

SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT  
**METRO RAIL PROJECT**

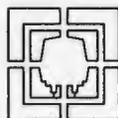


**DESIGN REPORT  
FOR  
SIX STATIONS &  
LINE SEGMENTS**



JUNE 1989

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**GENERAL CONSULTANT:**

**METRO RAIL TRANSIT CONSULTANTS**  
DMJM/PBQD/KE/HWA

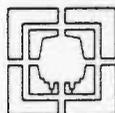
SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT  
**METRO RAIL PROJECT** 

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**DESIGN REPORT  
FOR  
SIX STATIONS &  
LINE SEGMENTS**

**TASK 1.A  
PHASE II  
PART A**

**SUBMITTED:  
JUNE 30, 1989**



**GENERAL CONSULTANT:**

**METRO RAIL TRANSIT CONSULTANTS  
DMJM/PBQD/KE/HWA**

## CONTENTS

### DESIGN REPORT FOR SIX STATIONS AND LINE SEGMENTS TASK 1.A

	Page
Executive Summary	iii
1.0 Introduction	1
1.1 Background	1
1.2 Description of Studies for Task 1.A	1
1.2.1 Alignment Studies	2
1.2.2 Station Studies	2
1.2.3 Code and Exiting Studies	3
1.2.4 Emergency Fan Room Design Studies	4
1.2.5 Utility Studies	5
2.0 Alignment Description	9
2.1 General	9
2.2 Vermont Alignment	9
2.3 Hollywood Alignment	11
3.0 Station Descriptions	13
3.1 Vermont/Beverly Station	13
3.1.1 Site Context	13
3.1.2 Station Entrance	13
3.1.3 Station Site Work	14
3.1.4 Station Configuration	15
3.1.5 Station Length	15
3.1.6 Station Depth	15
3.1.7 Utilities	16
3.2 Vermont/Santa Monica Station	19
3.2.1 Site Context	19
3.2.2 Station Entrance	19
3.2.3 Station Site Work	20
3.2.4 Station Configuration	20
3.2.5 Station Length	20
3.2.6 Station Depth	21
3.2.7 Utilities	21
3.3 Vermont/Sunset Station	24
3.3.1 Site Context	24
3.3.2 Station Entrance	24
3.3.3 Station Site Work	25

3.3.4	Station Configuration	26
3.3.5	Station Length	26
3.3.6	Station Depth	27
3.3.7	Utilities	27
3.4	Hollywood/Western Station	Page 31
3.4.1	Site Context	31
3.4.2	Station Entrances	31
3.4.3	Station Site Work	32
3.4.4	Station Configuration	32
3.4.5	Station Length	32
3.4.6	Station Depth	33
3.4.7	Utilities	33
3.5	Hollywood/Vine Station	36
3.5.1	Site Context	36
3.5.2	Station Entrance	36
3.5.3	Station Site Work	37
3.5.4	Station Configuration	38
3.5.5	Station Length	38
3.5.6	Station Depth	39
3.5.7	Utilities	39
3.6	Hollywood/Highland Station	44
3.6.1	Site Context	44
3.6.2	Station Entrance	44
3.6.3	Station Site Work	45
3.6.4	Station Configuration	46
3.6.5	Station Length	46
3.6.6	Station Depth	46
3.6.7	Utilities	47
4.0	Conclusions	50

#### APPENDIXES

Appendix A:	Directive No. DD-001 and Attachments	52
Appendix B:	List of Design Drawings Contained in Accompanying "Design Drawings for Six Stations and Line Segments"	53



## EXECUTIVE SUMMARY

This report presents the tasks performed to complete General Engineering, Phase II, Part A, Scope of Work for the line tunnel segment and for the following six stations: Vermont/Beverly, Vermont/Santa Monica, Vermont/Sunset, Hollywood/Western, Hollywood/Vine, and Hollywood/Highland.

The Scope of Work for this task is initiation of General Engineering for the line tunnel segment and conceptual design of the six stations. The results of the work are included in this report. The work was primarily performed by the architectural, civil, and utility disciplines. A total of 139 drawings was prepared for the alignment plan and profile, architectural conceptual plans and sections for the individual stations, utility plans and profiles, and property identification plans. These drawings exhibit station entrance locations, station dimensions, depth to the stations, alignment plan and profile, location of nearby structures, utility plans and profiles, and property identification plans. This report outlines the basis of design, analogy, and studies performed for the preparation of design drawings and gives recommendations for the next phase of final design.

1.0 INTRODUCTION

## 1.0 INTRODUCTION

### 1.1 BACKGROUND

This design report summarizes the overall technical approach and conclusions reached during conceptual design, Part A, General Engineering for the Phase II program, Task 1.A.

Phase II of the Metro Rail work program consists of 12.9 miles of double track subway alignment extending from Wilshire/Alvarado Station to North Hollywood Station with an extension in the westerly direction to Wilshire/Western station, and 11 stations, which will be built by the cut-and-cover method.

Phase II is divided into two parts, Part A and Part B. Part A begins General Engineering tasks and Part B comprises Preliminary and Final Engineering tasks.

The report concerns six of the eleven stations and the line tunnel segments connecting these stations. The six stations are: Vermont/Beverly, Vermont/Santa Monica, Vermont/Sunset, Hollywood/Western, Hollywood/Vine, and Hollywood/Highland. The alignment and the six stations are part of the Locally Preferred Alternative (LPA) adopted by the Southern California Rapid Transit District (the District) Board on July 14, 1988, and are included in the final Supplemental Environmental Impact Statement and the Subsequent Environmental Impact Report (SEIS/SEIR) dated November 3, 1988.

### 1.2 DESCRIPTION OF STUDIES FOR TASK 1.A

The design concepts for the six stations and the line segments described in this report are represented by the

design drawings in this Task 1.A submittal. These design drawings include the alignment plan and profile drawings, architectural conceptual plans and sections, utility plans and profiles, and property identification maps.

#### 1.2.1 Alignment Studies

The plan and profile drawings show the horizontal and vertical location of the alignment.

Three factors influenced its location:

- o Minimized impact on structures adjacent to the subway
- o Property accessibility for station entrances
- o location of major subsurface utility lines.

To minimize structural modifications to existing buildings adjacent to the alignment, their foundation conditions were determined from available building plans and the tunnel alignment located accordingly. The search for more building plans will continue when Phase II work resumes.

#### 1.2.2 Station Studies

The design factors considered in selecting the station entrances and developing the final station location plans include the following:

##### A. Site Planning

- o site context
- o historical and cultural impacts
- o joint development potential and real estate requirements

- o patronage estimates as shown in Design Directive Number DD-001 (Appendix A)
- o mode of station access: pedestrian, bus, or auto
- o station site impacts.

#### B. Station Configuration and Engineering Considerations

- o station circulation
- o code impacts
- o station length and depth determinants
- o mechanical, electrical, and system ancillary space requirements
- o structural determinants.

Conceptual 40 feet = 1 inch (40-scale) site plans and sections for each of the six stations were prepared after studies of the stations and station entrances. Schematic 20 feet = 1 inch (20-scale) floor plans of the stations showing preliminary ancillary room arrangements were also prepared. These are included for study purposes only and will be developed further in Part B of General Engineering.

#### 1.2.3 Code and Exiting Studies

A preliminary code analysis of existing criteria and 1985 revisions to the 1979 Uniform Building Code (UBC) adopted by the City of Los Angeles identifies impacts to station layout. Exiting stairs must now have an 11-inch minimum tread length and a maximum 7-inch riser height instead of the 10-1/2 inch tread and 7-1/2 inch riser required by the 1979 UBC. The emergency fan rooms need a more detailed design analysis of exiting requirements, as required by the Fire/Life Safety Committee. These changes will be incorporated in the next engineering phase.

Rolf Jensen and Associates, Inc., did a preliminary analysis of station exiting requirements as part of the station conceptual design. The Jensen calculations are based on patronage figures from Design Directive DD-001, and indicate a single entrance with two stairs and two escalators provides adequate exiting capacity from the mezzanine to grade for all six stations. Emergency exiting from the platform requires a 66-inch wide exit stair at each end of the platform for all stations except Vermont/Santa Monica, which requires an 88-inch-wide exit stair at each end.

These exiting requirements are initial estimates only. Precise exiting requirements will be verified during the next level of design after station room layouts are more precisely defined.

#### 1.2.4 Emergency Fan Room Design Studies

A cost-effective study of the existing prototypical emergency fan room shown in the Mechanical Standard and Directive Drawings was done. The existing "T" layout of the emergency fan rooms shortens the overall station box dimension to 550 feet, but this requires a wider box in the emergency fan room area, requires more complex construction, and interferes with utility rearrangements at most stations. Redesigning fan rooms to avoid the "T" configuration requires a longer but narrower overall box. Since the fan room area is approximately the same in each concept, costs will be similar.

Emergency fan room space requirements for all stations were analyzed on a station-by-station basis. Preliminary mechanical and structural reviews indicate that several vertical or horizontal fan configurations will achieve the

comparable cost-effective layouts. This level of design, however, is within the scope of the next engineering phase.

#### 1.2.5 Utility Studies

The utility studies focused on identifying major facilities along the alignment and avoiding interferences with Metro Rail facilities. If interferences were unavoidable, conceptual utility rearrangement plans were made at 20 scale to minimize the impact.

Initially, deep gravity lines along the tunnel alignment were identified to ensure that the tunnel vertical alignment did not interfere with them. The major gravity lines identified are as follows:

- o South of the centerline of 5th Street at Station AR 325+95, an existing 24-inch vitrified clay pipe (VCP) sanitary sewer crosses over the alignment at invert elevation 199±.
- o North of the centerline of 5th Street at Station AR 326+35, an 8-foot 5-inch-high by 10-foot-wide reinforced concrete box culvert storm drain crosses over the alignment at invert elevation 204±.
- o Approximately at the centerline of 3rd Street at Station AR 399+70, a 7-foot 5-inch high by 9-foot wide reinforced concrete box culvert crosses over the alignment at invert elevation 235±.
- o Approximately at the centerline of Council Street at Station AR 359+90, a 27-inch VCP sanitary sewer constructed in a tunnel crosses under the alignment at invert elevation 242±.

- o At the centerline of Melrose Avenue at Station AR 392+70, a 24-inch VCP sanitary sewer crosses over the alignment at invert elevation 268±.

The vertical tunnel alignment will not interfere with these facilities. During tunnel construction, however, some protective construction procedures may be required to avoid damage to them.

Concurrently, the design effort focused on station sites. Sanitary sewer and storm drain profiles for existing gravity lines were plotted at each station site location. Architectural, structural, and civil disciplines coordinated to avoid interferences between gravity lines and proposed station structure. Once the station horizontal and vertical outlines at each proposed station site were established, the utility interferences with the station excavation support system components were examined. Soldier pile corridors along the sides of the station were delineated on City of Los Angeles substructure maps and impacted facilities identified.

After this task was completed at each station site at pocket track and crossover track locations, a preliminary utility rearrangement plan for each site was designed in accordance with the following procedure:

Existing utility information for each site was first plotted at 20 scale from existing utility agency as-built drawings. The horizontal outlines of the station structure and the soldier pile corridors were superimposed on the composite existing utility plan. A new alignment for each utility line requiring relocation was selected and plotted. Any resulting interferences or conflicts were analyzed and resolved into a constructible solution.

It was assumed that all utilities within the station excavation can be supported from the temporary deck structural beams after suitable preparation. The following briefly describes the preparation required for each type of utility prior to its being supported by the station contractor:

A. Waterlines

All waterlines are owned and operated by the City of Los Angeles, Department of Water and Power - Water Systems (DWPWS). Generally, existing water lines are cast iron and must be replaced by an equivalently sized steel line in an offset alignment before being supported. This steel line must be installed at an elevation that adequately clears proposed deck beams. During street restoration, the steel line is backfilled and becomes permanent.

B. Electrical Duct Banks

All power distribution facilities are owned and operated by the City of Los Angeles, Department of Water and Power - Power Systems (DWPPS). Generally, a parallel duct structure must be installed at an elevation clear of the proposed deck beams. After the duct structure is completed and cable pulled through it, the new system is energized. The abandoned system is removed as station excavation proceeds. During street restoration, the supported duct structure is backfilled and becomes permanent.

C. Telephone Duct Banks

All telephone facilities are owned and operated by the Pacific Bell Telephone Company. These facilities can

usually be lowered in place. The duct structure encasement must be carefully removed, split plastic duct installed around existing cable, and ducts lowered into a deeper trench excavated alongside the existing duct bank alignment. During the street restoration work, the split plastic ducts are encased in concrete prior to being backfilled.

D. Gas Lines

All gas lines are owned and operated by the Southern California Gas Company (SCGC). If existing steel gas lines are in good condition, they can be supported in place, unless they conflict with the temporary deck structure.

E. Sanitary Sewers

All sanitary sewers are owned and operated by the City of Los Angeles. These facilities are generally replaced by the Contractor with temporary lines, usually polyvinyl chloride (PVC), to existing grade and then supported from the temporary deck structure. During street restoration, the permanent VCP sanitary sewer, along with manholes, is constructed and backfilled.

F. Storm Drains

All storm drain facilities are owned and operated by the City of Los Angeles or the County of Los Angeles or both. Depending on their size, condition, and material, storm drain facilities are either supported in place or replaced with temporary facilities by the Contractor and then supported.



## 2.0 ALIGNMENT DESCRIPTION

### 2.1 GENERAL

At the Wilshire/Vermont Station the alignment splits. The line is bifurcated by an equilateral turnout. One segment continues west along Wilshire Boulevard, and the other turns through a reverse curve to the north and up Vermont Avenue.

The alignment remains within the right-of-way (ROW) boundaries of Vermont Avenue to just north of Sunset Boulevard. Here it curves to the west and into the Hollywood Boulevard ROW. The alignment continues along Hollywood Boulevard to a point west of Highland Boulevard, then turns northwest through the Santa Monica Mountains to the Universal City Station.

### 2.2 VERMONT ALIGNMENT

A detailed evaluation of the alignment adjacent to Wilshire/Vermont Station revealed several structures with deep caisson foundation structures that require expensive underpinning construction. To minimize the impact to these buildings, Vermont Station was shifted south and east. The alignment being designed begins at the northwest end of Wilshire/Vermont Station in the turnout. Ordinarily the turnout used for the split would be a No. 15 equilateral turnout that provides a design speed of 45 mph through this special trackwork. In this case, however, a No. 12 equilateral turnout is used, which spreads the two lines within a shorter distance. The design speed is reduced to 40 mph, the same design speed used for the 900-foot radius curve that follows. Using 900 feet instead of the desired 1000 feet for the radius curves accommodates tunnel spread and

minimizes impact to existing structures. A compound curve adjusts the alignment and keeps it under New Hampshire Avenue, thereby minimizing the property take required. The line then goes through a reverse curve and proceeds north in the Vermont ROW at about 3rd Street.

To bifurcate the system, right and left tracks are configured one above the other. Normally an over-and-under configuration changes to a side-by-side configuration in the shortest possible distance. To minimize the width of tunnel structure to be spanned with underpinning beams, however, the over-and-under configuration is maintained beyond the required underpinning for the Fireman's Fund Building.

The criteria call for subway crosspassages between tunnels spaced no more than 750 feet apart. With special consideration they might be spaced up to 1250 feet apart providing they have exits to the surface. In the over-and-under formats crosspassages require a vertical configuration, and this is more expensive than the normal side-by-side crosspassage. Therefore, the added distance for the over-and-under configuration is the most suitable alternative.

Tunnel construction normally requires a 20-foot cover, and more if feasible. The shallowest possible depth is preferred when cut-and-cover construction is involved. The vertical alignment is designed considering both these factors and such criteria requirements as steepness of grade and length of vertical curve.

A 27-<sup>inch</sup> sanitary sewer tunnel crosses the alignment \* at Council Street. The sewer elevation is too deep to pass under the tunnels while maintaining a reasonable depth at the cut-and-cover crossover structure close by. Therefore, the alignment goes over the sewer where the tunnels are

only 10 feet from the surface. ~~It must be constructed by cut-and-cover methods.~~ *may be required.* \*

The vertical alignment continues on a slope that parallels the grade of the existing street above, then flattens to a moderate 0.3 percent slope through the stations and adjacent crossovers. The maximum permitted slope through the station is 1 percent. A steeper street grade of up to 4 percent or more creates an unequal depth at the end of the station. This difference in depth is especially large when the station is adjacent to a crossover structure, making the overall length of minimum track slope more than 900 feet. In many cases the station structure can utilize this difference by placing ancillary rooms and other required spaces in the area of greater depth.

As the line progresses up Vermont Avenue it crosses the Hollywood Freeway. It again crosses the freeway at Hollywood Boulevard. In both locations, the freeway is depressed and a bridge overcross carries the surface street. The overcrossings are supported by spread footing foundations that are not impacted by the tunnel structures.

Vermont/Sunset Station is located as far north as possible while still permitting a curve of radius 1000 feet to the west that ends in Hollywood Boulevard. The line passes under Barnsdall Park, which has buildings of historic significance, and a small shopping center. There is no impact on these structures because the tunnels are deep and the park is on a hill above Hollywood Boulevard.

### 2.3 HOLLYWOOD ALLIGNMENT

Hollywood Boulevard is a street with many widths, both property-line-to-property-line and curb-to-curb. At the station sites there are constraints to construction methods

because of the narrow and irregular widths. The line, however, continues along the centerline. In addition, at the Hollywood/Vine and Hollywood/Highland stations the removal and replacement of the famous star nameplates in the sidewalk that are part of the Walk of Fame must be considered during construction.

The vertical alignment in Hollywood Boulevard is controlled by the station structures, which are for the most part influenced by existing utilities.

During conceptual design, the tunnel location conflicted with the lowest level of the four-story garage of the Hollywood Galaxy, a new development planned for the north-east corner of Sycamore and Hollywood Boulevard. Subsequent studies produced an acceptable alignment that avoids the conflict but requires an additional 230 feet of tunnel. This alignment passes under Runyon Canyon Park in the Santa Monica Mountains on its northerly direction to Universal City Station.

To find suitable sites for the ventilation structures, field visits have been made to the hills above the alignment. Final site selection will be made when ventilation requirements are determined during final design.



### 3.0 STATION DESCRIPTIONS

#### 3.1 VERMONT/BEVERLY STATION

##### 3.1.1 Site Context

This station area has predominantly low-rise commercial and retail buildings along Vermont Avenue. The Hilton Hotel and the Hollywood Freeway are one block to the north of the station.

The station area has the least amount of commercial property susceptible to redevelopment, according to the final SEIS/SEIR. There is some joint nature development potential at the entrance site, but the general area is expected to remain residential and small-scale commercial.

##### 3.1.2 Station Entrance

The station entrance is located at the northeast corner of Vermont Avenue and Beverly Boulevard on property currently occupied by a gas station.

The entrance is oriented parallel to Beverly Boulevard to avoid acquiring the adjacent four-story office building to the north. This orientation also facilitates bus patron transfer which, according to patronage data, accounts for from approximately 70 to 75 percent of patron use in the morning and evening peak hours. The grade in this area slopes from 5 to 6 percent, and may require retaining walls or special grading around the entrance openings.

The northwest corner of the intersection is occupied by a two-story commercial building, and was considered as a possible entrance site because the grade is level in this area. Acquiring this corner building, however, would

require the displacement of many small businesses and entail substantial relocation costs.

The southwest and southeast corners were determined unsuitable for an entrance because an entrance at either location requires shifting the platform and station structure to the south. If the station were shifted, there would be major utility impacts and alignment impacts at that end of the station. The present alignment is designed to go over the sewer line at Council Street, but this design is not possible if the station structure moves southerly where there is not enough cover for the utilities. In order to move the station southerly, the alignment needs to be lowered approximately 15 feet to clear the sewer line in Council Street; the cost of doing so makes it infeasible.

### 3.1.3 Station Site Work

Traffic mitigation measures include street widening in areas where Metro Rail construction impacts existing sidewalks. Streets that will be affected at this station are Beverly Boulevard and Vermont Avenue.

Beverly Boulevard will be widened to 40 feet from street centerline to the north curb in the station entrance area, according to the final SEIS/SEIR. Vermont Avenue will be widened to 80 feet, curb-to-curb, wherever station construction impacts the sidewalks. Los Angeles Bureau of Engineering information indicates their recommended improvements include widening Vermont Avenue from a 70-foot roadway to an 84-foot roadway from Council Street to Melrose Avenue. This would narrow the sidewalks to 8-foot 10-inch widths that may affect the amount of foot area available for shaft grates. This impact will be further investigated by more detailed mechanical studies.

Station shaft grates and exitway hatches will be located in the sidewalks or off-street within the station entrance ROW to minimize property acquisition costs.

#### 3.1.4 Station Configuration

Vermont/Beverly Station is a single end-mezzanine with a 28-foot wide center platform and a crossover at the south end of the station. According to the patronage data of this station, the minimum entrance with two stairs and two escalators is adequate for exiting requirements. There is provision for a knock-out-panel (KOP) at the west side of the mezzanine, but no future entrance is planned at this time.

#### 3.1.5 Station Length

The length of the station is 878 feet to the end of the cut-and-cover structure. The station ancillary is located within the station structure. The Traction Power Sub-Station (TPSS), fan room, and DWP Incoming Electrical Service room are located above the crossover. Mechanical and electrical room locations and sizes are schematic and preliminary at this time, and subject to change during future engineering phases. Shaft grates and exitway hatches are located in sidewalks within street ROWs or within the entrance ROW to minimize acquisition costs. The location and size of these hatches and grates are preliminary and have not been precisely determined at this time.

#### 3.1.6 Station Depth

The depth to the station box is determined by utility clearance requirements near the south end of the station, and the alignment and top-of-rail profile in the station are affected by the need to clear the Hollywood Freeway

immediately to the north of the station structure. The rising street grade along Vermont Avenue in contrast to the sloping track profile creates a substantial amount of cover over the station structure at the north end. To minimize the overburden on this structure, a third-level ancillary is provided that is part of the emergency fan room. This room has been sized for a vertical instead of a horizontal fan arrangement to allow enough clearance for utility rearrangements on either side of the main station structure. Future mechanical studies, however, will be required to verify the feasibility of this fan layout.

### 3.1.7 Utilities

A separate utility relocation contract is required for this station because of the construction complexity and time needed for utility relocations. The following utilities will be included in this preliminary contract:

#### A. Water Lines

A 30-inch cast iron pipe (CIP) water main located 16 feet east of the Vermont Avenue centerline traverses the entire length of the station excavation. DWPWS has requested that this line be relocated out of the station excavation along an alignment that runs west on Council Street, north on New Hampshire Avenue, and returns easterly on Rosewood Avenue to join the existing 30-inch CIP line. Preliminary investigation indicates that it will be possible to support a 30-inch steel line from the temporary decking structure at a considerable cost savings. This alternate will be discussed with DWPWS.

A 6-inch CIP waterline that parallels the Vermont Avenue centerline 19 feet to the west between Council

Avenue and Beverly Boulevard and a 12-inch CIP water-line located 29 feet west of the centerline between Beverly Boulevard and Rosewood Avenue will be replaced with an equivalently-sized steel line east of the existing alignment.

A 20-inch CIP line in Beverly Boulevard will be replaced with a 20-inch steel line so that it can be supported within the station excavation.

An 8-inch CIP line in Council Street will be replaced with an 8-inch steel line so that it can be supported within the station excavation.

B. Electrical Duct Banks

A 4.8-kV electrical duct bank consisting of two 5-inch and eight 4-inch conduits parallels the Vermont Avenue centerline 30 feet to the east. This duct bank is located within the easterly pile line of the station excavation and must be relocated to a new alignment west of the existing one.

C. Telephone Duct Banks

Two parallel telephone duct banks run within the entire station excavation on the westerly side of Vermont Avenue 17 feet and 24 feet west of centerline. The existing multiple tile duct structures must be replaced with split plastic duct before they can be lowered and supported in place.

D. Gas Lines

A 4-inch gas line located 24 feet east of the Vermont Avenue centerline will be reconstructed on a lower parallel alignment west of the existing line.

All the facilities described above will be supported in place by the station contractor.

The following utilities can be modified by the station contractor:

E. Sanitary Sewers

An 8-inch sanitary sewer line is located outside of the station excavation and clear of the pile line on both sides of the station. Unless impacted by ventilation shaft and emergency exit configurations, both lines can be kept in service without modification during station construction.

F. Storm Drains

No storm drain facilities will be impacted by the station excavation.

## 3.2 VERMONT/SANTA MONICA STATION

### 3.2.1 Site Context

The area along Vermont between Melrose Avenue to the south and Santa Monica Boulevard to the north has two major institutions, the Braille Institute and Los Angeles City College, both located on the west side of Vermont Avenue. The surrounding areas have low-rise, one- and two-story commercial and retail buildings along Vermont Avenue, many of which serve the college community.

The Nicholas Priester building located at the northwest corner of Vermont and Santa Monica Boulevard has historic significance.

### 3.2.2 Station Entrance

The station entrance is located on the west side of Vermont Avenue between Santa Monica Boulevard and Willowbrook Avenue, which is the northern limit of LACC.

This mid-block location was chosen to accommodate both those going to the LACC main entrance approximately two blocks to the south, and bus transfer patrons using the busy Santa Monica bus corridor. Patronage data from the District indicates that from 61 to 68 percent of station users arrive and depart by bus during the peak hours; therefore, in order to facilitate bus transfers the station entrance was placed closer to Santa Monica boulevard than to the LACC main entrance.

The station entrance involves acquisition of several low-rise buildings, including a fast-food stand (Der Weinerschnitzel), a small office building, and the International House of Pancakes. Joint development potential is

limited at the entrance site, but a KOP will provide access to the east side of Vermont where there is a shopping center and several low-rise commercial buildings.

### 3.2.3 Station Site Work

Traffic mitigation measures at this station include post-construction widening of Vermont Avenue to 80 feet, curb-to-curb, from Lockwood Avenue to Santa Monica Boulevard.

To minimize property acquisition costs, station shaft grates and exitway hatches will be located either in the sidewalks or off-street within the station entrance ROW.

### 3.2.4 Station Configuration

Vermont/Santa Monica Station is a center mezzanine station with a 28-foot-wide center platform. Station ancillary spaces are located in the station box; the TPSS and DWP Incoming Electrical Service rooms are located under the entrance.

Patronage data and a preliminary Fire/Life Safety analysis indicate the minimum entrance with two stairs and two escalators is adequate. Although no future entrance is planned at this station, a KOP will be provided on the east side of the mezzanine.

### 3.2.5 Station Length

The length of the station is 604 feet to the end of the cut-and-cover structure. This dimension differs from the initial length of 560 feet shown in the final SEIS/SEIR because of the redesign of the emergency fan rooms, which was necessitated by utility clearance requirements.

The initial design provided a shorter but much wider box that interfered with utility line relocation and required lowering the station box to accommodate existing utility lines. The revised design provides a longer but narrower ancillary space that will be as cost effective as the initial design because the construction is simpler and because both emergency fan room designs have approximately the same area.

### 3.2.6 Station Depth

The depth of the station box is determined by the preliminary utility clearance requirements along Vermont Avenue. There is a possibility, however, that the station can be raised a few feet after the location of ancillary rooms and shafts has been made final during the next phase of preliminary engineering after more precise utility relocation plans have been prepared.

### 3.2.7 Utilities

A separate utility contract is also required for this station. The following utilities will be included in this contract:

#### A. Waterlines

A 30-inch CIP water main parallels the Vermont Avenue centerline 14 feet to the east. DWPWS has requested this line be rerouted around the station excavation site. The shortest alignment for this relocation is east on Lockwood to Madison, north to Santa Monica Boulevard, and then west to tie back into the existing 30-inch line in Vermont north of the station excavation. This line can also be replaced with a 30-inch steel line on an offset alignment and then supported in

place by the station contractor at considerable cost savings.

A 12-inch waterline on the west side of Vermont 29 feet west of the street centerline will be replaced with a 12-inch steel line on an offset alignment. Waterlines that tee off this 12-inch line east and west on Willowbrook Avenue will also be replaced in steel to allow support within the station excavation.

B. Electrical Duct Banks

A 4.8-kV distribution system, including a duct bank with four 5-inch and twelve 4-inch conduits and two large vaults, will require relocation to enable it to be supported from the temporary deck structure. Duct banks that branch west and east on Willowbrook Avenue will also require relocation.

C. Telephone Duct Banks

Two large telephone duct banks, each containing 24 multiple tile ducts, are located on the westerly side of Vermont Avenue 16 feet and 23 feet west of the street centerline. Both systems require lowering to clear the station decking beams, which entails breaking away the tile ducts, installing split plastic ducts around cables, and lowering the duct system. Lateral lines in Willowbrook Avenue require the same treatment within the station excavation.

After completion of the work described above, the station contractor will be able to support in place the utilities modified in the advance utility relocation contract.

The following utilities will be either relocated or reconstructed by the station contractor:

D. Gas Lines

No gas rearrangement is required for this station.

E. Sanitary Sewers

An 8-inch sanitary sewer will be constructed 40± feet east of the Vermont Avenue centerline to replace an existing 18-inch sewer located 29 feet east of the centerline. The size reduction is possible because the city has reconfigured the sewer system by diverting the mainline flow to a new 18-inch sewer that runs westerly down Santa Monica Blvd.

An 18-inch sewer will be relocated 42 feet west at the Vermont Avenue centerline from the centerline of Willowbrook Avenue southerly beyond the station excavation limit and tied into the existing 18-inch sewer located 31 feet west of the centerline. An 8-inch sewer will be constructed north of the Willowbrook Avenue centerline to provide local service.

F. Storm Drains

A 54-inch reinforced concrete pipe (RCP) storm drain line 20 feet east of the Vermont Avenue centerline will be replaced with a temporary pipe to enable it to be supported from the deck structure. Upon street restoration, this line will be reconstructed with RCP by the station contractor.

### 3.3 VERMONT/SUNSET STATION

#### 3.3.1 Site Context

The area around Vermont Avenue and Sunset Boulevard is a major regional medical center with medical facilities and major hospitals. These include Kaiser Permanente Medical Center one block to the west of the intersection, Children's Hospital on the southeast corner, and Hollywood Presbyterian Hospital further south near Fountain Avenue.

Other land uses in the area are a motel and low-rise office/commercial buildings and retail shops along Vermont Avenue. North of Sunset Boulevard near Hollywood Boulevard is Barnsdall Park, which has cultural and historic significance, and a shopping center.

#### 3.3.2 Station Entrance

The station entrance is located near the northeast corner of Vermont and Sunset, immediately next to the Children's Hospital Administration Building.

This location was chosen because of its proximity to the corner and the fact that it would not impact any existing medical facilities. The entrance site is currently occupied by several one- and two-story retail shops and a Wells Fargo Bank building, and could have some joint development potential.

The corner location will facilitate bus interface, which provides 68 percent of the peak hour patrons, according to patronage data. This data also indicates that only one entrance is required at this station.

Other entrance sites at the intersection of Sunset Boulevard and Vermont Avenue were analysed, as well as at mid-block along Vermont Avenue. Except for the northeast corner, all corners at the intersection have existing mid-rise buildings.

The northwest corner has an eight-story medical office building with a bank on the ground and basement floors. MRTC received structural plans of this building on May 1, 1989, in order to review the possibility of placing an entrance in this building as requested by the District.

In compliance with the District's request, MRTC analyzed the impact of the entrance on the eight-story building circulation and on the structural elements and determined that such an entrance would be not feasible because of the impact on the structural elements of the building housing the existing bank and the structural underpinning required. An entrance in this building will likely be limited to only a stair and escalator because of the building structural layout. This information, which is shown on building and foundation structural drawings (S-1 to S-15 of the original building), was presented to the District in an informal working session May 31, 1989. MRTC recommended at this session that additional studies of this entrance location should be done during the next phase of engineering, if required.

Another entrance shown on the initial LPA station plans was located mid-block on the west side of Vermont near the Travel Lodge Motel. This was made a future entrance to minimize real estate acquisition costs.

### 3.3.3 Station Site Work

Traffic mitigation measures at this station include post-construction widening of Vermont Avenue to 80 feet, curb-to-curb, from Maubert Avenue, one block north of Sunset Boulevard, to Fountain Avenue, one block south of Sunset.

Station shaft grates and exitway hatches are located within the station entrance ROW or within the street ROW in sidewalks to minimize acquisition costs.

### 3.3.4 Station Configuration

Because of the location of the entrances and the restrictions on the horizontal alignment as it curves towards Hollywood Boulevard, Vermont/Sunset Station is a double-end mezzanine station. It has a 28-foot-wide center platform and a crossover on the south side of the station. Ancillary rooms are located at the ends of the mezzanines and over the crossover. The TPSS and DWP Incoming Electrical Service rooms are located over the crossover.

The south mezzanine with the future entrance will be constructed as part of the initial shell for structural reasons, but the stairs, escalators, and elevator will not be installed.

### 3.3.5 Station Length

The length of the station is 878 feet to the end of the cut-and-cover structure. The north end of the station has a third-level ancillary space and a wider box because of ancillary room layouts. Future studies of these mechanical spaces may narrow the structure even more at this end, and reduce costs.

### 3.3.6 Station Depth

The depth of the station box is determined by the preliminary utility clearance requirements at the south end of the station in Vermont Avenue. The existing street grade that rises toward the north end of the station creates an opportunity to add a third level at that end of the station to minimize structural overburden and to provide necessary ancillary space.

### 3.3.7 Utilities

An advance utility relocation contract is required to relocate the following utilities prior to the start of the station construction contract:

#### A. Waterlines

A 12-inch CIP waterline runs 19 feet west of the Vermont Avenue centerline throughout the entire length of the station excavation. This line can be replaced with a 12-inch steel line on a parallel alignment east of the existing line.

A 24-inch CIP watermain located 19 feet north of the Sunset Boulevard centerline crosses the station excavation. This line must be replaced with a 24-inch steel line on a parallel alignment south of the existing line so that it can be supported from the deck structure by the station contractor.

An 8-inch CIP waterline tees off to the east from the 12-inch line in Vermont. This line must also be replaced with a steel line offset to the north of the existing line.

An 8-inch CIP line in De Longpre Avenue tees off the 12-inch line in Vermont and runs east. This line must be replaced with an 12-inch steel line offset to the north of the existing alignment.

B. Electrical Duct Banks

A 4.8-kV underground electrical distribution system with eight 4-inch conduits parallels the Vermont Avenue centerline 30 feet to the west. This system interferes with the east pile line of the station and must be relocated on a parallel alignment west of the existing alignment. Several large vaults will require support by the station contractor. A 4.8-kV duct bank crosses the station excavation south of the Sunset Boulevard centerline and must be reconstructed on an alignment south of the existing duct bank.

C. Telephone Duct Banks

A telephone duct bank with 14 multiple tile ducts parallels the Vermont Avenue centerline 34 feet to the east. This facility interferes with the pile line and must be relocated. Within the station excavation, it appears that this duct bank can be moved approximately 2 feet to the west provided there is enough slack in the cables. Because the pile line moves out 2 feet at the interface between the crossover excavation and the station excavation, this relocated duct bank must be transitioned from the west side to the east side of the pile line at this location. If there is insufficient slack in the cables, new cables will have to be installed, which will be very costly. An alternate solution is to shift the station horizontal alignment from 2 to 3 feet easterly. This conflict will require detailed investigation during the final design phase.

A telephone duct bank with four multiple tile ducts parallels the Vermont Avenue centerline 15 feet to the west. This duct bank can be replaced with split plastic ducts and then lowered in place to provide deck beam clearance. A telephone duct bank with four conduits enters the station excavation on a curved alignment near the south property line of Sunset Boulevard. It parallels the Vermont Avenue centerline 23 feet to the west, then transitions westerly to leave the station excavation near the south end of the station/crossover track interface. This duct bank can be reconstructed with split plastic ducts and then lowered in place.

A large 20-foot by 10-foot telephone manhole, No. 21205, is located within the pile line on the west side of the crossover track 400 feet south of the Sunset Boulevard centerline. If it is not possible to avoid this structure with soldier pile installation, its relocation will be very costly. Again, a shift from 2 to 3 feet east of the alignment may be advisable to avoid this manhole.

After rearrangement of the above utilities, the station contractor can support them from the station temporary deck structure.

#### D. Gas Lines

An existing 20-foot gas line that crosses the station excavation 23 feet north of the Sunset Boulevard centerline can be supported in place unless its condition is deteriorated.

The following utilities will be replaced with temporary lines by the station contractor, supported from the station

deck structure, then reconstructed during street restoration:

E. Sanitary Sewers

An 18-inch VCP sanitary sewer parallels the Vermont Avenue centerline 11 feet to the east.

An 8-inch VCP sanitary sewer is aligned on the Vermont Avenue centerline.

F. Storm Drains

A 45-foot RCP storm drain parallels the Vermont Avenue centerline 23 feet to the east.

### 3.4 HOLLYWOOD/WESTERN

#### 3.4.1 Site Context

Existing commercial land uses in this area are predominantly low-rise and small-scale, and most adjacent areas are residential. There are no special-activity centers nearby. According to the Los Angeles City Community Plan, this area will remain mostly in residential and small-scale use.

The area is part of the Community Redevelopment Agency (CRA) Hollywood study area, which is currently involved in restoration of a four-story hotel on the northeast corner of Hollywood Boulevard and Western Avenue. The southwest corner has two potentially historic buildings.

#### 3.4.2. Station Entrances

The station is located away from the intersection to comply with the Los Angeles Department of Transportation request to the District to avoid construction at more than one intersection along Hollywood Boulevard if at all possible. This requires an end-mezzanine-type station. Additionally, the CRA requested there be no station entrance in the hotel under restoration, but that a KOP be provided for the commercial property immediately adjacent to it on the north side of Hollywood Boulevard.

The northwest and southwest corner properties are also possible entrance sites; however, the southwest corner has buildings with potential historic significance and the northwest corner has several small commercial business that would have to be relocated. The southeast corner, however, is a single parcel that is currently vacant.

Because of these factors, the entrance is located on the southeast corner, which is under construction for a shopping center. This corner location facilitates bus transfers which, according to District patronage data, account for from 76 to 79 percent of station patrons during the peak hours.

#### 3.4.3 Station Site Work

Additional traffic mitigation measures at this station include post-construction widening of Hollywood Boulevard to 80 feet, curb-to-curb, along the area of cut-and-cover except where the sidewalk will be less than 10 feet. Certain sections of Hollywood Boulevard where the station will be located have a total of only 80 feet ROW.

Station shaft grates and exitway hatches are located within the station entrance ROW or in sidewalks within the street ROW to minimize acquisition costs.

#### 3.4.4 Station Configuration

Hollywood/Western Station has a single-end-mezzanine leading to a 28-foot-wide center platform. Ancillary rooms are located in the station box. The TPSS and DWP Incoming Electrical Service rooms are located under the station entrance.

Patronage data and preliminary Fire/Life Safety analysis indicate a minimum entrance with two stairs and two escalators is adequate. Although no future entrance is planned at this station, a KOP will be provided on the north side of the mezzanine.

E. Sanitary Sewer

An 8-inch VCP sewer located 15 feet north of the Hollywood Boulevard centerline will be replaced with a temporary 8-inch line, supported in place from the decking structure, and replaced with an 8-inch VCP during street restoration.

An 8-inch VCP sewer will be replaced within the limits of the station excavation.

F. Storm Drains

No storm drains are impacted by the station.

### 3.5 HOLLYWOOD/VINE STATION

#### 3.5.1 Site Context

The Hollywood/Vine area is part of the CRA Hollywood Redevelopment Area and also part of the Hollywood Historic District.

The Hollywood Historic District begins immediately west of Argyle Street on the north side of Hollywood Boulevard, and 200 feet west of Argyle on the south side of Hollywood Boulevard. The proposed entrance sites are not within the boundaries of the Historic District. The sidewalks along Vine Street and Hollywood Boulevard are part of the Walk of Fame. The intersection of Hollywood and Vine has heavy pedestrian traffic most of the time.

The intersection at Hollywood and Vine has mid-rise office buildings on all but the northwest corner, which is currently occupied by the Brown Derby restaurant. The area one block to the west at Argyle Street is composed of surface parking lots, one- and two-story commercial and retail buildings, and several theaters.

There is good potential for joint development in this area, especially on the south side of Hollywood Boulevard beyond the limits of the Hollywood Historic District.

#### 3.5.2 Station Entrance

The station entrance is located on the southwest corner of Hollywood Boulevard and Argyle Street to avoid acquiring any buildings in the Historic District, which begins at this point.

Other entrances closer to the intersection of Hollywood and Vine were considered but determined unsuitable because they are within the Historic District and would have substantial environmental impact.

The entrance will serve the bus terminal facility planned at this site, currently occupied by the Stella Adler theatre and surface parking lots.

A future entrance and a kiss-and-ride facility are planned on the north side of Hollywood Boulevard on property currently occupied by an auto dealership.

### 3.5.3 Station Site Work

The bus terminal planned at this station will have eight permanent spaces. Additional spaces for eight temporary bus lines will be accommodated on-street; it is, however, possible to include these temporary spaces in the terminal after additional design studies are done.

The bus terminal was relocated from the north side to the south side of Hollywood Boulevard after recent discussions with District Bus Planning and Operations indicated the south side is more desirable for bus operations. The CRA also indicates this location is more desirable because it does not impact sensitive residential areas on the north side of Hollywood Boulevard near Vista Del Mar. The south side also has greater development potential because of its higher permitted density; however, this could increase acquisition costs.

Additional traffic mitigation measures at this station include post-construction widening of Hollywood Boulevard to 80 feet, curb-to-curb, along the area of cut-and-cover. This is widening required by the Los Angeles Municipal

Code, and will substantially impact the Walk of Fame sidewalks, which will be reduced 5 feet on either side of the street.

The station ancillary rooms are planned so the required shafts, shaft grates, and exitway hatches are not located in the sidewalks that form part of the Walk of Fame. To minimize acquisition costs without compromising joint development potential, they will be located instead within the station or street ROWs.

#### 3.5.4 Station Configuration

Hollywood/Vine Station has a center mezzanine leading to a 28-foot-wide center platform. A pocket track located on the west side of the proposed station may be relocated to the east side to minimize construction impacts, if required. The length of the pocket track is 1,150 feet. Ancillary rooms are located in the station box and over the pocket track. The TPSS and DWP Incoming Electric Service rooms are located over the crossover near Ivar Street.

Patronage data and preliminary Fire/Life Safety analysis indicate that an entrance with two stairs and two escalators is adequate. A future entrance is planned at the south side of the station mezzanine. Additional KOPs can be located at the entrances to accommodate possible additional access openings for joint development.

#### 3.5.5 Station Length

The length of the station is 1,677 feet to the end of the cut-and-cover structure. The emergency fan rooms at the east of the station are designed to accommodate the blast relief shafts that need transition to side streets within the street ROW to avoid placing grates along the Walk of Fame. This design provides a longer but narrower

ancillary space that is cost effective because of simpler construction.

### 3.5.6 Station Depth

The depth of the station box is determined by the preliminary utility clearance requirements along Hollywood Boulevard, particularly those near Ivar Street at the west end of the pocket track. After the ancillary rooms are laid out in more detail during the next phase of preliminary design and more detailed utility rearrangement plans are prepared, it might be possible to raise the station to reduce costs.

### 3.5.7 Utilities

A separate utility relocation contract will relocate the following utilities in advance of the station contract:

#### A. Waterlines

A 24-inch CIP water main parallels the Hollywood Boulevard centerline 25 feet to the north between the east end of the station and Vine Street. DWPWS requested that this line be relocated to an alternate alignment either north or south of the station site. The line can be supported from the station temporary deck structure on a parallel alignment south of the existing line. This alternate will result in significant cost savings compared to either of the DWPWS proposed alternate alignments.

A DWPWS 16-inch CIP waterline parallels the Hollywood Boulevard centerline between the west end of the pocket track at Cahuenga Boulevard and Vine Street. This line can be relocated on a parallel alignment to the south of the existing line with a 16-inch steel

line constructed at an elevation below the decking structure.

Existing waterlines in the following cross streets require the construction of parallel steel lines that can be supported within the station/pocket track excavation. They are as follows:

Cosmo Street:	8-inch south of the Hollywood Boulevard water main
Ivar Street:	16-inch north and south of the Hollywood Boulevard water main
Vine Street:	24-inch north and south of the Hollywood Boulevard water main
Vine Street:	12-inch south of the Hollywood Boulevard water main
Argyle Street:	8-inch north and south of the Hollywood Boulevard water main

B. Electrical Duct Banks

A 4.8-kV electrical distribution system consisting of several large vaults and a duct bank with twelve 4-inch conduits requires relocation because it interferes with the north pile line of the station and pocket track. A parallel alignment can be constructed to the south of the present alignment.

Duct banks in the following cross streets must be reconstructed to allow support from the temporary deck structure within the excavation:

Ivar Street:	six 4-inch conduits
Vine Street:	six 4-inch conduits
Argyle Street:	six 4-inch conduits

C. Telephone Duct Banks

A telephone duct bank system with six 3-inch conduits parallels Hollywood Boulevard 27 feet south of the centerline. This duct bank system will be lowered in place after existing cables are placed in split plastic ducts.

D. Gas Lines

An 8-inch gas line runs parallel to and 22 feet south of the Hollywood Boulevard centerline between Cahuenga Boulevard and Cosmo Street. This line reduces to 6 inches east of Ivar Street. A parallel line lowered to clear deck beams can be constructed north of the existing line.

Gas lines in the following cross streets can be supported within the excavation unless they are found to be in a deteriorated condition:

Cahuenga Boulevard:	2 inches
Cosmo Street:	2 inches
Ivar Street:	10 inches
Vine Street:	2 inches
Argyle Street:	4 inches

After completion of the work described above, the station contractor will support in place the utilities rearranged in the advance utility relocation contract.

The following utilities will be rearranged by the station contractor:

E. Sanitary Sewers

All sanitary sewer lines will remain in their existing alignments. The contractor will replace them with temporary PVC lines, support the temporary lines in place, and reconstruct all sewers within the station excavation with VCP during the street restoration phase of the project. The following sewers will be affected within the station/pocket track excavation:

Hollywood Boulevard 12-inch VCP sanitary sewer 20 feet south of centerline between Cahuenga Boulevard and Ivar Avenue

8-inch VCP sanitary sewer 21 feet north of centerline between Ivar Avenue and Vine Street

8-inch VCP sanitary sewer between Vine Street and the east end of the station

Ivar Street 12-inch VCP sanitary sewer

Vine Street 8-inch VCP sanitary sewer

Argyle Street 8-inch VCP sanitary sewer

F. Storm Drains

All storm drains will remain in their existing alignments. The contractor will generally replace existing RCP storm drains with temporary lines supported from

the deck structure. Permanent RCP storm will be reconstructed during street restoration. The storm drains affected are as follows:

Hollywood Boulevard 24-inch RCP storm drain 17.5 feet north of centerline between Cahuenga Boulevard and 140 feet west of Ivar Street.

75-inch RCP from 140 feet west of Ivar Street to Ivar Street. Because of its large size and curved alignment, this storm drain will be difficult to support. It is joined from the north by a 69-inch Ivar Street centerline 30 feet westerly. The junction of these two large storm drains is within the station excavation and will require special design for the support system.

Vine Street 33-inch RCP storm drain 18 feet east of centerline

Argyle Street 24-inch RCP storm drain 6 feet east of centerline.

## 3.6 HOLLYWOOD/HIGHLAND STATION

### 3.6.1 Site Context

The station area is part of the CRA Hollywood Redevelopment area and also part of the Hollywood Historic District. There are many historic buildings in this area, with the major focal center at Mann's Chinese Theater and the Hollywood Wax Museum nearby. The sidewalks along Hollywood Boulevard are part of the Walk of Fame.

Two major areas in the vicinity are planned for development. The area adjacent to Mann's Chinese Theater is planned as a large mixed-use complex with theaters, retail/commercial space, a hotel, and a museum. Another large development with residential and retail uses, on the east side of Highland Avenue north of Hollywood Boulevard, is under consideration by the CRA.

### 3.6.2 Station Entrance

Two proposed station entrance sites are part of CRA redevelopment areas and have substantial joint development potential. The first is located near Mann's Chinese Theater at the west end of the station and the second is at the northwest corner of Hollywood Boulevard and McCadden Place at the east of the station.

Plans for a large mixed-use complex near the Chinese Theater have been prepared by the Jerde Partnership. The proposed entrance to the station is located in this complex, parallel to Hollywood Boulevard. The District has coordinated recent discussions between the developers and MRTC regarding the joint development of the entrance and mixed-use development. The entrance is located mid-block

to incorporate it into the redevelopment project and to provide an entrance directly off Hollywood Boulevard. Currently this site is a single-level underground parking structure.

Locating the entrance at the northwest or northeast corners of Hollywood and Highland was considered but was found to be too costly because of the structural modifications required to place the main entrance within the existing buildings at this intersection. The southwest and southeast corners at Hollywood and Highland were also considered as possible entrance sites but were rejected because of the potentially significant historic buildings on these sites.

Another potential entrance site is located on the northwest corner of Hollywood and McCadden. A seven-story office building without historic significance is located on the property at present. This property is also part of a CRA redevelopment project that includes retail, commercial, and housing units. CRA is in favor of locating an entrance here. At present, the site is designated as a future entrance.

### 3.6.3 Station Site Work

Traffic mitigation measures at this station include post-construction widening of Hollywood Boulevard to 80 feet, curb-to-curb, along the area of cut-and-cover. This widening is required by the Los Angeles Municipal Code, and will substantially impact the Walk of Fame sidewalks and reduce them 5 feet on either side of the street.

The station ancillary rooms have been planned so that the required shafts, shaft grates, and exitway hatches are not located in the sidewalks that are part of the Walk of Fame.

To minimize acquisition costs without compromising joint development potential, they will be located within station ROWs or other street ROWs.

#### 3.6.4 Station Configuration

The Hollywood/Highland Station has mezzanines at each end of the station that lead to a 28-foot wide center platform. The mezzanine at the east end of the station is for future use but will be constructed now for structural reasons. This entrance, mezzanine stairs, and escalators will be installed at a later date.

Station ancillary rooms are located within the box and under the main station entrance at the west end of the station. The TPSS and DWP Incoming Electrical Service rooms are located under the entrance.

Patronage data and preliminary Fire/Life Safety analysis indicate that an entrance with two stairs and two escalators is adequate. However, KOPs are planned at each end mezzanine; additional locations will be determined as information on possible development becomes available.

#### 3.6.5 Station Length

The length of the station is 725 feet to the end of the cut-and-cover structure. This length is determined by the entrance locations that extend the mezzanine and the mezzanine ancillary.

### 3.6.6 Station Depth

The depth of the station box is determined by the preliminary utility clearance requirements along Hollywood Boulevard and at the intersection of Highland. These utilities impact the station mezzanine area and will require additional study before the station can be raised or the utilities relocated.

### 3.6.7 Utilities

A separate advance utility relocation contract is required for the Hollywood/Highland Station. The following utilities will be included in the contract:

#### A. Waterlines

A 16-inch CIP line located 23 feet north of the Hollywood Boulevard centerline will be replaced with a 16-inch steel line on an offset alignment.

A 12-inch CIP line 31 feet east of the Highland Avenue centerline and an 8-inch CIP line 19 feet west of the Highland Avenue centerline will be replaced with steel lines as required to allow support within the station excavation.

#### B. Electrical Duct Banks

A 4.8-kV electrical distribution system duct bank with twelve 4-inch conduits located 30 feet north of the Hollywood Boulevard centerline is within the north pile line of the station excavation and must be relocated to a parallel alignment.

A 4.8-kV electrical distribution system duct bank with nine 4-inch conduits located in the westerly side of Highland Avenue must be relocated to allow support of this facility within the station excavation.

C. Telephone Duct Banks

A Pacific Bell Telephone duct bank with four 4-inch ducts located 22 feet south of the Hollywood Boulevard centerline must be reconstructed with split plastic ducts and lowered in place to allow support from the deck structure.

D. Gas Lines

An 8-inch supply line located 29 feet south of the Hollywood Boulevard centerline must be relocated to a lower parallel alignment to allow support from the deck structure.

The above facilities will be supported in place from the station temporary deck structure by the station contractor.

The following facilities will be replaced with temporary lines, supported in place during station construction, and then replaced with permanent facilities during street restoration:

E. Sanitary Sewers

An 18-inch VCP sewer located 10 feet south of the Hollywood Boulevard centerline flows easterly to join an 18-inch VCP sewer that flows southerly in Highland Avenue 45 feet west of the Highland Avenue centerline.

An 8-inch VCP sewer located 15 feet south of the Hollywood Boulevard centerline flows easterly to join an 8-inch VCP sewer that flows southerly in Highland Avenue 19 feet east of the Highland Avenue centerline.

A 10-inch VCP sewer flows southerly in Highland Avenue approximately 25 feet east of the centerline.

An 8-inch VCP sewer located 15 feet south of the Hollywood Boulevard centerline is joined by a 6-inch VCP sewer that flows southerly at the centerline of McCadden Place.

F. Storm Drains

A 42-inch RCP storm drain (located 7 feet north of the Hollywood Boulevard centerline that flows easterly) turns southeasterly to join a 51-inch RCP storm drain that flows southerly 12± feet west of the Highland Boulevard centerline. These lines join south of the station excavation.

A 24-inch RCP storm drain located 20 feet north of the Hollywood Boulevard centerline flows easterly from Highland Avenue to join a 30-inch RCP storm drain that flows southerly in McCadden Place and then turns to flow easterly in Hollywood Boulevard 14± feet north of the Hollywood Boulevard centerline.

When the final design phase begins, the owner of each impacted facility will be consulted regarding the proposed rearrangement of its facilities and the rearrangement plan refined accordingly. Cost and schedule considerations will be factored into these refinements to arrive at the optimal utility rearrangement solution.



#### 4.0 CONCLUSIONS

Task 1.A Engineering has defined the alignment and station location parameters. The studies and analyses presented by the civil, architectural, and utility disciplines form the conceptual framework for the next level of engineering, Part B.

The civil alignment plan and profiles will continue to be modified during the preliminary and final engineering phases as refinements to the station plans and utility rearrangement plans are made.

During the next phase civil work will involve the development of surface restoration plans at cut-and-cover construction sites; the design of the kiss-and-ride parking areas; and the more detailed development of the bus terminal at the Hollywood Station.

The architectural plans and sections will be refined during the next phase of engineering to include mechanical, electrical, and structural preliminary plans, and System requirements. Detailed development of station ancillary spaces will be necessary to select the most efficient and most economic concept for each of the six stations.

Detailed Fire/Life Safety requirements will be analyzed once the ancillary room plans are finalized with other disciplines. More precise exiting calculations for each station will be prepared from these plans during the next phase of preliminary engineering.

Joint development requirements at Hollywood/Highland Station will continue to modify the station entrance plan and may impact the station layout. The Hollywood stations

have special environmental impacts because of the Historic District buildings and the Walk of Fame sidewalks. As the station ancillary spaces are developed and shaft and grate sizes are more precisely determined, mitigation measures can be developed. The architectural plans are conceptual in nature; although they indicate general locations for these surface penetrations, they do not show precise dimensions for these items. These dimensions will be determined during the next phase, preliminary engineering.

The utility plans and profiles will provide a basis for discussion with public agencies and with the owner of each impacted utility regarding the proposed rearrangement.

Where the stations are deep because of the utility lines, a detailed study of study of station ancillary sections might allow the utility line to be incorporated into the ancillary space; this will permit the station to be raised.

These modifications and refinements will be prepared during the next phase of engineering.



APPENDIX A

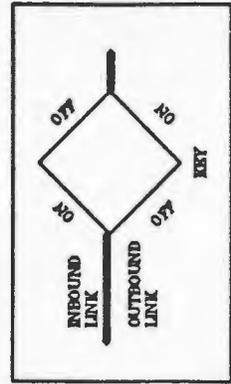
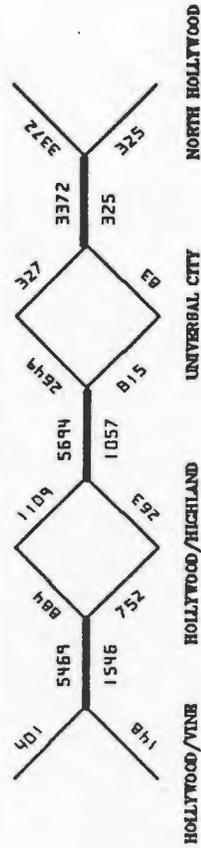
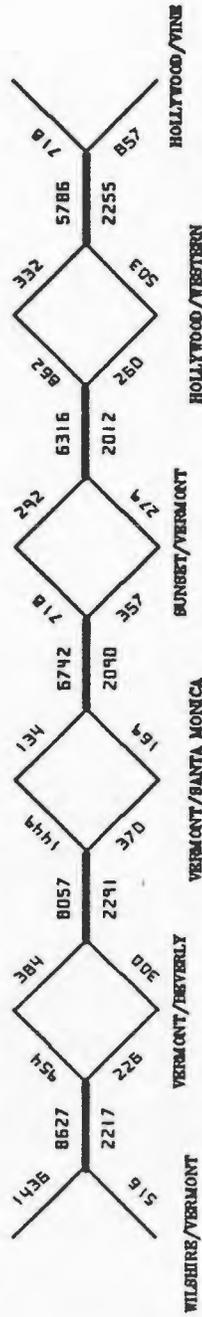
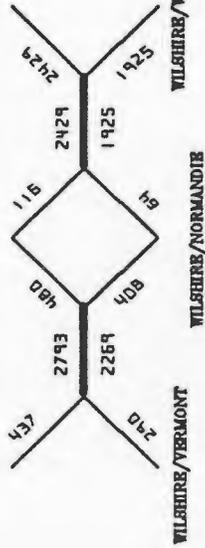
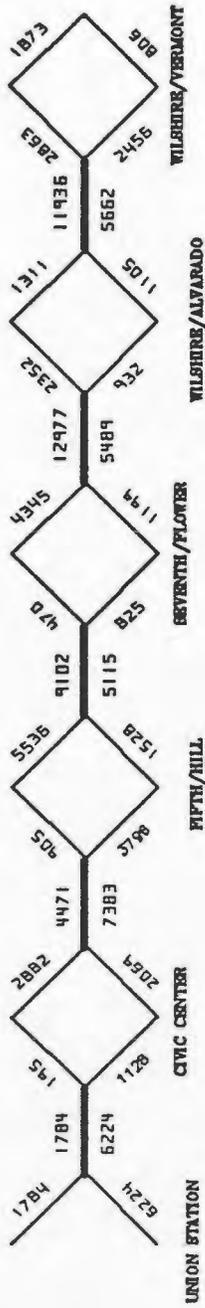
DIRECTIVE NUMBER DD-001 AND ATTACHMENTS

# METRO RAIL PROJECT DESIGN DIRECTIVE



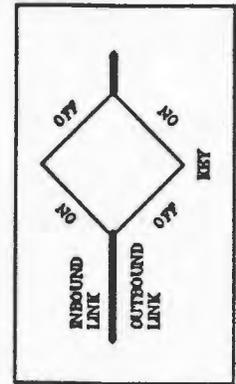
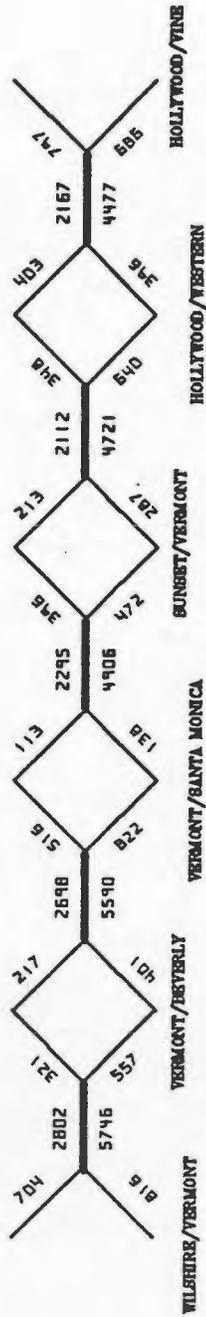
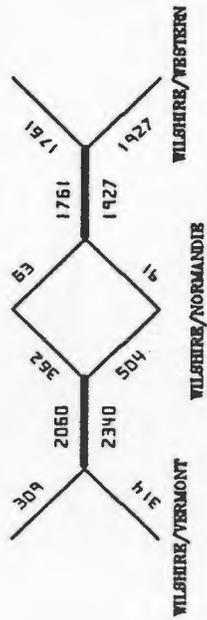
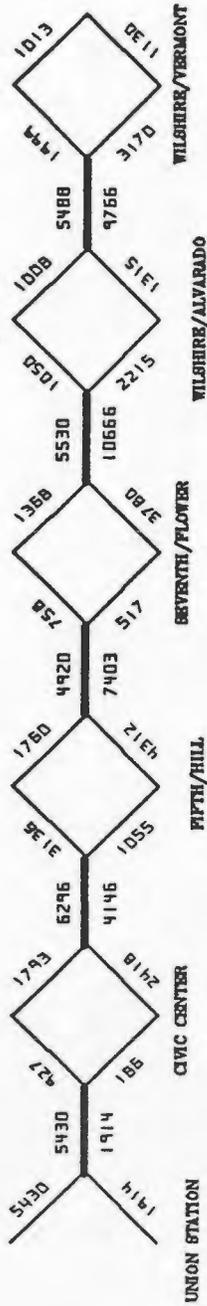
Page 1 of 7

1. DIRECTIVE NUMBER: DD-001	IMPLEMENTING CHANGE REQUEST	
2. DIRECTIVE TITLE:  Metro Rail Project Phase II Design Patronage	3. CR NUMBER <u>8-062</u>	4. APPROVAL DATE <u>11-28-88</u>
5. BACKGROUND:  The purpose of this directive is to establish baseline, design year patronage numbers and a peaking factor to be used for sizing Metro Rail Phase II System elements.		
6. PRIOR POLICY OR DESIGN REQUIREMENTS:  DD-001 - Metro Rail Project Design Patronage (September 1983)		
7. DIRECTIVE:  The following attached diamond diagrams and tables constitute the baseline patronage for the Metro Rail System: diamond diagrams of year 2000 average daily and AM and PM peak-hour patronage, and mode of access/egress patronage tables for year 2000 AM and PM peak hours. The "peak within the peak" shall be taken to be 28.8% of the peak hour patronage within the peak 15 minutes. (i.e., a peaking factor of 1.15, rounded)		
8. JUSTIFICATION (ALSO IDENTIFY IMPACTS):  To establish consistent baseline patronage numbers and peaking factor to be used in Metro Rail Phase II Design Baseline material. Source of Data: SCRTD Planning Department.		
TITLE	SIGNATURE	DATE
9. ORIGINATOR:  E. B. Pollan	<i>E. B. Pollan</i>	10/27/88
10. DIRECTOR RAIL FACILITIES	<i>William D. Kristensen</i>	11/26/88
11. DIRECTOR SYSTEMS DESIGN AND ANALYSIS	<i>Joel J. Sandberg</i>	11/15/88
12. DIRECTOR PROGRAM CONTROL	<i>J. Crowley</i>	11/25/88
13. ASSISTANT GENERAL MANAGER TRANSIT SYSTEMS DEVELOPMENT	<i>William J. Rhee</i>	11-28-88



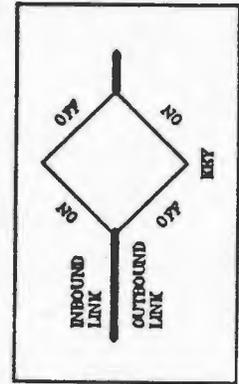
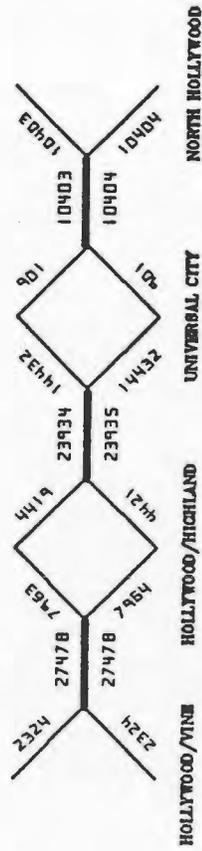
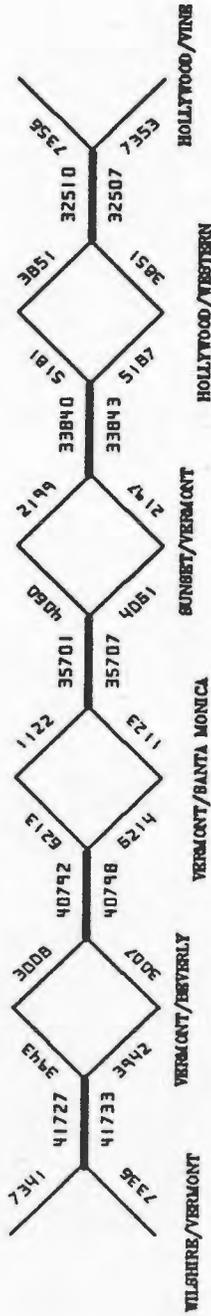
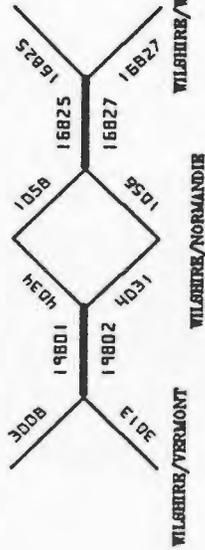
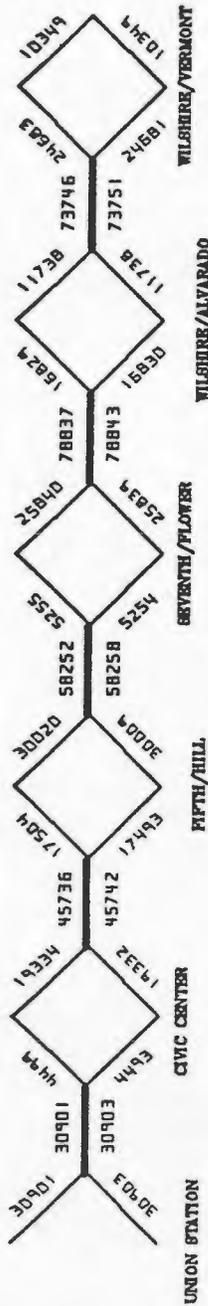
SCRTD METRO RAIL PROJECT  
AM PEAK-HR BOARDINGS, ALIGHTINGS, LINK LOADS  
YEAR 2000 - DESIGN YEAR

LOCALLY PREFERRED ALTERNATIVE ADOPTED JULY 14, 1988  
SOURCE OF DATA: SCRTD PLANNING DEPARTMENT



SCRTD METRO RAIL PROJECT  
PM PEAK-HR BOARDINGS, ALIGHTINGS, LINK LOADS  
YEAR 2000 - DESIGN YEAR

LOCALLY PREFERRED ALTERNATIVE ADOPTED JULY 14, 1988  
SOURCE OF DATA: SCRTD PLANNING DEPARTMENT



SCRTD METRO RAIL PROJECT  
DAILY BOARDINGS, ALIGHTINGS, LINK LOADS  
YEAR 2000 - DESIGN YEAR

LOCALLY PREFERRED ALTERNATIVE ADOPTED JULY 14, 1988  
SOURCE OF DATA: SCRTD PLANNING DEPARTMENT

SCR TD METRO RAIL PROJECT  
Locally Preferred Alternative Adopted July 14, 1988  
Entering/Exiting Volumes by Mode of Access/Egress  
Year 2000 A.M. and P.M. Peaks

<u>Station</u>	<u>Access/ Egress Mode</u>	<u>A.M. Peak Hour</u>		<u>P.M. Peak Hour</u>	
		<u>Entering</u>	<u>Exiting</u>	<u>Entering</u>	<u>Exiting</u>
Union Station	Park & Ride	1,434	41	112	1,343
	Kiss & Ride	499	15	31	343
	Bus	4,033	1,154	1,348	3,279
	Walk	<u>506</u>	<u>521</u>	<u>432</u>	<u>430</u>
	TOTAL	6,472	1,731	1,923	5,395
Civic Center	Park & Ride	0	0	0	0
	Kiss & Ride	0	0	0	0
	Bus	1,626	1,507	1,242	1,339
	Walk	<u>460</u>	<u>2,707</u>	<u>2,111</u>	<u>626</u>
	TOTAL	2,086	4,214	3,353	1,965
5th & Hill	Park & Ride	0	0	0	0
	Kiss & Ride	0	0	0	0
	Bus	1,650	3,461	2,712	1,519
	Walk	<u>702</u>	<u>5,879</u>	<u>4,723</u>	<u>1,279</u>
	TOTAL	2,352	9,340	7,435	2,798
7th & Flower	Park & Ride	0	0	0	0
	Kiss & Ride	0	0	0	0
	Bus	1,238	3,804	3,159	1,439
	Walk	<u>271</u>	<u>1,709</u>	<u>1,393</u>	<u>440</u>
	TOTAL	1,509	5,513	4,552	1,879
Wilshire/ Alvarado	Park & Ride	0	0	0	0
	Kiss & Ride	885	101	340	892
	Bus	489	443	404	434
	Walk	<u>2,063</u>	<u>1,623</u>	<u>1,622</u>	<u>1,891</u>
	TOTAL	3,437	2,167	2,366	3,217

SCRTD METRO RAIL PROJECT  
Locally Preferred Alternative Adopted July 14, 1988  
Entering/Exiting Volumes by Mode of Access/Egress  
Year 2000 A.M. and P.M. Peaks

Station	Access/ Egress Mode	A.M. Peak Hour		P.M. Peak Hour	
		Entering	Exiting	Entering	Exiting
Wilshire/ Vermont	Park & Ride	0	0	0	0
	Kiss & Ride	519	46	149	473
	Bus	2,045	1,356	1,338	1,788
	Walk	<u>2,223</u>	<u>1,797</u>	<u>1,648</u>	<u>1,900</u>
	TOTAL	4,787	3,199	3,135	4,161
Wilshire/ Normandie	Park & Ride	0	0	0	0
	Kiss & Ride	233	25	83	229
	Bus	24	102	106	50
	Walk	<u>358</u>	<u>321</u>	<u>265</u>	<u>285</u>
	TOTAL	615	448	454	564
Wilshire/ Western	Park & Ride	0	0	0	0
	Kiss & Ride	383	45	150	389
	Bus	1,427	1,303	1,115	1,189
	Walk	<u>425</u>	<u>662</u>	<u>494</u>	<u>341</u>
	TOTAL	2,235	2,010	1,759	1,919
Vermont/Beverly	Park & Ride	0	0	0	0
	Kiss & Ride	42	5	16	42
	Bus	707	589	491	564
	Walk	<u>145</u>	<u>236</u>	<u>219</u>	<u>169</u>
	TOTAL	894	830	726	775
Vermont/ Santa Monica	Park & Ride	0	0	0	0
	Kiss & Ride	27	3	11	28
	Bus	891	353	312	662
	Walk	<u>195</u>	<u>357</u>	<u>333</u>	<u>246</u>
	TOTAL	1,113	713	656	936
Vermont/Sunset	Park & Ride	0	0	0	0
	Kiss & Ride	54	7	23	57
	Bus	643	431	390	539
	Walk	<u>75</u>	<u>368</u>	<u>272</u>	<u>87</u>
	TOTAL	772	806	685	683

SCR TD METRO RAIL PROJECT  
Locally Preferred Alternative Adopted July 14, 1988  
Entering/Exiting Volumes by Mode of Access/Egress  
Year 2000 A.M. and P.M. Peaks

<u>Station</u>	<u>Access/ Egress Mode</u>	<u>A.M. Peak Hour</u>		<u>P.M. Peak Hour</u>	
		<u>Entering</u>	<u>Exiting</u>	<u>Entering</u>	<u>Exiting</u>
Hollywood/ Western	Park & Ride	0	0	0	0
	Kiss & Ride	75	8	25	72
	Bus	895	533	557	799
	Walk	<u>146</u>	<u>154</u>	<u>163</u>	<u>165</u>
	TOTAL	1,116	695	745	1,036
Hollywood/Vine	Park & Ride	0	0	0	0
	Kiss & Ride	99	10	35	97
	Bus	410	471	398	359
	Walk	<u>327</u>	<u>781</u>	<u>692</u>	<u>386</u>
	TOTAL	836	1,262	1,125	842
Hollywood/ Highland	Park & Ride	0	0	0	0
	Kiss & Ride	116	11	35	108
	Bus	529	814	657	470
	Walk	<u>680</u>	<u>734</u>	<u>687</u>	<u>637</u>
	TOTAL	1,325	1,559	1,379	1,215
Universal City	Park & Ride	990	25	43	662
	Kiss & Ride	163	5	9	111
	Bus	1,629	661	772	1,445
	Walk	<u>49</u>	<u>374</u>	<u>265</u>	<u>54</u>
	TOTAL	2,831	1,065	1,089	2,272
North Hollywood	Park & Ride	824	22	40	556
	Kiss & Ride	124	4	8	85
	Bus	1,776	323	391	1,345
	Walk	<u>18</u>	<u>38</u>	<u>32</u>	<u>20</u>
	TOTAL	2,742	387	471	2,006
OVERALL TOTALS		35,122	35,939	31,853	31,663

APPENDIX B

LIST OF DESIGN DRAWINGS

LIST OF DESIGN DRAWINGS

	<u>SHEET</u>	<u>DRAWING</u>	<u>DRAWING TITLE</u>
	<u>NUMBER</u>	<u>NUMBER</u>	
<u>ALIGNMENT</u>			
L.A. CBD TO NORTH HOLLYWOOD			
B-241	3	C-001	PLAN - AR 318+06.41 TO AR 329+37.87
	4	C-002	PLAN - AR 329+37.87 TO AR 340+00
	5	C-003	PLAN - AR 340+00 TO AR 351+00
	6	C-004	PLAN - AR 351+00 TO AR 362+00
	7	C-005	PLAN - AR 362+00 TO AR 373+00
B-251	8	C-006	PLAN - AR 373+00 TO AR 383+00
	9	C-007	PLAN - AR 383+00 TO AR 392+00
	10	C-008	PLAN - AR 392+00 TO AR 401+00
	11	C-009	PLAN - AR 401+00 TO AR 411+00
	12	C-010	PLAN - AR 411+00 TO AR 421+00
	13	C-011	PLAN - AR 421+00 TO AR 432+00
	14	C-012	PLAN - AR 432+00 TO AR 443+00
B-261	15	C-013	PLAN - AR 443+00 TO AR 454+00
	16	C-014	PLAN - AR 454+00 TO AR 465+00
	17	C-015	PLAN - AR 465+00 TO AR 476+00
	18	C-016	PLAN - AR 476+00 TO AR 487+00
	19	C-017	PLAN - AR 487+00 TO AR 498+00
B-271	20	C-018	PLAN - AR 498+00 TO AR 508+00
B-281	21	C-019	PLAN - AR 508+00 TO AR 517+00
	22	C-020	PLAN - AR 517+00 TO AR 528+00

LIST OF DESIGN DRAWINGS (Cont'd.)

	<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
	23	C-021	PLAN - AR 528+00 TO AR 539+00
	24	C-022	PLAN - AR 539+00 TO AR 550+00
	25	C-023	PLAN - AR 550+00 TO AR 558+00
	26	C-024	PLAN - AR 558+00 TO AR 568+00
	27	C-025	PLAN - AR 568+00 TO AR 579+00
	28	C-026	PLAN - AR 579+00 TO AR 590+00
B-301	29	C-027	PLAN - AR 590+00 TO AR 601+00
L.A. CBD TO NORTH HOLLYWOOD			
B-241	30	C-028	PROFILE - AR 318+06.41 TO AR 329+37.87
	31	C-029	PROFILE - AR 329+37.87 TO AR 340+45
	32	C-030	PROFILE - AR 340+45 TO AR 351+00
	33	C-031	PROFILE - AR 351+00 TO AR 362+00
	34	C-032	PROFILE - AR 362+00 TO AR 373+00
B-251	35	C-033	PROFILE - AR 373+00 TO AR 383-00
	36	C-034	PROFILE - AR 383+00 TO AR 392-00
	37	C-035	PROFILE - AR 392+00 TO AR 401+00
	38	C-036	PROFILE - AR 401+00 TO AR 411+00
	39	C-037	PROFILE - AR 411+00 TO AR 421+00
	40	C-038	PROFILE - AR 421+00 TO AR 432+00
	41	C-039	PROFILE - AR 432+00 TO AR 443+00

LIST OF DESIGN DRAWINGS (Cont'd.)

	<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
B-261	42	C-040	PROFILE - AR 443+00 TO AR 454+00
	43	C-041	PROFILE - AR 454+00 TO AR 465+00
	44	C-042	PROFILE - AR 465+00 TO AR 476+00
	45	C-043	PROFILE - AR 476+00 TO AR 487+00
	46	C-044	PROFILE - AR 487+00 TO AR 498+00
B-271	47	C-045	PROFILE - AR 498+00 TO AR 508+00
	48	C-046	PROFILE - AR 508+00 TO AR 518+00
	49	C-047	PROFILE - AR 518+00 TO AR 528+00
	50	C-048	PROFILE - AR 528+00 TO AR 539+00
	51	C-049	PROFILE - AR 539+00 TO AR 550+00
	52	C-050	PROFILE - AR 550+00 TO AR 558+00
	53	C-051	PROFILE - AR 558+00 TO AR 568+00
	54	C-052	PROFILE - AR 568+00 TO AR 579+00
	55	C-053	PROFILE - AR 579+00 TO AR 590+00
B-301	56	C-054	PROFILE - AR 590+00 TO AR 601+00
L.A. CBD TO NORTH HOLLYWOOD			
	57	C-055	SECTION - AR 321+00 TO AR 323+00
	58	C-056	SECTION - AR 334+25 TO AR 359+75
	59	C-057	SECTION - AR 368+50 TO AR 379+00
	60	C-058	SECTION - AR 456+50 TO AR 530+00
	61	C-059	SECTION - AR 557+00 TO AR 572+50
	62	C-060	SECTION - AR 594+00

LIST OF DESIGN DRAWINGS (Cont'd.)

	<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
<u>STATIONS:</u>			
VERMONT/ BEVERLY			
	63	A-101	VERMONT/BEVERLY STATION CONCEPTUAL SITE PLAN
	64	A-102	VERMONT/BEVERLY STATION CONCEPTUAL LONGITUDINAL SECTION
	65	A-103	VERMONT/BEVERLY STATION CONCEPTUAL MEZZANINE PLAN
	66	A-104	VERMONT/BEVERLY STATION CONCEPTUAL MEZZANINE PLAN
	67	A-105	VERMONT/BEVERLY STATION CONCEPTUAL PLATFORM PLAN
	68	A-106	VERMONT/BEVERLY STATION CONCEPTUAL PLATFORM PLAN
	69	U-001	VERMONT/BEVERLY STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 1
	70	U-002	VERMONT/BEVERLY STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 2
	71	U-003	VERMONT/BEVERLY STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 1
	72	U-004	VERMONT/BEVERLY STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 2
	73	U-005	VERMONT/BEVERLY STATION GRAVITY LINE PROFILES

LIST OF DESIGN DRAWINGS (Cont'd.)

	<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
VERMONT/ SANTA MONICA	74	A-201	VERMONT/SANTA MONICA STATION CONCEPTUAL SITE PLAN
	75	A-202	VERMONT/SANTA MONICA STATION CONCEPTUAL LONGITUDINAL SECTION
	76	A-203	VERMONT/SANTA MONICA STATION CONCEPTUAL MEZZANINE PLAN
	77	A-204	VERMONT/SANTA MONICA STATION CONCEPTUAL PLATFORM PLAN
	78	U-006	VERMONT/SANTA MONICA STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 1
	79	U-007	VERMONT/SANTA MONICA STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 2
	80	U-008	VERMONT/SANTA MONICA STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 1
	81	U-009	VERMONT/SANTA MONICA STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 2
	82	U-010	VERMONT/SANTA MONICA STATION GRAVITY LINE PROFILES
VERMONT/ SUNSET	83	A-301	VERMONT/SUNSET STATION CONCEPTUAL SITE PLAN
	84	A-302	VERMONT/SUNSET STATION CONCEPTUAL LONGITUDINAL SECTION

LIST OF DESIGN DRAWINGS (Cont'd.)

<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
85	A-303	VERMONT/SUNSET STATION CONCEPTUAL MEZZANINE PLAN
86	A-304	VERMONT/SUNSET STATION CONCEPTUAL MEZZANINE PLAN
87	A-305	VERMONT/SUNSET STATION CONCEPTUAL PLATFORM PLAN
88	A-306	VERMONT/SUNSET STATION CONCEPTUAL PLATFORM PLAN
89	U-011	VERMONT/SUNSET STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 1
90	U-012	VERMONT/SUNSET STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 2
91	U-013	VERMONT/SUNSET STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 1
92	U-014	VERMONT/SUNSET STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 2
93	U-015	VERMONT/SUNSET STATION GRAVITY LINE PROFILES - SHEET 1
94	U-016	VERMONT/SUNSET STATION GRAVITY LINE PROFILES - SHEET 2
HOLLYWOOD/ WESTERN		
95	A-401	HOLLYWOOD/WESTERN STATION CONCEPTUAL SITE PLAN
96	A-402	HOLLYWOOD/WESTERN STATION CONCEPTUAL LONGITUDINAL SECTION



LIST OF DESIGN DRAWINGS (Cont'd.)

<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
120	A-602	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL LONGITUDINAL SECTION
121	A-603	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL MEZZANINE PLAN
122	A-604	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL MEZZANINE PLAN
123	A-605	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL PLATFORM PLAN
124	A-606	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL PLATFORM PLAN
125	U-030	HOLLYWOOD/HIGHLAND STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 1
126	U-031	HOLLYWOOD/HIGHLAND STATION COMPOSITE EXISTING UTILITY PLAN - SHEET 2
127	U-032	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 1
128	U-033	HOLLYWOOD/HIGHLAND STATION CONCEPTUAL UTILITY REARRANGEMENTS - SHEET 2
129	U-034	HOLLYWOOD/HIGHLAND STATION GRAVITY LINE PROFILES

PROPERTY  
IDENTIFICATION  
PLANS

130	PI-B006	PROPERTY IDENTIFICATION PLAN VERMONT AVENUE SIXTH STREET TO SECOND STREET
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LIST OF DESIGN DRAWINGS (Cont'd.)

<u>SHEET NUMBER</u>	<u>DRAWING NUMBER</u>	<u>DRAWING TITLE</u>
131	PI-B007	PROPERTY IDENTIFICATION PLAN VERMONT AVENUE SECOND STREET TO OAKWOOD AVENUE
132	PI-B008	PROPERTY IDENTIFICATION PLAN VERMONT AVENUE ROSEWOOD AVENUE TO NORMAL AVENUE
133	PI-B009	PROPERTY IDENTIFICATION PLAN VERMONT AVENUE NORMAL AVENUE TO LA MIRADA AVENUE
134	PI-B010	PROPERTY IDENTIFICATION PLAN VERMONT AVENUE LA MIRADA AVENUE TO HOLLYWOOD BOULEVARD
135	PI-B011	PROPERTY IDENTIFICATION PLAN HOLLYWOOD BOULEVARD HARVARD BOULEVARD TO EDMONT STREET
136	PI-B012	PROPERTY IDENTIFICATION PLAN HOLLYWOOD BOULEVARD WILTON PLACE TO HARVARD BOULEVARD
137	PI-B013	PROPERTY IDENTIFICATION PLAN HOLLYWOOD BOULEVARD WILTON PLACE TO GOWER STREET
138	PI-B014	PROPERTY IDENTIFICATION PLAN HOLLYWOOD BOULEVARD EL CENTRO AVENUE TO WHITLEY AVENUE
139	PI-B015	PROPERTY IDENTIFICATION PLAN HOLLYWOOD BOULEVARD HUDSON AVENUE TO ORANGE DRIVE

July 19, 1989

ERRATA SHEET  
Design Report/Drawings for Six Station  
and Line Segments

1. Article 2.2, page 10, fifth paragraph of the Design Report:

Revise "27-foot" to read "27-inch" and revise the sentence which now reads "it must be constructed by cut and cover methods", to read "cut and cover methods may be required".

2. Drawing Number C004, Sheet 6:

At the top of the sheet, revise the notation which now reads "cut and cover" to read "cut and cover construction may be required".

3. Drawing Number C031, Sheet 33:

In the upper left hand corner of the drawing, revise the notation which now reads "cut and cover" to read "cut and cover construction may be required".

INCORPORATED 7/25/89  
JAD