PATRONAGE FORECASTS

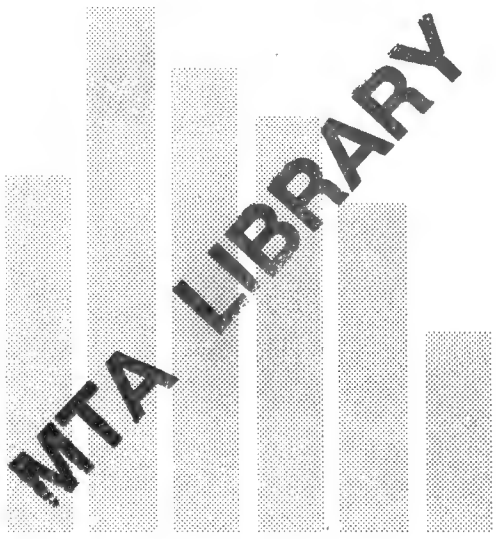
FOR THE SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

FEBRUARY1990

ADDENDUM

TO

PATRONAGE FORECASTS FOR THE
SAN FERNANDO VALLEY
LIGHT RAIL TRANSIT ALTERNATIVES



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CHAPTER 1

INTRODUCTION

1.0 INTRODUCTION

This work was performed for the Los Angeles County Transportation Commission under Technical Services Contract number R04-S11-D4002. The Southern California Association of Governments (SCAG) is designated under State and Federal laws to be the metropolitan planning organization (MPO) for Southern California. As the MPO, SCAG is responsible for generating and updating four major plans: (1) the Regional Mobility Plan; (2) the Air Quality Management Plan for the South Coast Air Basin; (3) the Regional Transportation Improvement Program; and (4) the Regional Growth Management Plan. To perform long-range transportation system and environmental impact analysis, SCAG is required to maintain a regional transportation model and future year transit and highway networks.

1.1 BACKGROUND

In 1987, SCAG performed patronage forecasts for each of five route alternatives to be included in an environmental impact report for the San Fernando Valley light rail transit line.[1] The five route alternatives included:

1) Southern Pacific "Burbank Branch" Line
2) Southern Pacific's "Main Line"
3) Victory Boulevard
4) Ventura Freeway Aerial
5) Los Angeles River Flood Control Channel

The Burbank Branch alignment considered a terminus at either Universal City or North Hollywood. Both the Main Line and the Victory Boulevard alignments had four variations; two of these were the terminuses, and two were in the alignments. Consequently, patronage forecasts were performed for twelve different alignments and for the No Project case to establish a basis for measuring the impacts on air quality. This work was concluded in December 1987.

In October 1988, the Los Angeles County Transportation Commission re-activated the EIR study.[2] Initially, two of the earlier alignments were identified for extensions of Metro Rail. The first of these had Metro Rail extended on the Burbank Branch alignment to Woodland Hills. The other two had Metro Rail extensions on the Ventura Freeway, one in subway and one in an aerial configuration, to Warner Center. Although the alignment was identical, there were differences in the park-ride capacity at some stations between the aerial and subway configurations, which called for separate patronage forecasts. Later, the LACTC defined a fourth alternative, an Automated Railway Transit (ART) line on the Ventura Freeway with one terminus at Warner Center and the other at the Universal City Metro Rail station. Finally, patronage forecasts were requested for shortened, i.e., "phased" versions of the first three alternatives.

1.2 SCOPE OF WORK

Additional model runs were needed to forecast ridership for Metro Rail extensions along the Burbank Branch and Ventura Freeway alignments. Manuel Padron and Associates, consultants to the LACTC, developed the station-to--station run times for each of the alternatives. LACTC's Rail Planning Division furnished the complete Metro Rail routings, run times, and station parking assumptions for the earlier study. This included the operations of Metro Rail from East Los Angeles to the San Fernando Valley and Metro Rail from East Los Angeles to Veteran and Wilshire. The LACTC has also stipulated that the rest of the rail system, the background bus system, as well as other conditions, be the same as those of the San Fernando Valley light rail EIR study. The specific model output requested by the LACTC for each alternative included:

1. A.M. Peak-Hour Passenger Loadings, both directions.
2. Average weekday ridership
3. A.M. Peak Period Station Mode of Access.
4. Estimated change in Vehicle Miles Traveled.
5. Unconstrained parking demand.

1.3 METHODOLOGY

All of the above data are derived from outputs of the regional transportation model. A description of the model is contained in an Appendix to the original report on the patronage forecasting for the San Fernando Valley light rail transit alternatives.[1] The following discussion contains a brief overview of the transportation model and travel forecasting process; however, it emphasizes the application of the model to the present study.

The SCAG regional transportation model, which is typical of the widely-used Urban Transportation Model System[3], consists of four stages:

(1) Trip Generation, in which trips are produced by analysis zone (AZ);

(2) Trip Distribution, in which a destination is assigned to each person trip produced in stage 1;

(3) Mode Choice, which splits home-work person trips among the modes available, i. e., transit and auto;

(4) Trip Assignment, in which transit trips are loaded onto the route of choice and vehicle trips are loaded onto the highway network.

The input to the trip generation models consists of socio-economic data in the form of 2010 population, employment, housing units, and median household

income. This data had been disaggregated to analysis zones (typically equal to one or two census tracts) from the regionally-adopted SCAG-82 Modified Growth Forecast for 2010. The output of trip generation, trip ends by zone for five trip purposes, is input to the trip distribution model. Trip distribution results in five interzonal person trip tables. These constitute the travel demand for the year 2010. This study utilizes the travel demand generated in the earlier San Fernando Valley study. Only modal split and transit assignment need be performed to obtain the ridership projection for an East-West alternative. A capacity-restrained assignment technique is employed in the transit assignment process in order to capture the impact on ridership of varying levels of park-ride facilities.

In order to maintain consistency in results between the light rail transit line alternatives and the East-West rail alternatives, several factors must remain constant for each model run. One constant is the travel demand, the 2010 person trip tables (home-based work and nonwork, and nonhome-based) input to modal split. These person trip tables had been generated in the San Fernando Valley Area Transportation Study[4], and had been chosen for the SFV EIR study because analysis zones in the Valley had been split, expanding the regional zone system to 1490 zones from 1285; both transit and highway networks had also been refined to fit the new zone system. Furthermore, the person trip tables reflected adjustments in the distribution of employment in the Valley recommended by the City of Los Angeles and its Citizens Advisory Committee.

Parameters in the mode choice model, such as transit fares, auto operating cost, parking cost, etc., are also held constant through all model runs.

The base highway and transit networks employed in the earlier SFV EIR study are used here as well. The highway impedance matrices used here as inputs to the mode choice model are the same as those used in the earlier study.

Vehicle miles traveled (VMT) is determined only for that rail transit line alternative that has the highest transit usage. The policy of comparing the VMT from the alternatives with the highest and lowest transit usage to the VMT resulting from the No Project case was established in the earlier SFV EIR study[1].

The modeling steps outlined above are illustrated by the Transportation Model System Flow Charts in Appendix A.

CHAPTER 2

DEFINITION OF THE EAST-WEST RAIL TRANSIT ALTERNATIVES

2.0 INTRODUCTION

This chapter describes the year 2010 travel demand and the 2010 transportation system input to mode choice. The travel demand consists of three person trip tables, described below, which remained a constant input through all model runs. The transportation system consists of both highway and transit networks, which provide the level-of-service data, such as zone-to-zone travel times, needed by the mode choice model. In this study, the highway system did not change, but remained fixed for all transit alternatives. Only the transit network was changed from model run to model run by superposing, with adjustments, a given East-West Rail Transit Project alternative on the background transit system. Thus, the outcome of modal split reflects the change in ridership resulting from differences in route alignment, number or location of stations, the availability of park-ride facilities, vehicle performance characteristics, and headway.

2.1 TRAVEL DEMAND IN YEAR 2010

The starting point of any patronage forecasting is a projection in some future year of population and employment (retail and total) growth as well as the distribution of that growth throughout the region, of the number and distribution of both single and multiple housing units, and of median household income. These data are expressed in terms of Analysis Zones (AZs), into which the entire region is subdivided. The socio-economic data are disaggregated to the AZs from larger areas call Regional Statistical Areas (RSAs), Figure 2.1-1, the geographic unit for which data are compiled in the SCAG-82 Modified Growth Forecast Policy.[5] The process of disaggregating the RSA data to analysis zones is technically complex, but many city planning departments are involved and consulted in the process. The impacts of projects to be developed in the near future are taken into account where possible. The end result represents the best judgment of local officials, planning professionals and interested citizens about a likely and viable direction for the region. This data base is a fundamental assumption upon which the travel demand rests.

Travel demand, the output of the trip distribution model, consists of three person trip tables:

1. Home-work person trips;
2. Other-work person trips;
3. Nonwork person trips

These tables were originally generated for the San Fernando Valley Area study[2]. A more detailed discussion of the socio-economic data input to the trip generation model and the output of trip generation and trip distribution is given in "Patronage Forecasts for the San Fernando Valley Light Rail Transit Alternatives"[1]

2.2 THE 2010 HIGHWAY SYSTEM

Modal split requires the impedance matrices from three highway networks:

1. A standard peak period highway system. Link speeds in this network represent peak-period, mixed-flow traffic conditions. The network used in this study was taken from the San Fernando Valley Area Study[3]. It represents the 2010 Existing Plus Funded highway network, taken in regional modeling as the Null highway system because it represents the existing highway system plus those State Transportation Improvement Program (STIP) projects to be completed by 1995. It includes the Century Freeway, but not the Long Beach Freeway extension to Pasadena. This network was refined in the San Fernando Valley Area transportation study to fit the refined zone system in the Valley.

2. A Shared-Ride highway network. This network is built from the standard peak period network by changing the freeway ramp meter speeds to 20 mph, wherever a ramp meter bypass lane occurs.

3. A Carpool highway network. This network is built from the Shared Ride network by adding to it High-Occupancy-Vehicle lanes which allow carpools of three or more persons.

The standard peak period highway network was also used to determine the minimum time and distance of auto connector links. The conventions for defining and coding auto links are described in the original report[1].

2.3 BACKGROUND TRANSIT NETWORK

The base transit network used in the earlier light rail study[1] was retained for this study. The background bus system contained in this network includes all of the SCRTD local bus routes (UNET Mode 4), all park-ride and express bus routes (Mode 5) except those that would be in direct competition with the rail lines, all of the mnunicipally operated local bus routes (Mode 6), and all of the OCTD local bus lines (Mode 7). SCRTD local bus routes in the Valley had been adjusted for the light rail EIR study such that the stations on any alternative were provided with bus access. The following rail lines (coded as mode 8) were part of the base transit network, and were, therefore, held fixed for all model runs:

1. A Metro Rail line on Wilshire Boulevard between East Los Angeles (Whittier/Arizona) and Wilshire/Veteran; with a 6-min headway.

2. The Coast LRT running between Marina Del Rey (Culver/Lincoln) and Torrance (Hawthorne Blvd. and PCH) at a headway of 6 minutes.

3. Two lines operating on the Century Freeway, one from Norwalk (I605) to Lot C near LAX at headways of 12 minutes, the other from Norwalk to Space Park (Aviation and Compton Blvds.), also at headways of 12 minutes. The effective headway over the common portion of this route between Norwalk and Aviation Boulevard is six minutes.

4. The Long Beach - Los Angeles LRT at a headway of six minutes.

5. The Los Angeles - Pasadena LRT from 7th and Flower to Walnut and Hill via the AT&SF track in Highland Park; headway is six minutes.

In addition to the rail lines, the base network included the Harbor Freeway Transitway. Two express buses operated on the transitway. One route ran between San Pedro and Vignes Street; the other ran between the Artesia/Vermont Transportation Center and Vignes Street; both were assigned headways of five minutes.

2.4 DEFINITION OF EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

The transit network for each model run was created by adding an East-West Rail Transit Alternative to the base transit network described in 2.3.

2.4.1 Model Run "A": Metro Rail Extended Along Burbank Branch R-O-W

In this, the first alternative, the Metro Rail line to North Hollywood is extended to Topanga Canyon Boulevard on Southern Pacific's Burbank Branch alignment. Station-to-station times and distances are given in Table 2.4-1. Park-ride lot capacities were supplied by LACTC.[6] Auto access links were retained from the earlier light rail EIR study, because P&R stations in this alternative are identical to those of the earlier study.

LACTC's consultant furnished the operating plan[7] for this Metro Rail Extension alternative. The operating plan specified the station locations, station-to--station distances and travel times, the station dwell time, and the morning peak period headway of six minutes for network coding. Station-to-station times given in Table 2.4-1 include the station dwell time of twenty seconds and have been rounded to the nearest tenth of a minute.

2.4.2 Model Run "B": Metro Rail Extended Along Ventura Freeway (Aerial)

In this alternative, Metro Rail is extended along the Ventura Freeway from Universal City to Vanowen/Canoga. LACTC specified the station locations, station-to-station distances and running times, station dwell time, and the morning peak period headway of six minutes.[7] Times and distances are given in Table 2.4-2. The park-ride capacities given in Table 2.4-2 were specified by the LACTC to be for the aerial configuration.[6] Since the stations with park-ride facilities were identical to those in the Ventura Freeway LRT, auto access links used in that study[1] were applied to this alternative.

2.4.3 Model Run "D": Metro Rail Extended Along Ventura Freeway (Subway)

This alternative is identical to that of Model Run "B" in all respects except that the park-ride facilities have different capacities. These are shown in Table 2.4-3; they were also defined by LACTC.8 Auto access links from Model Run "B" were retained for this run.

2.4.4 Model Run "E": Automated Railway Transit (ART) On Ventura Freeway

The route of this alternative runs between Universal City, where passengers can transfer to/from Metro Rail, and Vanowen/Canoga. Stations and parking are the same as in the Model Run "B" alternative. LACTC specified a morning peak period headway of two minutes. SCAG staff calculated the station-to-station run times for a top speed of 65 mph and acceleration/deceleration rates of 3.5 mph/sec. A detailed line description is given in Table 2.4-4.

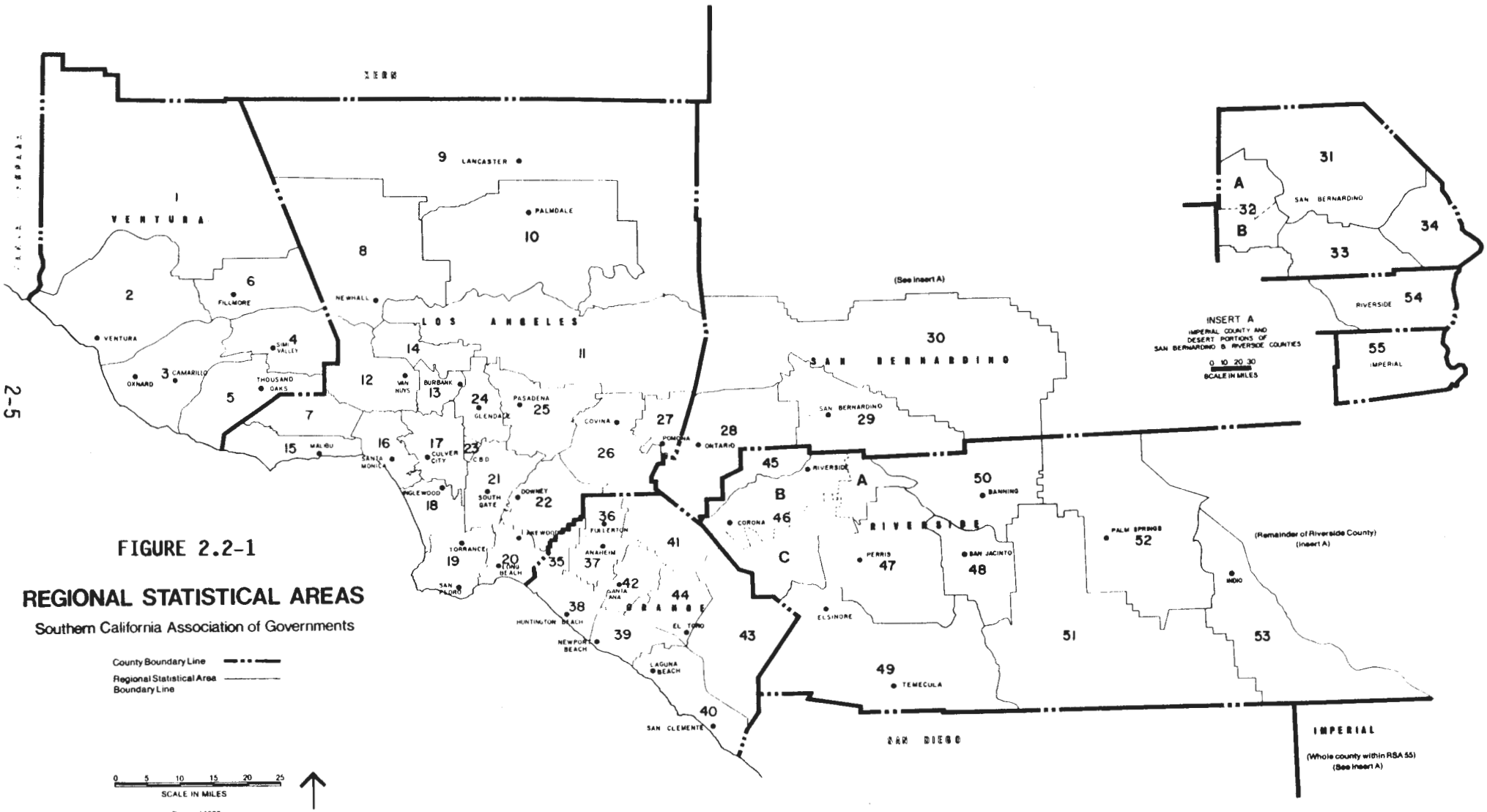

FIGURE 2.2-1

REGIONAL STATISTICAL AREAS

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County Boundary Line

Regional Statistical Area Boundary Line

TABLE 2.4-1

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "A"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 1

METRO RAIL EXTENSION ON SP BURBANK BRANCH ALIGNMENT TO TOPANGA CYN BLVD

AM PEAK PERIOD HEADWAY = 6.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	WHITTIER/ARIZONA	500	4607				
2	INDIANA/WHITTIER	0	4578	1.9	1.9	2.6	2.6
3	SOTO/WHITTIER	0	4563	1.1	3.0	1.9	4.5
4	UNION STATION	2500	8047	1.9	4.9	2.6	7.1
5	1ST/HILL (CIVIC CTR)	0	8046	0.8	5.7	1.8	8.9
6	5TH/HILL	0	8045	0.5	6.2	1.5	10.4
7	7TH/FLOWER	0	8031	0.5	6.7	1.5	11.9
8	WILSHIRE/ALVARADO	0	8044	1.1	7.8	2.1	14.0
9	WILSHIRE/VERMONT	0	8043	1.0	8.8	2.0	16.0
10	VERMONT/BEVERLY	0	5126	1.0	9.8	2.0	18.0
11	VERMONT/SANTA MONICA	0	5268	1.0	10.8	2.0	20.0
12	SUNSET/EDGEMONT	0	5264	0.8	11.6	1.8	21.8
13	SUNSET/WESTERN	0	5257	0.8	12.4	1.8	23.6
14	SUNSET/VINE	0	5238	1.0	13.4	2.0	25.6
15	HOLLYWOOD/HIGHLAND	0	8034	0.6	14.0	1.6	27.2
16	UNIVERSAL CITY	1000	8033	3.6	17.6	4.9	32.1
17	NORTH HOLLYWOOD	1000	8032	2.0	19.6	2.7	34.8
18	LAUREL CANYON	0	5682	1.3	20.9	2.1	36.9
19	FULTON/BURBANK	0	3079	1.7	22.6	2.4	39.3
20	VAN NUYS BL	325	3121	1.7	24.3	2.5	41.8
21	SEPULVEDA	675	3171	1.0	25.3	1.8	43.6
22	WOODLEY	440	5656	1.2	26.5	2.0	45.6
23	BALBOA	400	5654	1.0	27.5	1.8	47.4
24	WHITE OAK	475	3245	1.2	28.7	2.0	49.4
25	RESEDA	370	5637	0.9	29.6	1.8	51.2
26	WINNETKA	1160	5632	2.1	31.7	2.7	53.9
27	TOPANGA CANYON	0	5626	2.1	33.8	2.8	56.7

TABLE 2.4-2

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "B"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 11

METRO RAIL EXTENSION IN AERIAL CONFIGURATION ON VENTURA FREEWAY TO CANOGA

AM PEAK PERIOD HEADWAY = 6.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	WHITTIER/ARIZONA	500	4607				
2	INDIANA/WHITTIER	0	4578	1.9	1.9	2.6	2.6
3	SOTO/WHITTIER	0	4563	1.1	3.0	1.9	4.5
4	UNION STATION	2500	8047	1.9	4.9	2.6	7.1
5	1ST/HILL (CIVIC CTR)	0	8046	0.8	5.7	1.8	8.9
6	5TH/HILL	0	8045	0.5	6.2	1.5	10.4
7	7TH/FLOWER	0	8031	0.5	6.7	1.5	11.9
8	WILSHIRE/ALVARADO	0	8044	1.1	7.8	2.1	14.0
9	WILSHIRE/VERMONT	0	8043	1.0	8.8	2.0	16.0
10	VERMONT/BEVERLY	0	5126	1.0	9.8	2.0	18.0
11	VERMONT/SANTA MONICA	0	5268	1.0	10.8	2.0	20.0
12	SUNSET/EDGEMONT	0	5264	0.8	11.6	1.8	21.8
13	SUNSET/WESTERN	0	5257	0.8	12.4	1.8	23.6
14	SUNSET/VINE	0	5238	1.0	13.4	2.0	25.6
15	HOLLYWOOD/HIGHLAND	0	8034	0.6	14.0	1.6	27.2
16	UNIVERSAL CITY	1000	8033	3.6	17.6	4.9	32.1
17	LAUREL CANYON BL	195	5458	2.9	20.5	3.8	35.9
18	COLDWATER CANYON BL	160	5454	0.7	21.2	1.5	37.4
19	WOODMAN AVE	95	5450	1.2	22.4	2.0	39.4
20	VAN NUYS BL	85	5444	1.0	23.4	1.8	41.2
21	SEPULVEDA BL	240	5441	1.0	24.4	1.8	43.0
22	HAYVENHURST	800	5650	1.7	26.1	2.5	45.5
23	WHITE OAK	400	5640	1.7	27.8	2.5	48.0
24	RESEDA	120	5638	1.1	28.9	1.9	49.9
25	TAMPA AVE	290	5633	1.0	29.9	1.8	51.7
26	WINNETKA	220	5630	1.0	30.9	1.8	53.5
27	DE SOTO AVE	890	5431	1.0	31.9	1.8	55.3
28	OXNARD/CANOGA	0	5629	1.0	32.9	1.8	57.1
29	VICTORY/CANOGA	0	5624	0.6	33.5	1.4	58.5
30	VANOWEN/CANOGA	585	7331	0.4	33.9	1.2	59.7

TABLE 2.4-3

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "D"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 1

METRO RAIL EXTENSION IN SUBWAY CONFIGURATION ON VENTURA FREEWAY TO CANOGA

AM PEAK PERIOD HEADWAY = 6.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	WHITTIER/ARIZONA	500	4607				
2	INDIANA/WHITTIER	0	4578	1.9	1.9	2.6	2.6
3	SOTO/WHITTIER	0	4563	1.1	3.0	1.9	4.5
4	UNION STATION	2500	8047	1.9	4.9	2.6	7.1
5	1ST/HILL (CIVIC CTR)	0	8046	0.8	5.7	1.8	8.9
6	5TH/HILL	0	8045	0.5	6.2	1.5	10.4
7	7TH/FLOWER	0	8031	0.5	6.7	1.5	11.9
8	WILSHIRE/ALVARADO	0	8044	1.1	7.8	2.1	14.0
9	WILSHIRE/VERMONT	0	8043	1.0	8.8	2.0	16.0
10	VERMONT/BEVERLY	0	5126	1.0	9.8	2.0	18.0
11	VERMONT/SANTA MONICA	0	5268	1.0	10.8	2.0	20.0
12	SUNSET/EDGEMONT	0	5264	0.8	11.6	1.8	21.8
13	SUNSET/WESTERN	0	5257	0.8	12.4	1.8	23.6
14	SUNSET/VINE	0	5238	1.0	13.4	2.0	25.6
15	HOLLYWOOD/HIGHLAND	0	8034	0.6	14.0	1.6	27.2
16	UNIVERSAL CITY	1000	8033	3.6	17.6	4.9	32.1
17	LAUREL CANYON BL	0	5458	2.9	20.5	3.8	35.9
18	COLDWATER CANYON BL	0	5454	0.7	21.2	1.5	37.4
19	WOODMAN AVE	400	5450	1.2	22.4	2.0	39.4
20	VAN NUYS BL	85	5444	1.0	23.4	1.8	41.2
21	SEPULVEDA BL	500	5441	1.0	24.4	1.8	43.0
22	HAYVENHURST	650	5650	1.7	26.1	2.5	45.5
23	WHITE OAK	0	5640	1.7	27.8	2.5	48.0
24	RESEDA	120	5638	1.1	28.9	1.9	49.9
25	TAMPA AVE	145	5633	1.0	29.9	1.8	51.7
26	WINNETKA	220	5630	1.0	30.9	1.8	53.5
27	DE SOTO AVE	890	5431	1.0	31.9	1.8	55.3
28	OXNARD/CANOGA	0	5629	1.0	32.9	1.8	57.1
29	VICTORY/CANOGA	0	5624	0.6	33.5	1.4	58.5
30	VANOWEN/CANOGA	585	7331	0.4	33.9	1.2	59.7

TABLE 2.4-4

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "E"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 101

AUTOMATED RAILWAY TRANSIT ON VENTURA FREEWAY BETWEEN UNIVERSAL CITY AND CANOGA

AM PEAK PERIOD HEADWAY = 2.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	UNIVERSAL CITY	1000	8033				
2	LAUREL CANYON BL	195	5458	2.9	2.9	3.3	3.3
3	COLDWATER CANYON BL	160	5454	0.7	3.6	1.3	4.6
4	WOODMAN AVE	95	5450	1.2	4.8	1.8	6.4
5	VAN NUYS BL	85	5444	1.0	5.8	1.7	8.1
6	SEPULVEDA BL	240	5441	1.0	6.8	1.7	9.8
7	HAYVENHURST	800	5650	1.7	8.5	2.2	12.0
8	WHITE OAK	400	5640	1.7	10.2	2.2	14.2
9	RESEDA	120	5638	1.1	11.3	1.7	15.9
10	TAMPA AVE	290	5633	1.0	12.3	1.7	17.6
11	WINNETKA	220	5630	1.0	13.3	1.7	19.3
12	DE SOTO AVE	890	5431	1.0	14.3	1.7	21.0
13	OXNARD/CANOGA	0	5629	1.0	15.3	1.7	22.7
14	VICTORY/CANOGA	0	5624	0.6	15.9	1.2	23.9
15	VANOWEN/CANOGA	585	7331	0.4	16.3	1.0	24.9

CHAPTER 3

PATRONAGE FORECASTS

3.0 INTRODUCTION

This chapter presents the patronage forecasts for the full-length East-West Rail Transit Project Alternatives. These were tested in Model Runs "A", "B", "D", and "E".

3.1 PASSENGER LOADINGS

Morning peak-hour passenger loadings are shown in Tables 3.1-1, -2, -3, and -4, for Model Runs "A", "B", "D", and "E". Peak-hour passenger loadings are derived directly from ULOAD Report 3, the daily home-work passenger trips output by the transit assignment program for each transit line modeled. Appendix B contains a Report 3 for each of the rail transit alternatives.

AM Peak-Hour Passenger Loadings are obtained by multiplying the daily home-work passenger loadings (i. e., INs, ONs, and OFFs) by 0.241, an empirical factor.

3.2 MODES OF ACCESS

The activity at each station depends on the modes by which passengers access the station. Passengers may walk to the station, transfer from a bus or other rail line, or arrive by auto. AM Peak Period Station Mode of Access is shown in Tables 3.2-1A,B, -2A,B, -3A,B, and -4A,B for Model Runs "A", "B", "D", and "E", respectively. In Table 3.2-1A, "AM TRIPS" is assumed to be equal to one-half the daily home-work trips or boardings. In other words, it is assumed that all of the boardings that occur in the morning peak period are commuter trips. AM TRIPS is broken down by mode of access. The rail transfers at Union Station are from the other Metro Rail line; at 7th/Flower, the transfers are from the Long Beach-Pasadena light rail line; at Wilshire/Vermont, the transfers are from the Metro Rail line on Wilshire Blvd. Arrivals by auto occur only at stations designated as having park-ride lots. This is so because only park-ride stations are given auto access links in the model. In reality, there are some passengers who will access the other stations by auto, either by being dropped off or by parking on the street.

Table 3.2-1B resolves the auto arrivals in 3.2-1A into the number of passengers who are dropped off (kiss-rides), and the number of passengers who would use the park-ride facility. "M2 ARRS" is the total number of persons arriving by auto during the AM peak period. 22.5 percent of these are assumed to be kiss-riders (ALL K&R). The other 77.5 percent arrive in vehicles, at an average auto occupancy of 1.4, that use the park-ride facility. Some of these riders depart on the Metro Rail line (M8 VEHS); others depart by express bus (M5 VEHS), which may share the same facility.

3.3 AVERAGE WEEKDAY RIDERSHIP

Average weekday ridership is the patronage (ridership) forecast for each rail transit line alternative. It is composed of the total daily passenger trips, or boardings, including both work and nonwork trips. Since the mode choice model operates only on home-based work person trips, it is necessary to estimate daily nonwork transit trips by applying a factor to total daily home-work passenger trips. This factor is the ratio of observed work trips to total trips, and for the region as a whole is equal to 0.54. The factor is applied only to the total of the home-work passenger trips, not to passenger loadings or boardings, for the reason that nonwork trips are shorter and generally have different origins and destinations than commuter trips. For the San Fernando Valley LRT study, the factor was modified to reflect the proportion of total daily trips that are work trips for each route studied. For the Burbank Branch R-O-W, the factor is 0.536; for the Ventura Freeway, it is 0.521.[1]

Table 3.3-1 compares the average weekday trips of the Metro Rail Extensions and ART with those of the light rail transit alternatives modeled for the earlier San Fernando Valley EIR study. To make this comparison valid, the average weekday trips on each Metro Rail Extension were obtained by summing the daily boardings only at stations in the Valley, except for the southbound boardings at the North Hollywood/Universal City station, and adding the north bound "IN" less the "OFF" passenger volumes at the North Hollywood/Universal City station.

The higher ridership on Metro Rail Extension "A" results from an over-all reduction of waiting time and riding time, the first because the line is continuous at Universal City, the second because of a shorter running time than either the "B" or "D" alternatives. The shorter running time accrues from fewer stations on Metro Rail Extension, in the Valley, in alternative "A".

Metro Rail Extensions on the Ventura Freeway Right-of-Way have higher ridership than the LRT for the same reasons as given above. Everything else being equal, the difference in ridership between "B" and "D" is attributed to a difference in the number of park-ride spaces available to the aerial and subway configurations.

Technological differences, mainly higher speeds, allow the Ventura Freeway ART to attract higher ridership than the LRT. The ridership figure in Table 3.3-1 does not reflect a shorter headway; the headway for the ART in Model Run "E" was actually six minutes.

TABLE 3.1-1

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "A"
METRO RAIL EXTENSION: UNIVERSAL CITY TO TOPANGA VIA BURBANK BRANCH RIGHT-OF-WAY

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	WHITTIER/ARIZONA	4607	0	1385	0	1	4607	264	0	264
2	INDIANA/WHITTIER	4578	1385	176	8	2	4578	311	5	52
3	SOTO/WHITTIER	4563	1553	1028	116	3	4563	540	40	269
4	UNION STATION	8047	2464	3119	288	4	8047	924	189	573
5	1ST/HILL (CIVIC CTR)	8046	5295	95	715	5	8046	1200	90	367
6	5TH/HILL	8045	4675	140	2175	6	8045	4172	16	2987
7	7TH/FLOWER	8031	2641	505	140	7	8031	6982	52	2862
8	WILSHIRE/ALVARADO	8044	3006	173	536	8	8044	7040	463	521
9	WILSHIRE/VERMONT	8043	2642	452	110	9	8043	8134	133	1226
10	VERMONT/BEVERLY	5126	2984	284	966	10	5126	7578	1340	783
11	VERMONT/SANTA MONICA	5268	2303	128	161	11	5268	6922	801	145
12	SUNSET/EDGEMONT	5264	2270	141	239	12	5264	6287	763	128
13	SUNSET/WESTERN	5257	2173	295	284	13	5257	6037	581	330
14	SUNSET/VINE	5238	2183	167	975	14	5238	5484	1038	485
15	HOLLYWOOD/HIGHLAND	8034	1375	215	148	15	8034	5488	662	666
16	UNIVERSAL CITY	8033	1442	63	489	16	8033	4590	1134	236
17	NORTH HOLLYWOOD	8032	1016	229	281	17	8032	3292	1393	95
18	LAUREL CANYON	5682	964	55	83	18	5682	2985	333	26
19	FULTON/BURBANK	3079	936	38	62	19	3079	2849	175	39
20	VAN NUYS BL	3121	912	38	603	20	3121	2347	938	437
21	SEPULVEDA	3171	347	43	72	21	3171	1947	449	49
22	WOODLEY	5656	317	13	22	22	5656	1779	188	20
23	BALBOA	5654	309	14	29	23	5654	1520	275	17
24	WHITE OAK	3245	294	32	59	24	3245	1244	309	33
25	RESEDA	5637	267	36	125	25	5637	763	525	43
26	WINNETKA	5632	178	118	32	26	5632	241	524	3
27	TOPANGA	5626	265	0	265	27	5626	0	241	0

S U M M A R Y

MRT	VEHICLE TYPE
6.0	HEADWAY
33.8	ROUTE MILES
27	NUMBER OF STATIONS
35.8	AVERAGE SPEED
8134	AM PEAK LOAD

TABLE 3.1-2

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "B"
METRORAIL EXTENSION: UNIVERSAL CITY TO CANOGA AVENUE VIA VENTURA FREEWAY AERIAL

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	WHITTIER/ARIZONA	4607	0	1417	0	1	4607	303	0	303
2	INDIANA/WHITTIER	4578	1417	178	13	2	4578	371	6	74
3	SOTO/WHITTIER	4563	1582	1064	123	3	4563	606	54	289
4	UNION STATION	8047	2523	3121	298	4	8047	957	221	571
5	1ST/HILL (CIVIC CTR)	8046	5346	109	737	5	8046	1229	108	380
6	5TH/HILL	8045	4718	147	2196	6	8045	4172	24	2967
7	7TH/FLOWER	8031	2670	516	169	7	8031	6927	71	2826
8	WILSHIRE/ALVARADO	8044	3018	176	574	8	8044	6954	471	498
9	WILSHIRE/VERMONT	8043	2620	433	124	9	8043	7988	147	1181
10	VERMONT/BEVERLY	5126	2929	277	961	10	5126	7428	1336	776
11	VERMONT/SANTA MONICA	5268	2245	122	159	11	5268	6773	799	144
12	SUNSET/EDGEMONT	5264	2208	140	243	12	5264	6132	763	122
13	SUNSET/WESTERN	5257	2105	287	282	13	5257	5870	580	317
14	SUNSET/VINE	5238	2110	162	963	14	5238	5295	1043	467
15	HOLLYWOOD/HIGHLAND	8034	1310	208	148	15	8034	5260	662	627
16	UNIVERSAL CITY	8033	1370	133	623	16	8033	3645	1813	198
17	LAUREL CANYON BL	5458	880	76	59	17	5458	3222	457	34
18	COLDWATER CANYON BL	5454	897	32	69	18	5454	2954	296	27
19	WOODMAN AVENUE	5450	860	74	43	19	5450	2722	270	39
20	VAN NUYS BL	5444	891	49	551	20	5444	2249	922	448
21	SEPULVEDA BL	5441	389	27	49	21	5441	2036	250	38
22	HAYVENHURST	5650	367	18	65	22	5650	1804	270	38
23	WHITE OAK	5640	321	33	55	23	5640	1592	248	36
24	RESEDA	5638	298	53	87	24	5638	1199	443	51
25	TAMPA AVENUE	5633	264	46	100	25	5633	889	372	61
26	WINNETKA	5630	210	6	14	26	5630	847	49	8
27	DE SOTO AVENUE	5431	203	20	87	27	5431	563	317	33
28	OXNARD/CANOGA	5629	136	6	45	28	5629	534	58	30
29	VICTORY/CANOGA	5624	96	3	39	29	5624	522	47	34
30	VANOWEN/CANOGA	7331	60	0	60	30	7331	0	522	0

SUMMARY

MRT	VEHICLE TYPE
6.0	HEADWAY
33.9	ROUTE MILES
30	NUMBER OF STATIONS
34.1	AVERAGE SPEED
7988	AM PEAK LOAD

TABLE 3.1-3

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "D"
METRO RAIL EXTENSION IN SUBWAY ALONG VENTURA FREEWAY FROM UNIVERSAL CITY TO TOPANGA

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	WHITTIER/ARIZONA	4607	0	1417	0	1	4607	301	0	301
2	INDIANA/WHITTIER	4578	1417	178	13	2	4578	369	6	74
3	SOTO/WHITTIER	4563	1582	1064	123	3	4563	598	54	283
4	UNION STATION	8047	2523	3121	298	4	8047	944	221	567
5	1ST/HILL (CIVIC CTR)	8046	5346	109	737	5	8046	1211	108	375
6	5TH/HILL	8045	4718	147	2196	6	8045	4138	24	2951
7	7TH/FLOWER	8031	2670	516	169	7	8031	6864	71	2796
8	WILSHIRE/ALVARADO	8044	3018	176	574	8	8044	6893	471	500
9	WILSHIRE/VERMONT	8043	2620	433	124	9	8043	7909	147	1163
10	VERMONT/BEVERLY	5126	2929	277	961	10	5126	7334	1336	761
11	VERMONT/SANTA MONICA	5268	2245	122	159	11	5268	6673	799	138
12	SUNSET/EDGEMONT	5264	2208	140	243	12	5264	6029	763	120
13	SUNSET/WESTERN	5257	2105	287	282	13	5257	5759	580	309
14	SUNSET/VINE	5238	2110	162	963	14	5238	5168	1043	451
15	HOLLYWOOD/HIGHLAND	8034	1310	209	148	15	8034	5107	662	600
16	UNIVERSAL CITY	8033	1371	144	623	16	8033	3436	1855	184
17	LAUREL CANYON	5458	892	40	60	17	5458	3135	335	34
18	COLDWATER CANYON	5454	872	17	67	18	5454	2995	167	27
19	WOODMAN AVENUE	5450	822	75	41	19	5450	2703	332	40
20	VAN NUYS BL	5444	857	51	530	20	5444	2194	920	412
21	SEPULVEDA BL	5441	377	27	48	21	5441	1978	250	34
22	HAYVENHURST	5650	356	28	61	22	5650	1742	269	33
23	WHITE OAK	5640	323	5	55	23	5640	1660	120	38
24	RESEDA	5638	273	57	82	24	5638	1199	512	51
25	TAMPA AVENUE	5633	248	46	90	25	5633	889	372	61
26	WINNETKA	5630	204	6	13	26	5630	847	49	8
27	DE SOTO AVENUE	5431	198	20	88	27	5431	563	317	33
28	OXNARD/CANOGA	5629	130	6	43	28	5629	534	58	30
29	VICTORY/CANOGA	5624	92	3	37	29	5624	522	47	34
30	VANOWEN/CANOGA	7331	58	0	58	30	7331	0	522	0

S U M M A R Y

MRT	VEHICLE TYPE
6.0	HEADWAY
33.9	ROUTE MILES
30	NUMBER OF STATIONS
34.1	AVERAGE SPEED
7910	AM PEAK LOAD

TABLE 3.1-4

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "E"
AUTOMATED RAILWAY TRANSIT (ART) ON VENTURA FREEWAY BETWEEN UNIVERSAL CITY AND CANOGA

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	UNIVERSAL CITY	8033	0	908	0	1	8033	3599	0	3599
2	LAUREL CANYON BL	5458	908	99	58	2	5458	3203	441	45
3	COLDWATER CANYON BL	5454	949	47	63	3	5454	2953	285	35
4	WOODMAN AVENUE	5450	933	89	47	4	5450	2727	268	41
5	VAN NUYS BL	5444	975	84	616	5	5444	2385	913	571
6	SEPULVEDA BL	5441	443	35	53	6	5441	2177	258	49
7	HAYVENHURST	5650	425	26	78	7	5650	1931	285	40
8	WHITE OAK	5640	373	45	74	8	5640	1713	264	47
9	RESEDA	5638	345	64	102	9	5638	1307	469	64
10	TAMPA AVENUE	5633	307	59	117	10	5633	946	421	59
11	WINNETKA	5630	250	9	12	11	5630	907	50	12
12	DE SOTO AVENUE	5431	247	28	100	12	5431	607	340	40
13	OXNARD/CANOGA	5629	176	7	54	13	5629	572	66	31
14	VICTORY/CANOGA	5624	130	3	51	14	5624	557	51	36
15	VANOWEN/CANOGA	7331	82	0	82	15	7331	0	557	0

S U M M A R Y

ART	VEHICLE TYPE
2.0	HEADWAY
16.3	ROUTE MILES
15	NUMBER OF STATIONS
39.3	AVERAGE SPEED
3600	AM PEAK LOAD

TABLE 3.2-1A

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "A"
METRO RAIL EXTENSION ON BURBANK BRANCH R-O-W TO TOPANGA CANYON

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

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	4607	WHITTIER/ARIZONA	500	0	2874	152	5.3	2079	72.3	643	22.4	0	0.0
2	4578	INDIANA/WHITTIER	0	0	376	230	61.2	146	38.8	0	0.0	0	0.0
3	4563	SOTO/WHITTIER	0	0	2217	182	8.2	2035	91.8	0	0.0	0	0.0
4	8047	UNION STATION	2500	0	6863	254	3.7	4830	70.4	447	6.5	1333	19.4
5	8046	1ST/HILL (CIVIC CTR)	0	0	383	3	0.8	380	99.2	0	0.0	0	0.0
6	8045	5TH/HILL	0	0	323	7	2.2	316	97.8	0	0.0	0	0.0
7	8031	7TH/FLOWER	0	0	1156	0	0.0	315	27.2	0	0.0	841	72.8
8	8044	WILSHIRE/ALVARADO	0	0	1319	882	66.9	437	33.1	0	0.0	0	0.0
9	8043	WILSHIRE/VERMONT	0	0	1213	0	0.0	963	79.4	0	0.0	250	20.6
10	5126	VERMONT/BEVERLY	0	0	3369	2715	80.6	654	19.4	0	0.0	0	0.0
11	5268	VERMONT/SANTA MONICA	0	0	1927	712	36.9	1215	63.1	0	0.0	0	0.0
12	5264	SUNSET/EDGEMONT	0	0	1875	1831	97.6	45	2.4	0	0.0	0	0.0
13	5257	SUNSET/WESTERN	0	0	1817	965	53.1	852	46.9	0	0.0	0	0.0
14	5238	SUNSET/VINE	0	0	2499	1820	72.8	680	27.2	0	0.0	0	0.0
15	8034	HOLLYWOOD/HIGHLAND	0	0	1820	873	47.9	948	52.1	0	0.0	0	0.0
16	8033	UNIVERSAL CITY	1000	0	2483	323	13.0	678	27.3	1483	59.7	0	0.0
17	8032	NORTH HOLLYWOOD	1000	0	3367	600	17.8	1012	30.0	1756	52.1	0	0.0
18	5682	LAUREL CANYON	0	0	804	567	70.5	237	29.5	0	0.0	0	0.0
19	3079	FULTON/BURBANK	0	0	442	79	17.9	363	82.1	0	0.0	0	0.0
20	3121	VAN NUYS BL	325	0	2026	70	3.5	1561	77.0	395	19.5	0	0.0
21	3171	SEPULVEDA	675	0	1021	198	19.4	204	20.0	620	60.7	0	0.0
22	5656	WOODLEY	440	0	418	138	33.0	58	13.9	222	53.1	0	0.0
23	5654	BALBOA	400	0	600	108	18.0	14	2.3	479	79.7	0	0.0
24	3245	WHITE OAK	475	0	708	178	25.1	33	4.7	497	70.2	0	0.0
25	5637	RESEDA	370	0	1164	286	24.5	391	33.6	488	41.9	0	0.0
26	5632	WINNETKA	1160	0	1332	28	2.1	35	2.6	1270	95.3	0	0.0
27	5626	TOPANGA	0	0	501	285	56.9	216	43.1	0	0.0	0	0.0

TABLE 3.2-1B

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "A"
METRO RAIL EXTENSION VIA BURBANK BRANCH RIGHT OF WAY TO TOPANGA CANYON BOULEVARD

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

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
4607	500	1328	735	133	74	1196	661	299	269	147.00
4578	0	0	0	0	0	0	0	0	0	0.0
4563	0	0	0	0	0	0	0	0	0	0.0
8047	2500	1346	745	604	334	743	411	303	167	29.80
8046	0	0	0	0	0	0	0	0	0	0.0
8045	0	0	0	0	0	0	0	0	0	0.0
8031	0	0	0	0	0	0	0	0	0	0.0
8044	0	0	0	0	0	0	0	0	0	0.0
8043	0	0	0	0	0	0	0	0	0	0.0
5126	0	0	0	0	0	0	0	0	0	0.0
5268	0	0	0	0	0	0	0	0	0	0.0
5264	0	0	0	0	0	0	0	0	0	0.0
5257	0	0	0	0	0	0	0	0	0	0.0
5238	0	0	0	0	0	0	0	0	0	0.0
8034	0	0	0	0	0	0	0	0	0	0.0
8033	1000	1483	821	0	0	1483	821	333	333	82.10
8032	1000	1756	973	0	0	1756	973	395	395	97.30
5682	0	0	0	0	0	0	0	0	0	0.0
3079	0	0	0	0	0	0	0	0	0	0.0
3121	325	540	299	145	80	395	219	121	89	92.00
3171	675	620	344	0	0	620	344	139	140	50.96
5656	440	222	123	0	0	222	123	50	50	27.95
5654	400	479	265	0	0	479	265	108	108	66.25
3245	475	497	276	0	0	497	276	111	112	58.11
5637	370	488	270	0	0	488	270	109	110	72.97
5632	1160	1270	703	0	0	1270	703	285	286	60.60
5626	0	0	0	0	0	0	0	0	0	0.0

TABLE 3.2-2A

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "B"
ME METRO RAIL EXTENSION IN AERIAL CONFIGURATION ON VENTURA FREEWAY TO CANOGA

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

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	4607	WHITTIER/ARIZONA	500	0	2940	153	5.2	2132	72.5	655	22.3	0	0.0
2	4578	INDIANA/WHITTIER	0	0	382	234	61.3	148	38.7	0	0.0	0	0.0
3	4563	SOTO/WHITTIER	0	0	2318	190	8.2	2128	91.8	0	0.0	0	0.0
4	8047	UNION STATION	2500	0	6934	258	3.7	4873	70.3	455	6.6	1348	19.4
5	8046	1ST/HILL (CIVIC CTR)	0	0	452	3	0.7	449	99.3	0	0.0	0	0.0
6	8045	5TH/HILL	0	0	356	8	2.2	348	97.8	0	0.0	0	0.0
7	8031	7TH/FLOWER	0	0	1219	0	0.0	332	27.2	0	0.0	887	72.8
8	8044	WILSHIRE/ALVARADO	0	0	1342	898	66.9	444	33.1	0	0.0	0	0.0
9	8043	WILSHIRE/VERMONT	0	0	1204	0	0.0	962	79.9	0	0.0	242	20.1
10	5126	VERMONT/BEVERLY	0	0	3347	2708	80.9	640	19.1	0	0.0	0	0.0
11	5268	VERMONT/SANTA MONICA	0	0	1911	713	37.3	1198	62.7	0	0.0	0	0.0
12	5264	SUNSET/EDGEMONT	0	0	1874	1830	97.7	44	2.3	0	0.0	0	0.0
13	5257	SUNSET/WESTERN	0	0	1797	957	53.3	840	46.7	0	0.0	0	0.0
14	5238	SUNSET/VINE	0	0	2500	1821	72.8	680	27.2	0	0.0	0	0.0
15	8034	HOLLYWOOD/HIGHLAND	0	0	1805	869	48.1	937	51.9	0	0.0	0	0.0
16	8033	UNIVERSAL CITY	1000	0	4036	320	7.9	2044	50.6	1672	41.4	0	0.0
17	5458	LAUREL CANYON	195	0	1107	280	25.3	502	45.3	326	29.4	0	0.0
18	5454	COLDWATER CANYON	160	0	680	140	20.6	231	34.0	310	45.6	0	0.0
19	5450	WOODMAN AVENUE	95	0	714	382	53.4	118	16.5	215	30.1	0	0.0
20	5444	VAN NUYS BL	85	0	2014	355	17.6	1503	74.6	156	7.7	0	0.0
21	5441	SEPULVEDA BL	240	0	575	92	16.0	145	25.2	339	58.9	0	0.0
22	5650	HAYVENHURST	800	0	598	19	3.2	61	10.2	519	86.6	0	0.0
23	5640	WHITE OAK	400	0	584	23	3.9	71	12.2	490	83.9	0	0.0
24	5638	RESEDA	120	0	1030	418	40.5	418	40.6	195	18.9	0	0.0
25	5633	TAMPA AVENUE	290	0	867	425	49.0	9	1.0	433	49.9	0	0.0
26	5630	WINNETKA	220	0	115	42	36.8	6	5.3	66	57.9	0	0.0
27	5431	DE SOTO AVENUE	890	0	700	52	7.4	50	7.1	598	85.4	0	0.0
28	5629	OXNARD/CANOGA	0	0	133	133	100.0	0	0.0	0	0.0	0	0.0
29	5624	VICTORY/CANOGA	0	0	104	104	100.0	0	0.0	0	0.0	0	0.0
30	7331	VANOWEN/CANOGA	585	0	1083	167	15.4	0	0.0	916	84.6	0	0.0

TABLE 3.2-2B

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "B"
METRO RAIL EXTENSION IN AERIAL CONFIGURATION VIA VENTURA FREEWAY TO CANOGA

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

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
4607	500	1323	732	138	76	1185	656	297	266	146.40
4578	0	0	0	0	0	0	0	0	0	0.0
4563	0	0	0	0	0	0	0	0	0	0.0
8047	2500	1349	747	602	333	747	414	303	168	29.88
8046	0	0	0	0	0	0	0	0	0	0.0
8045	0	0	0	0	0	0	0	0	0	0.0
8031	0	0	0	0	0	0	0	0	0	0.0
8044	0	0	0	0	0	0	0	0	0	0.0
8043	0	0	0	0	0	0	0	0	0	0.0
5126	0	0	0	0	0	0	0	0	0	0.0
5268	0	0	0	0	0	0	0	0	0	0.0
5264	0	0	0	0	0	0	0	0	0	0.0
5257	0	0	0	0	0	0	0	0	0	0.0
5238	0	0	0	0	0	0	0	0	0	0.0
8034	0	0	0	0	0	0	0	0	0	0.0
8033	1000	1672	926	0	0	1672	926	376	376	92.60
5458	195	330	183	5	3	326	180	74	73	93.85
5454	160	310	171	0	0	310	171	70	70	106.88
5450	95	215	118	0	0	215	118	48	48	124.21
5444	85	252	140	96	53	156	87	56	35	164.71
5441	240	339	187	0	0	339	187	76	76	77.92
5650	800	520	288	1	1	519	287	116	117	36.00
5640	400	490	272	0	0	490	272	110	110	68.00
5638	120	195	108	0	0	195	108	43	44	90.00
5633	290	433	240	0	0	433	240	98	97	82.76
5630	220	66	38	0	0	66	38	14	15	17.27
5431	890	628	348	30	17	598	331	141	135	39.10
5629	0	0	0	0	0	0	0	0	0	0.0
5624	0	0	0	0	0	0	0	0	0	0.0
7331	585	982	544	66	37	916	507	221	206	92.99

TABLE 3.2-3A

LACTC SAN FERNANDO VALLEY LIGHT RAIL LINE EIR STUDIES

MODEL RUN "D"
METRO RAIL EXTENSION - UNIVERSAL CITY TO CANOGA VIA VENTURA FREEWAY SUBWAY

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

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	4607	WHITTIER/ARIZONA	500	0	2940	153	5.2	2132	72.5	655	22.3	0	0.0
2	4578	INDIANA/WHITTIER	0	0	382	234	61.3	148	38.7	0	0.0	0	0.0
3	4563	SOTO/WHITTIER	0	0	2318	190	8.2	2128	91.8	0	0.0	0	0.0
4	8047	UNION STATION	2500	0	6934	258	3.7	4873	70.3	455	6.6	1348	19.4
5	8046	1ST/HILL (CIVIC CTR)	0	0	452	3	0.7	449	99.3	0	0.0	0	0.0
6	8045	5TH/HILL	0	0	356	8	2.2	348	97.8	0	0.0	0	0.0
7	8031	7TH/FLOWER	0	0	1219	0	0.0	332	27.2	0	0.0	887	72.8
8	8044	WILSHIRE/ALVARADO	0	0	1342	898	66.9	444	33.1	0	0.0	0	0.0
9	8043	WILSHIRE/VERMONT	0	0	1204	0	0.0	962	79.9	0	0.0	242	20.1
10	5126	VERMONT/BEVERLY	0	0	3347	2708	80.9	640	19.1	0	0.0	0	0.0
11	5268	VERMONT/SANTA MONICA	0	0	1911	713	37.3	1198	62.7	0	0.0	0	0.0
12	5264	SUNSET/EDGEMONT	0	0	1874	1830	97.7	44	2.3	0	0.0	0	0.0
13	5257	SUNSET/WESTERN	0	0	1797	957	53.3	840	46.7	0	0.0	0	0.0
14	5238	SUNSET/VINE	0	0	2500	1821	72.8	680	27.2	0	0.0	0	0.0
15	8034	HOLLYWOOD/HIGHLAND	0	0	1807	869	48.1	938	51.9	0	0.0	0	0.0
16	8033	UNIVERSAL CITY	1000	0	4147	320	7.7	2147	51.8	1681	40.5	0	0.0
17	5458	LAUREL CANYON	0	0	778	280	36.0	498	64.0	0	0.0	0	0.0
18	5454	COLDWATER CANYON	0	0	384	140	36.5	244	63.5	0	0.0	0	0.0
19	5450	WOODMAN AVENUE	400	0	846	382	45.1	127	15.0	338	39.9	0	0.0
20	5444	VAN NUYS BL	85	0	2015	355	17.6	1504	74.6	156	7.7	0	0.0
21	5441	SEPULVEDA BL	500	0	575	92	16.0	145	25.2	339	58.9	0	0.0
22	5650	HAYVENHURST	650	0	616	19	3.1	61	9.9	537	87.0	0	0.0
23	5640	WHITE OAK	0	0	260	23	8.8	237	91.2	0	0.0	0	0.0
24	5638	RESEDA	120	0	1181	418	35.4	498	42.1	266	22.5	0	0.0
25	5633	TAMPA AVENUE	145	0	867	425	49.0	9	1.0	433	49.9	0	0.0
26	5630	WINNETKA	220	0	115	42	36.8	6	5.3	66	57.9	0	0.0
27	5431	DE SOTO AVENUE	890	0	700	52	7.4	50	7.1	598	85.4	0	0.0
28	5629	OXNARD/CANOGA	0	0	133	133	100.0	0	0.0	0	0.0	0	0.0
29	5624	VICTORY/CANOGA	0	0	104	104	100.0	0	0.0	0	0.0	0	0.0
30	7331	VANOWEN/CANOGA	585	0	1083	167	15.4	0	0.0	916	84.6	0	0.0

TABLE 3.2-3B

LACTC SAN FERNANDO VALLEY LIGHT RAIL LINE EIR STUDIES

MODEL RUN "D"
METRO RAIL EXTENSION - UNIVERSAL CITY TO CANOGA VIA VENTURA FREEWAY SUBWAY

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

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
4607	500	1323	732	138	76	1185	656	297	266	146.40
4578	0	0	0	0	0	0	0	0	0	0.0
4563	0	0	0	0	0	0	0	0	0	0.0
8047	2500	1349	747	602	333	747	414	303	168	29.88
8046	0	0	0	0	0	0	0	0	0	0.0
8045	0	0	0	0	0	0	0	0	0	0.0
8031	0	0	0	0	0	0	0	0	0	0.0
8044	0	0	0	0	0	0	0	0	0	0.0
8043	0	0	0	0	0	0	0	0	0	0.0
5126	0	0	0	0	0	0	0	0	0	0.0
5268	0	0	0	0	0	0	0	0	0	0.0
5264	0	0	0	0	0	0	0	0	0	0.0
5257	0	0	0	0	0	0	0	0	0	0.0
5238	0	0	0	0	0	0	0	0	0	0.0
8034	0	0	0	0	0	0	0	0	0	0.0
8033	1000	1681	930	0	0	1681	930	378	378	93.00
5458	0	0	0	0	0	0	0	0	0	0.0
5454	0	0	0	0	0	0	0	0	0	0.0
5450	400	338	186	0	0	338	186	76	76	46.50
5444	85	252	140	96	53	156	87	56	35	164.71
5441	500	339	187	0	0	339	187	76	76	37.40
5650	650	538	298	1	1	537	297	121	121	45.85
5640	0	0	0	0	0	0	0	0	0	0.0
5638	120	266	146	0	0	266	146	60	60	121.67
5633	145	433	240	0	0	433	240	98	97	165.52
5630	220	66	38	0	0	66	38	14	15	17.27
5431	890	628	348	30	17	598	331	141	135	39.10
5629	0	0	0	0	0	0	0	0	0	0.0
5624	0	0	0	0	0	0	0	0	0	0.0
7331	585	982	544	66	37	916	507	221	206	92.99

TABLE 3.2-4A

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "E"
AUTOMATED RAILWAY TRANSIT ON VENTURA FREEWAY BETWEEN UNIVERSAL CITY AND CANOGA

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

STA. NO.	STA. NODE	STATION NAME	P&R CAP.	ON ST CAP.	AM TRIPS	ARR. WALK	(%)	ARR. BUS	(%)	ARR. AUTO	(%)	ARR. RAIL	(%)
1	8033	UNIVERSAL CITY	1000	0	1884	30	(1.6)	148	(7.9)	206	(10.9)	1501	(79.6)
2	5458	LAUREL CANYON BL	195	0	1120	287	(25.6)	497	(44.4)	336	(30.0)	0	(0.0)
3	5454	COLDWATER CANYON BL	160	0	690	142	(20.5)	240	(34.7)	309	(44.7)	0	(0.0)
4	5450	WOODMAN AVENUE	95	0	741	402	(54.3)	117	(15.8)	222	(30.0)	0	(0.0)
5	5444	VAN NUYS BL	85	0	2068	371	(17.9)	1536	(74.3)	161	(7.8)	0	(0.0)
6	5441	SEPULVEDA BL	240	0	607	90	(14.8)	145	(23.9)	372	(61.3)	0	(0.0)
7	5650	HAYVENHURST	800	0	646	22	(3.4)	63	(9.8)	561	(86.8)	0	(0.0)
8	5640	WHITE OAK	400	0	642	24	(3.7)	82	(12.8)	537	(83.5)	0	(0.0)
9	5638	RESEDA	120	0	1108	456	(41.1)	462	(41.7)	191	(17.2)	0	(0.0)
10	5633	TAMPA AVENUE	290	0	996	497	(49.8)	9	(0.9)	491	(49.2)	0	(0.0)
11	5630	WINNETKA	220	0	123	44	(35.8)	9	(7.3)	70	(56.9)	0	(0.0)
12	5431	DE SOTO AVENUE	890	0	764	54	(7.1)	51	(6.7)	660	(86.3)	0	(0.0)
13	5629	OXNARD/CANOGA	0	0	152	152	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
14	5624	VICTORY/CANOGA	0	0	112	112	(100.0)	0	(0.0)	0	(0.0)	0	(0.0)
15	7331	VANOWEN/CANOGA	585	0	1157	184	(15.9)	7	(0.6)	966	(83.5)	0	(0.0)

TABLE 3.2-4B

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "E"
AUTOMATED RAILWAY TRANSIT ON VENTURA FREEWAY BETWEEN UNIVERSAL CITY AND CANOGA

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

STA. #	P&R CAP	M2 ARRS	TOT VEH	M5DEPART	M5 VEHS	M8DEPART	M8 VEHS	ALL K&R	M8 K&R	%OCCUPIED
8033	1000	1681	931	1476	817	206	114	378	46	93.10
5458	195	341	189	5	3	336	186	76	76	96.92
5454	160	309	171	0	0	309	171	69	70	106.88
5450	95	222	122	1	1	222	121	50	50	128.42
5444	85	253	140	92	51	161	89	57	36	164.71
5441	240	372	205	0	0	372	205	84	84	85.42
5650	800	562	311	1	1	561	310	126	126	38.88
5640	400	537	297	0	0	537	297	121	121	74.25
5638	120	191	105	0	0	191	105	43	43	87.50
5633	290	491	273	0	0	491	273	110	110	94.14
5630	220	70	39	0	0	70	39	16	16	17.73
5431	890	694	384	35	19	660	365	156	148	43.15
5629	0	0	0	0	0	0	0	0	0	0.0
5624	0	0	0	0	0	0	0	0	0	0.0
7331	585	1026	568	60	33	966	535	230	217	97.09

CHAPTER 5

IMPACT OF EAST-WEST RAIL TRANSIT PROJECTS ON VEHICLE MILES TRAVELED

5.0 INTRODUCTION

The impact on air quality of a transit improvement can be indirectly measured by the reduction in vehicle miles of travel (VMT) resulting from the increase in transit use. Vehicle miles of travel is determined from the assignment of vehicle trips to the highway network. Vehicle trips results directly from the modal split process in the travel forecasting models; consequently, vehicle miles of travel reflects the level of transit ridership.

5.1 TECHNICAL APPROACH

In the forerunner to this report (3), traffic assignment was performed for the No Project case and for two of the twelve San Fernando Valley light rail alternatives: the one with highest and the one with the lowest patronage. The highest ridership occurred on the SP Mainline/Lankershim (designnated SP.UC1) route to the Universal City station, and the lowest ridership occurred on the Ventura Freeway (VENFWY) alignment. These alternatives provided the maximum and minimum changes in VMT, from the No Project case, resulting from implementation of a light rail line in the San Fernando Valley. In this study, the extension of Metro Rail on the Burbank Branch right-of-way to Warner Center, from North Hollywood (MODEL RUN "A"), obtained the highest patronage of all of the rail alternatives considered for the San Fernando Valley. Consequently, the vehicle trips resulting from the modal split performed on the Burbank Branch Metro Rail Extension were assigned to the highway network; the resulting traffic volumes on each link of the network provided the measure of VMT.

5.2 RESULTS

Table 5.3-1 below compares daily ridership and daily VMT for the alternatives in question. Ridership is defined as the total daily passenger trips, or boardings, on the rail line under study. Daily ridership for the No Project case consists of the total daily boardings on the express buses that had been replaced by the rail alternative. DAILY RIDERS for the Metro Rail Extension is the total boardings at Valley stations only. Daily VMT is that for the entire region, not just the Valley, for the reason that the East-West Rail Transit Projects are each a part of a region-wide rail system; therefore, East-West rail riders do affect traffic elsewhere in the region.

The results of Table 5.3-1 indicate that there is a net reduction in overall VMT regardless of which East-West rail transit project is constructed. Although the provision of park-ride facilities at certain stations would increase traffic at these stations, an increase that in most cases is much

TABLE 3.3-1

SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

COMPARISON OF AVERAGE WEEKDAY TRIPS, VALLEY STATIONS ONLY FROM UNIVERSAL CITY

Metro Rail Extensions:	Average Weekday Trips
Burbank Branch "A"	57,800
Ventura Freeway Aerial "B"	51,500
Ventura Freeway Subway "D"	49,100
Automated Rail Transit (transfer at Universal):	
Ventura Freeway ART "E"	49,200
Light Rail Alternatives[1]:	
Burbank Branch, Owensmouth to Universal City	46,200
SP Mainline to Universal City via Lankershim	45,600
SP Mainline to Universal City via U. S. 101	43,100
Victory Blvd. to Universal City via Lankershim	47,900
Victory Blvd. to Univeral City via 101	46,500
Los Angeles River Flood Control Channel	32,300
Ventura Freeway, Canoga/Vanowen to Universal City	34,000

1 Source: Patronage Forecasts for the San Fernando Valley Light Rail Transit Alternatives, March 1988. Southern California Association of Governments, Los Angeles.

CHAPTER 4

PATRONAGE FORECASTS FOR PHASED CONSTRUCTION

4.0 INTRODUCTION

Several model runs were conducted to determine ridership on East-West rail transit alternatives when they were only partially completed to an interim terminus. These are Model Runs "F", "G", and "H". These were full model runs in that a transit network was created for each alternative, each was subjected to modal split and to the park-ride capacity-restrained assignment. The alternatives considered in these model runs are defined in Secton 4.1. Section 4.2 presents the patronage forecasts for Model Runs "F", "G", and "H", respectively. Section 4.3 discusses Average Weekday Ridership for "F", "G", and "H" as well as for situations extrapolated from them.

4.1 DEFINITION OF PHASED ALTERNATIVES

4.1.1 Model Run "F": Burbank Branch LRT to Sepulveda

This alternative is the light rail transit line operating on the Burbank Branch alignment between Universal City and a phased terminus at Sepulveda Boulevard.[9,10] In this case, the LACTC specified that Metro Rail would terminate at Universal City; passengers would transfer between the lines at this station.[9] In the original study[1], the full-length Burbank LRT terminated at Owensmouth/Oxnard. Station-to-station times and distances, given in Table 4.1-1, are the same as in the full-length alternative. Parking spaces for designated stations were specified by the LACTC.[10] Auto access links were accorded the same treatment as in the original study in that the auto connectors at the Van Nuys station were retained from the original study, but the auto connectors at the line terminus were allowed to vary to a maximum of eight miles[1].

LACTC also specified that an express bus connect the Sepulveda terminus to Warner Center via Victory Boulevard, with park-ride facilities at Warner Center. Auto connectors at the Owensmouth/Oxnard station in the original study were used at Warner Center in this model run. An average speed of 20 mph, SCAG's coding convention for express buses, was taken for this line.

4.1.2 Model Run "G": Burbank Metro Rail Extension to Balboa

This alternative is identical to the alternative in Model Run "A", except that it terminates at Balboa instead of Topanga Canyon Boulevard. Times and distances are given in Table 4.1-2. Park-ride spaces at designated stations were specified by the LACTC.[10] Auto connector links were retained from Model Run "A" for all stations except the terminus at Balboa, where a maximum distance over the highway system of eight miles was allowed.

Here too, LACTC specified an express bus connecting the Balboa terminus to

Warner Center via Victory Boulevard.

4.1.3 **Model Run "H": Ventura Freeway Metro Rail Extension to Sepulveda**

This is the same as the alternative in Model Run "D", with a phased terminus at Sepulveda Boulevard. Times and distances are given in Table 4.1-3. LACTC specified park-ride stations and capacities[6]. Auto connector links were kept from Model Run "D", except for the Sepulveda station, where a maximum of eight miles was allowed.

In this case, the express bus connecting the Sepulveda terminus to Warner Center operated on Ventura Boulevard.

4.2 PASSENGER LOADINGS

AM Peak Hour Passenger Loadings are shown in Tables 4.2-1, 4.2-2, and 4.2-3 for Model Runs "F", "G", and "H", respectively.

4.3 AVERAGE WEEKDAY RIDERSHIP

Average weekday ridership, shown in Table 4.3-1, is equal to total daily passenger trips or boardings. Ridership is calculated by dividing the total number of daily home-work boardings at all stations on the line by an empirical factor (see Chapter 3) to account for nonwork trips. Daily home-work passenger loadings are exhibited in Tables B-5, B-6, and B-7, Appendix B, for Model Runs "F", "G", and "H", respectively.

In Model Run "F", the daily home-work passenger trips are just the sum of the boardings at each station, because the transit line is independent of Metro Rail; in other words, transfers between the two lines occur at Universal City.

In Model Runs "G" and "H", Metro Rail is continuous at North Hollywood or Universal City. In order to derive a ridership estimate that is comparable to the riderships obtained for the independent LRT line, the Metro Rail Extension is treated as though a transfer occurred at Universal City. On the westbound side of the extension, daily home-work boardings are summed at all stations from and including Universal City to and including the western terminus of the line; incoming passengers westbound at Universal City (less the number of OFFs at Universal City) are treated as boardings; on the east bound side, boardings are summed at all stations to but not including Universal City (less the OFFs at Universal City). This total of daily home-work passenger trips is divided by the appropriate factor; 0.536 for the Burbank Branch, 0.521 for the Ventura Freeway route, to obtain Average Weekday Ridership given in Table 4.3-1.

Average Weekday Trips are shown in Table 4.3-1 for two cases that were not modeled. These patronage figures were derived from Model Run "G". The first case considered was that of the Metro Rail Extension on the Burbank Branch to Balboa with two stations removed, the Woodley Avenue station and

the Laurel Canyon Boulevard station. A new set of passenger loadings was derived by assuming that half of the passengers who had boarded or alighted at these stations in Model Run "G" would find a new transit path to one or the other of the adjacent stations. It was then possible to adjust the station-to-station passenger volumes from "G" to arrive at the new daily home-work passenger trip table.

In the second case considered, the Metro Rail Extension on the Burbank Branch was phased to a terminus at Sepulveda rather than Balboa, and the Laurel Canyon station was excluded. In this case, the passenger volumes to/from the now-nonexistent stations were reduced by 90 percent.

TABLE 4.1-1

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "F"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 101

LIGHT RAIL TRANSIT LINE ON SP BURBANK BRANCH: UNIVERSAL C. TO SEPULVEDA

AM PEAK PERIOD HEADWAY = 6.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	UNIVERSAL CITY	1000	8033				
2	NORTH HOLLYWOOD	1000	8032	2.6	2.6	3.4	3.4
3	LAUREL CANYON	0	5682	1.1	3.7	1.9	5.3
4	FULTON/BURBANK	0	3079	1.7	5.4	2.5	7.8
5	VAN NUYS BL	325	3121	1.7	7.1	2.5	10.3
6	SEPULVEDA	675	3171	1.1	8.2	1.8	12.1

TABLE 4.1-2

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "G"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 1

METRO RAIL EXTENSION ON SP BURBANK BRANCH ALIGNMENT TO TOPANGA CYN BLVD

AM PEAK PERIOD HEADWAY = 6.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	WHITTIER/ARIZONA	500	4607				
2	INDIANA/WHITTIER	0	4578	1.9	1.9	2.6	2.6
3	SOTO/WHITTIER	0	4563	1.1	3.0	1.9	4.5
4	UNION STATION	2500	8047	1.9	4.9	2.6	7.1
5	1ST/HILL (CIVIC CTR)	0	8046	0.8	5.7	1.8	8.9
6	5TH/HILL	0	8045	0.5	6.2	1.5	10.4
7	7TH/FLOWER	0	8031	0.5	6.7	1.5	11.9
8	WILSHIRE/ALVARADO	0	8044	1.1	7.8	2.1	14.0
9	WILSHIRE/VERMONT	0	8043	1.0	8.8	2.0	16.0
10	VERMONT/BEVERLY	0	5126	1.0	9.8	2.0	18.0
11	VERMONT/SANTA MONICA	0	5268	1.0	10.8	2.0	20.0
12	SUNSET/EDGEMONT	0	5264	0.8	11.6	1.8	21.8
13	SUNSET/WESTERN	0	5257	0.8	12.4	1.8	23.6
14	SUNSET/VINE	0	5238	1.0	13.4	2.0	25.6
15	HOLLYWOOD/HIGHLAND	0	8034	0.6	14.0	1.6	27.2
16	UNIVERSAL CITY	1000	8033	3.6	17.6	4.9	32.1
17	NORTH HOLLYWOOD	1000	8032	2.0	19.6	2.7	34.8
18	LAUREL CANYON	0	5682	1.3	20.9	2.1	36.9
19	FULTON/BURBANK	0	3079	1.7	22.6	2.4	39.3
20	VAN NUYS BL	325	3121	1.7	24.3	2.5	41.8
21	SEPULVEDA	675	3171	1.0	25.3	1.8	43.6
22	WOODLEY	440	5656	1.2	26.5	2.0	45.6
23	BALBOA	400	5654	1.0	27.5	1.8	47.4

TABLE 4.1-3

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "H"

D E T A I L E D L I N E D E S C R I P T I O N
M O D E 8 (R A I L) L I N E 11

METRO RAIL EXTENSION IN SUBWAY ON VENTURA FREEWAY TO SEPULVEDA BOULEVARD

AM PEAK PERIOD HEADWAY = 6.0 MINUTES

NO	STATION	P&R	NODE	DIST	CUM	TIME	CUM
1	WHITTIER/ARIZONA	500	4607				
2	INDIANA/WHITTIER	0	4578	1.9	1.9	2.6	2.6
3	SOTO/WHITTIER	0	4563	1.1	3.0	1.9	4.5
4	UNION STATION	2500	8047	1.9	4.9	2.6	7.1
5	1ST/HILL (CIVIC CTR)	0	8046	0.8	5.7	1.8	8.9
6	5TH/HILL	0	8045	0.5	6.2	1.5	10.4
7	7TH/FLOWER	0	8031	0.5	6.7	1.5	11.9
8	WILSHIRE/ALVARADO	0	8044	1.1	7.8	2.1	14.0
9	WILSHIRE/VERMONT	0	8043	1.0	8.8	2.0	16.0
10	VERMONT/BEVERLY	0	5126	1.0	9.8	2.0	18.0
11	VERMONT/SANTA MONICA	0	5268	1.0	10.8	2.0	20.0
12	SUNSET/EDGEMONT	0	5264	0.8	11.6	1.8	21.8
13	SUNSET/WESTERN	0	5257	0.8	12.4	1.8	23.6
14	SUNSET/VINE	0	5238	1.0	13.4	2.0	25.6
15	HOLLYWOOD/HIGHLAND	0	8034	0.6	14.0	1.6	27.2
16	UNIVERSAL CITY	1000	8033	3.6	17.6	4.9	32.1
17	LAUREL CANYON BL	0	5458	2.9	20.5	3.8	35.9
18	COLDWATER CANYON BL	0	5454	0.7	21.2	1.5	37.4
19	WOODMAN AVE	400	5450	1.2	22.4	2.0	39.4
20	VAN NUYS BL	85	5444	1.0	23.4	1.8	41.2
21	SEPULVEDA BL	750	5441	1.0	24.4	1.8	43.0

TABLE 4.2-1

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "F"
LIGHT RAIL LINE ON BURBANK BRANCH R-O-W - PHASED OPERATION FROM UNIVERSAL CITY TO SEPULVEDA BOULEVARD

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	UNIVERSAL CITY	8033	0	714	0	1	8033	3498	0	3498
2	NORTH HOLLYWOOD	8032	714	261	207	2	8032	2426	1160	88
3	LAUREL CANYON	5682	767	48	67	3	5682	2156	295	25
4	FULTON/BURBANK	3079	748	34	62	4	3079	2062	123	29
5	VAN NUYS BL	3121	720	17	596	5	3121	1211	1034	183
6	SEPULVEDA	3171	141	0	141	6	3171	0	1211	0

S U M M A R Y

LRT	VEHICLE TYPE
6.0	HEADWAY
8.2	ROUTE MILES
6	NUMBER OF STATIONS
40.7	AVERAGE SPEED
3498	AM PEAK LOAD

TABLE 4.2-2

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "G"
METRO RAIL EXTENSION ON BURBANK BRANCH R-O-W TO PHASED TERMINUS AT BALBOA BLVD

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	WHITTIER/ARIZONA	4607	0	1383	0	1	4607	263	0	263
2	INDIANA/WHITTIER	4578	1383	175	8	2	4578	312	5	54
3	SOTO/WHITTIER	4563	1550	1031	117	3	4563	534	43	265
4	UNION STATION	8047	2464	3074	286	4	8047	910	184	560
5	1ST/HILL (CIVIC CTR)	8046	5253	97	712	5	8046	1195	88	373
6	5TH/HILL	8045	4637	140	2155	6	8045	4160	15	2980
7	7TH/FLOWER	8031	2623	507	137	7	8031	6937	54	2831
8	WILSHIRE/ALVARADO	8044	2993	175	533	8	8044	6976	463	503
9	WILSHIRE/VERMONT	8043	2635	458	107	9	8043	8051	134	1208
10	VERMONT/BEVERLY	5126	2987	284	967	10	5126	7480	1339	768
11	VERMONT/SANTA MONICA	5268	2304	133	160	11	5268	6828	798	146
12	SUNSET/EDGEMONT	5264	2277	141	243	12	5264	6188	763	122
13	SUNSET/WESTERN	5257	2175	290	284	13	5257	5935	578	325
14	SUNSET/VINE	5238	2181	161	973	14	5238	5374	1042	481
15	HOLLYWOOD/HIGHLAND	8034	1370	214	147	15	8034	5332	658	616
16	UNIVERSAL CITY	8033	1436	67	537	16	8033	4354	1194	216
17	NORTH HOLLYWOOD	8032	965	222	290	17	8032	3038	1399	84
18	LAUREL CANYON	5682	897	53	84	18	5682	2737	330	29
19	FULTON/BURBANK	3079	865	34	73	19	3079	2607	167	36
20	VAN NUYS BL	3121	826	29	624	20	3121	1757	1099	249
21	SEPULVEDA	3171	231	19	73	21	3171	1354	433	29
22	WOODLEY	5656	177	7	19	22	5656	1179	184	9
23	BALBOA	5654	165	0	165	23	5654	0	1179	0

S U M M A R Y

MRT	VEHICLE TYPE
6.0	HEADWAY
27.5	ROUTE MILES
23	NUMBER OF STATIONS
34.8	AVERAGE SPEED
8051	AM PEAK LOAD

TABLE 4.2-3

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "H"
METRO RAIL EXTENSION FROM UNIVERSAL CITY ON VENTURA FREEWAY SUBWAY ALIGNMENT TO PHASED TERMINUS AT SEPULVEDA

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	WHITTIER/ARIZONA	4607	0	1419	0	1	4607	292	0	292
2	INDIANA/WHITTIER	4578	1419	178	13	2	4578	357	6	72
3	SOTO/WHITTIER	4563	1585	1066	123	3	4563	588	48	278
4	UNION STATION	8047	2528	3068	297	4	8047	914	213	539
5	1ST/HILL (CIVIC CTR)	8046	5298	111	742	5	8046	1173	108	368
6	5TH/HILL	8045	4667	146	2170	6	8045	4032	23	2882
7	7TH/FLOWER	8031	2643	504	156	7	8031	6635	72	2675
8	WILSHIRE/ALVARADO	8044	2991	173	574	8	8044	6654	470	489
9	WILSHIRE/VERMONT	8043	2591	433	126	9	8043	7614	146	1106
10	VERMONT/BEVERLY	5126	2898	280	962	10	5126	6999	1341	726
11	VERMONT/SANTA MONICA	5268	2216	114	169	11	5268	6325	803	128
12	SUNSET/EDGEMONT	5264	2161	139	235	12	5264	5677	763	114
13	SUNSET/WESTERN	5257	2065	284	291	13	5257	5387	580	290
14	SUNSET/VINE	5238	2058	159	970	14	5238	4768	1043	423
15	HOLLYWOOD/HIGHLAND	8034	1247	199	144	15	8034	4617	660	509
16	UNIVERSAL CITY	8033	1302	129	623	16	8033	2904	1858	144
17	LAUREL CANYON	5458	808	43	60	17	5458	2589	339	24
18	COLDWATER CANYON	5454	791	14	74	18	5454	2462	144	18
19	WOODMAN AVENUE	5450	731	78	48	19	5450	2062	425	26
20	VAN NUYS BL	5444	761	1	572	20	5444	1072	1014	24
21	SEPULVEDA BL	5441	190	0	190	21	5441	0	1072	0

S U M M A R Y

MRT	VEHICLE TYPE
6.0	HEADWAY
24.4	ROUTE MILES
21	NUMBER OF STATIONS
34.0	AVERAGE SPEED
7614	AM PEAK LOAD

TABLE 4.3-1

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

COMPARISON OF AVERAGE WEEKDAY TRIPS ON PHASED ALTERNATIVES
VALLEY STATIONS ONLY, FROM UNIVERSAL CITY

Metro Rail Extensions:	Average Weekday Trips
Burbank Branch to Balboa (Model Run "G"):	51,500
Without Woodley and Laurel Canyon stations:	48,900
Burbank Branch to Sepulveda without Laurel Canyon:	41,000
Ventura Freeway Subway to Sepulveda (Model Run "H"):	36,900
Light Rail Alternatives:	
Burbank Branch to Sepulveda (Model Run "F"):	37,900

less than the peak hour volumes, there would be a net reduction, region-wide, of both VMT and on-road emissions.

TABLE 5.3-1

DAILY RIDERSHIP AND RESULTING VMT FOR SELECTED RAIL ALTERNATIVES

	NO PROJECT	VENFWY	SP.UC1	METRO "A"
DAILY RIDERS	15,500	34,000	45,600	57,800
DAILY VMT	310,170,135	309,955,452	309,760,997	309,729,982
CHANGE IN VMT		- 214,683	- 409,138	- 440,153

LIST OF REFERENCES

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2. Memorandum: November 8, 1988; To: Murray Goldman, SCAG; From: Ben Darche, LACTC; Subject: San Fernando Valley EIR Patronage Runs and Required Outputs.

3. Hanson, Susan, Ed. The Geography of Urban Transportation. The Guilford Press. New York. 1986.

4. San Fernando Valley Area Transportation Study, Phase 2 - Long Range Plan. Southern California Association of Governments. Los Angeles. March 1988.

5. SCAG-82 MODIFIED FORECAST. Population, Housing, Employment. Adopted February 1985.

6. FAX to Murray Goldman from Ben Darche, January 3, 1989: "Summary of SFV Transit Station Parking, Burbank and Ventura Alternatives (Revised 12-16-88)", by Gruen Associates.

7. Letter from Manuel Padron & Associates to Fred Silverman, LACTC, dated December 2, 1988; Subject: San Fernando Valley EIR Study. Table 1 - Operating Plans for Network Coding.

8. Memorandum, April 24, 1989. To: Murray Goldman, SCAG; From: Susan Rosales, LACTC; Subject: San Fernando Valley Patronage Runs.

9. Memorandum dated July 17, 1989 (revised July 25, 1989). To: Murray Goldman, SCAG, From: Susan Rosales, LACTC; Subject: Patronage Runs for San Fernando Valley, Pasadena and Coastal South Corridor.

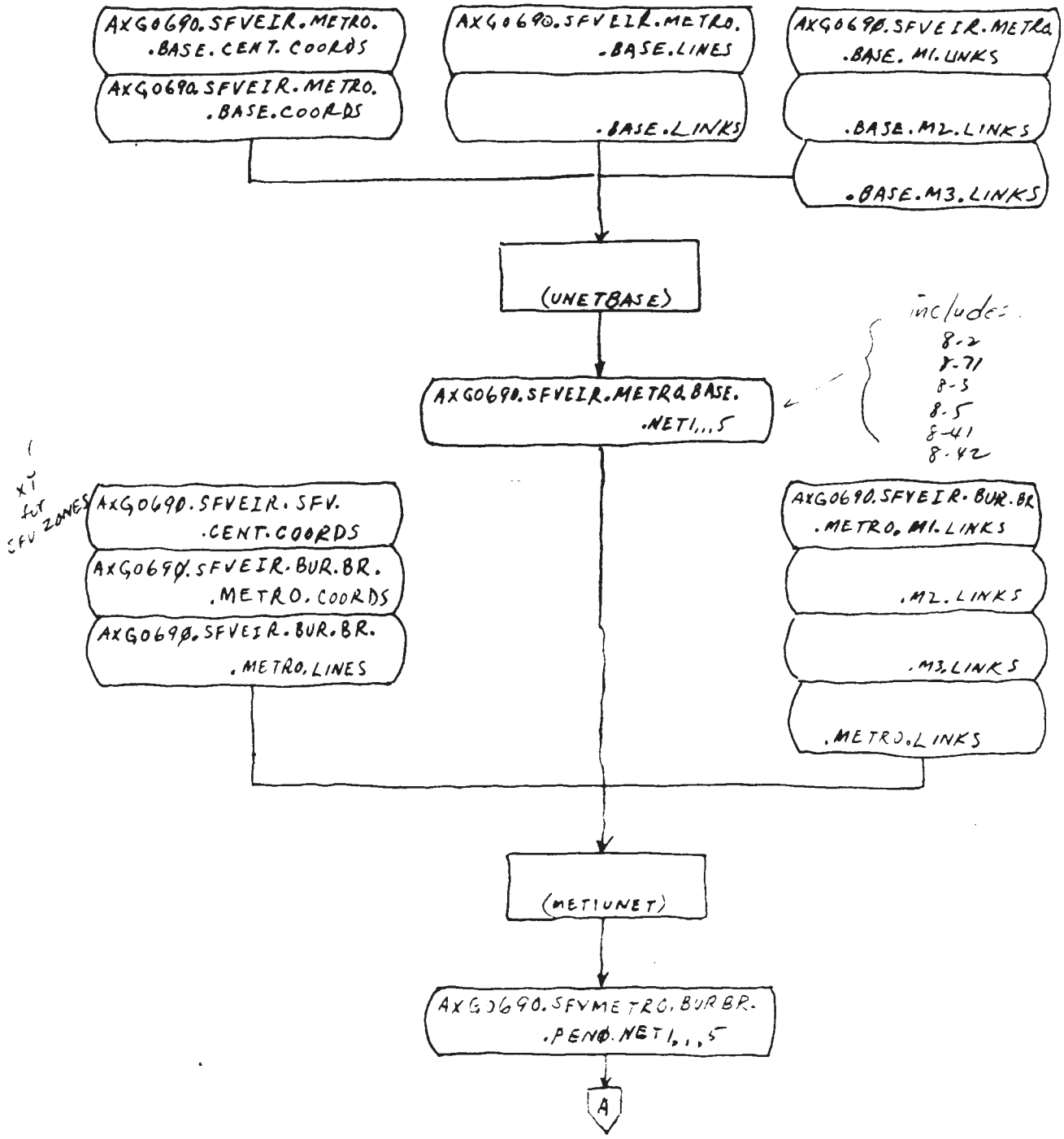
10. Memorandum dated August 30, 1989. To: Murray Goldman, From: Susan Rosales; Subject: Phased Runs for San Fernando Valley.

APPENDIX A

TRANSPORTATION MODEL SYSTEM FLOW CHARTS

METRO RAIL EXTENSION VIA BURBANK BRANCH R-O-W

DEVELOP TRANSIT NETWORK



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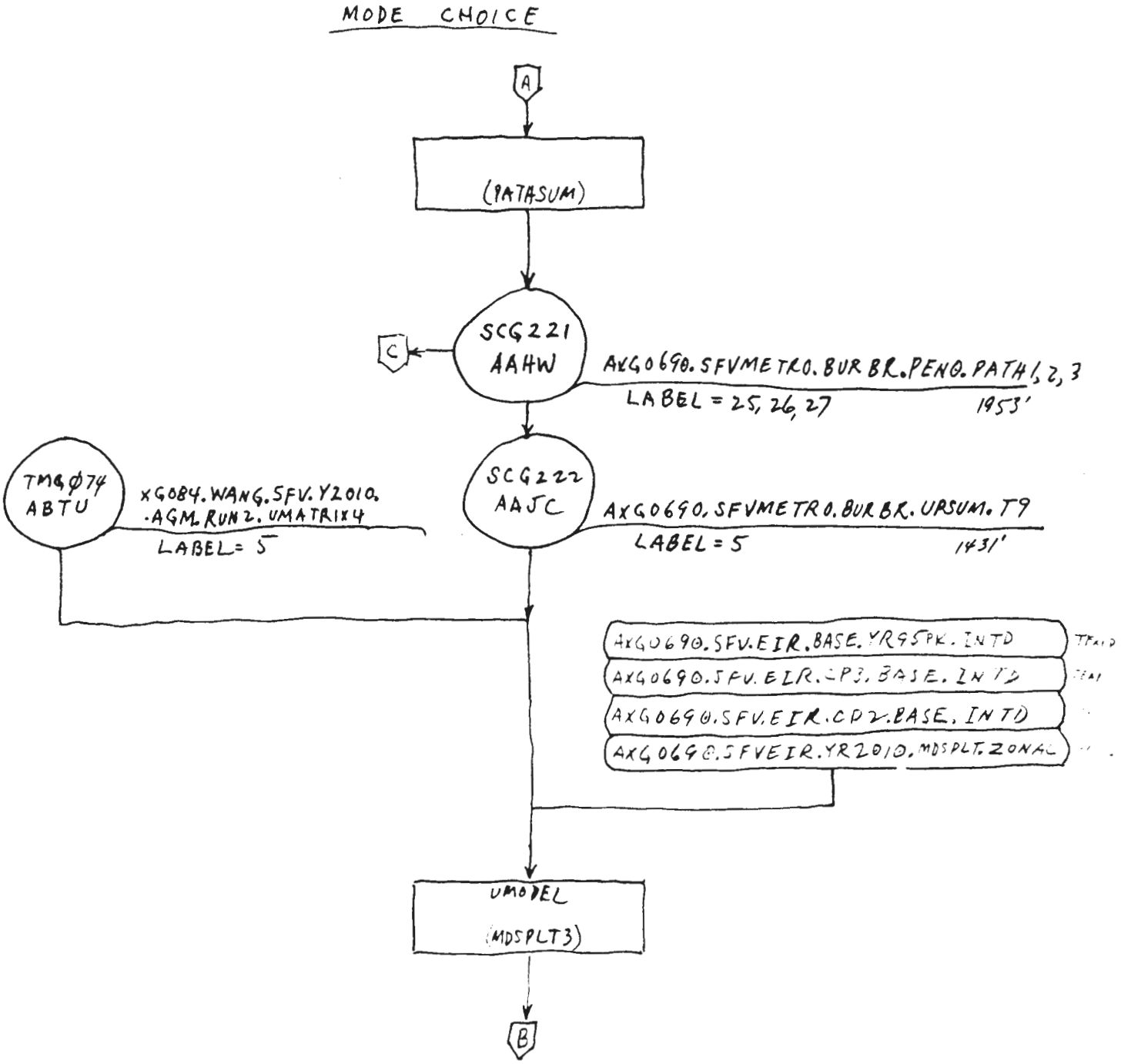
Date:



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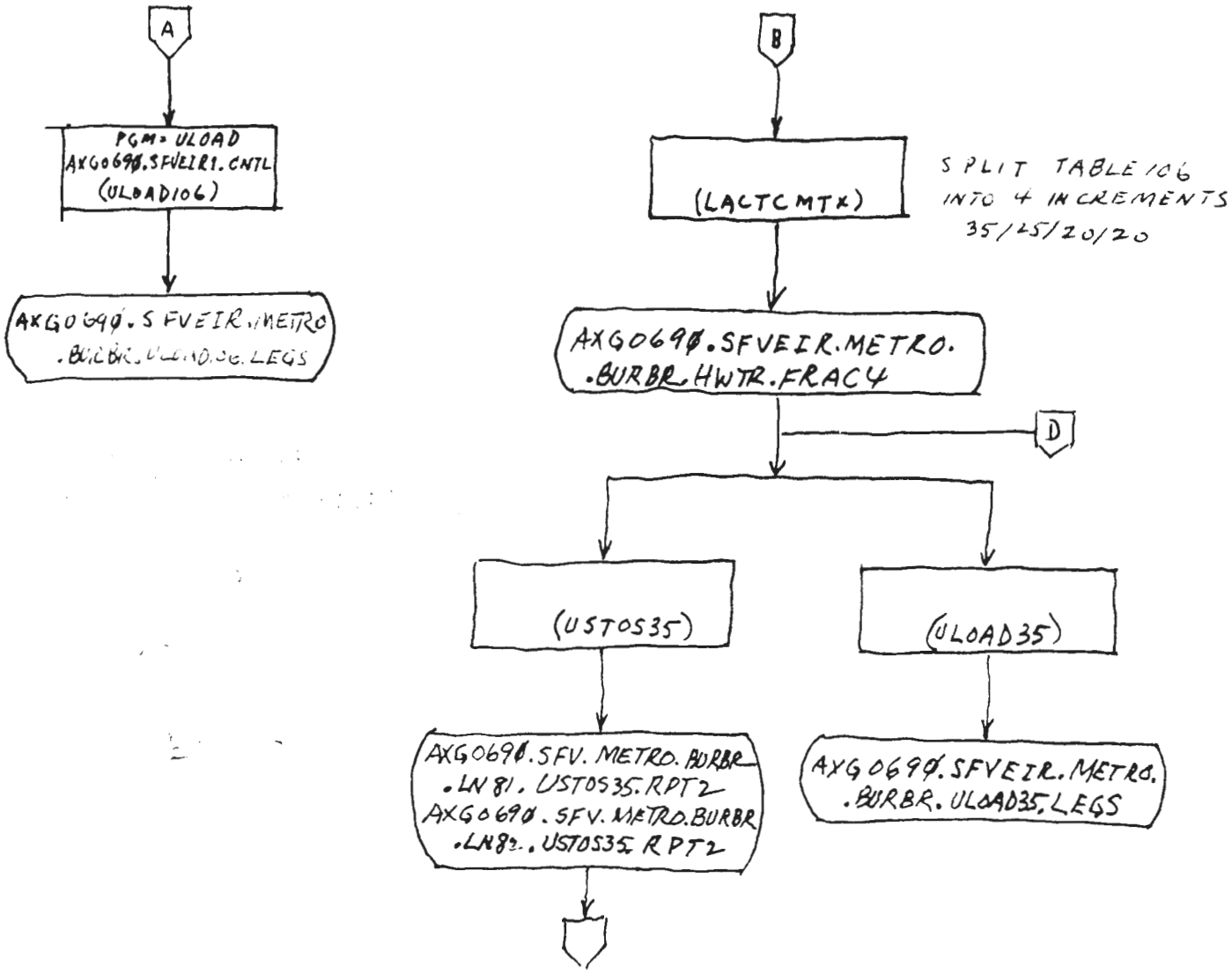

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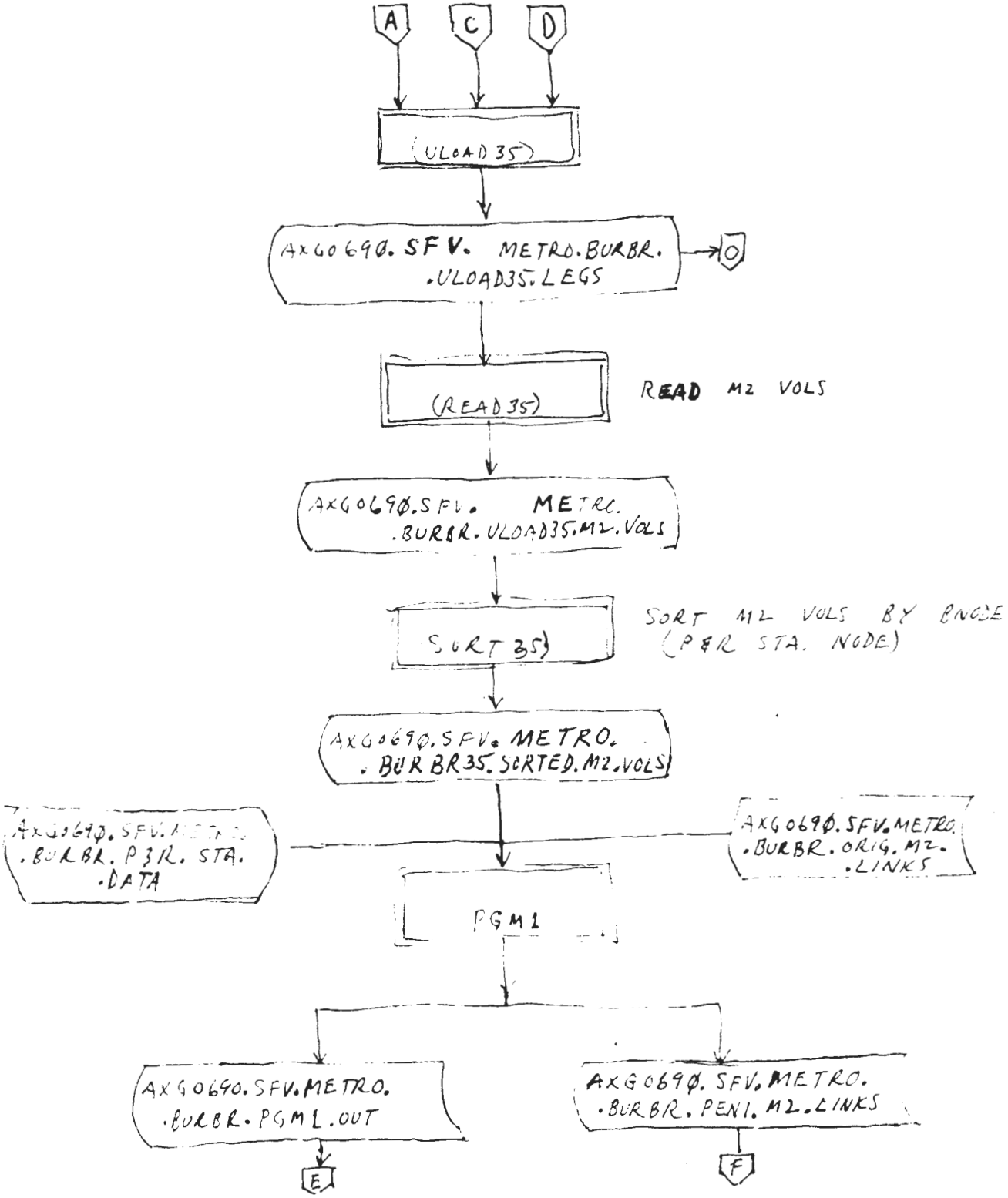

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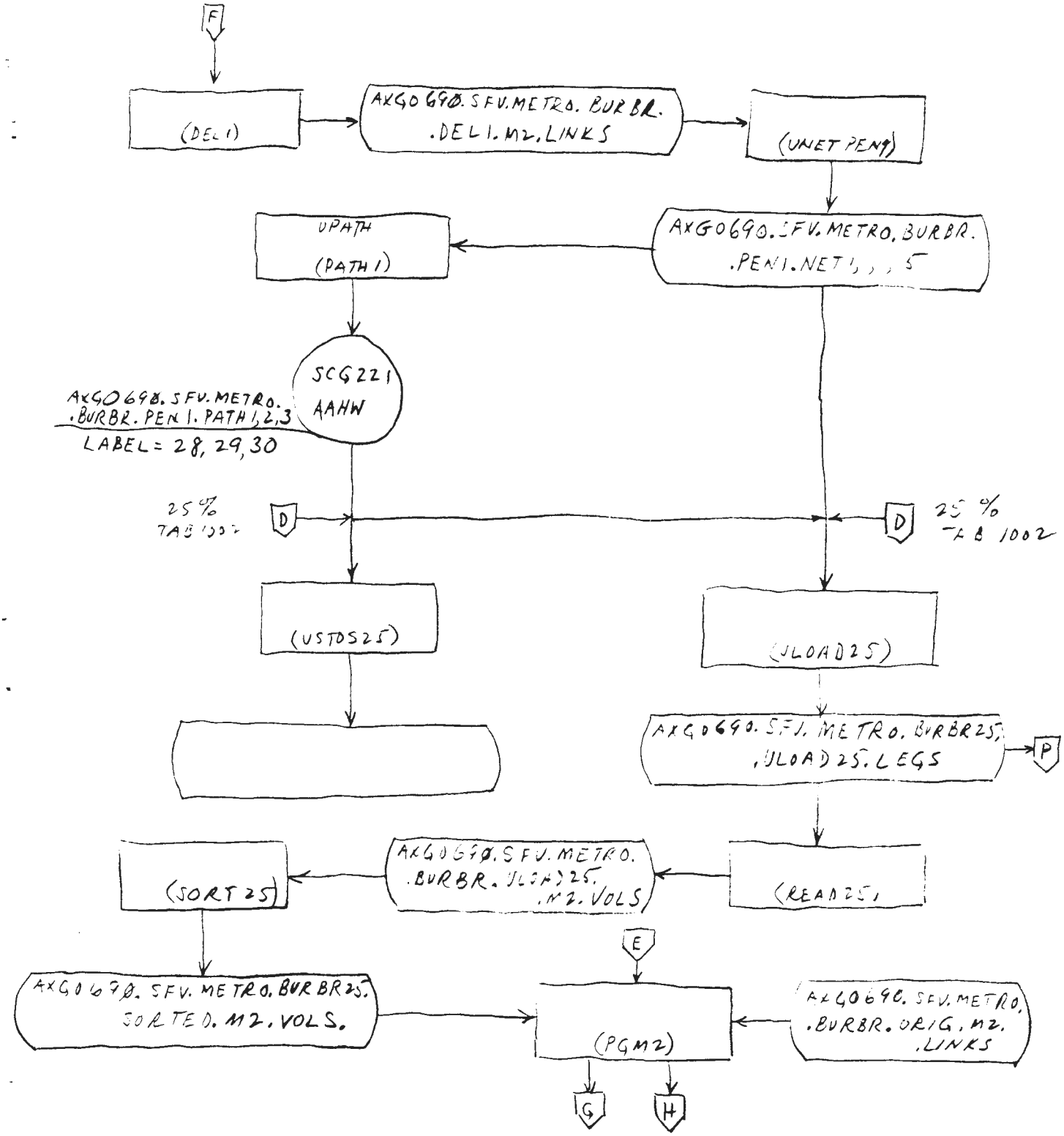

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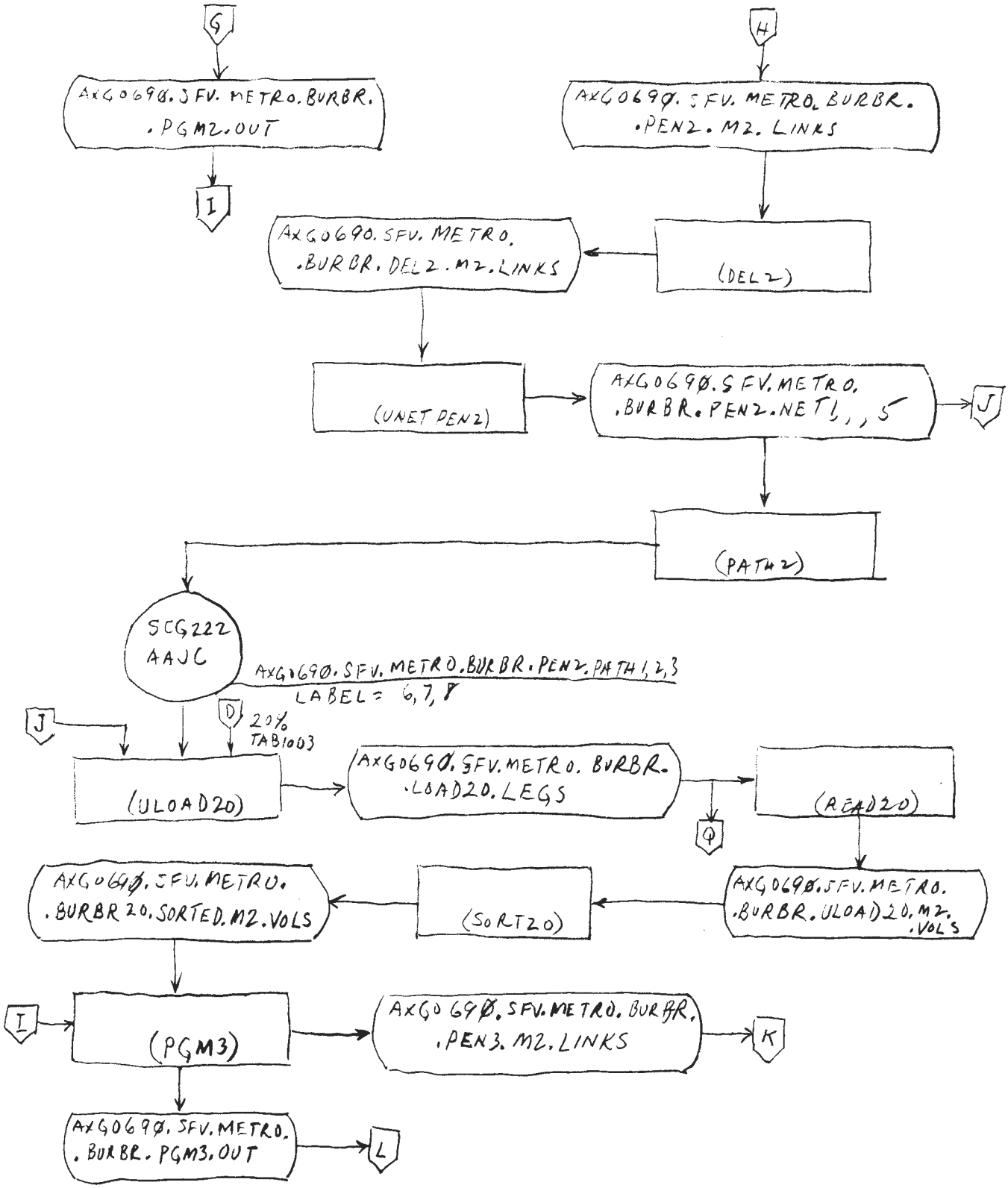

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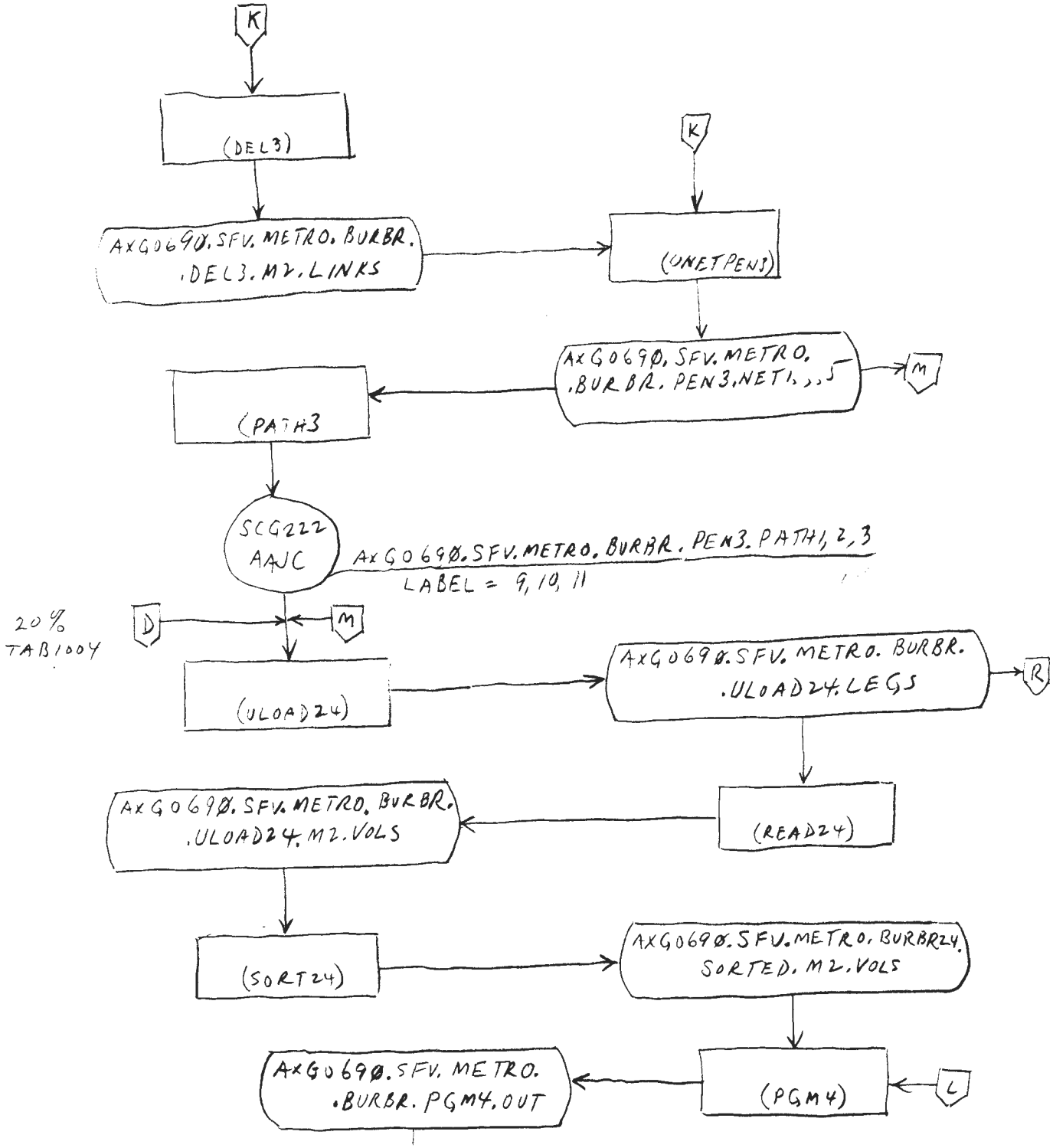

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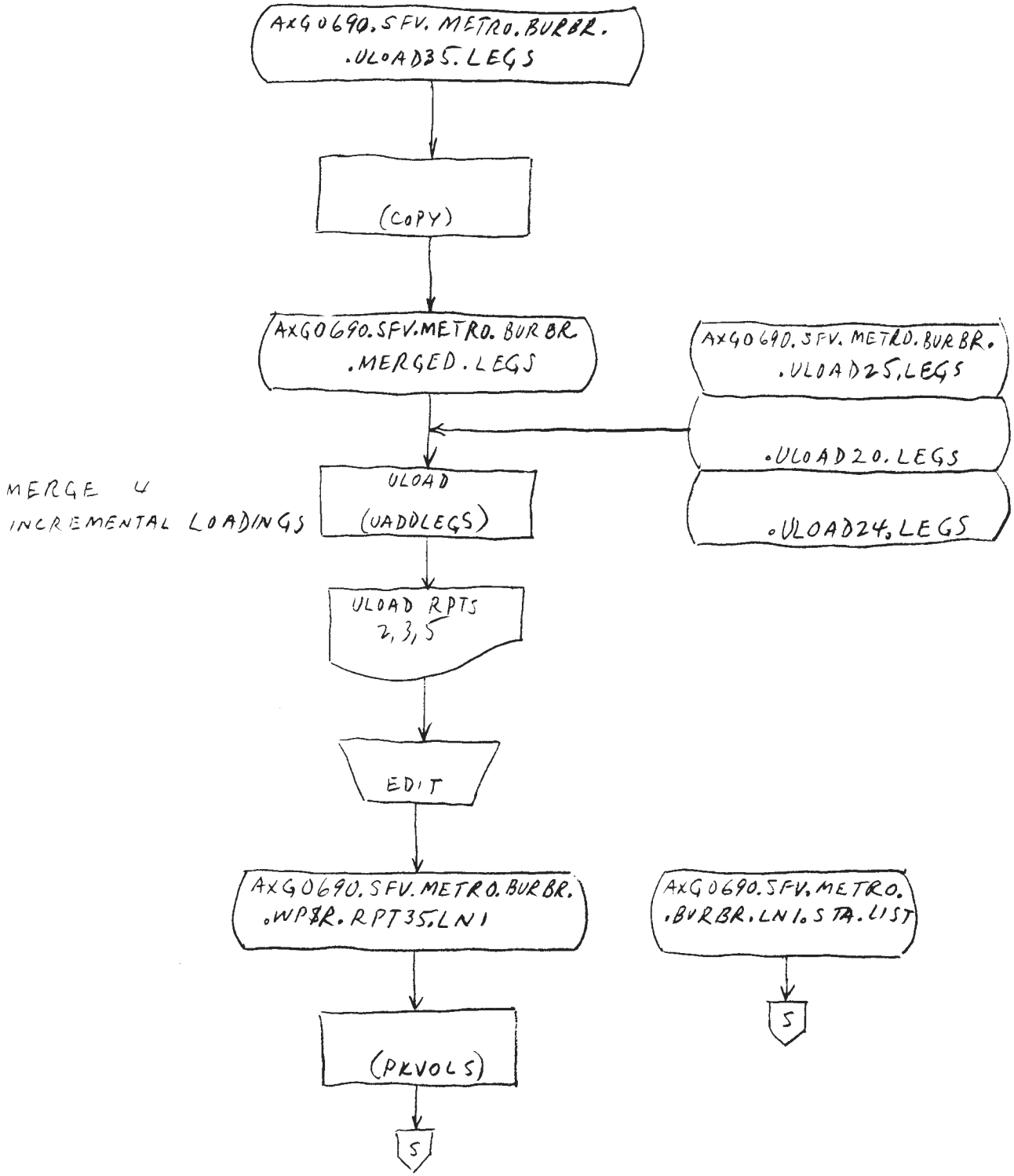

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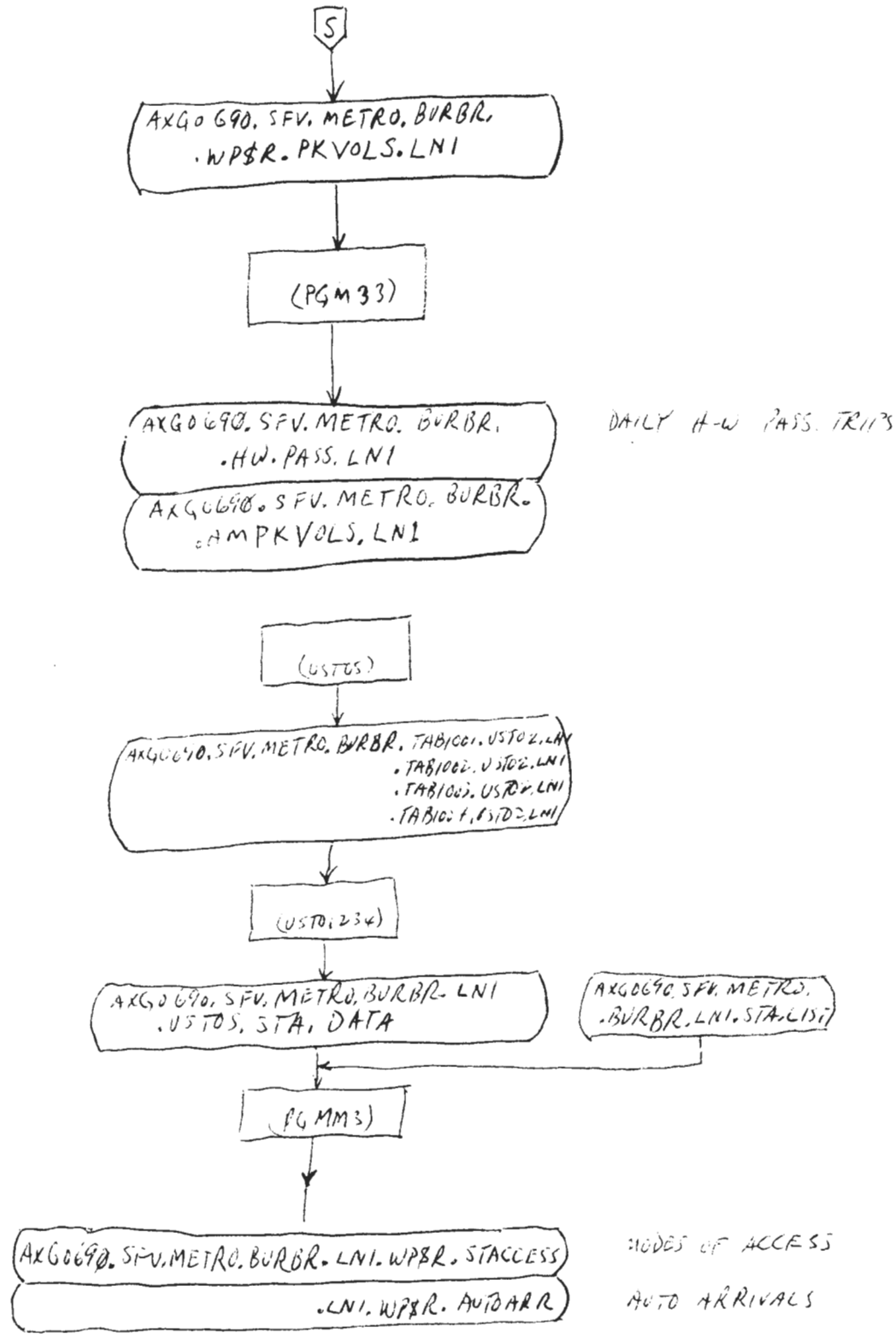
METRO RAIL EXTENSION VIA BURBANK BRANCH R-O-W



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TRANSPORTATION MODEL SYSTEM FLOW CHART — Page_____of

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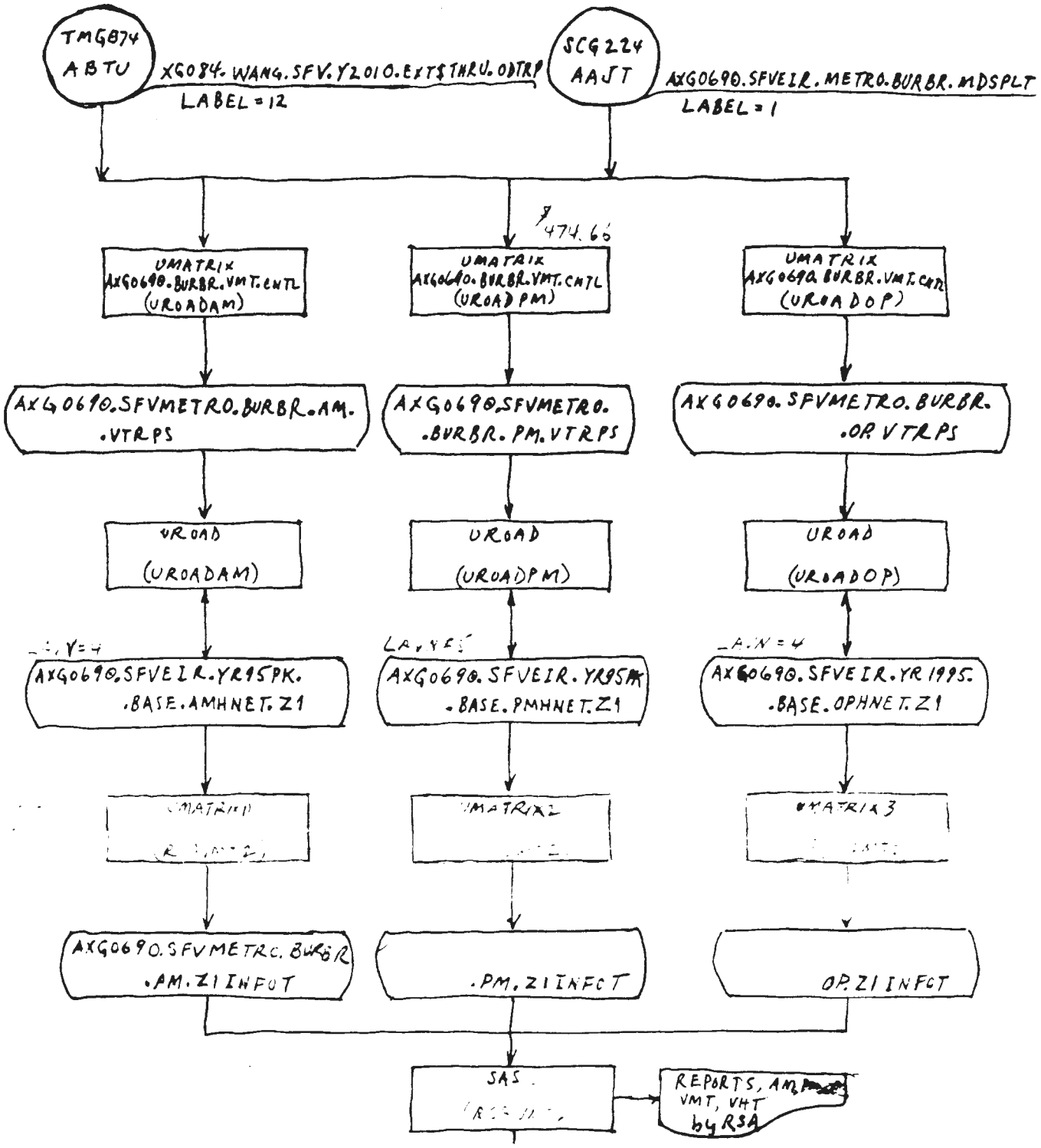
Southern California Association of Governments

METRO RAIL EXTENSION VIA BURBANK BRANCH R-O-W

TRAFFIC ASSIGNMENT - VMT ESTIMATION



TRANSPORTATION MODEL SYSTEM FLOW CHART
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APPENDIX B

DAILY HOME-WORK PASSENGER TRIPS

APPENDIX B

Daily (weekday) Home-work Passenger Loadings for the full-length East-West rail alternatives are shown in Tables B-1, B-2, B-3, and B-4 for Model Runs "A", "B", "D", and "E", respectfully. These tables are the direct result of assigning home-work transit trips, output by the mode-choice model, to the transit network.

Daily (weekday) Home-Work Passenger Loadings for the phased terminuses are shown in Tables B-5, B-6, and B-7 for Model Runs "F", "G", and "H", respectfully.

Daily home-work passenger loadings are in "production-attraction" format. This means that both the going and return trip are produced in the zone of production. Thus, total daily home-work trips, or boardings, is equal to the sum of the ON's. It is also equal to the sum of the OFF's.

Most commuter trips go to work in the morning. Therefore, to gain a view of station activity, one may assume that one-half of the ON's at a given station will occur in the morning peak period, and one-half of the OFF's occur at that station in the morning peak period.

TABLE B-1

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "A"
METRO RAIL EXTENSION: UNIVERSAL CITY TO TOPANGA VIA BURBANK BRANCH RIGHT-OF-WAY

DAILY (WEEKDAY) HOME-WORK PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB IN	VOLUME ON	(READ DOWN) OFF	T	D	SB IN	VOLUME ON	(READ UP) OFF	T	D
1	WHITTIER/ARIZONA	4607	0	5747	0	0.0	0.0	1097	0	1097	56.7	33.8
2	INDIANA/WHITTIER	4578	5747	729	34	2.6	1.9	1292	22	217	54.1	31.9
3	SOTO/WHITTIER	4563	6442	4266	482	4.5	3.0	2239	168	1115	52.2	30.8
4	UNION STATION	8047	10226	12942	1195	7.1	4.9	3833	783	2377	49.6	28.9
5	1ST/HILL (CIVIC CTR)	8046	21973	393	2966	8.9	5.7	4981	373	1521	47.8	28.1
6	5TH/HILL	8045	19400	581	9024	10.4	6.2	17312	65	12396	46.3	27.6
7	7TH/FLOWER	8031	10957	2095	580	11.9	6.7	28970	216	11874	44.8	27.1
8	WILSHIRE/ALVARADO	8044	12472	718	2226	14.0	7.8	29213	1920	2163	42.7	26.0
9	WILSHIRE/VERMONT	8043	10964	1875	456	16.0	8.8	33752	550	5089	40.7	25.0
10	VERMONT/BEVERLY	5126	12383	1179	4007	18.0	9.8	31443	5559	3250	38.7	24.0
11	VERMONT/SANTA MONICA	5268	9555	531	666	20.0	10.8	28721	3323	601	36.7	23.0
12	SUNSET/EDGEMONT	5264	9420	586	991	21.8	11.6	26089	3164	532	34.9	22.2
13	SUNSET/WESTERN	5257	9015	1223	1179	23.6	12.4	25048	2411	1370	33.1	21.4
14	SUNSET/VINE	5238	9059	692	4045	25.6	13.4	22756	4306	2014	31.1	20.4
15	HOLLYWOOD/VINE	8034	5706	894	615	27.2	14.0	22773	2746	2763	29.5	19.8
16	UNIVERSAL CITY	8033	5985	260	2028	32.1	17.6	19047	4706	980	24.6	16.2
17	NORTH HOLLYWOOD	8032	4217	951	1167	34.8	19.6	13658	5782	393	21.9	14.2
18	LAUREL CANYON	5682	4001	228	346	36.9	20.9	12384	1380	106	19.8	12.9
19	FULTON/BURBANK	3079	3883	157	257	39.3	22.6	11820	726	162	17.4	11.2
20	VAN NUYS BL	3121	3783	159	2504	41.8	24.3	9739	3893	1812	14.9	9.5
21	SEPULVEDA	3171	1438	178	299	43.6	25.3	8079	1864	204	13.1	8.5
22	WOODLEY	5656	1317	55	90	45.6	26.5	7380	780	81	11.1	7.3
23	BALBOA	5654	1282	59	120	47.4	27.5	6308	1141	69	9.3	6.3
24	WHITE OAK	3245	1221	132	244	49.4	28.7	5161	1284	137	7.3	5.1
25	RESEDA	5637	1109	151	520	51.2	29.6	3164	2177	180	5.5	4.2
26	WINNETKA	5632	740	489	131	53.9	31.7	1001	2175	12	2.8	2.1
27	TOPANGA	5626	1098	0	1098	56.7	33.8	0	1001	0	0.0	0.0

TABLE B-2

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "B"
METRORAIL EXTENSION - UNIVERSAL CITY TO CANOGA AVENUE VIA VENTURA FREEWAY AERIAL

DAILY (WEEKDAY) HOME-WORK PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME IN	ON	(RD DN) OFF	STA NO.	TRAN NODE	SB VOLUME IN	ON	(RD UP) OFF
1	WHITTIER/ARIZONA	4607	0	5879	0	1	4607	1256	0	1256
2	INDIANA/WHITTIER	4578	5879	740	55	2	4578	1541	24	309
3	SOTO/WHITTIER	4563	6564	4413	510	3	4563	2516	223	1198
4	UNION STATION	8047	10467	12952	1235	4	8047	3971	916	2371
5	1ST/HILL (CIVIC CTR)	8046	22184	454	3060	5	8046	5098	449	1576
6	5TH/HILL	8045	19578	612	9110	6	8045	17311	100	12313
7	7TH/FLOWER	8031	11080	2143	700	7	8031	28744	295	11728
8	WILSHIRE/ALVARADO	8044	12523	729	2382	8	8044	28856	1955	2067
9	WILSHIRE/VERMONT	8043	10870	1798	514	9	8043	33146	609	4899
10	VERMONT/BEVERLY	5126	12154	1151	3988	10	5126	30823	5543	3220
11	VERMONT/SANTA MONICA	5268	9317	505	660	11	5268	28104	3317	598
12	SUNSET/EDGEMONT	5264	9162	581	1007	12	5264	25446	3166	508
13	SUNSET/WESTERN	5257	8736	1189	1170	13	5257	24358	2405	1317
14	SUNSET/VINE	5238	8755	674	3994	14	5238	21970	4326	1938
15	HOLLYWOOD/HIGHLAND	8034	5435	864	614	15	8034	21826	2746	2602
16	UNIVERSAL CITY	8033	5685	550	2585	16	8033	15125	7521	820
17	LAUREL CANYON BL	5458	3650	316	245	17	5458	13370	1898	143
18	COLDWATER CANYON BL	5454	3721	132	285	18	5454	12256	1228	114
19	WOODMAN AVENUE	5450	3568	308	180	19	5450	11296	1120	160
20	VAN NUYS BL	5444	3696	204	2286	20	5444	9331	3824	1859
21	SEPULVEDA BL	5441	1614	110	202	21	5441	8448	1039	156
22	HAYVENHURST	5650	1522	76	268	22	5650	7484	1120	156
23	WHITE OAK	5640	1330	136	230	23	5640	6604	1031	151
24	RESEDA	5638	1236	220	362	24	5638	4976	1840	212
25	TAMPA AVENUE	5633	1094	191	413	25	5633	3688	1542	254
26	WINNETKA	5630	872	26	57	26	5630	3516	204	32
27	DE SOTO AVENUE	5431	841	83	361	27	5431	2336	1317	137
28	OXNARD/CANOGA	5629	563	24	187	28	5629	2217	242	123
29	VICTORY/CANOGA	5624	400	12	161	29	5624	2165	195	143
30	VANOWEN/CANOGA	7331	251	0	251	30	7331	0	2165	0

TABLE B-3

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "D"
METRORAIL EXTENSION - UNIVERSAL CITY TO CANOGA AVENUE VIA VENTURA FREEWAY SUBWAY

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME (RD DN) IN	ON	OFF	STA NO.	TRAN NODE	SB VOLUME (RD UP) IN	ON	OFF
1	WHITTIER/ARIZONA	4607	0	5879	0	1	4607	1247	0	1247
2	INDIANA/WHITTIER	4578	5879	740	55	2	4578	1530	24	307
3	SOTO/WHITTIER	4563	6564	4413	510	3	4563	2480	223	1173
4	UNION STATION	8047	10467	12952	1235	4	8047	3918	916	2354
5	1ST/HILL (CIVIC CTR)	8046	22184	454	3060	5	8046	5026	449	1557
6	5TH/HILL	8045	19578	612	9110	6	8045	17172	100	12246
7	7TH/FLOWER	8031	11080	2143	700	7	8031	28480	295	11603
8	WILSHIRE/ALVARADO	8044	12523	729	2382	8	8044	28601	1955	2076
9	WILSHIRE/VERMONT	8043	10870	1798	514	9	8043	32816	609	4824
10	VERMONT/BEVERLY	5126	12154	1151	3988	10	5126	30430	5543	3157
11	VERMONT/SANTA MONICA	5268	9317	505	660	11	5268	27687	3317	574
12	SUNSET/EDGEMONT	5264	9162	581	1007	12	5264	25018	3166	497
13	SUNSET/WESTERN	5257	8736	1189	1170	13	5257	23897	2405	1284
14	SUNSET/VINE	5238	8755	674	3994	14	5238	21444	4326	1873
15	HOLLYWOOD/HIGHLAND	8034	5435	867	614	15	8034	21189	2746	2491
16	UNIVERSAL CITY	8033	5688	597	2585	16	8033	14256	7696	763
17	LAUREL CANYON BL	5458	3700	167	249	17	5458	13010	1389	143
18	COLDWATER CANYON BL	5454	3618	72	279	18	5454	12429	695	114
19	WOODMAN AVENUE	5450	3411	313	169	19	5450	11214	1379	164
20	VAN NUYS BL	5444	3555	211	2200	20	5444	9104	3819	1709
21	SEPULVEDA BL	5441	1566	110	199	21	5441	8207	1039	142
22	HAYVENHURST	5650	1477	117	253	22	5650	7228	1115	136
23	WHITE OAK	5640	1341	20	229	23	5640	6888	499	159
24	RESEDA	5638	1132	238	342	24	5638	4976	2124	212
25	TAMPA AVENUE	5633	1028	191	372	25	5633	3688	1542	254
26	WINNETKA	5630	847	26	53	326	5630	3516	204	32
27	DE SOTO AVENUE	5431	820	83	364	27	5431	2336	1317	137
28	OXNARD/CANOGA	5629	539	24	180	28	5629	2217	242	123
29	VICTORY/CANOGA	5624	383	12	154	29	5624	2165	195	143
30	VANOWEN/CANOGA	7331	241	0	241	30	7331	0	2165	0

TABLE B-4

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "E"
UNIVERSAL CITY TO VANOWEN/CANOGA VIA AUTOMATED RAILWAY ON VENTURA FREEWAY

DAILY (WEEKDAY) HOME-WORK PASSENGER LOADINGS
(WITH P&R CAPACITY-RESTRAINED TRANSIT ASSIGNMENT)

STA NO.	STATION NAME	TRAN NODE	NB VOLUME IN	ON	(RD DN) OFF	STA NO.	TRAN NODE	SB VOLUME IN	ON	(RD UP) OFF
1	UNIVERSAL CITY	8033	0	3768	0	1	8033	14933	0	14933
2	LAUREL CANYON BL	5458	3768	411	242	2	5458	13292	1829	188
3	COLDWATER CANYON BL	5454	3937	196	261	3	5454	12253	1184	145
4	WOODMAN AVENUE	5450	3872	370	195	4	5450	11314	1111	172
5	VAN NUYS BL	5444	4047	349	2557	5	5444	9898	3787	2371
6	SEPULVEDA BL	5441	1839	145	220	6	5441	9032	1069	203
7	HAYVENHURST	5650	1764	107	322	7	5650	8012	1184	164
8	WHITE OAK	5640	1549	186	305	8	5640	7109	1097	194
9	RESEDA	5638	1430	267	422	9	5638	5425	1948	264
10	TAMPA AVENUE	5633	1275	245	484	10	5633	3924	1747	246
11	WINNETKA	5630	1036	39	49	11	5630	3765	207	48
12	DE SOTO AVENUE	5431	1026	118	413	12	5431	2520	1410	165
13	OXNARD/CANOGA	5629	731	29	222	13	5629	2372	275	127
14	VICTORY/CANOGA	5624	538	14	211	14	5624	2313	210	151
15	VANOWEN/CANOGA	7331	341	0	341	15	7331	0	2313	0

TABLE B-5

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "F"
LIGHT RAIL TRANSIT ON BURBANK BRANCH FROM UNIVERSAL CITY TO PHASED TERMINUS AT SEPULVEDA

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

STA NO.	STATION NAME	TRAN NODE	WB IN	VOLUME ON	(READ DN) OFF	TRAN NODE	EB IN	VOLUME ON	(READ UP) OFF
1	UNIVERSAL CITY	8033	0	2963	0	8033	14515	0	14515
2	NORTH HOLLYWOOD	8032	2963	1081	860	8032	10067	4813	365
3	LAUREL CANYON	5682	3184	201	280	5682	8947	1224	104
4	FULTON/BURBANK	3079	3105	141	258	3079	8555	511	119
5	VAN NUYS BL	3121	2988	70	2474	3121	5024	4292	761
6	SEPULVEDA	3171	584	0	584	3171	0	5024	0

TABLE B-6

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "G"
METRO RAIL EXTENSION ON BURBANK BRANCH: UNIVERSAL CITY TO PHASED TERMINUS AT BALBOA

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

STA NO.	STATION NAME	TRAN NODE	NB IN	VOLUME ON	(READ DOWN) OFF	T	D	SB IN	VOLUME ON	(READ UP) OFF	T	D
1	WHITTIER/ARIZONA	4607	0	5738	0	0.0	0.0	1091	0	1091	56.7	33.8
2	INDIANA/WHITTIER	4578	5738	727	35	2.6	1.9	1293	22	224	54.1	31.9
3	SOTO/WHITTIER	4563	6430	4280	484	4.5	3.0	2216	177	1100	52.2	30.8
4	UNION STATION	8047	10226	12754	1185	7.1	4.9	3775	764	2323	49.6	28.9
5	1ST/HILL (CIVIC CTR)	8046	21795	402	2955	8.9	5.7	4960	364	1549	47.8	28.1
6	5TH/HILL	8045	19242	581	8940	10.4	6.2	17262	64	12366	46.3	27.6
7	7TH/FLOWER	8031	10883	2103	568	11.9	6.7	28783	225	11746	44.8	27.1
8	WILSHIRE/ALVARADO	8044	12418	725	2210	14.0	7.8	28947	1923	2087	42.7	26.0
9	WILSHIRE/VERMONT	8043	10933	1902	442	16.0	8.8	33405	555	5089	40.7	25.0
10	VERMONT/BEVERLY	5126	12393	1177	4011	18.0	9.8	31038	5555	3188	38.7	24.0
11	VERMONT/SANTA MONICA	5268	9559	553	662	20.0	10.8	28334	3311	607	36.7	23.0
12	SUNSET/EDGEMONT	5264	9450	584	1008	21.8	11.6	25677	3165	508	34.9	22.2
13	SUNSET/WESTERN	5257	9026	1202	1177	23.6	12.4	24627	2399	1349	33.1	21.4
14	SUNSET/VINE	5238	9051	668	4036	25.6	13.4	22297	4324	1994	31.1	20.4
15	HOLLYWOOD/VINE	8034	5683	886	611	27.2	14.0	22123	2731	2557	29.5	19.8
16	UNIVERSAL CITY	8033	5958	276	2230	32.1	17.6	18066	4953	896	24.6	16.2
17	NORTH HOLLYWOOD	8032	4004	923	1205	34.8	19.6	12606	5807	347	21.9	14.2
18	LAUREL CANYON	5682	3722	218	350	36.9	20.9	11358	1368	120	19.8	12.9
19	FULTON/BURBANK	3079	3590	142	304	39.3	22.6	10818	691	151	17.4	11.2
20	VAN NUYS BL	3121	3428	121	2590	41.8	24.3	7292	4559	1033	14.9	9.5
21	SEPULVEDA	3171	959	79	302	43.6	25.3	5618	1796	122	13.1	8.5
22	WOODLEY	5656	736	28	80	45.6	26.5	4892	764	38	11.1	7.3
23	BALBOA	5654	684	0	684	47.4	27.5	0	4892	0	9.3	6.3

TABLE B-7

LACTC SAN FERNANDO VALLEY EAST-WEST RAIL TRANSIT PROJECT ALTERNATIVES

MODEL RUN "H"
METRO RAIL EXTENSION VIA VENTURA FREEWAY SUBWAY TO PHASED TERMINUS AT SEPULVEDA

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

STA NO.	STATION NAME	TRAN NODE	NB VOLUME IN	ON	OFF (RD DN)	STA NO.	TRAN NODE	SB VOLUME IN	ON	OFF (RD UP)
1	WHITTIER/ARIZONA	4607	0	5890	0	1	4607	1210	0	1210
2	INDIANA/WHITTIER	4578	5890	740	55	2	4578	1483	25	298
3	SOTO/WHITTIER	4563	6575	4425	512	3	4563	2439	199	1155
4	UNION STATION	8047	10488	12729	1234	4	8047	3793	884	2238
5	1ST/HILL (CIVIC CTR)	8046	21983	461	3080	5	8046	4869	449	1525
6	5TH/HILL	8045	19364	606	9003	6	8045	16731	96	11958
7	7TH/FLOWER	8031	10967	2092	649	7	8031	27532	297	11098
8	WILSHIRE/ALVARADO	8044	12410	719	2380	8	8044	27608	1951	2027
9	WILSHIRE/VERMONT	8043	10749	1798	523	9	8043	31595	604	4591
10	VERMONT/BEVERLY	5126	12024	1161	3990	10	5126	29041	5565	3011
11	VERMONT/SANTA MONICA	5268	9195	472	700	11	5268	26244	3330	533
12	SUNSET/EDGEMONT	5264	8967	577	977	12	5264	23554	3164	474
13	SUNSET/WESTERN	5257	8567	1179	1206	13	5257	22354	2405	1205
14	SUNSET/VINE	5238	8540	660	4026	14	5238	19783	4326	1755
15	HOLLYWOOD/HIGHLAND	8034	5174	827	598	15	8034	19159	2737	2113
16	UNIVERSAL CITY	8033	5403	537	2586	16	8033	12049	7709	599
17	LAUREL CANYON BL	5458	3354	177	247	17	5458	10742	1408	101
18	COLDWATER CANYON BL	5454	3284	58	307	18	5454	10216	599	73
19	WOODMAN AVENUE	5450	3035	325	201	19	5450	8557	1765	106
20	VAN NUYS BL	5444	3159	3	2372	20	5444	4448	4209	100
21	SEPULVEDA BL	5441	790	0	790	21	5441	0	4448	0