

UNION STATION

LOS ANGELES



TRANSIT
MASTER
PLAN

TECHNICAL APPENDIX

August 1992

UNION STATION

L O S A N G E L E S



TRANSIT

MASTER

PLAN

TECHNICAL APPENDIX

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Los Angeles

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I Preface

The present study proposes to identify projects, establish a phasing approach and a preliminary cost allocation for the transit-related infrastructure construction at Union Station.

Transit infrastructure is defined as any system or structure, temporary or permanent in nature, that allows the transit systems and associated areas proposed for the Union Station site to be built according to the intended start-up schedule and in coordination with the planned joint and private development structures.

As a result of the timing framework, the transportation facilities must be built in advance of the joint and private development projects. The reasons for this are as follows:

- A) The ROD (start-up) dates for certain transit systems are very near, eg: Metro Link service begins in October of 1992 and Metro Rail service begins in January/February 1993.
- B) At present the site is relatively unencumbered. Once development projects begin construction it will become increasingly difficult to stage and build transit infrastructure projects. Accelerated transit infrastructure minimizes disruption and other negative impacts on operating transit systems.
- C) Certain sites are contingent upon transit improvements either because of close proximity or the realities of the phasing plan.
- D) The Los Angeles regional economy is in a recessionary cycle. The effects on the commercial real estate market have been quite pronounced. The Downtown office space market has an oversupply.

The net effect of these conditions has been a marked decrease in the construction of new office space in the Downtown core and other parts of the city. The trend will likely continue in the short and medium term. This provides an opportunity for the construction of transit infrastructure throughout the Union Station site prior to private construction commencing.

Note: This draft study proposes cost and allocation projections that are conceptual in nature and subject to revision.

II Introduction: Transit at Union Station

Union Station, known historically as the Los Angeles Union Passenger Terminal, will become the intermodal transit hub for the entire Los Angeles basin and region. Built in 1939 in a grand Mission Revival style of architecture, it became the last of the great urban railroad stations built in the United States.

Union Station served as a joint facility for three railroad giants that shaped and transformed the West: Southern Pacific, Santa Fe and Union Pacific Railroads.

It's completion marked the consolidation of three separate passenger railroad facilities located in downtown Los Angeles. Since its opening, Union Station has been the only rail service center for the City of Los Angeles. After a period of relative decline caused by increased auto ownership and reliance upon air travel, Union Station is enjoying a vigorous resurgence, as it now represents the fifth largest station for Amtrak ridership in the country. In addition to Amtrak, a series of heavy and light rail systems augmented by modal links to surface transportation will make this site the key origin, destination and transfer point in the complex transit network that will soon serve the cities and suburbs of Southern California.

The purpose of this comprehensive transit plan is to ensure the success of the new systems, create an attractive, safe and pleasant environment and enhance transit use and ridership.

Transit Systems at Union Station:

Heavy rail modes such as Amtrak and Metrolink use the existing trackage and platform facilities to the North and East of the Union Station Terminal. The Metro Rail Red Line to the West as well as the Eastern extension of the Red Line will use the underground subway tunnel and station located directly below the Union Station trainyard and will be accessed by portals at the East and West side.

The Metro Rail Blue Line Light Rail to Pasadena and later to Burbank/Glendale will use a new raised platform facility to be built in the location of existing platform #1.

All surface transit serving rail users will be positioned so as to effectively achieve convenient modal linkages for the benefit of the transit user.

The Bus/Rail interface areas will be identified and planned with the aforementioned purpose and responding to the exigencies of site development and construction staging.

The current site imposes a series of conditions upon the transit user that can only be described as problematic. The historic "head house" or station building is separate and quite distant from the train platforms. Rail functions such as information, ticketing, baggage handling and waiting rooms are scattered over a wide area of Union Station.

- 1) There is very limited access to rail transit services. At present only the passenger tunnel connects Union Station to the rail platforms. The projected increase in rail service will overwhelm the capacity of the tunnel.
- 2) The present facility is not convenient. The Amtrak and Commuter Rail rider must wait in a space that is removed from the view of the trains. This already confusing operational configuration will be exacerbated with increased ridership. This is particularly problematic for commuters who need to board their train quickly.
- 3) The original design did not contemplate a complex multimodal facility where transfers occur across the site at various levels that are intended to handle peak passenger volumes exceeding the capacity of existing concourses.

The present study will propose ways of addressing the task of moving passengers from one mode to another, from one area to another and to provide efficient linkages on and off site. These solutions will involve a variety of projects from simple interim facilities involving only surface improvements and lighting, to completed permanent transit facilities such as concourses and bus/taxi areas. Due to the complexity of the site and the long-term view of the proposed master plan for development, the transit improvements will be presented within a proposed phasing structure. This phasing structure is keyed to new transit operations.

Transit Services at Union Station

The following is a listing of the transit services that have, or will have, Union Station as a hub or link in their respective systems:

A) Amtrak service Operational

Amtrak provides inter-city rail service to and from Union Station and major cities in California and throughout the country. Amtrak operates daily roundtrip trains between San Diego and Los Angeles. This service is supplemented by one additional train from Orange County funded by the Orange County Transportation Authority.

Long-standing regularly scheduled service includes inter-city trains such as the Desert Wind, Sunset Limited, Coast Starlight and the Super Chief.

Other Amtrak service at Union Station includes coastal service (one round trip daily to Northern California with connections to Vancouver) and transcontinental service (two round trips daily to Chicago and New Orleans, with one additional train three days per week.

The Amtrak line is shown on Fig. 1.

B) Metrolink (Commuter Rail) Service in place by October 1992

Five new commuter rail lines ending at Union Station are being planned by the Southern California Regional Rail Authority (SCRRA), a joint powers authority consisting of representatives from Los Angeles, Orange, San Bernardino, Riverside and Ventura Counties. At start-up, commuter rail service would be limited to peak periods, although in the longer term future off-peak service would also be provided. Service on three of these lines (from Moorpark, Santa Clarita and Pomona) is scheduled to begin in October of 1992 and is expected to bring over 4000 peak period commuters per day into Union Station.

Additional services are planned to start in 1993, including a new line from Riverside and expansion of the current Orange County and Amtrak service. The planned extension of the Pomona line to San Bernardino may also occur during 1993. Longer-range planning also calls for service connecting some other outlying areas, but these lines would not directly serve Union Station.

SCRRA plans to expand Metrolink service to five outlying counties according to the following general schedule:

- | | | |
|----|----------------------------|---------------------------------------------------|
| 1) | Moorpark (Ventura County) | Operational Oct '92 |
| 2) | Santa Clarita (Pomona leg) | Operational Oct '92 |
| 3) | San Bernardino | Operational Oct '92 |
| 4) | Riverside | Operational Spring '93 |
| 5) | Orange County (Oceanside) | Partially operational. System expansion Fall '93. |

The Metrolink system is shown on Fig. 1.

**C) Metro Rail Red Line
Operational by February 1993.**

The Metro Rail Red Line is one of the key elements of a 300-mile rail transit network approved by the Los Angeles County voters in 1980. The Red Line is a subway that will run 17.4 miles from Union Station to the San Fernando Valley, serving Downtown, the Wilshire Corridor, Hollywood, Universal City and North Hollywood. The first 4.4-mile segment of the line is scheduled to open in January/February 1993 with extensions to Wilshire and Western in 1996, Hollywood and Vine in 1998 and North Hollywood in 2001. Recent projections estimate that the Red Line will carry about 30,000 passengers per day when it opens.

The Metro Rail line is shown on Fig. 1.

D) Metro Rail Red Line Westerly and Easterly Extensions Operational after 2000.

The Metro Rail Orange Line consists of planned easterly and westerly extensions of the Metro Rail Red Line. The western extension would connect West Los Angeles along an alignment still under discussion, while the eastern extension would continue into East Los Angeles. At Union Station, the Red Line subway routes to the East and the West would utilize identical facilities. The Red Line Easterly Extension into East Los Angeles is not expected to open until after the year 2000.

E) Metro Rail Blue Line LRT Operational. Pasadena segment operational by 1996.

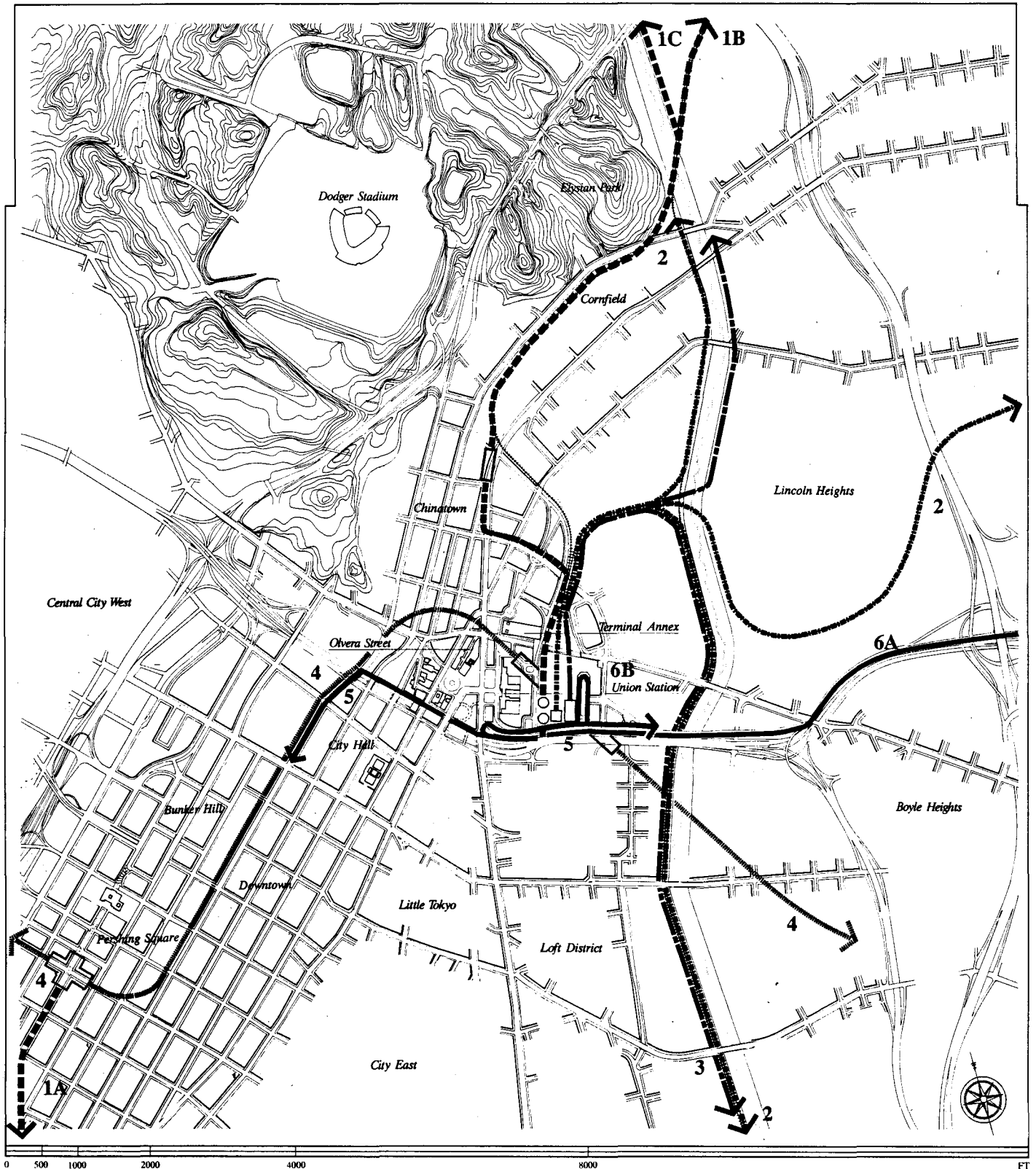
The Metro Rail Blue Line LRT between Long Beach and Downtown Los Angeles was the first element of Los Angeles' rail network to open in 1990. The 22-mile light rail system operates mostly at-grade, with some aerial and subway sections. The Metro Rail Blue Line terminates at the Seventh Street Metro Center station in Downtown Los Angeles, where it connects with the Red Line. This portion of the Blue Line currently carries about 35,000 passengers per day.

A second portion of the Blue Line, from Union Station to Pasadena, is currently being engineered and is scheduled to open in 1996. This 13.4-mile segment of the Blue Line is projected to carry up to 68,000 passengers per day by the year 2010. An additional branch to Glendale and Burbank is also anticipated.

Eventually, a "Blue Line Connector" will be constructed to connect the Pasadena Blue Line (ending at Union Station) to the Long Beach Blue Line (ending at Seventh Street). LACTC's 30-Year Plan anticipates that this connection, covering approximately 1.5 miles, will be constructed by the year 2007.

The light rail lines are shown on Fig. 1.

Figure 1



- - - - - - 1A LRT Long Beach
- - - - - - 1B LRT Pasadena
- - - - - - 1C LRT Glendale
- - - - - - 2 MetroLink Commuter Rail
- - - - - - 3 AMTRAK
- - - - - - 4 MetroRail
- - - - - - 5 SCRTD Buses
- - - - - - 6A El Monte Busway
- - - - - - 6B Gateway Metro PLaza

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 DISTRICT PLAN
 Regional Transit Systems
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**F) Amtrak buses
Operational**

Amtrak train operations are supplemented by feeder and connector bus service. Amtrak operates feeder buses which bring train riders to Union Station from outlying areas (such as Chatsworth and Thousand Oaks) to meet regularly scheduled train arrivals and departures. Amtrak also operates bus connectors from areas where rail service does not connect directly to Los Angeles (from Bakersfield for example). Amtrak has approximately ten bus arrivals and ten bus departures scheduled daily at Union Station.

G) SCRTD Express and local bus service

Many of SCRTD's bus routes converge on Downtown Los Angeles, with a large number passing by the Union Station area along the Macy/Sunsite and Alameda corridors. Over twenty SCRTD lines reach Union Station on local streets. These lines include both line haul routes and freeway express routes, and approach Union Station from all directions. The lines approaching Union Station on surface streets stop at a number of locations along Alameda Street and Macy Street. Another ten SCRTD freeway express lines stop at the El Monte Busway in-line station serving Union Station.

Figures 2 and 3 show the principal bus routes serving Union Station and environs.

**H) Foothill Transit Zone bus service
Operational**

Foothill Transit Zone also provides freeway express bus service to Union Station. All of the Foothill lines approach Union Station from the East on the El Monte Busway and stop at the in-line station on the busway. Several of Foothill's routes operate all day long, offering service in both directions. Others operate as commuter services, offering only inbound service in the morning peak and outbound service in the evening period.

**I) LADOT Dash, Commuter Express and Train'n Wheels bus service.
Operational**

The Los Angeles Department of Transportation (LADOT) funds three types of transit service to Downtown Los Angeles, only two of which directly serve Union Station. The first is the Dash shuttle service which connects different parts of the Downtown for a \$0.25 fare. The current Dash route which passes by Union Station on Alameda Street provides direct service to the Civic Center and the area around the Arco Plaza. With a transfer, riders can access most other parts of the Downtown. Dash service operates Monday to Saturday with frequencies of six to ten minutes on weekdays and about fifteen minutes on weekends.

The other LADOT service is the Commuter Express service from outlying communities. Nine commuter lines serve Los Angeles but none provides direct service to Union Station.

J) City Taxis and private autos

Taxi service from Union Station is provided by one taxi company, although all companies may drop off passengers there. The taxi loading area is located at the South end of the property and is also utilized by private van shuttles and private passenger autos.

Figure 2A

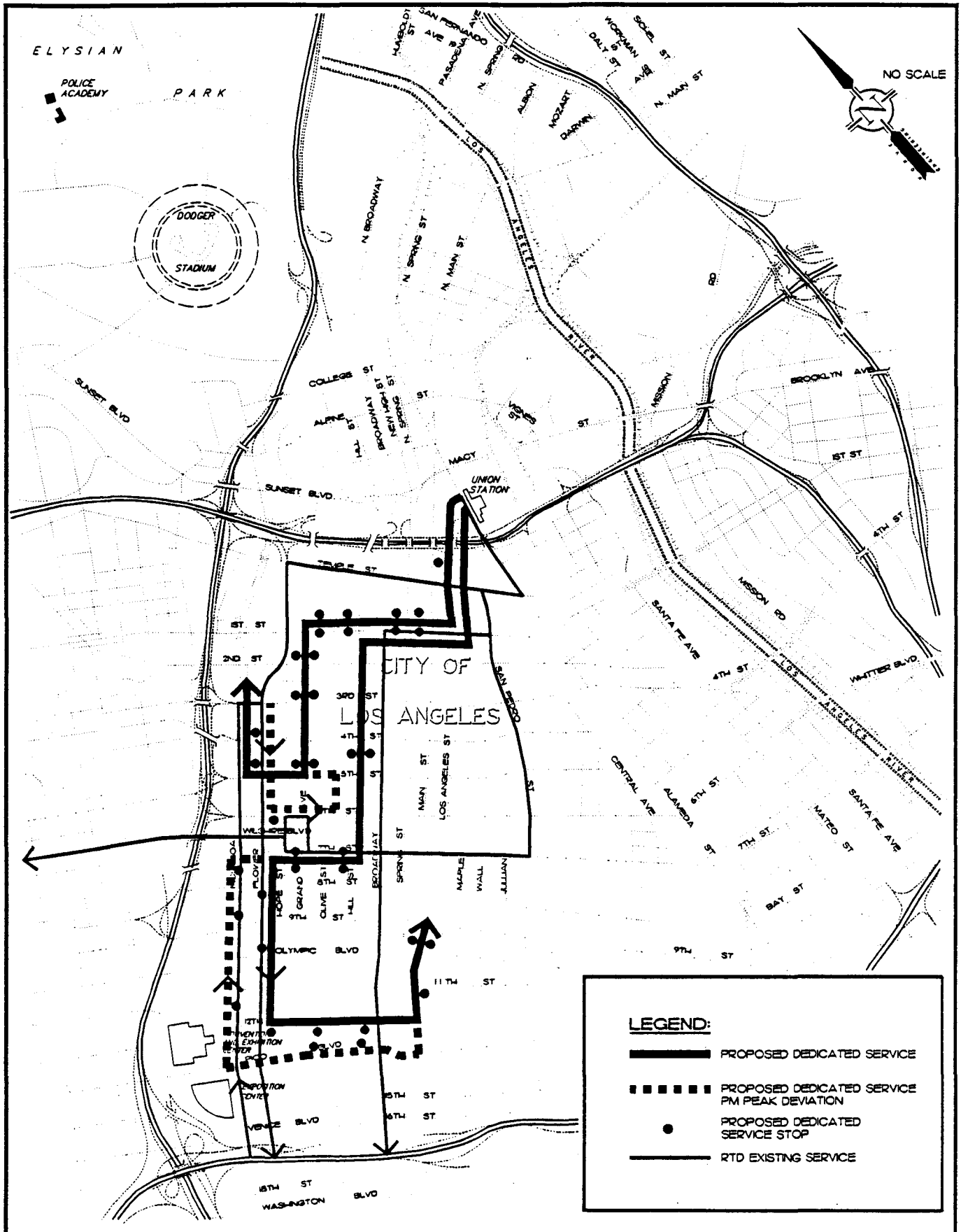
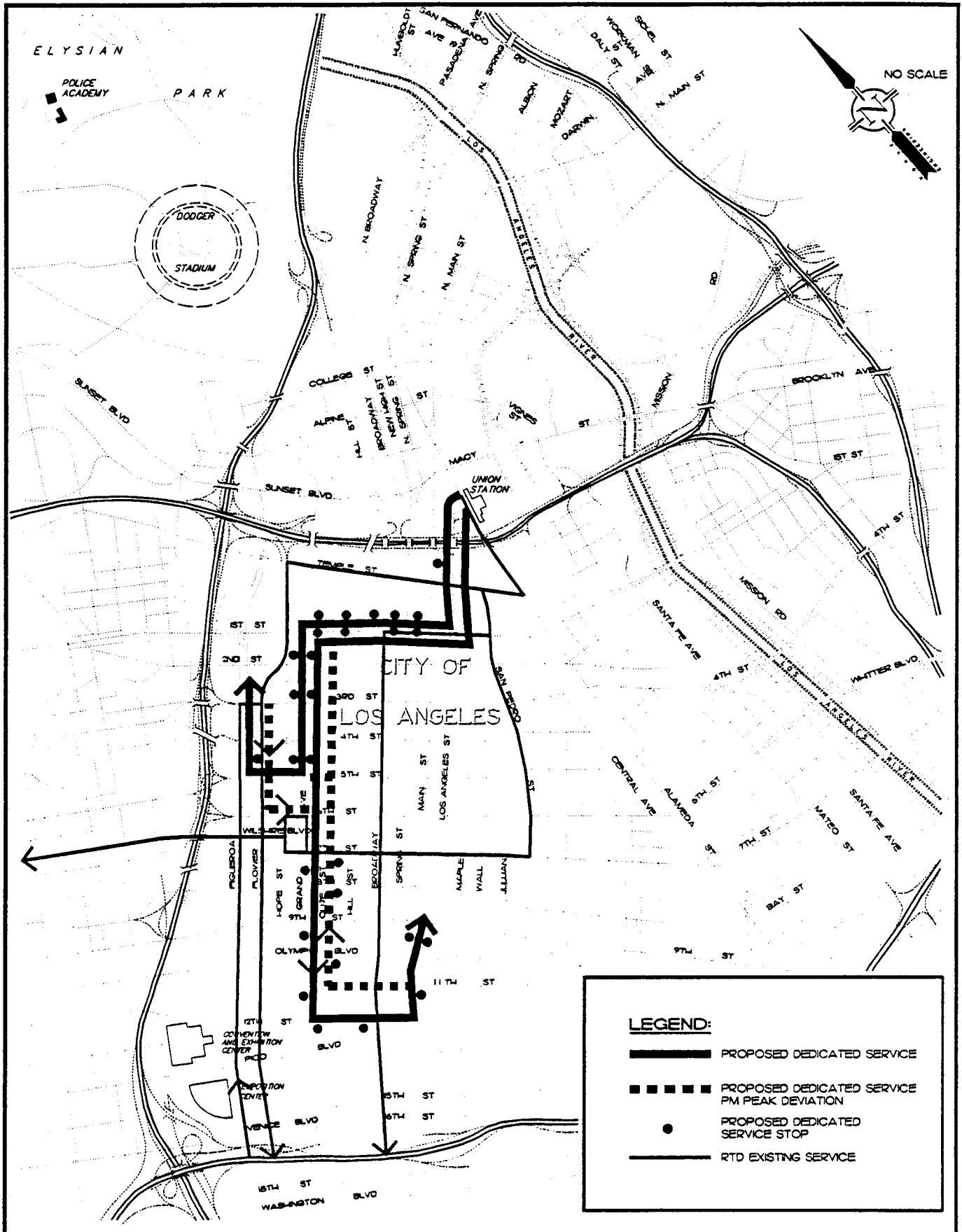


Figure B



The Need for the Study

The task of planning an intermodal transit hub for Los Angeles on a site such as Union Station extends beyond the correct positioning and movement of transit equipment. We must additionally plan for the transit user and the relationships in connections between the transit modes. The provision of convenient, safe and attractive transit systems becomes essential to the overall region-wide goal of convincing the commuter to forsake his or her car and ride transit.

Transit Systems and Ridership

The coming start-up of these transit systems will bring thousands of additional transit riders per day to Union Station. In the next year alone, the combination of Metro Rail and Metrolink (Commuter Rail) could result in up to 16,000 new daily transit riders making connections at Union Station, three or four times the existing ridership. This number will continue to grow as service is expanded and new modes such as the Pasadena Blue Line come on line.

In its final form, the transit systems at Union Station will have an estimated capacity of about 60,000 passengers per hour. While this patronage estimate is not expected in the initial phases, the correct planning of the integrated system as it builds over time, must address this reality. There is an obvious and critical need for a transit master plan which coordinates the interface between transit access and private development on the site.

Coordination of Transit services and future development

This Transit Infrastructure Plan incorporates the existing plans for new transit services and offers additional coordination to ensure that public transit services and private development at Union Station are compatible. For example, the Plan includes a proposed new Transit Concourse at the South end of the tracks which would consolidate Amtrak and Commuter Rail operations. The new Transit Concourse and the consolidation of services in one location could help solve several potential problems that the influx of new transit services might pose:

- A) Preliminary studies show that the existing passenger tunnel is likely to become overloaded by the high volume of Amtrak, Metrolink and LRT passengers descending from the tracks above. The Transit Concourse would keep many of these passengers on the track level, reducing the flow in the passenger tunnel and affording easy modal interchanges among systems at track level. This Transit Concourse could also be connected directly to the Metro Rail East Portal, offering a second rail-to-rail connection and further reducing passenger volumes in the tunnel.
- B) The Transit Concourse would provide a single location for transit information, ticketing and boarding, instead of having some operations at ground level and some at track level.
- C) The Transit Concourse provides a variety of access points to the transit system and connects to an upper level roadway system with critical curbside loading areas. This is necessary for the success of transit operations while avoiding the overloading of existing facilities.
- D) The Transit Concourse allows for separation of the Amtrak intercity operations from commuter operations. It also allows for more efficient baggage handling and passenger staging in close proximity and within view of the trains.

As an example, it is expected that the beginning of expanded Metrolink service into Union Station will bring about 4200 commuters into the Union Station area. This is scheduled to occur in October of this year. Since the Metro Rail Red Line will not yet be operational at the time, provisions must be made for the commuters (about 2/3 of the expected initial total of 4200 passengers) that will want to connect with surface bus transit.

After the Red Line opening, most of the Metrolink patronage (about 65-75%) will connect with Metro Rail and only a small number will want to board buses. Metro Rail patronage is estimated at 6000 passengers per peak period.

A window of opportunity now exists to coordinate all transit planning efforts at Union Station before private development moves forward. This Transit Infrastructure Plan attempts to take advantage of that opportunity by summarizing

existing transit plans in one place, offering additional infrastructure suggestions, tying together the East and West Portals, the Southern Roadway, new speed ramps to Alameda and Macy Streets, etc, and proposing a preliminary infrastructure phasing schedule and cost allocation.

This study will highlight certain areas that are critical for the movement of people and equipment. Some, like temporary bus facilities intended to handle short-term interface requirements will require planning and coordination in the short-term. Other facilities such as the Transit Concourse, are to be built in medium and long-term but must be taken into account as part of an integrated strategy of transit planning and urban design. This study also considers the construction feasibility of transit infrastructure components and their impacts on the operating transit systems.

The basis for this integrated strategy are the projected ridership estimates and the proposed transit systems start-up schedule. By taking these factors into account: the amount of people using the facilities and their requirements and the construction of transit improvements over time, a realistic plan will emerge.

Clearly, there is a compelling case to be made for the early implementation of the transit infrastructure, to avoid conflicts, negative impacts and service disruptions. Further, it may be argued that the current market conditions for commercial office space make the building of transit infrastructure improvements considerably easier because the site is relatively unencumbered.

Coordination with other transportation planning work

The beginning of service for certain transit systems, such as Metrolink commuter rail expanded service, has focused the attention of the property owner, Catellus Development Corporation and the main transit agencies, the Los Angeles County Transportation Commission (LACTC) and the Southern California Rapid Transit District (SCRTD) and Amtrak on the need to plan for the on-site transit infrastructure improvements well ahead of the required dates.

This study, together with "Union Station Bus/Rail Interface Plan" by Korve Engineering, Inc and commissioned by LACTC and the Alameda Plan (in progress) will serve as a general survey of conditions and an outline for what needs to be done to adequately accommodate the transit user in the short and medium term.

The Transit Masterplan

A key component of the Alameda Plan is the Transit Masterplan. The document is currently in preparation. This section of the report will summarize the most important aspects of the plan.

The Transit Masterplan is predicated on three concepts:

- 1) Significant use of transit to minimize auto trips.
- 2) The establishment of a strong pedestrian circulation system to complement high-transit service.
- 3) Dispersal of vehicular traffic across numerous ingress/egress routes to minimize traffic impacts.

Moreover, the plan relies on the unique opportunity afforded by the site for an unparalleled use of transit. Currently 62% of Downtown office workers drive alone to work, while only 21% use transit and 17% rideshare. For future onsite development, the plan proposes an aggressive but achievable goal of 60% transit use and 15% rideshare with only 25% drive alone.

Plan Components:

The Alameda Plan will provide a complete transit program incorporating the transit facilities already described in previous sections of this report and additional improvements to the local vehicular circulation network. A summary follows:

- 1) The transit services planned for the Union Station site include the Metro Rail Red and Blue lines and their respective extensions, the Metrolink commuter rail service, Amtrak intercity service, SCRTD bus service, Dash Bus, Amtrak Bus, Train'Wheels, city taxis, etc.
- 2) Continued capacity enhancement of these systems.
- 3) Local transit connections to the CBD such as a proposed downtown circulator, increased shuttle bus, expanded Dash Bus service, a possible Broadway/ Chinatown shuttle, a possible Downtown Trolley linking several neighborhoods and commercial/ tourist/ entertainment destinations.

- 4) Integration of local, express and contract bus services into one system.
- 5) Implementation of an urban design plan based on pedestrian spaces. The transit user will be given every advantage over the automobile within the confines of the Alameda Plan. Access to transit services will occur within ample, safe and well designed public open spaces.

An East-West pedestrian corridor will provide direct access to transit and private development sites and public open spaces.

- 6) The plan proposes to disperse traffic by providing multiple entry and exit points, and by capturing traffic before it reaches overloaded intersections, thereby reducing congestion.
- 7) Establishment of a comprehensive Transit Demand Management Plan aimed at attaining transit and ridership goals. A vigorous information fostering site identity and encouraging transit use will be pursued.

The TDM Plan will propose a comprehensive trip reduction program along with a work-hours management program directed at spreading the peak hour rush as much as possible.

A TMO (Transportation Management Organization) will be established specifically for the site with a full-time staff to implement the TDM program. The TMO will work closely with the Central City TMA (Commuter Club).

- 8) Parking plan: While it is important to provide sufficient parking for the project, on-site parking policies must be carefully tailored and coordinated with the mode split policies so that an oversupply of parking does not discourage transit use.

In this light, the Alameda Plan is not proposed as a peripheral parking facility.

The policies and positions delineated above are proposed as part of this study and are subject to revision.

III Specific Purposes of the Study

- A) **Identification** of the key intermodal interface areas, specific transit infrastructure requirements and the projected timing.
- B) The interrelated nature of the transit projects at Union Station requires a comprehensive view and an integrated approach to the problem of intermodal connections. Since not all projects will be built at once, the issue of the correct **timing** of infrastructure improvements becomes of paramount importance.
- C) **Preliminary costing** of transit infrastructure projects.

This information, albeit approximate, will help the transit agencies address planning and operational issues, and their construction subsidiary in their programming and cost estimating efforts.

- D) **Preliminary infrastructure improvement cost allocation** to be borne by transit agencies and property owners.

IV Private Development and the Interface with Transit Facilities at the Union Station Site

The Union Station site is currently being developed within a larger context entitled the Alameda Plan. At this writing, the plan exists only in conceptual form. Upon implementation, the Alameda Plan will provide a comprehensive framework for the development of the entire area.

It is important to note the nature of the master plan framework, in that it attempts to define the timing of construction events and physical conditions over a fairly long period of time, spanning 25 to 30 years. The timing of infrastructure improvements is critical for the orderly implementation of the entire masterplan, and as a result of this study seems to be guided more acutely by transit needs rather than likely development scenarios.

At present the Alameda Plan is being reviewed by City agencies in advance of a formal review process coupled with the required EIR. The appropriate local and regional transit providers have been briefed and their recommendations will be incorporated into future versions of the Alameda Plan.

Alameda Plan Highlights

A) Location, boundaries and adjacencies.

The Alameda Plan is formed by two major parcels:

- 1) Union Station Parcel. With a total area of about 50 acres, the property contains the Union Station terminal building and the existing rail support facilities: Parking lots, passenger platforms and trackage, baggage handling facilities, etc.

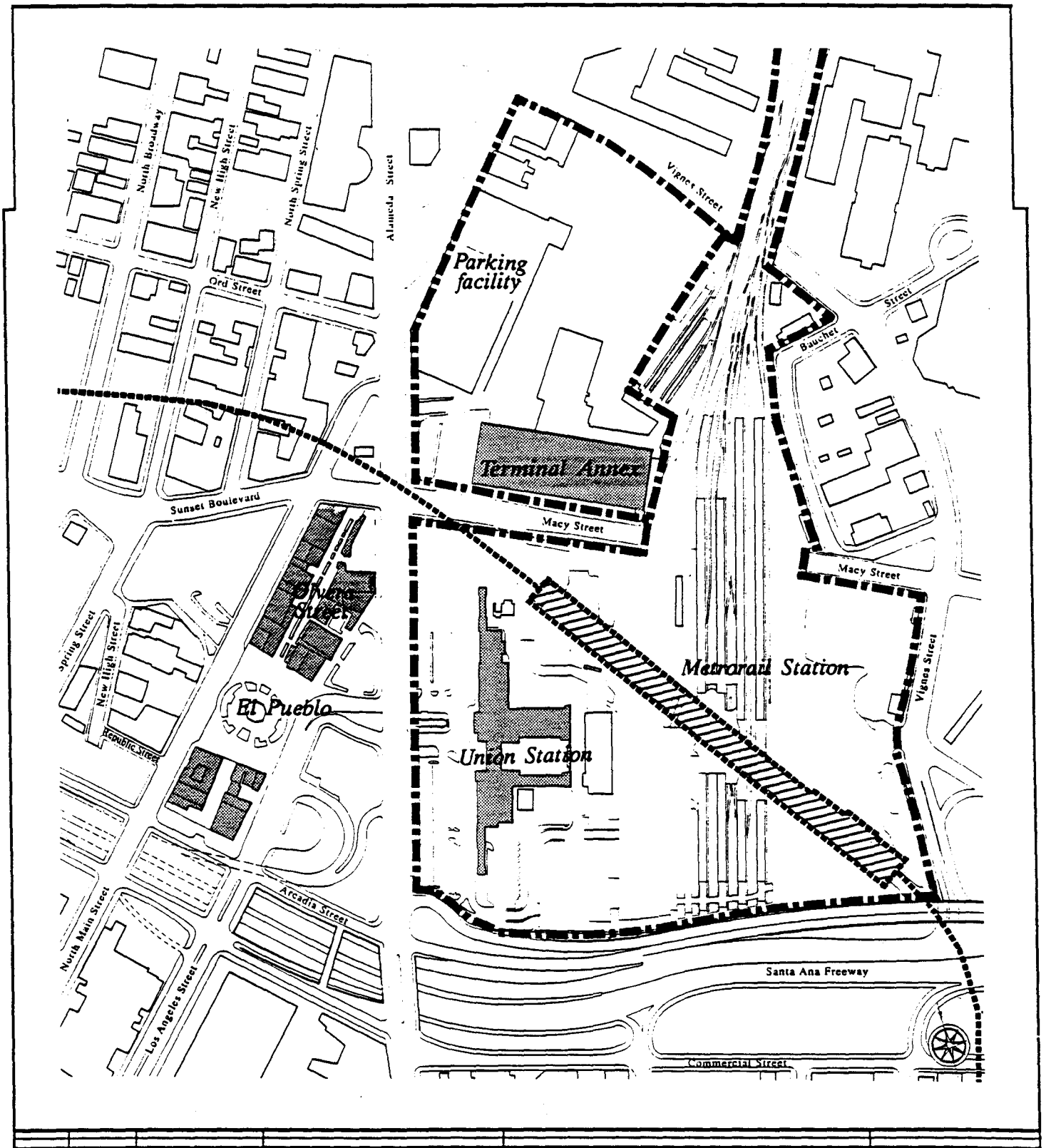
- 2) The United States Postal Service Terminal Annex Parcel. With a total area of about 18 acres, the parcel contains the Terminal Annex Building and related facilities, a 1200 car parking garage and a large paved maneuvering yard.

The district boundaries are: Vignes Street to the North and East, the Hollywood Freeway to the South and Alameda Street to the West. Macy Street runs West-East bisecting the two properties.

The principal adjacencies are: Chinatown to the North and West, industrial and institutional uses to the East, industrial and the Artist's Loft District to the South and Little Tokyo and the Downtown and Civic Center to the South and West. The most prominent adjacency is directly to the West across Alameda Street: the Pueblo of Los Angeles, which contains Olvera Street, La Placita and Our Lady Queen of Angels Church, the site of the original pueblo settlement of the City.

See Figure 3 for Alameda Plan boundaries. See Figures 4A, 4B, 4C, and 5 for a description of the Alameda Plan.

Figure 3



Boundaries

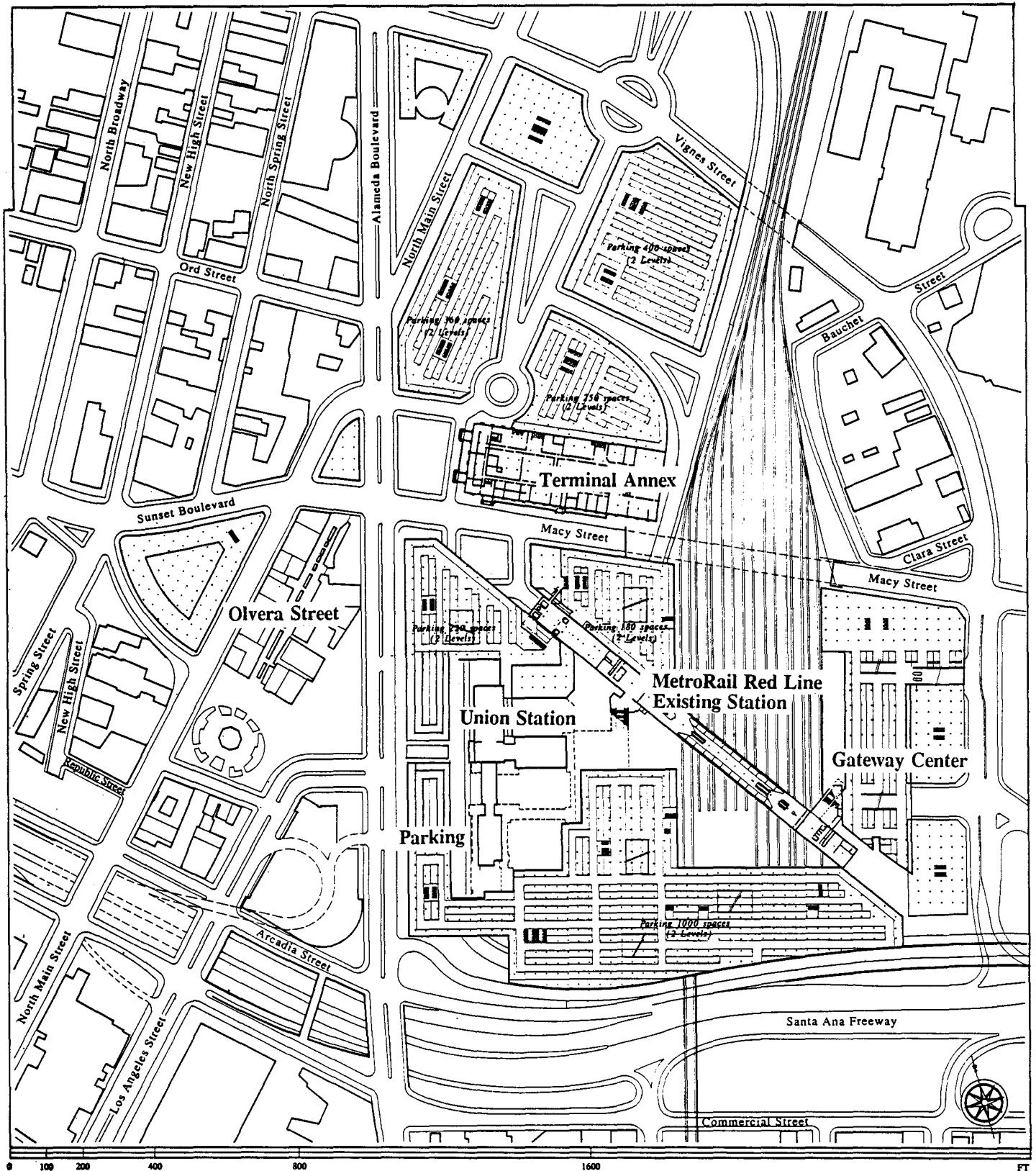
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Figure 4A



ALAMEDA

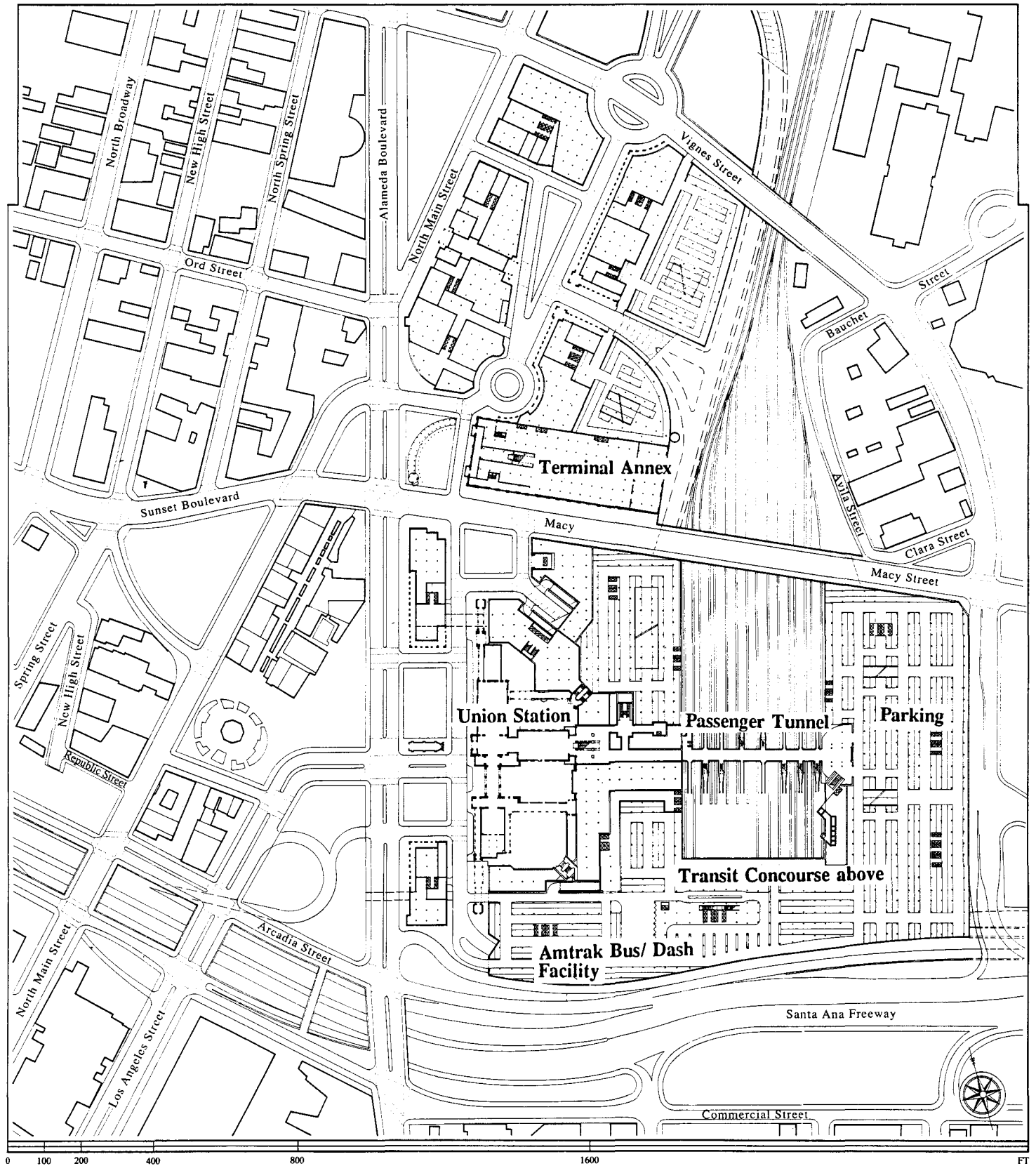
DISTRICT PLAN

-10'; -20'; -30' Basement Plans

Ehrenkrantz, Eckstut & Whitelaw

August, 1991

Figure 4B



ALAMEDA

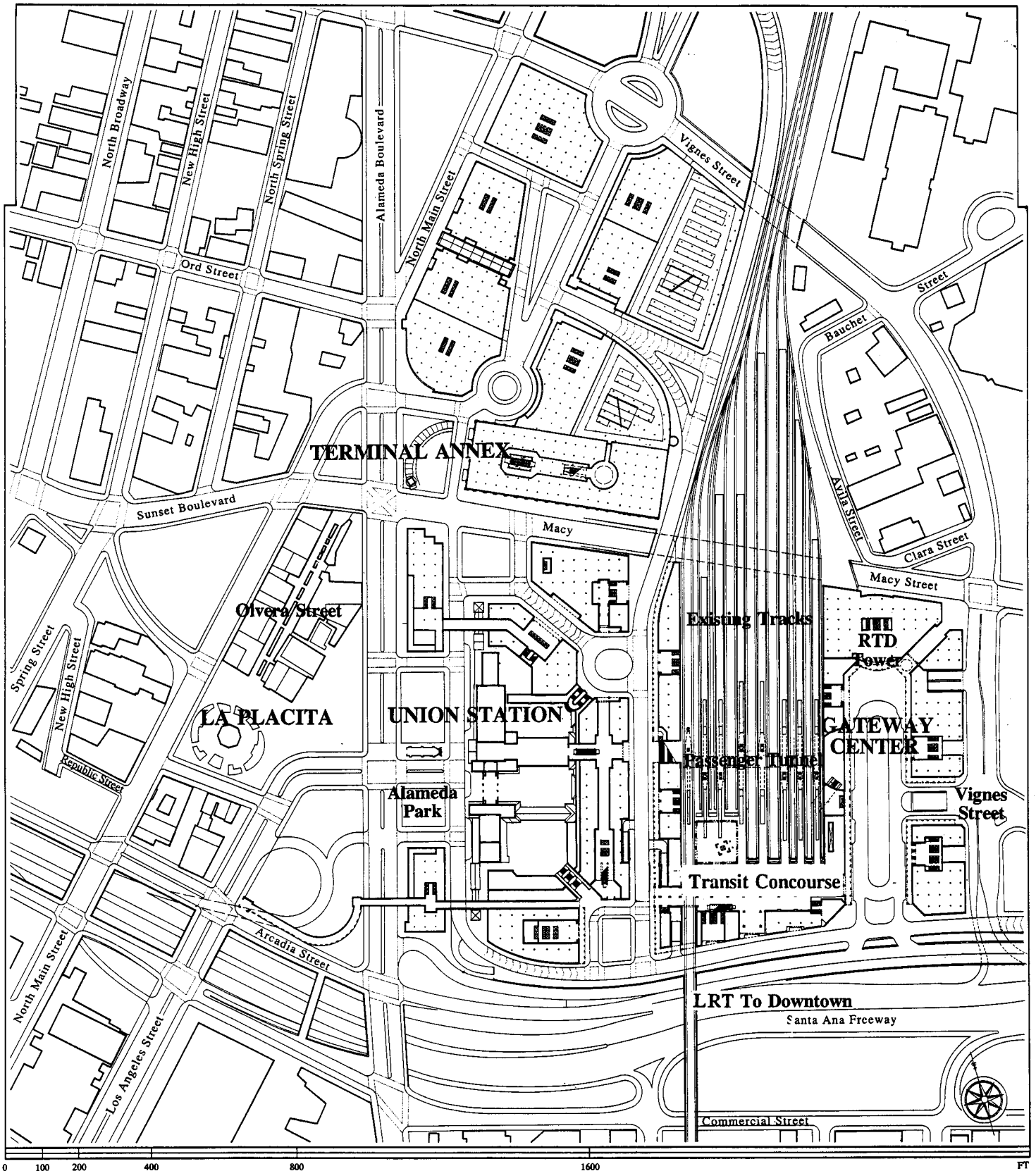
DISTRICT PLAN

0' E.L. Plan

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Figure 4C



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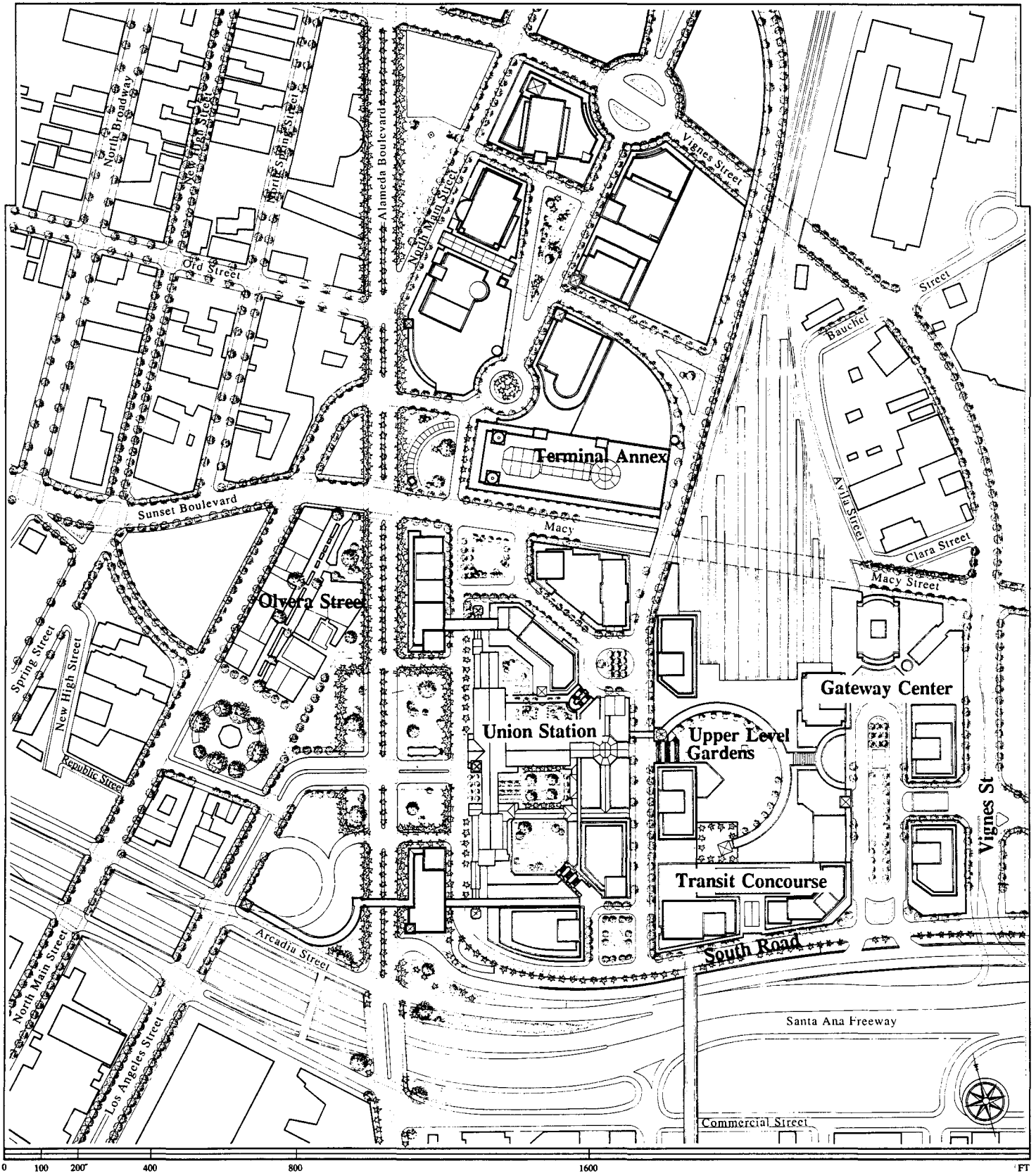
D I S T R I C T P L A N

El. +20 Plan

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Figure 5



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DISTRICT PLAN

Illustrative Site Plan

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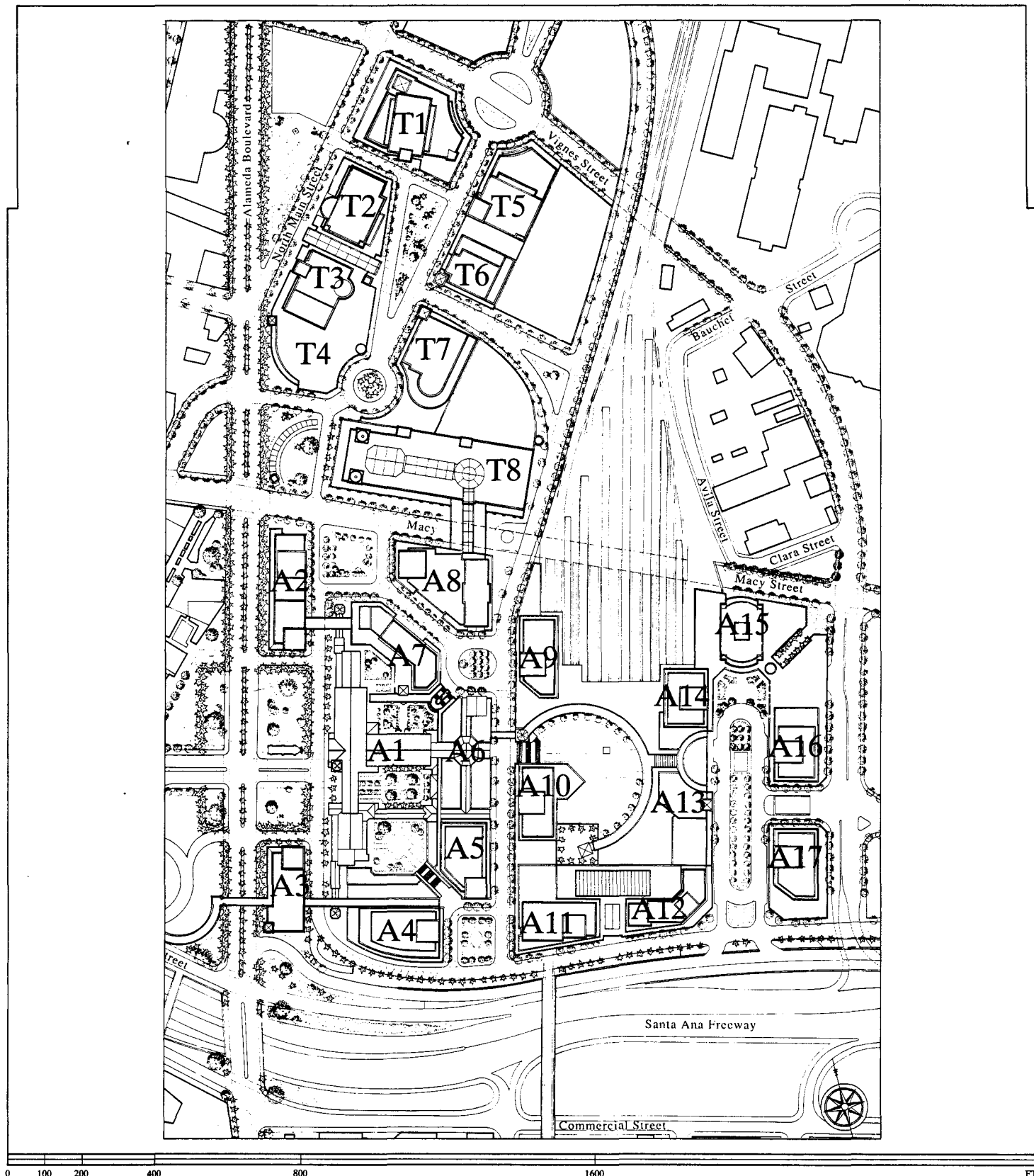
B) Proposed Land Uses

The draft master plan concept proposes the following land uses on the Union Station parcel (See fig. 6,7,8):

- 1) Commercial and Government office space.
- 2) Institutional (Museums, etc)
- 3) General retail, commuter-serving retail, food and entertainment uses.
- 4) Hotels
- 5) Housing
- 6) Transit uses
- 7) Public open space
- 8) Parking, general building service areas.

This listing is preliminary. A parcel-by-parcel description of uses and building amounts is shown on fig.6, 7 and 8. The parcel characteristics and proposed development amounts are conceptual and subject to change. The plans depict general urban (not building) design and planning intent and are not meant to represent accurate project characteristics.

Figure 6



Parcel Plan

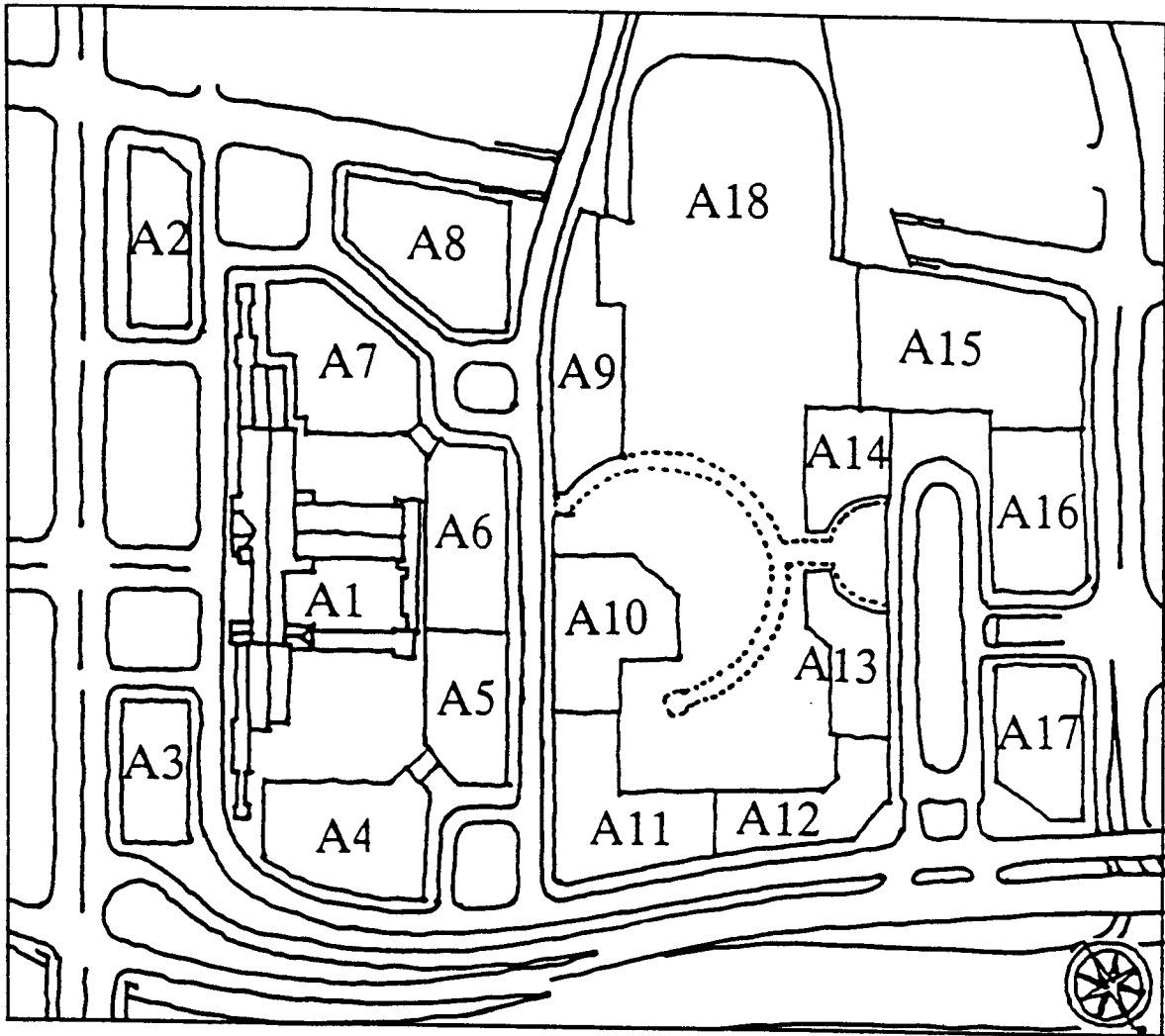
ALAMEDA

DISTRICT PLAN

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Figure 7



Parcel Areas

		<i>GSF</i>
A1	100,000	
Union Station		
A2	30,000	
Retail/Conf. C.		
A3	25,000	
Museum		
A4	42,000 - 25,000	
Office		
A5	30,000 - 25,000	
Office		
A6	40,000	
Retail		
A7	38,000 - 18,000	
Hotel		
A8	42,000 - 40,000	
Office		
Residential	20,500	
A9		30,000 - 23,000
Office		
A10		28,000 - 22,000
Office		
A11		40,000 - 24,500
Office		
A12		24,000 - 19,000
Hotel		
A13		28,000 - 14,000
Office		
A14		19,600
Office		
A15		40,000 - 18,500
RTD HQ		
A16		40,000 - 23,000
Office		
A17		35,000 - 24,000
Office		

DATA SUMMARY

Union Station Master Plan

<i>Development Parcels</i>	<i>Building GSF</i>	<i># of Floors</i>	<i>Typical Floor GSF</i>	<i>Parking at 1/1,000 sf Office 1/Rm Hotel 1/1,000 sf Retail</i>
A1 Union Station Retail	100,000	1	100,000	200
A2 Retail/Conf Hotel	90,000	3	30,000	90
A3 Museum	70,000	3	24,000	70
A4 Office	450,000	16	(L) 42,000 (U) 25,000	450
A5 Office	300,000	11	(L) 30,000 (U) 25,000	300
A6 Retail	80,000	2	40,000	160
A7 Hotel (300 rms)	350,000	15	(L) 38,000 (U) 18,000	300
A8 Office-Resid. (300 du)	600,000	24	(L) 42,000 (U) 20,500	600
A9 Office	540,000	23	(L) 30,000 (U) 23,000	540
A10 Office	400,000	18	(L) 28,000 (U) 22,000	400
A11 Office	675,000	25	(L) 40,000 (U) 24,000	675
A12 Hotel (450 rms)	550,000	31	(L) 24,000 (U) 19,000	500
A13 Office	185,000	7	(L) 28,000 (U) 14,000	185
A14 Office	350,000	19	19,600	350
A15 RTD HQ	600,000	29	(L) 40,000 (U) 18,500	800
A16 Office	760,000	31	(L) 40,000 (U) 23,000	760
A17 Office	900,000	36	(L) 35,000 (U) 24,000	900
Total	7,000,000			7,280

C) Identification of principal transit interface areas and linkages

Existing Conditions:

It is useful to review the existing conditions of the site. Figures 9, 10 and 11 illustrate the Union Station site in plan. The main features are listed below:

- 1) **Public parking lots (North and South) directly in front of LAUPT.**
- 2) **Los Angeles Union Passenger Terminal, the building and its associated courtyards and arcades.**
- 3) **Baggage Handling facility**
- 4) **Parking and support office facility and South ramp and associated parking areas.**
- 5) **REA building (to be partially re-constructed).**
- 6) **Existing passenger tunnel (to be re-constructed).**
- 7) **Existing rail platforms and tracks (some, disturbed by Metro Rail construction will be re-built).**
- 8) **West and East Entrance (Portal) locations.**
- 9) **Gateway construction area**
- 10) **El Monte Busway**

Figure 9

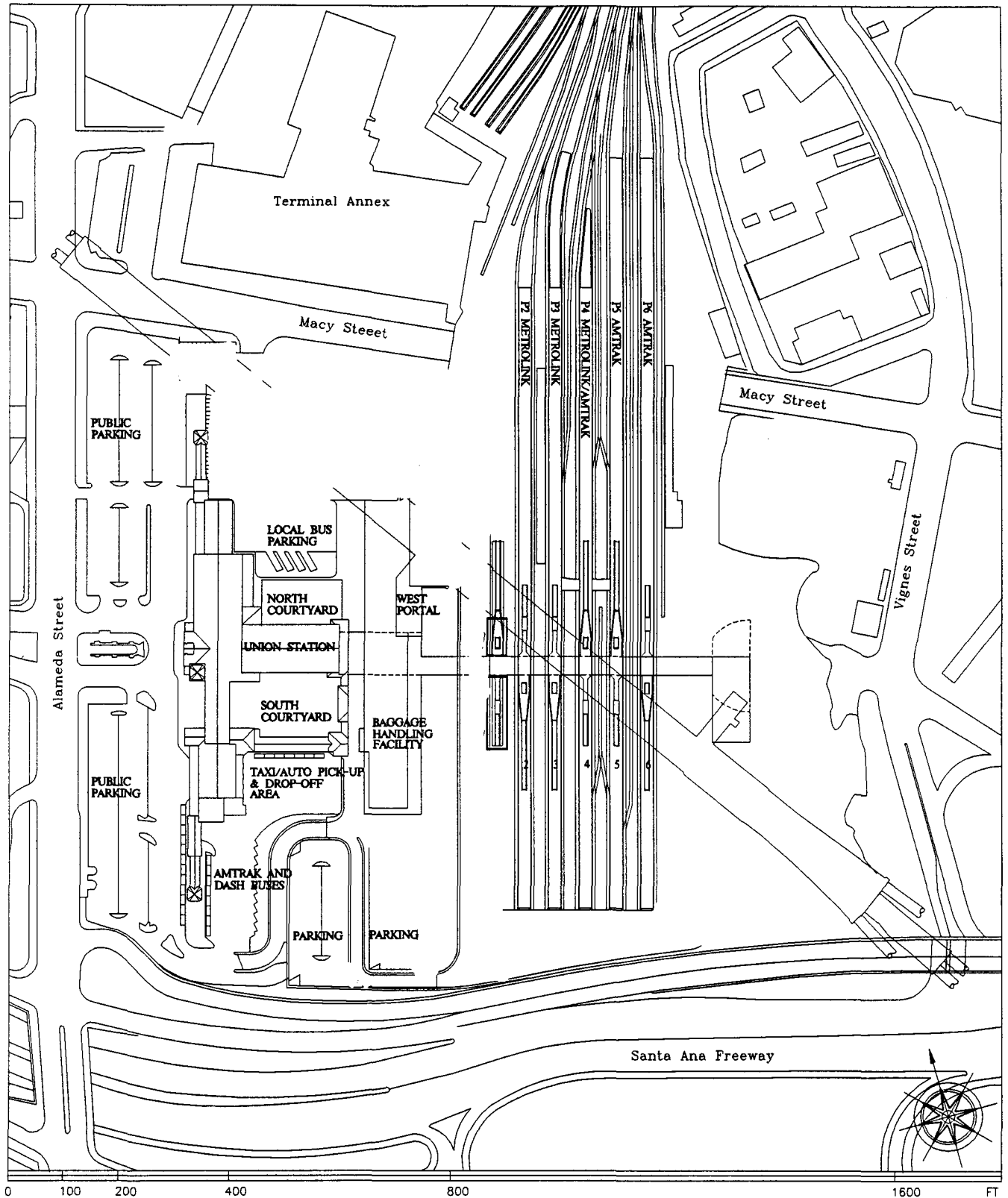


Figure 10

Transit Masterplan at Union Station

Aerial Photo: March 1992



Terminal Annex

Parking

MetroRail Construction

Macy St

Alameda St

MetroRail Red Line Station

Construction Site Future Gateway

Vignes St

Union Station

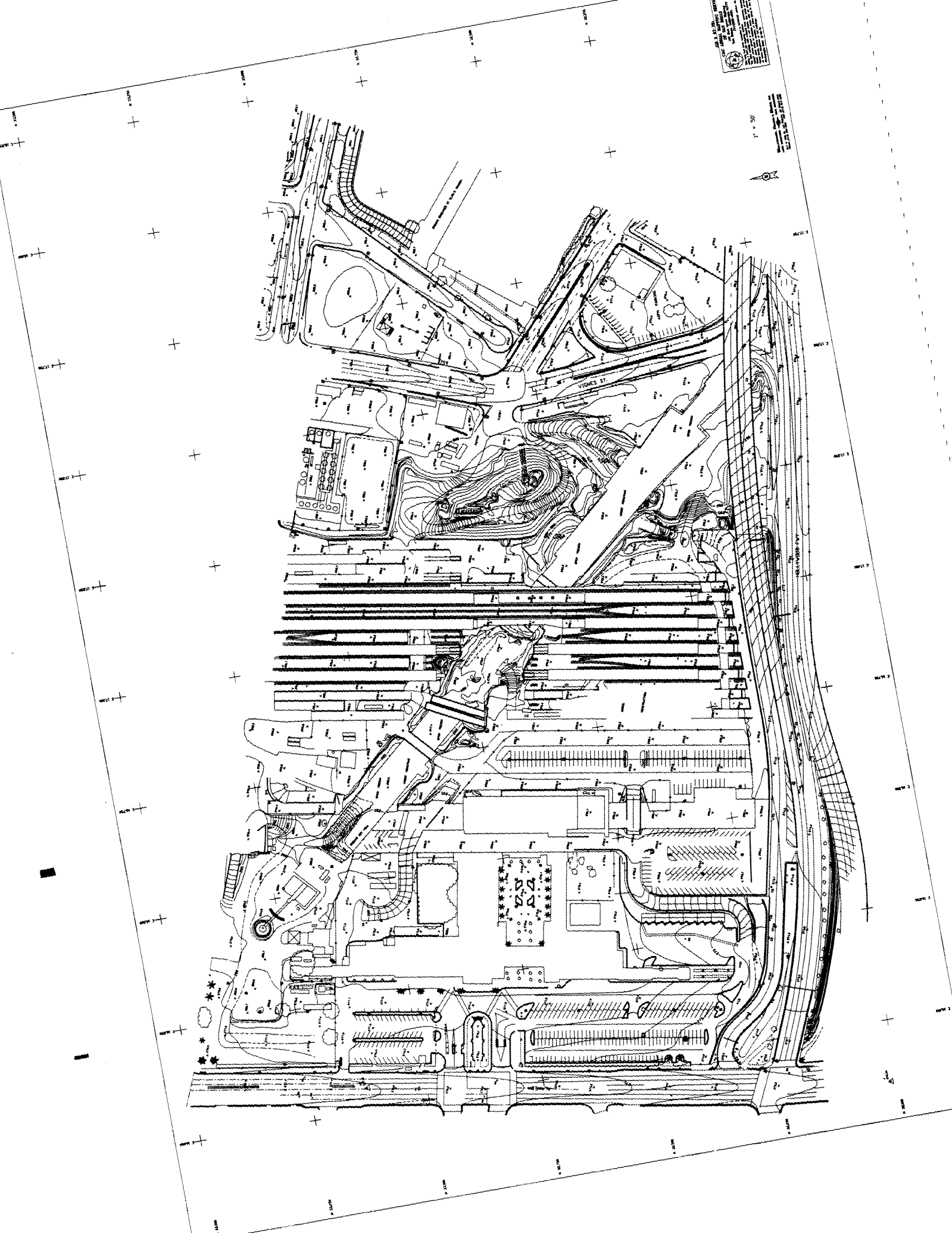
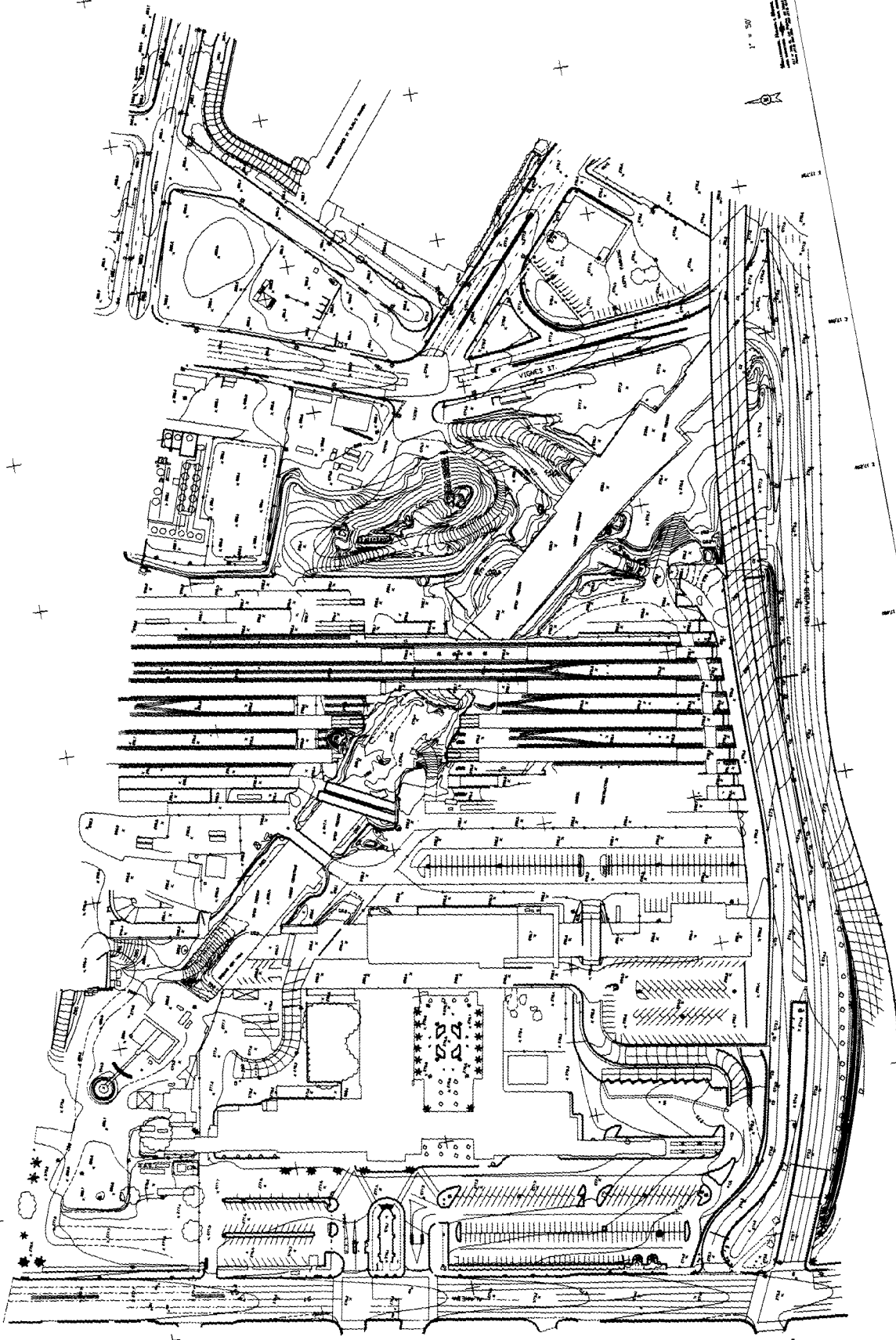
MetroRail Construction

Parking

Hollywood Fwy

Scale: 1" = 50'
North Arrow
Date: 1968
Sheet No. 1 of 1

1" = 50'



Transit Interface Areas:

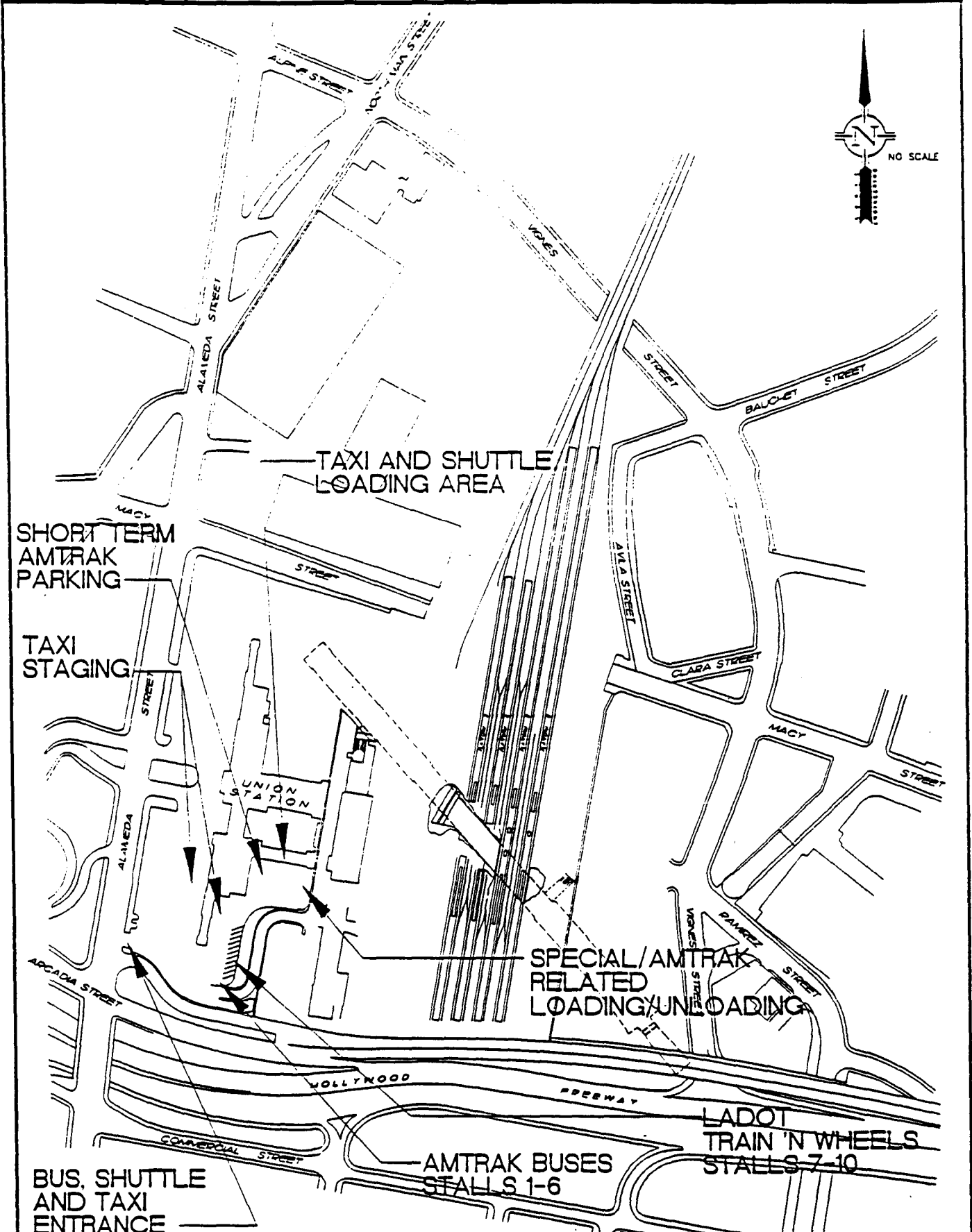
For the purposes of this study transit interface areas are defined as places where transit and people meet, to transfer to other modes or simply for reasons of access.

Key to these transfer points are vertical circulation systems (stairs, ramps, elevators and escalators) to connect three primary activity levels:

- 1) -40' Level: Metro Rail
- 2) 0' Level: Street, taxi, bus, auto and pedestrians
- 3) +15' Level: Heavy, light rail, auto, bus, pedestrians.

The transit operations already in place, such as Amtrak, use certain areas at the Union Station site for interface purposes. The following is a list of these areas, refer to figure 12 .

- 1) The existing rail platforms, the passenger tunnel and related platform ramps are used to take commuters from their Amtrak and commuter trains the LAUPT.
- 2) Taxi, shuttle and auto pick-up and drop-off. Located within a "motor courtyard" accessible from Alameda Street and the Union Station parking lots.
- 3) Amtrak Express, LADOT Dash, LADOT Commuter Express LADOT Train'n Wheels and other bus services.
- 4) El Monte Busway SCRTD stop off Hollywood Freeway at Union Station.
- 5) SCRTD Bus stops in the vicinity of the site.



Korve Engineering

FILE NAME: 1071.DWG

UNION STATION BUS/RAIL INTERFACE PLAN

TAXI, SHUTTLE AND AMTRAK LOADING AREAS

FIGURE 28

D) Union Station Construction Plans

The Union Station site will undergo considerable transformations as a result of both the construction of new transit services and the implementation of the Alameda Plan. The section "Development-related construction at Union Station" lists projects that are proposed for the Union Station site at this writing. These projects are likely to change in the course of project development and as a response to market conditions.

1) Transit-related Construction

Four major transit services are planned to be operating by FY 1997, and all of them have required some level of new construction at Union Station. The four rail modes are:

- a) Metro Rail Red Line (East and West)
- b) Metro Rail Blue Line LRT to Pasadena.
- c) Metrolink Commuter Rail service
- d) Amtrak passenger service.

Of these services only Amtrak is currently in operation. The construction activities for the other three services have caused temporary changes to Amtrak operations on the site. Much of the re-construction necessary was caused when existing facilities were disturbed to construct the Metro Rail Red Line station tunnel, which is now complete.

The transit-related improvements at Union Station respond to a coordinated strategy intended to accomplish the following:

- a) Allow the construction of the integrated transportation plan.

A key provision is the creation of a second "front door" for transit facilities oriented to the East.

- b) Achieve convenient intermodal connections over time as

new transit operations come on-line and the Alameda Plan is built.

The transit-related construction projects underway or planned at Union Station include:

- a) Reconstruction of the commuter rail tracks, platforms and platform ramps.
- b) Reconstruction of the Amtrak tracks, platforms and platform ramps.
- c) Reconstruction of the passenger tunnel below the commuter rail and Amtrak platforms.
- d) Reconstruction of the North ramp to the upper level and the REA building.
- e) Construction of temporary RTD Bus Facility and 300-space parking facility required by Metro Rail EIS.
- f) Construction of the Metro Rail West Portal and passenger connections to the Passenger Concourse Waiting Room.
- g) Construction of the Metro Rail Red Line East Portal and passenger connections to the passenger tunnel and Gateway Metro Plaza.
- h) Construction of the 2300 car Metro Rail park and ride facility at the East Portal.
- i) Construction of Gateway Metro Plaza.
- j) Re-alignment of Vignes Street in conjunction with Metro Plaza construction.

- k) **Reconstruction of tracks, platforms, platform ramps and passenger connections for the Metro Rail Blue Line LRT to Pasadena.**

Figure 13 shows the proposed transit systems. The chart (fig 14) provides a generalized timeline for the construction of transit-related improvements at Union Station.

2) Development-related construction at Union Station

In addition to transit operations, the Union Station site contains seventeen private development parcels (refer to figures 6,7, 8). The proposed parcel configurations, assigned land uses and development densities are conceptual in nature.

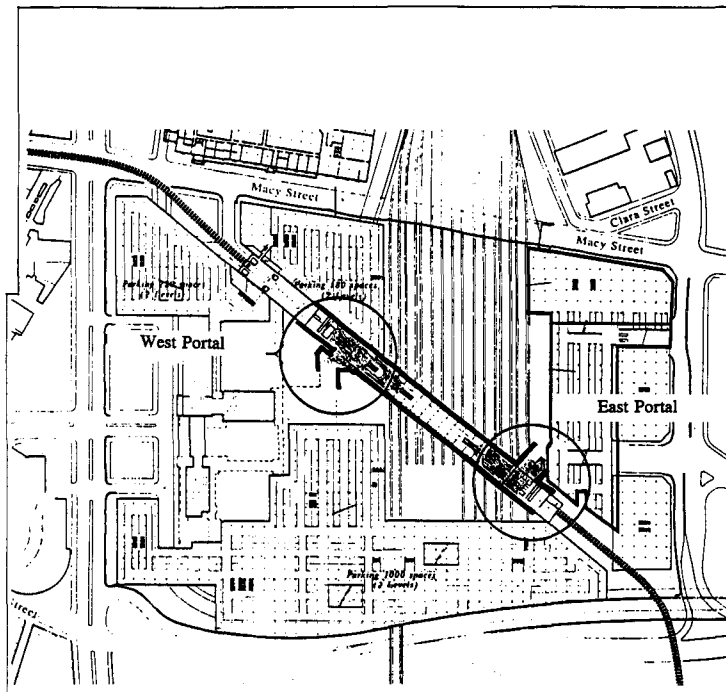
The Alameda Plan which guides the long-term development of the site proposes a 25- 30 year implementation program which coordinates transit and private development.

At present the Los Angeles regional economy continues in the current recessionary trend. The repercussions on the commercial office market have been particularly acute. A short-term reversal of this trend is unlikely.

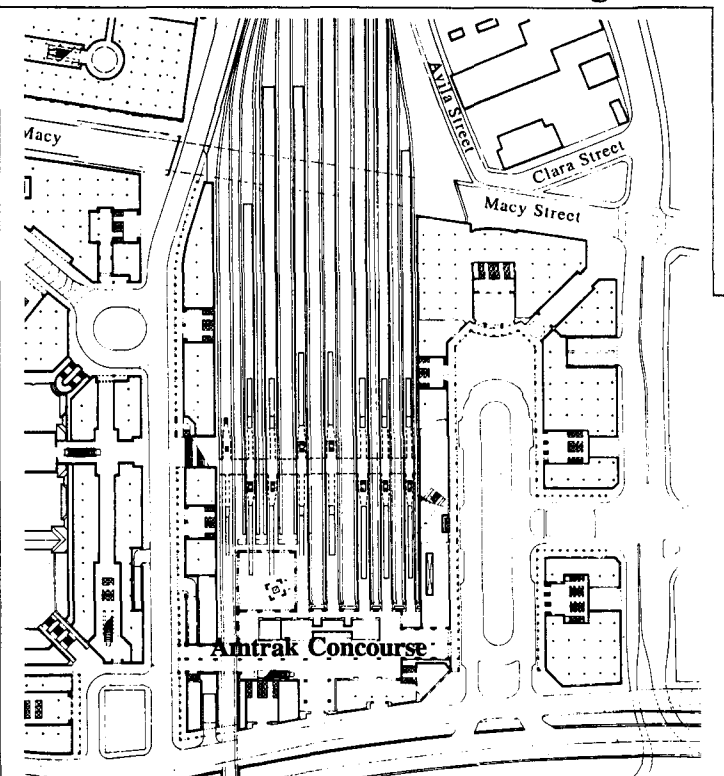
The above notwithstanding, it is expected that some private development-related construction will occur on the site in the near-term. Of the development sites being considered, the Gateway Center site east of Union Station will likely begin construction in late 1992 or early 1993.

Several major private developments are planned for the vicinity of Union Station which will add to the construction activity at various times. These include:

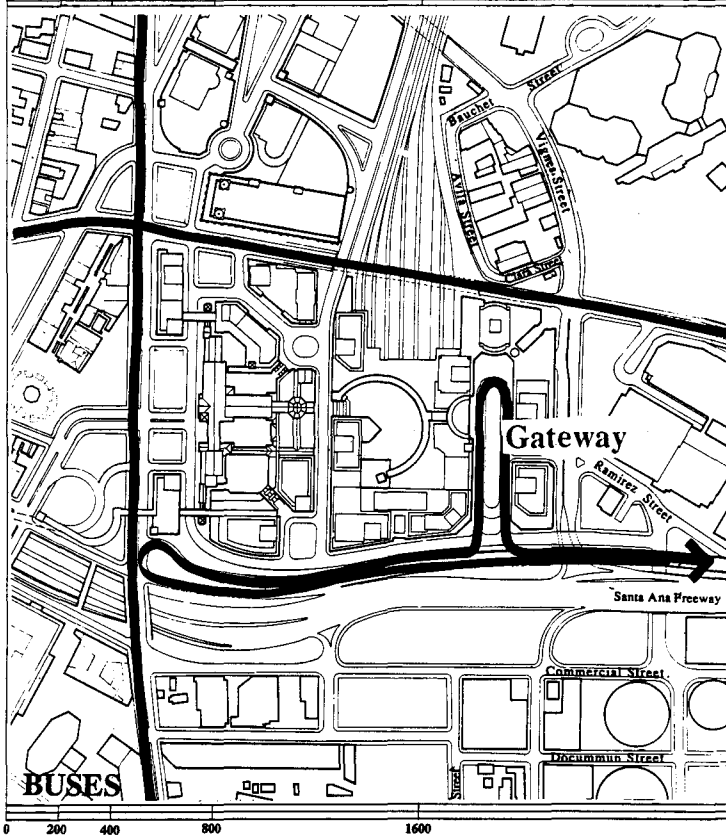
- a) **Government uses are planned for the Terminal Annex site, just north of Union Station.**



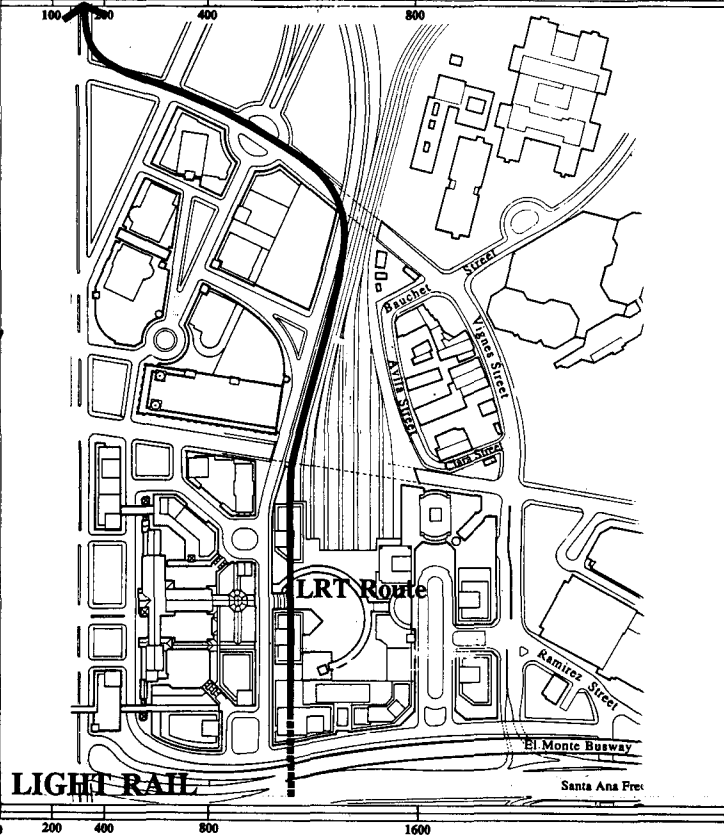
METRORAIL RED LINE STATION



AMTRAK / COMMUTER CONCOURSE



BUSES



LIGHT RAIL

ALAMEDA

DISTRICT PLAN

Transit Systems

Ehrenkrantz & Eckstut Architects

October 1991

TRANSIT IMPROVEMENTS AT UNION STATION • GENERALIZED TIMELINE

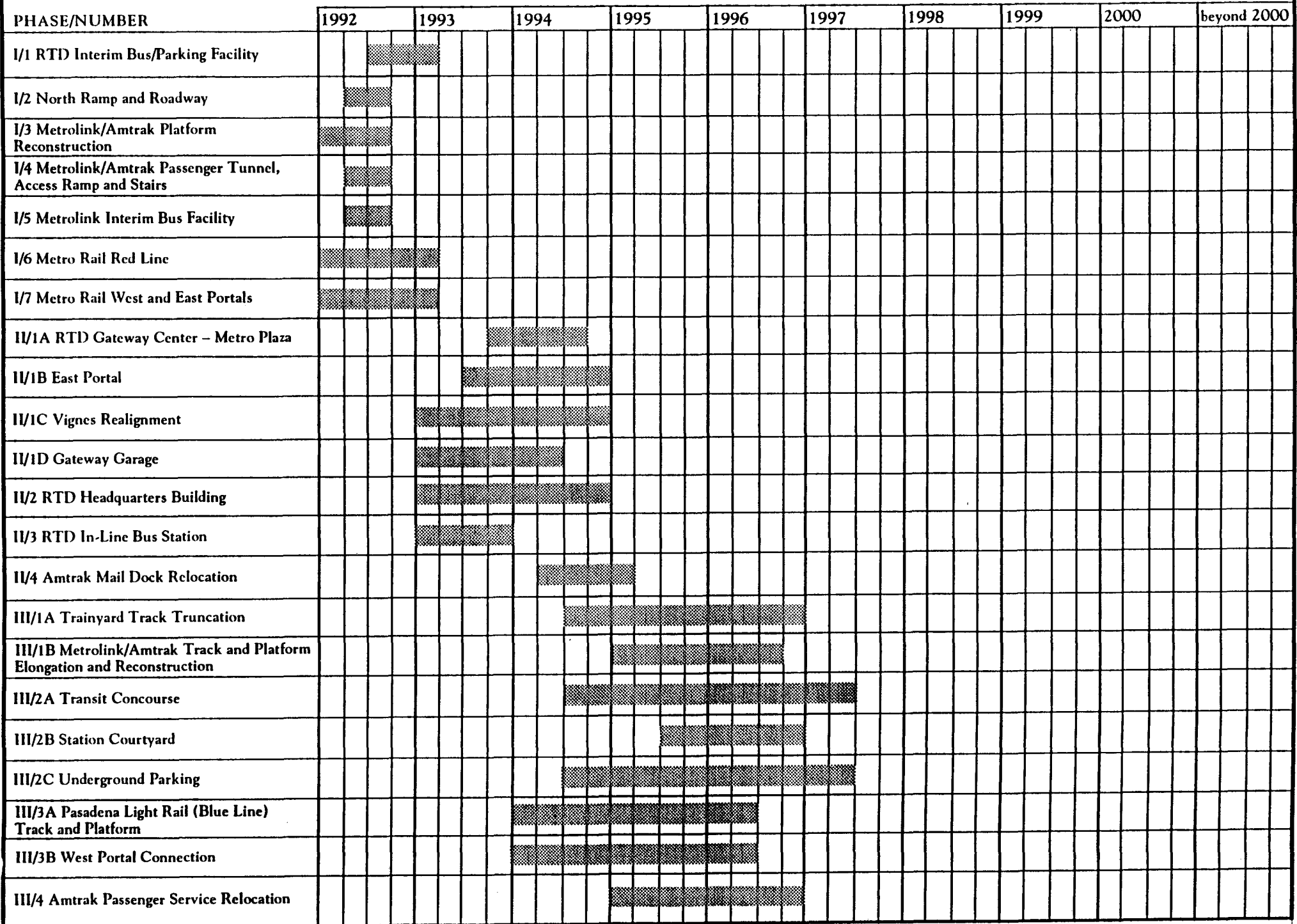


Figure 14

- b) The SCRTD Headquarters Tower at Gateway Center will be built just east of the existing tracks, at the north end of Metro Plaza at the corner of Macy and Vignes Streets.
- c) The Alameda Plan, a comprehensive long-range plan for the area roughly bounded by Alameda Street on the west, Vignes Street on the north and east and the Hollywood/Santa Ana Freeway to the south.

V Proposed preliminary phasing of construction and transit-related infrastructure at the Union Station site

The following section will establish a preliminary phasing approach for the construction of all improvements on the Union Station site with special emphasis on the transit-related infrastructure improvements. Again, because of the high degree of interrelatedness of the Alameda Plan components it is best to give an overview of the totality.

Diagrams 15 through 21 will serve to illustrate the proposed approach to the phasing of key construction events. The specific transit-related infrastructure improvements will be shown as footnotes to the plan and are shown in pink/purple.

METROLINK COMES TO UNION STATION 1992

Beginning October 1992, Metrolink service will connect Union Station with Moorpark, Santa Clarita and Pomona, adding 4,000 passengers to the 5,000 - plus Amtrak riders already flowing through Union Station on a daily basis. An estimated two-thirds of Metrolink's commuter passengers will require connections to the 20 city bus lines that pass Union Station, as well special bus services to downtown and other central locations.

This phase focuses on reconstructing the trainyard for increased usage and improving passenger access between the rail and surface transportation services (bus/shuttle/taxi/auto), and connections to the 20 city bus lines that pass Union Station, as well as special bus services to downtown and other central locations.

Signage, ticketing and limited passenger service facilities will also be provided at track level or in convenient locations at Union Station during this phase.

PUBLIC TRANSIT ACTIVITY

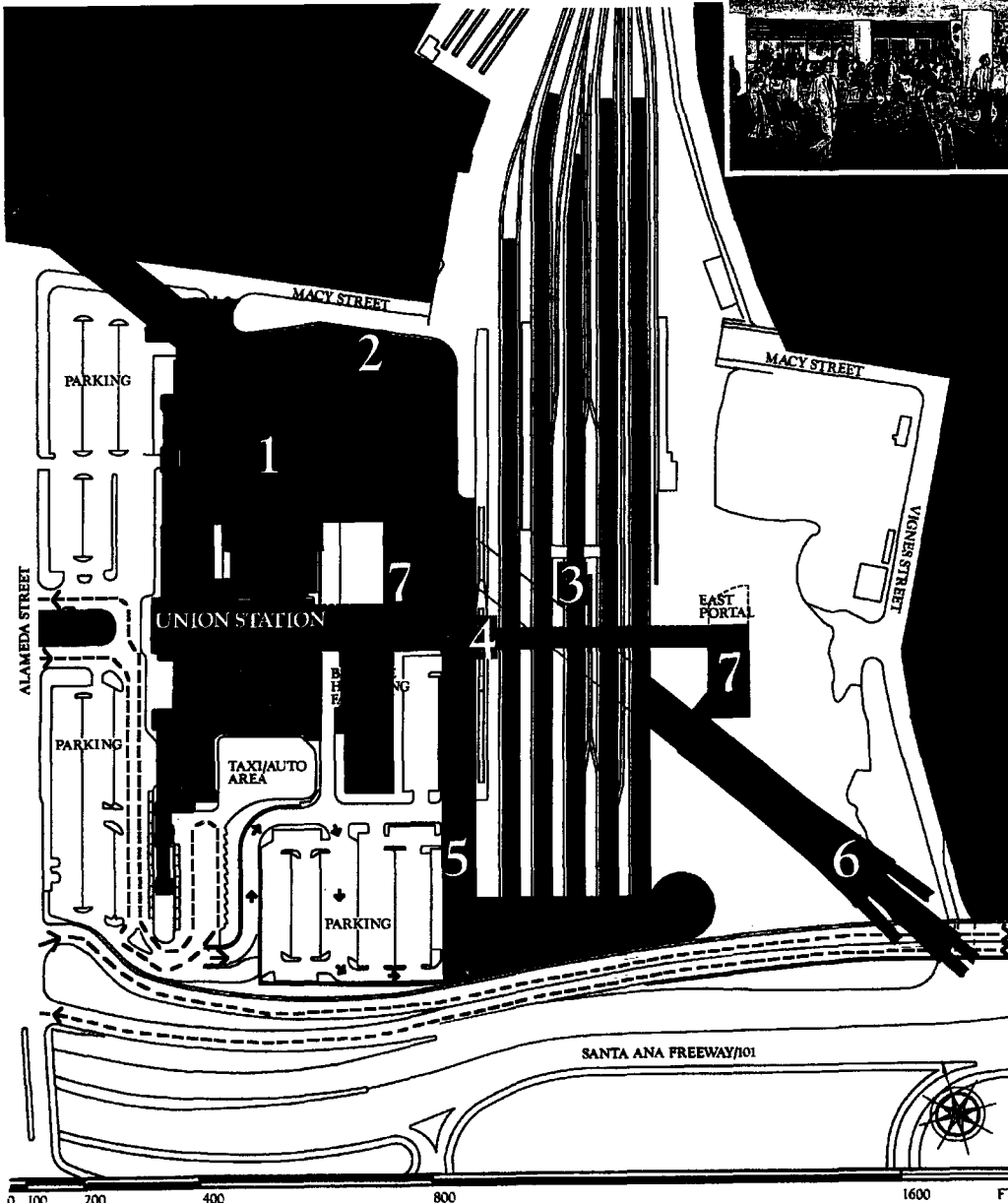
Metrolink starts October 26, 1992 - 4,000 passengers daily
Amtrak service expanded - 10,000 passengers daily

1. **RTD Interim Bus/Parking facility**
Pick-up and parking area for commuters transferring to RTD bus routes, beginning October 1992.
2. **North Ramp and Roadway**
Infrastructure required for access by Metrolink and Metro Rail bus systems.

3. **Metrolink/Amtrak Platform Reconstruction**
Five existing train tracks and platforms being rebuilt due to Metro Rail
4. **Metrolink/Amtrak Passenger Tunnel, Access Ramps and Stairs**
Existing passenger tunnel renovated, handicap-access ramps and stairs to the train tracks being built.
5. **Metrolink Interim Bus Facility**
Buses and shuttles accommodated at southwestern edge of passenger platforms for Metrolink commuters.
6. **Metro Rail Red Line**
Construction nearing completion on subway tunnel, 45 feet below ground.
7. **Metro Rail West and East Portals**
Two passenger entrances, the East and West Portals, to facilitate transfers to Metrolink, Amtrak and RTD bus services.

PHASE I

1992



- 1** RTD Interim Bus/Parking Facility
- 2** North Ramp and Roadway
- 3** Metrolink/Amtrak Platform Reconstruction
- 4** Metrolink/Amtrak Passenger Tunnel, Access Ramps and Stairs
- 5** Metrolink Interim Bus Facility
- 6** Metro Rail Red Line
- 7** Metro Rail West and East Portals

	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local Buses, Amtrak & DASH Buses, Metrolink Interim Buses, El Monte Busway

METRO RAIL COMES TO UNION STATION 1993-94

In March 1993, the Metro Rail Red Line, carrying 30,000 passengers per day, will arrive at Union Station from MacArthur Park and three downtown stations. In addition, two new Metrolink lines will arrive, carrying another 10,000 riders each day from Riverside and Orange Counties.

As it is estimated that 65% of the Red Line commuters will want to connect to Metrolink trains, facilities must be in place to transfer these riders both at the trainyard level and up from the subway to pedestrian thoroughfares and transfer facilities two levels above.

Total transit patronage at Union Station, including bus ridership, could reach 60,000 passengers daily by this phase.

PUBLIC TRANSIT ACTIVITY

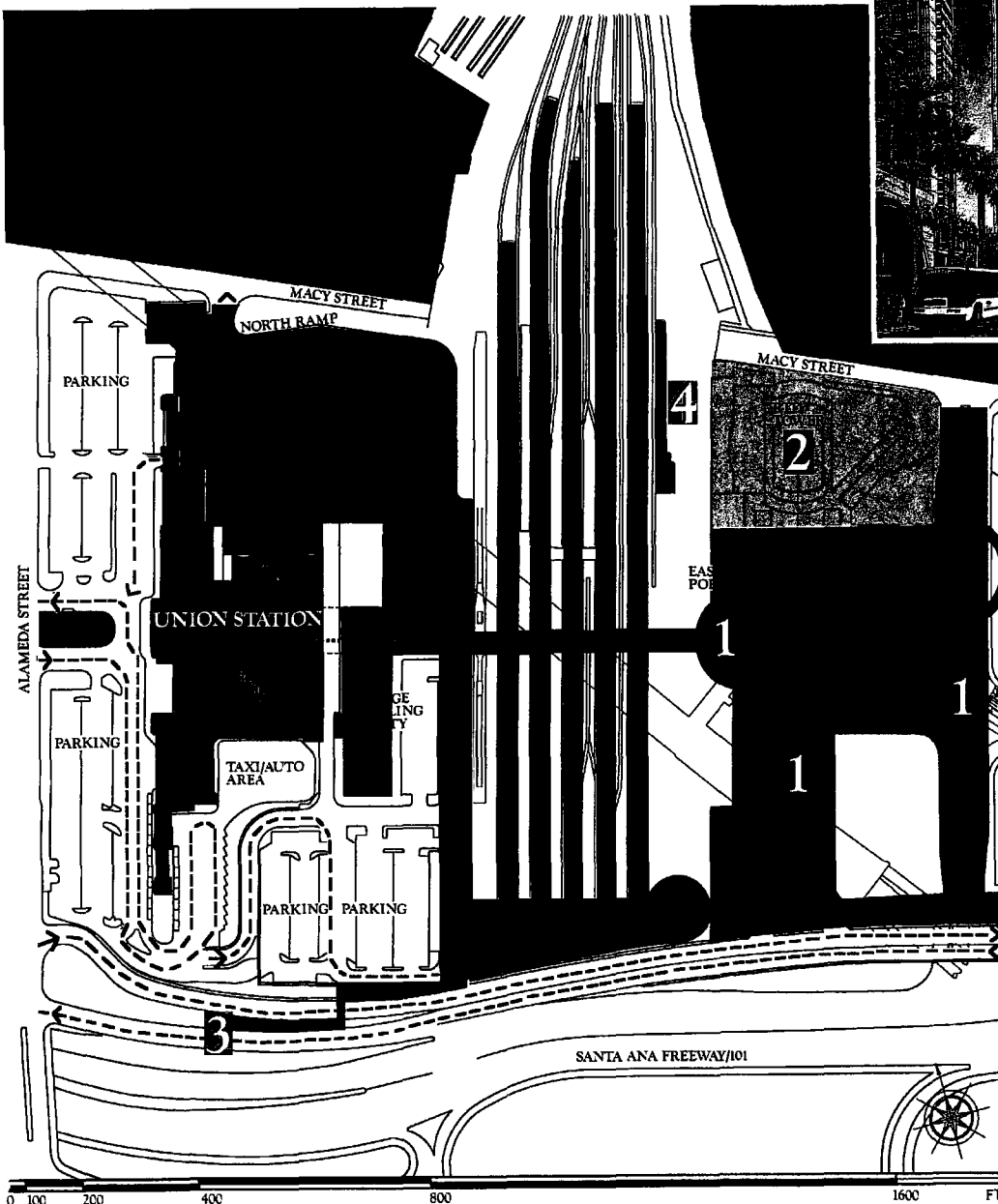
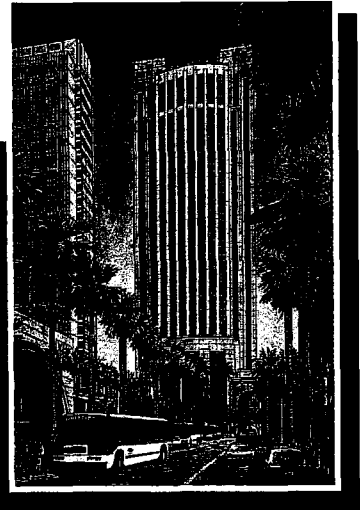
Metro Rail starts March, 1993 - 30,000 passengers daily
Metrolink expands to Riverside and Orange Counties - 10,000 passengers daily

1. **RTD Gateway Center - Metro Plaza, East Portal, Vignes Realignment, Garage**
Under construction is RTD's bus and passenger plaza for auto, bus and taxi pick-up and drop-off connections to Metro Rail, Metrolink and Amtrak. A 2300-stall Metro Rail park and ride facility is also underway.
2. **RTD Headquarters Building**
Offices and a 750-stall parking garage for 1300 SCRTD employees being built.

3. **RTD In-Line Bus Station**
El Monte Busway connection to Union Station from Santa Ana/101 Freeway.
4. **Amtrak Mail Dock Relocation**
Will be moved off-site to provide access to Tracks 7 and 8 for commuter rail service expansion.

PHASE II

1993-1994



- 1** RTD Gateway Center - Metro Plaza, East Portal, Vignes Realignment, Garage
- 2** RTD Headquarters Building
- 3** RTD In-Line Bus Station
- 4** Amtrak Mail Dock Relocation

	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local Buses and In-Line Bus Station, Amtrak & DASH Buses, Metrolink Interim Buses, El Monte Busway

PASADENA BLUE LINE COMES TO UNION STATION 1995-96

By 1995, Metro Rail and Metrolink will already be expanding their services through Union Station. The Metro Plaza at the Gateway Center will replace the interim Metrolink bus facilities, and Metro Rail passengers will be moving through the East and West Portals. The first building at Gateway Center will welcome its tenants, the RTD employees - and a second government office building could be under construction.

Daily, 100,000 passengers will pass through Union Station by this phase.

PUBLIC TRANSIT ACTIVITIES

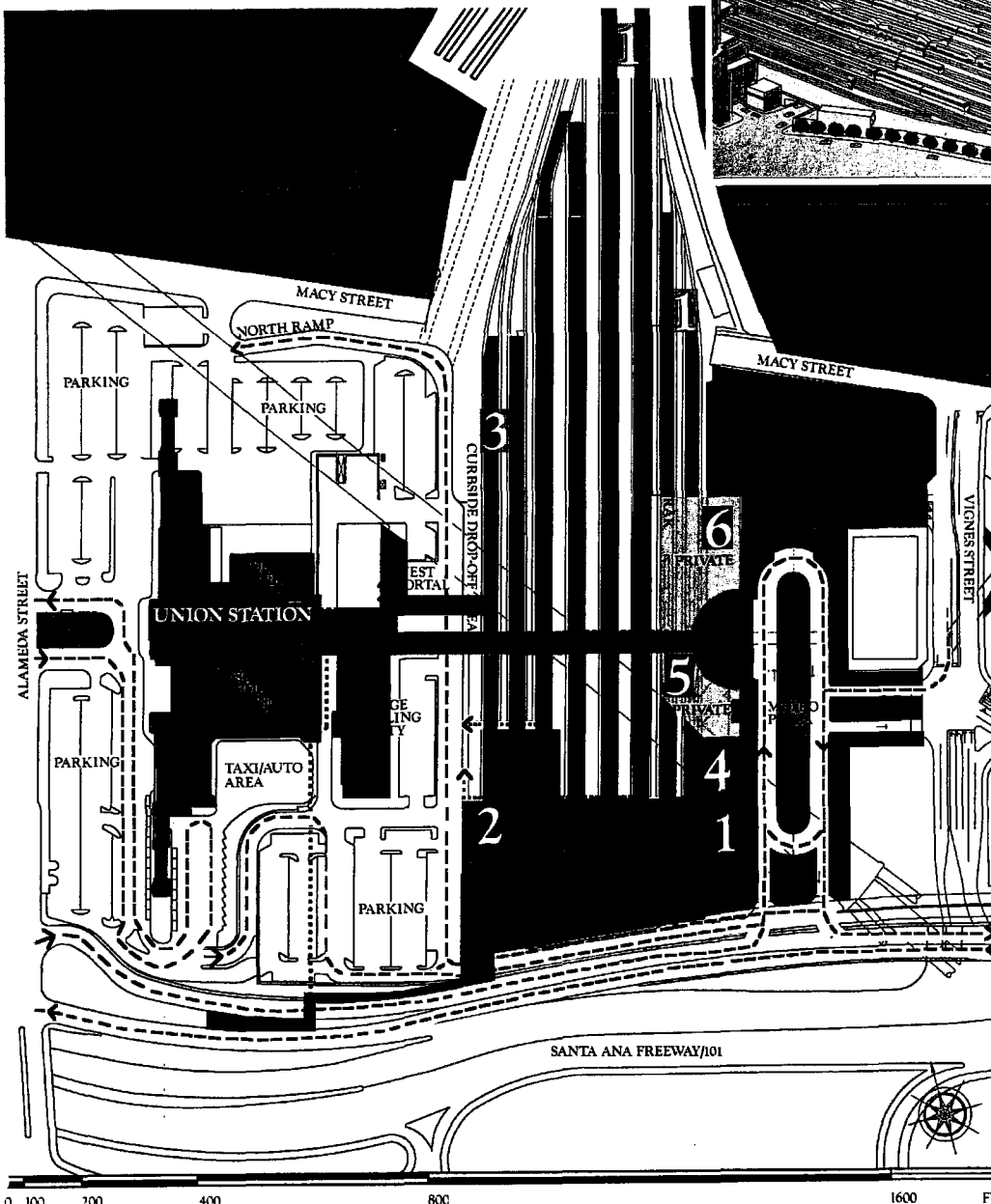
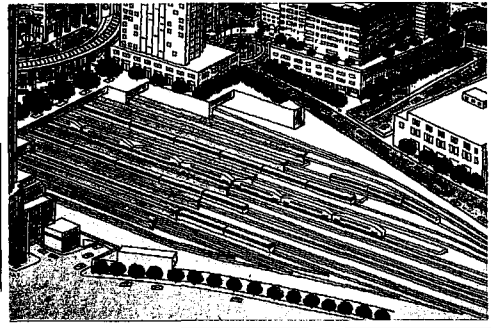
Pasadena Light Rail (Blue Line) arrives - 35,000 passengers daily
Metro Rail and Metrolink expand - additional 30,000 passengers daily
Amtrak expands - additional 3,000 passengers daily
Metro Plaza operational - 4,000 bus riders daily

- 1. Trainyard Track Truncation; Metrolink/Amtrak Track and Platform Elongation and Reconstruction**
Northward extension and truncation at southern end permits required changes to tracks and platforms for expanded Amtrak and Metrolink service.
- 2. Transit Concourse; Station Courtyard; Underground Parking**
Adds ticketing, information and waiting areas and increased convenience for transferring passengers.
- 3. Pasadena Light Rail Track and Platform; West Portal Connection**
Addition of track and platform for Pasadena commuters; direct connection through West Portal to avoid congestion in passenger tunnel.

- 4. Amtrak Passenger Service Relocation**
Relocate from the west end of the passenger tunnel to the southern end of the trainyard to facilitate transfers between Metrolink and Metro Rail and increase operating efficiency for Amtrak by placing all services at track level.
- 5. Potential Amtrak Office Space Relocation**
Consolidation of Amtrak office space needs on east side of the trainyard could occur in conjunction with the Passenger Service relocation.
- 6. Potential Second Gateway Building**
Potential development of public agency or private office building.

PHASE III

1995-1996



- 1** Trainyard Track Truncation; Metrolink/Amtrak Track and Platform Elongation and Reconstruction
- 2** Transit Concourse; Station Courtyard; Underground Parking
- 3** Pasadena Light Rail (Blue Line) Track and Platform; West Portal Connection
- 4** Amtrak Passenger Service Relocation
- 5** Potential Amtrak Office Space Relocation
- 6** Potential Second Gateway Building

	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local Buses and In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

**SURFACE TRANSPORTATION SYSTEMS FACILITATED;
PRIVATE DEVELOPMENT COMMENCES AT UNION STATION
1997-98**

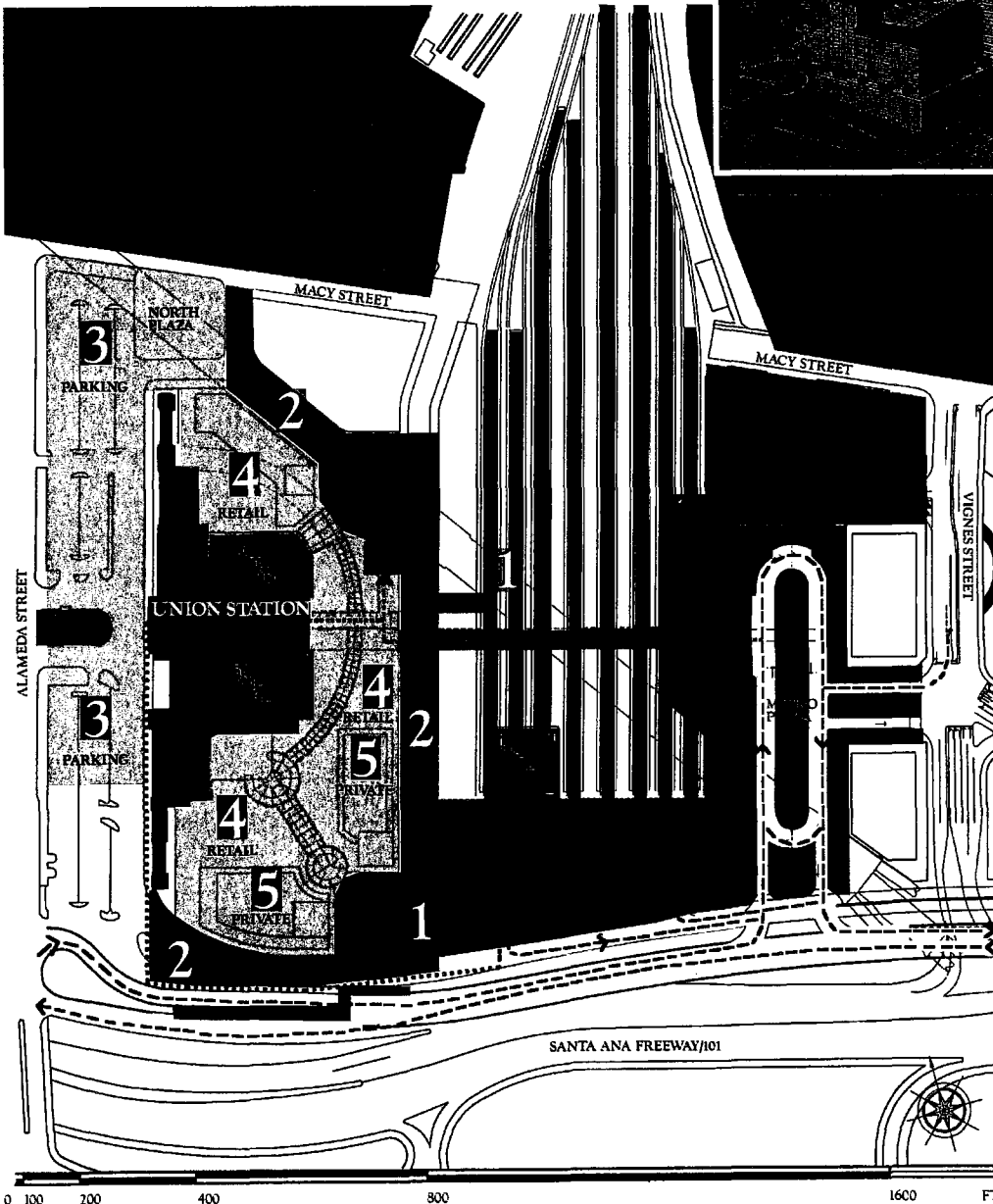
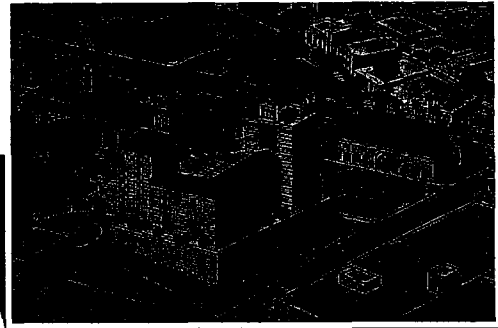
This phase begins private development at Union Station, as the Gateway project continues to expand, and the front of Union Station is configured for retail and office uses.

If sufficient market demand exists and government approvals are in place, two parcels could be available for approximately one million square feet of private development. In addition, a specialty retail center is contemplated to provide 250,000 to 350,000 square feet of space with a significant proportion for food and restaurant uses. To serve additional private development demands, a significant underground parking garage adjacent to Alameda Street would be put in place.

-
1. **Amtrak Bus/DASH/Taxi/Shuttle Facility**
Relocate Taxi and Auto, DASH and Amtrak Bus pick-up sites to underground facility that will connect via escalator to transit concourse; addition of separate parking facility at pedestrian tunnel level to provide transit concourse access.
 2. **Upper Level Roadway Extension (College Street); South and West Plazas**
A transitway above and across middle of the site, this will facilitate all rail and surface transportation system interconnections, including auto drop-off.
 3. **Potential Underground Parking Facilities; North Plaza**
Adjacent to Alameda Street to accommodate additional private development demands.
 4. **Potential Private Development Retail Center**
Potential 250,000 to 300,000 square-foot retail center.
 5. **Potential Private Development Buildings**
Potential development of one million square feet on two parcels.

PHASE IV

1997-1998



- 1** Amtrak Bus/DASH/Taxi/Shuttle Facility - Underground
- 2** Upper Level Roadway Extension (College Street); South and West Plazas
- 3** Potential Underground Parking Facilities; North Plaza
- 4** Potential Private Development Retail Center
- 5** Potential Private Development Buildings

	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

BLUE LINE EXTENDS FROM UNION STATION TO DOWNTOWN 1999-2000

Metro Rail and the Pasadena Blue Line complete their circle in this phase, as they link the remaining communities to and through Union Station. The Blue Line will be extended to Downtown, and complete the link between the region's first transit project and one of the last; Metro Rail will go the distance, and extend to the east and west side communities.

In this phase, a transit concourse, spanning the southern end of the site, along with the East Portal connection through to the Metro Plaza, will accommodate over 250,000 people daily, in one of the most outstanding, user-friendly transit centers in the United States. The new age of mass transit in the region - with all of its possibilities - is now complete.

Provided employers, hoteliers and restaurateurs find Union Station the attractive, convenient hub and destination that planners predict, private development could accelerate in this phase. A second office building could be added next to the RTD building at the Gateway Center. Also envisioned is the development of a small 250 room hotel and conference facility. Functionally and architecturally integrated with the historic Union Station, the hotel is conceived as a gracefully terraced new building that reuses the grand ticket concourse as the main lobby or a ballroom for the hotel, while providing views of the landscaped North Patio and downtown Los Angeles.

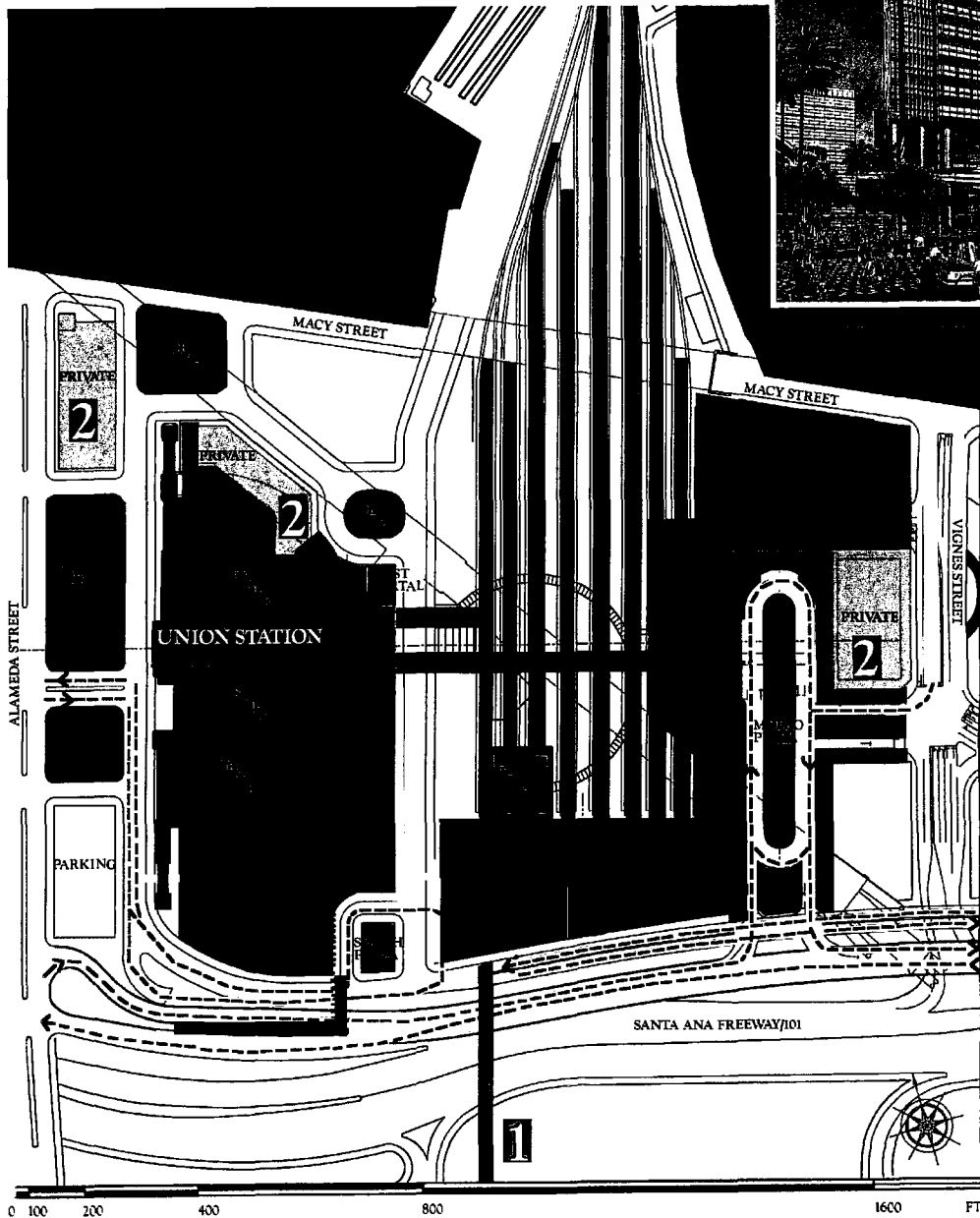
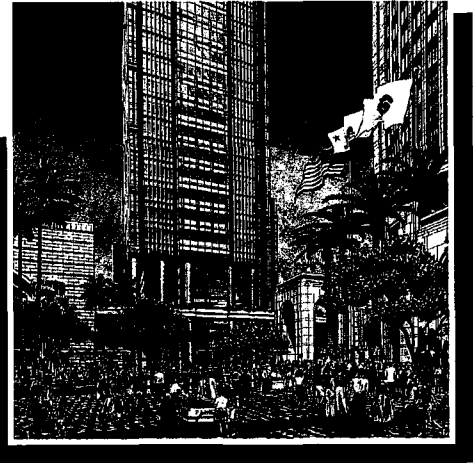
PUBLIC TRANSIT ACTIVITIES

Pasadena Light Rail (Blue Line) extends to Long Beach - additional 35,000 passengers daily

1. **Pasadena Light Rail (Blue Line) Extension to Downtown**
Connect Pasadena to Long Beach, via Union Station and Downtown
2. **Potential Private Development Buildings/Hotel**
Potential office building, small hotel and conference facility under consideration.

PHASE V

1999-2000



- 1** Pasadena Light Rail (Blue Line) Extension to Downtown
- 2** Potential Private Development Buildings/Hotel

	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

UNION STATION 2000 - 2009

Beyond the year 2000, additions to the three primary transit systems are scheduled to link at Union Station.

Glendale and Burbank will add stations on the light Rail lines. The Metro Rail Orange line will connect the eastern most communities of the region. And Metrolink will expand service frequency, bringing more than 100 commuter trains to Union Station each day.

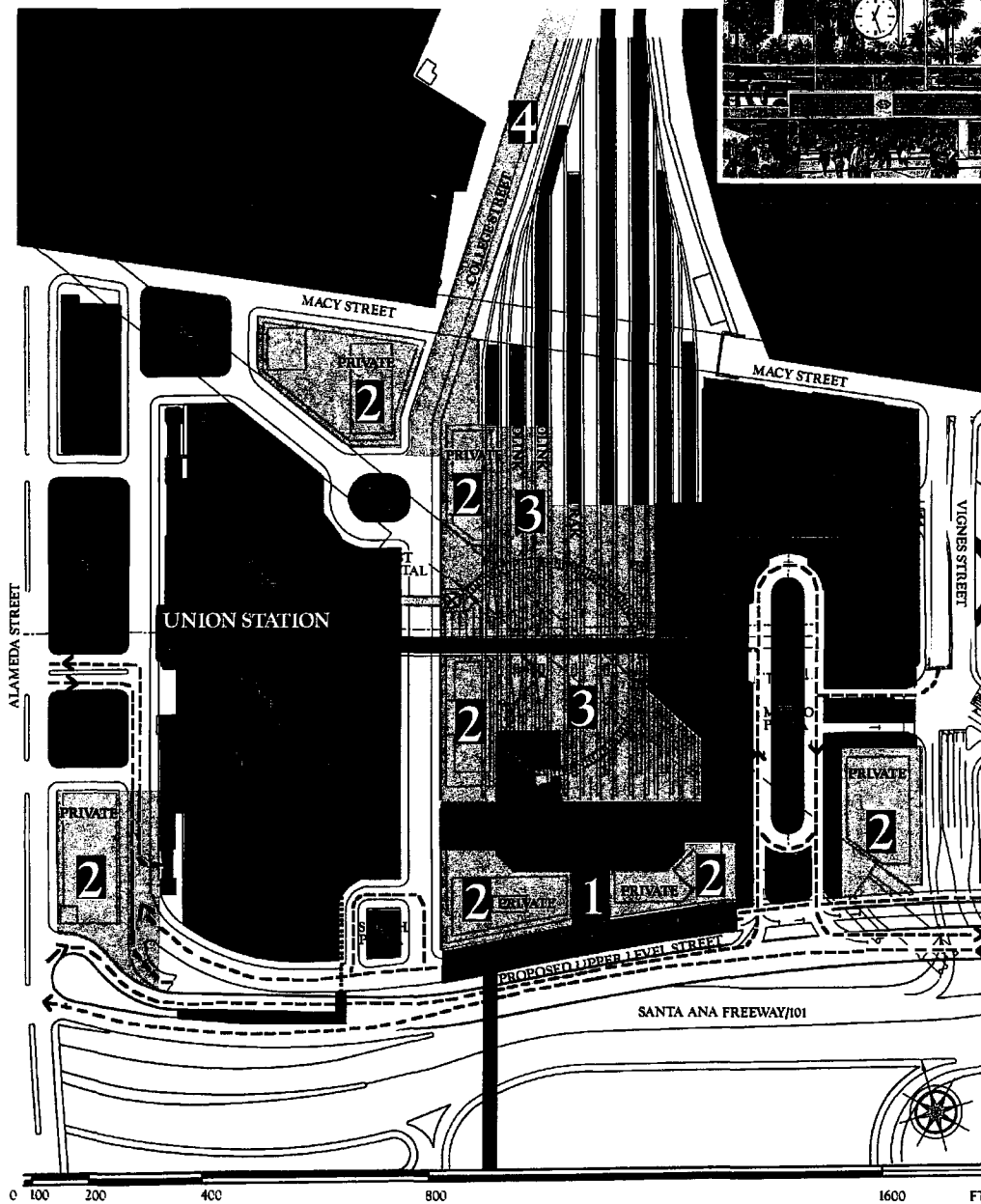
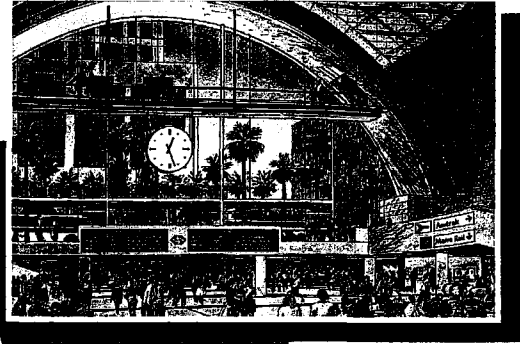
PUBLIC TRANSIT ACTIVITIES

Glendale and Burbank Light Rail Stations added
Metro Rail Orange Line completed
Metrolink expands frequency

- 1. Upper Level South Roadway; Transit Concourse Connection**
Auto drop-off will be facilitated for growing commuter population.
- 2. Potential Private Development Building, Hotel, Residential; Internal Roadway**
- 3. Gardens Above Trainyard**
- 4. College Street Extension**
Extension from Alameda Street/College Street intersection to Union Station.

PHASE VI

2000-2009



- 1** Upper Level South Roadway; Transit Concourse Connection
- 2** Potential Private Development Building, Hotel, Residential; Internal Roadway
- 3** Gardens above Trainyard
- 4** College Street Extension

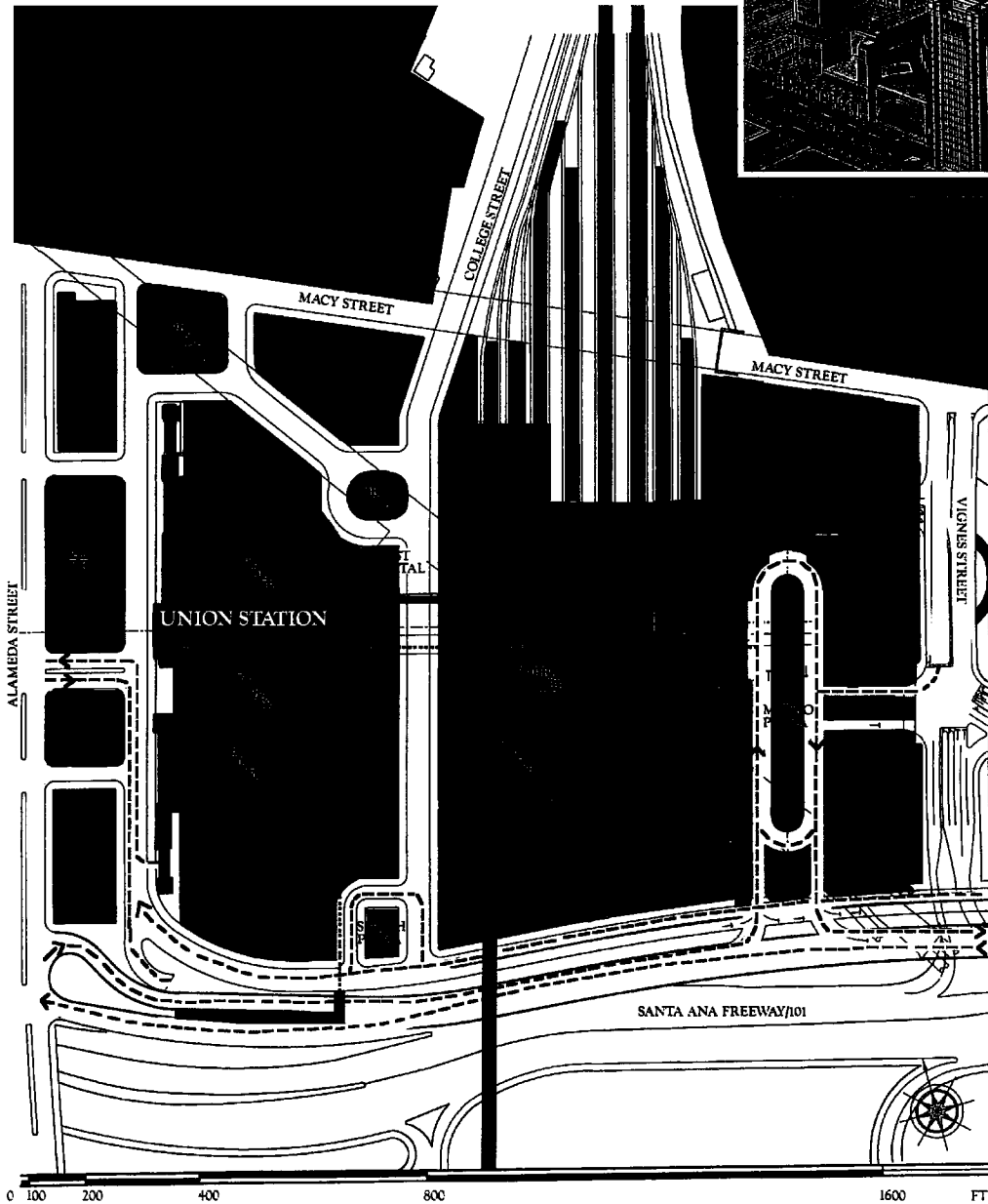
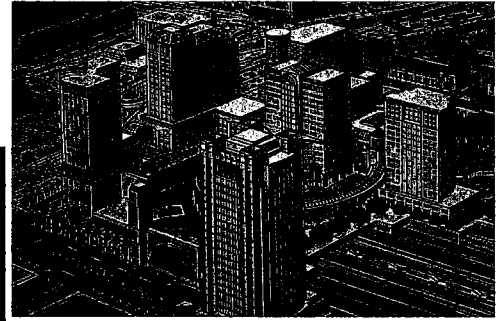
	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

**UNION STATION
THE YEAR 2010**

At build-out, Union Station will include 6 to 7 million square feet of private uses, and more than 30 acres of public uses including transit and 12 acres of space in ten parks, gardens and plazas.

The ultimate vision for Union Station is one of an integrated public transit facility on three levels - connecting to and through private development - providing residents and visitors safe, attractive and convenient places to work, walk live, shop, browse, commute - and enjoy this 21st century gateway to our city.

UNION STATION THE YEAR 2010



0 100 200 400 800 1600 FT

	Existing Public Transit Development
	Existing Private Development
	Open Space
	Pedestrian Connections
	Bus Lines - Surface and Underground

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #I/1, I/2: Temporary RTD Bus/Parking Facility
North Ramp & Roadway

Location: North of Union Station, off Macy St

Linkages: Public parking, upper level roadway.

Comments: Part of "North End Restoration":
 - REA Building reconstruction
 - North Ramp
 - Upper and lower parking areas.

Projected Costs: _____

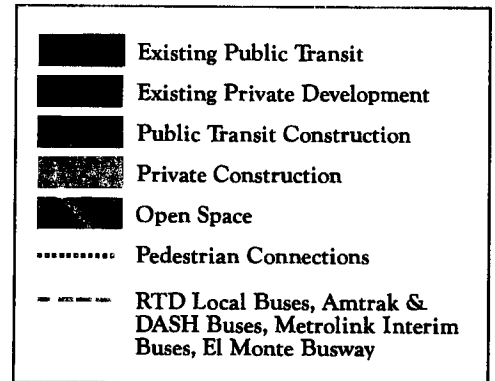
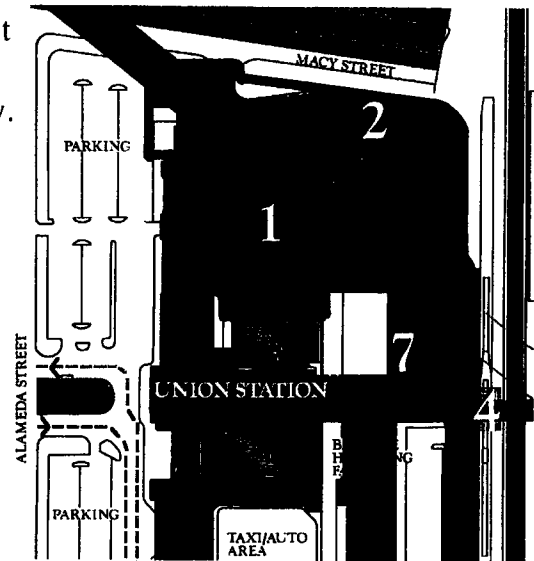
Assumptions:

1. Minimal interim facility
2. Controlled access for buses/ autos
3. Include lighting/ security, etc.
4. Required restoration of area

Area: Approximately

Cost: \$2,700,000

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #1/3, 1/4: Passenger tunnel, ramps and trainyard reconstruction

Location: Existing passenger tunnel, ramps and existing tracks/ platforms.

Linkages: MetroRail East Portal at Gateway Center Union Station West Portal. Also connects to Interim MetroLink Area via vertical circulator.

Comments: Part of "Passenger tunnel and trainyard restoration".

Projected Costs:

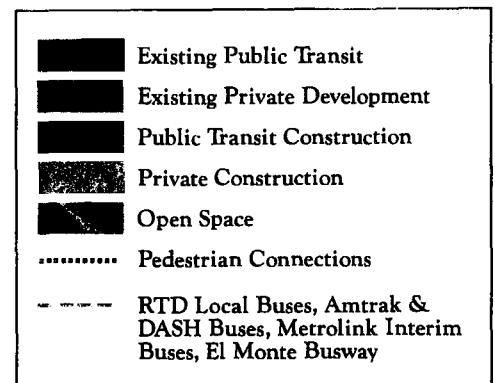
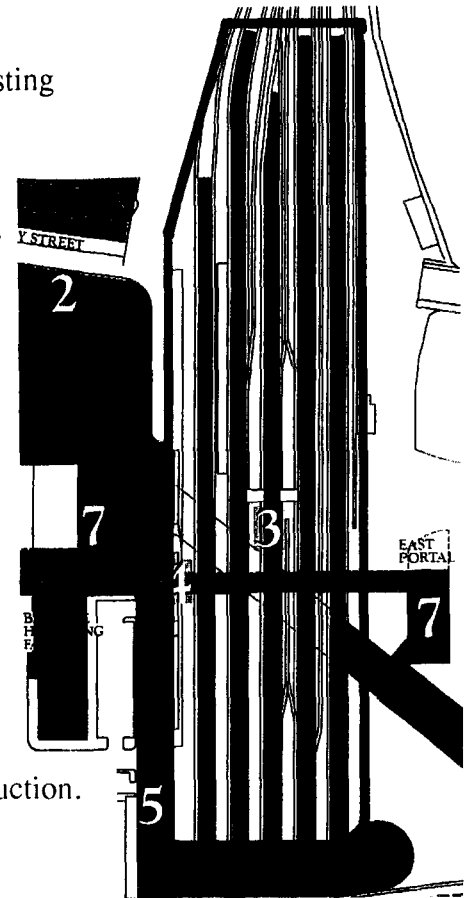
Assumptions:

1. Includes reconstruction of platforms 1-6 (LRT, MetroLink and Amtrak)
2. Existing budget includes REA Building reconstruction.

Area: 25,000 SF

Cost: \$8,100,000

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #I/4: REA Building Reconstruction
(Cont).

Location: NE of Union Station

Linkages: West Portal, Upper level street,
North Courtyard, Interim MetroLink
Area.

Comments: Part of "North End Reconstruction"

Projected Costs:

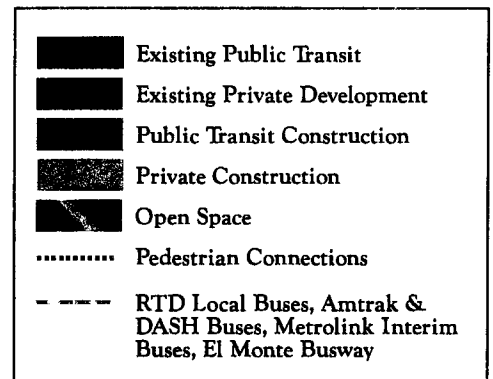
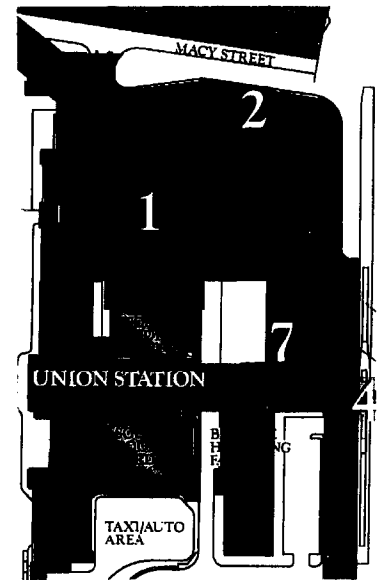
Assumptions:

1. Partial reconstruction of REA building

Area:

Cost: Included in North End Reconstruction
budget.

Notes:



Transit Infrastructure Preliminary Cost Analysis Union Station

Item #1/5: Interim Metrolink Bus Area

Location: Directly West and South of existing tracks

Linkages: To passenger tunnel and platforms

Comments: Connects to North Ramp, must include vertical circulator for Union Station access. Requires a truncation of the rail tracks and platforms to a point where Amtrak platforms 5-6 end. A subsequent truncation will occur at the time of construction of the Transit Concourse, requiring a corresponding elongation of the Amtrak platforms and tracks.

Projected Costs:

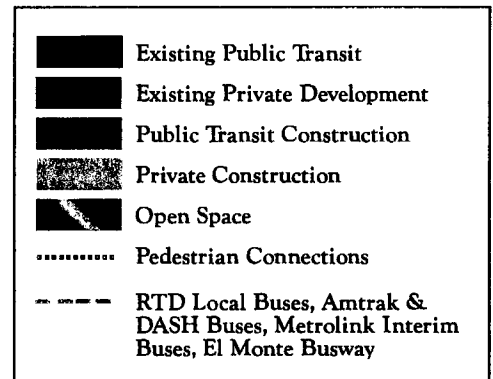
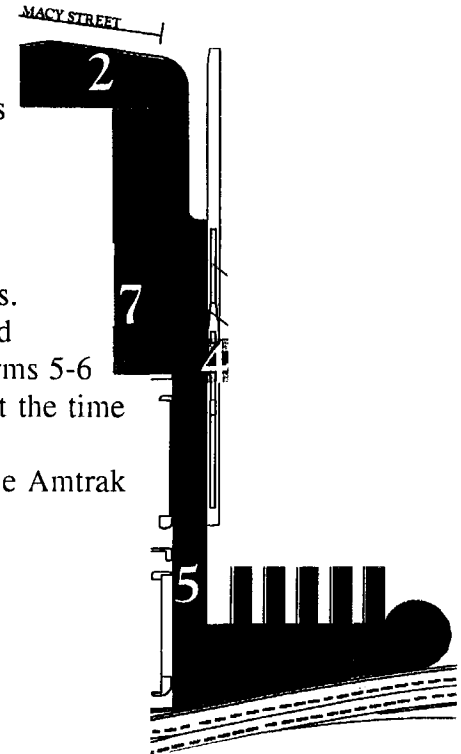
Assumptions:

1. Landscaped surface facility
2. Incorporates Metro Plaza design principles.
3. Includes bus berthing, layover, seating, etc.

Area: Approximately

Cost: \$3,450,000

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #II/1A: Gateway Metro Plaza

Location: East of existing tracks and platforms

Linkages: Gateway Transit Garage, East Portal, El Monte Busway, Macy and Vignes Streets.

Comments: Construction of facility, eliminates need for Interim MetroLink Area and Bus/Parking Facility.

Projected Costs:

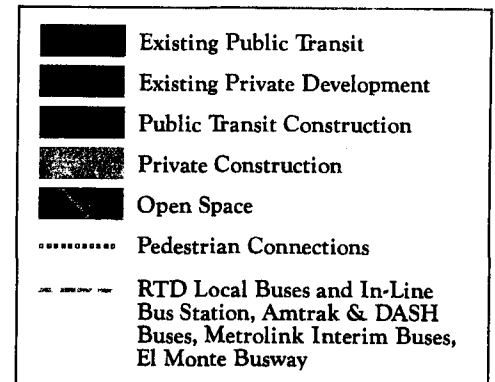
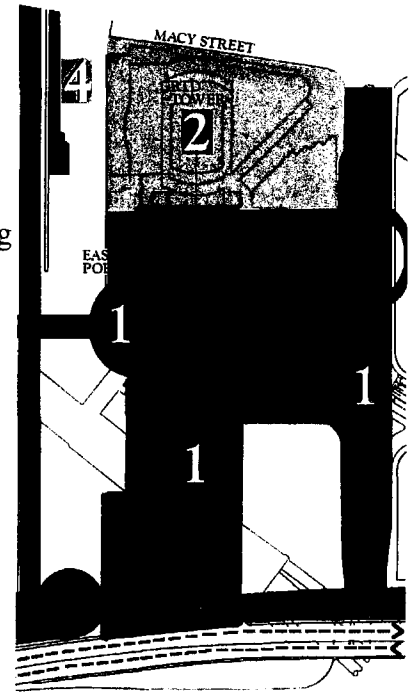
Assumptions:

1. Facility is undergoing final design
2. Current cost figures are approximate and include East Portal, Public underground parking, redesigned Vignes Street and the Metro Plaza Bus Plaza.

Area: 125,000 SF

Cost: \$162,000,000 (includes land acquisition)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #II/1B: Gateway East Portal

Location: Eastern terminus of passenger tunnel at Gateway Center

Linkages: Gateway Transit Garage, Metro Plaza, Metro Rail Red Line Station.

Comments: Metro Rail East Portal projected to be ready by ROD June '93. Gateway East Portal portion schedule to be defined.
 Provisions must be made for Access/ Service/ Fire Life Safety at East Portal prior and during Gateway construction.

Projected Costs:

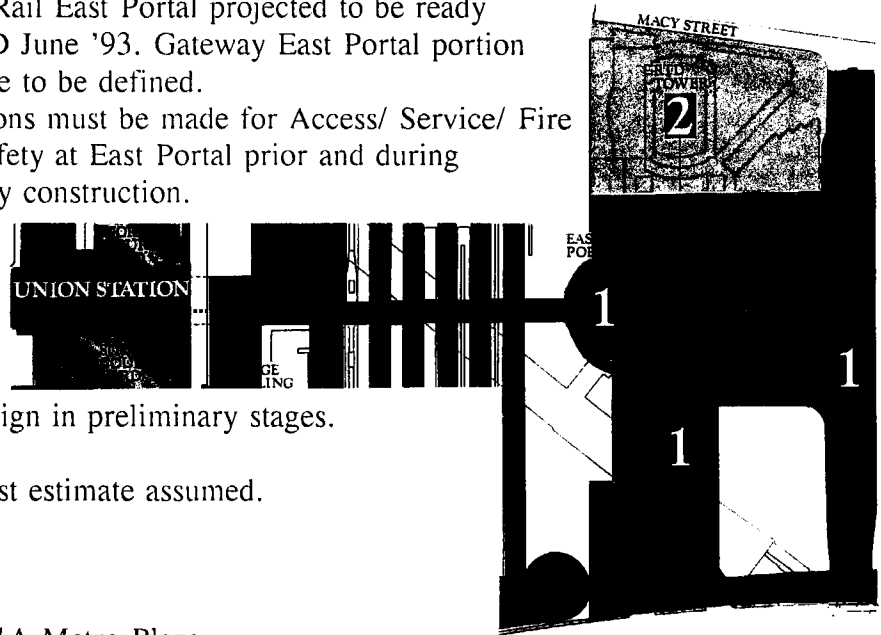
Assumptions:

1. East Portal design in preliminary stages.
2. Preliminary cost estimate assumed.

Area:

Cost: Included in II/1A Metro-Plaza

Notes:



	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local Buses and In-Line Bus Station, Amtrak & DASH Buses, Metrolink Interim Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #II/1C: Vignes Street Realignment

Location: East boundary of Union Street
between May Street and Freeway.

Linkages: From Freeway to Gateway, auto
and bus linkage.

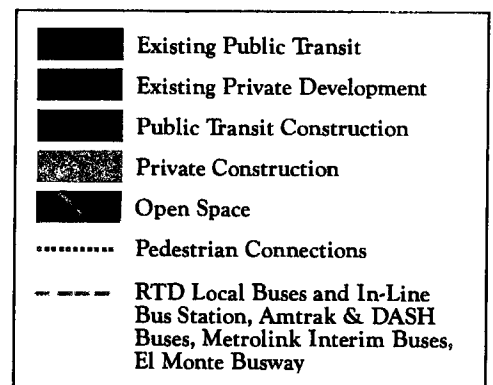
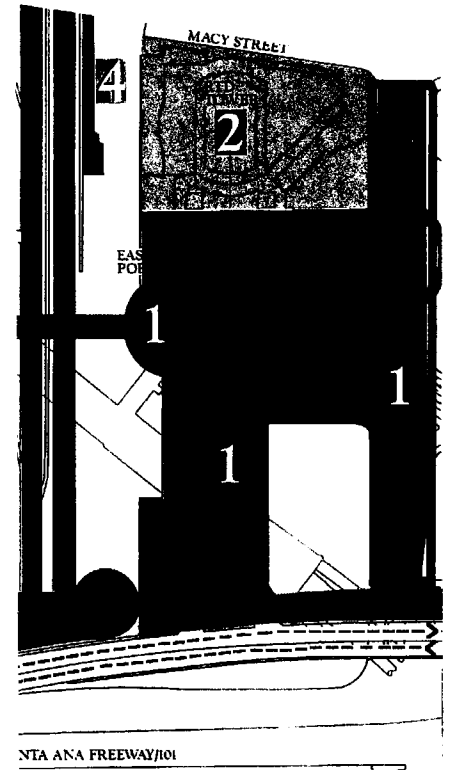
Comments: Part of RTD Gateway project

Projected Costs:

Area:

Cost: Included in II/1A Metro-Plaza

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #II/1D Gateway Garage

Location: East side of Union Station. Located under north half of Vignes Street, Phase II site and metro Plaza. Located adjacent to RTD Tower parking.

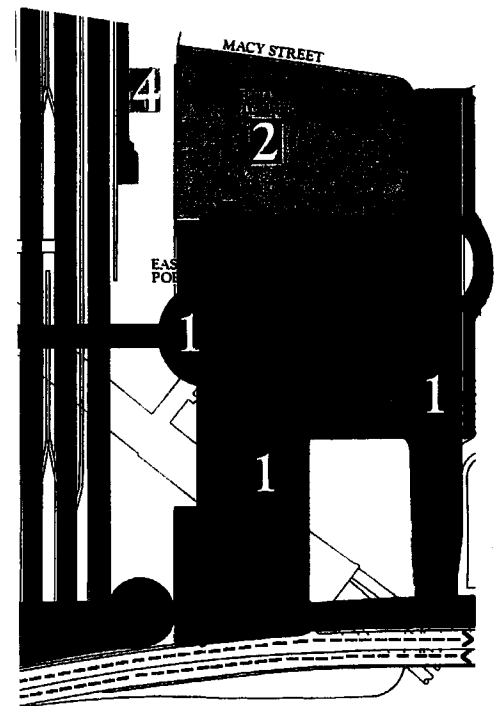
Comments: Public parking garage to provide approximately 2300 stalls.

Projected Costs:

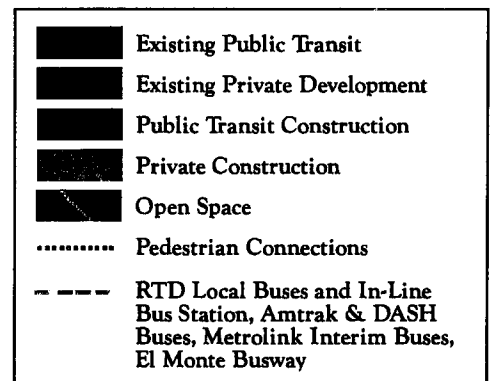
Area:

Cost: Included in II/1A Metro-Plaza

Notes:



SANTA ANA FREEWAY/I01



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item # II/2: RTD Headquarters Building

Location: Corner of May and Vignes

Linkages: N/A

Comments: 600,000 s.f. administrative headquarters for RTD.

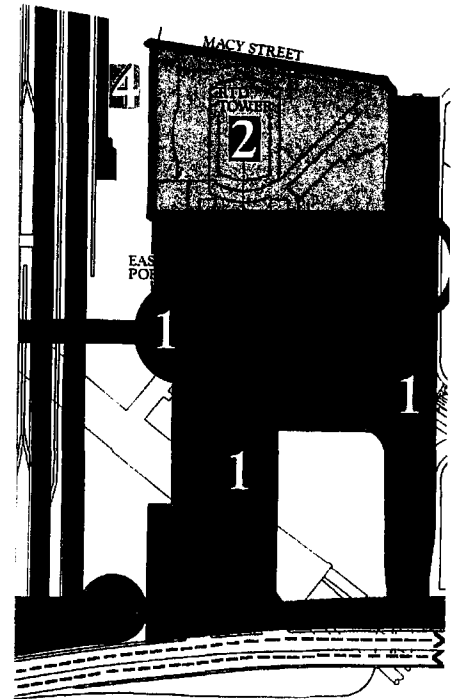
Projected Costs:

1. Estimated cost based on design development drawings. Additional refinements requirements.

Area:

Cost: \$150,000,000 preliminary estimate

Notes:



ANTA ANA FREEWAY/101

	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local Buses and In-Line Bus Station, Amtrak & DASH Buses, Metrolink Interim Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #11/3: In-Line Station

Location: On El Monte Busway, South of Union Station

Linkages: To Interim Metrolink Area and surface parking facilities.

Comments: Facility has not been designed.

Projected Costs:

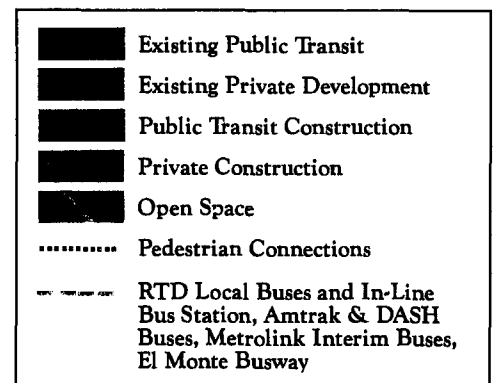
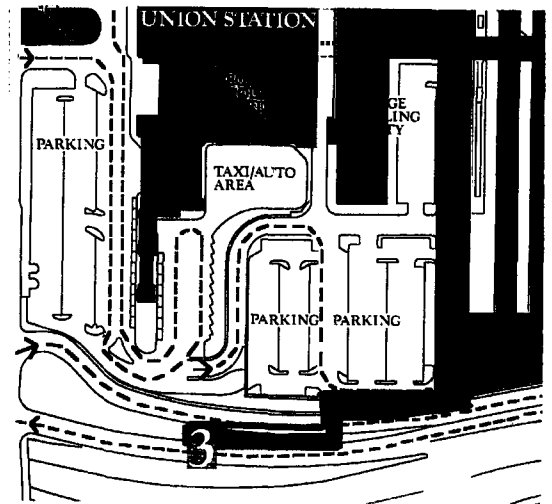
Assumptions:

1. Bridge structure over East-bound lane of Busway.
2. Requires handicapped access elevator and sidewalks to Interim Metrolink Area.

Area:

Cost: \$2,000,000 (Approximate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #II/4: Amtrak Mail Dock Relocation

Location: On East side of platform #6 rail

Linkages: N/A

Comments: Facility needs to be relocated prior to construction of platforms rail #7 and #8 for Metrolink service.

Projected Costs:

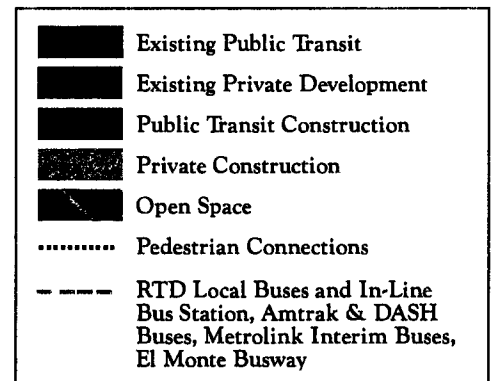
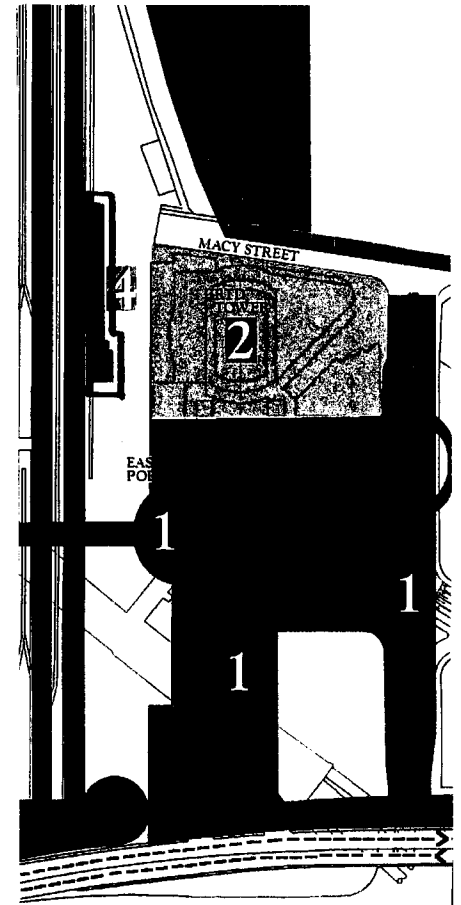
Assumptions:

1. Costs include demolition and construction of new facility off-site.

Area:

Cost: \$2,000,000 (Approximate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #III/1A: Interlocker Improvements and Trainyard Track Truncation

Location: South end of trainyard. North of Santa Ana/101 Freeway.

Linkages: To other trains and proposed transit concourse

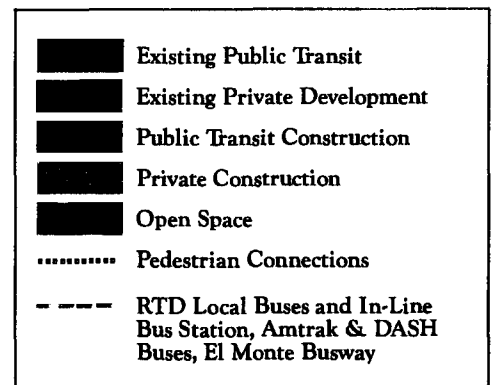
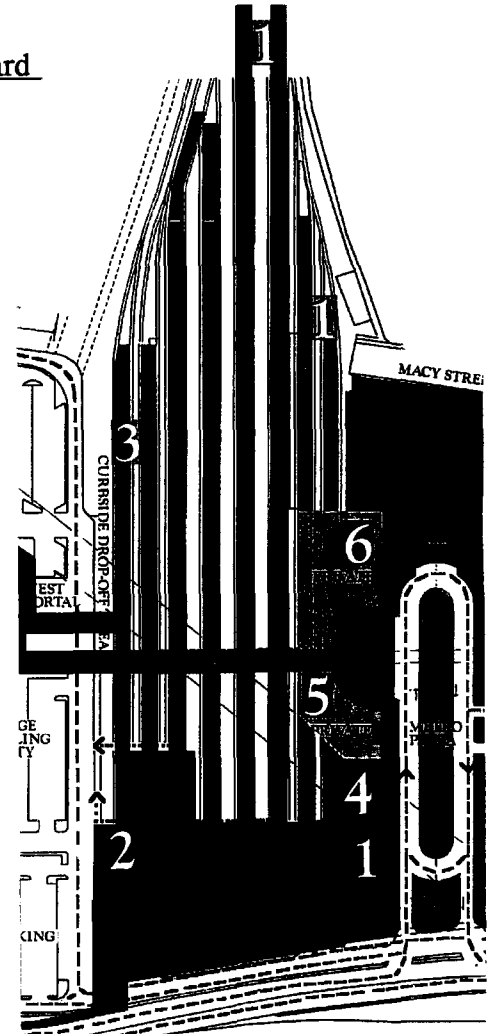
Comments: Truncation required to construct new transit concourse at end of tracks.

Projected Costs:

Area:

Cost: \$16,000,000 (Rough estimate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #III/1B: Metrolink/Amtrak Track and Platform Elongation and Reconstruction

Location: North, West and East sides of trainyard.

Linkages: Light rail to Metrolink commuter rail to Amtrak.

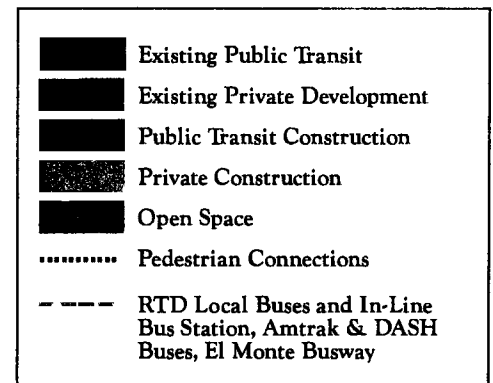
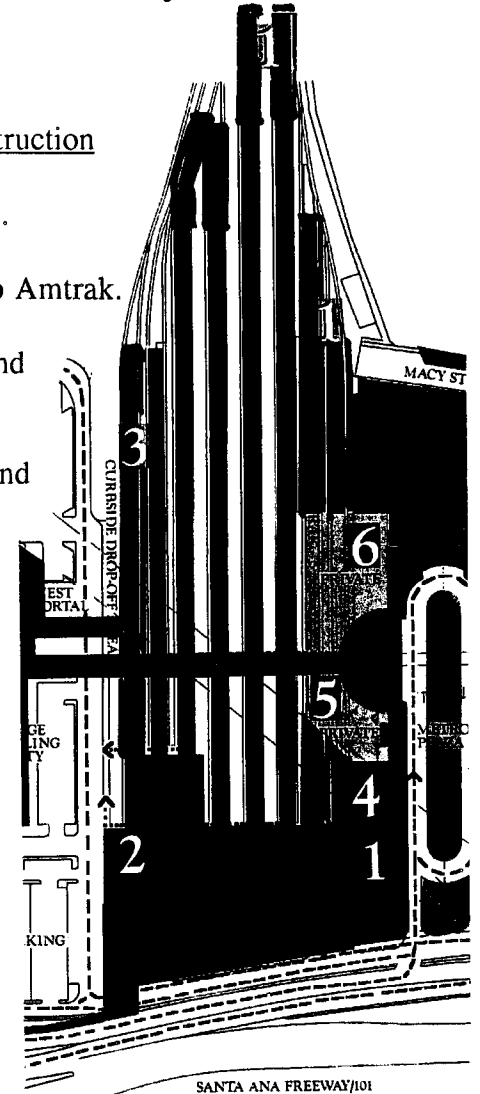
Comments: Amtrak elongation of platforms 3,4,5 and 6 required to allow trainyard truncation to occur. Construction of Platform #1 Pasadena Light Rail and Platforms #7 and #8 for expanded Metrolink service.

Projected Costs:

Area:

Cost: \$11,000,000 (Rough estimate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

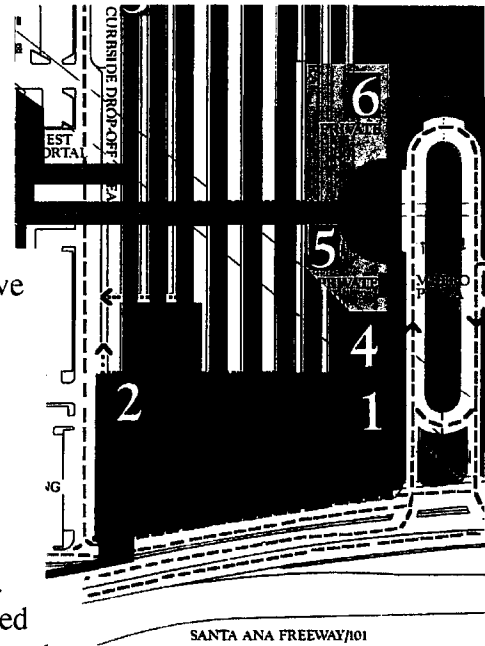
Union Station

Item # III/2A: Transit Concourse
III/2C: Underground Parking

Location: At South end of trainyard extending full width of trainyard.

Linkages: Amtrak Bus/DASH Taxi Facility In-Line Station, Amtrak, LRT and Metrolink platforms, proposed Amtrak administrative facility and below grade parking. Auto access from upper level roadway.

Comments: Provides ticketing and waiting area of approximately 72,000 s.f. Relieves anticipated congestion in 28' wide passenger tunnel. Envisioned as a grand public space similar to East Portal. Underground parking for 1000 cars located below transit concourse. Assumed costs and use for parking shared 50% transit / 50% private.

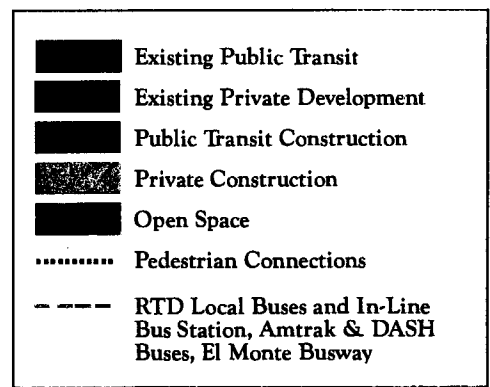


Projected Costs:

Area: 72,000 s.f. Transit Concourse
 288,000 s.f. parking

Costs: \$22,000,000 Transit Concourse
 \$20,000,000 Underground Parking

Notes:



Transit Infrastructure Preliminary Cost Analysis

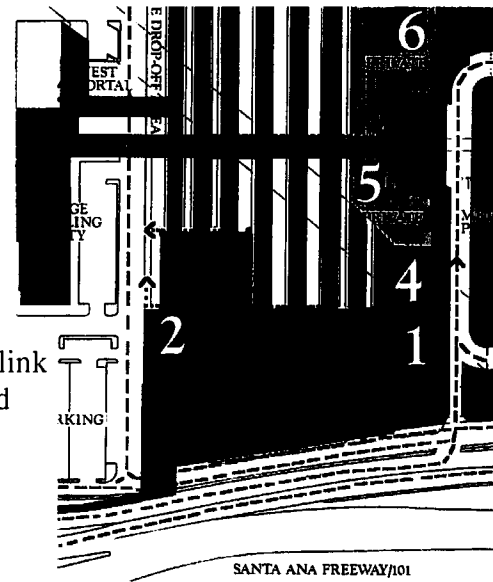
Union Station

Item #III/2B: Station Courtyard

Location: Adjacent to transit concourse
 at end of Platforms #1, #2 and #3.

Linkages: Pedestrians to rail.

Comments: Provides open air landscaped court as part of arrival experience. Light rail station continues through space. Metrolink pathways walk through station courtyard after disembarking before entering the transit concourse.

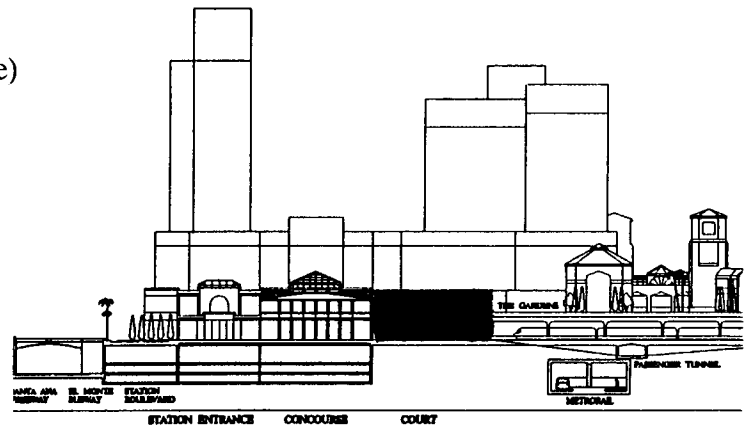


Projected Costs:

Area: 14,000 s.f.

Cost: \$2,000,000 (Rough Estimate)

Notes:



	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local Buses and In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #III/3A: MetroRail Blue Line LRT Platform

Location: Existing platform #1

Linkages: Passenger tunnel and ramps, Station Courtyard and Transit Concourse.

Comments: Built to LRT requirements.

Projected Costs:

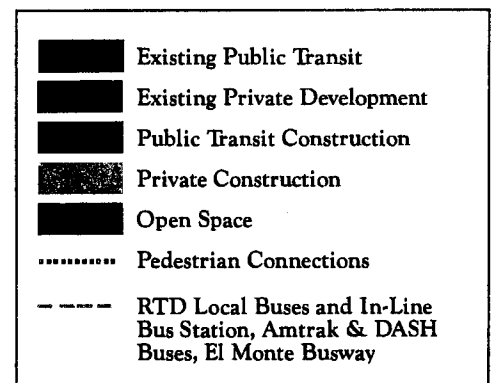
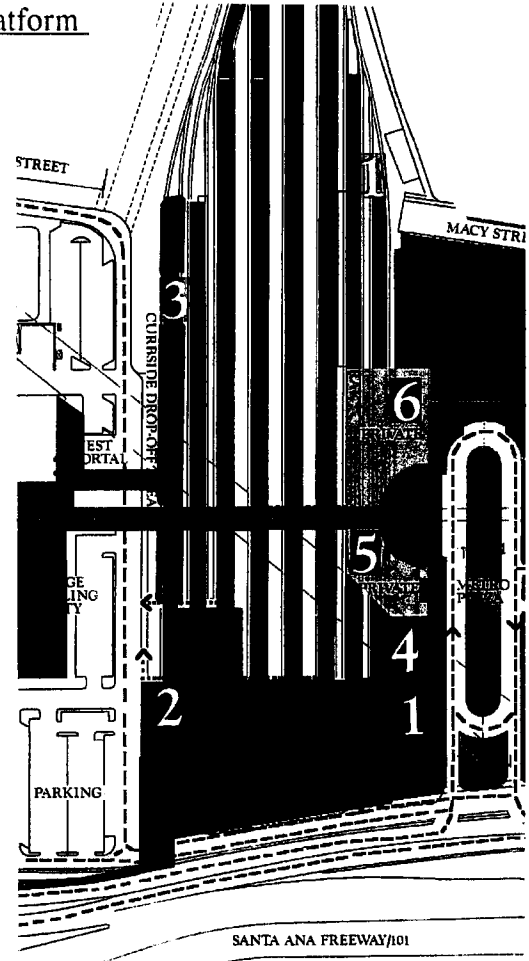
Assumptions:

1. Design to be determined by RCC.
2. Timing to be determined.

Area: To be determined

Cost: To be determined

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item # III/3B West Portal Connection

Location: North of an parallel to the Passenger Tunnel on West side of trainyard.

Linkages: Connects Pasadena Light rail directly with West Portal.

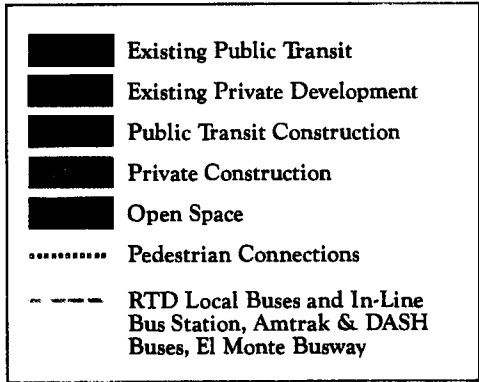
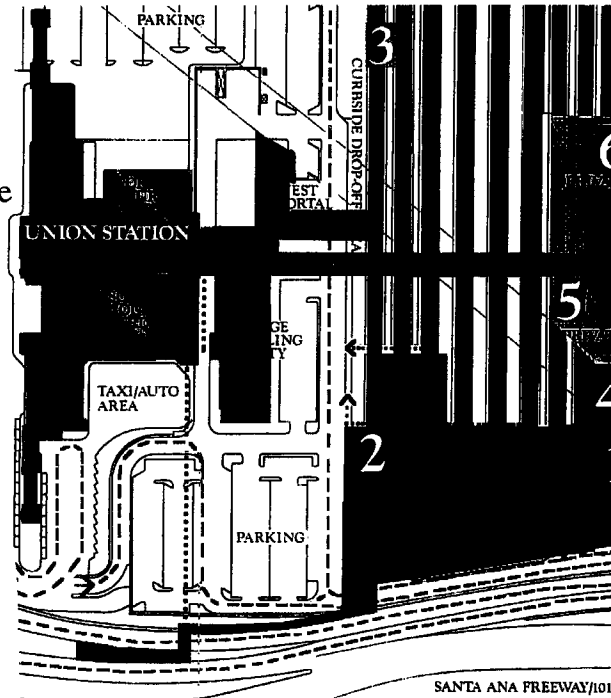
Comments: Relieves congestion in 28' wide Passenger Tunnel.

Projected Costs:

Area:

Cost: \$3,000,000 (Rough Estimate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item # III/4 Amtrak Passenger Service Relocation

Location: Within Transit Concourse and adjacent at east end of Transit Concourse.

Linkages: Trams to bus/auto/taxi.

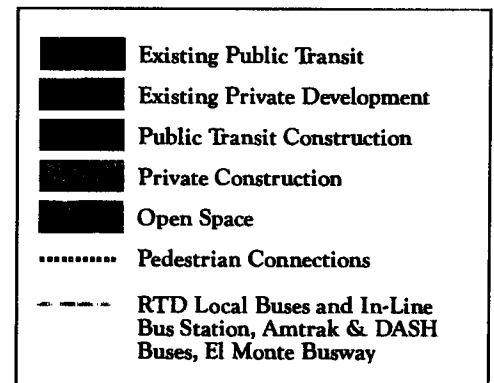
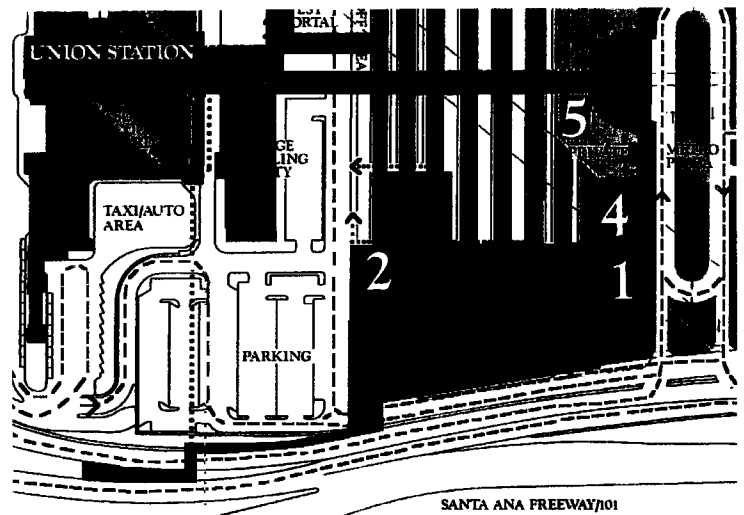
Comments: Relocates Amtrak ticketing, waiting and crew services from the historic depot to the Transit Concourse and adjacent building. Catellus assumes responsibility for relocating adjacent office space.

Projected Costs:

Area:

Cost: \$10,000,000

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #IV/1 Amtrak Bus/DASH/Taxi/Shuttle Facility

Location: Below South Plaza at Level 0'.

Linkages: Transit Concourse via escalators
and elevators, parking areas.

Comments: Must contain provisions for access
through private development parcel
to the West. Similar in concept to a
bus/taxi pick up area at a airport.

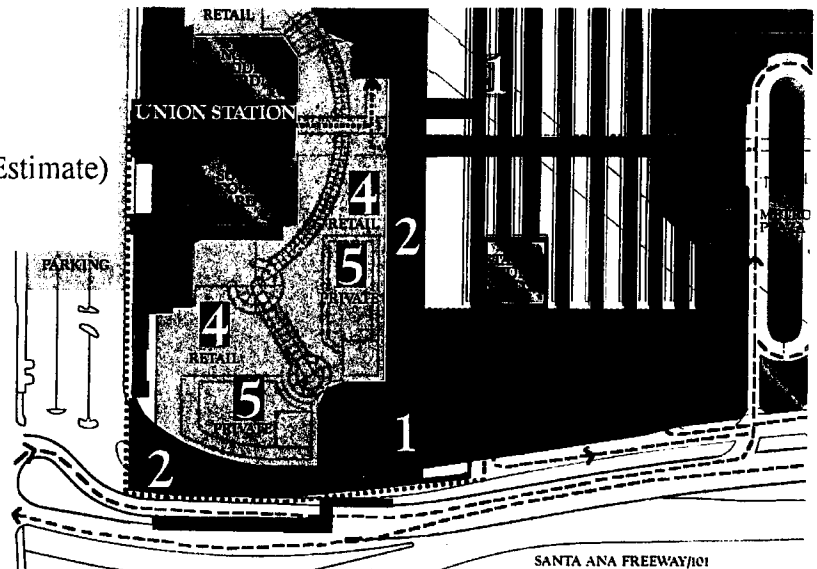
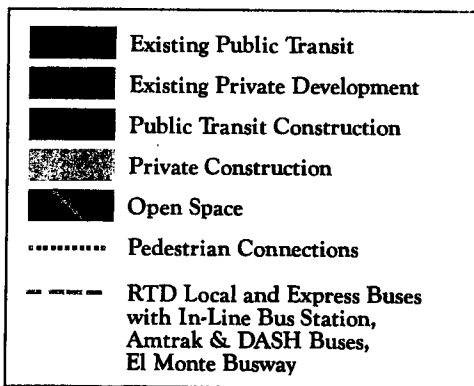
Projected Costs:

Assumptions:

1. Required 17' floor-to-floor height for
bus access.
2. Shares access with taxis, private autos.

Area:

Cost: \$15,000,000 (Rough Estimate)



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #IV/2 Upper Level Roadway Extension
South and West Plazas

Location: On the West side of the trainyard behind the historic depot.

Linkages: Bus/auto/taxi/shuttle to train.
Auto to parking.

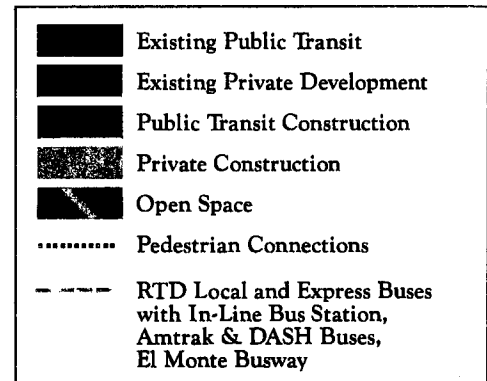
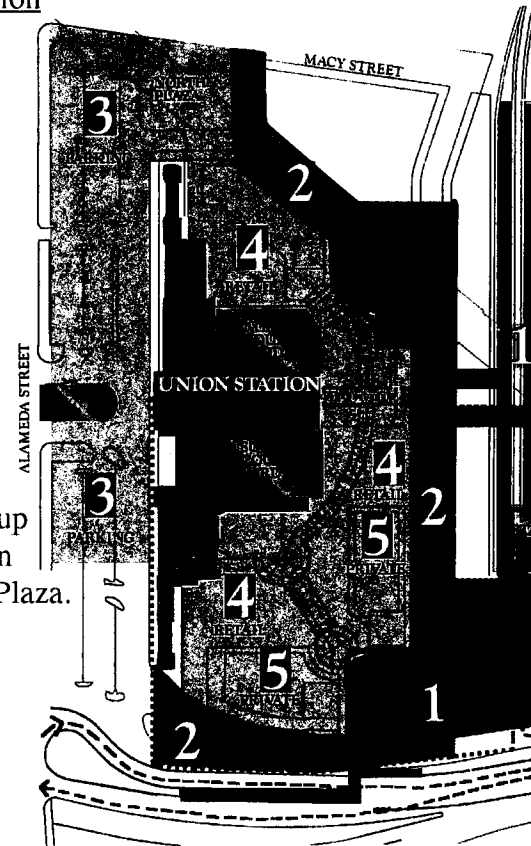
Comments: Provides circulation above proposed bus/auto/taxi/shuttle drop-off area. Provides curbside drop off and pick-up for the trainyard. Expands pedestrian access to West Portal through West Plaza.

Projected Costs:

Area:

Cost: \$11,000,000 (Rough Estimate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #IV/3B

North Plaza/Internal Roadway

Location: On the west and north side of Union Station.
From Alameda and Macy street to existing internal roadways.

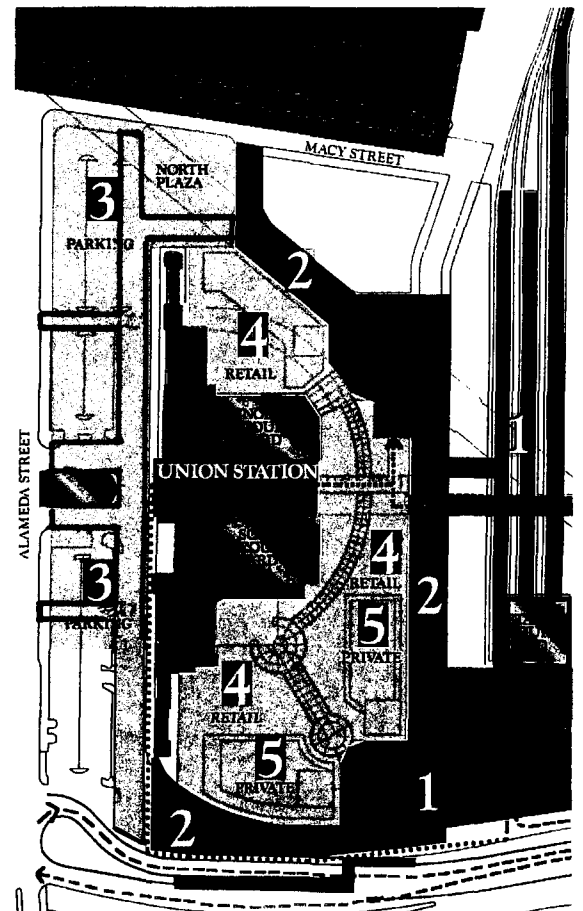
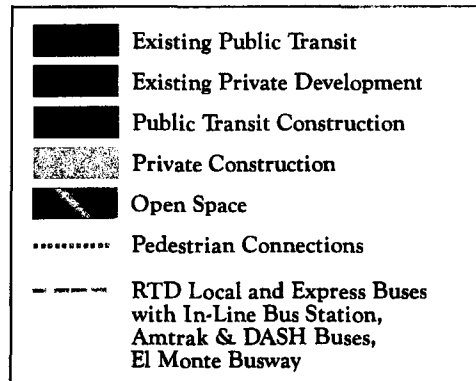
Comments: Roadways required for internal circulation.
Used by everyone at Union Station. Needs to be developed concurrently with retail parking.
North Plaza created as major landscaped area.
Privately funded.

Projected Costs:

Area:

Cost: \$12,000,000 (Rough Estimate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #V/1: Pasadena Blueline (Light Rail) Extension to Downtown

Location: Directly south of Platform #1

Linkages: Transit Concourse, Hollywood Freeway.
Private Development Parcels

Comments:

Projected Costs:

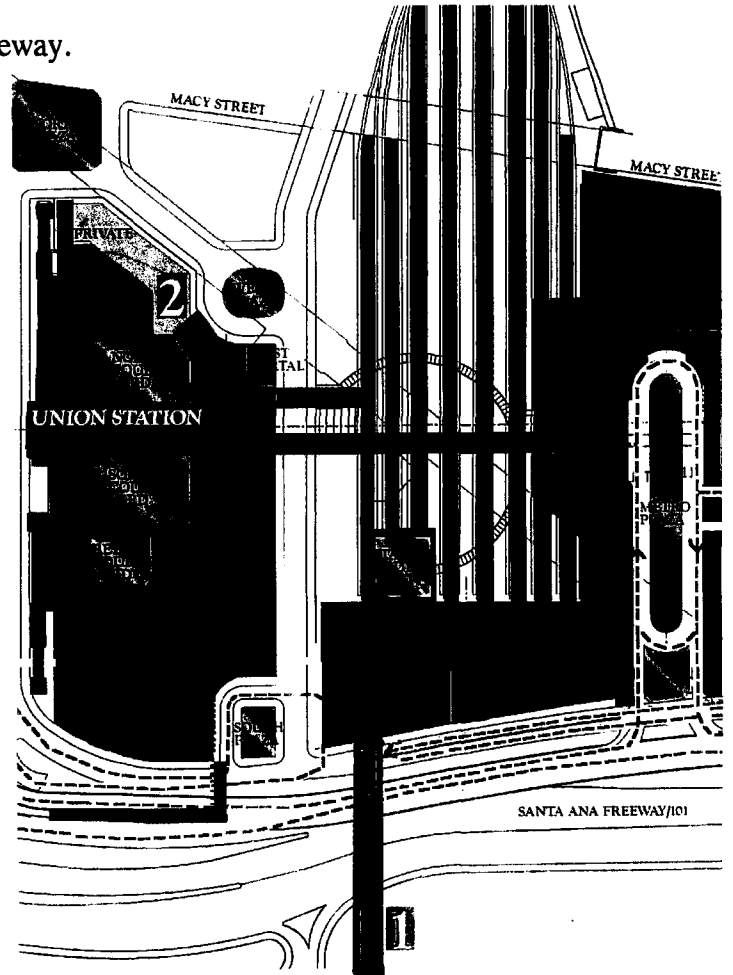
Assumptions:

1.

Area:

Cost: Unknown

Notes:



	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #VI/1A Upper Level South Roadway

Location: Adjacent to El Monte busway at South end of Union Station site. Spans the width of the trainyard.

Linkages: Auto, bus access from east end of site to west end of site. Curb drop-off and pick-up.

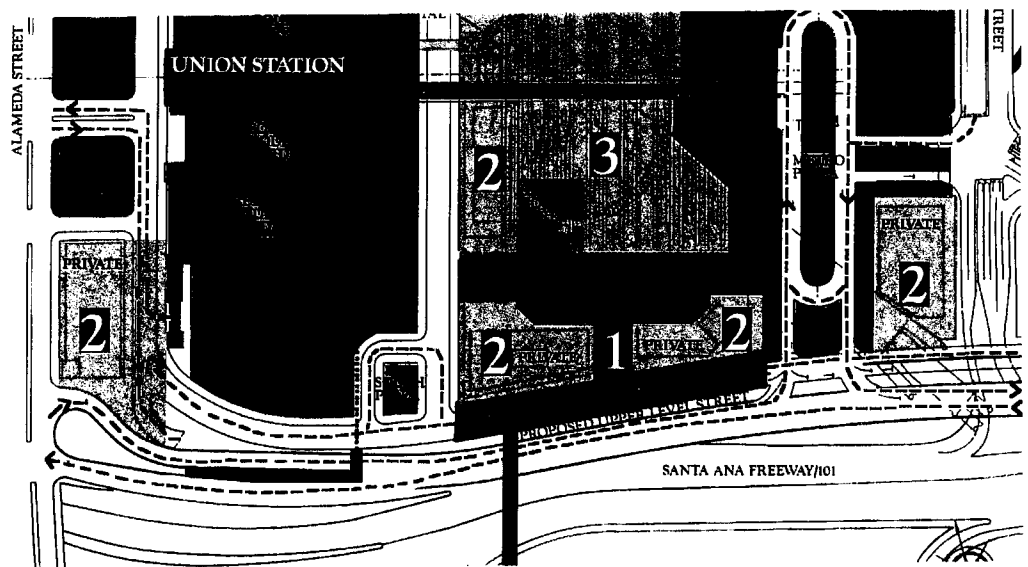
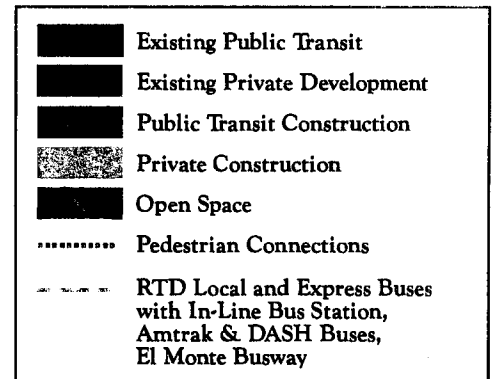
Comments: Needs to be constructed at same time as underground parking beneath. Assumes that underground parking is privately funded.

Projected Costs:

Area: 28,000 s.f.

Costs: \$5,000,000 (Rough Estimate)

Notes:



Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #VI/1B Transit Concourse Connection

Location: Between South Roadway and Transit Concourse.

Linkages: Auto/shuttle pick-up and drop-off for Transit Concourse passengers.

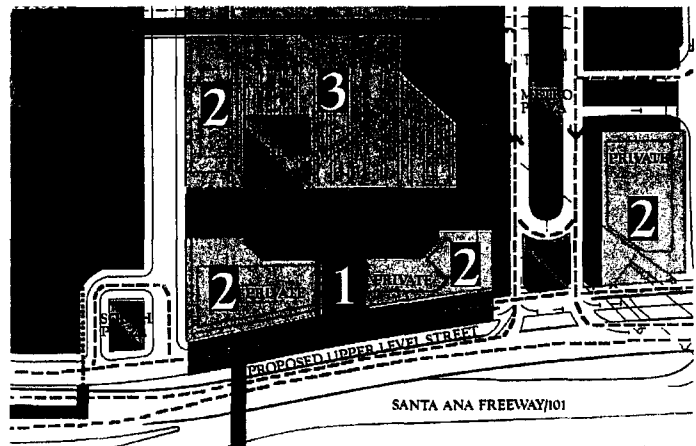
Comments: Provides grand entrance to Transit Concourse from south roadway. Major pedestrian circulator. Potential for service retail.








Projected Costs:

Area:

Cost: \$2,000,000 (Rough Estimate)

Notes:



	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #VI 2B: Internal Roadway

Location: Runs N-S directly West of Union Station building

Linkages: North Plaza, Alameda Park, Union Station, Alameda Street and private development parcels north and south of Alameda Park.

Comments: Provides access to the Union Station and the upper level street system. Provides access to Alameda Park.

Projected Costs:

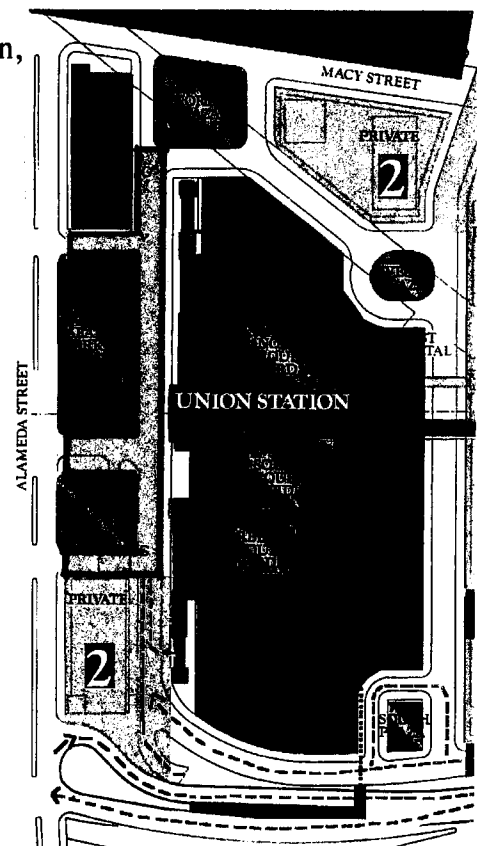
Assumptions:

1. 100% private development cost

Area:

Cost: \$3,000,000 (Rough Estimate)

Notes:



	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #VI/3: Gardens Above Trainyard

Location: East of internal N-S street west of Gateway Center, and north of Transit Concourse

Linkages: West Plaza, West Portal, Private development parcels, East Portal and Transit concourse

Comments:

Projected Costs:

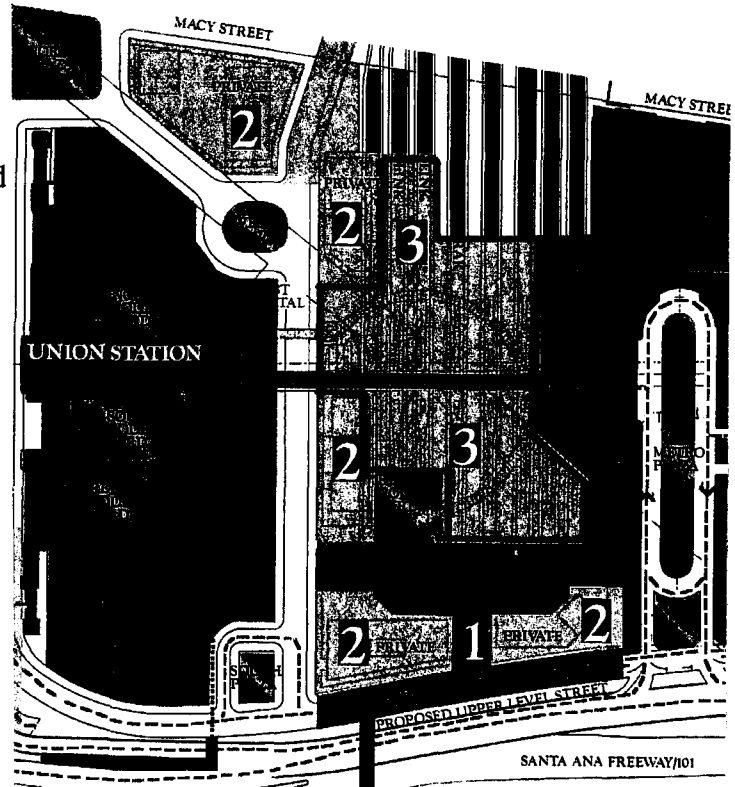
Assumptions:

- To be built after construction of Transit Concourse concurrently with adjacent private development parcels

Area:

Cost: \$8,000,000

Notes:



	Existing Public Transit
	Existing Private Development
	Public Transit Construction
	Private Construction
	Open Space
	Pedestrian Connections
	RTD Local and Express Buses with In-Line Bus Station, Amtrak & DASH Buses, El Monte Busway

Transit Infrastructure Preliminary Cost Analysis

Union Station

Item #VI/4: College Street Extension

Location: North from Union Station site, west plaza north towards Vignes and Alameda Streets

Linkages: Private development parcels
Terminal Annex building and northern parcels of Terminal Annex site.

Comments: Bridges over Macy and Vignes Streets.
Ramps down to meet level of internal street at Terminal Annex site.

Projected Costs:

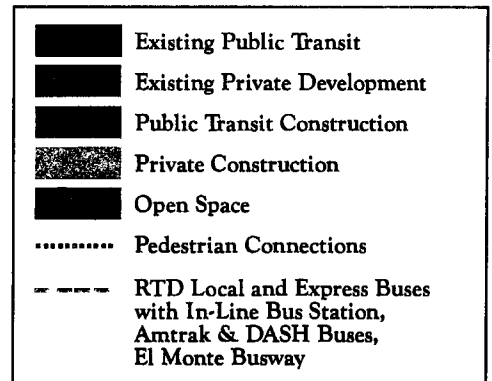
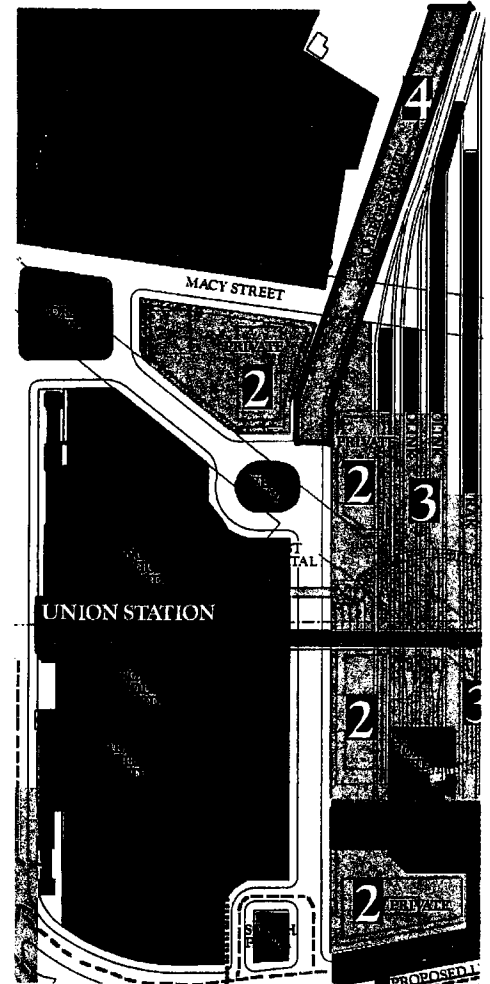
Assumptions: Alignment is preliminary

1.

Area:

Cost: \$24,000,000

Notes:



PHASE NUMBER	ESTIMATED COST	TRANSIT COST	PRIVATE COST	SHARED COST	COMMENTS
I/1 RTD Interim Bus/Parking Facility	\$2,700,000	100%	Developer contributes land		Must operate by October 92. Funded
I/2 North Ramp and Roadway	(Included in Above)	100%	Developer contributes land		Funded.
I/3 Metrolink/Amtrak Platform Reconstruction	\$8,100,000	100%	None		Funded.
I/4 Metrolink/Amtrak Passenger Tunnel, Access Ramp and Stairs	(Included in Above)	100%	None		Funded.
I/5 Metrolink Interim Bus Facility	\$3,450,000	100%	Developer contributes land		Funded.
I/6 Metro Rail Red Line	Unknown	100%	Developer contributes easements		Funded.
I/7 Metro Rail West and East Portals	Unknown	100%	Developer contributes easements		Funded.
II/1A RTD Gateway Center - Metro Plaza	\$162,000,000	90%	10%	Subject to future cost sharing	Bus Plaza grant financing
II/1B East Portal	(Included in II/1A)	90%	10%		Part of RTD Gateway project. Grant financing
II/1C Vignes Realignment	(Included in II/1A)	90%	10%	Subject to future cost sharing	Part of RTD Gateway project. Grant financing
II/1D Gateway Garage	(Included in II/1A)	90%	10%	Subject to future cost sharing	Part of RTD Gateway project. Grant financing
II/2 RTD Headquarters Building	\$150,000,000	None	100%		RTD building. Tax exempt financing.
* II/3 RTD In-Line Bus Station	\$2,000,000	100%	None		
* II/4 Amtrak Mail Dock Relocation	\$2,000,000	100%	None		
* III/1A Interlocker improvements and Trainyard Track Truncation	\$16,000,000	100%	None		
* III/1B Metrolink/Amtrak Track and Platform Elongation and Reconstruction	\$11,000,000	100%	None		
* III/2A Transit Concourse	\$22,000,000	100%	Developer Contributes air rights		
* III/2B Station Courtyard	\$2,000,000	100%	None		
* III/2C Underground Parking	\$20,000,000	50%	50%	Cost share assumes some private need for parking.	Parking structure needs to be built at same time as Transit concourse, which covers it.
* III/3A Pasadena Light Rail (Blue Line) Track and Platform	Unknown	100%	None		
* III/3B West Portal Connection	\$3,000,000	100%	None		
* III/4 Amtrak Passenger Service Relocation	\$10,000,000	100%	Developer contributes air rights		

Union Station Transit Masterplan
 Technical Appendix

Allocation of Transit Infrastructure Costs

PHASE NUMBER	ESTIMATED COST	TRANSIT COST	PRIVATE COST	SHARED COST	COMMENTS
** III/5 Potential Amtrak Office Space Relocation	\$10,000,000	None	100%		
III/6 Potential Second Gateway Building	\$116,000,000	None	100%		
* IV/1 Amtrak Bus/DASH/Taxi/Shuttle Facility - Underground	\$15,000,000	100%	Developer contributes air rights		
* IV/2 Upper Level Roadway Extension (College Street); South and West Plazas	\$11,000,000	100%	Developer contributes land		
IV/3A Potential Underground Parking Facilities	\$24,000,000	None	100%		
** IV/3B North Plaza/Internal Roadway	\$12,000,000	None	100%		
IV/4 Potential Private Development Retail Center	\$85,000,000	None	100%		
IV/5 Potential Private Development Building	\$150,000,000	None	100%		
V/1 Pasadena Light Rail (Blue Line) Extension to Downtown	Unknown	100%	None		
V/2 Potential Private Development Buildings/Hotel	\$325,000,000	None	100%		
* VI/1A Upper Level South Roadway	\$5,000,000	100%	Developer contributes land		
* VI/1B Transit Concourse Connection	\$2,000,000	100%	Developer contributes land		
VI/2A Potential Private Development Buildings, Hotel, Residential	\$1,000,000,000	None	100%		
** VI/2B Internal Roadway	\$3,000,000	None	100%		
** VI/3 Gardens Above Trainyard	\$8,000,000	50%	50%		
** VI/4 College Street Extension	\$24,000,000	None	100%		

* **TOTAL \$115,000,000** Transit related infrastructure that LACTC is responsible for excluding Gateway and other known funded projects

** **TOTAL \$63,000,000** Transit related infrastructure that is funded privately excluding Gateway.