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GENERAL PLANNING CONSULTANT:

BOUNDARY OPTIONS WHITE PAPER

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## BOUNDARY OPTIONS WHITE PAPER

**Introduction**

The setting of the boundaries is a critical task in determining Benefit Assessment Districts for Phase II of Metro Rail. In determining how to define the boundaries and structure of benefit-assessment districts, four primary issues must be considered:

- o Determination of benefit
- o Equity of the assessment
- o Ease and cost of administration
- o Ability to raise the funds needed

Legislative and case law distinguish between general and special benefits and permit assessments to be based on special benefits only, as opposed to taxes, which may be based on general benefits. Thus, the primary aim of benefit assessment must be that those who receive a special benefit share that benefit with the agency building the project. The aim of the boundary setting, therefore, is to include all those who receive special benefit and exclude those that receive only general benefit.

The enabling legislation defines a maximum boundary but allows discretion in determining district boundaries within that maximum limit. The legislation also allows tiers or zones within the Districts. The CBD area differs from the non-CBD area in intensity of development and land use patterns thus creating a need for review of the criteria used for MOS-1 and development of criteria which better fit the non-CBD area. A uniform boundary and rate structure for all districts would be the easiest and least costly to administer, however, the setting of boundaries must consider all factors including the ability to raise the needed funds. Benefit and equity are matters that will enter into all considerations of the boundaries and structure of benefit assessment districts.

This paper will examine the enabling legislation and its constraints, the geographic limitations, the rationale for walking distances, the use of zones and tiers, the criteria used in determining MOS-1 Boundaries, and preliminary assessable square footage for all stations for Phase II. This paper will also identify viable options for determining boundaries which are equitable and fair for Phase II and will raise the necessary private sector share of funds for the construction and operation of Metro Rail.

## Fundamental Aims of Boundary Setting

Boundaries of a benefit assessment district for a transit project are more difficult to define than for a finite project such as a water project district. Anyone may use the transit system, therefore the system confers general benefit on all urban-area residents and visitors. Identifiable special benefits are those that arise from proximity to the station. As detailed in the Summary of Issues and Analysis of Benefits Attributable to Rail Transit paper, the primary special benefits accrue to property owners and proprietors of hotels, motels, retail establishments, offices and other commercial businesses in the vicinity of the stations. In addition, tenants, visitors and employees located in the vicinity of Metro Rail stations should enjoy a wider variety of retail shopping and entertainment opportunities as well as the improved accessibility and convenience offered by the transit system. Employers may experience greater visibility and subsequent improvements in employee recruitment and retention. Principally these benefits arise only by virtue of people being able to walk to and from the station. Increased retail business occurs because of concentration of pedestrian flows around retail establishments, as people walk to and from the station. Similar arguments about the extent of incidence of special benefits can be made for each of the various types of potential beneficiaries.

## Legislative Constraints

Section 33000 et seq. of the Public Utilities Code authorizes the Southern California Rapid Transit District to levy special benefit assessments for rail rapid transit facilities and services. The legislation restricts the area which could be assessed to a maximum of one mile from the center point of any rail transit station within the Central Business District of the City of Los Angeles and to a maximum of one-half mile from the center point of a rail transit station at any other location. The Phase II stations would all fall within the one-half mile restriction. By placing different restrictions on the maximum boundaries the legislature recognized that there may be differences in the CBD and non-CBD areas which would affect the criteria used to set boundaries. The non-CBD area is not and never will be developed to the intensity of the CBD, and the land use patterns are more varied as well. The CBD is developed with intensive high rise commercial use with minimal residential use while in the Phase II area, low rise commercial structures front along the major thoroughfares and are generally surrounded by residential or mixed uses.

The legislation allows for separate zones within the benefit assessment districts. The zones may be either contiguous or noncontiguous areas of land within the district. The only restrictions in the legislation on zones are:

- o each zone be an area adjacent to or in the vicinity of one or more rail transit stations, and
- o the boundaries of the benefit district and each zone be drawn so as to reflect, as accurately as possible, the areas in which special benefits are conferred by reason of the proximity and operation of one or more rail transit stations.

Once the boundaries are approved through the process set out in the legislation, the Board can not change the boundaries or zones until it gives notice of its intention to change the boundaries and stating the purpose of the changes. A hearing would need to be held and notice given. At the conclusion of the hearing, the Board may determine, by resolution, whether to make any or all of the proposed changes.

#### **Natural and Man-Made Boundaries**

Natural and man-made barriers such as a freeway or steep topography should be considered when determining the benefit assessment boundary. These features should be considered when they impose a barrier to access to the transit station. If there is a barrier to access to the station, then benefit is likely to be less as benefit is directly dependent on proximity and access to the station. Not all natural or man-made features are barriers, therefore criteria need to be developed to determine when such a feature could be determined a barrier to access which would affect benefit to property. The following criteria could be used in such a determination:

1. 75% or more of the streets along the feature terminate on one or both sides of the feature

This criteria implies that if three out of four streets are terminated, the feature represents a significant barrier to movement. Generally, if one out of every two streets is terminated, significant diversions are not required to cross the feature, and the perception of a barrier to movement is not obvious. When three out of four are, then substantial deviations may be required to cross the feature, sufficient that designation as a barrier seems appropriate.

2. The feature represents a psychological barrier, as would be the case for an open, wide river, a range of mountains or hills, and an above-grade freeway

This issue has to do with the visual intrusion of the barrier. For example, a range of mountains is obviously perceived as a barrier, no matter what other considerations enter into barrier determination. Generally, a freeway or rail line that is above grade will provide a visual indication of its presence and will therefore be a fairly obvious psychological boundary. A freeway that is below grade is not intrusive in the same way, and generally would not be considered to form a psychological barrier.

3. There is a marked change in development pattern from one side of the freeway to the other.

A change in the development pattern across the feature is an obvious indicator that receipt of benefits would be likely to be markedly different across the feature, or may not continue across it. Lack of change of development pattern on the other hand, would tend to indicate that the feature is not perceived to be a barrier, irrespective of other criteria.

4. There is no direct street connection that crosses the feature to the station.

A direct connection from a station across the feature by means of a direct street connection, is a prerequisite for benefits to be maintained across the feature. Research into benefit from rapid transit stations indicates that direct physical connections or visible identity with a station heightens the level of perceived and actual benefit.

If any three of these conditions are found to exist, the feature should be considered a barrier. If it is determined that the feature is a barrier, then it should act as the boundary provided it is within the maximum legal limit.

In addition to the above criteria, if the topography of area precludes pedestrian access, then it should be considered a barrier to walking distance. If the streets are too steep for pedestrian access then walking distances should be measured to the point where pedestrian access could be reasonably obtained. A slope which exceeds 5 percent is generally considered too steep for pedestrian access. If there are publicly accessible people movers, trams, elevators or escalators to move people up the slope, then the topography would no

longer be considered a barrier. This criteria should not be included with the four above since it could be considered as a barrier on its own rather than requiring two or three other criteria to be present before it is considered a barrier.

### Walking Distance

A critical factor identified in benefit evaluation relating to boundary definition is walking distance especially to activity centers. A comprehensive literature search, as well as personal interviews in Washington, D.C. and Atlanta, Georgia was completed to determine the locus, magnitude and level of sustained real estate gains generated by rapid transit systems. The most germane findings of this evaluation that relate to defining boundaries for Metro Rail districts involve the incidence and duration of benefits. This evaluation determined that the highest incidence of real estate gains occurs within walking distance of activity centers with a more dispersed pattern in suburban stations. Real estate projects located within close proximity to a rapid transit station promote their transit access by identifying their city block radius to a station entrance.

Boundaries could be measured by either radius as described in the legislation or by walking distance. Research, however, has indicated that benefits are more directly related to walking distance rather than a radius. If walking distance is used to define the boundary, the distance should be defined as closely as possible to represent an actual walking distance, that is the distance measured as the shortest distance along the centerline along streets and not a straight-linear distance.

### Rules of Inclusion or Exclusion of Blocks

Using either a walking distance or a radius for measurement, a determination must be made as to when a block or parcel should be included in the assessment. Using either method of measurement, the boundary would bisect parcels which could create program administration and equity problems. Full city blocks and block faces are generally well defined geographic areas, subject to little arbitrary interpretation.

As an alternative to using full city blocks, the use of block faces could be considered. Block faces are a subset of blocks and, therefore, may be a more precise measure of distance from a transit station than full city blocks. Specifically, a benefit assessment district may include one, two, or three block faces rather than a full city block, potentially better representing the actual extent of special benefits. Use of block faces, however, introduces several possible disadvantages.

First, existing parcel boundaries could present a large range of unusual parcel configurations for a given block face (e.g. differing parcel depths, L shaped parcels, parcels which double frontage etc.) Such a configuration could introduce both equity and program administration issues. Second, building structures are not confined to single parcels in a benefit assessment

district that cover only part of a building. To avoid the administrative problems of assessing only a portion of a building, the SCRTD would have to monitor the developments on the periphery of all benefit assessment districts continually and would need to change boundaries every time that a redevelopment took place that would cross both a parcel boundary and the benefit assessment district boundary. Use of block faces would entail highly unusual boundary configurations and would introduce program administration problems. Figure 1 gives examples of blocks which contain regular block faces and irregular block faces. Block face B illustrates the difficulty of drawing a boundary using block faces. Moreover, in other cities with rapid-transit systems, developers have, at times, responded to transit stations by acquiring, developing or redeveloping an entire city block.

For these reasons, benefit assessment district boundaries should be established in terms of full city blocks or block faces. Aside from the minor equity issues that could be associated with the issue of full city blocks, it is recommended that full blocks be used for benefit assessment district boundaries, i.e. the district boundaries should follow the centerline of street rights-of-ways.

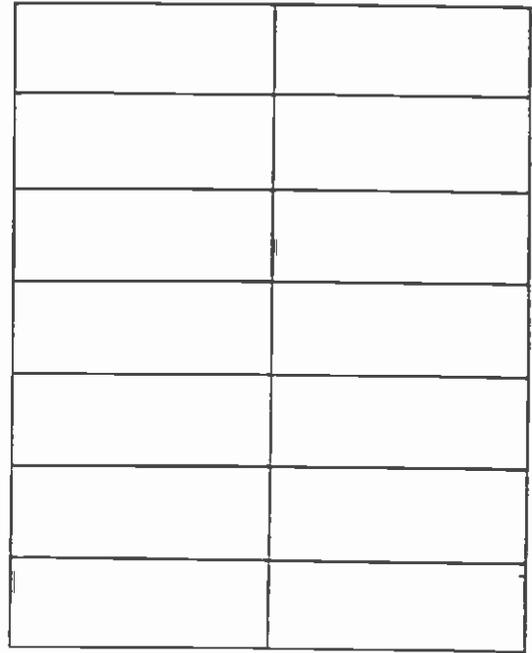
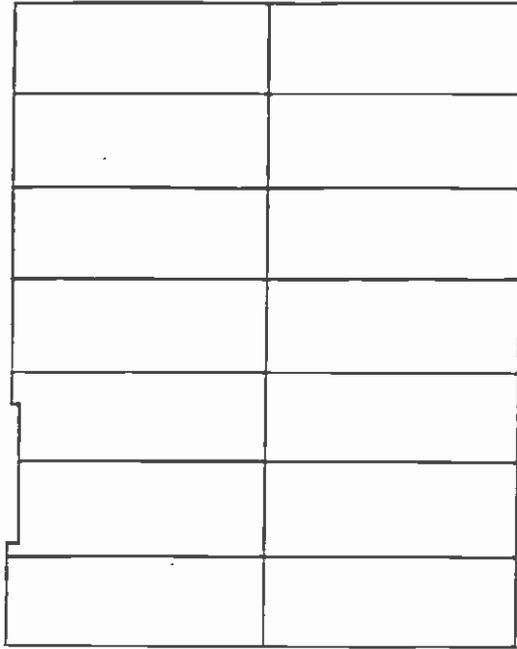
#### Alternate Methods for Determining Inclusion or Exclusion of a Block or Block Face

Different methods may be used to determine if a full block or full block face should be included in a benefit assessment district. Two methods are:

- a) If any part of a block is included within a designated distance from the geometric center of a station, the entire block would be included in the benefit-assessment district. Correspondingly, if any part of a block face is included within a designated distance from the center of the station, the entire block face would be included in the benefit assessment district.
- b) If more than one-half of a city block (measured in square feet or acres of parcel area) is included within the designated distance from the geometric center of a station, the entire city block would be included in the benefit assessment district. Correspondingly, if more than one half of a block face (measured in linear feet along the street frontage) is included within a designated distance from the geometric center of a station, the entire block would be included in the benefit assessment district. (Figure 2.)

Each of these two methods for determining inclusion or exclusion of a block or block face presents advantages and disadvantages. The first alternative (if any part is included) would likely create a larger benefit assessment district for a specified distance from the station center. Correspondingly, use of the first alternative may dictate use of a shorter distance specification from the station center than would be the case for the second alternative. The first alternative would also be likely to introduce a more jagged boundary than the second, leading to some potential question about its fairness at the periphery of the district.

BLOCK WITH CONSISTENT BLOCK FACE



BLOCK WITH IRREGULAR SHAPED LOTS

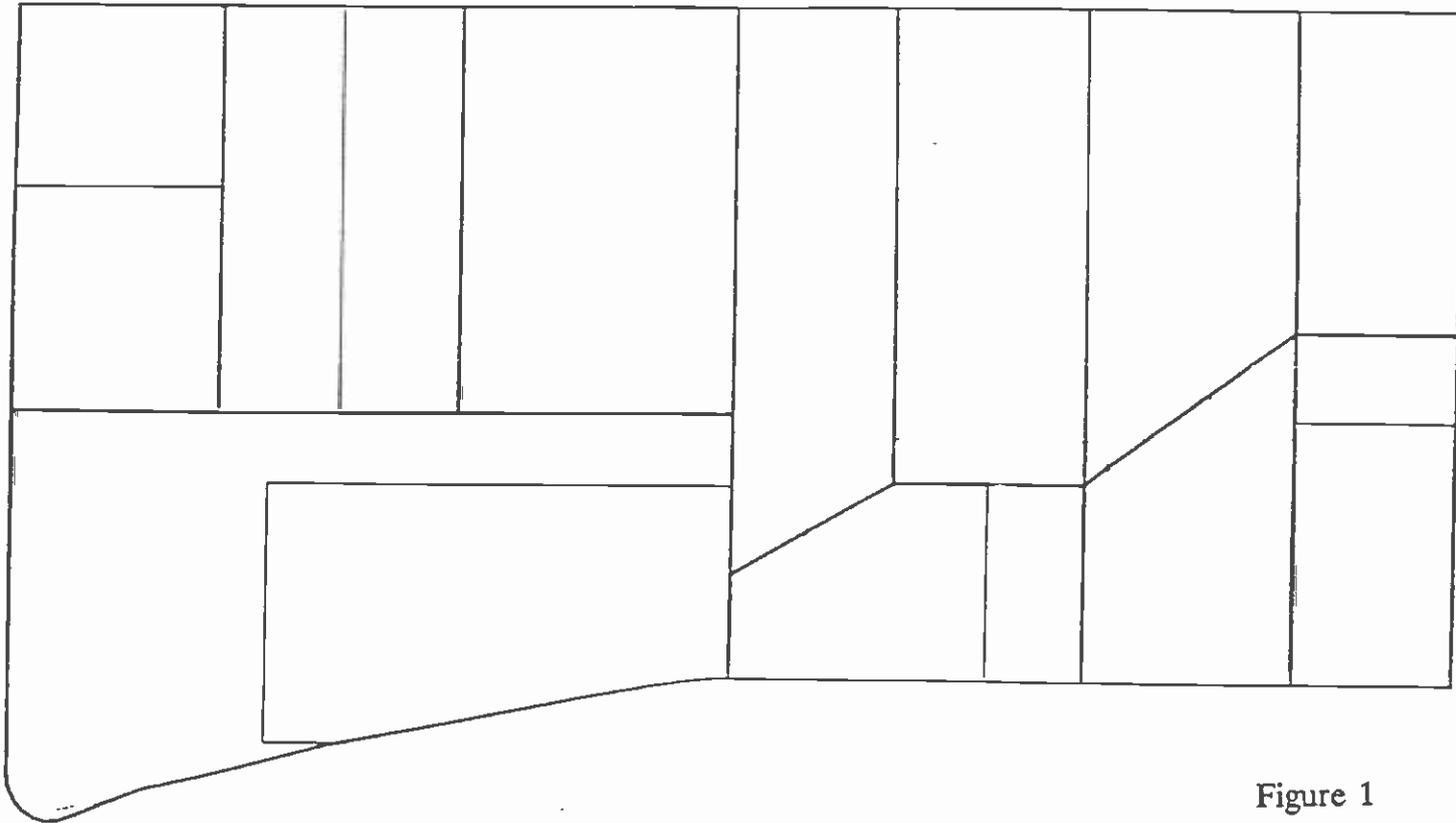
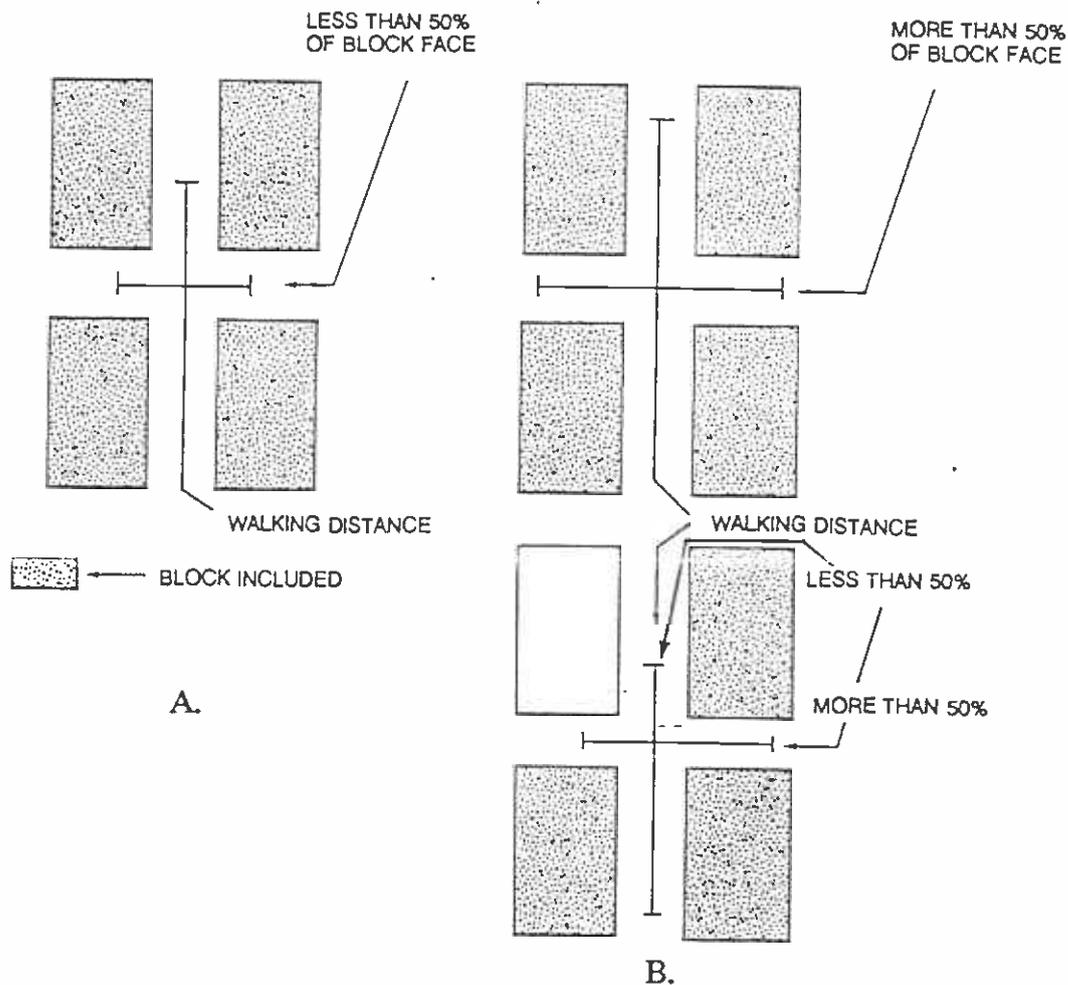


Figure 1

## ALTERNATIVE METHODS FOR DETERMINING INCLUSION OR EXCLUSION OF A BLOCK



- A. If any part of a block or block face is included within a designated distance from the geometric center of a station, the entire block would be included in the benefit assessment district. (Example A)
- B. If more than one-half of a city block or block face is included within the designated distance from the geometric center of a station, the entire city block would be included in the benefit assessment district. (Example B)

The second alternative offers the following advantages:

- a) It should make it easier to demonstrate special benefits in that district boundaries would be more closely tied to average walking distances.
- b) The district boundaries should be less jagged and potentially more equitable and acceptable to property owners in the district.

### **One-Half Mile Radius - Block Inclusion versus Legal Limit**

If the one-half mile walk distance is used for the boundary, there will be blocks which could be included under the walk distance rule but portions of those blocks would exceed the one-half mile radius. (Figure 3) Any property located outside the one-mile radius can not be legally assessed. In this instance, there are the following four options:

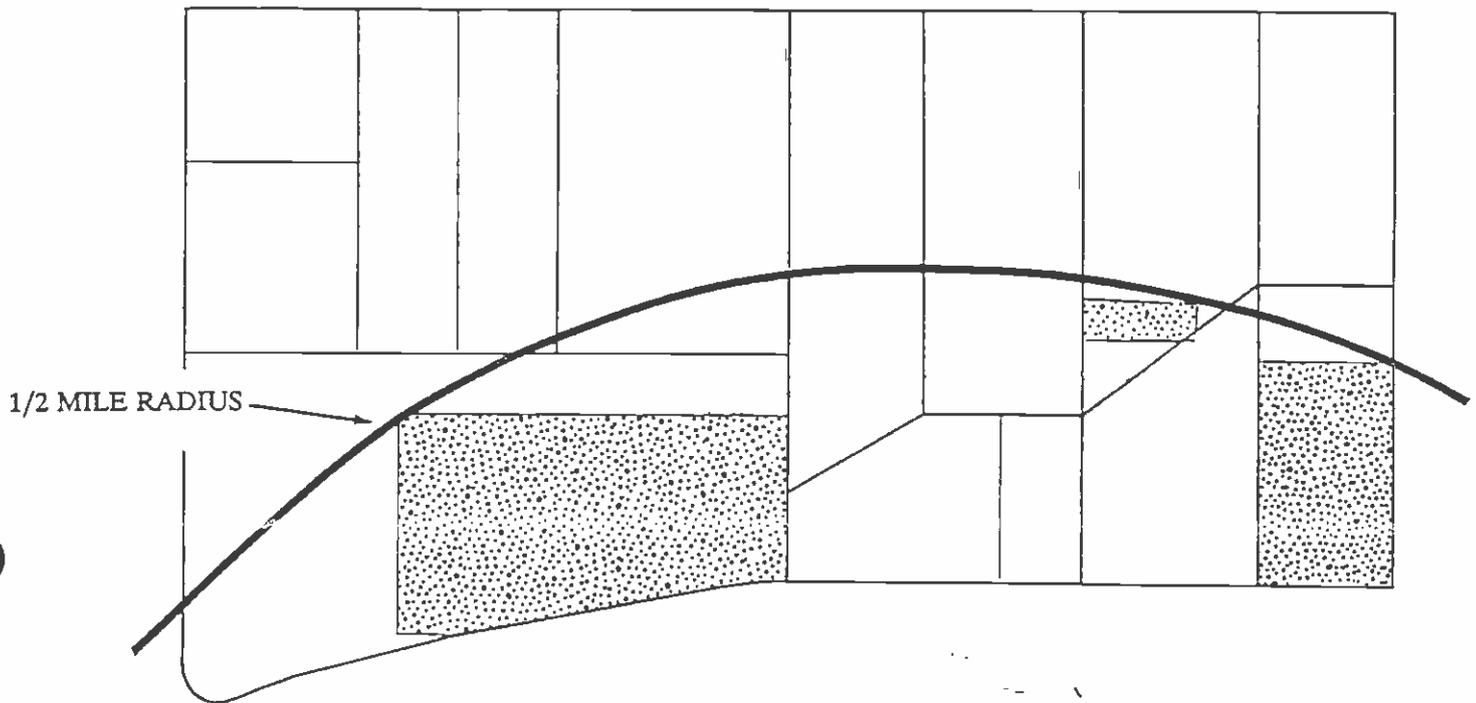
1. exclude entire block
2. include the portion of the block under the curve
3. include largest fitting rectangle (if greater than 50% of parcel)
4. include the individual parcel if within the 1/2 mile radius.

Option 1 would produce a boundary consistent with the remainder of the boundary if full blocks are used in determining the boundary. Options 2, 3, and 4 would produce a jagged boundary which could run between adjacent lots. These options would also be difficult to administer because it would have to be determined where buildings are sited on parcels and the portion of the parcel subject to assessment prorated. A building may even straddle the boundary line if built on more than one parcel.

### **Zones**

There is a special benefit in the proximity of the station which could support the argument for a premium zone. If tiers or zones are used within benefit assessment districts, the benefit assessment rate within the premium tier would be higher than that in the rest of the district due to the special benefits received. The premium tier could be designated as one full block surrounding a station, the block face on property fronting major streets, or located within a specified premium distance from the station portal. The rate differential between the premium and secondary zones should be set to reflect the anticipated gradient of decreasing potential benefits with increasing distance from the station portals. Figure 4 illustrates how far people will walk to a rapid transit station. For the first 1000', walking is clearly preferred. After 2500', the amount of people who will walk to a transit station drops dramatically. The enabling legislation supports the use of tiers or premium zones.

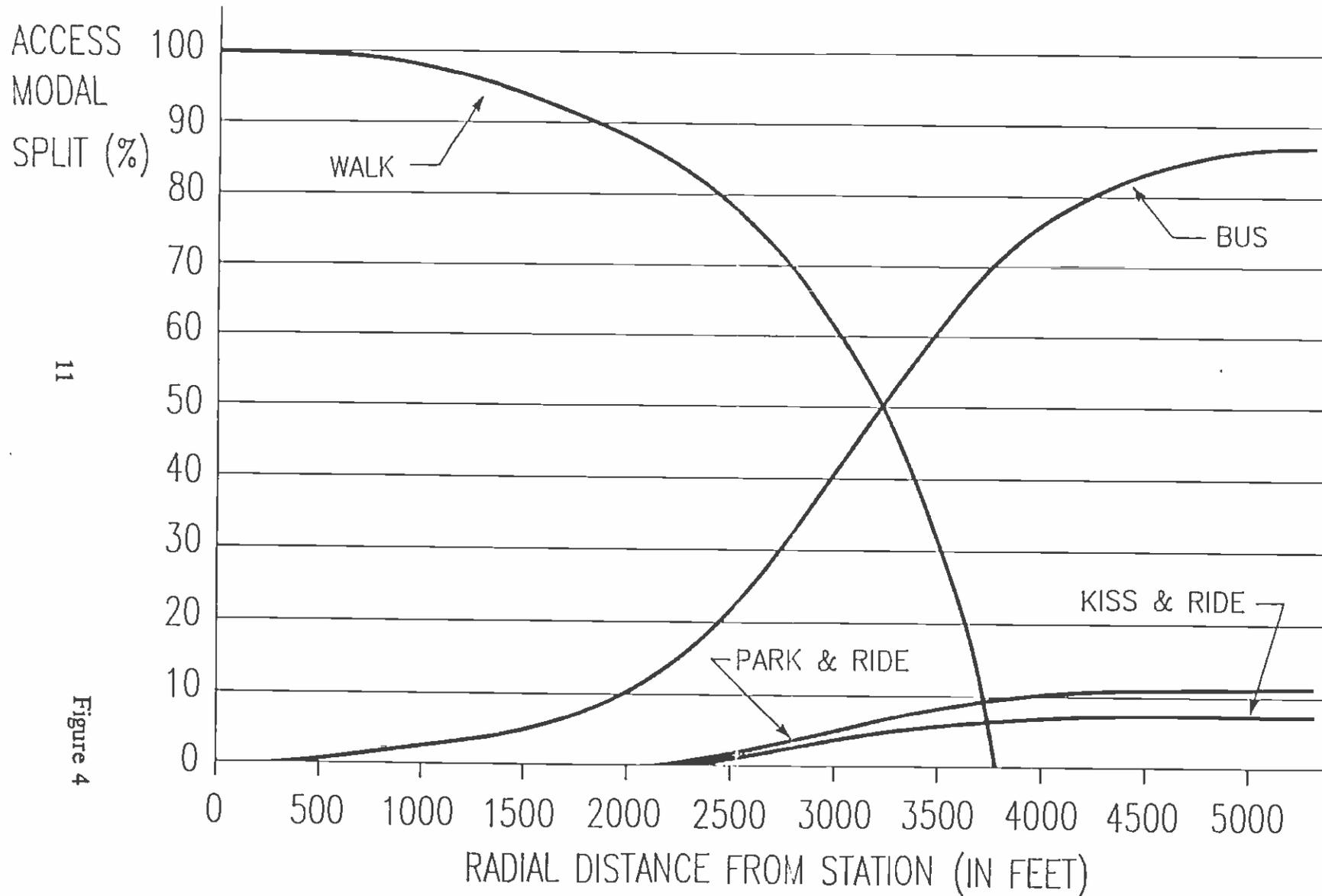
1/2 MILE BOUNDARY  
BLOCK INCLUSION VS. LEGISLATIVE LIMIT\*



- \* THE ENABLING LEGISLATION DOES NOT ALLOW PROPERTIES WHICH ARE OUTSIDE THE 1/2 MILE RADIUS TO BE INCLUDED.

Figure 3

# ACCESS TO RAPID TRANSIT STATION RELATIVE TO DISTANCE FROM STATION



11

Figure 4

## MOS-1 Boundary Rules

The MOS-1 boundaries were established based on walking distances with a distance of 1/2 mile for the four CBD stations and 1/3 mile for the Wilshire/Alvarado station. The distances were measured using the block inclusion rule which includes a full city block in the district if more than one-half of the city block or if more than one-half of the block face is included within the designated distance from the center of the station. There are also two smoothing rules which were developed to eliminate some of the irregularities of the boundary in order to accomplish the goal of being fair and equitable. These rules are:

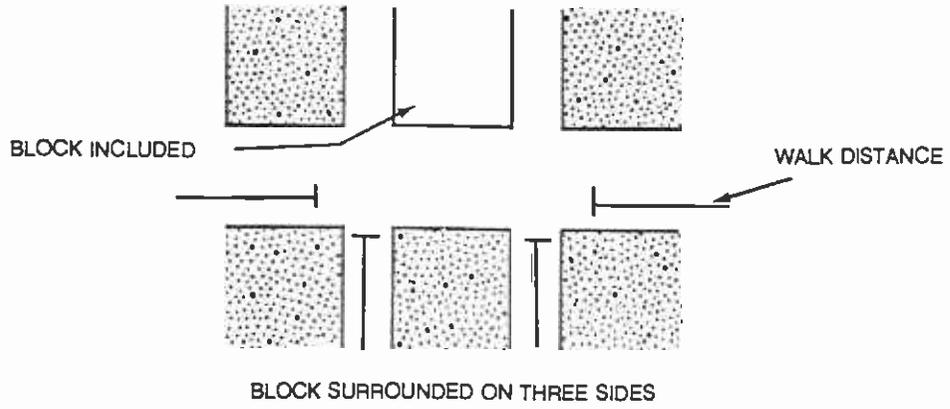
1. When the boundary is to run along major features such as a freeway, river or railroad right-of-way, the boundary runs along the centerline of the feature.
2. When the boundary runs along three sides of one or two adjacent blocks then those blocks are included. (Figure 5.)

Tiers or premium zones were not instituted in MOS-1.

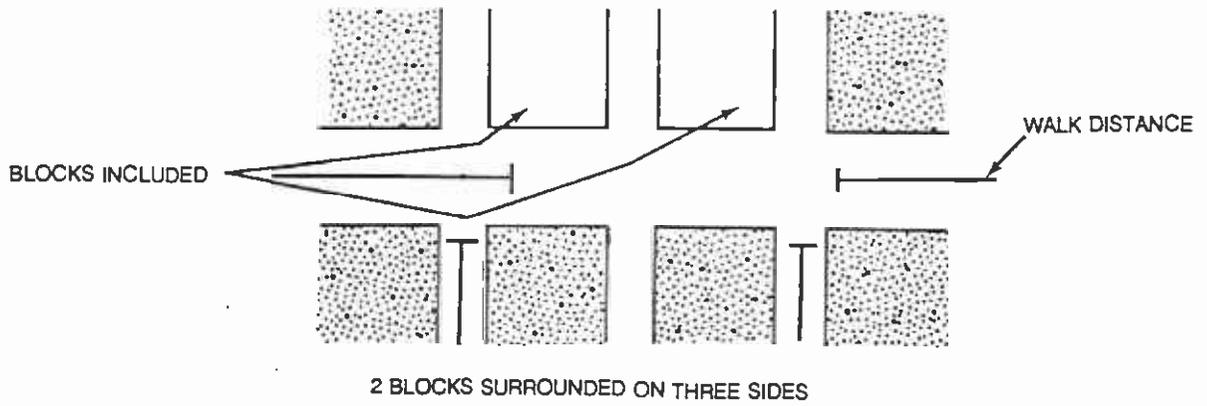
## Phase II Data Collection

The type of land use and the amount of square footage by category is an important consideration when determining the boundary. A massive data collection effort was undertaken in order to determine the amount of square footage within the potential boundaries. Data on the amount of square feet by land use type was collected from the L.A. County Tax Assessor's information and from the L.A. County Flood Control Data Tape. The information was augmented by data collected from a field survey, and from a survey of existing records from the City of Los Angeles Department of Building and Safety for all properties located within 1/3 mile radius of the station. For the area between 1/3 mile and 1/2 mile, data was collected from the L.A. County Tax Assessor's Information and the from the L.A. County Flood Control Data. This data was augmented with information from the Building Owners and Managers Association (BOMA) on the large office buildings located along the route. The amount of assessable square footage using the same rules as used for MOS-1 is shown in Table 1. For purposes of this table the amount of square footage which lies within the overlap area of the Wilshire/Vermont and Wilshire/Normandie, and the Wilshire/Vermont and Vermont/Beverly stations are included in the Wilshire/Vermont station figures, the overlap between the Vermont/Santa Monica and Vermont/Sunset stations is included in the Vermont/Santa Monica station numbers, the overlap between the Hollywood/Western and the Hollywood/Vine station is included in the Hollywood/Western station and the overlap between the Hollywood/Vine and Hollywood/Highland stations is included in the figures for the Hollywood/Vine station. This assignment of common area to a single station was done to avoid double counting of square footage for stations. The total for all eleven stations for 1/3 mile is approximately \$42 million and for 1/2 mile is approximately \$51 million.

# SMOOTHING RULE



-  BLOCK INCLUDED USING WALK DISTANCE RULE
-  BLOCK INCLUDED USING SMOOTHING RULE



-  BLOCK INCLUDED USING WALK DISTANCES
-  BLOCK INCLUDED USING SMOOTHING RULE

Figure 5

TABLE 1  
PRELIMINARY  
ASSESSABLE SQUARE FOOTAGE  
BY STATION

STATION	DISTANCE	SQUARE FEET
WILSHIRE/ VERMONT	1/3 MILE	4,713,476
	1/2 MILE	6,511,396
WILSHIRE/ NORMANDIE	1/3 MILE	6,732,636
	1/2 MILE	6,898,783
WILSHIRE/ WESTERN	1/3 MILE	3,611,949
	1/2 MILE	4,020,026
VERMONT/ BEVERLY	1/3 MILE	2,226,497
	1/2 MILE	2,938,503
VERMONT/ S. MONICA	1/3 MILE	1,712,218
	1/2 MILE	2,463,656
VERMONT/ SUNSET	1/3 MILE	1,908,313
	1/2 MILE	2,360,571
HOLLYWOOD/ WESTERN	1/3 MILE	2,343,336
	1/2 MILE	3,659,800
HOLLYWOOD/ HIGHLAND	1/3 MILE	4,916,560
	1/2 MILE	4,980,024
HOLLYWOOD/ VINE	1/3 MILE	6,619,958
	1/2 MILE	7,374,599
NORTHHOLLYWOOD	1/3 MILE	4,294,812
	1/2 MILE	6,192,836
UNIVERSAL CITY	1/3 MILE	2,758,810
	1/2 MILE	4,073,082
TOTAL	1/3 MILE	41,835,565
	1/2 MILE	51,473,276

## Boundary Conclusions

This discussion leads to three important conclusions regarding boundary definitions:

- a) Boundaries for a rapid transit benefit assessment district must be established through a careful determination of the distance to which special benefits extend from a station.
- b) Boundaries cannot be set at more than some reasonable walking distance from a station. An average person walks at about 3 mph, and can cover about a quarter mile in 5 minutes, and a half mile in 10 minutes. There is considerable evidence to suggest that average walking distances to and from transit facilities do not generally exceed one-half mile, and have a mean close to one-quarter mile. This range (one-quarter to one-half mile) should generally be the maximum range within boundaries are set.
- c) Boundaries should be set to include as many properties receiving special benefits as possible, to spread the assessment widely and equitably as possible.

Recommending and setting boundaries for benefit assessment districts involves tradeoffs. With each tradeoff, the important benefit and equity variable issues discussed in this paper must be considered.

## Recommendations

In evaluating alternate boundaries, several criteria should be used, including the ability to demonstrate that special benefits (as opposed to general, regionwide benefits) occur for property within the boundary, that the boundary will not generate undue problems in administration, that the boundary would represent an equitable treatment of benefiting and non-benefiting property and that revenue-generating requirements are met.

While similar criteria and guidelines should be utilized to determine the boundaries for both CBD and non-CBD stations, variances in existing development patterns, local development planning objectives, and future station area growth potentials in the non-CBD area require the use of additional criteria to define non-CBD Metro Rail benefit assessment boundaries.

It is recommended that the following criteria be adopted for the Phase II benefit assessment districts:

- o The district boundary be determined by a 1/2 mile walk distance (2640 feet) from the center of the station.
- o The maximum distance be measured along the centerline of the street.
- o If more than 50% of the block or block face is within walking distance then the block is included.
- o If the a block is bisected by the 1/2 mile maximum radius then the block is excluded.

The 1/2 mile distance is one which is allowed by the enabling legislation and one which allows the benefit assessments to be shared by all those who will benefit from the location of a Metro Rail station. Using walking distance rather than radius relates the boundary more directly to benefit since there is a proven correlation between walking distance and benefit. The inclusion of a full block when more than 50% of the block is within walk distance provides a smoother more equitable boundary which is also less costly to administer.