	33
Status Quo	high	25	10
With SP/SF Merger[3]	high	37	10
One-Way Loop[4]	high	25	10
Consolidation[5]	high	0	67

[1] Projections are for freight traffic south of Watts Junction and are consistent with economic planning of the ports, but it is not known precisely when this level of traffic will materialize.

[2] Existing traffic includes both switcher and through movements; projected traffic is through movements only because no estimates of switcher movements are available.

[3] For comparative purposes, the assumption is made that all ports-related ATSF train traffic will use the Wilmington Branch.

[4] Southern Pacific operations continue on their own routes. Union Pacific and Santa Fe operations operate one-way on their tracks.

[5] All trains to and from the port operate on the San Pedro Line of the Southern Pacific.

Source: LACTC, 1985.

One-Way Loop alternatives, total through freight train movements through the study area would be about one-half that of the Consolidated projection, or about 35 train movements per day in the high development scenario. Approximately 75 percent of these trains would use the Wilmington ROW, with the remainder on the San Pedro.

These study projections are useful for planning purposes, but must be interpreted with caution. The ranges of future freight train movements indicated are consistent with capacity and economic planning of the San Pedro Bay Ports; however, when such levels of freight train movement would be realized is subject to actual economic developments in this country and abroad. For example, the High Scenario includes movements of coal (primarily on the Union Pacific), which in the early 1980s was thought to be a critical component of freight traffic throughout the 1980s but which collapsed as a freight transportation market about 1983.

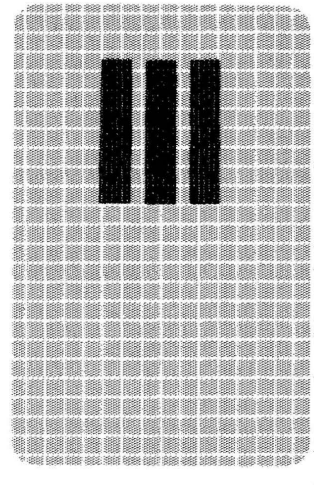
Railroad officials foresee the low range of train movements by the year 2000 and regard the high range as speculative. The high range could not be accommodated under existing track capacities on certain routes. It should be noted that the railroads, which are in competition with each other, do not foresee consolidation of routes to the ports (either the One-way or Consolidated alternatives shown in Table 11-42A). However, the Southern Pacific and Santa Fe railways are likely to merge in 1986. Thus, it is meaningful for planning and impact assessment purposes to augment the Status Quo scenario with the ports-related freight train movements estimated by SCAG for the Santa Fe's Harbor District route to the ports. It is likely that when the Santa Fe and Southern Pacific railroads merge, the Santa Fe's ports-related freight movements (currently two through movements per weekday and estimated to increase to from six to 12 by the year 2000) would utilize the shorter Southern Pacific Wilmington Branch route.

When a freight train movement occurs during a peak traffic period, significant queuing and delays to vehicular traffic result. The Mealy Street Connector would shift from 19 to 37 through trains a day from the Wilmington Branch ROW to the San Pedro Branch ROW, assuming a Status Quo SP/SF merger scenario. Future freight rail traffic growth at these levels would create significant traffic impacts in the study area on arterials that intersect at-grade with these rail lines. Therefore, the increase in freight train movements, combined with anticipated increases in vehicular traffic on major arterials in the study area, would result in even greater delays to vehicular traffic. Though these delays would be primarily on major east/west arterials, the proposed freight rail diversion would cross Alameda at-grade north of Rosecrans, thus also inhibiting traffic on Alameda. In

addition, long queues on major east/west arterials resulting from freight train delays could disrupt north/south streets if signal timings were not properly designed and prohibitions against blocking an intersection not strictly enforced.

SCAG proposed that a task force identify sources of funding for grade separations from major crossing roadways. SCAG also concluded that the recommended long-term option for train routing to and from the ports should be the Consolidated route, which would place through freight traffic movements for all three railroads on the San Pedro Line of the Southern Pacific, parallel and adjacent to Alameda Street. Such action would eliminate the at-grade crossing of Alameda north of Rosecrans on the Wilmington Branch. The railroad officials involved consider this routing as viable only if it is grade separated from crossing arterial streets.

Chapter



III LOCAL IMPACTS AND MITIGATION MEASURES DURING CONSTRUCTION

A general discussion of construction techniques can be found in Section I-300 of this document. In this chapter, the impacts of construction in the immediate project area are compared to existing conditions or to those expected at the mid-point of the proposed construction period, depending on data availability (refer to Figure III-10A throughout the discussion). Issues dealt with in the previous environmental documentation are not reexamined. When significant and/or substantial, mitigation measures are discussed in a separate section; otherwise, mitigation measures, if required, are examined in the impacts section.

III-100 NATURAL ENVIRONMENT

III-110 GEOLOGY AND HYDROLOGY

III-111 Impacts Assessment and Mitigation Measures

The existing geological conditions in the Compton area would not present any unusual problems for the construction of at-grade sections of Alternative MC-5. The elevated LRT sections and bridge structures would be founded on recent alluvial soils of sand, gravel, and cobbles with poor quality rock underlying them. Due to the potentially variable soil and seismic conditions, it is recommended that between 20 and 30 piles support each of the foundations for the elevated guideway columns and bridge abutments.

The probability of a major earthquake occurring during the construction phase is considered low. All available construction techniques for the safety of workers and passing pedestrians would be implemented. Shoring and falsework would be used extensively in supporting above- and below-ground structures. In the event of a major earthquake, damage to structures under construction could be extensive; however, the clean-up and repair of the project could be accomplished more quickly and easily than if the project were completed and in operation. No unusual methods would be used above what is specified in standard construction procedures.

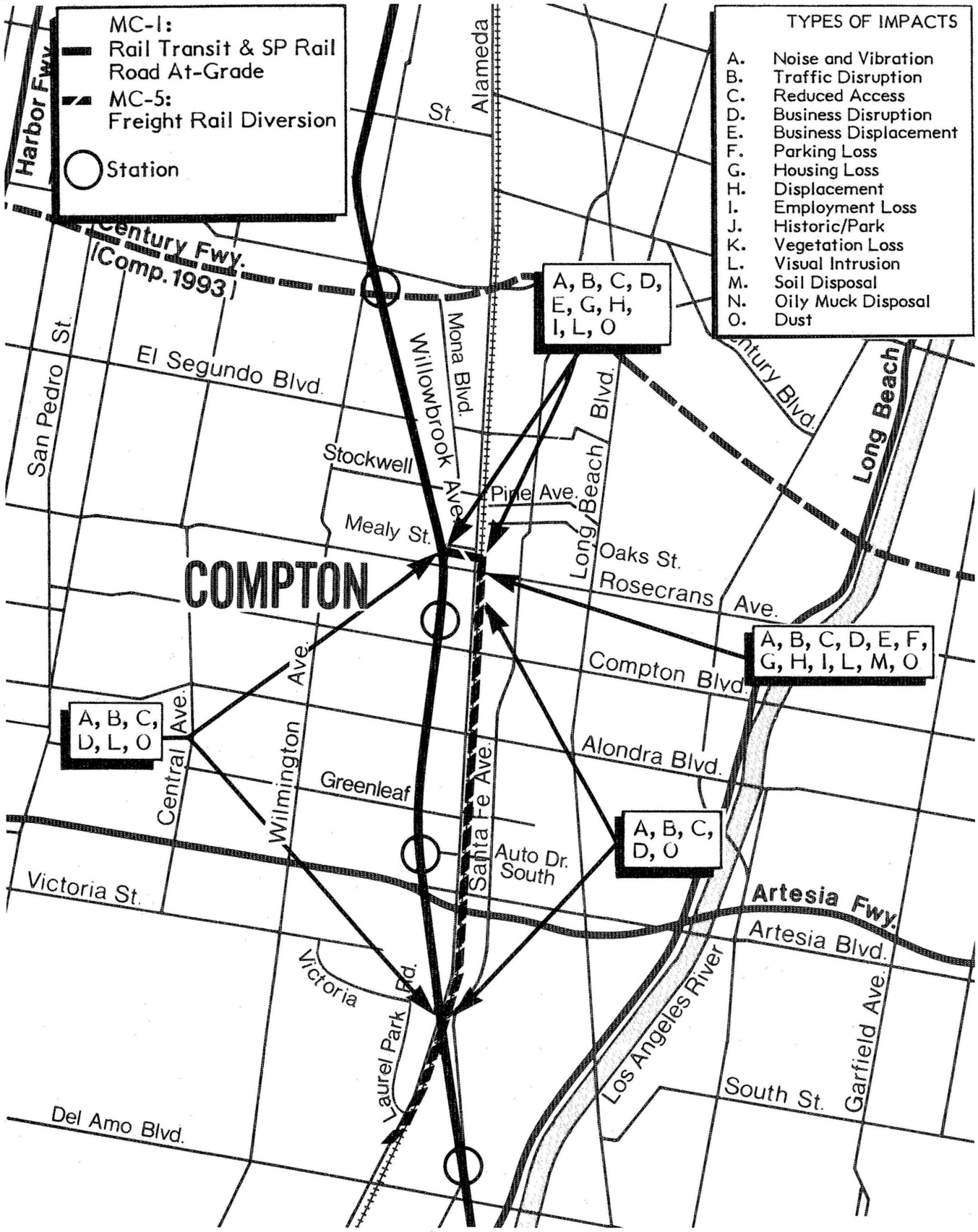


Figure III-10A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Impacts During Construction Alternative MC-5

SOUTHERN CALIFORNIA RAIL CONSULTANTS

There would be a large amount of soil generated by and backfill required for Alternative MC-5. Quantities of excess material and required backfill for the MC-5 alternative are shown in Table III-11A. If it is not contaminated with urban debris, some of the excess material coming from construction of MC-5 would be used on other sections of the proposed project or be transferred to other on-going projects such as the Century Freeway, where large amounts of backfill would be required.

TABLE III-11A

COMPARISON OF MC-1 AND MC-5

EXCAVATION AND BACKFILL REQUIREMENTS

Alternative	Total Excavation (Cubic Yards)	Total Backfill (Cubic Yards)
Project as adopted:		
MC-1 (Compton At-Grade)	265,000	39,000
Project with MC-5 (Mealy Street Connector)		
Option A (at-grade)	269,000	62,000
Option B (underpass)	359,000	85,000
Option C (overpass)	274,000	65,000

Source: SCRC, 1985

There would be no impacts to any established floodplain during the construction of Alternative MC-5. Impacts on hydrology in the Compton area would be related to water runoff from the construction sites and erosion of barren rock and soil surfaces exposed during excavation. Placing straw or other temporary coverings over barren surfaces would reduce the severity of erosion. Temporary culverts, ditches, catch basins, and settling ponds would be installed on the construction site to maintain existing drainage flows and collect excess water and sediments coming from the project. Sediments collected from the settling ponds would be disposed of at a Class II or III disposal site.

Water resources which would potentially be affected by runoff or small amounts of erosion are the Los Angeles River, Compton Creek, and the Central and West Coast Groundwater Basins. Any impacts would be mitigated by using vegetative covering, catch basins, and settling ponds during construction.

III-120 VEGETATION AND WILDLIFE

III-121 Impacts Assessment

There would be no significant impacts to vegetation and wildlife due to the construction of MC-5. The amount of vegetation (landscaping) in the form of trees and shrubs to be removed would be extremely small. Permanent landscaping is proposed for the light rail corridor where deemed desirable or appropriate. There are no endangered species existing along the MC-5 alignment. None of the existing species is of great significance; all are common throughout Southern California. Displaced wildlife, such as birds and rodents, would return of its own accord after the construction phase. No mitigation measures would be required.

III-130 NOISE

III-131 Impacts Assessment

Noise from construction activities on MC-5 is of most concern in locations where sleep or speech interference is a consideration. Sensitive receptors include residences, hotels and motels, schools, hospitals, and religious facilities. Sustained high noise levels near such receptors may be disruptive to normal activity during daytime hours and unacceptable at night. Typical noise levels produced by construction equipment are listed in Table III-13A. The City of Compton has an ordinance that prohibits nighttime (7 PM to 7 AM) construction. Rail construction, however, may be exempt from the ordinance, but the LACTC would, in any case, work closely with the city to minimize noise impacts during construction.

The community noise equivalent level (CNEL) is a measure of the 24-hour noise exposure weighted to give additional penalty to noise during the evening and night hours (see Chapter II for a more detailed explanation of CNEL). For typical noise-sensitive receptors, CNEL values of up to 65 dBA are generally considered acceptable. For other land uses often found in urban areas (such as office buildings, commercial activities, etc.), a CNEL of up to 75 dBA is considered within the acceptable range. However, for construction activities, levels considerably higher may be acceptable because of the

TABLE III-13A

AVERAGE NOISE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	Average A-Weighted Noise Level at 50 Feet, dB
Air Compressor	81
Backhoe	85
Concrete Mixer	85
Concrete Pump	82
Concrete Vibrator	76
Crane, Derrick	88
Crane, Mobile	83
Dozer	87
Generator	78
Grader	85
Jackhammer	88
Loader	84
Paver	89
Piledriver	101
Pneumatic Tool	85
Pump	76
Rock Driller	98
Roller	80
Saw	78
Scraper	88
Shovel	82
Truck	88

Source: Bolt Beranek & Newman, 1984.

temporary nature of the activity. A CNEL of up to 90 dBA for noise-sensitive land uses and up to 100 dBA for offices and commercial activities would not be considered unacceptable for intermittent construction activity.

In order to estimate the construction noise exposure in Compton, scenarios were developed describing the number, type, location, and operating cycle of the construction equipment which could be required for Alternative MC-5 and its options. The number of trucks was found to be a major factor in the expected noise and vibration levels during construction.

Table III-13B presents the resulting noise exposure estimates for the different types of construction that would be required. For the at-grade construction, the estimated annual average noise exposure would be below 65 dBA at a distance of between 150 to 200 feet from the construction site; the corresponding distance range for aerial guideway construction is 175 to 250 feet (actual distance depends upon type of terrain and assumes no shielding by intervening structures or land forms). Based on these distances, there are 175 residential units along Willowbrook Avenue and 16 units along Mealy Street which would experience construction noise exposure in excess of 65 dBA.

While the daily values are below 90 dBA and would be considered acceptable for noise-sensitive land uses if the construction activity were to last for a short period of time, the high annual average CNEL values are indicative of the relatively lengthy time frames during which the construction would be underway. These values indicate the need to consider noise mitigation measures during the long-term construction phases.

III-132 Mitigation Measures

In order to reduce construction noise impacts on residential areas and other noise-sensitive uses, the following measures are recommended:

- Use of Alternative Methods and Modified Construction Equipment

  In the last few years more attention has been given to the development and use of low-noise-generating construction equipment. Specifications for the use of such equipment should be written into the criteria and provisions of construction contracts. Whenever possible, prefabricated structures would be used rather than performing assembly on site.

TABLE III-13B

CONSTRUCTION NOISE ESTIMATES FOR MC-5

Type of Construction	Use	Estimated CNEL at 50 Feet, dBA*	
		Daily	Average Annual
At-Grade	LRT track construction, SPTC track construction/ relocation, Rosecrans Option A	78	72
Trench, Retaining Wall and Fill	Rosecrans Option B (underpass)	83	80
Aerial Guideway	LRT track construction, Rosecrans Option C (overpass)	80	76

* Assumes construction activity would occur between 7 AM and 7 PM. Activity at night, if approved by Compton, would raise CNEL by up to 10 dBA.

Source: BBN Laboratories, 1985.

o Maximizing Physical Separation and Using Noise Barriers

In extreme cases or where particularly sensitive locations would be involved, acoustical barriers could be provided around stationary construction equipment and/or doors and windows of adjacent buildings. Special attention would be given to the selection of truck routes so that noise from heavy-duty trucks would have minimal impact on noise-sensitive receptors.

o Proper Combination of Scheduling Techniques and Avoiding Noise-Sensitive Hours

Use of the equipment would be scheduled to maintain the lowest possible overall noise levels by 1) planning the higher noise level operations during the peak ambient periods and 2) avoiding as much as possible peak and impulse noise, as relatively

uniform sound levels tend to be less obtrusive. Nighttime construction activity should be avoided.

III-140 AIR QUALITY

III-141 Impacts Assessment and Mitigation Measures

There are two basic sources of emissions which are of concern during the construction of the project: construction equipment powered by diesel or gasoline-fueled engines and dust produced whenever soils are disturbed, called "fugitive" dust.

As a result of construction activities, the area surrounding the project could experience increases in emissions of carbon monoxide, reactive organic gases, nitrogen oxides, sulfur oxides, and particulates. The direct sources of these emissions include operation of machinery and equipment (powered by fossil fuels) and travel of the construction work force to and from construction sites by means of motor vehicles. Construction activities could also result in local traffic delays, detours, and congestion, which may cause additional emissions attributable to increased motor vehicle idling. Moreover, some of the construction energy demand may be met by electrical power generated within the South Coast Air Basin, which would have associated air pollutant emissions.

Fugitive dust is produced when construction machinery disturbs the existing soil and local winds make it airborne. Such emissions are generally proportional to the volume of earth being moved. This source of construction emissions is typically not a serious problem, because the size of particles generated tends to be larger than other forms of particulate matter, and as a result the dust settles a short distance from the source.

The MC-5 alternative discussed in this document constitutes a very small change to and affects an equally small area of the overall Long Beach-Los Angeles Rail Transit Project. Furthermore, the area to be affected by construction activity has generally level topography, necessitating minimal additional earth movement above that discussed for the mid-corridor alternatives analyzed as part of the environmental studies for the entire rail transit project. The Rosecrans underpass option, however, would necessitate some additional earth movement, which would in turn require the use of additional construction equipment. As a result, this option would create some additional construction emissions as compared with the overpass and at-grade options. Within the context of the entire rail project, however, the additional construction activity resulting from implementation of MC-5 is not regarded as major.

South Coast Air Quality Management District Rules and Regulations apply to the proposed project. Rule 403, in particular, gives specific criteria for limitations on fugitive dust emissions. Of those possible mitigation measures which can be used to limit fugitive dust production, site watering is the most frequently used. This method can reduce construction site dust emissions by as much as 50 percent. It is intended that this method would be used to limit fugitive dust at construction sites associated with the project. The construction contractor will be responsible for complying with construction specifications, and the South Coast Air Quality Management District has enforcement responsibility with respect to fugitive dust.

Combustion emissions generated by construction equipment could be mitigated in two ways: by using electricity from the utility system rather than diesel-powered generators, and by minimizing the distance trucks must drive to dispose of excavated materials.

III-150 ENERGY USE

III-151 Impacts Assessment

The energy required for construction of the entire Long Beach-Los Angeles Rail Transit Project has been previously documented, including all those components necessary for completing the system. This section more appropriately focuses on the differences resulting from implementation of Alternative MC-5.

Implementation of the Mealy Street diversion would require construction of approximately 1,500 feet of new freight rail trackage for the Mealy Street Connector and an additional 2,000 feet south of Dominguez Junction, for a total of approximately 3,500 feet. Rail construction energy estimates published in the May 1984 DEIR for the entire Long Beach-Los Angeles Rail Transit Project were based on a unit consumption rate of 9.95×10^9 BTU/mile, or 1.88×10^6 BTU/foot of rail track constructed. Applying these rates to the additional track construction necessitated by MC-5 (1.88×10^6 BTU/foot x 3,500 feet) yields a total of 6.58×10^9 BTU additional construction energy consumed by the MC-5 alternative, as compared with the currently adopted MC-1 alternative. In the total project context of some $1,800 \times 10^9$ BTU, this change is less than 0.36 percent and is therefore insignificant. Consequently, there would be no need for any mitigation measures.

III-200 SOCIOECONOMIC ENVIRONMENT

III-210 ACQUISITION AND DISPLACEMENT

The following is a summary of the potential property acquisition and relocation to be expected if MC-5 is implemented. These impacts are described according to the two major aspects of the alternative: the Mealy Street Connector, which would divert freight rail traffic from the Wilmington Branch ROW to the San Pedro Branch ROW along Mealy Street, and the roadway improvements along Rosecrans Avenue in the vicinity of Alameda Street. Two other aspects of the project, construction of the overpass guideway structure for the light rail alignment and extension of the east roadway of Alameda Street, would not require relocation of any businesses or residences.

III-211 Mealy Street Connector

The proposed freight rail diversion right-of-way would pass through all or a portion of 26 individual parcels. Of these 26 parcels, it appears from preliminary investigation that 13 would be required in their entirety, another seven would be potentially required in their entirety, and the remaining four would be subject to partial acquisition. Of the 26 parcels potentially affected by the Mealy Street Connector, five are publicly owned, and the balance (21) are under private ownership; two of these are owned by the Southern Pacific Railroad (SP). Of the parcels owned by the SP and those which are publicly owned, all but one appear to be unimproved. Those privately owned parcels which would be definitely and potentially required in their entirety are summarized in Table III-21A.

Based on local demographic information as compiled by the U.S. Census Bureau, average family size in this area ranges from 3.5 to 4.2 persons per household. Applying these figures yields a potential displacement of 28-34 persons from single-family units and 95-113 persons from multi-family units, for a total potential displacement of 123-147 persons.

Five businesses would be affected by the Mealy Street Connector: an auto mechanic's shop, a junkyard, a warehouse, an equipment rental business, and the Owens-Corning Fiberglass Corporation. In the case of Owens-Corning, property would be acquired, but the portion to be purchased is not directly involved in the main manufacturing plant. The other four businesses would probably have to be relocated.

TABLE III-21A

POTENTIAL ACQUISITION AND DISPLACEMENT

MEALY STREET CONNECTOR

Residential Displacement	
Single-Family Units	8
Multi-Family Units	
No. of structures	7
No. of dwelling units	27
Non-Residential Acquisition (parcels)	
Commercial/Industrial	5
Vacant Parcels to be Acquired	
City of Compton	4
Private Ownership	4

Source: Myra L. Frank & Associates, 1985.

III-212 Rosecrans Avenue Improvements

In addition to the freight rail track relocation resulting from the Mealy Street Connector, the project also proposes street improvements on Rosecrans Avenue. Option A, which would leave Rosecrans at-grade but widen the intersection of Rosecrans/Alameda to provide additional turning lanes, would not require the acquisition of any buildings.

Two alternatives which would produce grade separation between automobile traffic on Rosecrans and freight rail traffic along Alameda are under consideration. One is an underpass (Option B), allowing automobile traffic to pass beneath the freight traffic. A second is an overpass (Option C), which would allow automobile traffic to pass above the freight rail traffic.

Most of Option B could be built within the existing right-of-way along Rosecrans Avenue (100 feet in width). However, in one section (between Tamarind Avenue on the west and Rose Avenue on the east), the project right-of-way requires approximately 125 feet in order to provide for enlarged curb radii to facilitate tractor-trailers turning right into Rosecrans Avenue from southbound west Alameda and northbound east Alameda. From this widest section, the proposed right-of-way would then return to 100 feet at approximately Tamarind Avenue on the west and Rose Avenue on the east.

As presently designed (preliminary engineering) implementation of Option B would necessitate acquisition and relocation of five commercial properties on Rosecrans Avenue. These properties include a fast food restaurant, a market, a building housing a dentist's office and a foot clinic, a bicycle shop and another commercial building which appears to be vacant.

There would also be minor amounts of partial land acquisition for purposes of street widening and enlargement of curb radii. Approximately 8,000 square feet of land would be required, which, at an estimated value of $5.00 per square foot, would result in an acquisition cost of approximately $40,000. It should be noted that the cost of acquisition of property under ownership of the SPTC has not been estimated here.

Acquisition costs for property along Rosecrans Avenue under Option B would total approximately $1,300,000. Applying standard planning estimates to the businesses acquired, approximately 40-50 employees would also be displaced.

Not included in the $1,300,000 would be the cost of relocating these displaced businesses. Under the Uniform Relocation and Assistance Act, businesses are compensated for all actual costs of relocation to a new site, including the costs associated with moving all necessary equipment, fixtures, and inventory.

In addition, a partial acquisition would be required at a gas station/ mini-market located on the northeast corner of Rosecrans Avenue and east Alameda Street. This would necessitate the relocation of the pump island to another portion of the property.

There are also several other properties which could potentially be affected, depending upon the final design for the project. These include the parking lot of a church and a county health building.

The overpass (Option C) as presently designed (conceptual engineering) could be wholly contained in the existing right-of-way. As a result, no businesses would be displaced and only very minor amounts of privately owned land would be required for some corner curb radii increases. The sidewalk widths on both the north and south sides of Rosecrans would be reduced from approximately nine feet to five feet, ten inches.

Construction activities, particularly those associated with the underpass and overpass options, would likely severely impair access from the street to these businesses. This, together with an absence of on-street parking during the construction period and a loss of pedestrian traffic, would probably restrict normal business operations.

III-213 Mitigation Measures

The mitigation which would be necessary for the acquisition of property and the relocation of businesses and residents is set down in state law. The Uniform Relocation Assistance and Real Property Acquisition Policies Act, California Government Code Section 7260 et seq., mandates relocation services and payments to be made to eligible residents, business concerns, and non-profit organizations displaced by the project. The law provides for uniform and equitable treatment of persons displaced from their homes, businesses, or farms and establishes the land acquisition policies which must be followed by public agencies. These services and payments are partial mitigation for the effects of acquisition of these properties. The costs for residential relocation are estimated to be approximately $285,000. Business relocation cannot be estimated because the law requires reimbursement be made for actual costs.

This mitigation would be further defined after the preferred alternative is selected and final engineering design completed. A Relocation Assistance Policy and Plan will be adopted by LACTC in accordance with the requirements of the state law.

In an effort to help alleviate construction impacts on businesses, the LACTC will work with businesses in construction areas to maintain public awareness by keeping sidewalks open, maintaining signage directing patrons to open businesses and keeping at least one traffic lane in each direction open as much as possible. This mitigation would add $750,000 to the cost of construction.

III-220 COMMUNITY SERVICES

III-221 Impacts Assessment

Increased traffic congestion as a result of lane closures at construction sites or temporary detours would result in diminished auto access to some community services. Utility relocation prior to construction of either the Alameda underpass or overpass (Options B or C) would require at least two lanes of traffic to be occupied for a period of approximately 12 to 14 months. In some instances, block-long sections of Rosecrans Avenue, Alameda Street, and Willowbrook Avenue would be closed temporarily, most probably in the late-night/early-morning hours, if a variance to the Compton noise ordinance can be obtained.

During construction of MC-5, efforts would be made to maintain one lane of through traffic in each direction, though temporary detours around the bridges and embankments could become necessary. At a minimum, one lane would be kept open across intersections for emergency and construction equipment access; however, the increase in traffic congestion could result in prolonged response times for emergency vehicles.

Pedestrian access would be maintained and would not be significantly impaired. If necessary, temporary access routes/sidewalks would be constructed to provide access to local facilities. In particular, every attempt would be made to provide adequate pedestrian access to the Los Angeles County Health Center located at the southeast corner of the Rosecrans/Alameda intersection. Auto access to this facility, however, could be impaired by utility relocation and construction activities for Options B and C.

Utility relocation would be generally limited to those streets that cross perpendicularly to the proposed alignment. For the LRT aerial guide-way, it may be possible to avoid most of the existing utilities located below the LRT structures. However, construction of the Rosecrans Underpass (Option B) would require that all existing utilities crossing perpendicular to the proposed trench be relocated to the new bridge structures. This process would undoubtedly necessitate temporary shutoff of some utilities.

III-222 Mitigation Measures

Implementation of traffic congestion mitigation measures (see Section III-312) could reduce the impact of diminished auto access to community service facilities. In addition, construction management

would keep local providers of emergency services abreast of the location and duration of construction activities. Every effort would be made to insure that there are no delays to emergency vehicles which would prevent the local police and fire departments from maintaining a five- to six-minute response time for emergencies.

Although pedestrian access to mid-corridor facilities would not be significantly obstructed, grade crossings under construction could present a potential hazard for children on their way to and from schools and parks. Constructing walkways and fencing around construction sites would alleviate this potential hazard. Safety awareness programs offered in schools and employment of crossing guards would also promote safer conditions.

Although temporary interruption of some utilities crossing under Rosecrans (with Option B) would be unavoidable, inconvenience to utility customers would be lessened by giving advance notice of any shutoffs.

III-230 ECONOMIC ACTIVITY

III-231 Impacts Assessment

The significant economic impact resulting from construction of the proposed project in the Compton area would be the potential disruption to businesses located along Rosecrans Avenue. These businesses can generally be described as a mixture of small, independently owned service and retail establishments. Disruption could occur when street access is partially restricted during construction, thereby obstructing pedestrian and vehicular access to the businesses along the street. In addition, business activity could be affected by noise and dirt from the construction itself.

Of the three options under consideration, Option A (at-grade) would cause the least disruption because it would affect the least number of businesses. For Options B and C, heavy equipment would be operating in the middle of the street, with larger excavating equipment used for Option B. During the course of the construction period (20-28 months), accessibility to all businesses on Rosecrans Avenue would be impaired. It is currently planned that one traffic lane would be kept open in each direction, but all on-street parking would be removed and direct left turns into business establishments would not be possible. In addition, there would be brief periods of time (two to three hours per day, two to three times a week during heavy construction) when these lanes would have to be closed.

Most businesses on both sides of Rosecrans appear to have parking available either on-site or on adjacent side streets. The exceptions are a bar on the southeast corner of Rosecrans and Willowbrook and a garage on the south side of Rosecrans just east of Rose Avenue, both of which appear to rely on on-street parking along Rosecrans. Also, a residential cluster located in the middle of the 400 block of Rosecrans Avenue does not appear to have off-street parking. On balance, however, most of the business establishments would be able to continue operations because of available on-site and side street parking.

Thus, for the street as a whole, the effects of construction would be serious because of the reduced access and parking, though for some establishments without off-street parking the effects would be greater.

The construction of the LRT, reconstruction of the SPTC line, and modifications of local roadways in the vicinity of the Wilmington Branch ROW would not result in any significant impacts on local economic activity during construction. There would be minor relocation of traffic flows at various street intersections and in other areas adjacent to the proposed project. In the case of the San Pedro Branch ROW, however, where small businesses rely on street access, the impact of street closures for modifications of Rosecrans and Alameda would be significantly adverse.

A slight increase in construction employment would occur in Compton as well as the overall region as a result of the proposed project.

III-232 Mitigation Measures

Should businesses have to be displaced, compensation and relocation services would be available under the California Uniform Relocation Assistance and Real Property Acquisition Policies Act. This act provides for assistance in locating replacement property and payment for actual moving and related costs, in addition to the fair market value paid for the business. If the business cannot be relocated without a substantial loss of patronage and chooses to go out of business rather than move, it can be eligible for a payment in lieu of moving costs up to $10,000. It is possible, though not likely, however, that comparable space at affordable rents might not be available for all businesses displaced.

To mitigate the potential disruption to local businesses due to reduced pedestrian and vehicular access during construction, one lane would be kept open in each direction to permit vehicular traffic flow in addition to construction and emergency vehicles. Special measures

would be taken to encourage pedestrian access. In coordination with local merchants, the visibility of the businesses would be maintained through temporary signing and other measures.

III-240 VISUAL QUALITY

III-241 Impacts Assessment

The visual environment of the project area would be adversely affected during the construction of Alternative MC-5 and each of the various options for grade separation of the Rosecrans Avenue/SPTC railroad crossing. The visual intrusions would be associated with site preparation, general construction, and traffic control.

Contributing to the visual influence would be the presence of heavy construction equipment and stockpiled construction materials, areas for temporary waste material storage, fencing for the construction and storage areas, and traffic barriers.

Visual impacts would be most intense if the Rosecrans Avenue grade separation were an aerial structure (Option C). With this option, there would be a concentration of heavy equipment used for foundation construction and erection of the aerial support structure and roadway elements. With the underpass option for Rosecrans Avenue (Option B), heavy construction equipment would also be present, but the equipment would be less visible since it would be at-grade or in excavated areas.

The at-grade segments of roadway reconstruction and track relocation would require tearing up the roadbed or street pavement and the temporary closing of traffic lanes. The temporary closure of traffic lanes would require traffic barriers and directional and detour signs that would negatively affect the visual environs. Site preparation for the Mealy Street Connector would require removing existing structures and conducting grading operations.

Visual impacts from the construction activities would be a primary contributor to a general feeling of disruption in the area. Again, however, this intrusion would be temporary in nature.

III-242 Mitigation Measures

To help mitigate visual disruption, the construction areas should be well maintained. Also, sites for materials and equipment storage should be located in industrial areas or other areas along the alignment where their presence would not be visually incompatible with the surrounding environs.

III-250 HISTORIC AND CULTURAL RESOURCES

No structures of historic or architectural significance were identified in the project area, and, therefore, no construction impacts to historic or cultural resources can occur.

III-300 TRAFFIC AND TRANSPORTATION

III-310 TRAFFIC, TRANSIT AND PARKING

III-311 Impacts Assessment

Impacts on vehicular traffic and pedestrian movements during construction of Alternative MC-5 would be limited to delays encountered due to temporary partial street closures and the utilization of vehicular and/or pedestrian detours around construction sites.

It is anticipated that construction of each at-grade freight rail crossing would result in the temporary loss of existing parking and the closure of up to one half of the travel lanes in the immediate vicinity of each at-grade crossing. These crossings include one on Willowbrook Avenue, one on Alameda Street and every east/west crossing of the San Pedro Line from Elm Street to Dominguez Junction. A minimum of one travel lane in each direction is expected to be maintained on all roadways during the construction of each at-grade crossing, with additional lanes being made available during peak hours on major crossings. Vehicular traffic would likely be detoured around each construction area to the other half of the roadway where construction is not underway or where it has already been completed. In addition, pedestrian traffic would be temporarily detoured to the side of the street opposite the construction activity.

The impacts on traffic flow at the four major east/west streets -- Rosecrans Avenue, Compton Boulevard, Alondra Boulevard and Greenleaf Boulevard -- from construction of a second track parallel to the San Pedro Line would be decreased travel speeds, some additional congestion at the railroad crossings and adjacent intersections on Alameda Street, and possibly some diversion of traffic to alternate crossings. For example, when the double tracking of the Rosecrans or Compton crossings is under construction, some traffic (particularly in the case of local residents familiar with the area) may detour to the Elm Street or Palmer Avenue crossings to avoid the construction area. In addition, similar delays would also be realized by buses on routes utilizing these crossings, such as SCRTD Lines 55, 124, 125, 127, and 128. Pedestrian impacts at these locations would be limited to the delay encountered by those individuals who found it necessary to cross the street to avoid the immediate construction area.

Similar vehicular and pedestrian impacts to those noted above would be expected during construction of the east Willowbrook and west Alameda at-grade crossings. However, the only bus line that would

be affected at either of these two crossings would be SCRTD's Line 55, which operates northbound on east Willowbrook.

During construction of freight rail crossings at minor streets such as Elm, Palmer or Laurel, where ADTs are less than 5,000 vehicles per day, the existing crossings would be temporarily closed to traffic. This would result in some inconvenience to local residents who would be forced to utilize alternate routes to cross the tracks during the week(s) when construction is in progress. Transit and pedestrian activities, however, would not be affected by construction activity at these locations.

Traffic impacts during removal of the track along the abandoned section of the Wilmington Line would be limited to minimal vehicular delays encountered due to temporary partial closure of each street affected. The total length of disruption to both vehicular and pedestrian traffic at each location should be limited to a week to ten days.

Construction of Option A (the at-grade alternative) at Alameda/ Rosecrans would not result in any significant negative impacts to existing traffic flows at the intersection of Rosecrans and Alameda. One travel lane at a time would be temporarily closed to through traffic, but such a closure could be programmed for off-peak periods. In addition, the widening of west Alameda Street in the vicinity of the Rosecrans intersection could be undertaken in conjunction with the construction of the second at-grade crossing to ensure that the impacts of constructing the second parallel at-grade crossing would be similar to those described above.

The widening of each side of Rosecrans at the east side of west Alameda Street could be accomplished with only minor disruption to existing traffic. Once construction begins, however, approximately 50 on-street parking spaces would be permanently eliminated along Rosecrans Avenue between Willowbrook Avenue and Spring Street. (This would be true for all of the options evaluated at Alameda/ Rosecrans.)

Both of the grade-separated alternatives (Options B or C) would result in a greater level of construction activity along Rosecrans Avenue than would Option A, with much of this activity occurring directly in the center of the roadway.

III-312 Mitigation Measures

Standard construction area traffic control procedures and appropriate timing of actual construction activity are expected to be adequate to

reduce the traffic impacts associated with construction at each low-volume at-grade crossing and with the removal of the abandoned sections of the Wilmington Line. The LACTC should, in its contracts with contractors, require that completion of these at-grade crossings and track removals be properly staged. With proper staging, the low volume of traffic that would be delayed or diverted to alternate routes would not result in any significant negative impacts requiring further mitigation.

In addition, proper staging of construction activity at the major east/west crossings of the diverted line, such as scheduling of partial street closures during off-peak periods whenever possible, should be sufficient mitigation to accommodate the traffic impacts of construction activity. Appropriate construction area traffic control techniques should be employed to maintain a minimum of one lane open in each direction, with additional lanes made available during peak hours, if possible. However, the intense level of construction activity and large amount of construction equipment required to implement any of the grade separation alternatives at Alameda/Rosecrans would require that the majority of through traffic on Rosecrans Avenue be detoured around the construction area for an extended period of time.

The discontinuous nature of the street patterns north of Rosecrans Avenue precludes the development of a detour route around the north side of the construction area. However, a potential detour route south of Rosecrans has been identified in consultation with City of Compton staff. This route entails the utilization of the Willowbrook Avenue one-way couplet, Palmer Street, and Santa Fe Avenue, as illustrated in Figure III-31A. It is anticipated that one lane in each direction would be maintained on Rosecrans Avenue through the construction area, primarily to provide local access to businesses and intersecting streets between Willowbrook and Spring Avenues, but also to provide access between Rosecrans Avenue and Alameda Street. Through traffic on Rosecrans Avenue, however, would be encouraged to utilize the detour route.

In order to effectively implement the detour plan, a number of traffic engineering improvements are recommended to accommodate the increased traffic volumes along Willowbrook, Palmer, and Santa Fe without significant congestion delays to the detoured traffic.

1) Parking along Willowbrook Avenue should be temporarily prohibited and each half of the one-way couplet should be striped for two lanes.

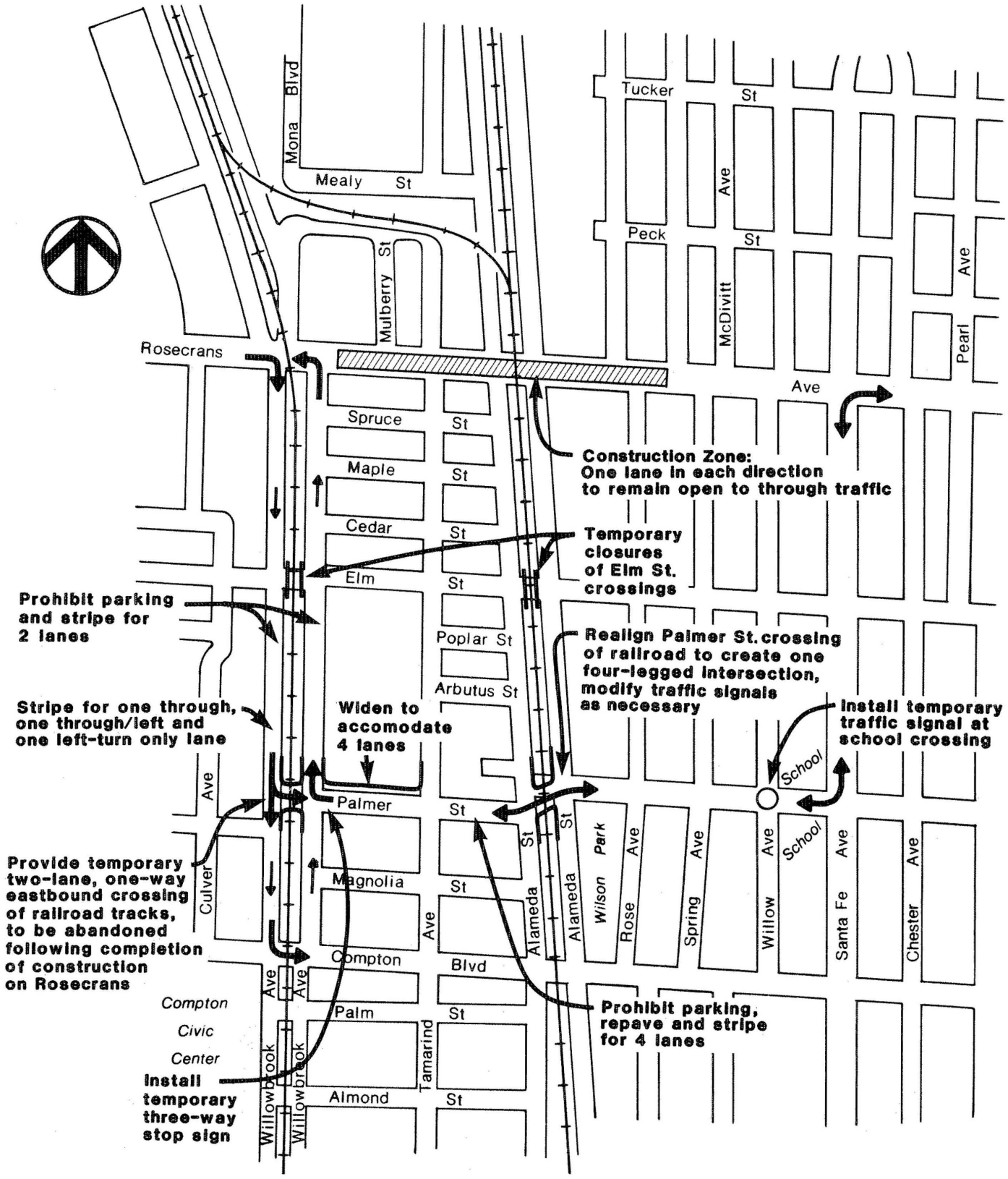


Figure III-31A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Detour Around Rosecrans/ Alameda During Construction

SOUTHERN CALIFORNIA RAIL CONSULTANTS

2) The Elm Street crossings of the Wilmington Branch (at Willowbrook) and the San Pedro Branch (at Alameda) should be temporarily closed to prevent traffic intrusion into the residential neighborhood served by Elm Street. Elm is a narrow residential street and its use as a detour around the Rosecrans construction zone should be discouraged.

3) A new temporary crossing of the Wilmington Branch should be constructed at Palmer Street. This crossing would contain two lanes eastbound. The crossing would be removed following completion of the Rosecrans grade separation and reopening of the Elm Street crossings.

4) Palmer Street, between Willowbrook Avenue and Tamarind Avenue, should be widened to four lanes along the abandoned Boys Market frontage.

5) Parking should be prohibited and the existing street repaved and striped for four lanes along Palmer Street, between Tamarind Avenue and Alameda Street.

6) The existing Alameda/Palmer intersections (two, closely spaced off-set intersections) should be reconstructed as one single intersection by providing a diagonal connection across the railroad tracks. The intersection reconstruction would not affect any property to the east or west of Alameda Street.

7) A temporary traffic signal should be installed at Willow Avenue/ Palmer Street to improve safety at the school crossing at this location where a crossing guard is currently on duty during school hours.

8) Appropriate detour signs should be installed along this preferred detour route to avoid any problems of inadvertent turning onto one-way streets and to indicate the availability of Compton Boulevard as an alternate detour route.

It is anticipated that, with the improvements recommended above, the detour route would provide the level of roadway capacity necessary to accommodate the rerouted Rosecrans Avenue through traffic without unreasonable negative impact. Approximately 15,000 to 18,000 vehicles per day could be expected to utilize the detour route. The installation of a temporary traffic signal at Willow Avenue and Palmer Street is proposed to mitigate the potential impact of these vehicles passing the school.

The detour route is approximately 3,000 feet longer than the existing Rosecrans Avenue route and may increase the typical Rosecrans Avenue driver's travel time through the project area from three to five minutes during peak periods. The cost of this mitigation measure would be $300,000.

In addition, during construction of either the overpass structure or excavation of the underpass trench across Alameda Street, north/south traffic on Alameda Street would experience some delays as it is routed around the construction area. Since the project also entails the extension of east Alameda Street north from Rosecrans Avenue to Oaks Street, east Alameda Street, if built first, would be available to accommodate much of the existing north/south travel demand through the construction area.

Several innovative mitigation measures may also be utilized to reduce the impacts of construction of some of the high-volume at-grade crossings such as that at west Alameda Street north of Rosecrans. For example, the size of the area under construction on Alameda Street could be limited to allow maintenance of one southbound lane and two northbound lanes at all times during construction so that the potential problem of northbound queues extending into the Rosecrans intersection and subsequently restricting east/west traffic movements would be reduced by eliminating the northbound merge. Alternatively, construction at this and other high-volume locations could be limited to off-peak hours, and metal plates could be placed across excavated pavement areas to accommodate four travel lanes during peak commute hours throughout the construction period.

Finally, special attention should be given to 1) adequate advance warning for motorists of the construction zone ahead, 2) proper lighting of the construction areas during nighttime (non-construction) hours to maximize safety, and 3) accommodation for handicapped pedestrians during construction activity.

III-320 RAILROAD OPERATIONS

III-321 Impacts Assessment and Mitigation Measures

Implementation of MC-5 would require the construction of approximately 20,000 feet of new rail line to relocate Wilmington Branch freight rail traffic to the San Pedro Branch ROW of the Southern Pacific. This would result in the abandonment of all existing at-grade rail crossings of the Wilmington Line from Rosecrans Avenue to Compton Creek. Also, two new at-grade rail crossings, one on east Willowbrook Avenue north of Rosecrans Avenue and one on west Alameda Street north of Rosecrans Avenue, would be created.

None of the main-line freight activities would be interrupted during construction of the project. Proper scheduling of construction activity at the two locations where the Mealy Street diversion connects to the Wilmington Line would ensure continued operations on the Wilmington Line. In addition, relocation of a short section of the San Pedro Line at Rosecrans Avenue prior to construction of the Mealy Street Connector would ensure uninterrupted operation on the San Pedro Line. The Owens-Corning spur would be relocated, however, and could be inoperative for a short period.

III-400 CUMULATIVE IMPACTS WITH RELATED PROJECTS

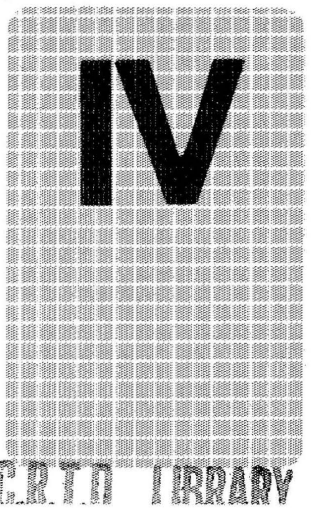
Several related projects which could be constructed at approximately the same time as MC-5 are listed in Section I-500 of this document.

If the rail consolidation recommendations of the San Pedro Bay Ports Access Study are implemented, there may be construction activity (construction of roadway grade separations - see Section II-420) at various locations in the vicinity of MC-5. Specific locations and the magnitude of such activities are not known at this time; however, it would be reasonable to expect that should such activity occur, there would be some additional noise, dust, congestion, and disposal activity.

Implementation of the Intermodal Container Transfer Facility (ICTF) would increase freight rail traffic in the mid-corridor principally on the Southern Pacific Wilmington Branch, but also on its San Pedro Branch.

Development of the Harbor Freeway Transitway (which may be deferred by Caltrans to the early 1990s) would also add to east/west traffic problems. It is expected that traffic congestion would be the major cumulative impact in the mid-corridor; maintaining a smooth east/west traffic flow during project construction would be a major goal. Mitigation measures would include proper signing, advance warning to affected neighborhoods, and an appropriate number of detours. No additional mitigation measures are expected to be necessary.

Chapter



IV IMPACTS AND MITIGATION MEASURES DURING OPERATION

The operations impacts of MC-5 are assessed against year 2000 and current No Project conditions (current defined as 1980, 1983 or 1985, depending on data availability). Issues dealt with in the previous environmental documentation are not reexamined. The year 2000 was selected for analysis because it represents a year when the system would be in full operation and because population and employment data are available on a regional basis for that year (SCAG '82). When significant and/or substantial mitigation measures are required for a particular impact category, such measures are discussed in a separate section. Otherwise, mitigation measures, if required, are examined in the impacts section.

IV-100 NATURAL ENVIRONMENT

IV-110 GEOLOGY AND HYDROLOGY

IV-111 Impacts Assessment

Operation of Alternative MC-5 (Mealy Street Freight Rail Diversion) would have little or no impact on topography and soils, nor would it have any effect on soil used for agricultural development. Soils incorporated into the project for foundation and backfill would be tested for their suitability for construction purposes prior to use.

The proposed project, which would operate at-grade, on elevated structures and/or below-grade, would be located in a highly active seismic area under the influence of the four major fault zones previously mentioned in Section II-211. During moderate and major earthquakes, the alignment would be subject to strong ground-shaking; structures could potentially crack and slip from joints and foundations. Careful testing of soil foundations and correction of weaknesses in soil strength, coupled with state-of-the-art seismic design, would lessen the severity of the effect. Structures would be designed to withstand collapse from a maximum credible earthquake.

Caltrans preliminary geological investigations for the overall mid-corridor, including Compton, indicate that liquefaction potential is high. Should soils subject to liquefaction be found below the proposed MC-5 alignment, then site-specific engineering techniques (e.g., importation of stable material, compaction of soils, permanent dewatering, and attachment of deep-set piles to bedrock or lower, denser soils) would be implemented as mitigation measures. The MC-5 alignment would not cross an existing fault where it would be subject to fault rupture hazards.

Alternative MC-5 would not encroach upon an established floodplain. There would be no need for the construction of major flood control facilities. The Compton area is a highly urbanized region. The construction of the project would not create additional pressure for growth in areas subject to flooding. Impacts would be limited to the possibility that construction of the project could alter some drainage flow patterns. Alternative MC-5 would be designed and constructed with intrinsic drainage facilities such as subdrains, sumps, gutters, culverts, and catch basins, as appropriate.

Nor would the alignment have any negative effect on drainage flow patterns in the Compton area. The proposed alternative would generally maintain existing flow patterns and would generate no more water than existing vehicles and development. Existing and proposed surface streets and drainage facilities would be adequate to handle any runoff coming from the project. Supplemental catch basins could be constructed, if necessary, to collect any excess water.

In the Compton area, there is a diffused regionwide source of pollution which affects water quality. This pollution source is urban runoff primarily from paved surfaces consisting of such water pollutants as sediment, lead, oils, and grease that are eventually discharged into local water bodies, mainly during storm conditions. The proposed alignment would not add measurable amounts of pollutants to existing urban runoff.

The operation of Alternative MC-5 would comply with all applicable federal, state, and local policies, and standards and land use strategies which address water resource impacts, including the Federal 208 Areawide Waste Treatment Management Plan. The project is not expected to have any significant adverse impacts upon water bodies or wastewater treatment facilities within the South Coast Planning Area (208 Plan Area).

IV-120 VEGETATION AND WILDLIFE

IV-121 Impacts Assessment

Existing landscaping, ruderal (predominantly weedy) vegetation, and wildlife within the construction area of Alternative MC-5 would be either permanently removed or relocated. The amount of vegetation and wildlife within the existing mid-corridor right-of-way is relatively small and considered insignificant. Most existing trees would not be disturbed, although some may have to be trimmed. The operation of the new connector would have no additional impact on wildlife over existing automobile and freight rail traffic. No mitigation would be required.

IV-130 NOISE AND VIBRATION

IV-131 Noise

IV-131.1 Impacts Assessment

In the project area, the major noise source at present is traffic on Willowbrook Avenue and Alameda Street, with a relatively small contribution, on average, from freight rail traffic. In the future, however, anticipated increases in freight traffic would result in a much greater contribution from this source along both Willowbrook Avenue and Alameda Street.

The light rail portion of the project would remain in the Wilmington ROW; however if MC-5 is implemented, it would rise on an aerial structure to cross over the diverted freight tracks and return to grade south of Rosecrans. Previous studies have shown that light rail noise on an aerial structure is about 3 dBA greater than at at-grade operation.

The diversion of freight rail traffic from the Wilmington ROW to the San Pedro ROW would significantly lower the noise levels along the entire Wilmington ROW, even with the addition of 3 dBA due to the aerial LRT at Rosecrans Avenue. The CNEL reduction along the Wilmington ROW south of Rosecrans Avenue would range from 2.1 dBA at Willowbrook and Rosecrans to as much as 11 dBA at Willowbrook and Elm Street.

Current freight traffic traveling at 20 mph on the Wilmington Branch produces a CNEL at 25 feet of 74 dBA. (As described in Section II-230, the CNEL is a 24-hour average level, incorporating adjustments for noises occurring during evening and nighttime hours.) As a means of comparison, Table IV-13A lists estimated distances to different CNEL values for three freight train traffic levels along the Wilmington Branch: existing levels of traffic and two future levels, including the Low Scenario and High Scenario Status Quo options recently studied in the San Pedro Bay Ports Access Study. The significantly higher noise exposures generated by the existing and future freight rail traffic are apparent in the much greater distances shown to the various CNEL values.

As shown by the maximum passby and contour distance comparisons, the light rail system (aerial section) would be an insignificant contributor to the noise environment along Willowbrook Avenue. Under MC-5, diversion of freight traffic would result in a significant lowering of current and future noise levels attributable to freight

TABLE IV-13A

FREIGHT TRAIN CNELs ON SPTC WILMINGTON BRANCH

S.P. Wilmington Branch	Distance in Feet to Indicated CNEL[1]				
	75 dBA	70 dBA	65 dBA	60 dBA	55 dBA
Existing Freight Traffic	--	64	200	632	2,000
Future Rail Freight Traffic (year 2000)					
Low Scenario[2] (13 trains/day)	50	158	500	1,585	5,000
High Scenario[2] (25 trains/day)	100	316	1,000	3,160	10,000

[1]Assumes flat, open terrain with no shielding elements (atmospheric absorption not taken into account).

[2]The freight rail traffic levels shown for year 2000 are for the SPTC Wilmington Branch. Projected low and high scenarios represent a range of possible future freight rail traffic levels that might happen if all potential growth occurs. It is not possible to predict whether all of this growth would occur before year 2000, although port planning in both Los Angeles and Long Beach assumes such growth.

Source: BBN Laboratories, 1985.

trains along Willowbrook Avenue in the City of Compton. MC-5 would also raise noise levels slightly along Alameda Street due to the relocation of the Wilmington Branch rail traffic onto the Alameda Street railway corridor. Table IV-13B lists estimated distances to different CNEL values for various levels of freight train traffic on the San Pedro Branch ROW.

In order to quantitatively evaluate the impact of the light rail operations and the diversion of freight train operations, a fractional impact analysis was performed. The fractional impact methodology is a means of taking into account the absolute levels of the future noise environ-

ment, the level of the existing noise environment, and the distribution of people exposed to various noise levels. In simple terms, the level weighted population (LWP) used in the fractional impact analysis is a compilation of all the population affected by noise within a specified distance. This number is not an absolute number of people but has weighting factors applied to reflect differing sound levels as related to distance and intensity. This method of counting the number of affected people allows not only a comparison among the alternatives but also a comparison of existing to future conditions.

TABLE IV-13B

FREIGHT TRAIN CNELs ON
SPTC SAN PEDRO BRANCH ROW

S.P. San Pedro Branch	Distance in Feet to Indicated CNEL[1]				
	75 dBA	70 dBA	65 dBA	60 dBA	55 dBA
Existing Freight Traffic	--	32	100	316	1,000
Future Freight Rail Traffic (Year 2000) High Scenario (10 trains/day)[2]	40	126	400	1,264	4,000
Future Freight Rail Traffic (Year 2000) High Scenario With Diverted Wilmington Branch (35 trains/day)[2]	140	442	1,400	4,424	14,000

[1] Assumes flat, open terrain with no shielding elements (atmospheric absorption not taken into account).

[2] The freight rail traffic levels shown for year 2000 are for the SPTC San Pedro Branch. Projected low and high scenarios represent a range of possible future freight rail traffic levels that might happen if all potential growth occurs. It is not possible to predict whether all of this growth would occur before year 2000, although port planning in both Los Angeles and Long Beach assumes such growth.

Source: BBN Laboratories, 1985.

Table IV-13C presents the results of the impact analysis. The table lists by alternative the total number of people in each community who live within 500 feet of the rail routes. Under the three columns labeled "existing," the table gives the number of people with existing CNEL in excess of 65 dBA. This value is considered to be the dividing line between an acceptable and an unacceptable noise environment for residential land use. Next is listed the LWP, followed by the noise impact index (NII). The NII is the ratio of the level weighted population to the total number of people. For example, under Alternative MC-1 the table shows that there are 2,686 people living along the Wilmington Branch right-of-way in Compton. Of these, 452 have an existing noise exposure in excess of 65 dBA. The level weighted population is 630, or 23 percent of the total number of people living along that corridor.

The next two sets of columns in the table provide the same noise exposure information for the future conditions, with or without the light rail project. As indicated in the table, the future condition analysis includes the High Scenario for freight rail operations along the Wilmington and San Pedro Branches.

Examination of the NII and the LWP indicates that even if all potential growth in freight rail operations does not materialize, there would still be a sharp increase in the noise environment from existing conditions to future conditions with or without the freight rail diversion and light rail transit project. Under MC-1, addition of the LRT project to the future scenario along the Wilmington Branch would change the impact numbers insignificantly (of course, there is no change under MC-1 along the San Pedro Branch).

Under MC-5, there would be a significant decrease in noise impacts along the Wilmington Branch ROW. This can be seen in Table IV-13C which shows, for example, that the number of people experiencing a CNEL of 65 or greater would be reduced from 452 (with existing conditions) to 239 (with the project in the year 2000). Similar reductions can be found for the LWP and NII. Simultaneously, there would be a significant increase in impact along the San Pedro Branch. Comparing the totals, there would be a lower impact for MC-5 (LWP is 2,472) than for MC-1 (LWP is 2,864). Also, the total impact for MC-5 would be lower than the total impact for future conditions without the project (LWP is 2,849).

With the traffic mitigation measures for MC-5 proposed in Section IV-311, (some Alameda Street traffic now on west Alameda split in future between the west roadway and the east roadway), there would be a slight reduction in noise exposure and a corresponding reduction in noise impact because there are fewer people residing along east Alameda.

TABLE IV-13C

NOISE IMPACT ANALYSIS RESULTS

Alternative	Total No. People[1]	Existing			Year 2000 (High Scenario) No Build			Year 2000 (High Scenario) Project		
		65+[2]	LWP[3]	NII[4]	65+[2]	LWP[3]	NII[4]	65+[2]	LWP[3]	NII[4]
MC-1										
Wilmington Branch	2,686	452	630	.23	1,252	1,341	.50	1,252	1,356	.50
San Pedro Branch[6]	2,811	1,214	1,179	.42	1,770	1,508	.54	1,770	1,508	.54
TOTAL	5,497	1,666	1,809	.33	3,022	2,849	.52	3,022	2,864	.52
MC-5										
Wilmington Branch	2,686	452	630	.23	1,252	1,341	.50	239	252	.09
San Pedro Branch[6]	2,811	1,214	1,179	.42	1,770	1,508	.54	2,501	2,220	.79
TOTAL	5,497	1,666	1,809	.33	3,022	2,849	.52	2,740	2,472	.45
MC-5 WITH TRAFFIC MITIGATION OPTION[5]										
Wilmington Branch	2,686	452	630	.23	1,252	1,341	.50	239	252	.09
San Pedro Branch[6]	2,811	1,214	1,179	.42	1,770	1,508	.54	2,465	2,193	.78
TOTAL	5,497	1,666	1,809	.33	3,022	2,849	.52	2,704	2,445	.44

Notes:

1. People living within 500 feet of route
2. 65+ - No. people with CNEL greater then 65 dBA
3. LWP - Level Weighted Population
4. NII - Noise Impact Index = LWP / Total No. People
5. Possible rerouting of through traffic from west Alameda to east Alameda with reconfiguration of the Pine Avenue grade crossing.
6. San Pedro Branch includes Mealy Street area

Source: BBN Laboratories, 1985.

Table IV-13D lists CNEL estimates for future conditions with and without the project for non-residential noise-sensitive land uses along the corridor. Again, the diversion of freight rail traffic results in some substantial decreases in the noise levels along Willowbrook Avenue and a slight increase in noise levels along Alameda Street.

IV-131.2 Mitigation Measures

The increase in noise exposure under MC-5 would occur in two different areas. Along the San Pedro Branch ROW, there would be an increase in freight rail traffic from existing to proposed future levels. Residents are currently exposed to freight rail operations; under MC-5 they would experience comparable levels when individual trains passed by (passby levels) but, as there would be significantly more trains with the relocation, there would be increased frequency. The increase in noise exposure over future No Project conditions would range from 0 to 3.5 dB CNEL, depending on location, surface traffic flow, etc. This amount of increase, however, is usually not considered significant, and no mitigation measures would be needed in this area.

Along the Mealy Street Connector freight rail traffic would be introduced into an area now exposed only to street traffic and industrial noise, an area where no freight rail traffic would be expected in the future under any alternative except MC-5. Here, noise exposure is expected to increase significantly. For example, at the new apartment building south of Mealy Street, the CNEL may increase by 15 dB (assuming that the High Scenario level of freight train operations occurs). Several other dwelling units in the area are likely to experience somewhat lower, but nonetheless significant increases. The maximum noise level for each freight train passby at the apartment building would be 95 dBA, significantly higher than noise levels from existing sources. Such levels would be expected to occur, on average, about once per hour if all potential growth in freight train traffic actually materializes.

There are three different approaches that could be used to mitigate noise impacts, i.e., soundwalls, soundproofing, and purchase of noise easements. Only the latter two are considered feasible in this instance. Noise walls would have to be 15 to 20 feet high, or more, because of the height of the noise sound associated with conventional freight rail vehicles (the exhaust stack of the locomotive) and the height of the observers (second floor in the case of the apartment building). Walls this high may not be acceptable to residents on aesthetic grounds or to the railroad on the grounds of impaired access to the right-of-way. Consequently, this solution is not currently proposed as mitigation. If it were to be considered, it would cost approximately $300 per foot for about 1,000 feet, or approximately $300,000 to install.

TABLE IV-13D

NOISE EXPOSURE ESTIMATES FOR NON-RESIDENTIAL NOISE-SENSITIVE RECEPTORS, MC-5

Type	Nearest Street Intersection	CNEL, dBA Future No Project	LRT Level	Future with MC-5 Project*	Project Contribution
Wilmington Branch					
Church	Willowbrook & Rosecrans	80.7	62.0	78.6	-2.1
Church	Willowbrook & Rosecrans	80.7	62.0	78.6	-2.1
Church	Willowbrook & Maple	73.7	56.0	62.3	-11.4
Church	Willowbrook & Elm-Compton	73.5	55.2	62.1	-11.4
Church	Willowbrook & Elm-Compton	73.5	55.2	62.1	-11.4
Church	Willowbrook & Elm-Compton	73.5	55.2	62.1	-11.4
School	Willowbrook & Alondra	76.0	56.6	70.9	-5.1
San Pedro Branch					
Church	Alameda & Rosecrans	79.0	--	81.0	+2.0
School	Alameda & Rosecrans	79.5	--	80.4	+0.9
Church	Alameda & Palmer	80.5	--	82.3	+1.6
Library	Alameda & Compton	79.0	--	81.0	+2.0
Church	Alameda & Almond	73.4	--	76.7	+3.3
Children's Center	Alameda & Indigo	77.7	--	79.2	+1.5
Medical Facility	Alameda & Rosecrans	79.0	--	81.0	+2.0

* No freight rail traffic along Wilmington ROW.

Source: BBN Laboratories, 1985.

A second method of mitigation would be to modify homes to reduce interior noise levels. One disadvantage of this approach is that the outdoor noise environment is not affected. While it is difficult to estimate the exact types of mitigation that would be required without a detailed study of the structures to be modified, it is technically feasible to obtain a reduction of 10 to 15 dBA (relative to an open-window condition) by appropriate modification to windows, doors, and walls and the addition of air conditioning or mechanical ventilation systems. Typical costs of such modifications would be approximately $22,000 per single-family dwelling and $4,000 per apartment unit.

A third method of mitigation would entail the purchase of noise easements from the affected properties. Such easements would result from negotiations between the LACTC and the property owners in question. Depending on the location, the cost range could be $250 to $10,000 or more. Such easements would not, of course, reduce the actual noise impact.

IV-132 Vibration Impacts

Under MC-5, there would be a significant increase in the number of freight trains passing by vibration-sensitive locations along the San Pedro Branch ROW. Just as analysis indicated a significant increase in the noise exposure for these locations, there would be a significant increase in vibration exposure as well. Of greatest concern would be the impact on vibration-sensitive receptors along the Mealy Street Connector, where there is now no freight rail operation. For residences along this line, vibration levels comparable to existing levels along current freight rail lines would be expected.

For example, Figure IV-13A shows results of vibration measurements of freight train operations obtained in a prior study ("Railroad Corridor Transportation Report," Envirosphere Company, Newport Beach, CA, 1982). The measured data have been normalized to a distance of 100 feet from the track and a speed of 25 mph. The mean vibration spectrum and the range of vibration levels measured is plotted on the figure. The large range occurs because of localized ground propagation conditions and was observed for multiple measurements of similar trains as well as measurements at different distances for the same train. Trains would travel on the Mealy Street Connector at speeds of 20 mph and the closest distance from the tracks to the nearest building would be approximately 50 feet. For these conditions, the curves in the figure would shift downward by 3 to 6 dB. The mean vibration level would be well under any of the CHABA curves; however, some freight trains may generate vibration levels in the general range of the criterion curves. A significant impact is not expected, and no mitigation measures are warranted.

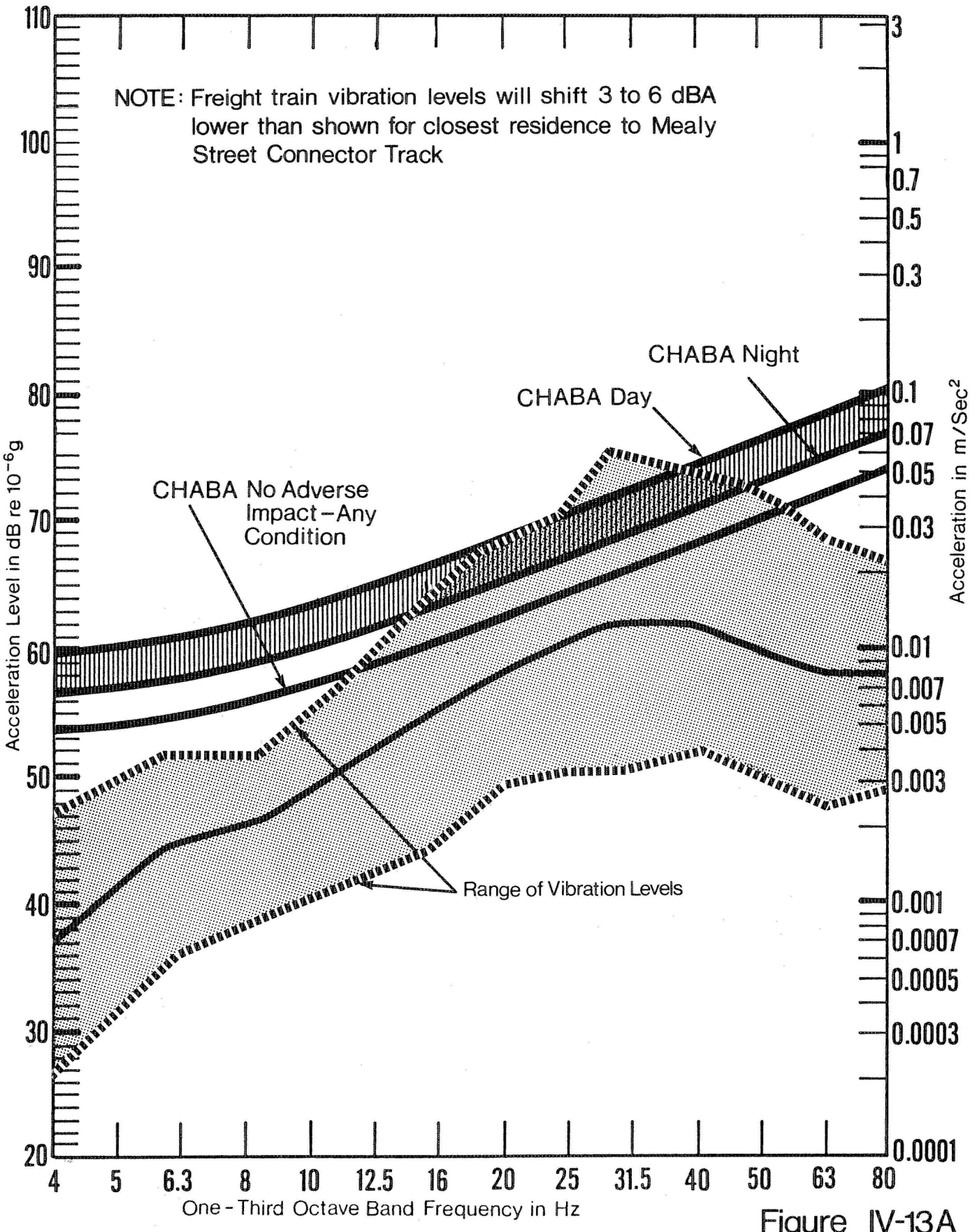


Figure IV-13A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Comparison of Measured Train Vibration Levels Using CHABA Criteria

PARSONS BRINCKERHOFF / KAISER ENGINEERS

IV-140 AIR QUALITY

IV-141 Impacts Assessment

The proposed MC-5 project improvements encompass a relatively small change to the entire Long Beach-Los Angeles Rail Transit Project, for which regional air quality impacts have been described in the May 1984 DEIR.

In that document, it was concluded that the entire light rail project would have a positive but extremely small influence on regional air quality. This conclusion is simply due to the fact that automobile-related travel, even with the most pervasive of public transportation systems, greatly overwhelms all other forms of travel and therefore dictates the state of mobile source emissions in the South Coast Air Basin. Given the fact that the proposed MC-5 improvements constitute a small change compared to the LRT project as a whole, these regional air quality conclusions remain unchanged.

Although the impact of the proposed MC-5 improvements would be negligible with regard to regional air quality, the same conclusion may not necessarily be valid for localized effects. In order to draw a conclusion in this regard, a localized carbon monoxide analysis was conducted and is described below.

A local carbon monoxide concentration analysis was conducted in the vicinity of the intersection of Rosecrans Avenue and Alameda Street, both with and without the proposed project. The California Line Source Dispersion model was used for this purpose. Each of the major sources of carbon monoxide emissions (Alameda, Rosecrans, Southern Pacific Railroad) was represented as a line source. A receptor location was selected to represent a typical pedestrian, the location being specified as a point on the sidewalk of west Alameda Street, approximately 200 feet north of the center line of Rosecrans Avenue.

Four cases were analyzed at this intersection. Case I represented the existing condition, defined as existing (1984) roadway and rail trackage geometry, together with 1984 automobile travel in the peak hour and an assumed passage of one freight train in the peak hour on the San Pedro Branch. Cases II - IV were defined to represent various conditions in the year 2000, to each of which were applied year 2000 automobile and freight rail traffic, assuming a worst-case condition of two trains arriving back-to-back in the peak hour. Case II was defined as the No Project condition (existing geometry). Case III consisted of proposed at-grade project improvements. Case IV consisted of the proposed Rosecrans Avenue grade separations. Both the underpass and overpass options represent equal improvements for purposes of line source modeling.

Two levels of ambient conditions were selected and applied to each analysis case. (Ambient conditions are meant to represent the level of background emissions in the project area, to which must be added the contributions of mobile sources.) The first of these was the highest one-hour carbon monoxide concentration at the Lynwood monitoring station and the second was the annual average of all hourly readings. The highest one-hour reading was taken from 1984 data, as prepared by the South Coast Air Quality Management District. As noted in Section II-240, the Lynwood monitoring station records fairly high carbon monoxide concentrations because of its proximity to a freeway. The annual average was taken from 1983 data, which was the most recent published information. Year 2000 ambient conditions were derived by attenuating the 1983/84 data by a factor equivalent to the expected decrease in auto emission factors to be attained in the year 2000.

The results of the analysis are displayed in Table IV-15A. Under existing conditions, the federal one-hour standard (35 ppm) is not violated, even in the worst hour of the year, but the state one-hour standard (20 ppm) is violated approximately 11 times per year. By the year 2000, it is anticipated that the state standard would be violated less frequently because of the expected improvements in automobile emissions characteristics.

Using standard planning estimates to calculate eight-hour concentrations, both the federal and state eight-hour standards (9.3 and 9.1 PPM, respectively) are now being violated and would continue to be violated in the year 2000 during certain times of the year with or without the project. Whether Rosecrans Avenue is at-grade or grade-separated at Alameda Street, the project would slightly increase carbon monoxide concentrations over the No Project condition in the vicinity of the intersection. The grade-separated options show a smaller predicted increase over the No Project condition than the at-grade alternative.

The annual averages shown in the table are provided to place the carbon monoxide situation into an appropriate context. Typical carbon monoxide concentrations are far less than the highest hourly readings would indicate. Although this does not excuse violations of federal and state standards, it does demonstrate that the period of such violations is typically confined to the winter months of the year, when dissipation of carbon monoxide is most difficult, and, further, that the frequency of violations is decreasing. The differences in calculated concentrations between the No Project alternative and both the at-grade and grade-separated alternatives are so small that it is likely none of the proposed MC-5 options would have a significant impact on local air quality.

TABLE IV-15A

CARBON MONOXIDE CONCENTRATIONS ESTIMATED IN THE VICINITY OF ALAMEDA STREET AND ROSECRANS AVENUE

A. CALCULATED MOBILE SOURCE-RELATED ONE-HOUR CONCENTRATIONS

Case I	- Existing Conditions	=	1.98 PPM
Case II	- Year 2000/No Project	=	2.10 PPM
Case III	- Year 2000/At-Grade Project	=	2.78 PPM
Case IV	- Year 2000/Grade Separations	=	2.57 PPM

B. AMBIENT CONCENTRATIONS

1984 = 29.0 PPM (highest)[1] and 2.6 PPM (annual average)[2]
2000 = 23.2 PPM (highest)[1] and 2.1 PPM (annual average)[2]

C. TOTAL ONE-HOUR CONCENTRATIONS (PPM)

Case	Highest Hour[3]	Annual Average
I	30.98	4.58
II	25.30	4.20
III	25.98	4.88
IV	25.77	4.67

D. TOTAL EIGHT-HOUR CONCENTRATIONS (PPM)
(Calculated @ 70% of one-hour)

Case	Highest Hour[3]	Annual Average
I	21.68	3.21
II	17.71	2.94
III	18.18	3.42
IV	18.04	3.27

[1] Worst one-hour reading at Lynwood monitoring station.

[2] Average of all one-hour readings over the course of the year.

[3] Highest hour readings typically occur in the morning hours from November through February.

Source: Myra L. Frank & Associates, 1985.

IV-150 ENERGY USE

IV-151 Impacts Assessment

Operational energy consumption estimates for the entire Long Beach-Los Angeles Rail Transit Project have been calculated and reported in the May 1984 DEIR, both in terms of energy associated with vehicular fuel consumption in the Southern California region and for system propulsion energy. When compared with the No Project alternative (12,779,689 gallons of gasoline consumed by light-duty vehicles per day), the baseline alternative (12,745,939 gallons per day) showed a regional daily fuel reduction of 0.26 percent. When the same comparison was drawn for vehicle propulsion energy (including auto, bus, LRT, Metro Rail, and freight rail), the No Project alternative showed an annualized consumption of 544,552 billion BTUs, whereas the baseline alternative resulted in 543,296 billion BTUs -- a savings of 0.23 percent of all sources of energy.

As demonstrated by the figures shown above, the light rail transit project as a whole would have a positive but very small benefit on regional energy consumption. The MC-5 alternative would result in a change in the overall project that must be characterized as very small, both in physical configuration and in terms of system operation. It is not expected to affect patronage and -- even when including the proposed grade separation -- would have only a small effect on vehicle operations, particularly within the regional context. Alternative MC-5 would increase the travel distance for freight rail traffic by approximately 1,500 feet, which would have an inconsequential effect on rail energy consumption. It is therefore concluded that the MC-5 alternative would have no measurable effect on operational energy consumption requiring mitigation.

IV-200 SOCIOECONOMIC ENVIRONMENT

IV-210 LAND USE, POPULATION, AND HOUSING

The methodology by which year 2000 growth forecasts were adjusted to estimate potential project-induced changes is discussed in Section IV-121 of the May 1984 DEIR.

IV-211 Land Use and Development

The following discussion is broken into two parts: 1) an assessment of the amount of project-induced development, and 2) an evaluation of how well the project would meet transit-related goals and objectives as stipulated in local general, community, and redevelopment plans.

IV-211.1 Growth-Inducing Impacts

It is expected that implementation of MC-5 would not change the potential for the overall LRT project to induce modest growth in a manner consistent with previous SCAG projections for the mid-corridor, namely, approximately 100,000 square feet of retail and 300,000 square feet of office development (see Table IV-22A of May 1984 DEIR). The diversion of freight rail traffic away from downtown Compton could also provide additional support for downtown development and enhance the attractiveness of the Compton CBD as a site for commercial and retail investment; it is, therefore, considered as supportive of the city's plans for growth.

IV-211.2 Conformance with Land Use Plans

The applicable land use plans concerning the MC-5 project area are the Compton General Plan, the Compton Redevelopment Plan, and the SCAG Ports Access Plan. The MC-5 freight rail diversion is consistent with all these plans. The Compton General Plan shows the project area with an industrial/manufacturing designation. Therefore, the introduction of freight rail into the area, although incompatible with the existing housing, is not inconsistent with the city's General Plan.

Adopted redevelopment plans for the Compton area focus on the Civic Center area and the Walnut Industrial Park. Both of these areas are to the south of the MC-5 project area. One of the redevelopment goals of the City of Compton is the removal of freight rail traffic from the Wilmington Branch adjacent to the Civic Center. The MC-5 alternative would meet this goal. Rail access to the Walnut Industrial Park could be maintained from the south, so the MC-5 diversion would not preclude local freight rail service to that area in the future.

The MC-5 project would be a first step in the consolidation of freight rail on the San Pedro Branch and is, therefore, in conformance with the adopted Rail Consolidation Policy of SCAG. It should be noted, however, that the physical institution of this first link may limit or preclude future implementation choices for the ultimate objective of the policy, which is a consolidated corridor for ports-related freight rail traffic along Alameda Street.

The LRT alignment and station location for MC-5 in Compton would be the same as for the other mid-corridor alternatives discussed in Chapter IV of the DEIR.

IV-211.3 Compatibility With Existing Land Uses

The introduction of freight rail traffic into the Mealy Street area between the two railroad branches is clearly incompatible with the existing residential uses south of Mealy Street and to the west of Mona Boulevard. It is not incompatible with the industrial and commerical uses (Owens-Corning plant and Compton Foundry) to the north and the heavy commercial uses (auto parts storage) along Alameda Street.

Neither of the grade separation options (Options B or C) at Alameda and Rosecrans would be totally compatible with the commercial nature of Rosecrans Avenue. The grade separations would introduce incompatibilities by changing the traffic patterns and pedestrian access, as well as introducing new visual elements. Shifting freight rail traffic from the Wilmington Branch ROW to the San Pedro Branch ROW under MC-5 would have the same land use impacts as the relocation proposed under MC-3 (DEIR, May 1984). For this latter alternative, it was found that the land uses adjacent to the San Pedro Branch were predominantly industrial and would not be adversely affected by the increased freight rail traffic, but that the remaining commercial and residential uses would. The incompatiblities would be a result of noise, traffic, and altered access. Conversely, along the Wilmington Branch, which has more residential land uses, the removal of freight rail traffic would be a positive benefit.

IV-212 Population Impacts

It is expected that MC-5 would have little or no growth-inducing impact beyond that predicted by SCAG for the other mid-corridor alternatives. According to SCAG, the Long Beach-Los Angeles Rail Transit Project is expected to increase the population in the mid-corridor by only one percent over the year 2000 forecast without the project.

IV-213 Housing Impacts

In the DEIR it was found that the light rail transit system would be likely to stimulate or encourage existing residential development trends; it would not create significant new building activity in areas where the momentum for growth was not already initiated. The diversion of the freight rail traffic under option MC-5 could provide further impetus to residential redevelopment in the Compton Boulevard station area while conversely discouraging residential development in the immediate vicinity of Mealy Street.

IV-220 COMMUNITY SERVICES

IV-221 Impacts Assessment

Substantial traffic queues could develop on Alameda Street (west roadway) under all options due to at-grade freight train crossing movements via the Mealy Street Connector. For those vehicles traveling north/south on west Alameda, the increase in congestion would reduce access to community facilities. The response times of emergency vehicles traveling via west Alameda could also increase.

Under Option A (at-grade intersection of Rosecrans and Alameda), the increase in at-grade freight rail activity on the San Pedro Branch could result in substantial queues developing on Rosecrans. The traffic delays would adversely affect access to community facilities and prolong the response times of emergency vehicles. The grade separation options, however, would improve accessibility and reduce response times for emergency vehicles traveling via Rosecrans to areas east and west of Alameda.

Existing through access to pedestrians and autos on Tamarind and Mona would be prohibited under all MC-5 options. Although the fencing along the Mealy Street Connector would serve to protect pedestrians from freight rail activity on the right-of-way, it would also require that they seek alternate routes to reach their destinations via the nearest grade crossing. This could mean a diversion of up to one-quarter mile. Under all options, sidewalks along Rosecrans would be reduced in width and on-street parking would be eliminated. This would have an adverse impact on public access to the community facilities located on Rosecrans.

IV-222 Mitigation Measures

Diminished auto access to community services and prolonged response times for emergency vehicles as a result of queuing problems due to at-grade freight traffic would be alleviated by applying TSM

improvements and other traffic congestion mitigation measures (see Section IV-310). Emergency services would need to simulate responses (tests) and develop alternate routes and/or contingency plans. Traffic signing and control elements would be implemented to encourage diversion of traffic from Alameda (west) to Alameda (east) if substantial queues develop on Alameda (west) due to at-grade freight train crossing movements. Though substantial queues could develop on Rosecrans at Alameda under Option A (at-grade) beyond those which currently exist, it should be noted that under MC-5 the at- grade rail crossing of the Wilmington Branch at Rosecrans would be eliminated. Since the LRT tracks would pass over Rosecrans, the Wilmington Branch right-of-way would no longer be a source of queuing problems on Rosecrans.

IV-230 ECONOMIC ACTIVITY

IV-231 Impacts Assessment

o Property Tax Revenue

No property acquisitions are anticipated for construction of the LRT aerial guideway, as that structure can be accommodated entirely within the existing SPTC right-of-way. The Mealy Street Connector, however, would pass through all or a portion of 26 individual parcels. Of these 26 parcels, it appears that some would be required in their entirety, while others would be subject to partial acquisition. Of the 26 parcels, five are publicly-owned and 21 are under private ownership, with two owned by the SPTC. The parcels that are acquired would be removed from the property tax rolls and the tax revenues would be lost to Los Angeles County.

According to preliminary engineering drawings, private property acquisition would be required only under Option B. However, conceptual drawings for Options A and C could be revised in later design and require additional right-of-way beyond the sidewalks, setbacks, and corners currently shown.

In addition, the specific method of construction could affect access to properties along Rosecrans, particularly for Options B and C. Although one lane of traffic in each direction should be maintained throughout most of the construction period, there will be periods when these roads will have to be closed, thereby reducing access even more. These periods could occur for two-three hours a day, two or three times a week for the heavy construction period.

For these reasons, impacts on property and sales taxes are to some extent speculative. Acquisitions for the Mealy Street Connector are

projected to remove $11,000 a year from the property tax rolls for all alternatives. This would amount to about 1.5 percent of the property taxes collected in Tax Rate Area 2800, or 0.25 percent of the City of Compton's property taxes. Potential acquisitions for Options B and C and potential business failures because of reduced access, loss of parking, and reduced visibility could induce additional property tax losses ranging from $6,000 to $17,000 a year. Total property tax losses could amount to $28,000 a year, particularly for the grade-separated alternatives. Such a loss would amount to 3.9 percent of the taxes collected in Tax Rate Area 2800, or 0.64 percent for the City of Compton. Reductions of more than two percent are considered to have a significant effect on individual areas.

New office, retail, and housing development in conjunction with the proposed LRT facility would increase the property tax base in the overall mid-corridor and generate new property taxes to the county, City of Compton, Special Districts, and other taxing agencies. Based on development projections and current market values for new development in the mid-corridor, Compton, and the county, the potential new annual property tax revenue indirectly generated by the proposed project would more than offset potential losses in property tax revenue created by implementation of MC-5. Table IV-23A shows the potential new annual property tax revenue to be generated by the LRT project (with or without MC-5), estimated in constant 1983 dollars.

TABLE IV-23A

ANNUAL PROPERTY TAX REVENUE POTENTIALLY GENERATED IN THE MID-CORRIDOR*

Indirectly Induced New Land Use	Property Tax Benefit
Office	$ 60,000
Retail	180,000
Housing	1,300,000
TOTAL	$1,540,000

*With LRT; with or without MC-5.

Source: Williams-Kuebelbeck and Associates, Inc., 1984.

o Local Business Activity

According to current plans, the at-grade option would not displace any businesses; however, widening the street may have a minor affect on sales for area businesses.

On-street parking would be permanently eliminated along Rosecrans Avenue for all options. Also, because of the presence of either underpass abutments (Option B) or overpass structures (Option C), direct left turns into mid-block business establishments would not be possible. As a result, accessibility to businesses along Rosecrans Avenue would be permanently impaired. However, there appears to be sufficient on-site or adjacent side street parking for most businesses on both sides of Rosecrans to allow their continued operation at or near former levels of activity. Two businesses, however, both on the south side of the street, appear to rely on on-street parking. For these two businesses, there would be some expected loss in business activity, due to increased walking distances from side street parking locations. Although no estimates have been made on sales volumes, it seems probable that the viability of the above two businesses would not be seriously adversely affected. A residential cluster on the south side of Rosecrans may also rely on on-street parking. Eliminating on-street parking could affect its attractiveness as a rental property.

On balance, however, the long-term effects on business activity along Rosecrans are considered to be minor.

The City of Compton generated $139.1 million in taxable retail sales revenue in 1984. The maximum potential loss from this amount attributable to implementation of the project would represent less than two percent of that total. In addition, new retail space associated with light rail-induced development would also generate several hundred new jobs which would offset losses attributable to implementation of MC-5.

IV-232 Mitigation Measures

Property tax impacts could be reduced by minimizing property acquisitions and by selling back excess property. If some businesses choose to terminate operations or relocate outside the area, however, there would be a loss of employment. Such a loss could be offset by the positive economic impacts of the project on redevelopment of local business.

Regarding tax revenues, new retail sales revenue could be indirectly generated by the LRT project through its impact on the development of potential retail sites. Overall, implementation of the LRT project (with or without MC-5) could contribute between $10 and $15 million (based on percentage market area of the mid-corridor) in annual taxable retail sales revenue to the City of Compton, more than making up for any potential loss due to displaced businesses.

IV-240 VISUAL QUALITY

IV-241 Impact Measures

The introduction of the MC-5 improvements would modify the existing visual character of the project area as well as create new visual elements. These visual elements, such as the freight diversion or the LRT itself, will be perceived differently by different observers. The assessment of visual impacts addresses direct changes in the setting introduced by the proposed project. Impacts are evaluated in terms of measures that consider changes in views, in visual setting, in the appearance of the street facade, and in the appearance of the street space; the compatibility of the system's components with the prevailing scale of buildings; and the visual proximity of the system to adjacent land uses.

IV-242 Impacts Assessment

The MC-5 freight rail diversion in Compton is generally situated within areas where it would not create a visual barrier except for abutting properties.

Visually non-sensitive segments of the alignment would include individual and commercial low-rise structures, setbacks, parking lots, and open fields (lots) which create non-continuous street facades and a weak definition of the street space. More visually sensitive segments of the alignment would include residential uses bordering the freight tracks and aerial structures.

IV-242.1 At-Grade Sections of LRT

The at-grade sections of the LRT would have relatively insignificant adverse impacts on the overall character, scale, and form of the visual setting in Compton. Visual impacts of the at-grade LRT sections would be limited primarily to the effects of required track improvements and the 24-foot high catenary support poles, spaced 80 to 100 feet on center, and electrical overhead wire. The median strip of Willowbrook Avenue between Oris Street and Greenleaf Boulevard is currently devoid of landscaping. Existing

poles within the SPTC ROW would be eliminated; however, several existing power and telephone lines paralleling the existing freight tracks in the street ROW would remain. The net effect would be a substitution of one set of poles for another within the SPTC ROW. A chain link fence (six to eight feet high) would also parallel the proposed right-of-way on both sides throughout its length.

Views of the new LRT catenary support poles and electrical wire would be obscured and screened to some extent by existing buildings. Also, the residences in the vicinity are generally situated between 75 and 100 feet from the proposed alignment along Willowbrook Avenue; therefore, the at-grade light rail transit section would not significantly alter the visual character of the area and would possibly improve it somewhat due to the more orderly configuration of the LRT poles.

IV-242.2 Elevated LRT Crossing on the Wilmington Branch

To eliminate conflicts between the light rail and freight operations on the Wilmington Branch, an elevated crossing (aerial guideway for the LRT) is proposed where the relocated SPTC tracks would swing eastward along Mealy Street. The new aerial guideway would be approximately 30 feet wide and 2,900 feet long, extending from just south of Oris Street to Elm Street south of Rosecrans Avenue.

Figure IV-24A, a view to the southwest from Mona Boulevard, shows existing conditions and a sketch of the proposed aerial guideway after construction of MC-5.

The elevated LRT crossing would be visually prominent and would impinge upon the viewshed of the adjacent community. Its scale and size would be incompatible with the surrounding neighborhood. The aerial structure would be highly visible from the neighborhoods both east and west of Willowbrook Avenue, where direct line-of-sight views of the structure would be created. The aerial structure and rail vehicles would be visible to all the residential units with windows and doorways facing Willowbrook Avenue and would affect the visual privacy of those units.

Light rail vehicle passengers on the aerial structure would have a clear view into the yards and windows of adjacent housing units.

The elevated guideway would be 16.5 to 23.5 feet above the ground and approximately 30 feet wide, supported by seven-foot-wide columns at roughly 80-foot intervals. Single or double catenary support poles at 80-foot to 100-foot intervals and overhead wires would extend 18 feet above the guideway. The support poles and electrical

Looking southwest from the intersection of Mona Boulevard and the east roadway of Willowbrook Avenue before (above) and after (below) construction of the LRT aerial section. Rosecrans Avenue is at the lower left. The building to the left of center is the Compton Courthouse, which is south of Compton Boulevard.

Figure IV-24A

Visual Analysis

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overhead wires would be visible as intermittent vertical elements above the guideway against the sky.

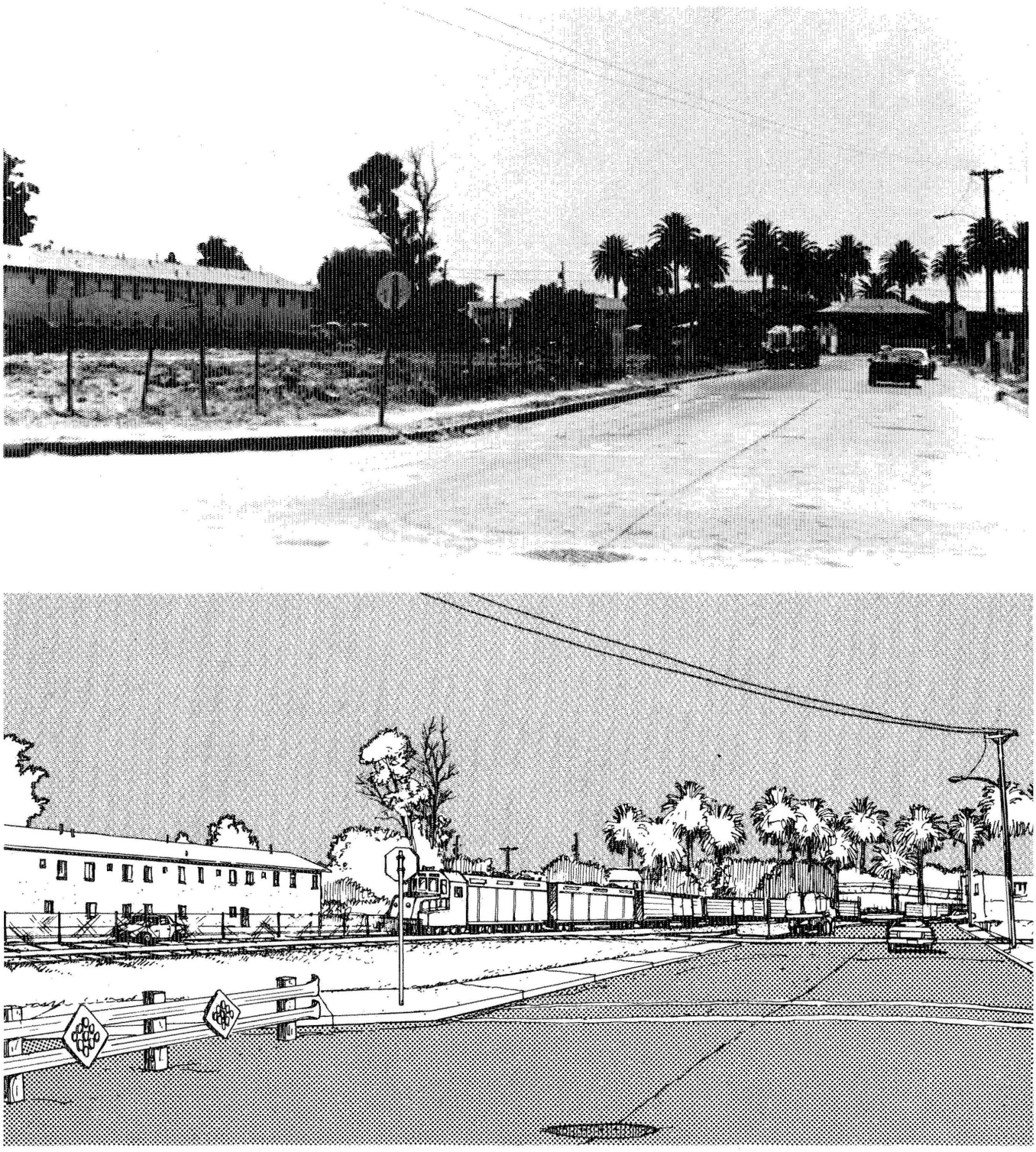
The aerial structure would tower above the adjacent low-rise buildings. It would also shade portions of Willowbrook Avenue. The shadows cast would vary daily and seasonally and would be located primarily within the street and rail right-of-way and not significantly affect adjacent buildings and residences.

IV-242.3 Mealy Street Connector

Implementation of MC-5 would divert freight operations off the Wilmington Branch (along Willowbrook Avenue) in the vicinity of Mealy Street. The proposed freight rail diversion would swing eastward from the Wilmington Branch at Mealy Street and parallel the south side of Mealy Street to Alameda (San Pedro Branch). Figure IV-24B depicts before and after conditions in this area. The neighborhood surrounding Mealy Street has not previously experienced freight rail traffic and its visual environment would be adversely affected by the diversion of freight trains into the area.

The land adjacent to the south side of Mealy Street is primarily residential, and residents are accustomed to viewing the proposed right-of-way as a vacant expanse of land, uninterrupted by trains. To a limited extent, fences along the freight rail diversion would screen an industrial area on the north side of Mealy Street from this residential area. From Willowbrook Avenue east to Alameda Street, the potential removal of approximately eight single-family residences and 27 multi-family units, together with the proposed improvements (trackbed), would further alter the visual appearance of the Mealy Street area. In addition, between Mona and Tamarind Streets, the freight rail diversion would be approximately 50 feet from the side of a new apartment building. This would adversely affect those apartment units with windows facing north onto Mealy Street and the proposed trackbed.

Implementation of the project would mean that the Mealy Street area would be affected by trains intermittently throughout the day. As a consequence, however, the area along the Wilmington Branch, where land use is largely residential, would no longer be exposed to the passage of freight trains on a daily basis.



Looking southwest from intersection of Mealy Street and Tamarind Avenue before (above) and after (below) construction of freight rail connector between SPTC Wilmington and San Pedro Branches. A southbound freight train is shown moving from the Wilmington Branch (along Willowbrook Avenue) to the San Pedro Branch (along Alameda Street). The Owens-Corning spur track and the team track are shown in the center and right foreground. The new local access street south of the Mealy Street Connector is visible on the far side of the tracks.

Figure IV-24B

Visual Analysis

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

SOUTHERN CALIFORNIA RAIL CONSULTANTS

Along Alameda Street, an expansive right-of-way and a development pattern of large-scale and bulky one-story industrial buildings result in discontinuous street facades and undefined street spaces. Currently approximately 60 percent of the land adjacent to the San Pedro Branch is industrial, 30 percent is residential, and 10 percent is commercial; occupants of buildings on these adjacent parcels are accustomed to seeing some freight traffic each day. The MC-5 diversion would only increase the frequency of occurrence of that visual element.

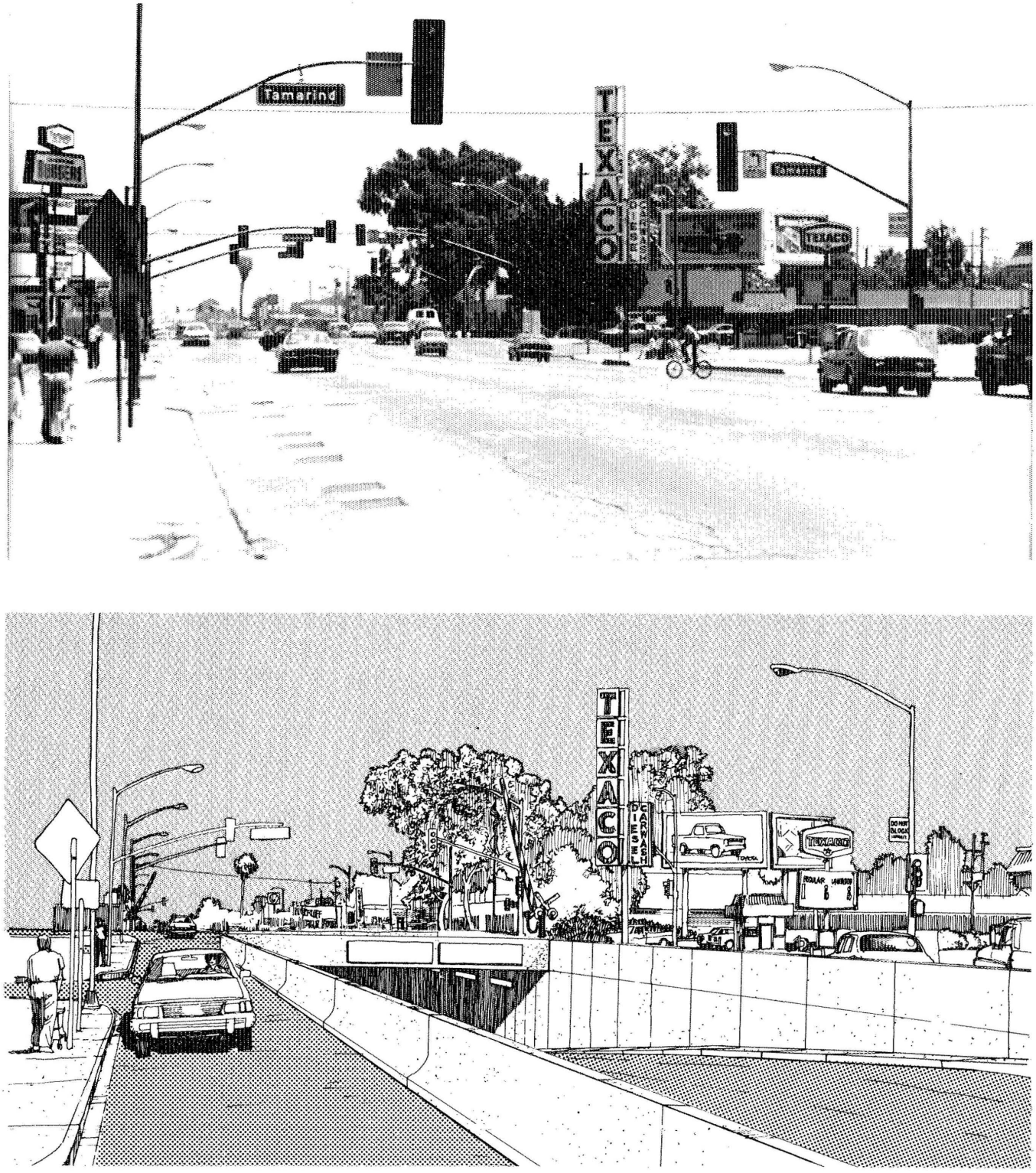
IV-242.4 Options for Rosecrans/Alameda Intersection

The following discussion will first identify the changes in the visual setting resulting with each option and then compare their relative impacts.

- Option A would have no additional significant impacts over those outlined in Section IV-242.1 above. Minor changes in the existing streetscape would occur at the west roadway of Alameda Street to accommodate the reconstructed at-grade intersection with Rosecrans. The most prominent change would be the automated crossing gates and flashing lights for the freight rail crossing, which would be common to all options.

- Option B would require an underpass for Rosecrans Avenue below Alameda Street and the San Pedro Branch that would have little or no visual impact on the surrounding area. All major features of the underpass would be below ground and would not significantly impinge upon the viewshed of the surrounding community. The underpass below Alameda Street would, however, restrict the side views of motorists and pedestrians. Figure IV-24C depicts before and after conditions for the underpass on Rosecrans.

- Option C calls for an overpass for Rosecrans Avenue above Alameda Street and the San Pedro Branch (see Figure IV-24D). Of the three options, the overpass would cause the most noticeable visual impacts on Rosecrans Avenue. It would be visible from adjacent businesses and residences. The aerial structure would be 23.5 feet from the ground to its underside and 58 feet wide. It would tower above adjacent buildings, be incompatible with the surrounding landscape, would visually restrict the street space for pedestrians, and would screen the view of the street for building occupants. It would also shade the street directly beneath it and/or the facades of adjacent buildings throughout the year. Mid-morning shadows would be restricted to the area directly under the guideway, while midday and



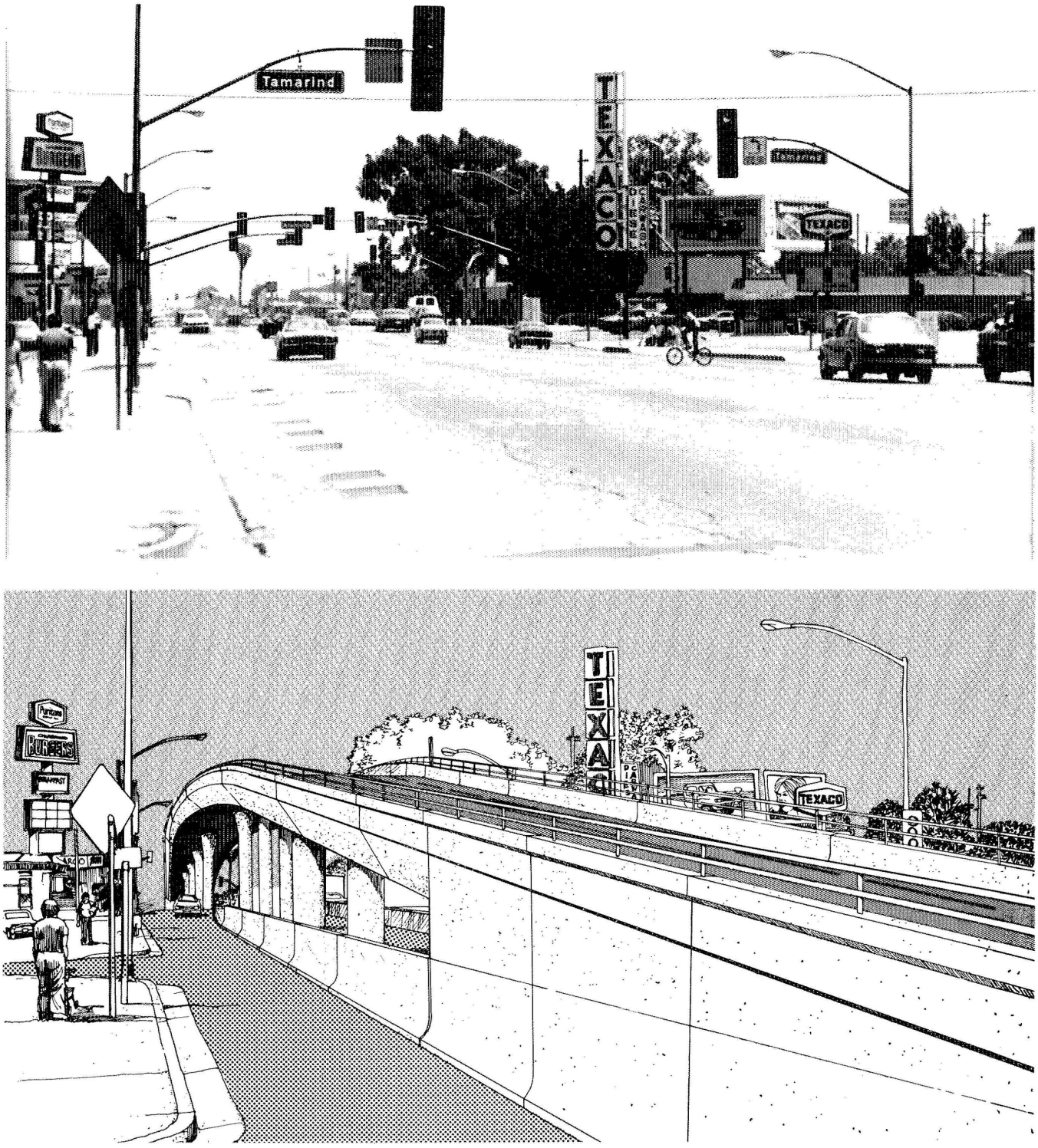
Looking east along the north side of Rosecrans Avenue at intersection with Alameda Street before (above) and after (below) construction of the underpass (Option B). The underpass would have two traffic lanes in each direction and one-way frontage roads at-grade on each side. Left turns to and from Rosecrans and Alameda would be permitted at-grade.

Figure IV-24C

Long Beach - Los Angeles
RAIL TRANSIT PROJECT
LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Visual Analysis

SOUTHERN CALIFORNIA RAIL CONSULTANTS



Looking east along the north side of Rosecrans Avenue at intersection with Alameda Street before (above) and after (below) construction of the overpass (Option C). (The drawing's perspective makes the overpass look steeper than it would be.) The overpass would have two lanes of traffic in each direction and a one-way frontage road at-grade on each side. Left turns to and from Rosecrans and Alameda would be permitted under the structure.

Figure IV-24D

Visual Analysis

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

SOUTHERN CALIFORNIA RAIL CONSULTANTS

afternoon shadows would affect building facades. During the heat of the summer months, this arcade effect could be considered a positive impact.

In summary, Option C would have the most significant adverse visual impacts of the three alternatives; Option B, the underpass segment on Rosecrans Avenue, would rank second; while Option A, the at-grade crossing of Alameda Street and the San Pedro Branch, would have the least adverse impact.

IV-243 Mitigation Measures

The removal of any trees and plants along the LRT or along Rosecrans Avenue could be mitigated by replacing them. In fact, the streetscape could be enhanced by planting trees of a single species appropriate to the character of the street. However, there are no feasible measures available for effectively mitigating the visual intrusion of the freight rail diversion.

IV-250 HISTORIC AND CULTURAL RESOURCES

No historic structures were identified in the project area, and therefore, no operational impacts will occur.

IV-300 TRAFFIC AND TRANSPORTATION

IV-310 TRAFFIC

The following section discusses north/south traffic impacts, east/west traffic impacts and the impacts on local accessibility, safety, and pedestrian activity. Throughout this discussion, it may be helpful for the reader to refer to Figure IV-31A, Traffic Improvements - MC-5 Project Area. Some of these improvements are adopted elements of the project (see Section I-120); others are optional and are discussed in the mitigation portion of Section IV-311.

IV-311 North/South Traffic Impacts and Mitigation Measures

The effect of rail freight operations on vehicular traffic along the Wilmington and San Pedro Branches of the SPTC in the area of MC-5 was investigated. Existing, year 2000 (without the project), and worst-case conditions for the year 2000 (with the project), were defined based on a recently-completed study by SCAG exploring possible reorganization of rail freight lines serving the harbor area (San Pedro Bay Ports Access Study) and projected vehicular and freight rail traffic. Auto queue lengths, waiting times, and dissipation times for queues at at-grade crossings were calculated in a manner similar to that done for both rail freight and rail transit operations in previous EIR documentation for the LRT project.

The consolidation of two freight rail traffic routes into a single route from Mealy Street south to Dominguez Junction would have a net positive impact on traffic in the area. Significant benefits would accrue to auto traffic crossing the Wilmington corridor because of the elimination of through train movements on this branch. Congestion, vehicle delays, and the potential for rail/auto conflicts would be significantly reduced. While shifting Wilmington Branch traffic to a second track on the San Pedro Branch would increase congestion, vehicle delays, and the potential for rail/auto conflicts for motorists using east/west arterials that cross the San Pedro Branch, the net overall effect on auto traffic from this diversion would still be positive.

Table IV-31A shows the comparative vehicle delays for MC-1 and MC-5 for intersections south of Rosecrans. These estimates show a net savings in vehicular delay after relocation in excess of five percent. However, the table underestimates the benefits of this shift to the San Pedro Branch because it does not account for the benefit to north/south traffic of having an alternative north/south route unimpeded by freight rail traffic. In addition, delay encountered by vehicles in the entire project area, not just in the immediate vicinity of each at-grade crossing, would also be reduced. For example, turning movements along the "abandoned" Wilmington corridor would

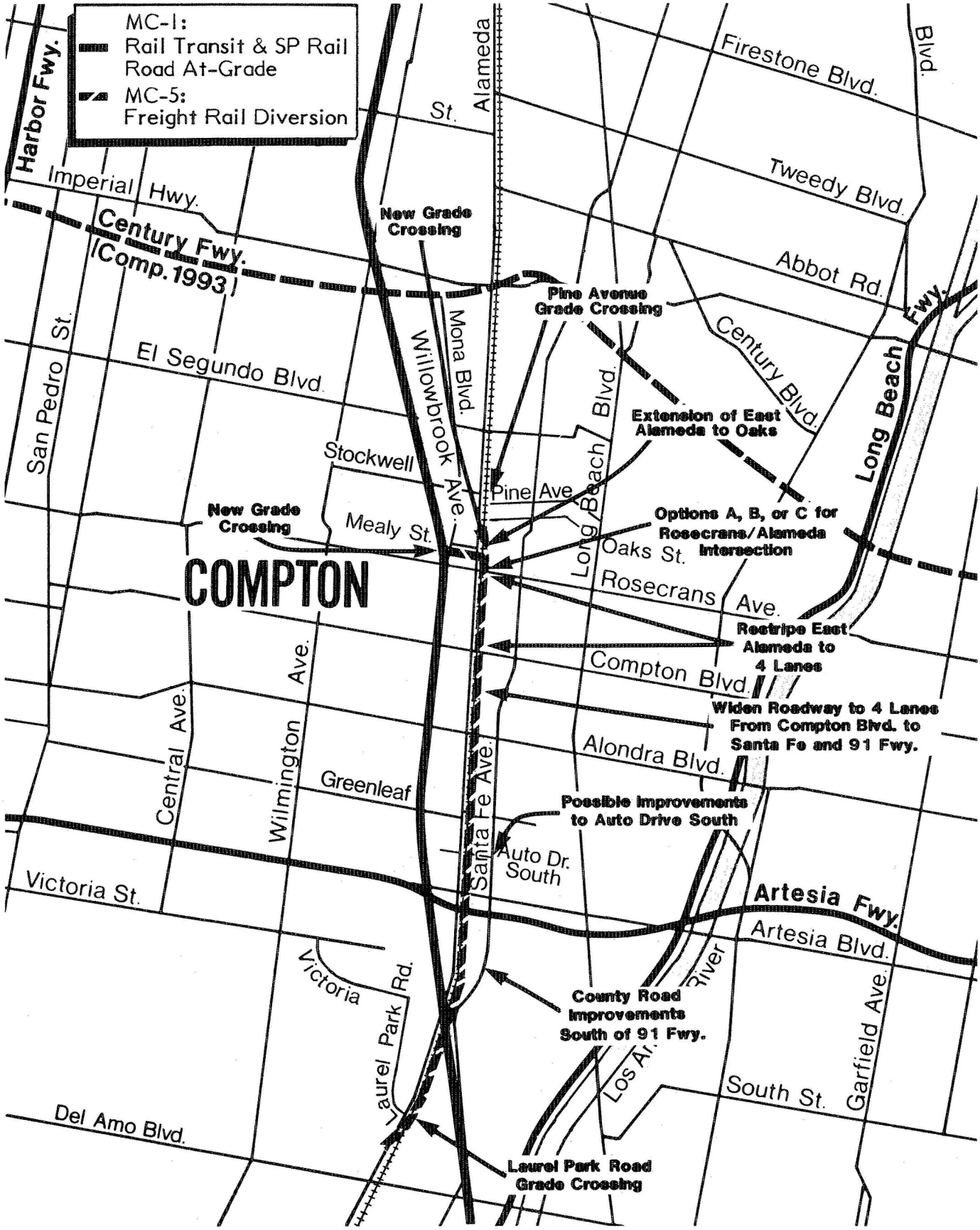


Figure IV-31A

Long Beach - Los Angeles RAIL TRANSIT PROJECT

LOS ANGELES COUNTY TRANSPORTATION COMMISSION

Traffic Improvements MC-5 Project Area

SOUTHERN CALIFORNIA RAIL CONSULTANTS

TABLE IV-31A

COMPARISON OF YEAR 2000 GRADE CROSSING VEHICLE DELAY TIME

FROM FREIGHT RAIL OPERATION

(Vehicle Hours per Day)

Cross Street	MC-1 (High Scenario) Wilmington Branch	MC-1 (High Scenario) San Pedro Branch	MC-5 (High Scenario) Wilmington Branch	MC-5 (High Scenario) San Pedro Branch	Net Savings on Crossings
1. Rosecrans Avenue	108	105	--	204	9
2. Compton Boulevard	64	68	--	129	3
3. Alondra Boulevard	61	75	--	122	14
4. Greenleaf Boulevard	*	*	--	65	--

* less than 50 hours of vehicle delay per day.

Note: The High Scenario is defined by SCAG as being 35 trains per day. Projected high scenarios represent a range of possible future freight rail traffic levels that might happen if all potential growth occurs. It is not possible to predict whether all of this growth would occur before the year 2000, although port planning in both Los Angeles and Long Beach assumes such growth.

Source: Southern California Association of Governments, 1983;
DKS Associates, 1985.

no longer be impeded by freight rail traffic. Consolidation on one corridor would also eliminate the potential for overlapping congestion on the two corridors.

Relocating the Wilmington Branch freight rail traffic to the San Pedro Branch would increase the number of train movements in a corridor of higher vehicular traffic levels. It would also create two new vehicle/freight rail conflict points that were not evaluated for Alternative MC-3 (DEIR, May 1984). These conflicts would occur at the at-grade crossing of east Willowbrook Avenue just north of Mealy Street and at the Alameda crossing of the Mealy Street diversion just north of Rosecrans Avenue. Of these two new crossings, east Willowbrook would not create significant adverse impacts. Traffic levels on east Willowbrook are low, and traffic could easily divert to west Willowbrook to avoid the crossing. For the current traffic analysis, attention was focused on the new at-grade crossing at Mealy and west Alameda Street and the four major east/west grade crossings of Alameda south of Mealy Street (Rosecrans, Compton Boulevard, Alondra and Greenleaf).

The impacts of train arrivals on vehicular delay are dependent on four variables: vehicular traffic levels (particularly those vehicles desiring to cross the tracks), the frequency of train arrivals, the total time the train requires to pass through the intersection (including the time required to lower and raise protective gates), and the time required for the intersection to return to normal operation. During freight train crossings of these intersections, vehicular movements parallel to the railroad tracks could continue; however, all vehicles attempting to cross the tracks would have to wait. These intersections would function under freeflow conditions for those vehicles not crossing the tracks and, simultaneously, at a condition of stoppage for those vehicles desiring to cross the tracks while a train passed through. Once the train passed, a "recovery" period would typically be required for these intersections before they would return to normal operation.

Estimates of average vehicular delay, potential queue lengths, and queue dissipation times were developed as a representative measure of intersection operations. For 4,700-foot freight trains traveling at 15 mph and using the SPTC Wilmington and/or San Pedro tracks, traffic levels were projected for the heavier PM peak hour in year 2000. Queue length and dissipation time calculations were predicted using the scenarios of one and two trains (arriving independently and back-to-back) during the peak traffic period. Utilizing existing geometry and projected year 2000 traffic volumes, the estimated time to dissipate queues at the major intersections affected by MC-5 ranged from 1.5 to 29 minutes. In previous documentation for the LRT project, dissipation times of three minutes or

more were assumed to represent unacceptable queuing or an adverse impact for light rail crossings. An eight-minute dissipation time is a more realistic criterion for freight trains. Table IV-31B summarizes the existing and projected delay analysis for the Rosecrans, Compton Boulevard, and Alondra Boulevard intersections with the Alameda Street ROW containing the relocated Wilmington Branch and San Pedro Branch. Greenleaf Boulevard is not shown because preliminary analysis indicated that future recovery times with the project in place would not exceed three minutes. Analysis results for those intersections exceeding that threshold value are summarized in Table IV-31B.

The intersection of Alameda Street and Rosecrans Avenue, the most congested of the intersections affected, is the only intersection anticipated to experience a serious degradation of operating levels if it is not grade separated. Existing average vehicular delays and recovery times of 47 seconds/vehicle and eight minutes, respectively, could increase to as much as 179 seconds/vehicle and 29 minutes by the year 2000 with the project (including north/south delays encountered on west Alameda from the Mealy Street diversion north of Rosecrans). All other intersections are anticipated to operate equal to or better than Alameda/Rosecrans does today (1984). At Alameda/Compton and Alameda/Alondra, existing recovery times of 3.0 and 4.5 minutes for one train, respectively (PB/KE, 1984), could increase to approximately 4.1 and 4.4 minutes for each intersection by the year 2000. Passage of two trains back-to-back, a much more likely occurrence with MC-5, would increase these dissipation times to about eight minutes for each intersection. Although this is a degradation of existing levels of service at these intersections, it is equal to or better than the current situation at Alameda/Rosecrans.

The longest recovery periods and vehicular delay estimates for the Alameda/Rosecrans intersection would be encountered when two trains pass back-to-back during the PM peak period. SPTC traffic projected to the year 2000 indicates that as many as 25 trains per day could be running on the relocated Wilmington Line plus 10 trains per day on the San Pedro Line for a total of 35 trains a day with MC-5 (Status Quo High Scenario). Assuming the continued Status Quo routing as the most likely occurrence, and the High Scenario train movements (which may or may not ever occur), it is conceivable that the arrival of two freight trains back-to-back could occur at this location on a regular basis during peak periods in the year 2000.

Vehicular delay at Alameda/Rosecrans from trains passing on the San Pedro Branch would be encountered by traffic on both Alameda Street (north/south) and Rosecrans Avenue (east/west). The MC-5 project has been designed in an effort to minimize the traffic impacts for all

TABLE IV-31B
ESTIMATED VEHICULAR DELAY AND INTERSECTION RECOVERY TIMES WITH IMPLEMENTATION OF MC-5

	Alameda/Rosecrans				Other Intersections	
	1984	Year 2000 with MC-5			Year 2000 with MC-5	
	Existing Geometry[3]	Existing Geometry[3]	Option A[3]	Options B & C[3]	Alameda/ Compton[4]	Alameda/ Alondra
Average Vehicular Delay[1] (seconds/vehicle)						
No Train	23	25	23	7.8[5]	17	17
One train	47	59	42	20	29	30
Two Trains (back-to-back)		179	105	50	70	71
Intersection Recovery Time[6] (minutes)						
One Train	8.0	14	5.4	4.8	4.1	4.4
Two Trains (back-to-back)		29	11	9.6	7.8	8.3

[1] Average Vehicular Delay (Seconds/vehicle) for year 2000 projected PM peak period traffic and rail freight trains on the Wilmington Line.

[2] Includes crossing of through traffic of west Alameda at Mealy Street, but no diversion to east Alameda.

[3] 3-phase signal, 90-second cycle length.

[4] Existing geometry, 2-phase signal, 90-second cycle length, no diversion of through traffic to east Alameda.

[5] 3-phase signal, 60-second cycle length.

[6] Time (minutes) that it takes the intersection to dissipate queues and return to normal operations once the gates are lifted. The train passage time of approximately 4.5 minutes is not included in this number.

Source: DKS Associates, 1985.

movements at this location. Mitigation measures incorporated into Option A would widen all approaches to the intersection by reducing sidewalk widths along Rosecrans and Alameda, while Options B and C would include grade separation of the Rosecrans/Alameda intersection.

o Mitigation Measures

Significant traffic mitigation measures have been incorporated into the project under Options A, B, and C. In addition, reconfiguration of the Pine Avenue grade crossing could be undertaken as a mitigation measure by the LACTC at a cost of $712,000. Implementation of this mitigation measure would, however, require that the City of Compton and Los Angeles County commit to certain improvements on east Alameda, Auto Drive South, and Laurel Park Road/west Alameda in order to facilitate the shift of north/south through traffic to east Alameda. This shift would decrease freight rail/auto conflicts on west Alameda, including the new Mealy Street/Alameda grade crossing. It would also tie into and reinforce the county-sponsored Industrial Expressway south of the Artesia Freeway (Route 91). With the shift of through traffic to east Alameda, a continuous stretch of roadway without any railroad grade crossings would be available to vehicles (mostly trucks) from the San Diego Freeway (405) on the south to Pine Avenue and west Alameda Street north of the MC-5 project area (see the description of Ports Access Highway Improvements in Section I-509).

In order to assess the effects of this diversion, a level of service analysis of east Alameda from this reconfigured crossing at Pine Avenue to the Artesia Freeway was performed. The analysis indicated a need for a continuous four-lane roadway by 1990 if the shift of Alameda Street traffic occurs. The LACTC would construct a two-lane roadway for east Alameda north of Rosecrans, connecting to west Alameda via a new or reconfigured crossing of the SPTC San Pedro Branch ROW in the vicinity of Pine Avenue. Any additional widening would be the responsibility of the City of Compton. South of Rosecrans, to just north of Compton Boulevard, the roadway would have to be striped by the City of Compton to accommodate four lanes, but sufficient roadway width is currently available. South of this point and south of Compton Boulevard, the existing roadway would have to be widened to four lanes to accommodate 1990 diverted traffic levels with an acceptable level of service. At Santa Fe and Auto Drive West, two additional turning lanes would be required by 1990. All of these improvements would be the responsibility of the City of Compton. South of the Artesia Freeway, current county plans call for sufficient street widening to accommodate the diverted traffic. The net effect of shifting west Alameda traffic to east Alameda would be adverse in 1990 unless roadway widening is undertaken by the City of Compton and Los Angeles County.

Table IV-31C reports vehicle delays at the Rosecrans, Compton, and Alondra intersections if one-third of the traffic using the west roadway of Alameda were diverted to the east roadway. These estimates are given for east Alameda as both a continuous four-lane roadway and a continuous two-lane roadway south of Oaks Street. Intersection recovery times at Alameda/Compton and Alameda/Alondra would increase beyond the eight-minute criterion if east Alameda is not widened to four lanes.

With traffic diverted to east Alameda, north/south traffic flows improve, but east/west traffic flows at major intersections may worsen slightly. The delay would be incurred because of the increased complexity of double intersections on each side of the San Pedro Branch. There are operational inefficiencies in providing proper signalization for both east and west Alameda as major streets because they are so close to each other. Nevertheless, the total number of auto/rail freight conflicts would be reduced and the net impact to all traffic in the project area would be positive.

TABLE IV-31C

ESTIMATED YEAR 2000 VEHICULAR DELAY AND INTERSECTION RECOVERY TIMES WITH PARTIAL TRAFFIC DIVERSION TO EAST ALAMEDA

	Alameda/ Rosecrans		Alameda/ Compton		Alameda/ Alondra	
Average Vehicular Delay (seconds/vehicle)	Two Lanes	Four Lanes	Two Lanes	Four Lanes	Two Lanes	Four Lanes
No Train	19	16	19	15	18	14
One Train	37	29	32	20	31	26
Two Trains (back-to-back)	95	71	76	64	74	64
Intersection Recovery Time (minutes)						
One Train	5.7	4.4	4.8	2.6	4.4	2.0
Two Trains (back-to-back)	11	8.6	9.4	3.9	8.6	3.9

Note: These calculations assume two-phase signals with 90-second cycle lengths.

Source: DKS Associates, 1985.

IV-312 East/West Traffic Impacts and Mitigation Measures

East/west traffic at Alameda/Rosecrans would be delayed by freight rail traffic on the San Pedro Branch of the SPTC, and three options have been identified for improvement of the Rosecrans/Alameda intersection to alleviate this problem. Each would provide some level of relief to the projected congestion problems at the Rosecrans crossing of the railroad; none, however, would completely eliminate vehicular delay encountered during train crossings. In addition, the implementation of any one of the options would result in some negative impacts such as elimination of left-turning movements to and from Rosecrans between Mulberry Street and Spring Avenue, resulting in reduced neighborhood access.

The at-grade alternative (Option A) is clearly inferior to the others from a traffic perspective, as it would result in severe congestion on both Alameda and Rosecrans during times of train crossings by the year 2000. If freight rail traffic levels escalate to the Status Quo High Scenario projected in the SCAG Ports Study, the likelihood of two trains arriving "back-to-back" would be much higher than it is today. Also, existing freight rail and vehicular traffic levels at the Alameda/Rosecrans intersection are such that any increase in freight rail traffic above existing levels on the San Pedro and Wilmington Lines would likely displace east/west traffic from Rosecrans to other east/west streets such as Compton Boulevard, Alondra Boulevard and Route 91. These routes are already experiencing increasing congestion during peak periods, and increases in freight rail traffic activity on both the Wilmington and San Pedro Lines are anticipated in the near future.

Widening both east Alameda and Rosecrans by providing an additional lane in each direction (Option A) would reduce typical average vehicular delay and intersection recovery times to 105 seconds/vehicle and 11 minutes, respectively, from 179 seconds/vehicle and 29 minutes, respectively. However, this would still be worse than existing typical average delay and recovery times of 47 seconds/vehicle and 8.0 minutes. Therefore, should the anticipated vehicular and freight rail traffic increases be realized, widening of both east Alameda and Rosecrans for the at-grade alternative would not provide sufficient traffic congestion relief at year 2000 projected traffic levels to maintain current service levels at Alameda/Rosecrans. An improved at-grade crossing at this location would not prevent a degradation in travel time for east/west traffic in the area during periods of freight rail traffic. These problems could be mitigated somewhat if the timing of freight traffic activity could be controlled precisely. However, freight train arrivals cannot be exactly predicted, thus limiting the likelihood of this being an effective mitigation measure.

Implementation of either Options B or C (underpass or overpass) would result in significant improvements to east/west traffic flow on Rosecrans. Even if two trains should arrive back-to-back, either of these options would maintain service levels at or near what is experienced today upon the arrival of one train. In addition, the required east/west movements on Rosecrans would be unimpeded by the rail movements on the San Pedro Branch. Therefore, the preliminary analyses indicate that a choice between these two alternatives should not be based on long-term traffic implications but on other parameters such as cost, air quality, noise levels, visual impacts, and neighborhood intrusion.

IV-313 Local Accessibility

Some of the options identified for improving the Alameda/Rosecrans intersection would affect the accessibility of surrounding neighborhoods. The at-grade crossing (Option A) would have little if any impact on accessibility to fronting properties on Rosecrans Avenue or local neighborhoods served by the north/south streets which intersect Rosecrans in the project area. Turning movements similar to those currently permitted at all intersections along Rosecrans would be accommodated. Options B and C, however, would affect accessibility to several properties in the vicinity of the grade separation by eliminating some existing turning movements on and off Rosecrans. Both of these grade-separated options would restrict movements along Rosecrans Avenue at Mulberry Street, Tamarind Avenue, Rose Avenue, and possibly Spring Avenue to right-turn-in/right-turn-out movements only.

The impact of these right-turn-in/right-turn-out restrictions would be limited to a minor inconvenience to local residents of neighborhoods adjacent to Rosecrans Avenue because these individuals would have to utilize slightly slower alternate routes between their homes and some destinations. A marginal increase in emergency response time for police, ambulance or fire vehicles attempting to reach some areas adjacent to the grade separation might also result. However, eliminating freight operations on the Wilmington Branch and the grade separation of the LRT at the Rosecrans/Willowbrook intersection would improve east/west traffic flows on Rosecrans, resulting in improved emergency vehicle access. Options B or C would improve east/west emergency vehicle access significantly. Further, a local access street connecting Mona Boulevard to Mulberry Street and Tamarind Avenue would be provided, thereby improving emergency access to the residences along Mulberry and Tamarind Streets, particularly for fire trucks which would approach the area from the west on Rosecrans Avenue.

IV-314 Safety

MC-5 introduces two new at-grade crossings of the SPTC Wilmington Branch. These are located on east Willowbrook where the tracks swing eastward as part of the Mealy Street Connector and on west Alameda, just north of Rosecrans Avenue. Though each of these crossings introduces a new location for auto/freight conflicts, 11 at-grade railroad crossings from Rosecrans Avenue to Manville Street on the Wilmington corridor would be abandoned. Thus, the total number of locations of exposure to auto/freight rail conflict would be reduced. Also, each of these new at-grade crossings would be protected with appropriate crossing gates and signal equipment. In addition, should one of the grade-separated options be implemented for Alameda/Rosecrans, east/west through traffic on Rosecrans would no longer be exposed to auto/rail conflicts at either rail right-of-way along Alameda Street or Willowbrook Avenue.

A major benefit associated with construction of a roadway grade separation along Rosecrans Avenue (Options B and C), in addition to the decreased delays experienced by vehicular traffic, would be the improved roadway safety resulting from the decrease in the number of potential conflicts between trains and vehicles traveling east/west crossing the San Pedro corridor tracks at-grade. Table IV-31D illustrates relative conflict exposure levels associated with the three major options under consideration for the Rosecrans Avenue crossing of Alameda Street.

Retention of the at-grade crossing at Alameda/Rosecrans would result in the greatest potential for vehicle/train conflicts. The number of daily through train operations on the San Pedro Branch could increase to as many as 67 trains by the year 2000, if developments at the ports of Long Beach and Los Angeles proceed as planned and the recommended consolidated train route to/from the ports is implemented. Even without the consolidation of train routes, operations along the Alameda corridor with the Mealy Street diversion could increase to 35 trains daily. At this projected level of freight rail traffic, together with projected vehicular traffic levels, Options B and C for treatment of the Alameda/Rosecrans intersection are the only alternatives that would create less exposure to auto/rail conflicts at this location in year 2000 than currently exist.

TABLE IV-31D

POTENTIAL YEAR 2000 AT-GRADE VEHICLE VS. FREIGHT TRAIN CONFLICTS AT ROSECRANS/ALAMEDA

CONDITION	PROJECTED DAILY VEHICLE CROSSINGS OF TRACKS	PROJECTED DAILY TRAIN OPERATIONS	RELATIVE EXPOSURE TO CONFLICT[1]
1985 - Existing Conditions	20,000	10[2]	1.00
2000 - No Project	23,500	35[3]	4.11
2000 - Option A	23,500	35[3]	4.11
2000 - Option B	4,750	35[3]	0.83
2000 - Option C	4,750	35[3]	0.83

[1] (Projected Year 2000 Daily Vehicle Crossings x Projected Year 2000 maximum Daily Train Operations)/(Existing Daily Traffic x Existing Daily Train Operations)

[2] Total existing daily through trains on Southern Pacific Wilmington and San Pedro Branches (SCAG, 1984).

[3] Projected daily through trains on Southern Pacific Wilmington and San Pedro Branches, Status Quo-High Scenario. Projected high scenarios represent a range of possible future freight rail traffic levels that might happen if all of this growth occurs before the year 2000, although port planning in both Los Angeles and Long Beach assumes such growth. (SCAG, 1984).

Source: DKS Associates, 1985.

Options B and C would result in the same level of relative safety improvement by eliminating approximately 18,750 daily at-grade vehicular crossings of the railroad at this location in the year 2000. The remaining at-grade crossings would primarily be made by vehicles turning left or right on or off Rosecrans Avenue.

IV-315 Pedestrian Activity

The only location along the MC-5 corridor where pedestrian activity would be adversely affected is at the intersection of Alameda/ Rosecrans. The primary facilities utilized by pedestrians in the immediate vicinity affected are the sidewalks along Rosecrans Avenue and Alameda Street and the crosswalks across each of these roadways. All three options under consideration at this location would result in the narrowing of sidewalks along Rosecrans Avenue from their existing width of 10 feet to between six and seven feet. Currently, the amount of pedestrian traffic along Rosecrans is relatively small. Assuming no major increase in pedestrian traffic, the narrowing of the sidewalks should not result in any negative impacts for pedestrians.

Option A would not eliminate any of the north/south crosswalks on Rosecrans Avenue and would therefore have the minimum impact on pedestrian travel patterns. Options B and C would result in the elimination of north/south crosswalks on Rosecrans between Willowbrook and west Alameda and between east Alameda and Santa Fe. These intervening crosswalk locations would have to be eliminated because of the retaining walls and/or embankments supporting the underpass or overpass, blocking north/south crossings of Rosecrans at Mulberry Street, Tamarind Avenue, Rose Avenue, and Spring Avenue. It would also be advisable for safety reasons to eliminate pedestrian crossings at McDivitt and Willow Avenues at the east end of the proposed grade separations to encourage pedestrians to cross at the signalized Santa Fe intersection.

The impact of the two grade-separated options would therefore be increased walking distances for pedestrians desiring to cross Rosecrans between Willowbrook and west Alameda or between east Alameda and Santa Fe. The average increase in walking distance would be two to three blocks, or about 600 to 900 feet. However, the grade separation options would also provide an improvement in local pedestrian activity by yielding a significant decrease in at-grade through traffic at the Rosecrans/Alameda crosswalks, resulting in improved safety for pedestrians at these crossings. Therefore, the grade separation alternatives appear to have little, if any negative impact on pedestrians which would require mitigation.

IV-316 Mitigation Measures

The implementation of this project should provide a net benefit to traffic within the project area. The consolidation of two nearly parallel freight rail lines along one corridor, which is the most easily controlled with respect to the number of at-grade crossings and

subsequent potential auto/rail conflicts, is a definite improvement over the existing situation. In addition, consolidation of the freight rail activity on one corridor reduces the total number of auto/rail conflict points that may require future improvements to reduce vehicular delay.

Though regional traffic circulation would be improved with implementation of MC-5, several site-specific mitigation measures to alleviate localized negative traffic impacts have been identified. Many of these have been subsequently incorporated into the MC-5 project, such as the identification and evaluation of several options for alleviating anticipated vehicular delay at the intersection of Alameda and Rosecrans. Other mitigation measures may be incorporated, including the upgrading of the east roadway of Alameda Street (see Section IV-311 for a detailed discussion). However, other low-cost, site-specific mitigation measures such as signing, striping or signal modifications may be found necessary upon final design and implementation of the project.

IV-320 TRANSIT IMPACTS

The bus transit system under the year 2000 No Project condition would be the existing bus system plus the SCRTD Sector Improvements Plan which was approved in 1980 and is scheduled for completion in 1985. However, in conjunction with the light rail project and in order to optimize overall transit operations while minimizing operating costs in the mid-corridor, a Complementary Bus Network supporting the light rail transit alternatives was developed. (Detailed information regarding the proposed bus changes is provided in the PB/KE memorandum titled "Design of Complementary Bus Network" (Task 7.7), dated August 24, 1983.) Existing bus lines would be reoriented to collect and distribute riders to and from light rail stations, while eliminating or reducing services on bus routes which parallel the rail transit alignment (e.g., SCRTD Line No. 55). Bus services would be maintained for bus riders whose travel requirements would not be conveniently served by the new rail system. The MC-5 project is anticipated to have little effect on any bus service that does not pass through the Alameda/Rosecrans intersection.

The only public transit route which currently passes through the Rosecrans/Alameda intersection is SCRTD Line No. 125. This line travels east/west along Rosecrans Avenue between La Mirada and El Segundo. Service is provided from approximately 5:00 AM until 8:30 PM at half-hour headways throughout most of the day. Bus stops in the project area are located at Willowbrook Avenue and Alameda Street.

The at-grade crossing of Alameda/Rosecrans (Option A) would result in slower travel times for Line No. 125 due to increased congestion at the Alameda/Rosecrans intersection. Buses on this line would be subject to longer and more frequent delays at the railroad crossing due to the net increase in vehicular traffic and the increased number of freight trains on the Alameda corridor. This would, however, be offset by reduced delays at Willowbrook Avenue where the rail freight train crossings on the Wilmington Branch would be eliminated.

The grade-separated alternatives (Options B and C) would both have impacts similar to Option A if the buses on Line No. 125 continue to serve the bus stop at Alameda Street by traveling alongside the underpass or overpass on the at-grade frontage roads. Should the RTD decide to eliminate or relocate the existing stops at Alameda Street, thereby allowing the buses to use the grade-separated road, travel times on Line No. 125 would be greatly improved. Since there are no north/south bus lines on Alameda Street, relocation of this stop would not affect bus transfers. Safety would also be improved with the elimination of both of the existing bus/rail freight train at-grade crossings. On the other hand, RTD patrons who currently utilize the Alameda Street stop would be negatively affected by having to walk a few extra blocks to either Willowbrook or Spring Avenue.

IV-330 PARKING IMPACTS

Parking impacts to the MC-5 project area would also be limited to the immediate vicinity of the Alameda/Rosecrans intersection, where some on-street parking would be lost. All of the options under consideration for the Rosecrans/Alameda intersection, including the at-grade crossing, would result in the elimination of approximately 50 on-street parking spaces on Rosecrans Avenue between east Willowbrook Avenue and Spring Avenue. These spaces are not currently heavily utilized, however, and it appears that off-street parking is not only available but is underutilized at most of the businesses along this section of Rosecrans. It is not anticipated that the loss of on-street parking along Rosecrans would result in any significant negative impacts requiring mitigation.

IV-340 RAILROAD OPERATIONS

IV-341 Impacts Assessment

The Mealy Street Connector would have a net positive impact on the SPTC. Relocation of the Wilmington Line as defined in the MC-5 project would reduce the total number of SPTC at-grade crossings in the project area. The potential grade separation of Rosecrans Avenue

with both the Wilmington and San Pedro Branches of the SPTC, in conjunction with the provision of protective gates at new crossings, greatly reduces the SPTC's exposure to and potential liability for auto/rail conflicts in the project area. In addition, provision of train signal hardware in the vicinity of the Mealy Street diversion to enable the SPTC to operate under "fixed-block" operating rules on the Wilmington Line in the area of the diversion would allow the SPTC to maintain its current train speeds (approximately 20 mph). This would eliminate any negative impacts on train operations (which would be the result of slower train speeds required to maintain a safe sight distance from other trains present in the area) resulting from the sharper curvature on the MC-5 alignment. Maintenance of rail operations on the Wilmington Line, therefore, would require no mitigation measures.

IV-400 CUMULATIVE IMPACTS WITH RELATED PROJECTS

The cumulative effects of the Long Beach-Los Angeles Rail Transit Project and other related projects in the region (see Section I-500) were analyzed in the May 1984 DEIR. This discussion focuses on the cumulative effects of MC-5 and other related projects in the region.

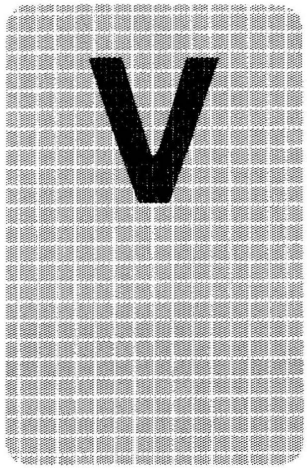
With expansion at the ports, as described in the "2020 Plan," and the full implementation of the Intermodal Container Facility Project (ICTF), both highway and freight rail traffic to the ports area are expected to increase. With the MC-5 shift of Wilmington Branch freight traffic to the San Pedro Branch ROW, a large proportion of the increased freight traffic would be running on that branch.

Shifting freight rail operations from the Wilmington Branch to the San Pedro Branch via the Mealy Street diversion would be consistent with the consolidation objective outlined in the SCAG Ports Access Study. MC-5 would accomplish partial consolidation, thereby increasing the number of trains on the San Pedro Branch. The increased number of trains would create increased congestion and rail/auto conflicts at intersections along the San Pedro Branch. Options B or C would accomplish grade separation at Rosecrans, in a manner consistent with ports access-related highway improvement studies elsewhere in the corridor (see Section I-509). Increased congestion at San Pedro Branch intersections with Compton Boulevard and Alondra Boulevard would support grade separation requests by the City of Compton to the Ports Advisory Committee.

If the Pine Avenue grade crossing is reconfigured to shift west Alameda traffic to east Alameda and the City of Compton improves east Alameda, these improvements would tie into the development of the Industrial Expressway (the "truckway" project) between the Artesia Freeway (Route 91) and San Diego (405) Freeway. With this combination of improvements, a continuous roadway, without railroad grade crossings of the Wilmington Branch (which carries most of the SPTC's ports-related freight traffic), would be available for ports-related truck traffic and Alameda Street through traffic.

The overall effect of MC-5, in combination with these related projects, would be beneficial.

Chapter



V PROBABLE ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

V-100 INTRODUCTION

The proposed MC-5 alternative would result in some adverse environmental effects which could not be completely avoided or mitigated. This applies to both the construction and operations phases of the project. This section summarizes the nature and extent of these effects. A detailed description of individual impacts can be found in the impact sections of this report (see Chapters III and IV).

The most significant unavoidable construction impacts would be noise, loss of housing, business disruption, business displacement, visual intrusion, traffic disruption, and reduced access. The most significant unavoidable operations impacts would be geologic hazards, noise and vibration, incompatible land use, potential business failures, traffic congestion, and reduced access.

V-200 CONSTRUCTION IMPACTS

V-210 NOISE

A temporary increase in noise would occur for all the proposed options during construction. Average daily noise levels would range between 78 and 83 dBA (CNEL) within 50 feet of construction activity. Intermittent peak noise periods could be as high as 90 dBA (CNEL) within 50 feet of construction activity at specific areas such as the light rail elevated guideway or either the underpass (Option B) or overpass (Option C).

The use of low-noise-generating equipment, prefabricated components, maximum physical separation (distance), scheduling construction activities during high ambient noise periods (daytime), and, in extreme cases, the use of noise walls would partially mitigate expected increases in noise levels; however, these measures would not totally alleviate the problem.

V-220 LOSS OF HOUSING

The selection of any of the MC-5 options would require acquisition of dwelling units and displacement of residents. Twenty-six parcels of land would be affected, including eight single-family dwellings and 27 multi-family units, for a total potential displacement of between 123-147 persons.

Available mitigation would be through compensation and relocation services under the California Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (California Government Code Chapter 16). This act provides for assistance in locating housing. For the homeowner this can include, in addition to the fair market value paid for the property, a payment of up to $15,000 to cover purchase differential, increased interest costs, and incidental costs incurred in purchasing a replacement home. All moving costs are also paid for all persons displaced. If displaced persons cannot be accommodated within the financial constraints of the Relocation Assistance Act, so-called Last Resort Housing would be implemented which allows new housing to be constructed. For the renter, up to $4,000 to cover a rental differential may be provided.

Total mitigation might not be possible. Comparable housing at affordable rents in the surrounding area might not be available for all persons displaced. Those not able to relocate in the immediate area could be placed nearby or possibly in outside areas of their choice if such a move is determined to be acceptable under the Relocation Assistance Act. Additional mitigation might be available through the provision of new housing by the City of Compton as part of its redevelopment efforts.

V-230 BUSINESS

V-231 Disruption of Areas

There would be some temporary adverse impacts on retail and commercial establishments located on streets used by the proposed project: potential loss of sales during construction periods due to partial or total street closures, sidewalk closures, noise, and dust. The impacts would be limited primarily to Rosecrans Avenue (with Options B and C), with impacts greatest at grade separation construction areas. The overall impact to individual establishments would be determined by the length of time construction activity is present, the dependence of business on walk-in or drive-in trade, and the financial health of the establishment.

Mitigation would be through: 1) maintenance of vehicular access with one lane of local through traffic in each direction on Rosecrans through most of the construction period and maintenance of pedestrian access; 2) scheduling of activity to minimize total time required and to allow intervals of no construction; 3) contractor performance of specific actions and monitoring to minimize annoyance due to noise and dust and to ensure that traffic is being maintained; and 4) provision of special signing or other devices for business establishments to compensate for loss of visibility or reduction in access.

Total mitigation would not be possible and some loss of sales is highly probable. The impact on the total project area would be relatively insignificant; however, impact on specific streets, blocks, or individual establishments might be considerable. Some businesses might fail, although the total number of such failures would likely be small.

V-232 Displacement

Until final engineering is completed, an exact determination of the number of commercial structures to be acquired cannot be made. Preliminary engineering for Option B shows five structures which would be required in their entirety, displacing approximately 40 to 50 employees. Conceptual engineering plans for Options A and C indicate that no structures would need to be acquired. This condition, however, could change in later design.

Available mitigation would be through compensation and relocation services under the California Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (California Government Code, Chapter 16). This act provides for assistance in locating replacement property and payment for actual moving and related costs, in addition to the fair market value paid for the business. If a business cannot be relocated without a substantial loss of patronage and chooses to go out of business rather than move, it can be eligible for a payment up to $10,000 in lieu of moving costs. Total mitigation might not be possible. Comparable space at affordable rents might not be available for all businesses displaced, though it is likely that most could be accommodated. If some businesses choose to terminate operations or relocate outside the area, there would be a loss of employment, but such a loss could be offset by the positive economic impacts of the project on redevelopment of local business.

V-240 VISUAL QUALITY

For all options, the visual intrusion of incompatible construction activities and equipment would contribute to a general sense of disruption. Visual impacts would be most intense near aerial segments (due to high-level construction activity) near residences. Visual impacts during construction would be temporary in nature, and no practicable mitigation would be available.

V-250 TRAFFIC DISRUPTION/REDUCED ACCESS

During the construction period, the length of time required to traverse the corridor would increase. There would also be reduced accessibility to some residences, businesses, and public facilities along portions of all proposed alternatives. Automobile access would

be impaired as a result of temporary street closures and congestion resulting from spillover onto adjacent streets (detours). Total street closure could occur at times for up to an entire block for at-grade sections along Willowbrook Avenue, Alameda Street, Rosecrans Avenue, and Mealy Street.

Access across Alameda Street for Rosecrans Avenue during the construction of the underpass (Option B) or overpass (Option C) would be severely limited. Sections along Willowbrook Avenue would be inherently less problematic because columns for the LRT flyover would be placed at approximately 80-foot intervals away from street intersections. The freight rail diversion and grade separation for Rosecrans Avenue would cause minor problems on Alameda Street between Mealy Street and Spruce Street. The addition of another freight track in the San Pedro Branch corridor would also cause minor disruption. Pedestrian activity in all construction areas would be greatly curtailed due to reduced sidewalk capacity and necessary safety precautions.

Emergency vehicles would have longer response times within and adjacent to construction zones due to overall constrained access resulting from detours, spillover congestion, and construction activity. Traffic disruption and reduced access impacts would be partially mitigated by adequate detours, appropriate signing, scheduling construction activity during non-peak hours, informational programs, and special traffic control methods such as flaggers, if necessary.

V-300 OPERATIONS IMPACTS

V-310 GEOLOGICAL HAZARDS

Despite construction of the light rail transit and freight lines to the highest possible seismic safety standards, there would still remain some risk of injury to transit patrons and non-patrons alike near or using the rail transit system during a major earthquake. This hazard exists for each of the MC-5 options.

V-320 NOISE AND VIBRATION

Noise and vibration impacts would occur from operation of the rerouted freight trains into the Mealy Street neighborhood. Increases in noise levels would be between 4 and 15 dBA CNEL due to the intrusion of freight traffic into an area that has never experienced any. The increase to between 13 and 25 trains per day would also raise noise levels along Alameda Street. As a consequence, however, a reduction of between 13 and 25 trains per day would occur along Willowbrook Avenue.

Freight traffic noise and vibration could be mitigated to some degree through the use of structural insulation (soundproofing) and air conditioning and the purchase of noise easements. Residents in some areas, however, might find even the mitigated noise and vibration levels objectionable because of the increase over the previous levels.

V-330 LAND USE

The operation of freight trains on the freight rail diversion would represent a permanent intrusion of an incompatible land use in an area (e.g., neighborhoods, local commercial and public facility zones) where there has never been freight rail operation. It would tend to make that area less attractive for residential uses in the future.

V-340 REDUCTION IN PROPERTY VALUES

The property values adjacent to the underpass (Option B) and over-pass (Option C) might be adversely affected, as could residential properties adjacent to the Mealy Street Connector. Mitigation measures for reduction in property values would be similar to those described for visual, traffic and noise impacts.

V-350 VISUAL QUALITY

The operation of the rail transit project and freight traffic in the Mealy Street area would represent a visual intrusion into an area that presently has no such activity. There would be obstructed views due to placement of the guideway structures. Aerial sections would create shadows and visually dominate the locales where they are constructed. Along Willowbrook Avenue and Rosecrans Avenue (Option C only), the aerial structures would be in close proximity to existing buildings; this would obscure the view from one side of the street to the other. Mitigation measures would focus on minimizing the height and width of the aerial section to the greatest extent possible. Use of center support columns would also reduce potential impact. Aside from using the most aesthetically pleasing design, no other practicable mitigation would be available.

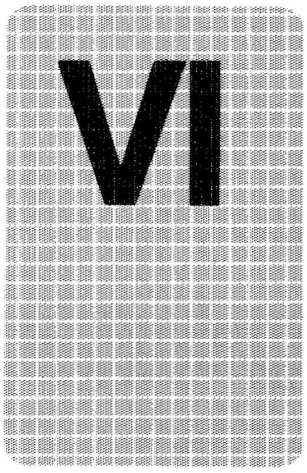
V-360 TRAFFIC CONGESTION/REDUCED ACCESS

If Alternative MC-5 is selected, trains rerouted onto the San Pedro Branch corridor would increase motor vehicle waiting times at intersections along Alameda Street; however, a decrease in waiting times would occur along Willowbrook Avenue. These decreases would be due to a reduction in the total number of grade crossings (11 fewer) accomplished with consolidation of freight rail traffic onto the Alameda Street ROW. Freight rail/roadway crossings would be constructed at-grade with automatic gates at all streets except Rosecrans Avenue under Options B and C. The selection of either an underpass (Option B) or an overpass (Option C) at Rosecrans Avenue and Alameda Street would reduce traffic congestion at this intersection. Other mitigation, such as the partial diversion of traffic to east Alameda via a reconfigured Pine Avenue grade crossing, is dependent on the implementation of measures on east Alameda, Auto Drive and Santa Fe Avenue (see Section IV-311) by other agencies.

Construction of Options B or C would reduce access to local streets between the east roadway of Willowbrook Avenue and Spring Avenue. For streets north of Rosecrans and west of west Alameda, this impact would be partially mitigated by construction of a new local access street adjacent to the diverted rail tracks. However, all local streets north and south of Rosecrans between east Alameda and Spring Avenue would have reduced access to Rosecrans.

Permanent reduction in sidewalk widths and parking spaces along Rosecrans would reduce the accessibility of businesses in that area, though not significantly.

Chapter



VI OTHER ALTERNATIVES

VI-100 INTRODUCTION

The purpose of this chapter is to document those alternatives to the proposed MC-5 improvements which may be reasonably considered as substitutes. In addition to the No Project condition, these alternatives are MC-1 (which would route LRT service in tandem with freight rail service along the Southern Pacific Wilmington Branch, and is currently the adopted mid-corridor segment for the Long Beach-Los Angeles Rail Transit Project), and MC-3 (which would divert freight rail traffic to the Southern Pacific San Pedro Branch using a portion of the West Santa Ana Branch). Each of the above alternatives has been analyzed in detail in the previously published DEIR (May 1984) and the reader is referred to that document for the detailed discussion. In this chapter, the results of the DEIR analysis are summarized; it is not the intent of this summary to supplant those detailed discussions.

VI-200 NO PROJECT ALTERNATIVE

The No Project alternative is included as a basis for comparison between conditions associated with implementation of the proposed project and conditions which would be present in the year 2000 in the project's absence. The No Project condition can be defined as existing roadway and freight rail geometry, without LRT service in the project area, upon which year 2000 automobile and freight rail traffic would be superimposed. In this alternative, freight rail traffic would continue to use both the SPTC Wilmington and San Pedro Branches for the movement of goods. This method of operation corresponds to the Status Quo operation defined in the SCAG Ports Access Study. For purposes of comparison, both high- and low-level freight train volumes are possible in the year 2000.

As defined in the SCAG Ports Access study and as defined in the May 1984 DEIR, the Low Scenario projects 17 freight trains per day operating on the Wilmington Branch, with 13 through trains operating from Watts Junction south to Dominguez Junction in the year 2000. The Status Quo High Scenario projects 29 freight trains per day operating on this branch, with 25 through trains per day operating from Watts Junction south to Dominguez Junction. On the San Pedro Branch, the SCAG Status Quo Low Scenario projects four through trains per day and the High Scenario projects 10 through trains per day. These figures compare to 10 trains per day (six through trains and four switcher movements) on the Wilmington Branch and four trains per day (two through trains and two switcher movements) on the San Pedro Branch in 1985.

In the absence of any changes to freight rail or roadway geometry in the project area, the No Project alternative would result in an increasing frequency of automobile delays, affecting primarily east/west movement along arterial roadways at the rail crossings of Willowbrook Avenue and Alameda Street. A nearly threefold increase in north/south freight train movements (projected under the SCAG Low Scenario) at these locations would give rise to an equivalent number of traffic stoppages, with a corresponding increase in automobile queue lengths. Under the SCAG High Scenario, these effects would be further exacerbated.

Thus, the impacts associated with the No Project alternative, in terms of traffic consequences and in comparison with the MC-5 roadway and rail geometric improvements, would be increased rail/auto conflicts and increased delays. The proposed LRT system operation would not contribute significantly to such delays.

In the future, the No Project alternative would result in a different set of physical conditions than would occur if the MC-5 alternative were implemented. By not altering the present configuration of freight rail trackage in the study area, this alternative would not alter land uses in the immediate vicinity, nor would it subject a different set of land uses to the noise, vibration and other effects associated with freight rail operations. These effects would increase in intensity, but they would be felt by the same industrial and commercial uses which currently characterize the study area. In contrast, the MC-5 alternative, by virtue of its routing of freight traffic along Mealy Street, would expose a residential area to train noise, vibration, and other associated effects, which they would otherwise not experience.

Without the rail transit project, however, neither concentrated transit service nor an incentive for concentrating development to achieve basic transportation and land use goals would occur.

Moreover, the No Project alternative would offer no strategies for enhancing mobility and accessibility; and as development occurs and traffic congestion worsens, mobility and accessibility would diminish, leaving residents of the corridor, particularly transit-dependent individuals, worse off than they are currently.

The No Project alternative would not meet the transportation needs in the existing rail corridor since there would be no major change in current transit modes or travel patterns. Changes that could occur with the No Project alternative would essentially consist of maintenance, repair, and minor modifications of the existing road network and bus system.

The existing street network, which currently handles the majority of the travel demand in the corridor, would be expected to carry the anticipated growth of employment. With significant increases in vehicular traffic projected for the year 2000, both bus service and vehicular traffic would encounter significantly reduced travel speeds and increased delays during the peak periods.

VI-300 ALTERNATIVE MC-1 (AT-GRADE RAIL SERVICE IN THE MID-CORRIDOR)

This alternative, which is currently the adopted alignment for the mid-corridor segment of the rail transit project, would place light rail transit service alongside freight rail operations on the Wilmington Branch of the Southern Pacific. It also represents a form of No Project alternative, in that it offers no alteration to freight rail operations in the MC-5 project area, but imposes the additional transit operations. It could, therefore, be considered a No Project alternative for freight operations, assuming that LRT service is in fact implemented.

The consequences of this alternative reside in the areas of freight rail operations, traffic impacts, mobility, relationship to surrounding land uses and, to some extent, economic activity.

Freight rail operations associated with the MC-1 alternative would be essentially the same as those experienced under the No Project alternative. The Status Quo SCAG alternative would be in effect, with similar freight train volumes to these indicated in the No Project discussion above. For purposes of traffic analysis, as reported in the DEIR (May 1984), a high-level freight rail operation scenario was assumed, resulting in worst-case traffic conditions. Thus, the implications for auto/freight rail conflicts, traffic delays, and vehicle queues would be similar to those discussed for the No Project alternative, except that the MC-1 alternative would also implement a rail transit/traffic signal coordination system, which would alleviate potential additional traffic delays attributable to the introduction of LRT service.

Since the MC-1 alternative has LRT service as one of its components, it therefore offers the improved mobility which occurs with the system as a whole and is similar to MC-5 in this regard.

As would be the case under the No Project alternative, continued freight rail traffic at-grade along the SPTC Wilmington Branch, independent of the light rail project, could have a negative influence on redevelopment efforts by the City of Compton in the Central Business District (CBD). The Compton CBD and Civic Center area is located to the south of Compton Boulevard and adjacent to Willowbrook Avenue, along which runs the Wilmington freight rail branch. The adverse noise, traffic delays, and other disruptive effects associated with future increases in freight rail traffic on the Wilmington Branch could tend to impede the redevelopment and economic revitalization efforts in this area. On the other hand, the presence of rail passenger service in this same area, with a station at Compton Boulevard, would provide for increased consumer patronage opportunities which would not otherwise occur. The Compton Town Center Shopping Center would also be accessible to transit patrons from this station.

VI-400 ALTERNATIVE MC-3 (FREIGHT RAIL RELOCATION)

The MC-3 alternative would offer an approach similar to MC-5 for the management of freight rail operations, namely the relocation of those operations to the SPTC San Pedro Branch corridor; MC-3, however, would accomplish the relocation using the West Santa Ana Branch at Watts Junction. The results of this freight relocation would divert freight rail operations to the San Pedro Branch operating north/south in the median between the east and west roadways of Alameda Street. The MC-3 alternative would also offer the opportunity for freight rail consolidation (advocated by the SCAG Ports Access Study) along the San Pedro Branch right-of-way and provide an exclusive right-of-way for LRT service.

The main differences between MC-3 and MC-5, therefore, are largely confined to the areas of traffic impacts, land use, and visual quality.

MC-3 would offer the possibility of freight rail consolidation along the San Pedro Branch, which in turn could result in greatly increased train movements. Without grade separation, significant negative traffic impacts would be largely confined to east/west movements; whereas, with the grade separation proposed by Options B or C for MC-5, north/south obstructions in the vicinity of the Alameda/ Rosecrans intersection would be reduced.

The MC-3 alternative would create negative visual impacts not occurring under MC-5. An elevated grade crossing and aerial station at 103rd Street would be visually prominent and would be incompatible, in terms of scale, with the historic Watts station.

MC-3 would have vibration impacts potentially damaging to the Watts Towers, as well as increasing residential noise exposure along the West Santa Ana Branch by up to 12.4 dBA CNEL in some areas. Additionally, while MC-5 would increase residential noise exposure by up to 15 dBA CNEL, increased exposure would be over a much smaller area than with MC-3.

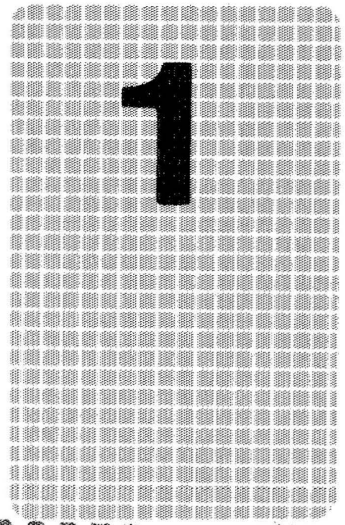
By diverting freight rail traffic to the San Pedro Branch of the SPTC farther north, the MC-3 alternative would alleviate the introduction of associated noise, vibration, and other disruptive effects experienced by the residential area along the Mealy Street Connector. It would, however, have additional negative noise effects on residential areas adjacent to the West Santa Ana Branch. In essence, the adverse impacts associated with the MC-3 alternative are shifted in location under MC-5 and are somewhat diminished in degree.

VI-500 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

The environmentally superior alternative in terms of avoidance of significant adverse local impacts would be the No Project alternative, where the only effect experienced would be that of increased freight rail traffic, which is common to all alternatives. However, the No Project alternative would also not have any of the beneficial effects associated with implementation of the remaining alternatives.

Section 15126(d)(2) of the state CEQA Guidelines states that if the No Project alternative is found to be the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Following this guideline, MC-1 would be defined as the environmentally superior alternative. Given the fact that freight rail traffic and related effects would occur regardless of the LRT alternative implemented, the MC-1 alternative would have the least disruptive effects on the surrounding environment when viewed in comparison with both MC-3 and MC-5. This is because MC-1, by being confined to the Wilmington Branch right-of-way, would have overall reduced construction impacts compared to the much greater scope of construction activities for MC-3 or MC-5, as well as the fact that MC-1 would not introduce adverse noise and visual impacts during operation.

Appendix



APPENDIX 1

Los Angeles County Transportation Commission
403 West Eighth Street
Suite 500
Los Angeles
California 90014
(213) 626-0370

NOTICE OF PREPARATION

June 5, 1985

FROM: Los Angeles County Transportation Commission
403 West Eighth Street, Suite 500
Los Angeles, CA 90014

SUBJECT: Notice of Preparation of a Subsequent Environmental Impact Report on the Long Beach-Los Angeles Rail Transit Project - Mealy Street Freight Rail Diversion (MC-5)

The Los Angeles County Transportation Commission (LACTC) as lead agency has undertaken an extensive environmental review of the 22-mile proposed light rail system between downtown Los Angeles and downtown Long Beach, including a Draft Environmental Impact Report (DEIR), a Supplemental EIR (SEIR), and a Final EIR (FEIR).

The FEIR was certified and preferred alignments for Los Angeles, the mid-corridor and Long Beach were adopted on March 27, 1985. Concurrence with alignment segments within Los Angeles and Long Beach was reached prior to certification and project adoption. The City of Compton has requested that an additional alternative alignment be analyzed. This alignment, known as the Mealy Street Freight Rail Diversion (MC-5), is described in the attached project description.

LACTC will need to know the views of your agency as to the scope and content of the environmental information which is necessary for your agency to pursue its statutory responsibilities in connection with the

proposed additional alignment. Your agency, as a responsible agency, will need to use the environmental documentation, including the subsequent EIR prepared by LACTC, when considering issuance of permits or other approval for the project. If your agency is not a responsible agency as defined by CEQA, we would still request your participation in defining the scope and content of the subsequent document.

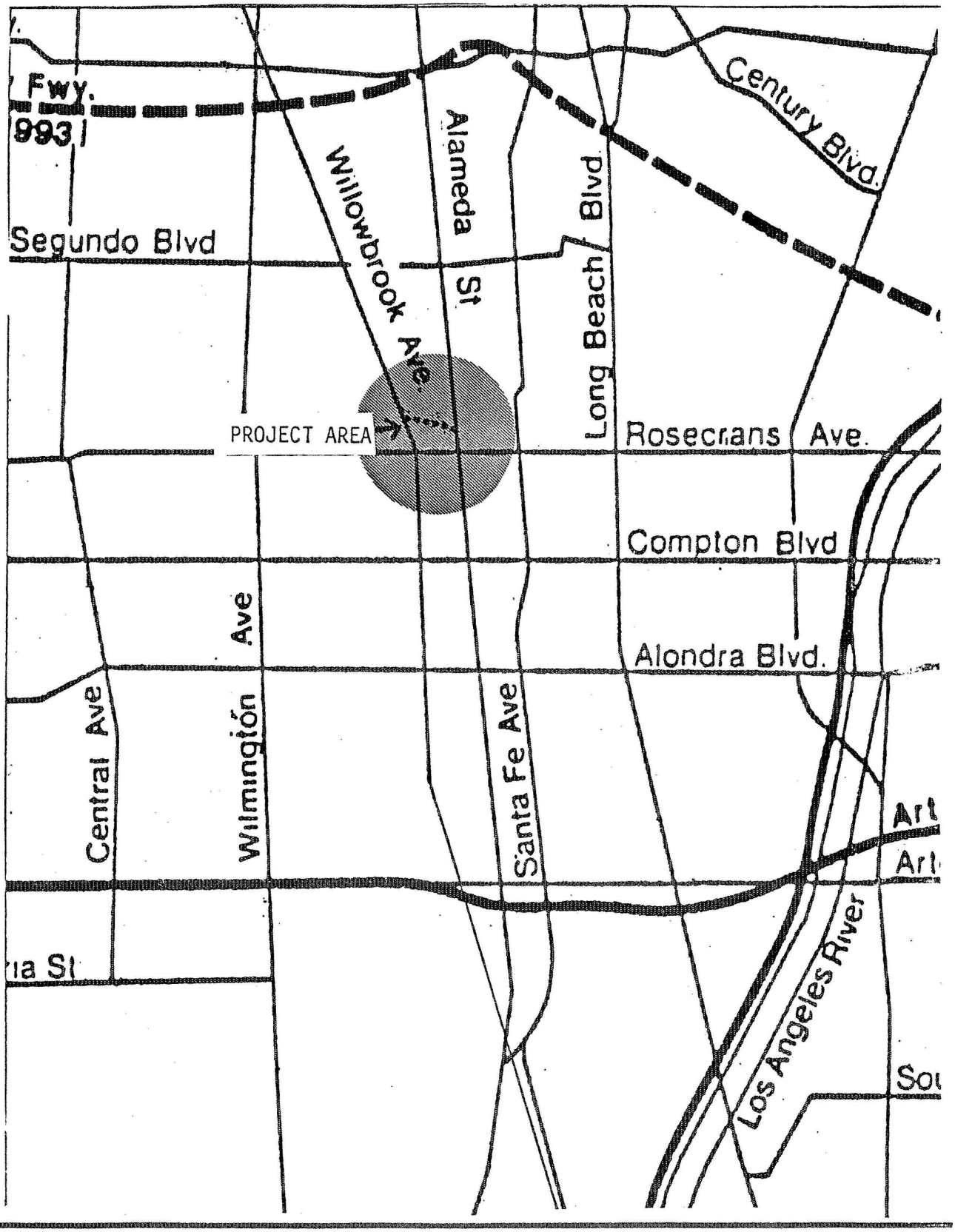
The description of the Mealy Street Freight Rail Diversion and possible environmental effects are contained in the attached materials. If additional information is needed, copies of the previous environmental documentation may be requested from the LACTC office.

Due to the time limits mandated by state laws, your response must be sent at the earliest possible date and not later than 30 days after receipt of this notice.

Please send your response to Mr. Daniel S. Caufield, Project Director, at the LACTC address shown above. Please include the name and phone number of the appropriate contact person in your agency.

Thank you for your continued cooperation.

Attachment: Project Description



Long Beach - Los Angeles
RAIL TRANSIT PROJECT
LOS ANGELES COUNTY TRANSPORTATION COMMISSION

MEALY STREET FREIGHT RAIL DIVERSION
Alignment Alternative

PROJECT DESCRIPTION

BACKGROUND

The Long Beach-Los Angeles Rail Transit Project is the first light rail project to be undertaken as part of a transit improvement program by the Los Angeles County Transportation Commission (LACTC). This program is funded by a one-half percent sales tax increase approved by county voters in 1980. Based on a 1982 feasibility study, the Long Beach-Los Angeles corridor was chosen to be the first project implemented. Most of the project route would be essentially the same as the last line operated by the Pacific Electric Railway's "Red Cars," which ceased operation in 1961.

The project has undergone preliminary engineering and a Draft Environmental Impact Report (DEIR) was issued by the LACTC on May 30, 1984. A Supplement to the DEIR, defining and evaluating additional alternatives for the Long Beach segment, was issued on December 3, 1984, while the Final EIR was issued and certified on March 27, 1985. In order to gain consensus for the mid-corridor segment, the LACTC is preparing a subsequent EIR to give similar analysis to an additional alternative within the City of Compton, known as the Mealy Street Freight Rail Diversion (MC-5).

DESCRIPTION OF ALTERNATIVE ALIGNMENT

The proposed alternative alignment follows the same general right-of-way as the other mid-corridor alternatives described in the previous environmental documentation, i.e., the Southern Pacific Wilmington Branch rail line. The MC-5 alternative would include an aerial segment for the light rail slightly north of Rosecrans Boulevard to allow passage of rerouted freight rail traffic under the proposed light rail guideway structure. The SPTC freight rail operations would move from the Wilmington Branch to the San Pedro Branch on right-of-way adjacent to Mealy Street.

SPTC track would be relocated to provide this connection between the two branches. The railroad's Wilmington Branch main line freight operations would be relocated to the San Pedro Branch from Mealy Street to Dominguez Junction. Thus, from Mealy Street to Dominguez Junction, the light rail transit system would operate in an exclusive right-of-way. In addition, there are roadway and intersection improvements, including optional grade separations, proposed for surface streets in the immediate area. These are addressed specifically in the paragraphs following:

AERIAL SEGMENT

At a point approximately 2000 feet north of Rosecrans, the two LRT tracks would rise on an aerial structure and continue along the existing SPTC right-of-way passing over Rosecrans and then gradually descending to grade at a point approximately 800 feet south of Rosecrans. The aerial structure reaches a maximum elevation of 23'6" above the track bed at a point approximately 1200 feet north of Rosecrans Avenue. At Rosecrans, the underside of the aerial structure would be 14'6" above street level.

SPTC TRACK RELOCATION - MEALY STREET CONNECTOR

At a point approximately 1200 feet north of Rosecrans, within the existing right-of-way, the relocated SPTC track would curve to the southeast and pass under the elevated LRT structure. Leaving the existing right-of-way, new SPTC track would pass through the southeast corner of Mona Boulevard and Mealy Street, and cross Tamarind Avenue at a point approximately 600 feet north of Rosecrans. If the intersection of Rosecrans and Alameda remains at grade, i.e., is not grade separated, then the relocated SPTC track would merge just north of Rosecrans with the existing San Pedro branch which divides Alameda Street into east and west roadways. A new SPTC track would be constructed approximately 20 feet east of the existing track, from Rosecrans approximately 1,000 to 2,000 feet south, to accommodate the widening of Alameda Street. At this point the new track would merge with the existing track and a new freight track would be constructed 20 to 25 feet closer to the west side of Alameda Street. If Rosecrans Avenue is grade separated from Alameda (see grade separation options), the relocated SPTC track would be placed approximately 15 feet west of and parallel to the existing track along Alameda from a point just north of Rosecrans Avenue south to Dominguez Junction.

In addition, the project as adopted on March 27, 1985 required that the existing team track on the Willowbrook line and the industrial spur for the Owens Corning plant be relocated. The plan adopted called for the spur and team track to be relocated on the vacant land just south of Mealy Street between Mona Avenue and Tamarind Street. Implementation of MC-5 would require slight changes in the location of these tracks to accommodate the connector track. The MC-5 location for the team track would begin just west of Alameda, where the track would diverge from and then parallel the Mealy Street Connector track for a distance of approximately 800 feet, terminating 200 feet west of Mona Boulevard. The new industrial spur connection would branch off from the team track and curve to the north to connect with the existing industrial spur at the plant. The relocated SPTC track and

team track would be located within a right-of-way corridor that varies in width from a minimum to 50 feet to a maximum of 80 feet.

STREET IMPROVEMENTS AND GRADE SEPARATIONS

The Mealy Street Connector would affect access and change traffic circulation patterns within the immediate area. The relocated SPTC track and right-of-way would prohibit through traffic on a north/south basis on Mona Boulevard and Tamarind Avenue, creating cul-de-sacs on the respective streets south of the right-of-way. Mona Boulevard, north of the track, would end at Mealy Street. Thus, southbound traffic on Mona would be directed east onto Mealy Street and westbound traffic on Mealy directed north onto Mona.

Alameda Street (east of the tracks) presently ends at a point approximately 450 feet north of Rosecrans. Under MC-5, it would be extended north to Oaks Street to provide through access. It is contemplated that final design of this alternative would include traffic signing and control elements (TSM improvements) to encourage diversion of traffic from Alameda (west) to Alameda (east) if substantial queues develop on Alameda (west) due to at-grade freight train crossing movements.

There are four grade separation options for Rosecrans Avenue at Alameda as described below:

Option A - At Grade

Under this option, Rosecrans Avenue would remain at-grade with possible improvement made at the intersection with Alameda.

Option B - Rosecrans Underpass

An underpass would be constructed, extending approximately 500 feet east and 500 feet west of Alameda, to allow four lanes of through traffic on Rosecrans to pass under the SPTC tracks and Alameda Street. The right and left lanes on Rosecrans would remain at-grade. The underpass would restrict access/egress on Tamarind Avenue, Mulberry Street, and Rose Avenue to right turn in/right turn out only.

Option C - Rosecrans Overpass with Straight Alignment

An overpass extending 500 to 700 feet east and west of Alameda Street would permit through traffic to pass over Alameda Street and the SPTC tracks. Access and egress to Mulberry Street would be on a right turn in/right turn out basis, or it would be closed completely

and access provided via Tamarind Avenue. Rose Avenue would be accessed/egressed on a right in/right out basis. Tamarind Avenue would remain open.

Option D - Rosecrans Overpass with Curved Alignment

The overpass would extend approximately the same distance east and west of Alameda as Option C; however, it would differ from Option C in that the overpass would curve north of Rosecrans as it rises from grade. As it passes over Alameda Street and the SPTC tracks, the overpass would be parallel and approximately 30 feet north of Rosecrans Avenue. Under this option, Rosecrans at Alameda would be closed to at-grade through traffic.

To maintain access to local surface streets and to facilitate traffic circulation, two frontage roads, one east of Alameda and one west, would be constructed just north of and parallel to the overpass. The frontage road east of the SPTC tracks would extend from Rosecrans, at a point just west of Spring Avenue, west to the east side of Alameda Street. It would provide for a single lane of westbound traffic. Rose Avenue, under this configuration, would terminate at the frontage road, preventing the through access to Rosecrans which presently exists. The frontage road west of the SPTC tracks would connect the west side of Alameda with Rosecrans Avenue at a point just west of Mulberry Street. A cul-de-sac would be created on Tamarind Avenue just north of the frontage road. Thus Mulberry would be accessed via the frontage road. Through access to Rosecrans from Mulberry would be eliminated.

In addition, northbound traffic on the west side of Alameda would access the overpass via a single westbound lane on Rosecrans Avenue. This lane would provide direct access to an overpass on-ramp that would be constructed just west of Tamarind Avenue. The on-ramp would direct the single lane of westbound traffic on Rosecrans, west of Alameda, onto the eastbound lanes of the overpass.

PROBABLE ENVIRONMENTAL EFFECTS

Environmental effects may be found in the following areas:

Air - the previous environmental documents have shown no regional air quality impacts. There may be microscale impacts due to cross-over traffic and automobile delays.

Noise - construction activities may result in a temporary increase in noise levels above existing ambient conditions. Changes in freight rail location would result in localized noise increases.

Land Use - land use changes may result from the implementation of the modified alternatives. Displacement of residents and businesses will result from the relocation of the freight rail line and if Option D (Rosecrans Overpass with curved alignment) is implemented.

Economic - construction and/or operation of the addition freight rail line on the San Pedro Branch along Alameda Street may effect the businesses located on that street.

Natural Resources - there will be a commitment of natural resources (e.g., wood, gravel, and concrete) to the construction of the project over and above those described in the previous environmental documents.

Transportation and Circulation - patterns of rail freight in the mid-corridor area will be altered. Patterns of vehicle and pedestrian circulation in the area of Alameda, Willowbrook, and Rosecrans may be altered as a result of this project. There is the potential for additional cross-traffic conflicts and delays along the Alameda Street corridor.

Utilities - construction may result in the movement and/or replacement of some utilities.

The subsequent EIR will be focused on the above areas. Other potential areas of environmental significance such as earth, water, light/glare, population, secondary development, navigable waterways and coastal zone have been found not to be affected by the proposed alignment or are covered adequately in the previous documents (i.e., the DEIR, SEIR and FEIR on the Long Beach-Los Angeles Rail Transit Project) and will not be discussed in the subsequent EIR.

APPENDIX 1

SUMMARY OF RESPONSES

AGENCY	DATE	SIGNATURE	ENVIRONMENTAL COMMENTS	OTHER COMMENTS	LOCATION IN EIR
STATE OF CALIFORNIA					
Dept. of Transportation (District 7)	7/1/85	W.B. Ballantine	No comment at this time.		
Public Utilities Commission	7/19/85	D.R. Chew	A) Options A or B (at-grade or underpass) would create long queues of traffic; B) Potential accidents and other traffic hazards should also be addressed.		A) Section IV-311 B) Section IV-314
REGIONAL					
SCRTD	7/5/85	Robert J. Murray	A) Bus/freight train conflicts; additional grade crossing at Willowbrook & Mealy to affect Line #55; impacts on supporting bus network; B) Safety of LRT cars; C) Noise and vibration impacts; D) Visual effect of aerial guideway; E) Auto and pedestrian circulation impacts; F) Costs/benefits of aerial alignment.		A) Section IV-320 B) May 1984 DEIR, Section I-420 C) Section IV-131 D) Section IV-240 E) Considered and analyzed in previous environmental documents. F) Costs: Section I-410 Benefits: Section IV-312
SCAG	7/11/85	Wendy A. Murphy	No comments at this time.		

APPENDIX 1

SUMMARY OF RESPONSES (cont.)

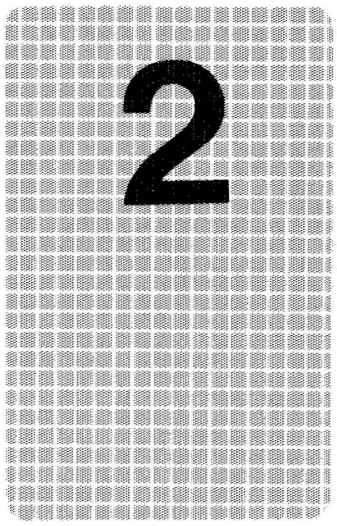
AGENCY	DATE	SIGNATURE	ENVIRONMENTAL COMMENTS	OTHER COMMENTS	LOCATION IN EIR
COUNTY					
County of Los Angeles Chief Administrative Officer	7/11/85	Bill Kreger for James Hankla	No comment.		
L.A. County Sanitation Districts	7/23/85	Gary Brooks for Charles W. Carry	Construction and operation of project over sewer lines and possible relocation of facilities requires review by Districts. Request plans for the entire LB-LA project in order to conduct full impacts evaluation.		
Dept. of Regional Planning	6/20/85	Norman Murdoch	Traffic impacts during construction; Visual impact of elevated guideway.		Section III-310 Section IV-240
CITY					
Long Beach	6/14/85	Robert Paternoster	No impacts expected.		
Los Angeles					
Fire Department	6/21/85	Chief Bartlett (by phone)	No negative impacts expected.		
Dept. of Transportation	7/5/85	Donald R. Howery	Request discussion of how MC-5 might preclude any future alternative diversion points further north.		Section S-500
Harbor Dept.	7/9/85	W. Calvin Hurst	No comments.	Would like copy of EIR when available.	

APPENDIX 1

SUMMARY OF RESPONSES (cont.)

AGENCY	DATE	SIGNATURE	ENVIRONMENTAL COMMENTS	OTHER COMMENTS	LOCATION IN EIR
Compton Police Dept.	6/25/85	G.A. Sandoval	No negative impacts expected.		
Fire, Police, and Public Works Depts. (joint letter)	7/19/85	Laverta Montgomery	A) Response time of 5-6 minutes for emergency vehicles maintained during construction and operation;		A) Section III-220
			B) MC-5 should include extension of Peck & Tucker Streets;		B) Not part of project
			C) Noise, dust and vibration during construction should be mitigated.		C) Section III-140

Appendix



APPENDIX 2

GLOSSARY OF TERMS AND ABBREVIATIONS

Above-Grade:
Above existing ground level

Absorption Rate:
The amount of newly constructed floor space in a given geographical area that is occupied over a period of time; the absorption rate is usually averaged on an annual basis

ADT (Average Daily Traffic)
Sum of two direction traffic volumes

Aerial Station:
A passenger station in which the guideway and platform are located on an above-grade structure

Air Quality Hot Spot:
A location where ambient carbon monoxide concentrations exceed the national ambient carbon monoxide concentrations

Alignment:
The horizontal location of a guideway or roadway

AM Peak Period:
Between 6:30 AM and 8:30 AM on weekdays

ANL:
Argonne National Laboratory

AQMA:
Air Quality Management Area

AQMD:
Air Quality Management District

AQMP:
Air Quality Management Plan

ARB:
Air Resources Board

Articulated Bus:

An extra-long bus that has the rear portion flexibly but permanently connected to the forward portion, providing a continuous interior through the two parts

Articulated Light Rail Vehicle:

A light rail car consisting of two or more full-size units free to swivel with the inner ends being carried on a common bogie. Passengers are allowed free access through the articulated joint.

At-Grade:

A guideway or road with vertical alignment at elevations generally the same as the surrounding areas (i.e., not elevated or depressed)

ATSF:

Atchison, Topeka and Santa Fe Railway

Ballast:

An integral part of the track structure composed of crushed rock or slag, the function of which is to support rails, distribute loads, and provide drainage for the track structure

Barrier-Free Fare Collection:

A fare collection system which provides for self-service (vending machine) pre-purchase of fares at transit stations with proof-of-fare payment by on-board inspectors

Below-Grade:

Below existing ground level

Berm:

A horizontal ledge cut between the foot and the top of an embankment to stabilize the slope by intercepting sliding earth.

BTU (British Thermal Unit):

An energy unit equal to the quantity of heat required to raise the temperature of one pound of water one degree farenheit

Busway:

A roadway which is used exclusively for buses, usually operating in express service

CALINE Model:

California Line Source Model. A mathematical model developed by the Caltrans Transportation Laboratory to predict carbon monoxide levels in the atmosphere

CALTRANS:
California Department of Transportation

Carpool:
An automobile with three or more occupants

Catenary:
An overhead wire configuration from which a transit vehicle collects power

CBD:
Central Business District

CCTV:
Closed circuit television

CEC:
California Energy Commission

Census Tract:
Small areas into which large cities and adjacent areas are divided by the U.S. Census for the purpose of providing comparable small area statistics

Central Groundwater Basin:
A hydrographic basin which includes the south central portion of Los Angeles County

CEQA:
California Environmental Quality Act

CHABA:
Committee on Hearing Bioacoustic and Biomechanics, National Academy of Sciences

CNEL (Community Noise Equivalent Level):
An average of the A-weighted noise levels occurring over a full 24-hour period, with adjustments applied to those levels occurring during evening and nighttime hours in order to account for the greater sensitivity of people to noise and vibration levels during these hours. Specifically the noise levels occurring between 7 PM and 10 PM have an adjustment of 5dB, while noise levels occurring from 10 PM to 7 AM have an adjustment of 10dB. These weighted evening and nighttime noise levels are then averaged together with the unweighted daytime noise levels to provide an equivalent hourly average

Couplet:
An adjacent pair of one-way streets running in opposite directions designed to add continuity and capacity to the roadway and facilitate the flow of traffic

Cut-and-Cover Construction:
A method of tunnel construction in which a trench is first excavated, a tunnel structure is constructed, and the trench is then backfilled

dBA:
A-weighted decibels which correspond to subjective perception of noise levels by the human ear

Decibel:
A unit of measurement of the intensity of sound

DEIR:
Draft Environmental Impact Report (a State of California environmental document)

DEIS:
Draft Environmental Impact Statement (a federal environmental document)

Dewatering:
Removing water from a construction site, such as a tunnel or a trench, by pumping or draining

Displacement:
Act of displacing firms, persons, and households from structures taken by eminent domain for transit rights-of-way and later to be demolished or relocated to permit transitway construction

Drawdown:
The magnitude of the change in water surface level in a well, reservoir or natural body of water resulting from the withdrawal of water

DTIM:
Direct Travel Impact Mode

Dwell Time:
The total time from the instant that a train stops in a station until it resumes moving

Elastic Demand:
Demand for a commodity or service which increases with a concurrent increase in the supply of the same commodity or service

Elderly/Senior Persons:
Persons 65 years or older

Emergency Vehicle:
Any vehicle normally used by state or local law enforcement, fire and medical authorities, or private industry to provide emergency service

Fail-Safe Design:
A design which permits continued operation in spite of the occurrence of a failure

FEIR:
Final Environmental Impact Report (a State of California environmental document)

FEIS:
Final Environmental Impact Statement (a federal environmental document)

FEMA:
Federal Emergency Management Agency

FHWA:
Federal Highway Administration

FIRM (Federal Insurance Rate Maps):
Maps published by FEMA to indicate flood potential for various areas

Fractional Impact Methodology:
A means of taking into account the absolute level of the future noise environment, the level of the existing noise environment, and the distribution of people exposed to various noise levels

Fugitive Dust:
Any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of man

Gap Closure:
Completion of a link between two existing segments of a road or rail system

Grade Crossing:
A physical arrangement of two transportation routes where there is a physical interference between rail and other vehicles on each route

Grade Separation:
Intersection of guideways or roads with different vertical alignments where there is a reduction or elimination of conflict between the respective alignments

Guideway:
The structure and its appurtenances upon which the transit vehicle will travel and be guided

Headway:
The time separation between two trains, both traveling in the same direction on the same tract, measured from the time the head end of the leading train passes a given reference point to the time the head end of the train immediately following passes the same reference point

Home-Work Trip:
A person-trip originating at home and terminating at one's place of work

HOV (High Occupancy Vehicle):
Autos used in carpools (three or more persons) and vanpools

Infill:
Vacant land suitable for development in existing urban areas.

Interface:
The junction between two transportation systems or subsystems

Junction:
A location where train routes converge or diverge

Kiss-and-Ride:
Auto drop-off and pick-up of transit riders

LA Basin:
A coastal plain bounded on the northeast by the San Gabriel Mountains, Puente Hills, and San Jose Hills; on the northwest by

the Santa Monica Mountains; on the west by the Pacific Ocean; on the southwest by the Palos Verdes Hills and San Pedro Bay; and on the east and southeast by the Santa Ana Mountains

LADOT:
City of Los Angeles Department of Transportation

LACTC:
Los Angeles County Transportation Commission

Landfills:

- Class I: Accepts hazardous wastes and all other non-radioactive wastes
- Class II: Accepts nontoxic biologically or chemically degraded and inert materials
- Class III: Accepts non-degradable, non-water soluble solids and inert materials
- Class IV: Designed to Class II Standards but accepts certain Class I materials that are minimally hazardous

LAPD:
Los Angeles Police Department

LARTS:
Los Angeles Regional Transportation Study

LBT:
Long Beach Transit Company

L_{dn} (Day-Night Noise Level):
Measurement of subject response to noise levels over 24 hours, expressed in A-weighted decibels. The 24-hour period is divided into day and night periods with the night period (i.e., 10 PM to 7 AM) having an adjustment added to account for greater sensitivity to noise at that time

L_{eq} (Energy Equivalent Level):
A number representing average sound energy over a measurement period, expressed in A-weighted decibels

LOS (Level of Service):
The relative quality of service provided by various transportation alternatives (i.e., Level of Service "A" is free flow, and Level of Service "F" is stop and go)

Low-Income Household:
Households with incomes below 125 percent of the federally defined poverty level

LRT:
Light Rail Transit

LRV:
Light Rail Vehicle

LWP (Level Weighted Population):
A measure of the number of people affected by a weighted noise level determined by the fractional impact methodology

Market-Rate Housing:
Housing where cost is determined by the housing market and not affected by such factors as subsidies or rent control

MC-1:
Compton At-Grade Alternative

MC-2:
Compton Grade Separation Alternative

MC-3:
SPTC Railroad Relocation

Mixed Traffic:
Roadway traffic which includes autos, buses, trucks and light rail vehicles

Mode Split:
The division of person-trips among available modes of transportation

Mode of Access Split:
The division of transit station arrivals among available modes of transportation

Multi-Family Housing Unit:
A housing contained in a structure having more than one housing unit

National Register (of Historic Places):
A listing maintained by the Heritage Conservation and Recreation Service of architectural, archaeological, and cultural sites of local, state, or national significance

NEPA:
National Environmental Protection Act, 1969

NII:
Noise Impact Index

Nonattainment Area:
An area designated by the United States Environmental Protection Agency as presently violating the National Ambient Air Quality Standards

NOx (Oxides of Nitrogen -- nitrogen oxide and nitrogen dioxide):
Pollutants released during combustion of fossil fuels

NPDES:
National Pollution Discharge Elimination System

Noise Sensitive Receptor:
A land use with a high degree of sensitivity to noise. Such uses include homes, churches, schools, medical facilities and theaters

No Project Alternative:
A future condition without the proposed project against which the project alternatives can be compared

Overcrowded Housing Unit:
A housing unit which is occupied by more than one person per room

Park-and-Ride:
Commuter transit service and associated facilities oriented toward passengers who drive to station areas in private autos and park

PB/KE:
Parsons Brinckerhoff/Kaiser Engineers

PBQ&D:
Parsons Brinckerhoff Quade & Douglas

Peak Hour:
The 60-minute period in a typical weekday which accommodates the largest number of automobile or transit patrons

Person-Trip:
A trip made by a person by any mode or combination of modes for any purpose

Person-Year:
A measurement of the amount of employment generated by the construction of a project, generally defined as 2080 man-hours

Platform, Center:
The portion of a station between and directly adjacent to the tracks where trains stop to load or unload passengers

Platform, Side:
The portion of a station at one side of a trackway directly adjacent to the tracks where trains stop to load and unload passengers

PM Peak Period:
Between 3:00 PM and 6:00 PM on weekdays

Portal:
An entrance or exit of a subway

PPM:
Parts Per Million

Public Transit Disabled:
Presence of a physical, mental, or other health condition which has lasted six or more months which limits or prevents a person from using public transportation

ROW (Right-of-Way):
Land or rights to land used or held for transit operations or public way

RSA:
Regional Statistical Area

RTP:
Regional Transportation Plan

RWQCB:
Regional Water Quality Control Board

San Pedro Bay Ports Access Study:

A Southern California Association of Governments study which investigates various alternatives for accommodating the projected increase in rail freight traffic between the SPTC, UP and ATSF main lines and the ports of Los Angeles and Long Beach

SCAB (South Coast Air Basin):

An area consisting of Los Angeles County south of the crest of the San Gabriel Mountains, all of Orange County, and Riverside and San Bernardino counties west of Banning Pass

SCAG:

Southern California Association of Governments

SCAG Region:

An area comprised of Imperial, Los Angeles, Orange, Riverside, San Bernardino and Ventura Counties

SCAG-82:

The growth forecast policy of the Southern California Association of Governments which consists of a set of population, employment, housing and land use forecasts for the SCAG Region, supported by assumptions and policies regarding future growth

Screenline:

An imaginary line, usually following such physical barriers as rivers or railway tracks, along which traffic counts may be conducted or compared

SCRC:

Southern California Rail Consultants

SCRTD:

Southern California Rapid Transit District

SCRTD Sector Improvement Plan (SIP):

The basic program outlining near-term SCRTD bus service improvements in Los Angeles County

Signal Pre-emption:

Traffic signal logic incorporated in hardware to modify normal signal phasing for preferential treatment of transit vehicles

SPTC:

Southern Pacific Transportation Company

Substation:

A facility containing electrical equipment, such as transformers or switch gear, which provides power to stations and vehicles

System Alternative:

A total transit system comprised of one downtown Los Angeles, one mid-corridor and one Long Beach routing alternative.

Queue:

A line of vehicles waiting at a traffic signal, or otherwise hindered in free travel

Transit-Dependent Person:

A person who does not have a private vehicle available or who cannot drive and who must use public transport in order to travel

Transportation Mode:

A form of transportation (e.g., automobile, bus, light rail transit, commuter rail, pedestrian, bicycle)

TSM (Traffic System Management):

A process for planning and operating a unitary system of urban transportation with key objectives of conservation of fiscal resources, energy, environmental quality and quality of life

UMTA:

Urban Mass Transportation Administration

Underpinning:

Permanent or temporary supports replacing or reinforcing older ones beneath a wall or column

UP:

Union Pacific Railroad

USGS:

United States Geological Survey

Vacancy Rate:

The ratio between the number of vacant housing units and the total number of units in the area

Value Capture:

A means whereby the land adjacent to a transportation facility is purchased, managed or controlled in order for the public to share in potential financial and community development benefits from the facilities not otherwise possible

V/C Ratio (Volume-to-Capacity Ratio):

Relationship of transport system usage to the number of patrons which can be accommodated for the same period of time

VMT (Vehicle Miles of Travel):

The aggregate total number of miles traveled by all vehicles over a given roadway or on all roadways within a specified geographic area during a given period of time

Willowbrook Neighborhood Development Project:

A project established by the Los Angeles County Community Development Commission to revitalize a 365-acre area in the unicorporated county area of Willowbrook. Major development activities proposed as part of this project include a regional shopping center and a transit center to be constructed in conjunction with the Century Freeway project

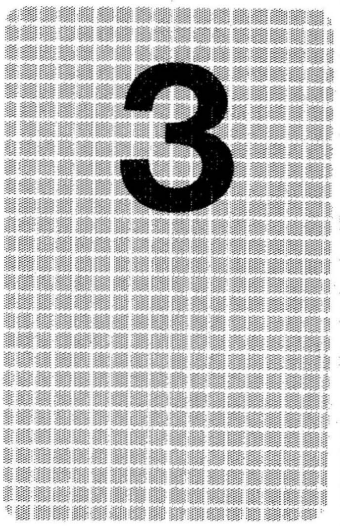
Work Disabled:

Presence of a physical, mental, or health condition which has lasted six or more months an which limits or prevents a person's ability to work

Zoned Fare System:

A fare structure in which the cost of a trip is a function of the number of zones traveled

Appendix



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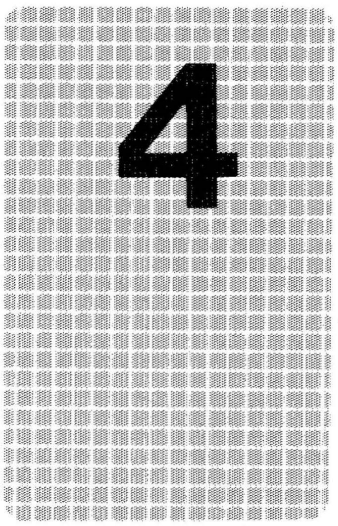
Appendix



APPENDIX 4

LIST OF PERSONS/ORGANIZATIONS CONTACTED

CITY OF LOS ANGELES

Port of Los Angeles	Lillian Kawasaki

CITY OF COMPTON

Planning Department	Robert Gavin John D. Johnson
Community Redevelopment Agency	Joseph Spraggins
Public Works Department	Dante Segundo Ed Sotello
City Manager	
City Engineer	

LOS ANGELES COUNTY

Assessor's Office	
Tax Collector's Office	
Planning Department	
Southern California Rapid Transit District	Ben Urban Gerald Squire

REGIONAL AGENCY

Southern California Association of Governments	Gill V. Hicks

STATE OF CALIFORNIA

Department of Economic and Business Development

Department of Transportation (Caltrans)

Employment Development Department

Board of Equalization

Department of Finance

Department of Conservation,
Division of Mines and Geology

Department of Fish and Game

UNITED STATES GOVERNMENT

United States Army Corps of Engineers

United States Fish and Wildlife Service

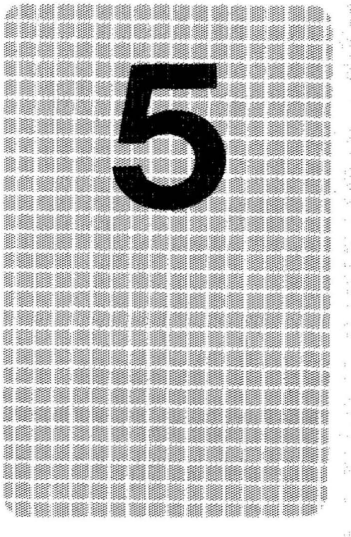
United States Soil Conservation Service

Federal Emergency Management Agency

PRIVATE

Compton Chamber of Commerce

Appendix



APPENDIX 5

LIST OF PREPARERS

LOS ANGELES COUNTY TRANSPORTATION COMMISSION
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PARSONS BRINCKERHOFF QUADE & DOUGLAS, Santa Ana, California
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BBN LABORATORIES, INC., Canoga Park, California
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John C. Funk.

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