

# *ROUTE 178 CORRIDOR STUDY*

*Prepared For:*

*KERN COG, CALTRANS, CITY OF BAKERSFIELD*

*Prepared By:*

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*December 1986*

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## EXECUTIVE SUMMARY

The purpose of the Route 178 Corridor Study was to determine what should be done to improve this state highway through central Bakersfield. East of downtown, Route 178 is built as a freeway. Through downtown and the adjacent residential neighborhood, State Route 178 traverses city streets. The resulting noise and congestion have been a lingering problem since the freeway was opened in the early 1970s.

The Route 178 Corridor Study addressed two specific issues:

1. The magnitude of the need for improvements along Route 178.
2. The preliminary design of recommended improvements, as necessary.

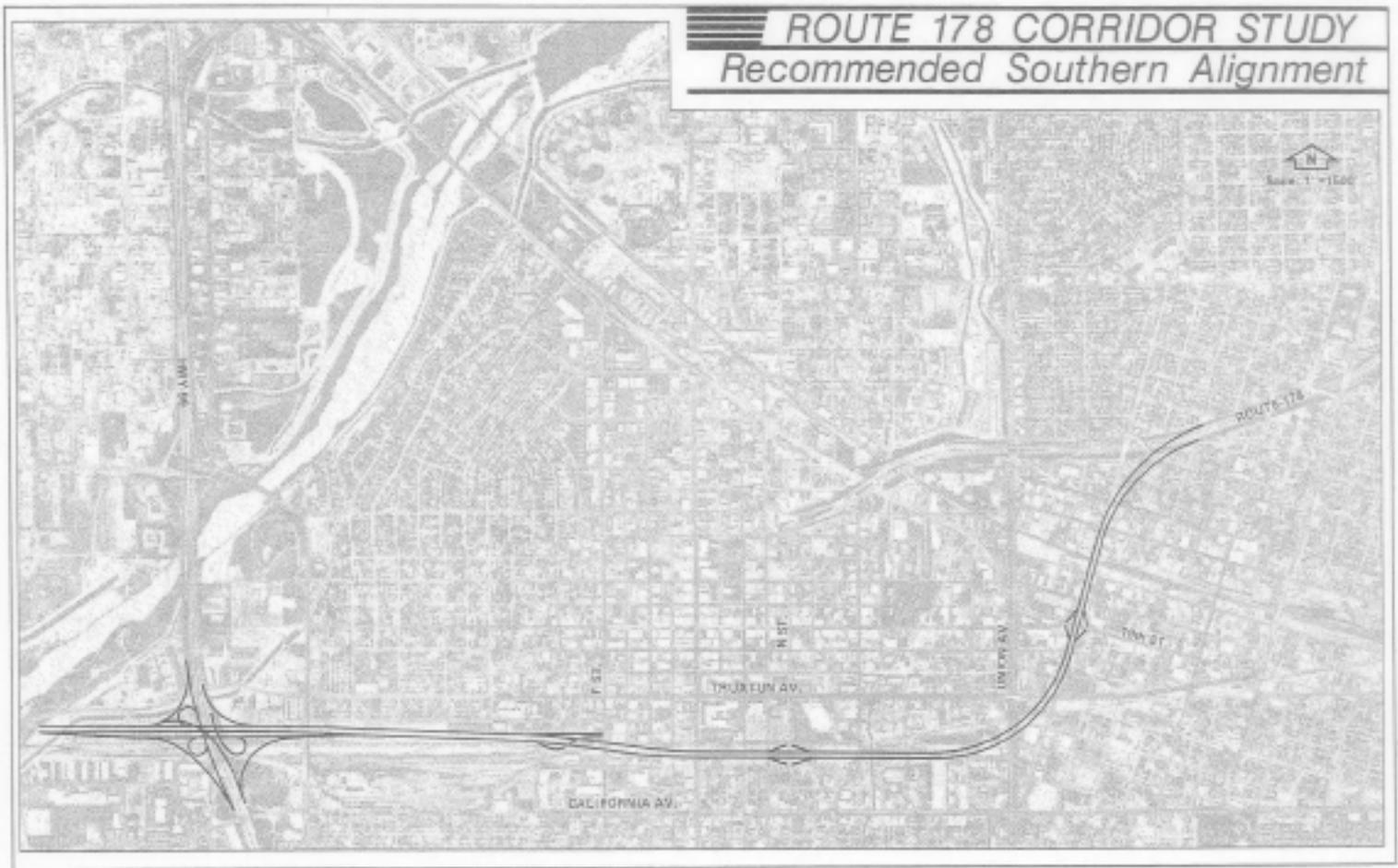
The study was sponsored by the Kern Council of Governments, Caltrans, and the City of Bakersfield. Lasting over a year and a half, the study was conducted by the consulting firm of Barton-Aschman Associates, Inc., and involved extensive public input both by residents along Route 178 and by other Bakersfield citizens and business leaders.

The analysis of the need for improvements identified four areas of concern:

1. *Projected traffic growth:* Traffic volume on Route 178 has been increasing by five percent per year since 1960. If this same rate continues, traffic demand will exceed the street capacity by 1990. In fact, significant traffic congestion is already occurring around Oak Street and Pierce Road.



2. *Safety:* Because of the congestion beginning to appear, accident rates have increased on 24th Street at Oak Street and Pierce Road. Also, the high volume and high speed of traffic through the Westchester residential area makes crossing the street dangerous for pedestrians and vehicles.
3. *Aesthetics:* The wide expanse of pavement, variety of signs, and varying building setbacks make Route 178 an unattractive gateway to downtown. This degrades the image of downtown and Bakersfield in general to residents and visitors.
4. *Neighborhood impact:* Route 178 bisects the Westchester residential neighborhood adjacent to downtown Bakersfield. The existence of a high-volume state highway in a residential area has a negative impact in terms of noise, dust, vibration, and aesthetics. In addition, Route 178 acts as a barrier, both physical and psychological, to interaction between the northern and southern halves of what is otherwise a cohesive neighborhood.



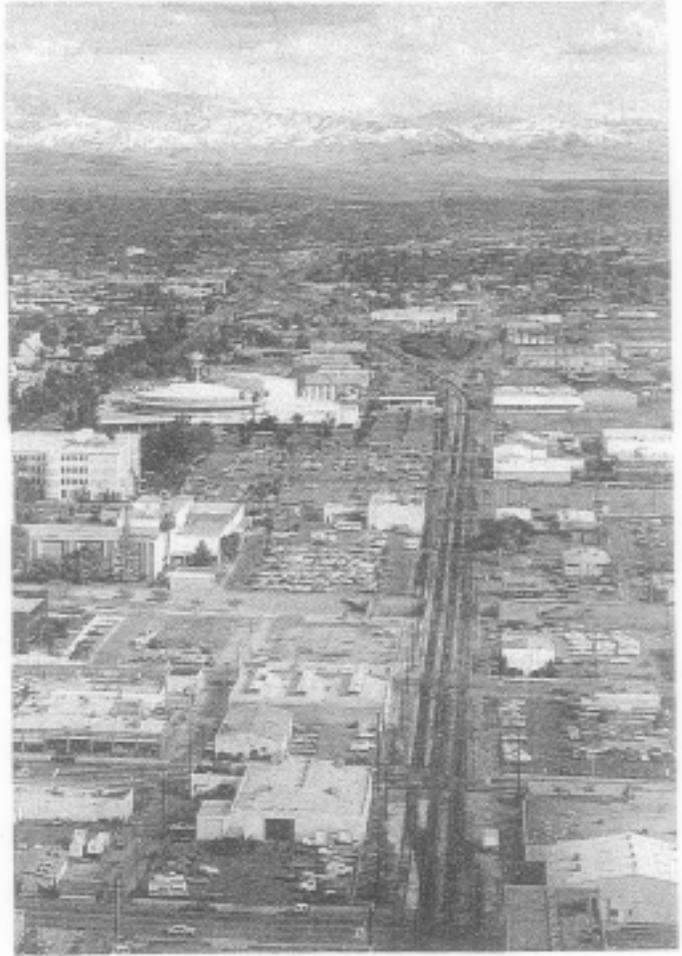
**Long-Range Recommendation** network, turn west at Truxton Avenue, and proceed along the Santa Fe railroad tracks To respond to the existing problems along Route 178, 178 and developed consultant the 178, 178 Route

evaluated alternatives for both ultimate (long-range) and interim (short-range) solutions. The recommended ultimate plan is to extend the existing freeway around the southern edge of downtown. This recommendation is described in the following paragraphs.

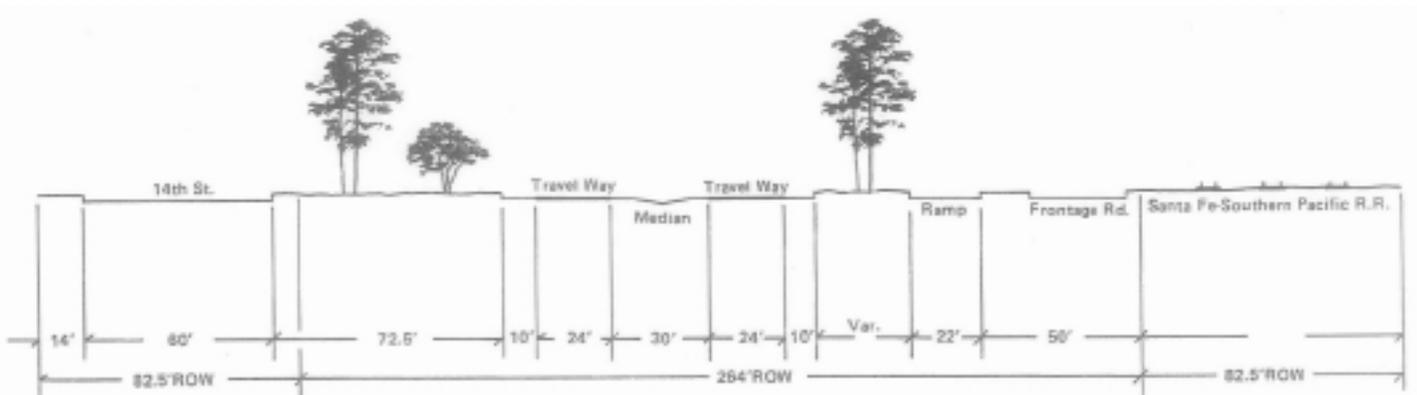
The proposed freeway would connect to the existing Route 178 freeway near Baker Street in East Bakersfield. It would proceed south paralleling the East Bakersfield street

to Highway 99. The freeway would be elevated through East Bakersfield, coming Santa Fe the to parallel grade to down tracks, An overpass would be required near F Street, where the freeway would cross from the southern side of the tracks to the northern side. Cross streets would pass under the freeway, and interchanges are planned at 19th Street to serve East Bakersfield and at N Street and F Street to serve downtown. A major freeway-to-freeway interchange would connect the proposed freeway to Highway 99.

A freeway along the southern alignment would offer several benefits. It would add substantial capacity for east-west traffic movement across central Bakersfield, which would support continued growth of the city without traffic congestion. It would also substantially increase downtown access. The existing downtown access routes would remain, and the freeway would add another gateway. By attracting a lot of traffic away from 23rd and 24th Streets, the southern freeway would improve environmental conditions in the Westchester area. Traffic through the neighborhood would be reduced by half.



There are two challenges to implementation of the proposed freeway: financing and environmental impact. In this respect, however, the recommended southern alignment presents fewer problems than would other possible alignments. The cost of the freeway would be roughly \$100 million, about the same as any alignment through central Bakersfield. The southern alignment would be more cost-effective, however, by providing more travel capacity. The primary environmental impact would be the need to relocate 170 homes and businesses that lie within the proposed right-of-way. Other impacts (such as noise and emissions) would be minimized, since the alignment passes through mostly industrial areas.



**SURFACE FREEWAY DOWNTOWN (Looking West)**

### Short-Range Recommendation

The ultimate solution to the Route 178 problems—a southern alignment freeway—may take more than 10 years to implement. During the interim period, several smaller steps can be taken to improve conditions on 23rd and 24th Streets. These steps, described in the following paragraphs, constitute the short-range plan.

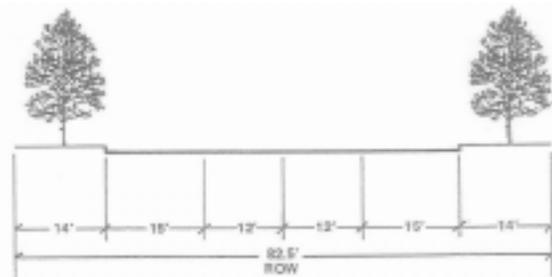
The downtown section of Route 178, 23rd and 24th Streets, can be improved through restriping of the pavement and the addition of landscaping. The existing pavement width is sufficient to provide four traffic lanes if curb parking is eliminated. This would increase capacity and decrease the **likelihood** of congestion. Landscaping can be added to the existing sidewalk area, which is 14 feet wide, to unify and improve the appearance of the street.

Through the Westchester neighborhood, Route 178 has sufficient capacity to accommodate short-range traffic demands, so the recommended plan focuses on improving the appearance of the street and decreasing its impact on residents. This can be accomplished through construction of a landscaped median on 24th Street. The median can be constructed in the area now occupied by the two-way left-turn lane. The median would reduce the visual width of the street, improve its appearance, and provide a refuge for pedestrians crossing the street. The median would have openings every third block, thereby focusing cross traffic and reducing conflict potential. If necessary, the cross street intersections at median breaks can be signalized.

In summary, the short-range plan consists of smaller-scale improvements that can be implemented immediately to improve conditions along Route 178 until the southern alignment freeway can be built. In order to move ahead with the freeway extension, the City of Bakersfield needs to adopt the recommended alignment and encourage Caltrans to add the project to its State Trans-



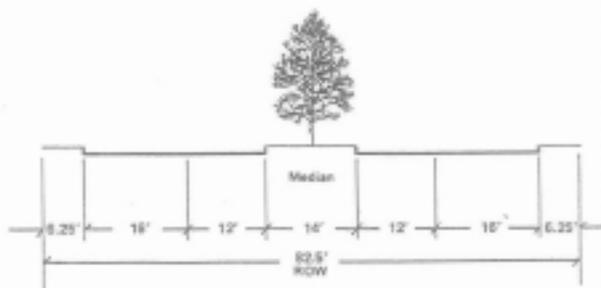
EXISTING DOWNTOWN SEGMENT



PROPOSED CROSS-SECTION  
23rd & 24th STREETS



EXISTING WESTCHESTER SEGMENT  
portation Improvement Plan.

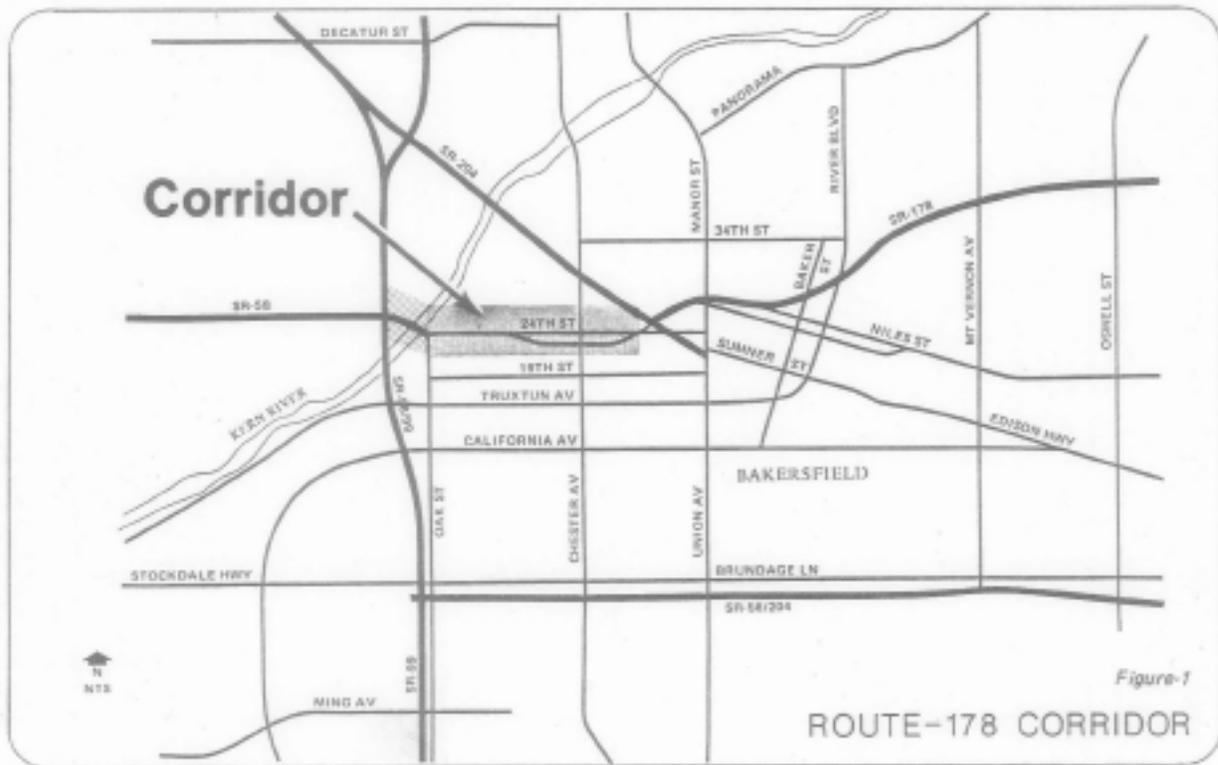


PROPOSED CROSS-SECTION  
24th STREET

# Chapter-1

## INTRODUCTION

This report discusses the procedures, analysis, and conclusions of a corridor study conducted for a portion of State Route 178 in Bakersfield. Figure 1 shows that the portion of S.R. 178 under study extends from S.R. 99 on the west to M Street on the east. This corridor study was conducted by Barton-Aschman Associates, Inc., transportation planning consultants, for a tri-agency committee consisting of the Kern Council of Governments, the City of Bakersfield, and the California Department of Transportation. This chapter discusses the study background, purpose, and procedure.



### STUDY BACKGROUND

The section of S.R. 178 included in this report has been considered for freeway construction many times in the past. In 1976 a portion of S.R. 178 was enlarged to a freeway; this portion extends from M Street east to Fairfax Road. The freeway was not extended west of M Street to S.R. 99 due to resistance by Bakersfield residents and the City Council. A freeway along this alignment would have destroyed many valuable homes and businesses in the area. The freeway, therefore, stopped at

M Street, leaving regular surface streets to carry the traffic load. The resultant high traffic volumes on downtown and residential streets has been a continuing problem ever since.

In 1984 the City of Bakersfield prepared a downtown redevelopment plan that recommended the construction of a parkway along the Route 178 alignment between S.R. 99 and M Street. The actual design of the parkway was not specified, however. The environmental impact report (EIR) prepared for the downtown plan raised the question of whether a parkway could accommodate the increased traffic volume expected along S.R. 178 due to downtown and overall regional growth. The downtown EIR recommended that a corridor study be conducted to assess travel demand and possible street system improvements along S.R. 178.

At the same time the California Department of Transportation (Caltrans) was preparing a study of a possible "Westside Highway" to link Interstate 5 to S.R. 99 through Bakersfield. One important issue regarding the location and design of the Westside Highway was how to link it to a freeway east of 99 (either S.R. 178 or S.R. 58) to create a continuous route from I-5 to the mountains east of Bakersfield.

To resolve these issues facing the City of Bakersfield and Caltrans with regard to the disposition of S.R. 178, a decision was made to conduct a Route 178 Corridor Study. Through a joint powers agreement, Kern Council of Governments, the City of Bakersfield, and Caltrans agreed to sponsor the corridor study. The consulting firm of Barton-Aschman Associates, Inc., of San Jose, California, was chosen through a competitive selection process to conduct the study.

## STUDY PURPOSE

The purpose of the study is two fold:

First, to identify the current and anticipated future level of transportation needs within the existing corridor, and

Second, to identify and evaluate alternative highway improvements that are cost effective, have minimum environmental impact, and have a reasonable level of public and political acceptance.

Since the availability of state funding for future transportation projects is always an uncertainty, it should be understood that this planning study is not a commitment on the part of Caltrans to provide funds or undertake project level environmental studies for a future transportation project. The end product of this study will provide the identification of an improvement project that has high public and elected official acceptance and one that would be cost effective in serving the current and future traffic needs of the corridor. If mutually agreed to by Caltrans, the City of Bakersfield and the Kern County Council of Governments, this project will be identified as a "Candidate Project" and will be considered for programming as funds become available. If the project is programmed, Caltrans will undertake all necessary design work and the preparation of the final environmental impact document.

## STUDY PROCEDURE

This study was started by the consultant in April 1985. Policy decisions and general study oversight has been the responsibility of a Steering Committee, made up of representatives of the three sponsoring agencies -- Kern COG, the City of Bakersfield, and Caltrans. The consultant kept the Steering Committee informed of study progress through technical memoranda, working papers, progress reports, and periodic face-to-face meetings.

The public *was* also involved in the study process to a great extent. (Full details of the public participation process are included in the appendix). Three general public meetings were held to gain input about corridor issues and problems, improvement opportunities, and evaluation of alternatives. These meetings were held in May 1985, September 1985, and May 1986, respectively. Kern COG prepared a mailing list of over 300 names of persons living along, owning a business within, or otherwise interested in the corridor to notify people of the meetings and to disseminate periodic working papers describing study progress.

In addition to general public involvement, Kern COG and the consultant made presentations to various civic groups to gain input regarding issues and improvement options. These groups included local architects, developers, realtors, the Chamber of Commerce, and the Downtown Business Association.

The first phase of the study involved the collection of data to determine existing traffic volumes and problems in the corridor. Traffic counts were conducted and existing data reviewed. Problems were identified through discussions with government officials and the public. Future traffic volumes in the corridor were estimated through a review of Caltrans' Kern County Travel Model projections. This phase was completed by September 1985 and demonstrated the need for transportation system improvements in the corridor.

The second phase of the study was the development of improvement alternatives. This phase was completed by the Consultant with extensive input from the study sponsors in January 1986. The third, and final, study phase was the evaluation of alternatives and selection of a preferred design. The consultant completed a technical evaluation of the alternatives, and the meetings with the public and civic groups provided information about the political viability of each alternative. Based on the technical and public evaluation of alternatives, recommended short- and long-range plans were developed in June 1986.

Throughout the study the consultant produced working papers describing the work completed to date. This final report is essentially a compendium of those working papers.

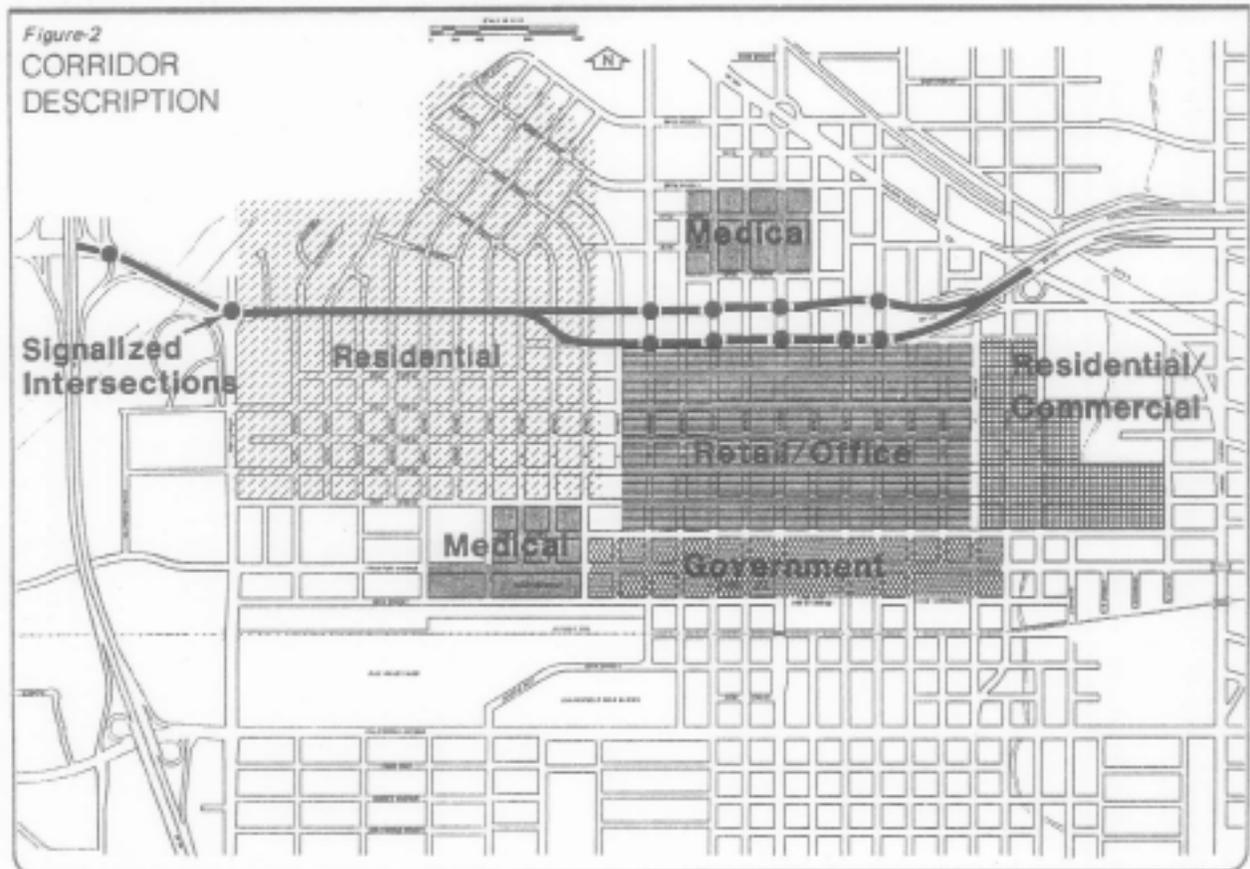
## Chapter-2

# EXISTING CONDITIONS

The corridor under study is most narrowly defined as consisting of 23rd and 24th Streets between S.R. 99 and M Street, a distance of 1.7 miles. This chapter describes the corridor, its importance to the region, existing traffic volume, and accident experience (see Figure 2).

### CORRIDOR DESCRIPTION

Through the study area, Route 178 consists of a four-lane arterial from S.R. 99 to B Street and a one-way couplet comprising 23rd and 24th Streets from B Street to M Street. In the couplet section 23rd and 24th Streets each have 54 feet of pavement width with three travel lanes and curb parking on both sides.



Land uses along this portion of Route 178 are a mixture of offices, retail shops, and auto-related businesses including new and used car dealers. From Oak Street to B Street Route 178 passes through a mature residential area with large, well-maintained homes on both sides of the street. The pavement in this section is 74 feet wide with four travel lanes, a two-way left turn median and curb parking on both sides. There are eleven signalized intersections along Route 178 between S.R. 99 and M Street.

### IMPORTANCE OF CORRIDOR

Route 178 provides three important transportation functions: connection to the Kern County east-west highway system, access to downtown Bakersfield, and access to the residential areas of east Bakersfield and Rio Bravo (see Figure 3). Route 178 connects directly to Route 58, which originates in San Luis Obispo County and passes through the Rosedale area to connect with S.R. 99. Coupled with Route 178, this provides an east-west link through the entire length of Kern County.

Access to downtown Bakersfield from Highway 99 is provided through interchanges at California Avenue and Route 178. Of these two, Route 178 runs closer to most downtown locations. Since Route 178 also connects to the Rosedale area west of Route 99 and to the residential areas of east Bakersfield and Rio Bravo, it serves as a major entrance way into downtown Bakersfield.

Besides connecting these areas to downtown, Route 178 provides the main link for all traffic from northeast Bakersfield and Rio Bravo, as it connects these areas directly to Highway 99.



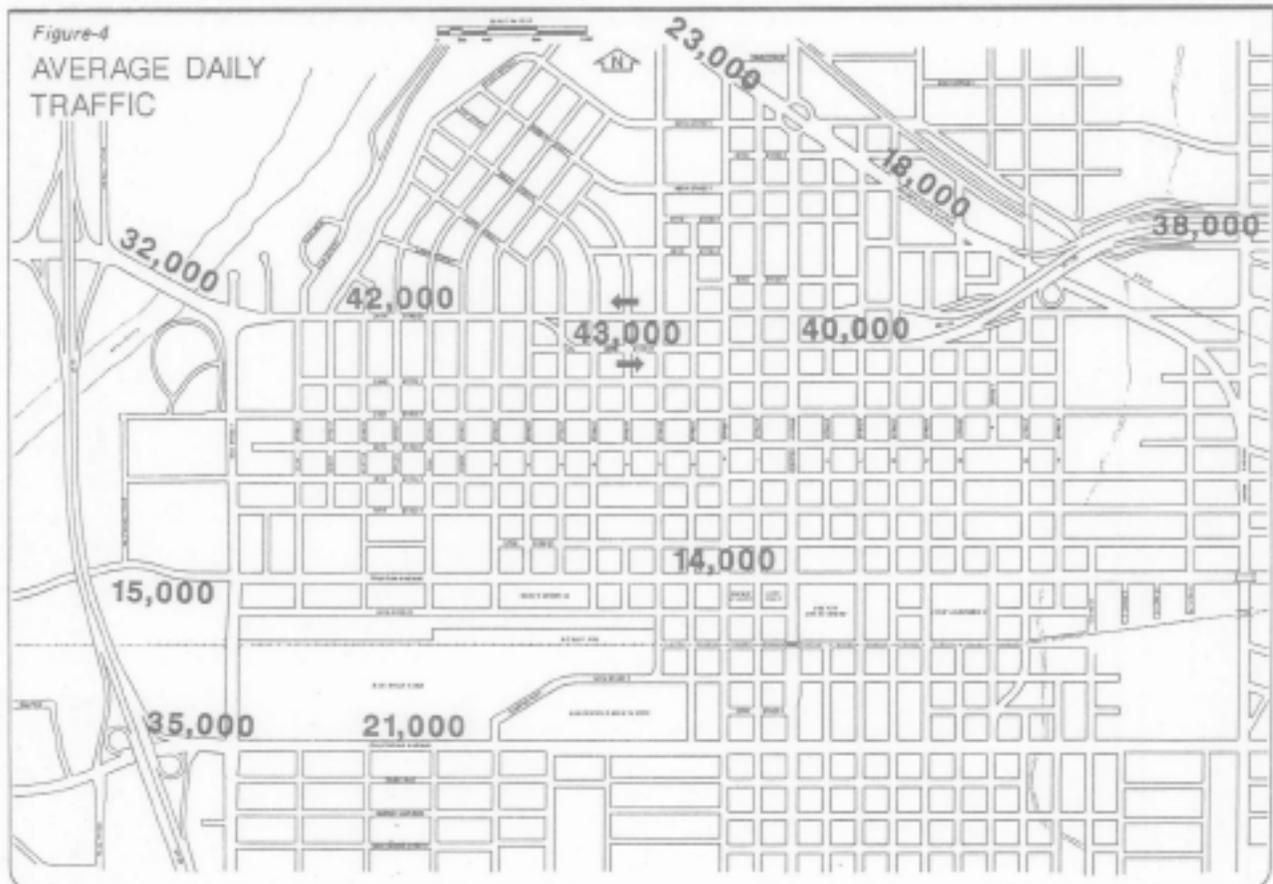
## OPERATIONAL CHARACTERISTICS

This section describes the existing traffic conditions on Route 178 and parallel arterials, which may be considered as alternate routes if Route 178 becomes congested. The accident history along Route 178 is also described.

### Traffic Volume

The California Department of Transportation (Caltrans) counts traffic-volumes on all state highways. The average daily traffic on each highway is reported annually in publications titled Traffic Volumes on California State Highways. Figure 4 shows that daily volumes on Route 178 range from 32,000 vehicles at Highway 99 to 43,000 vehicles at F Street. Volumes on the Golden State Highway (State Route 204) are substantially less -- 18,000 vehicles near Route 178 to 23,000 vehicles at F Street.

The City of Bakersfield also counts traffic volume on its major arterials. The two arterials paralleling Route 178 are Truxtun Avenue and California Avenue. Daily traffic on Truxtun Avenue is 14,000 vehicles and on California Avenue 21,000 to 35,000 vehicles.

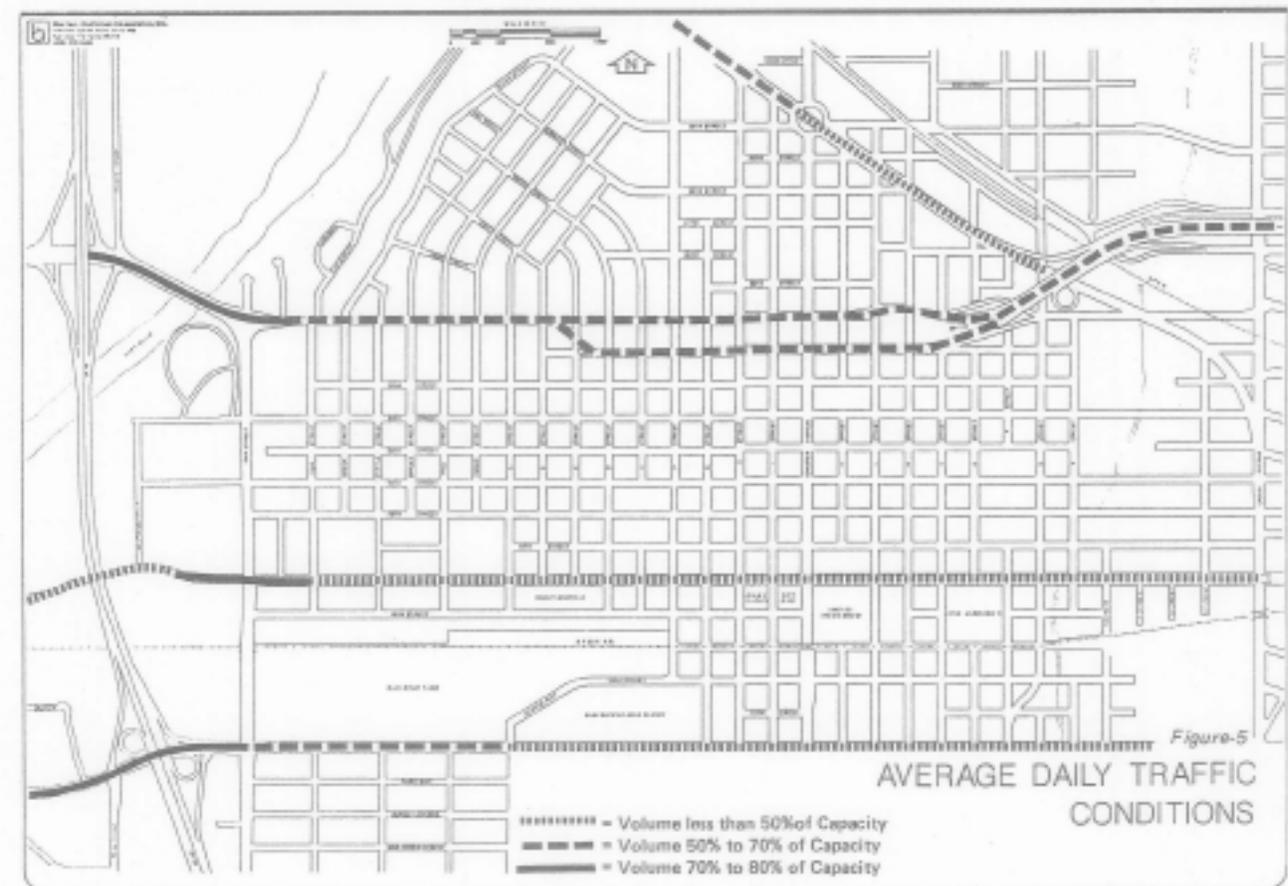


## Volume vs. Capacity

The daily traffic volumes are better understood when compared to street system capacity. Figure 5 shows that volume on Route 178 is generally equal to 5096-70% of capacity, except for the section from S.R. 99 to Oak Street, where daily volume equals 8096 of daily capacity.

On the Golden State Highway volumes are substantially lower, generally less than one-half of capacity. Given the periodic congestion on Route 178 one would expect more traffic to divert to Golden State. This does not occur, however, because Golden State would represent circuitous routing for most motorists (travel demand patterns are discussed later in the Origin-Destination section).

Truxtun and California Avenues are underutilized for most of their lengths downtown (volume 50% of capacity) but become much busier in the vicinity of Oak Street, due to the greater cross traffic there. Thus, California and Truxtun Avenues have similar volume-to-capacity ratios as on Route 178.

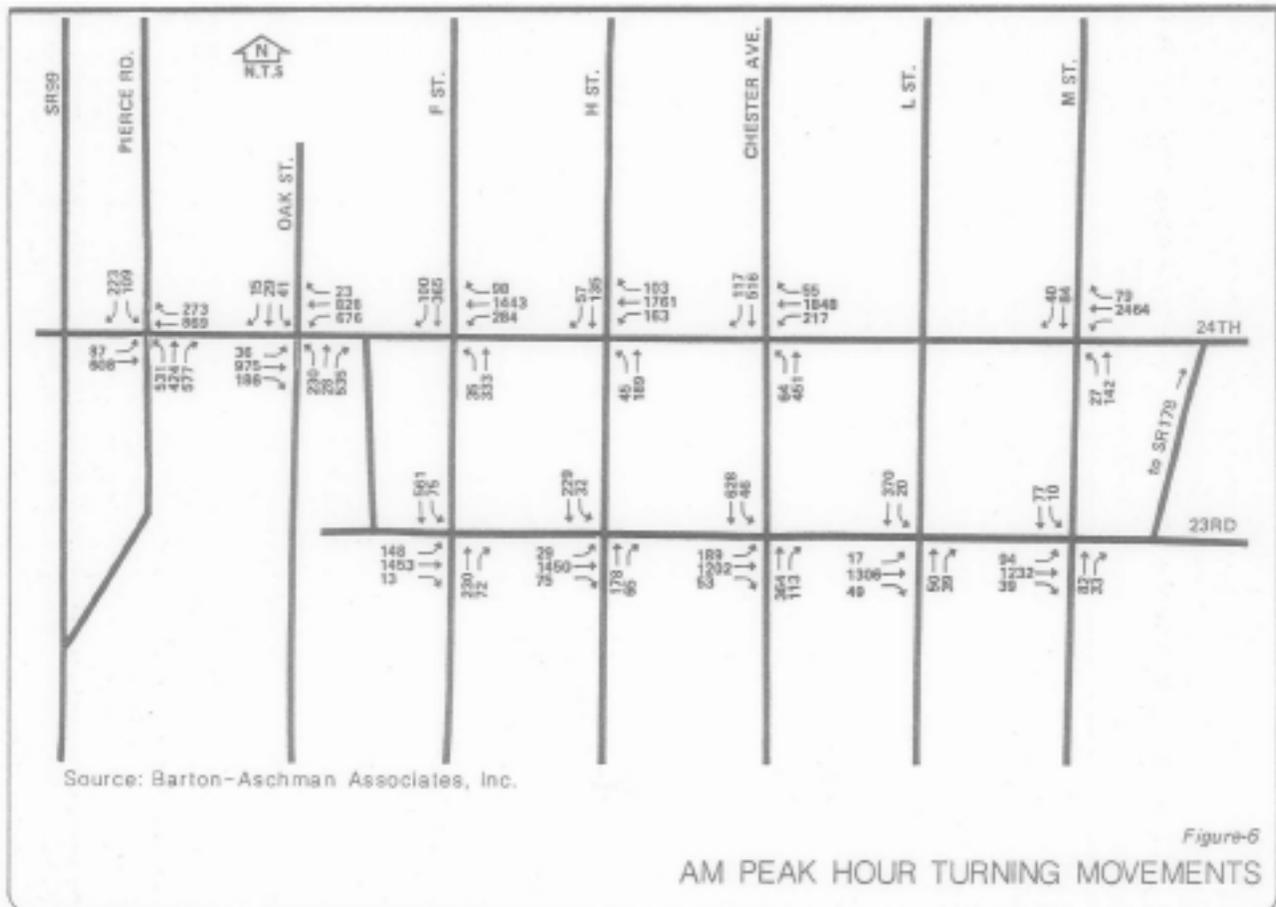


Another indicator of volume-to-capacity ratios comes from examination of peak hour volumes at signalized intersections. This was done, and the conclusions reached are similar to those reached by examination of daily traffic volume.

Manual counts of traffic volumes were conducted by Barton-Aschman Associates, Inc. on May 21 and 22, 1985 at the signalized intersections along 24th Street. In order to be sure to capture peak hour conditions, the counts covered the periods from 7-9 am, 11 am-1 pm, and 4-6 pm. These peak hour counts, shown in Figures 6, 7, and 8, were used to calculate volume-to-capacity ratios using information regarding lane markings and signal timing. Traffic counts for the intersections of Truxtun/Chester, Truxtun/Oak, and California/Oak were available from the City of Bakersfield. Volume-to-capacity ratios were also calculated for those intersections.

Peak hour volumes are quite close to capacity along Route 178 (see Figure 9). In fact, at the intersection of 24th and Pierce the volume is equal to capacity during the noon hour. In addition, the intersections of 24th at Chester, and 23rd at Chester are over 90% fully utilized, and the intersection of 24th at Oak is 88% full. Operationally, these ratios mean that traffic backs up at the intersections, and vehicles must wait through more than one green light to get through the intersection. The peak hour back up problem is particularly evident at the 24th Street and Pierce Road intersection.

Peak hour volumes on the major streets paralleling Route 178 are also relatively high. The Truxtun/Chester and Truxtun/Oak intersections are both operating at over 80% of capacity. California Avenue carries over 39,000 vehicles per day under Highway 99, and its intersection with Oak Street is operating at about 90% of capacity during peak hours.



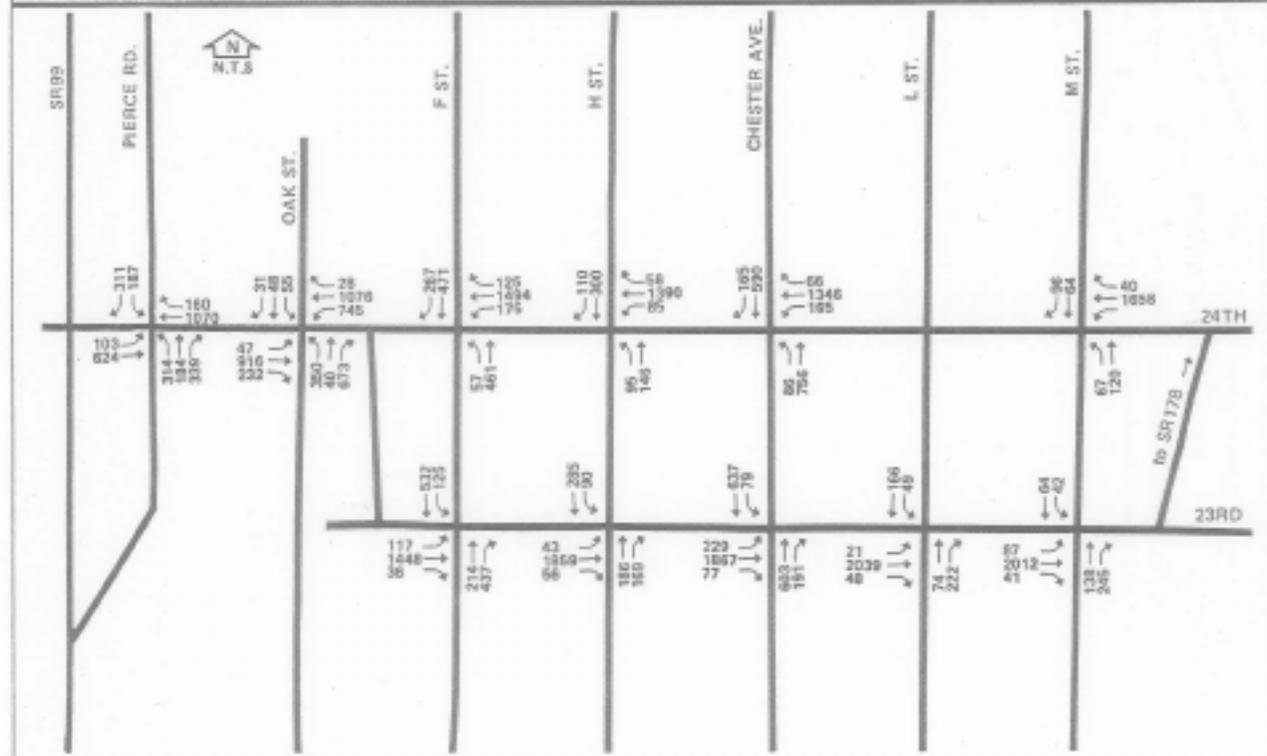
# ROUTE 178 CORRIDOR STUDY



Source: Barton-Aschman Associates, Inc.

Figure-7

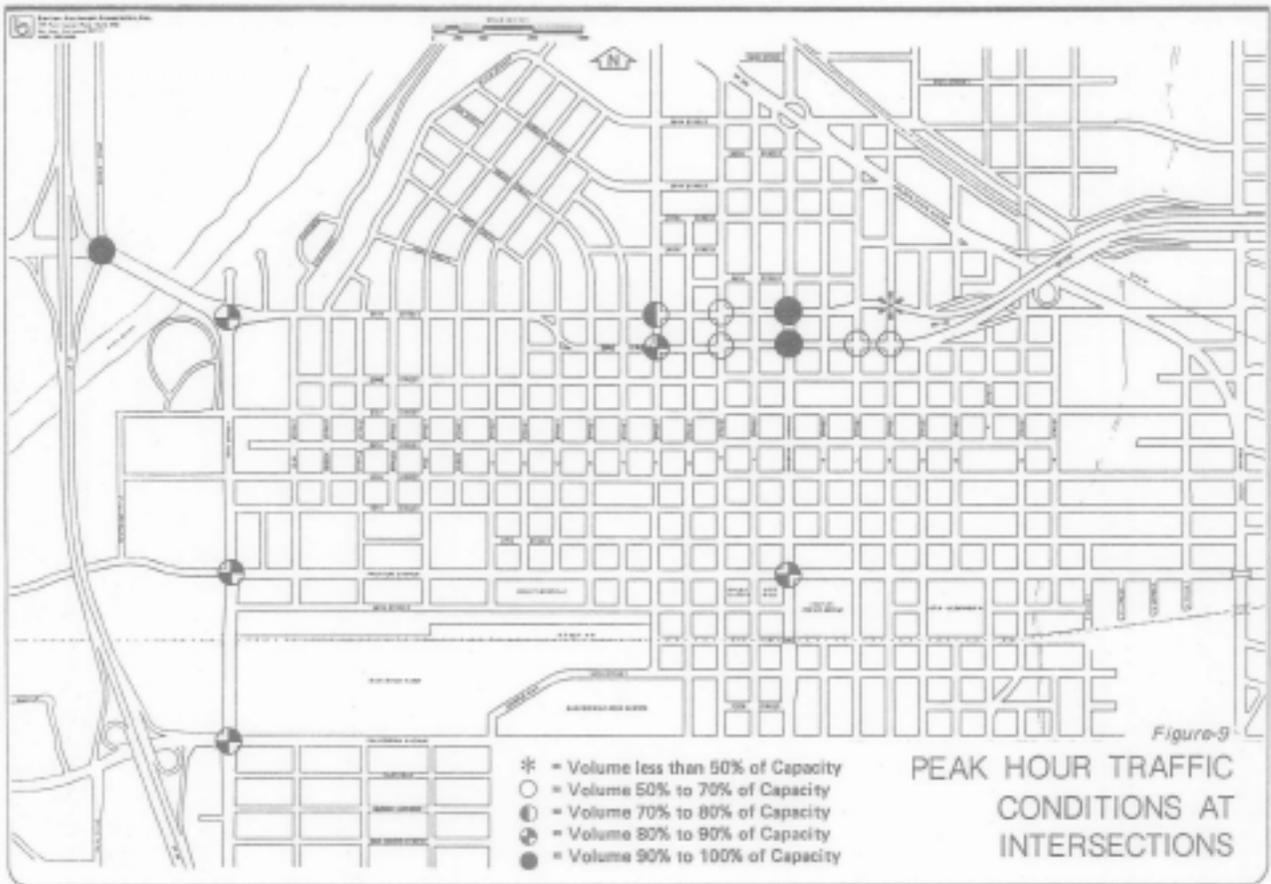
## MID-DAY PEAK HOUR TURNING MOVEMENTS



Source: Barton-Aschman Associates, Inc.

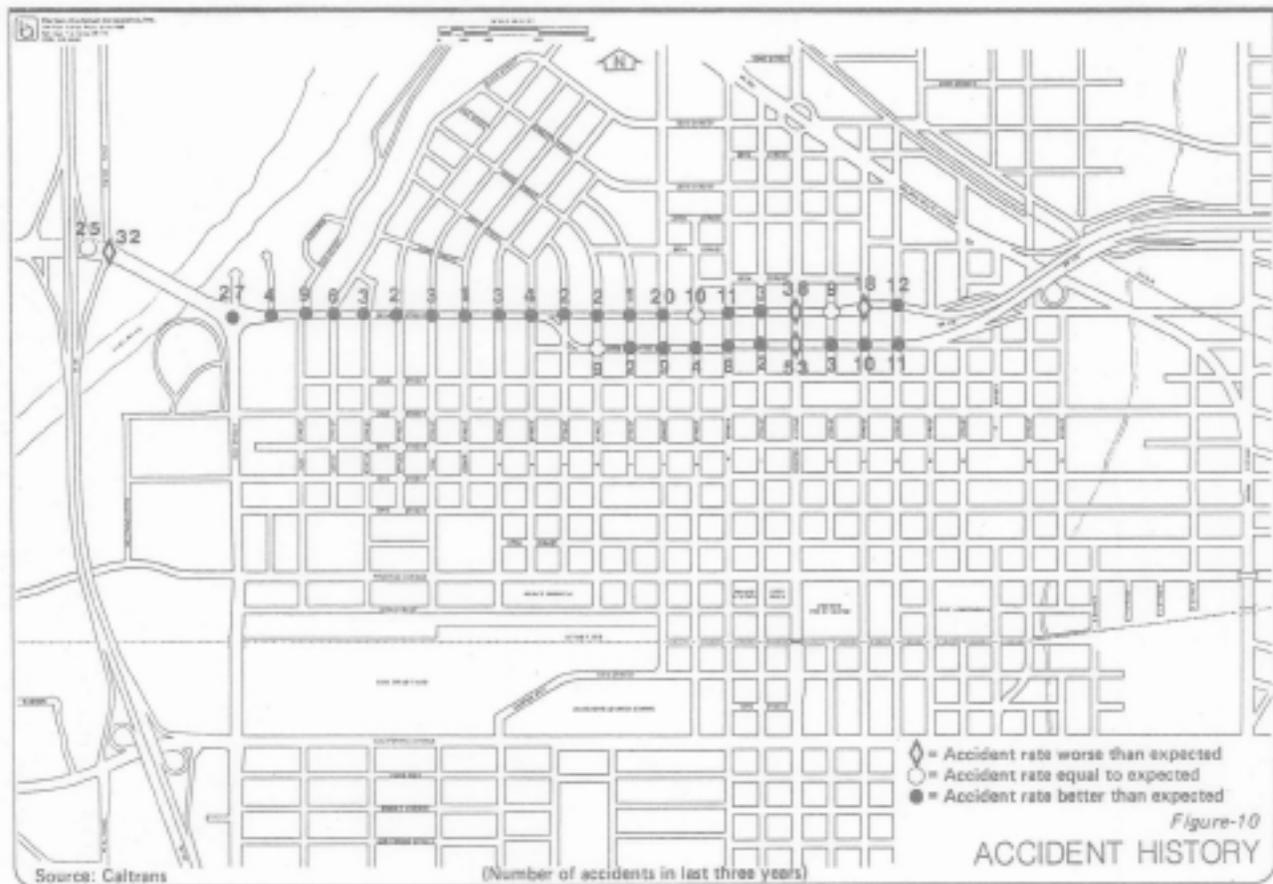
Figure-8

## PM PEAK HOUR TURNING MOVEMENTS



**ACCIDENT HISTORY**

Caltrans provided accident data from the last three years (4/1/82 to 3/31/85) for Route 178 from Highway 99 to M Street. Figure 10 shows that along most of the corridor, accident rates are relatively low. Especially in the residential section of 24th Street, accident rates are much lower than the expected rates for similar state highways. Along 24th and 23rd Streets in the downtown section of the corridor some locations have relatively high accident rates, while others have average rates or low rates. The high-accident locations are Chester Avenue at 23rd Street and 24th Street, and L Street at 24th Street. Locations with accident rates equal to the expected rates for similar state highways are 23rd and D, 24th and G, and 24th and K. Other downtown locations have low accident rates. The other location with high accident rates is the 24th Street and Pierce Road intersection, probably due to its high level of congestion.



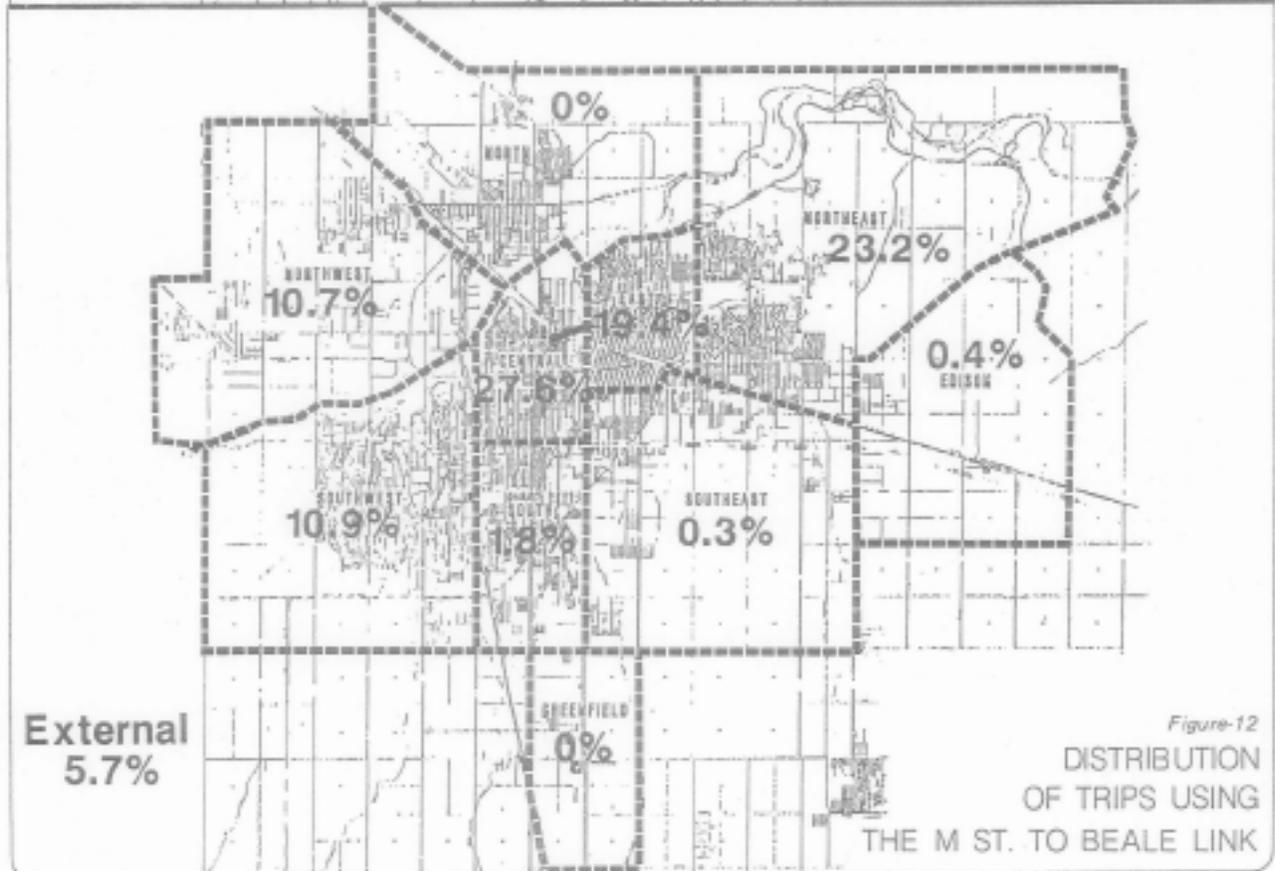
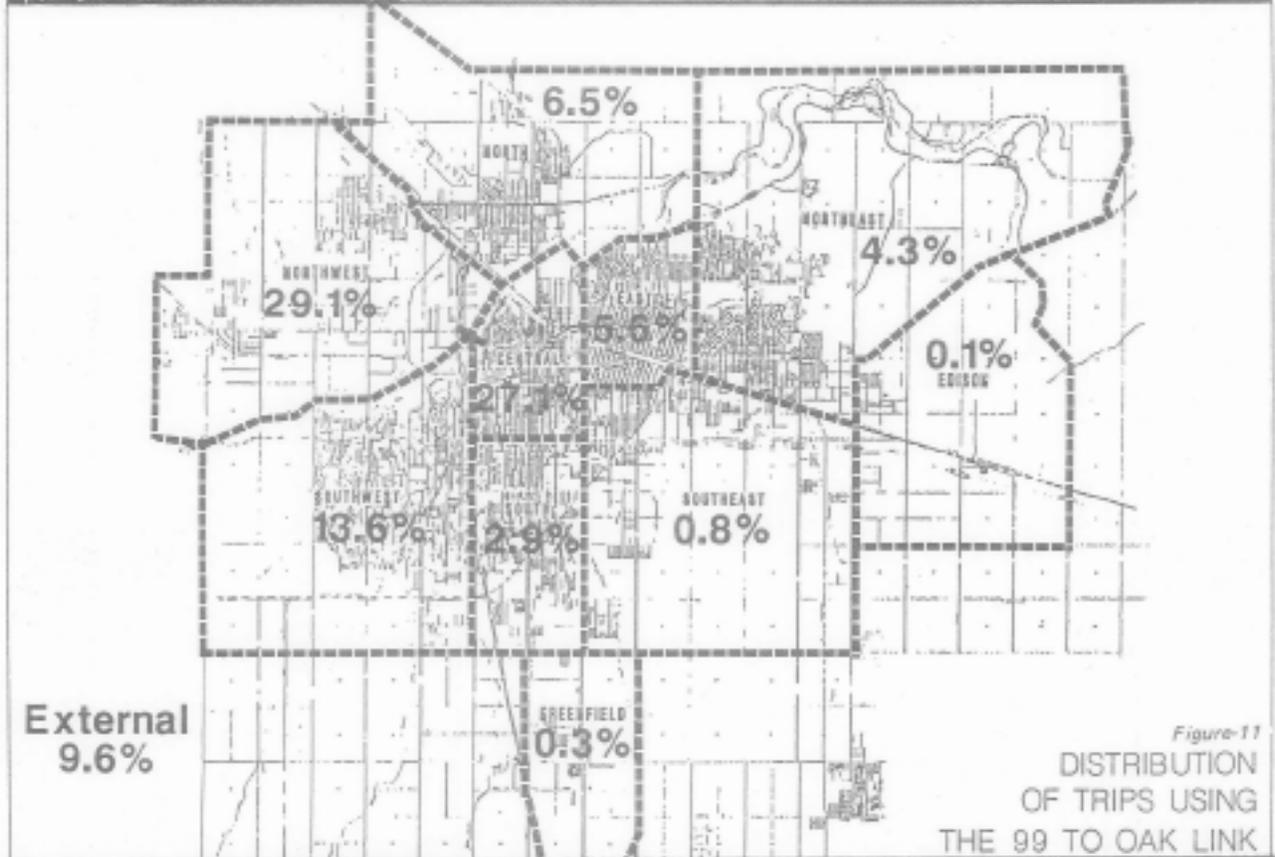
## ORIGIN-DESTINATION PATTERN

Analysis of the Caltrans transportation model of Kern County allows the identification of underlying travel patterns in the Route 178 corridor. The origin-destination pattern of vehicles shown by the model to use Route 178 were mapped. This was done for two separate sections of Route 178 — the section from Highway 99 to Oak Street and the section just east of M Street. Figures 11 and 12 show the distributions for vehicles using these two segments. Traffic on the Highway 99 to Oak segment is primarily travelling between the northwest and downtown and between the southwest and downtown. To a lesser extent the segment is used by traffic between the east and the northwest and between the east and the southwest.

The traffic distribution for the Route 178 segment just east of M Street is somewhat different. The downtown still appears as the major destination but now the primary origins are the east and northeast. There is also a lot of travel on this segment between the east and northwest and between the east and southwest.

Analysis of the model also shows that 90% to 95% of the traffic on Route 178 is locally-generated, i.e., it comes from the Bakersfield metro area. The remaining 5% to 10% is through traffic, not originated in or destined to Bakersfield but merely passing through.

# ROUTE 178 CORRIDOR STUDY



# Chapter-3

## ISSUES, PROBLEMS AND GOALS

Through interviews with residents and public officials and through review of the technical material presented above, the following transportation issues and problems were identified:

- Projected traffic growth
- Safety
- Aesthetics
- Neighborhood impact

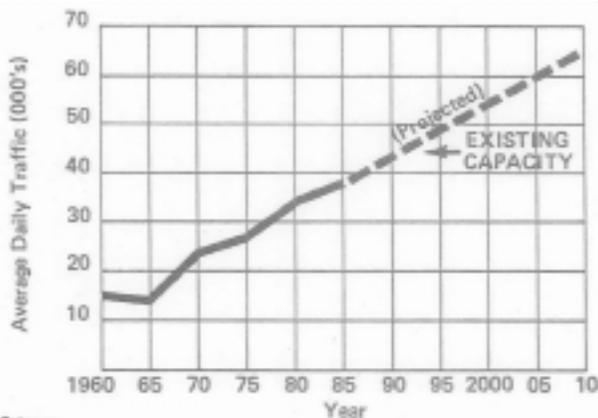
Each of these issues is discussed below. Following the discussion is a list of the study goals, established in response to the issues.

### PROJECTED TRAFFIC GROWTH

Traffic on Route 178 has been growing at a rate of about 5% per year since 1960 (see Figure 13). During this same period, Kern County employment has been growing about 3% per year and Bakersfield population about 2.5% per year (see Figure 14).

Figure -13

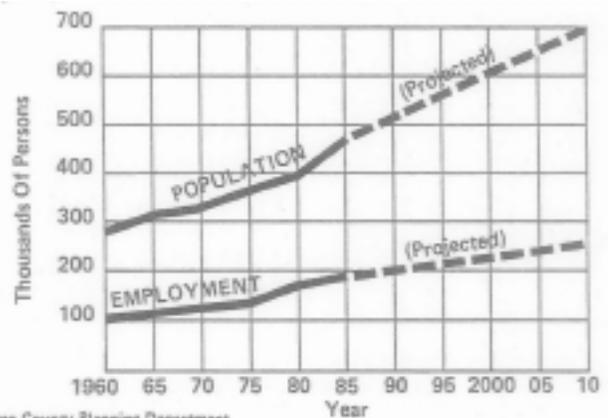
### DAILY TRAFFIC IN THE ROUTE-178 CORRIDOR



Source: Caltrans

Figure-14

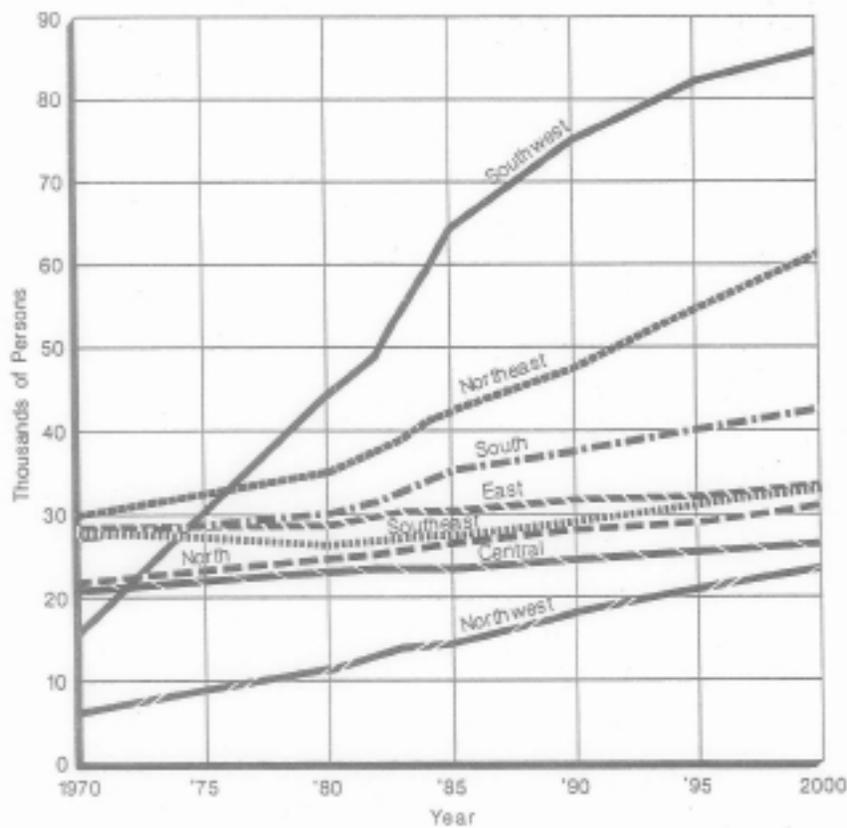
### KERN COUNTY POPULATION & EMPLOYMENT



Source: Kern County Planning Department  
Kern County Board of Trade

Increases in population and employment are usually accompanied by increases in traffic volumes. Population and employment in Bakersfield are projected to continue growing at about 2% per year at least through the year 2010.

This growth will put increasing pressure on the metro area street system, including Route 178. Two of the fastest growing areas of the region will be the southwest and the northeast (see Figures 15 and 16). Growth will increase the demand for travel between these areas, and Route 178 is an integral part of the street system linking them.



Source: Kern County Planning Department

Figure-15

**POPULATION GROWTH IN BAKERSFIELD METRO AREA  
BY PLANNING AREA\***

\*Planning Areas Shown In Figure-16

# ROUTE 178 CORRIDOR STUDY

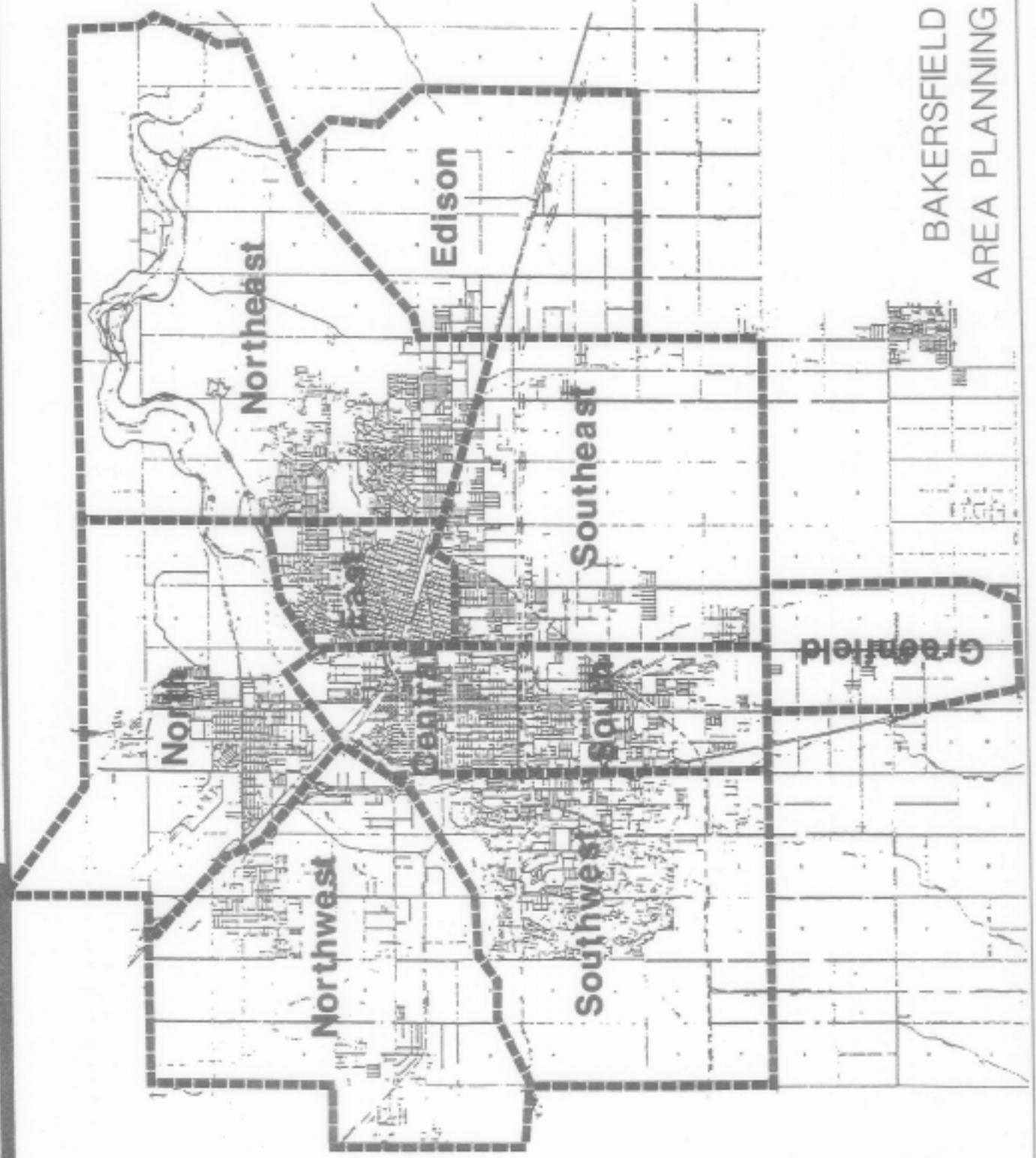


Figure-16  
BAKERSFIELD METRO  
AREA PLANNING AREAS

Caltrans has developed a computer model of traffic volumes and patterns in Kern County that can be used to project future traffic volume on Route 178. Inputs to the model are population and employment projections that have been prepared by Kern County and its individual cities. Table 1 summarizes the model's year 2010 projections for various segments of Route 178. Projections are shown for two scenarios — with and without the Westside Highway, which may tie into Route 178 just west of Highway 99. The Westside Highway is being studied by Caltrans as a possible upgrading of Route 58 between Interstate 5 and Highway 99.

**TABLE 1  
TRAFFIC VOLUME PROJECTIONS**

Road Segment	Existing	2010	2010 with Westside Highway
Route 178, at Oak	32,000	83,000	120,000
Route 178, at Pine	42,000	58,000	109,000
Route 178, at F	43,000	57,000	107,000
Route 178, at Chester	40,000	56,000	100,000

Source: Caltrans

#### FUTURE VOLUME-TO-CAPACITY RATIOS

The future traffic volume projections can be compared with road system capacity to determine whether increases can be accommodated and, if not, at what year capacity would be reached. Figure 17 shows that, even without the Westside Highway connection to Route 178, the Highway 99 to Oak segment of the corridor would reach capacity very soon. This would occur before the year 1990. By the year 2010, the downtown section of Route 178 would also be over capacity. Operationally, this would be a very congested condition. Peak traffic conditions would last as long as three hours in the morning and three hours in the evening. Traffic would be backed up so far at intersections that vehicles would have to wait for more than one green light to get through. On the residential section of 24th Street, volumes would be 80% of capacity. This would also be quite congested, with left turns to or from the cross streets very difficult or nearly impossible.

If the Westside Highway were linked to Route 178 as it presently exists, traffic volume demand would exceed capacity immediately upon opening.

# ROUTE 178 CORRIDOR STUDY

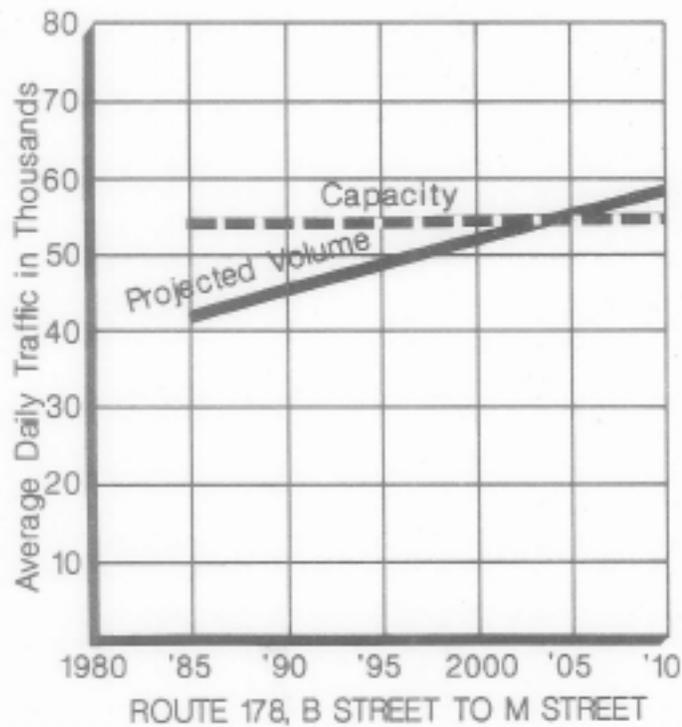
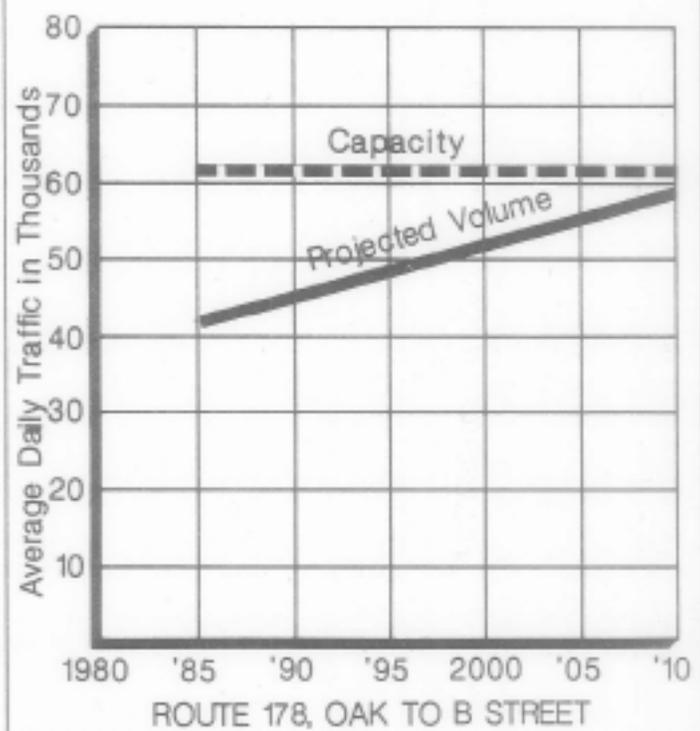
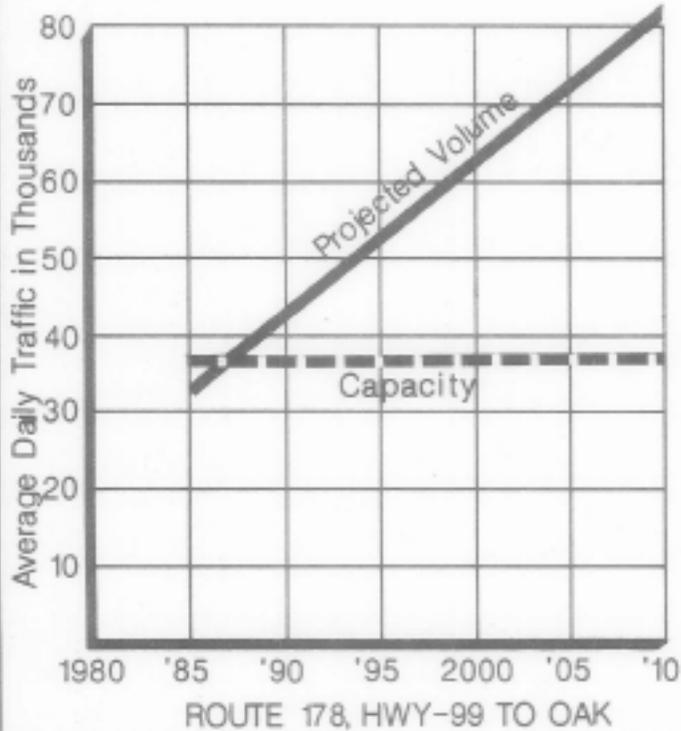


Figure-17  
**FUTURE VOLUME-TO-CAPACITY ANALYSIS**

## SAFETY

Although some of the intersections along Route 178 have a higher than normal accident rate due to congestion, the primary safety issue in the corridor is the crossing of 24th Street in the Westchester neighborhood. This applies to both pedestrians and vehicles, although the accident rate on that section of 24th Street has been low. The complaint is that crossing the street seems dangerous, especially for children.

The difficult crossing is a result of the fact that the street is 74 feet wide. At the typical walking speed of 4 feet per second, crossing takes 18.5 seconds. Finding a break in traffic this long is difficult because there are no signals nearby to create gaps. Also because there are no signals nearby, traffic speed is relatively high on 24th Street. Speed combined with the wide expanse of pavement makes the pedestrian feel unsafe.

## AESTHETICS

For many people Route 178 is the gateway to downtown Bakersfield. Yet much of the section from Highway 99 to M Street is visually unattractive. Between Highway 99 and Oak Street, 24th Street has no landscaping or special design treatment. The bridge provides a glimpse of the Kern River, but this vista is not capitalized upon. The Westchester section of 24th Street is lined with well-maintained homes with attractive landscaping, but the 74 feet width of uninterrupted pavement has a sterile look. The most visually unappealing section of Route 178 is the part passing through downtown Bakersfield. The traffic signs, business signs, and traffic signals create an overall impression of clutter. In addition, the varying building setbacks and lack of landscaping are unattractive.

Some persons are concerned that the poor appearance of Route 178 creates a negative impression of downtown Bakersfield and of the city as a whole.

## NEIGHBORHOOD IMPACT

Route 178 passes directly through the Westchester residential neighborhood. In general, a high-volume state highway is not compatible with residential neighborhood character. High traffic volumes create noise, dust, and vibration, which are detrimental to living conditions. In addition, 24th Street acts as a barrier, both physical and psychological, preventing the unification of the Westchester neighborhood north and south of Route 178.

The high traffic volume makes entering, exiting, and crossing 24th Street difficult. The problems of pedestrians crossing 24th Street were discussed above, and similar problems face motorists trying to turn left into or out from the cross streets. Sufficient gaps in 24th Street traffic are sometimes infrequent. This makes travelling to and from resident's homes difficult. Persons living south of 24th Street can take other routes, but those to the north have few alternatives to Route 178.

## STUDY GOALS

To respond to these issues and problems concerning Route 178, the following goals were adopted in this study. Improvements should:

1. Provide an adequate and attractive gateway to downtown Bakersfield that will accommodate future downtown growth,
2. Serve existing and future regional travel needs,
3. Minimize the environmental impacts of transportation facilities,
4. Preserve the Westchester neighborhood, and
5. Provide transportation facilities in a cost-effective manner.

These goals were used to develop and evaluate the improvement alternatives for the Route 178 corridor.

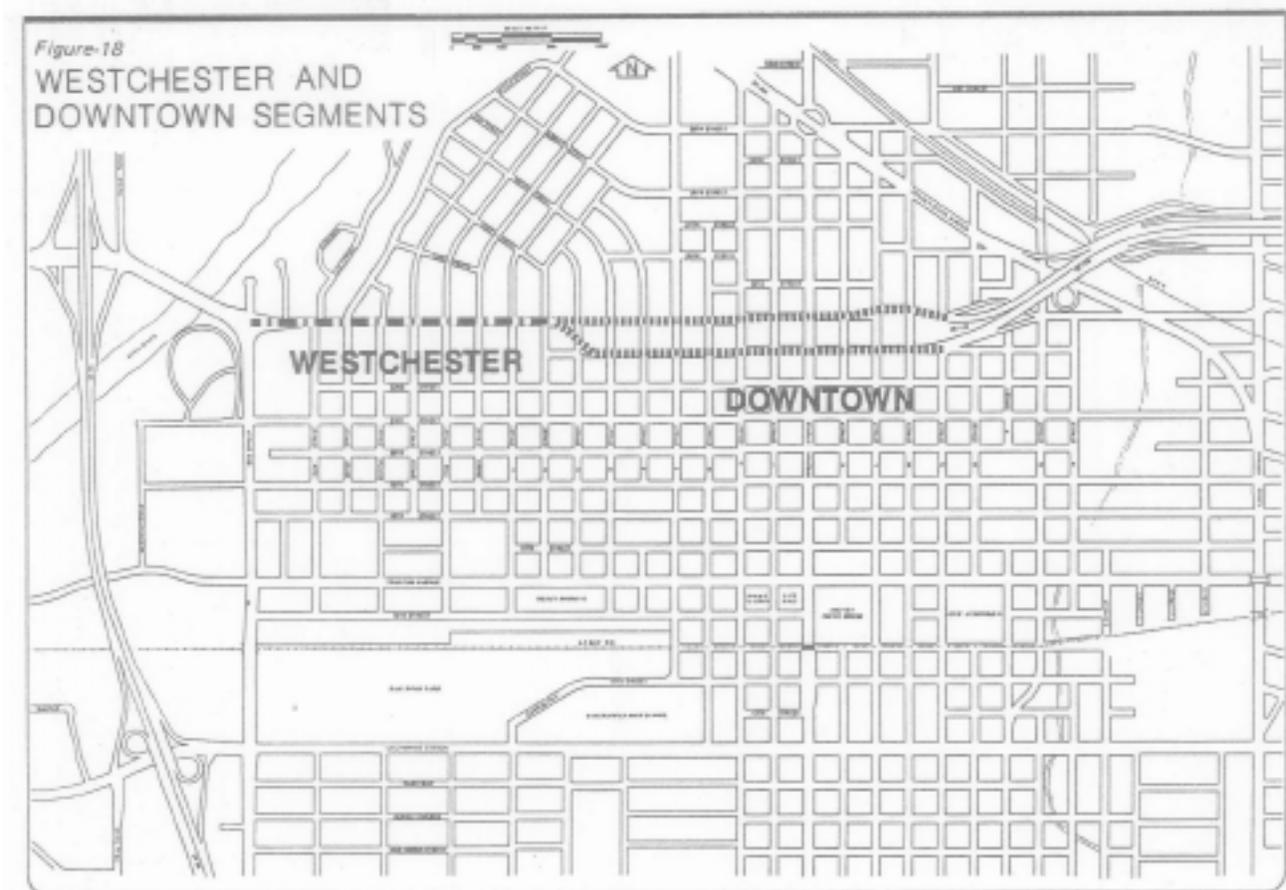
# Chapter-4

## DESCRIPTION OF ALTERNATIVES

A number of alternatives have been identified as potential options for responding to traffic growth, safety, and urban design issues facing the Route 178 corridor. These have been grouped into potential short- and longer-range alternatives and are described in this chapter.

### SHORT-RANGE IMPROVEMENT ALTERNATIVES

Short-range alternatives may be thought of as solutions or at least improvements to the existing traffic problems in the corridor and those that will appear in the next five to ten years. These options are confined to 23rd and 24th Streets in the downtown area and 24th Street in the Westchester residential area (see Figure 18).



Four basic alternatives were developed and studied:

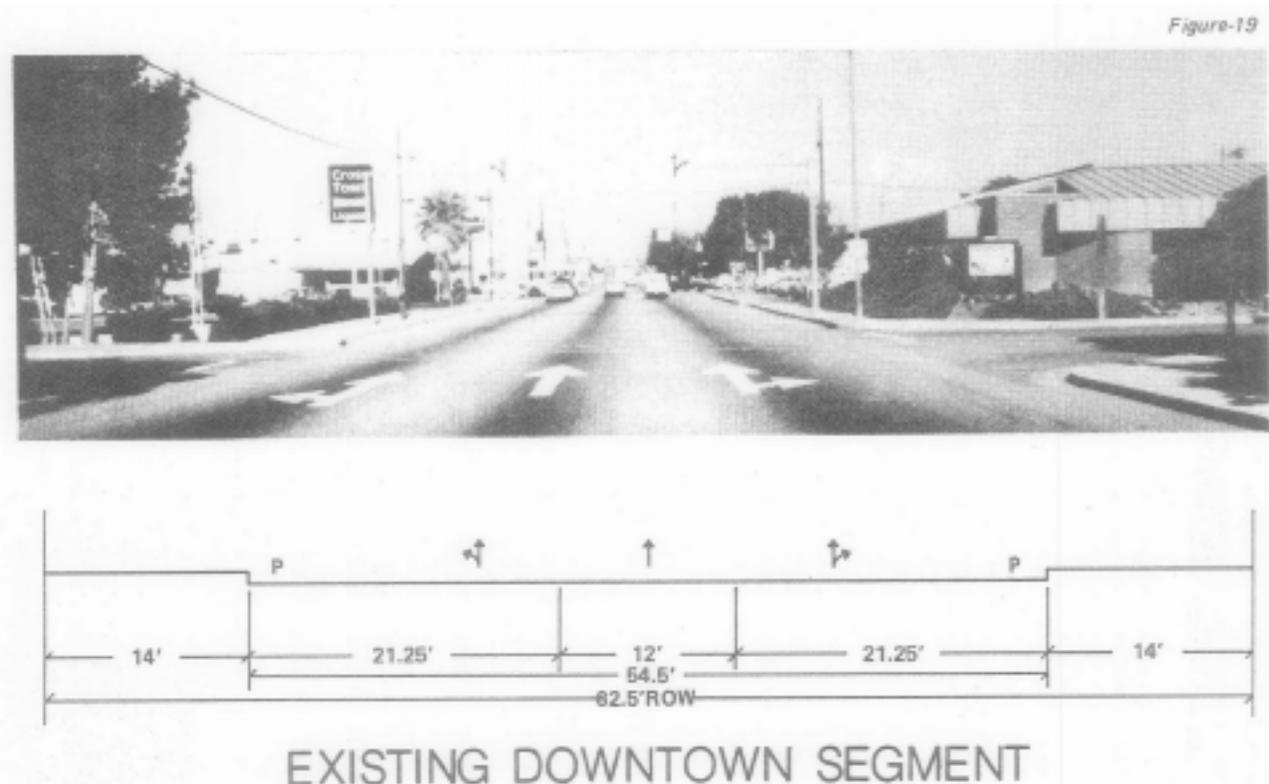
- Doing nothing, leaving 23rd and 24th Streets as they currently are but optimizing traffic signal timing;
- Landscaping 23rd and 24th Streets to improve their appearance, and in the residential section providing a pedestrian and turning vehicle refuge;
- Widening the streets within existing rights-of-way (ROW) to provide maximum vehicle carrying capacity; and
- Constructing a parkway along 23rd and 24th Streets, which would require new right-of-way.

These options are discussed on the following pages.

### DO NOTHING ALTERNATIVE

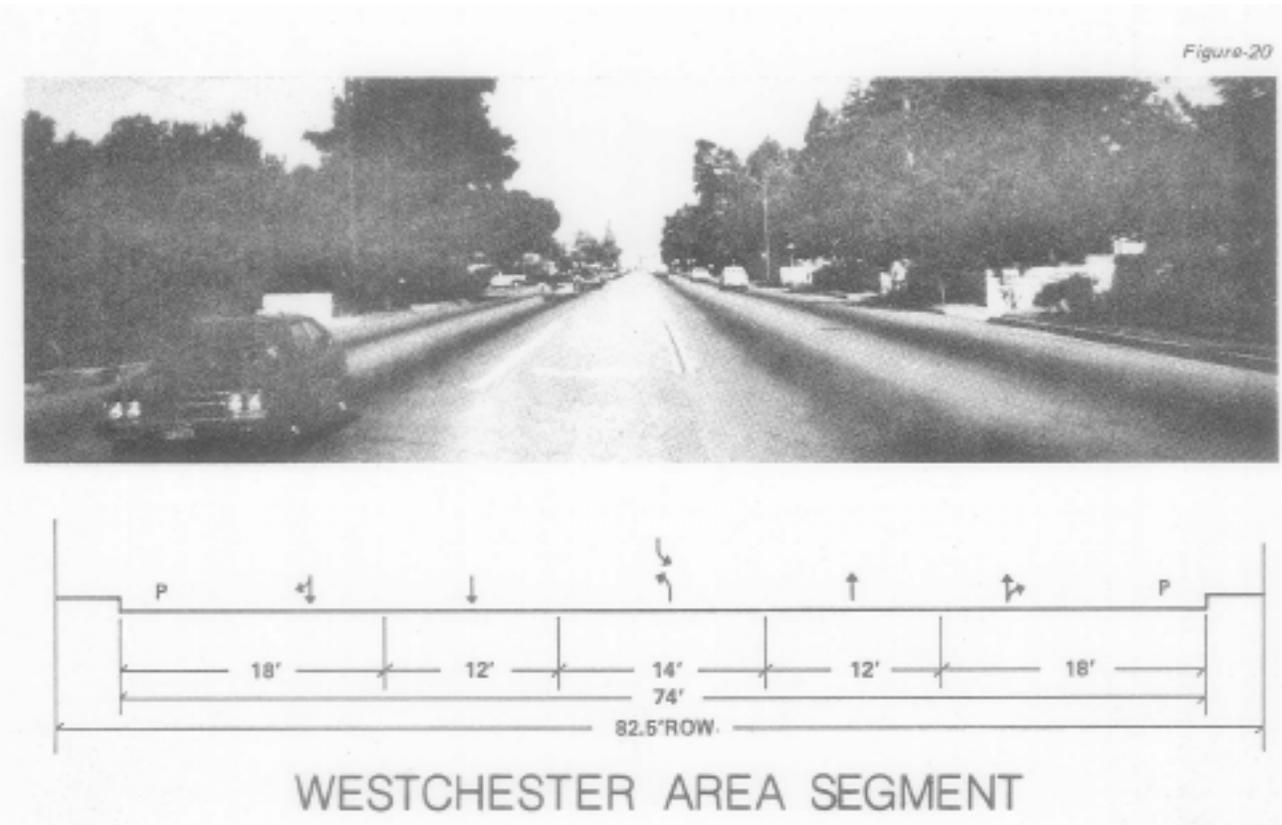
This alternative is intended to represent status quo, with 23rd and 24th Streets essentially remaining unchanged with respect to appearance, operation, and capacity.

In the downtown area, 23rd and 24th Streets operate as a one way couplet (pair), each having three lanes of pavement for through traffic and turning movements. Parking is permitted on both sides of the streets. For the future, traffic signals and signage would remain as existing, as would driveways, commercial signs, and building setbacks (see Figure 19).



With traffic volumes continuing to increase at some 5% per year, congestion will increase, particularly during the afternoon peak hour (4:30 - 5:30 pm) and during the midday (11:45 am - 12:45 pm). This congestion will increase delay for motorists at signalized intersections and will likely extend the period of time during which the streets are crowded.

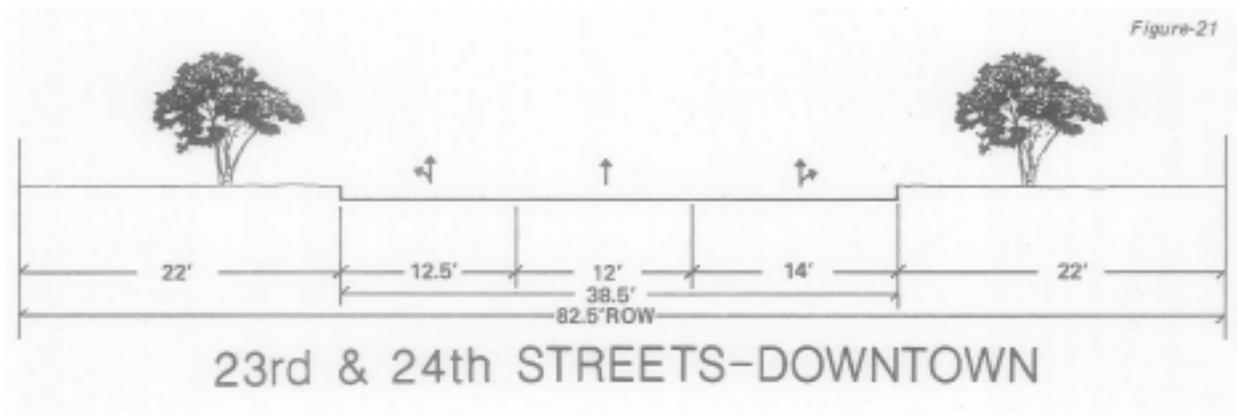
In the Westchester residential area, 24th Street operates as a two way arterial street with a continuous left turn lane in the center of the roadway (see Figure 20). Parking is permitted on both sides of the street and intersections are unsignalized. As development increases to the east and west of the Westchester neighborhood, traffic volumes will continue to increase on 24th Street. Noise levels will increase, turning movements onto and from sidestreets will become more difficult, and pedestrians will have greater difficulty crossing the street. *New* traffic signals at Beech (planned), Pine and B Streets (potential) will reduce the latter two problems while further increasing congestion, air pollution, and noise levels.



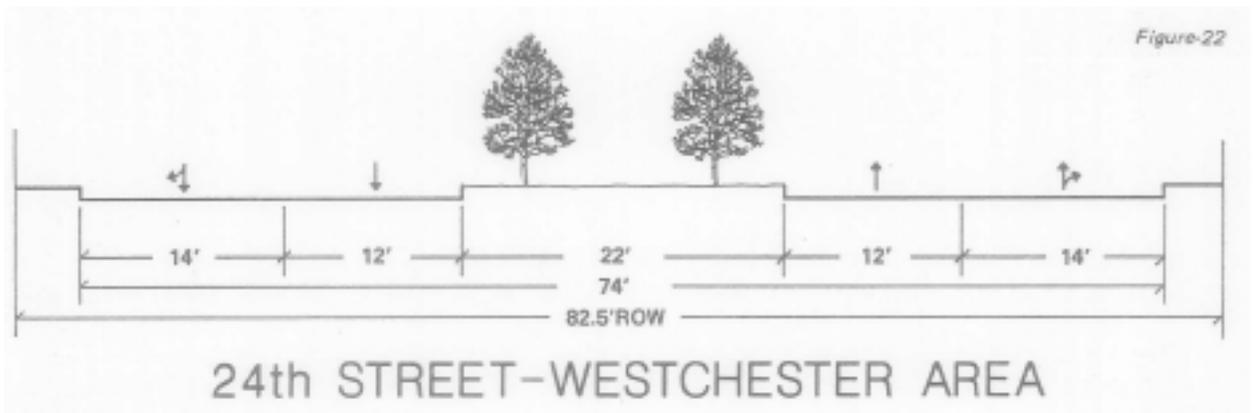
## STREET BEAUTIFICATION ALTERNATIVE

This proposal responds to the city's desire to provide an attractive gateway to downtown Bakersfield, the desire to minimize the environmental impacts of transportation facilities, and the desire to preserve the Westchester neighborhood.

In the downtown area, street trees would be planted along both sides of 23rd and 24th Streets to provide a unifying and attractive facade to the existing collection of variable building setbacks, commercial signage, and land use types (see Figure 21). Sidewalks could be widened and ground cover (landscaping) added to further strengthen the role of 23rd and 24th Streets as a major gateway to downtown. Operationally, little would change with respect to traffic movement although fewer traffic conflicts would occur if on-street parking were prohibited.

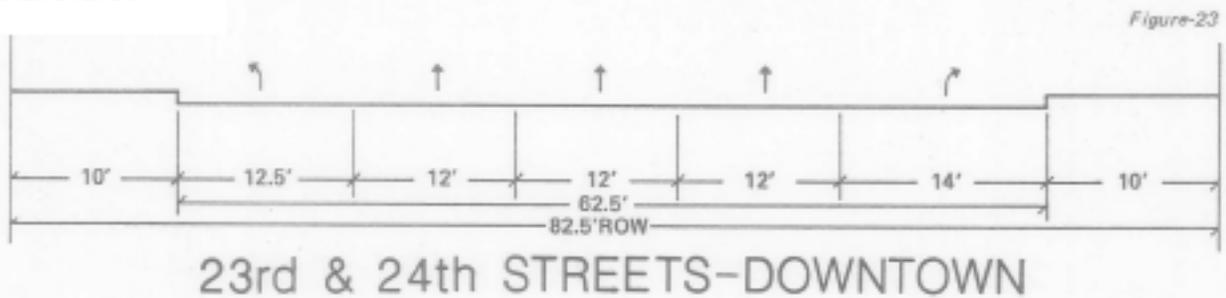


In the Westchester residential neighborhood, street beautification would be enhanced through the addition of a planted median (see Figure 22). Similar to Truxtun Avenue, this median would divide and reduce the visual impact of a major arterial and improve the ability of pedestrians to cross the street. Left turn pockets would be provided in the median, possibly every two or three blocks. The latter median break scenario would be consistent with traffic signals placed at Beech, Pine and B Streets as in the do nothing alternative. To accommodate the addition of the median, the continuous left turn lane would be eliminated. The median could occupy this center space as is or be widened, necessitating the removal of parking.



## MAXIMUM CAPACITY ALTERNATIVE

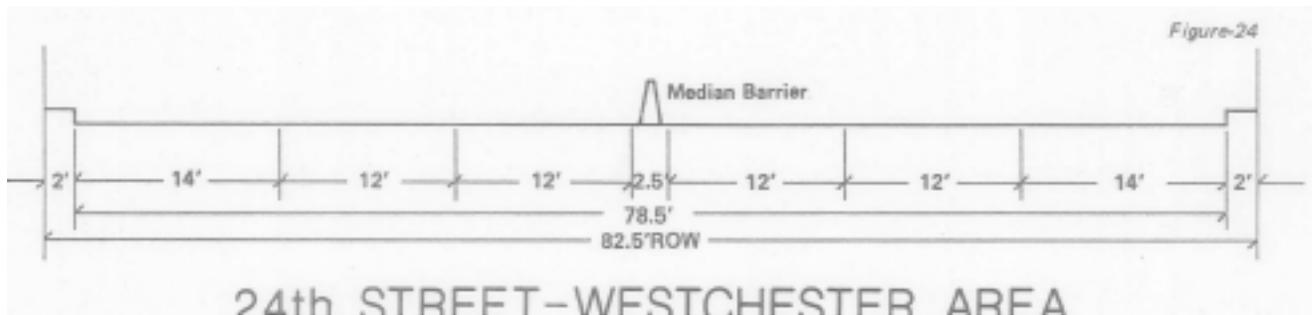
This alternative is intended to increase the capacity of 23rd and 24th Streets within their existing, publicly-owned rights-of-way. In so doing, the objective would be to accommodate the anticipated growth in traffic volumes to and through downtown Bakersfield.



In the downtown area, the existing sidewalks along 23rd and 24th would be narrowed from 14 feet to 10 feet (see Figure 23). On-street parking would be prohibited and the street's capacity would be increased from three to five moving traffic lanes. These five lanes on each street would be utilized for traffic moving through the downtown and for turning onto downtown-oriented streets such as Chester, H, and F Streets.

In the Westchester residential neighborhood, the maximum capacity alternative could take several forms. To match the capacity provided in the downtown area, the road could exist as it currently does (or as with street beautification alternative) provided that no traffic signals were installed between B and Oak Streets. If traffic signals were installed, as mentioned in the previous two alternatives, the roadway would need to be widened by up to 4.5 feet to allow for the provision of six moving traffic lanes (see Figure 24). The additional lanes would be needed to compensate for the loss of capacity along 24th Street caused by the traffic signals at cross streets.

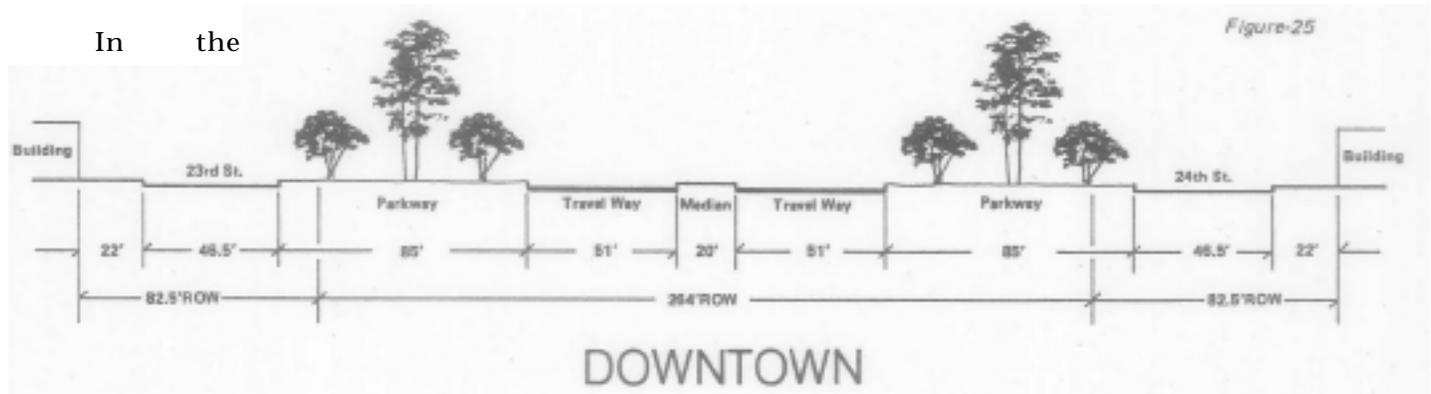
Another feature of the maximum capacity alternative is the construction of a grade separation and interchange at Oak and 24th Street to alleviate the congestion that exists at the intersection. Oak Street would likely pass over 24th Street and could continue across the Kern River as proposed in the existing Bakersfield General Plan.



## PARKWAY ALTERNATIVE

This alternative would create a tree lined boulevard through central Bakersfield, from M to Oak Street. The roadway would be constructed at grade and have intersections with major cross streets only. The parkway would have six travel lanes for through traffic and be extensively landscaped. No driveways would access directly onto the parkway.

In the



downtown area, the parkway could be located in the block between 23rd and 24th Streets (see Figure 25). This location would require the acquisition of all property located within this right-of-way. The existing 23rd and 24th Streets would remain under this concept, serving as frontage roads for the parkway. Major streets such as F, H, Chester, and L or M would cross the parkway at signalized intersections. Other existing streets would intersect with 23rd and 24th Streets, which could continue as one way facilities.

An alternate design for the downtown segment of the parkway would involve the upgrading of 23rd and 24th Streets. This option would widen the existing roadways, provide street trees and other landscaping, and prohibit on-street parking. This alternative would also require the acquisition of right-of-way, part or all of the blocks bounded by 23rd and 24th Streets. Unused land would then be available for redevelopment projects such as parking, parks or buildings.



In the

Westchester residential area, construction of the parkway would require the acquisition of approximately one-half of a normal sized city block (two to three house lots), most likely along the south side of existing 24th Street (see Figure 26). A narrowed 24th Street would remain in its current location with landscaping and possibly sound walls separating residences from parkway traffic.

## LONG-RANGE IMPROVEMENT ALTERNATIVES

These alternatives are intended to provide sufficient capacity to accommodate future traffic growth for at least 25 years. Projections of land development and corresponding traffic volumes have shown that a new, higher capacity and higher speed roadway is needed to meet these anticipated traffic loads. Such a facility would link east Bakersfield with west and connect the existing SR178 freeway with SR99 and the proposed westside highway.

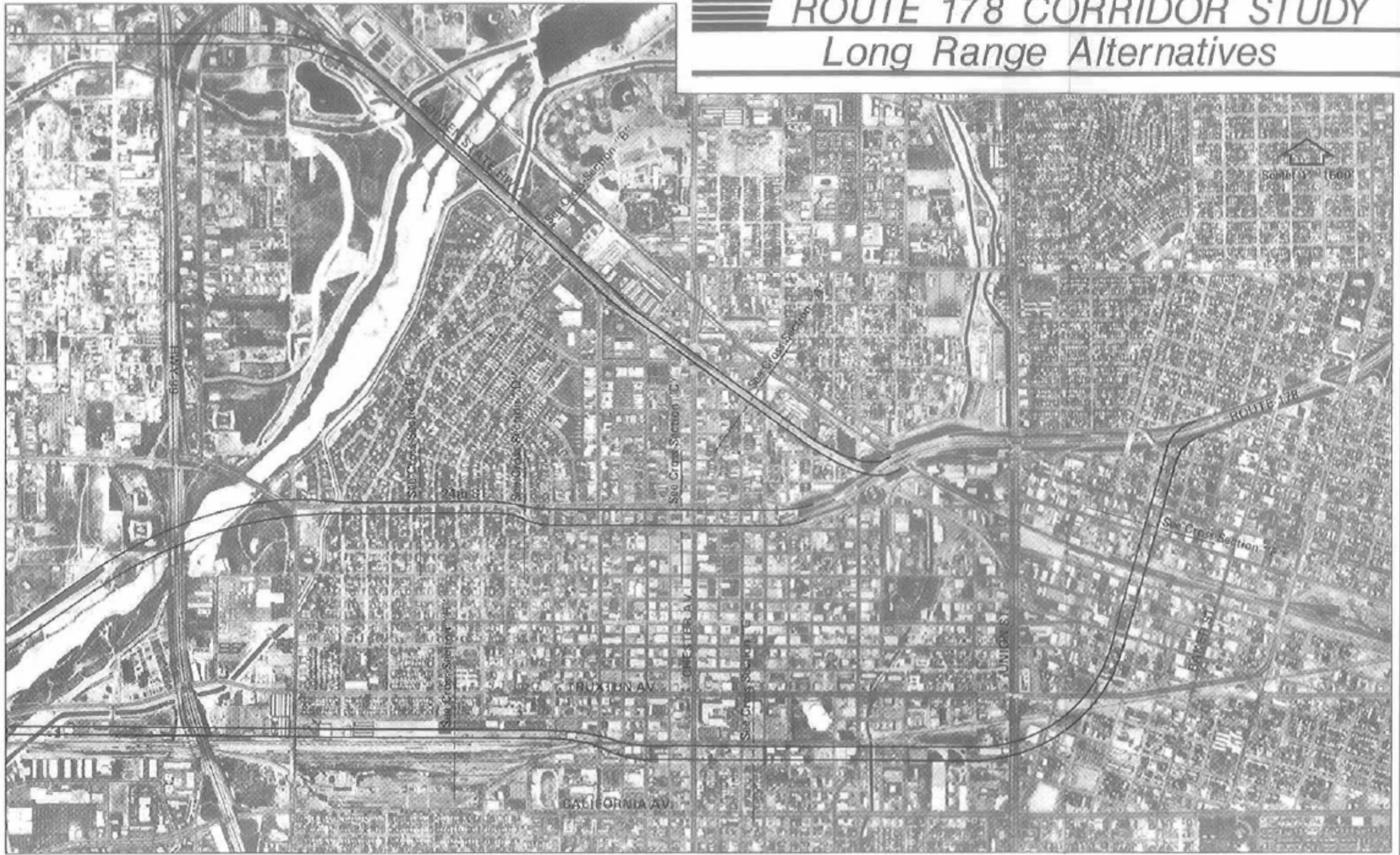
Interestingly, the need for an east-west freeway through central Bakersfield has been recognized since 1956 as documented in the Thoroughfares Report of that year. The need has been reconfirmed many times since with the publication of transportation plans in 1961, 1973, and 1982. Thus, the need is well established.

As freeway facilities are generally expensive and take many years to design, fund, and construct, it is appropriate to identify a preferred alignment for such a facility as a first step toward implementation. Toward that objective, three alternative alignments were proposed and discussed at some length during the study process. These alignments are listed below and discussed on the following pages. The following plate shows the alternative alignments.

- A northern alignment along, above, or adjacent to Golden State Highway;
- A central alignment along, below, or adjacent to 23rd and 24th Streets; and
- A southern alignment adjacent to the Santa Fe and Southern Pacific Railroad right-of-way.

# ROUTE 178 CORRIDOR STUDY

## Long Range Alternatives



## NORTHERN ALIGNMENT ALTERNATIVE

This alternative would involve constructing a freeway along, above, or adjacent to Golden State Highway (SR204) between Union Avenue and State Route 99. West of SR99, a freeway along this alignment would connect to a northern Westside Highway alignment in the vicinity of Hageman Road.

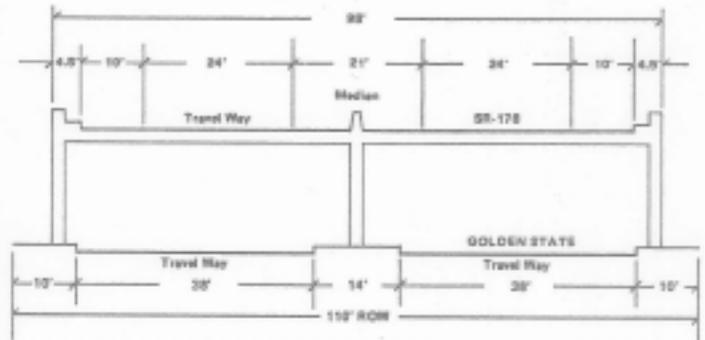
In terms of function, this alignment would connect northeastern Bakersfield with SR99 and northwestern Bakersfield. According to forecasts prepared by Caltrans, the northern alignment would divert approximately 15,000 vehicle trips from the 23rd and 24th Street corridor, which by Year 2010 would otherwise be carrying some 60,000 vehicles per day. By way of comparison, 23rd and 24th Streets currently carry 43,000 vehicles daily.



Existing SR-204

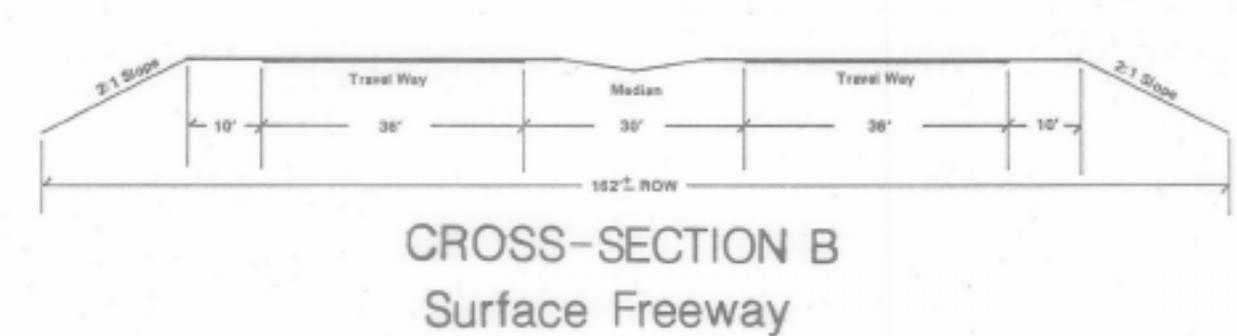
If the freeway were built atop Golden State Highway as depicted above, the elevated roadway would extend from Union Avenue to just west of F Street. Little new right-of-way would be needed and very few businesses would need to be relocated. Noise levels, shadows, and aesthetics would likely be the greatest environmental impacts of this alignment alternative.

## CROSS-SECTION A



Elevated Freeway

Beyond F Street the freeway would continue as a six-lane facility along the existing Golden State alignment.



From an engineering and cost perspective, the most significant element of this 3.0 mile freeway extension and expansion would be its interchange with SR99, Airport Drive, and the Westside Highway.

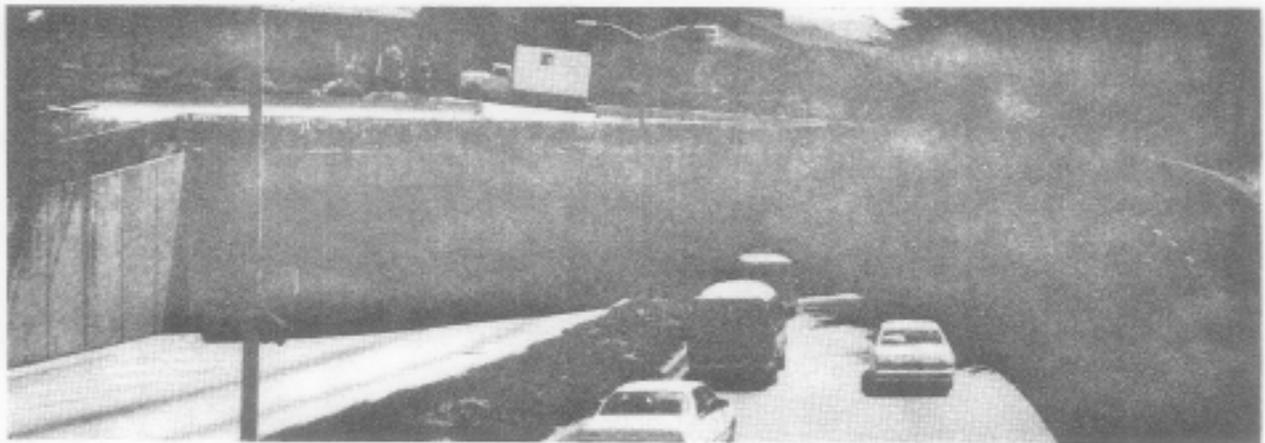
## CENTRAL ALIGNMENT ALTERNATIVE

This alternative would involve extending State Route 178 as a freeway in its current alignment along 23rd and 24th Streets, from M Street to SR99. West of SR99, the freeway would connect with the Westside Highway whose alignment would curve southwesterly to follow the Kern River.

Functionally, this alignment is the shortest of the three being considered, 1.7 miles. It is the most direct with respect to linking the Northeast with the Southwest, and for this reason was identified in 1973 as the preferred alignment for the SR178 freeway extension. Caltrans has forecasted its daily traffic volume to be over 80,000 vehicles, drawing traffic from 23rd and 24th Streets, Truxtun Avenue and Golden State Highway. Traffic volume along 23rd and 24th Streets would fall to about 15,000 vehicles per day in Year 2010.



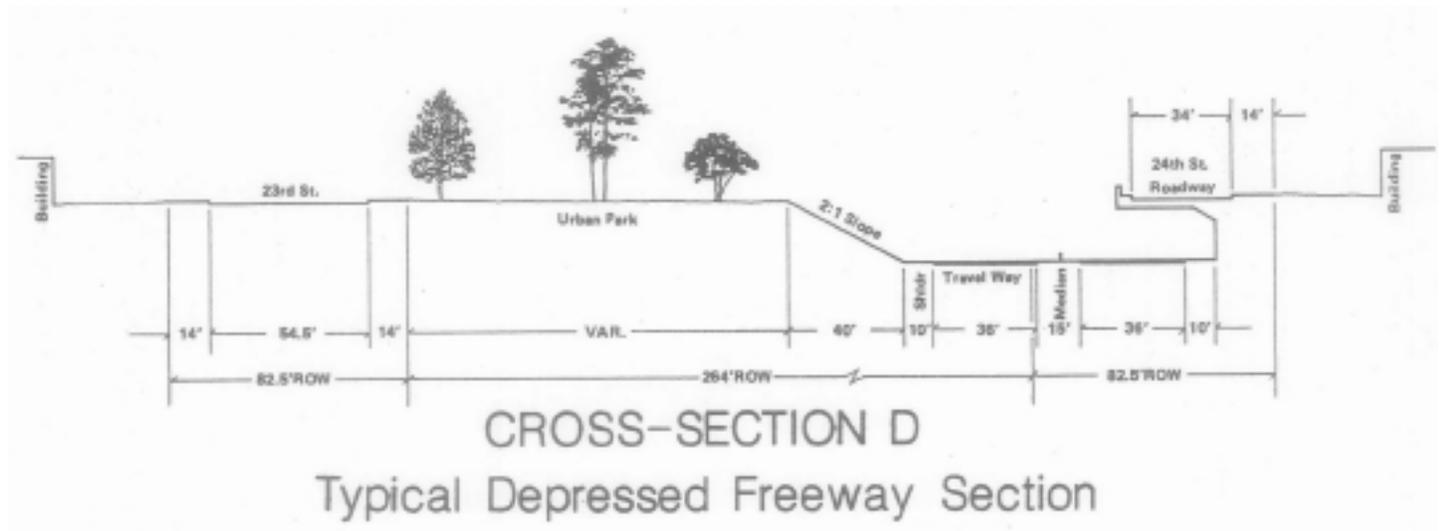
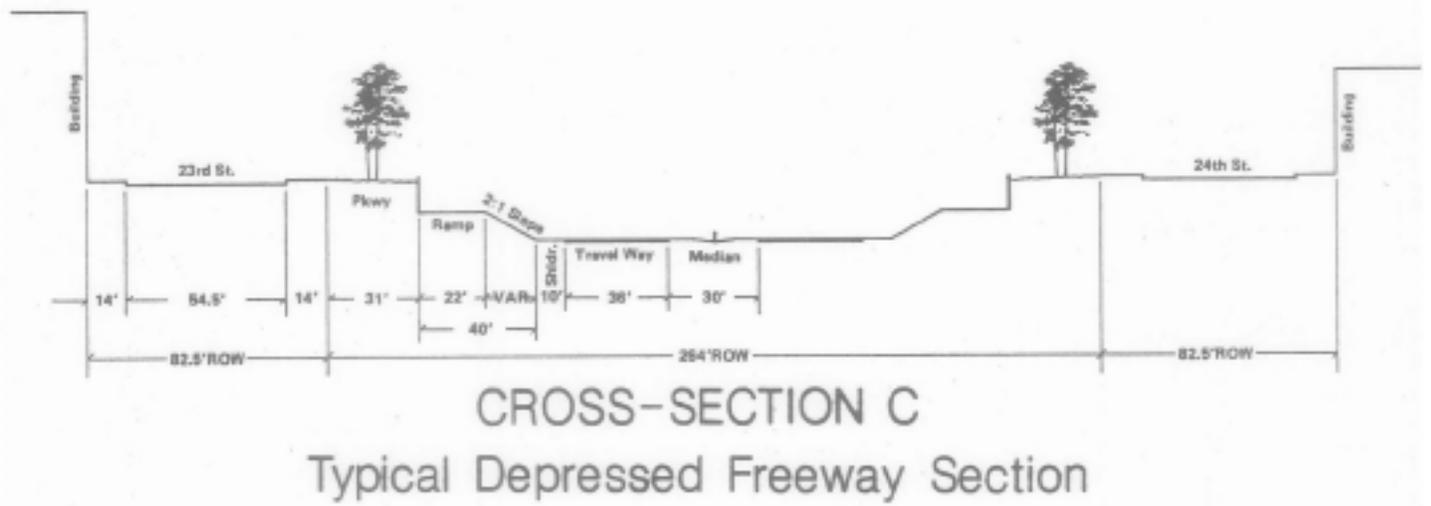
Depressed Freeway

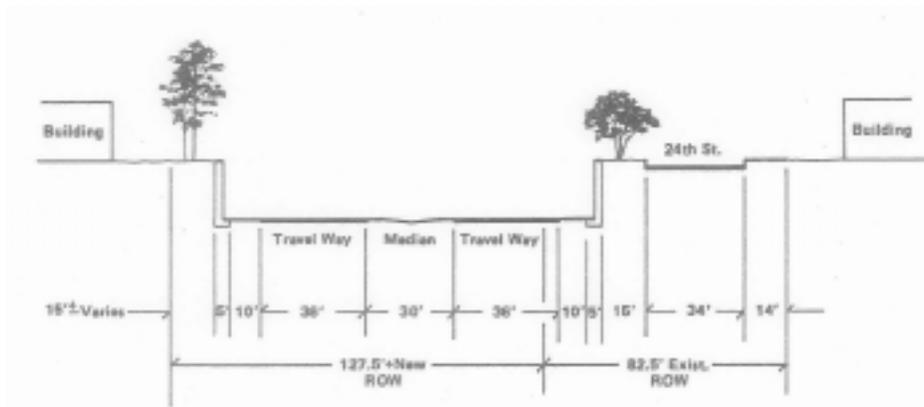
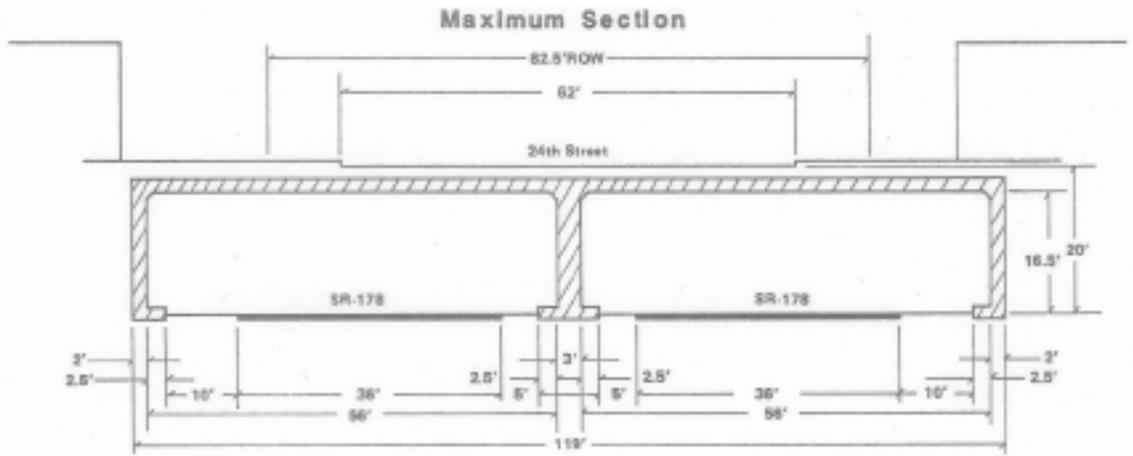
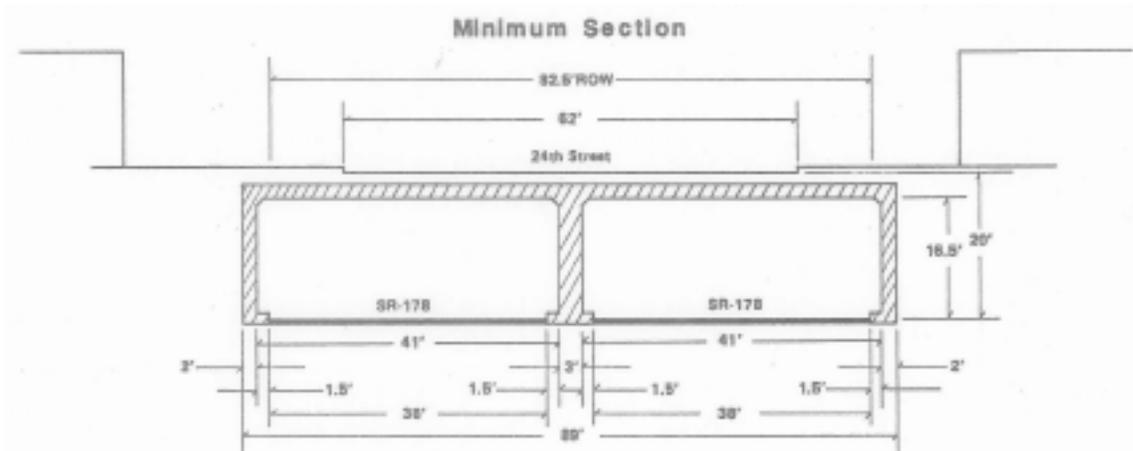


Covered Freeway

In the downtown area, it is envisioned that the freeway would lie between 23rd and 24th Streets as a depressed, six lane roadway. Two interchanges would be built to provide access to the downtown retail and government center. In the Westchester residential area, the depressed freeway could continue just south of a narrowed 24th Street, or be covered to reduce noise impacts and to unify the neighborhood.

From a design and construction standpoint, acquiring the necessary right-of-way and providing the interchange with State Route 99 would be the most significant elements of the project.

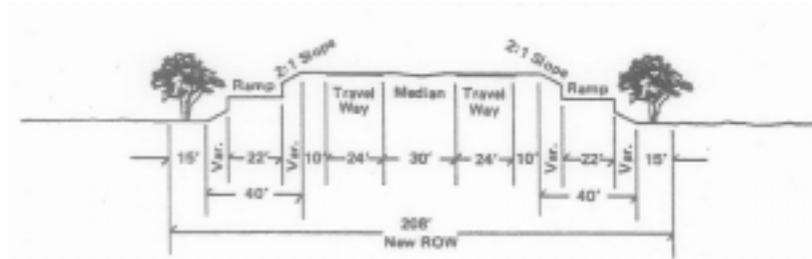




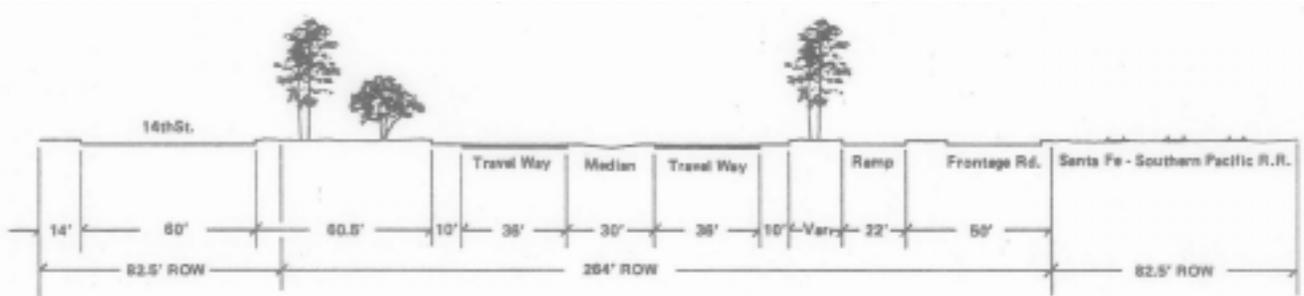
**CROSS-SECTION E**  
 Three Alternatives Through Westchester

SOUTHERN ALIGNMENT ALTERNATIVE

This alignment would pass along the south side of downtown, adjacent to the Atchison Topeka & Santa Fe Railroad tracks and right-of-way. East of Union Avenue, the alignment would curve northeasterly between Alta Vista Drive and Tulare Street to connect with the SR178 freeway. West of SR99, the alignment would connect with the Westside Highway as it followed the northern bank of the Kern River and the Cross Valley Canal.



CROSS-SECTION F  
Elevated Freeway—East Bakersfield

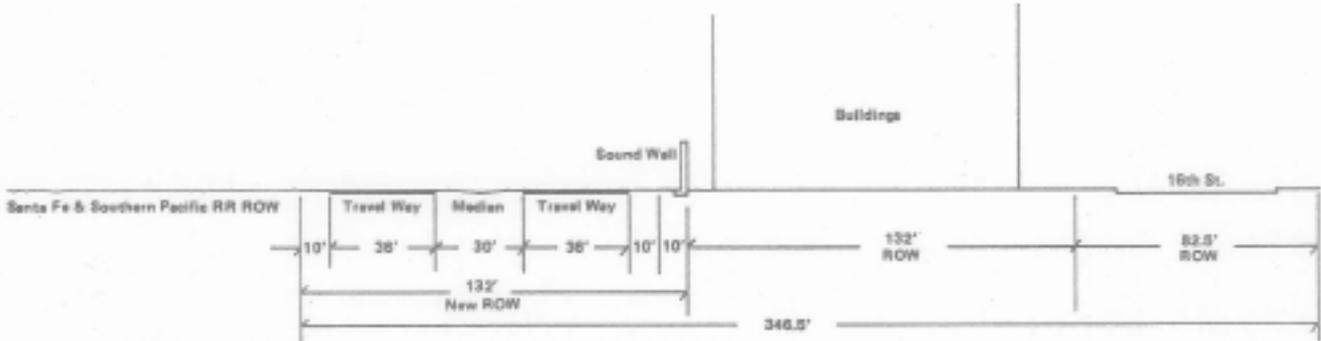


CROSS-SECTION G  
Surface Freeway—Downtown To F Street

As with the central alignment, this alternative would provide accessibility to downtown Bakersfield and connect the Northeast with the Southwest. Traffic would be diverted from 23rd and 24th Streets, Truxtun and California Avenues; it is estimated that some 70 to 80,000 vehicles would use this facility daily in Year 2010. Traffic volume in the 23rd and 24th Street corridor would fall to an estimated 25,000 vehicles per day.

In the East Bakersfield portion of this 4.4 mile extension, it is envisioned that the freeway would be elevated to cross over surface streets and the Southern Pacific and Santa Fe rail lines. Adjacent to downtown, the freeway could be at grade with major streets undercrossing the freeway and Santa Fe Railroad tracks -- similar to the Chester Avenue underpass.

Constructing an interchange with SR99 and interfacing with the Santa Fe Railroad yard would be the major engineering and cost elements of this proposal.



CROSS-SECTION-H  
Surface Freeway-F Street To Hwy-99

# Chapter-5

## EVALUATION OF ALTER NATIVES

The short- and long-range alternatives were evaluated from a technical standpoint by the consultant and from a subjective standpoint by the public. This chapter discusses the procedures and results of both evaluations.

### TECHNICAL EVALUATION — GOALS AND PERFORMANCE MEASURES

Each alternative was evaluated against a list of performance measures, which are designed to determine how well each alternative responds to the objectives established for the corridor. These objectives are listed below along with the performance measures.

Objective 1. The SR178 improvement project should provide an adequate and attractive gateway to downtown Bakersfield that will accommodate future growth.

#### Performance Measures

- The amount of new downtown development that can be supported by the transportation system measured in millions of square feet.
- A qualitative assessment of the visual aesthetics of downtown access using SR178.

Objective 2. The SR178 transportation investment should serve existing and future regional and metropolitan travel needs.

#### Performance Measures

- The daily capacity of the east-west arterial street and highway system between Golden State Highway and California Avenue.
- The ratio of 1995 (short-range) and Year 2010 traffic volume to the capacity provided by the east-west arterial street and highway system.
- A qualitative assessment of the degree to which each alternative serves metropolitan Bakersfield travel patterns and influences the location and subsequent use of the Westside Highway.

Objective 3. Construction of the transportation improvements should attempt to minimize environmental impacts.

#### Performance Measures

- The number of homes and businesses that will be taken or relocated.
- A qualitative assessment of land use impacts including development/redevelopment enhancement, growth inducement, and neighborhood land values.  
A qualitative assessment of noise, air quality, and aesthetic impact on sensitive receptors such as schools and hospitals.

Objective 4. The SR178 improvement project should seek to preserve the Westchester neighborhood.

#### Performance Measures

- The short-range capacity of 24th Street as an indicator of potential traffic levels, or the long-range estimated volume on 24th Street.
- The estimated speed of traffic on 24th Street through the neighborhood.
- A qualitative assessment of the ease of turning into or out from side streets along 24th Street, and the ease of crossing 24th Street by vehicles and pedestrians.

Objective 5. Transportation investments that are cost-effective should be provided.

#### Performance Measures

- The right-of-way acquisition costs including the costs of relocation.
- The construction costs including the costs of ancillary improvements necessary to obtain maximum benefit from each alternative.
- The ratio of total costs to estimated volume that will be carried.

## TECHNICAL EVALUATION - SHORT RANGE ALTERNATIVES

Table 2 provides a comparison of the four alternatives considered for short-range investment. In brief, they compare as follows:

1. The short-range alternatives do not significantly enhance the transportation system's ability to support downtown development, over and above the do nothing condition. Street beautification and landscaping efforts would enhance appearances however.
2. Capacity exists to accommodate further east-west travel growth; however, supply and demand is unbalanced. SR204 is underutilized, 23rd and 24th Streets are at capacity, and Truxtun and California are nearing full utilization. Increasing the capacity of SR178 or diverting traffic to parallel arterials is warranted.
3. Increasing traffic volumes on 23rd and 24th Streets will have negative impacts compared to current conditions. Attempting to mitigate increasing traffic volumes through landscaping and separation of traffic flows is considered to be desirable.
4. Increasing the capacity of 23rd and 24th Streets is considered to have a negative impact insofar as the preservation of the Westchester neighborhood.
5. Construction of the parkway alternative would require acquisition of downtown businesses and Westchester homes. Its right-of-way cost therefore would be relatively high. The grade separation of 24th and Oak Streets would be a major cost element of the increased capacity alternatives. The parkway would be the least cost effective of the four alternatives.

**TABLE 2****SHORT-RANGE ALTERNATIVES**

EVALUATION CRITERIA	DO NOTHING	BEAUTIFICATION	MAX CAPACITY	PARKWAY
<b>ENHANCE DOWNTOWN</b>				
o New Development (S.F.)	3.5M	3.5M	4.1M	4.1M
o Aesthetics	o	+	-	+
<b>REGIONAL TRAVEL GROWTH</b>				
o East-West Capacity (vpd)	150,000	150,000	165,000	165,000
o Highway Volume/Capacity (1995)	78%	78%	71%	71%
o Serves Travel Patterns	o	0	0	0
<b>ENVIRONMENTAL IMPACTS</b>				
o Business & Homes Displaced	o	o	o	71
o Land-Use Impact	-	+	-	-/+
o Noise, Air, Visual	-	+	-	-/+
<b>PRESERVE WESTCHESTER</b>				
o 24th Street Capacity (vpd)	45,000	45,000	60,000	60,000
o Traffic Speeds	40 mph	40 mph	40 mph	45 mph
o Neighborhood Access	o	+	-	-
<b>COST EFFECTIVENESS</b>				
o Right-of-Way Cost	none	none	none	high
o Construction Cost	low	low	medium	medium
o Total Cost/Demand	low	low	low	medium

o = No Change From Existing, + = Positive, - = Negative

## TECHNICAL EVALUATION - LONG RANGE ALTERNATIVES

The performances of the long-range alternatives are compared below vis-a-vis the evaluation objectives and performance measures (also see Table 3).

1. Constructing a freeway in the southern alignment adds the most capacity to the downtown-serving transportation system, as it is an entirely new (additional) facility. Other alignments replace existing arterial streets (central) or add capacity from one direction only (northern).
2. The central and southern alignments add capacity where it is most needed to accommodate Year 2010 travel needs. Residual capacity will be available to accommodate additional land development and travel demand. With the northern alignment, traffic volume on 24th Street, Truxtun, and California Avenues will equal or exceed the capacity of these arterial streets.
3. With the northern alignment, there will be little impact on the environment, positive or negative. A depressed freeway in the central alignment would have the most negative impact, although covering the freeway through Westchester would have positive impacts. The southern alignment alternative is considered to have a positive impact on land development opportunities.
4. The northern alignment preserves the status quo in Westchester. A central alignment is disruptive during construction; however, it would remove traffic from surface streets, which neighborhood residents must cross. The southern alignment also reduces neighborhood traffic.
5. All freeway alternatives are expensive to construct. The northern route is the least cost effective due to relatively light demand for a freeway in this alignment.

**TABLE 3****LONG-RANGE IMPROVEMENT ALTERNATIVES**

EVALUATION CRITERIA	NORTHERN	CENTRAL-DEPRESSED	CENTRAL-TUNNEL	SOUTHERN
<b>ENHANCE DOWNTOWN</b>				
o New Development (S.F.)	4.5M	5.5M	5.5M	7.5M
o Aesthetics	o	+	+	+
<b>REGIONAL TRAVEL GROWTH</b>				
o East-West Capacity (vpd)	217,000	230,000	242,000	262,000
o Highway Volume/Capacity (2010)	73%	69%	66%	61%
o Serves Travel Patterns		+	+	+
<b>ENVIRONMENTAL IMPACTS</b>				
o Business & Homes Displaced	0	110	100	170
o Land-Use Impact	o	-/+	+	+
o Noise, Air, Visual	o		+	o
<b>PRESERVE WESTCHESTER</b>				
o 24th Street Volume (vpd)	43,000	5,000	15,000	25,000
o Traffic Speeds	40 mph	25 mph	35 mph	40 mph
o Neighborhood Access	o	-	+	+
<b>COST EFFECTIVENESS</b>				
o Right-of-Way Cost	low	high	high	high
o Construction Cost	high	high	high	high
o Total Cost/Demand	high	low	low	low

o = No Change From Existing, + = Positive, - = Negative

## PUBLIC EVALUATION

As part of the public participation process for the Route 178 Corridor Study, the consultant prepared a questionnaire to elicit public reaction to the short- and long-range alternatives (a copy of the questionnaire follows this chapter).

Kern COG and consultant staff administered the questionnaire to several interested groups, including corridor residents, business owners, realtors, developers, and the Chamber of Commerce (see Table 4). The groups ranged in size from about 10 to over 100. The population surveyed does not represent a random sample of Bakersfield residents; thus, the survey results can not be interpreted as an unbiased representation of public opinion. The results, however, do represent the views of the specific groups surveyed.

The questionnaire elicited comment on both short- and long-range improvement alternatives. For the short-range alternatives, comments were elicited separately for the downtown portion of the corridor (D Street to M Street) versus the Westchester portion (Oak Street to D Street). Table 5 shows that the preferred short-range alternative through downtown varied considerably with each group. Westchester residents are in favor of leaving the corridor as is. This was not the first choice of the other groups, with some (East Bakersfield residents, realtors, and developers) being strongly opposed to leaving the downtown portion of the corridor as is. Aside from Westchester residents, questionnaire respondents favored the street beautification and maximum capacity options, with the maximum capacity alternative receiving a slightly higher positive vote. None of the groups favored the parkway concept.

Opinion about short-range options for the Westchester portion of the corridor was also split (see Table 6). Residents again favor leaving the corridor as is. Leaving the corridor as is was also favored by non-residents at the public meeting and by the Chamber of Commerce. Realtors and developers are, again, overwhelmingly opposed to leaving the corridor as is through Westchester. The maximum capacity option is preferred by realtors and the building industry, while developers prefer the parkway option, and East Bakersfield residents prefer street beautification.

# ROUTE 178 CORRIDOR STUDY

## QUESTIONNAIRE

Please use this questionnaire to record your impressions of the short- and long-range alternatives proposed for the corridor. Please circle your answers and return the completed questionnaire to a project staff member before leaving the meeting.

A. My interest in the Route 178 corridor is as a:

1. Resident of the corridor
2. Owner or operator of a corridor business
3. User of Route 178, 23rd and 24th Streets
4. Concerned citizen
5. Other (please specify)

B. Regarding the SHORT-RANGE improvement alternatives for 23rd and 24th Streets in the downtown area, please indicate your preference for each alternative.

	Strongly Dislike		Neutral or No Opinion		Strongly Favor
o Leave as Existing:	1	2	3	4	5
o Street Beautification:	1	2	3	4	5
o Maximum Capacity:	1	2	3	4	5
o Parkway:	1	2	3	4	5
Comments/Suggested Alternatives:					

C. Regarding the SHORT-RANGE improvement alternatives for 24th Street in the residential area, please indicate your preference for each alternative.

	Strongly Dislike		Neutral or No Opinion		Strongly Favor
o Leave as Existing:	1	2	3	4	5
o Street Beautification:	1	2	3	4	5
o Maximum Capacity:	1	2	3	4	5
o Parkway:	1	2	3	4	5
Comments/Suggested Alternatives:					



D. What is your opinion of a grade separation (overcrossing) of Route 178 at Oak Street to remove congestion at this location?

1. In favor
2. Opposed
3. No Opinion
4. Other

Comments/Suggested Alternatives: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

E. Regarding the LONG-RANGE alternatives, please indicate your preference for each alternative.

	Strongly Dislike		Neutral or No Opinion		Strongly Favor
o Northern Alignment along Golden State	1	2	3	4	5
o 23rd & 24th Street Depressed Freeway	1	2	3	4	5
o 24th Street Tunnel (under residential section)	1	2	3	4	5
o Southern Alignment adjacent to railroad	1	2	3	4	5

Comments/Suggested Alternatives: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

F. If you have other comments or suggestions, please write them below.

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Thank you for filling out this questionnaire. We will mail you the results prior to the

**TABLE 4**  
**SURVEY RESPONSE**  
next corridor meeting.

Groups	Number of Responses
General Public Meeting*	88
East Bakersfield Residents	7
Chamber of Commerce	6
Board of Realtors	10
Developers	9
Building Industry	47

\* questionnaire respondents from the general public meeting identified themselves as follows:

Residents	77%
Business Owners	5%
Corridor Users	11%
Citizens	6%
Other	1%

The questionnaire also elicited opinion about the long-range alternatives for the corridor (see Table 7). Westchester residents prefer a freeway alignment around their neighborhood to the north, using the existing Golden State alignment to the extent possible. The northern alignment was also rated favorably by a majority of respondents from East Bakersfield and the Chamber of Commerce. Opposition to the northern alignment was expressed by developers and the Board of Realtors. These same groups (realtors and developers) indicated support for a freeway alignment along 24th Street, but Westchester residents are strongly opposed to such an alignment. Chamber of Commerce representatives also expressed opposition to a 24th Street alignment. The tunnel option was supported by realtors and developers and opposed by residents and the Chamber of Commerce. The response to the southern freeway alignment was largely neutral; it was not strongly favored or opposed by any of the groups.

**TABLE 5  
OPINION CONCERNING SHORT-RANGE ALTERNATIVES THROUGH DOWNTOWN**

	ALTERNATIVES			
	Existing	Beautification	Maximum Capacity	Parkway
<b>General Public Meeting:</b>				
Westchester Residents Avg. Rank <sup>(1)</sup>	4.2	2.7	1.3	1.9
% Favoring <sup>(2)</sup>	65%	29%	3%	15%
% Opposed <sup>(2)</sup>	12%	40%	56%	53%
Non-Residents Avg. Rank	3.7	3.2	2.7	2.8
% Favoring	50%	45%	20%	20%
% Opposed	20%	25%	25%	20%
<b>East Bakersfield Residents:</b>				
Avg. Rank	2.0	4.1	4.0	3.3
% Favoring	17%	71%	60%	50%
% Opposed	83%	14%	20%	33%
<b>Chamber of Commerce:</b>				
Avg. Rank	3.6	4.0	3.5	2.8
% Favoring	40%	75%	75%	40%
% Opposed	20%	0%	25%	40%
<b>Board of Realtors:</b>				
Avg. Rank	1.5	3.4	4.3	3.3
% Favoring	0%	50%	86%	33%
% Opposed	83%	13%	0%	22%
<b>Developers:</b>				
Avg. Rank	1.6	3.8	4.1	3.5
% Favoring	13%	63%	71%	50%
% Opposed	75%	13%	14%	13%
<b>Building Industry:</b>				
Avg. Rank	2.2	2.9	3.8	3.3
% Favoring	16%	29%	51%	37%
% Opposed	49%	29%	12%	22%

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(1) Ranking system ranges from 1 (strongly oppose) to 5 (strongly favor).

(2) May not add to 100%. Some had no opinion.

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**TABLE 6  
OPINION CONCERNING SHORT-RANGE ALTERNATIVES THROUGH WESTCHESTER**

	ALTERNATIVES			
	Existing	Beautification	Maximum Capacity	Parkway
General Public Meeting:				
Westchester Residents Avg. Rank(1)	4.4	2.4	1.2	1.8
% Favoring(2)	71%	25%	1%	12%
% Opposed(2)	10%	44%	63%	59%
Non-Residents Avg. Rank	3.7	3.4	2.9	2.6
% Favoring	55%	40%	20%	15%
% Opposed	25%	20%	25%	20%
East Bakersfield Residents:				
Avg. Rank	2.7	4.0	3.0	3.7
% Favoring	33%	57%	25%	50%
% Opposed	50%	14%	25%	17%
Chamber of Commerce:				
Avg. Rank	4.3	3.7	3.0	3.8
% Favoring	75%	33%	33%	75%
% Opposed	0%	0%	33%	25%
Board of Realtors:				
Avg. Rank	1.7	3.4	4.0	3.9
% Favoring	0%	50%	57%	56%
% Opposed	71%	25%	0%	11%
Developers:				
Avg. Rank	1.6	3.9	3.9	4.0
% Favoring	13%	63%	63%	67%
% Opposed	75%	0%	13%	0%
Building Industry:				
Avg. Rank	2.3	2.9	3.7	3.3
% Favoring	18%	27%	49%	35%
% Opposed	49%	25%	16%	22%

Ranking system ranges from 1 (strongly oppose) to 5 (strongly favor).

May not add to 100%. Some had no opinion.

**TABLE 7  
OPINION CONCERNING LONG-RANGE ALTERNATIVES**

	ALTERNATIVES			
	Northern Alignment	Central Alignment		Southern Alignment
		Depressed	Tunnel	
<b>General Public Meeting:</b>				
Westchester Residents Avg. Rank <sup>(1)</sup>	4.8	1.4	1.2	3.2
% Favoring <sup>(2)</sup>	91%	7%	3%	35%
% Opposed <sup>(2)</sup>	1%	75%	74%	22%
Non-Residents Avg. Rank	3.1	2.6	2.7	3.6
% Favoring	35%	35%	30%	45%
% Opposed	35%	45%	30%	20%
<b>East Bakersfield Residents:</b>				
Avg. Rank	3.3	3.0	3.3	3.9
% Favoring	67%	33%	50%	57%
% Opposed	33%	33%	33%	14%
<b>Chamber of Commerce:</b>				
Avg. Rank	5.0	2.4	1.0	2.3
% Favoring	100%	40%	0%	2596
% Opposed	0%	60%	100%	5096
<b>Board of Realtors:</b>				
Avg. Rank	2.6	3.6	3.3	3.8
% Favoring	29%	50%	71%	63%
% Opposed	43%	25%	29%	25%
<b>Developers:</b>				
Avg. Rank	1.4	4.4	3.7	2.6
% Favoring	0%	89%	57%	38%
% Opposed	100%	11%	14%	38%
<b>Building Industry:</b>				
Avg. Rank	3.2	3.2	2.4	3.5
% Favoring	35%	29%	18%	39%
% Opposed	24%	25%	33%	16%

Ranking system ranges from 1 (strongly oppose) to 5 (strongly favor).

May not add to 100%. Some had no opinion.

## *Chapter -6*

# *RECOMMENDATIONS*

Based on the technical and public evaluation of alternatives, the consultant developed recommended short- and long-range improvement plans. The recommended short-range plan is a combination of the "street beautification" and "maximum capacity" alternatives. The recommended long-range plan centers around the southern alignment alternative. This chapter presents each plan in greater detail and discusses its relationship to the study goals.

### RECOMMENDED SHORT-RANGE PLAN

The short-range plan has been designed to enhance the 24th Street corridor to the extent practical while providing adequate capacity to accommodate traffic growth for the next ten years. The recommendations come from technical review and citizen input regarding the four short-range alternatives developed previously. These were: Do nothing, Beautification, Maximum Capacity, and Parkway.

For the downtown portion of the corridor, technical staff, residents, business owners, and others supported the "beautification" and the "maximum capacity" alternatives. The recommended plan therefore combines features of both alternatives; increased capacity is provided and some landscaping is incorporated.

For the Westchester portion of the corridor, residents and others preferred the "do nothing" and the "beautification" alternatives. The recommended plan selects the best features of these two options by adding landscaping without shifting traffic or moving the existing curb lines.

The plan also addresses existing and projected capacity deficiencies at Oak Street and Pierce Road by recommending street geometric changes and traffic signal optimization at intersections along 24th Street and Oak Street.

The recommended short-range plan has been designed to be compatible with the recommended long-range plan, which consists of building a new freeway connection between S.R. 178 and S.R. 99 around the southern side of downtown Bakersfield.

The following outlines the features of the short-range plan; more detail is given in the proceeding pages.

Through Downtown:

- 23rd & 24th Streets restriped and resurfaced to four lanes each
- Landscaping (street trees) added to sidewalks
- On-street parking removed
- Lost parking spaces replaced through better utilization of other available parking.

Through Westchester:

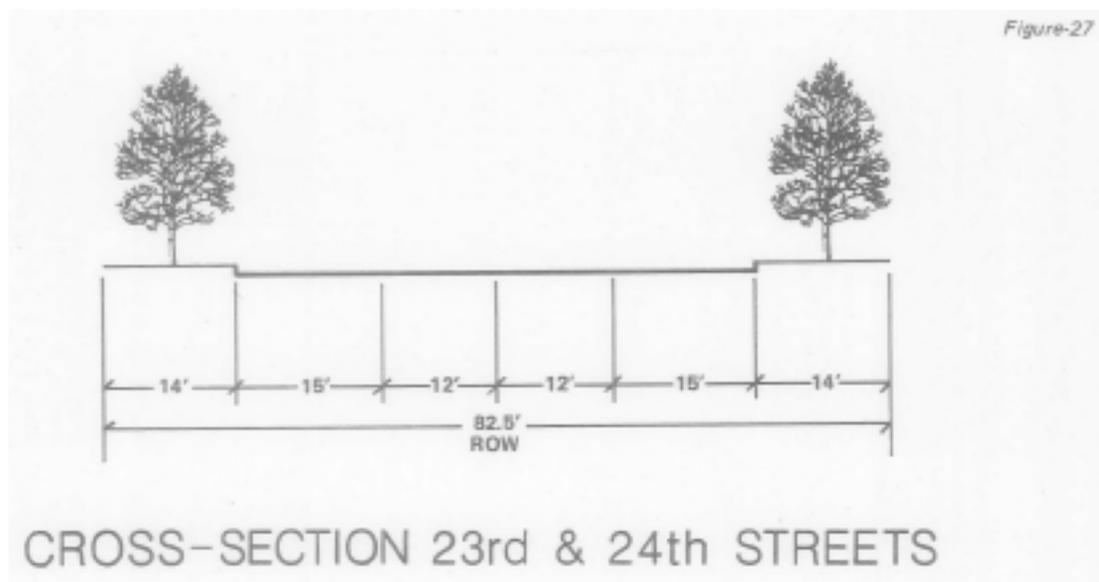
- Landscaped median added
- Median breaks every three blocks (unsignalized)
- Curb remains as existing
- On-street parking removed

Oak Street

- Widening of the 24th Street and Oak Street intersection
- Improvements of the Truxtun Avenue and Oak Street intersection
- Widening of the California Avenue and Oak Street intersection

DOWNTOWN SECTION

The recommended plan is a combination of the beautification and maximum capacity alternatives. Parking would be removed on 23rd and 24th Streets to allow restriping and resurfacing from three to four travel lanes (see Figure 27). The two curb lanes would be shared through-and-turn lanes. Landscaping would be added to the sidewalks to improve aesthetics and give a unified appearance to the streets that are now a random collection of signs and varying building setbacks.



The transition from two to four lanes eastbound on 23rd Street would take place between B Street and D Street. Each of the two lanes leading up to the transition would simply be widened and then split into two, with new striping. The transition from four to two lanes westbound on 24th Street would occur between F Street and C Street. The two lanes on the south side of the street would merge into one prior to ID Street, and then would merge again by C Street. By having all the merging occur on the south side of the street, the north curb lane would be undisturbed, and the new striping would be consistent with the existing striping.

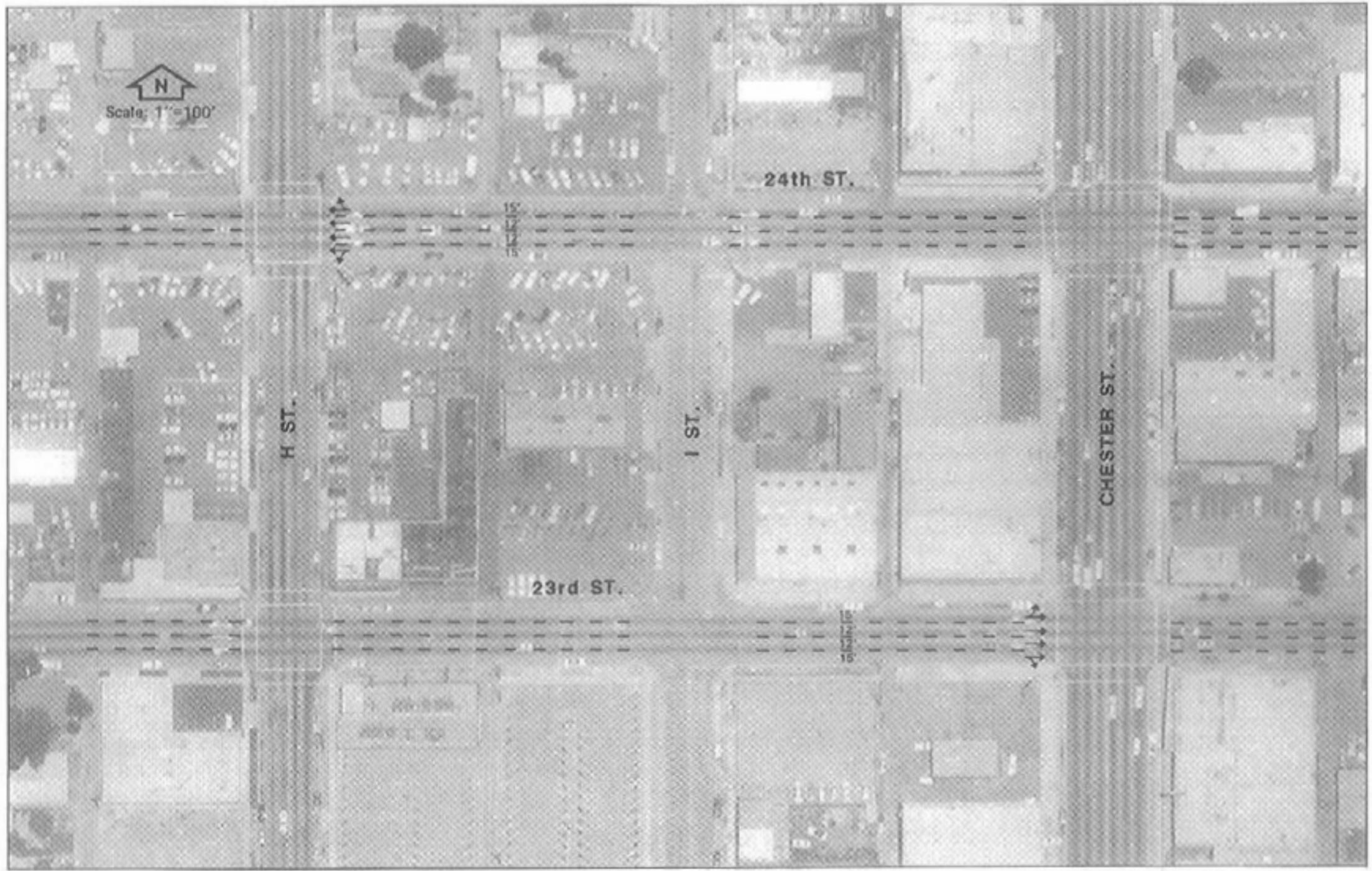
Lane widths would be in accordance with City of Bakersfield standards, and the elimination of parking would be in agreement with the City's recently-approved policy on design of arterial streets. Vehicles no longer able to park on 23rd or 24th Street could utilize the cross streets for curb parking or could use the city-owned off-street parking lot at 23rd and I Streets. Both facilities are presently under utilized.

The capacity of Route 178 through downtown in this configuration would be about 65,000 vehicles per day, which can be compared to Caltrans' 1996 volume projection of 50,000 vehicles per day. The level of service in 1996 would be better than that of today (volume-to-capacity ratio of about 0.77) and would be within accepted standards of performance.

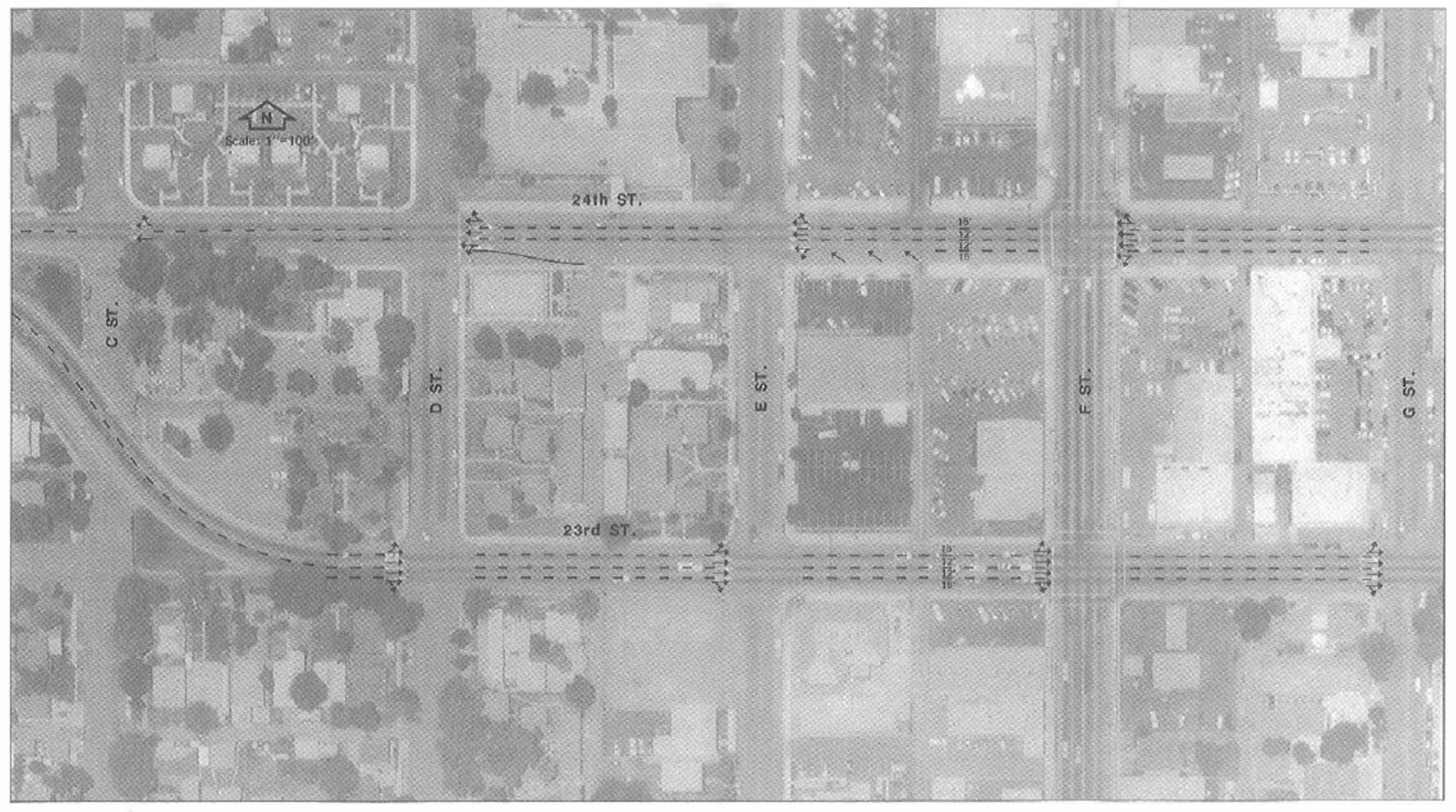
The addition of left-turn capacity from cross streets to 23rd and 24th Streets has been purposely avoided. It is thought that alternate routes are available to serve this demand, and the enhancement of those alternate routes would be more cost-effective than extensive improvements to the intersections along Route 178. In particular, opportunities exist for improving traffic flow on Truxtun Avenue and California Avenue, as described in the "Oak Street" section of this report. In addition, the recommended southern alignment freeway will serve demand between downtown and the west in the future.

The following two plates illustrate the downtown restriping plan.

**ROUTE 178 CORRIDOR STUDY**  
*Downtown Restriping Plan*

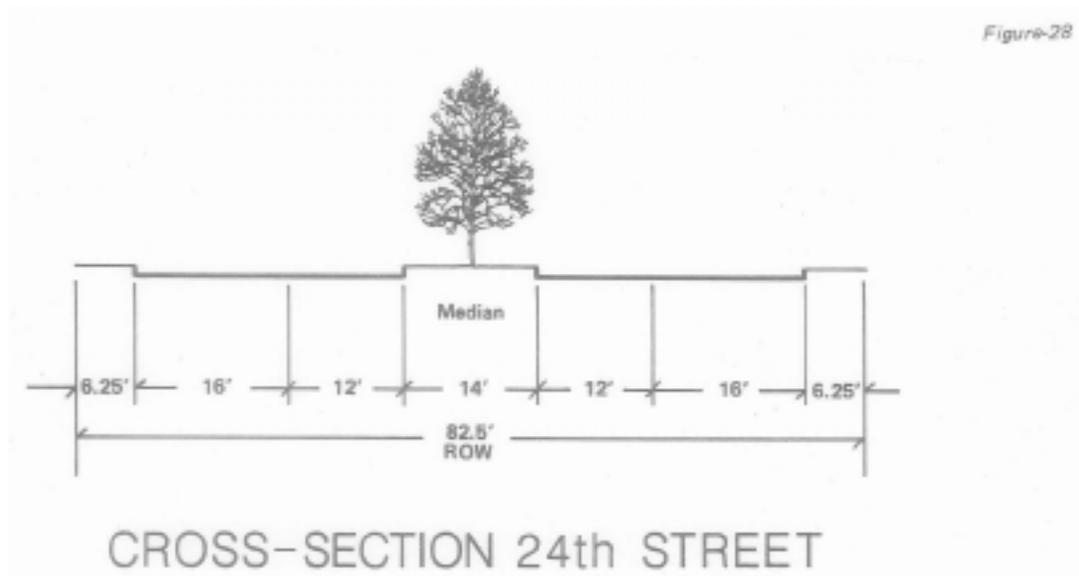


# ROUTE 178 CORRIDOR STUDY Transition Striping Plan



## WESTCHESTER SECTION

The plan in the Westchester section of Route 178 is designed to mitigate the impact of traffic on the neighborhood to the extent possible without altering curb lines. The continuous left-turn lane would be replaced by a landscaped median 14 feet wide, which is in accordance with the City of Bakersfield design standards. Parking would be removed and the curb lanes reduced from 18 feet to 16 feet wide. The median would improve aesthetics by introducing more landscaping and by reducing the visual width of the street. Operationally, it would ease pedestrian crossings by providing a refuge so that only one-half the street need be crossed at a time. Parking spaces lost along 24th Street could be replaced through utilization of the available curb parking on the cross streets.



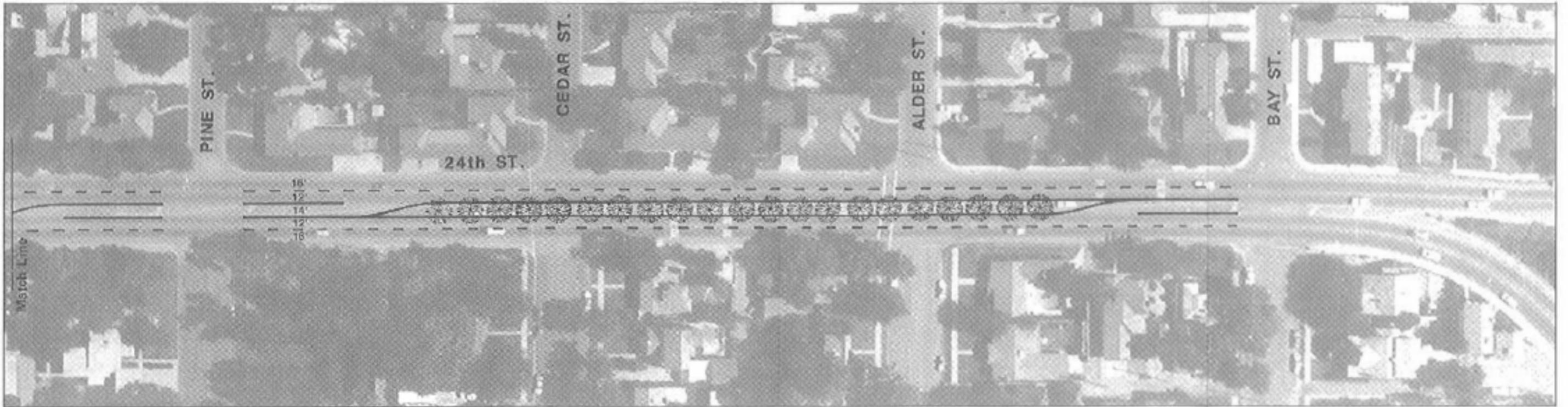
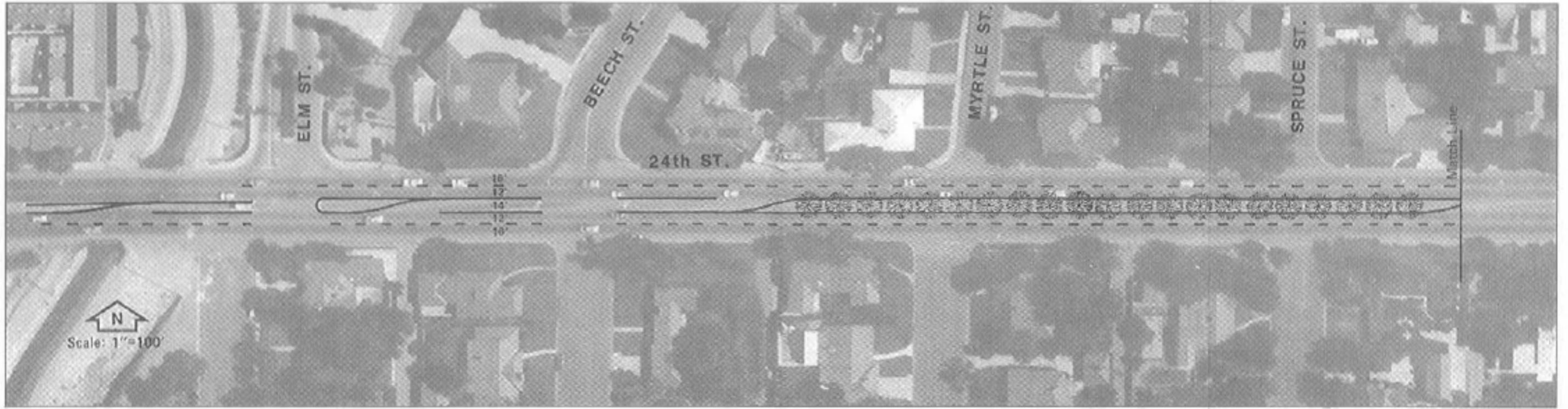
The median would begin at Oak Street and have breaks at Elm Street, Beech Street, Pine Street, and B Street. The intersections would initially be unsignalized, but could be signalized at a later date without seriously disrupting flow.

Under this plan, the capacity of 24th Street would remain unchanged, unless the median breaks were signalized. Existing capacity is 70,000 vehicles per day, which is more than adequate given Caltrans' 10-year projection of 48,000 vehicles per day through Westchester. If the cross streets were signalized, capacity would be reduced to about 56,000 vehicles per day (depending on the signal timing), which would still be adequate to serve demand. Once the southern bypass freeway was opened, volume through Westchester would be expected to decline to about 25,000 vehicles per day.

The following plate illustrates the Westchester median plan.

# ROUTE 178 CORRIDOR STUDY

## Westchester Median Plan



## OAK STREET

Several traffic improvements are recommended to increase the capacity of Route 178 and its parallel routes, Truxtun and California Avenues, across Oak Street to accommodate 10-year traffic growth. These three streets are considered together because they act in parallel to serve traffic travelling east and west across Oak Street in the S.R. 178 Corridor. A package of improvements can be utilized to balance traffic supply and demand among these streets rather than focusing investment merely on one facility.

The existing combined capacity of the three routes across Oak Street and Pierce Road is 82,000 vehicles per day, and existing volume totals 73,000 vehicles per day. This means that about 90% of existing capacity is being utilized and little volume growth is possible.

Caltrans projects that in ten years demand will grow to 90,000 vehicles per day, which exceeds existing capacity. A package of intersection improvements therefore is recommended that will include planned improvements by Caltrans and the City of Bakersfield. The improvements will boost corridor capacity to 105,000 vehicles per day across Oak Street, which will result in levels of service about equal to what occurs today.

Caltrans is planning to improve the Highway 99/Rosedale interchange, which will eliminate the traffic bottlenecks occurring at Oak Street and at Pierce Road (see Figure 29). At Pierce Road, Caltrans will add one lane in each direction to 24th Street, making it six lanes wide, including across the Kern River. In addition, new ramps will be added directly connecting Highway 99 to Pierce Road north of 24th Street, eliminating some of the turning movements at the 24th Street and Pierce Road intersection.

On 24th Street at Oak Street, Caltrans will add a third eastbound through lane. This lane will merge with the others just past Oak Street, so 24th Street through Westchester will remain as existing. Nevertheless, the improvement should eliminate eastbound back-ups on 24th Street.

In addition to the Caltrans improvements an additional turn lane and a change in signal phasing should be added to the 24th Street and Oak Street intersection. Thus, two exclusive left-turn lanes should be provided on the south leg of the intersection. On the north leg, the shared left-turn and through lane should be changed to an exclusive left-turn lane. The signal should be converted to full eight-phase operation, eliminating the split phase on Oak Street.

Grade-separation of the 24th and Oak Street intersection is not recommended because the extra capacity will not be needed once the southern bypass freeway is completed.

At the Truxtun Avenue and Oak Street intersection, the City of Bakersfield will be requiring an adjacent developer to add a right-turn lane to the north leg (see Figure 30). This improvement will reduce back ups on Oak Street and help vehicles headed west on Truxtun Avenue.

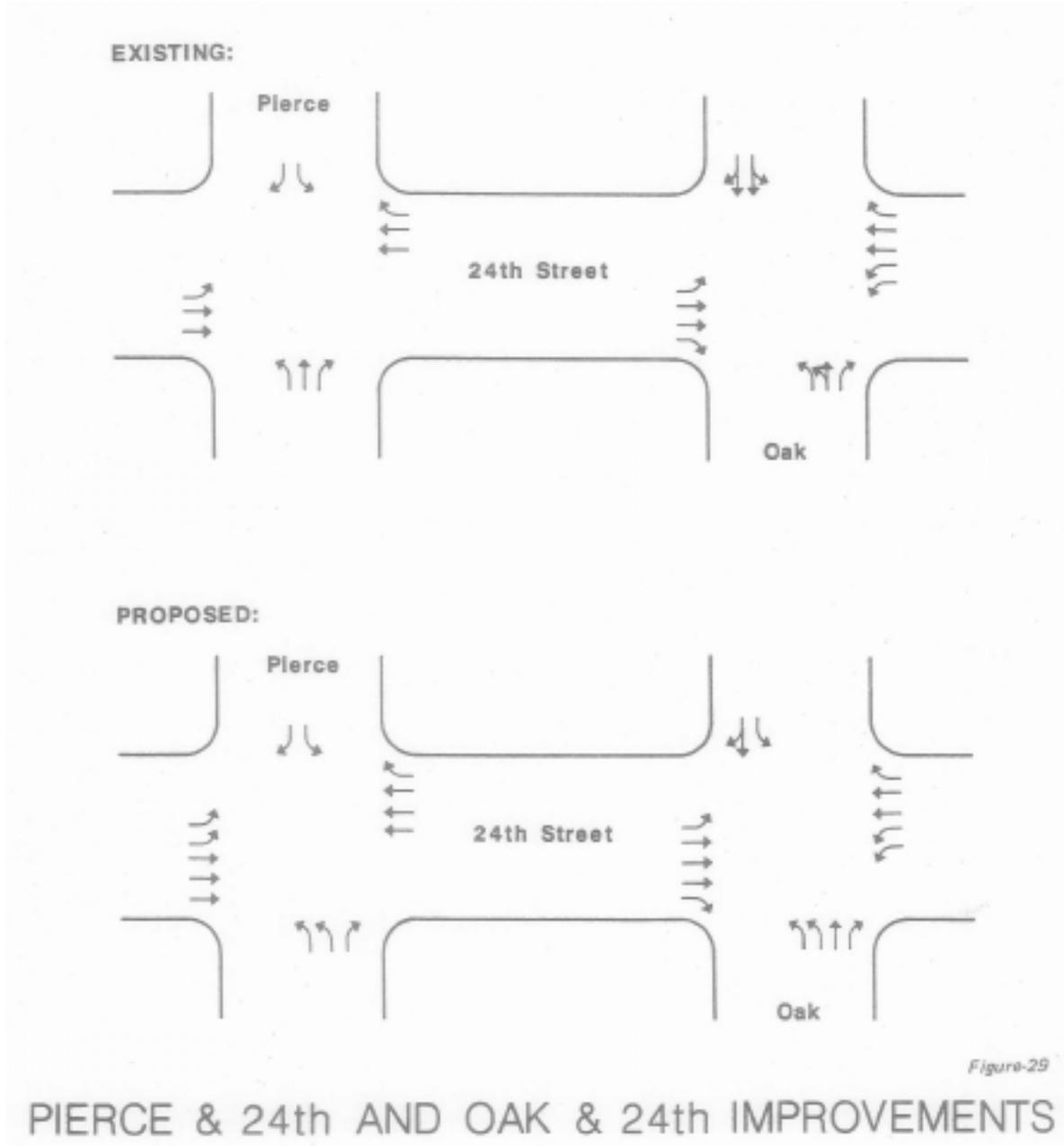


Figure-29

PIERCE & 24th AND OAK & 24th IMPROVEMENTS

The City of Bakersfield is planning major improvements to the California Avenue and Oak Street intersection. California Avenue will be widened to three lanes in each direction, and a second left-turn lane will be added to the east leg of the intersection. These improvements will significantly increase the capacity of California Avenue and make it a more attractive route for travel between downtown and the southwest.



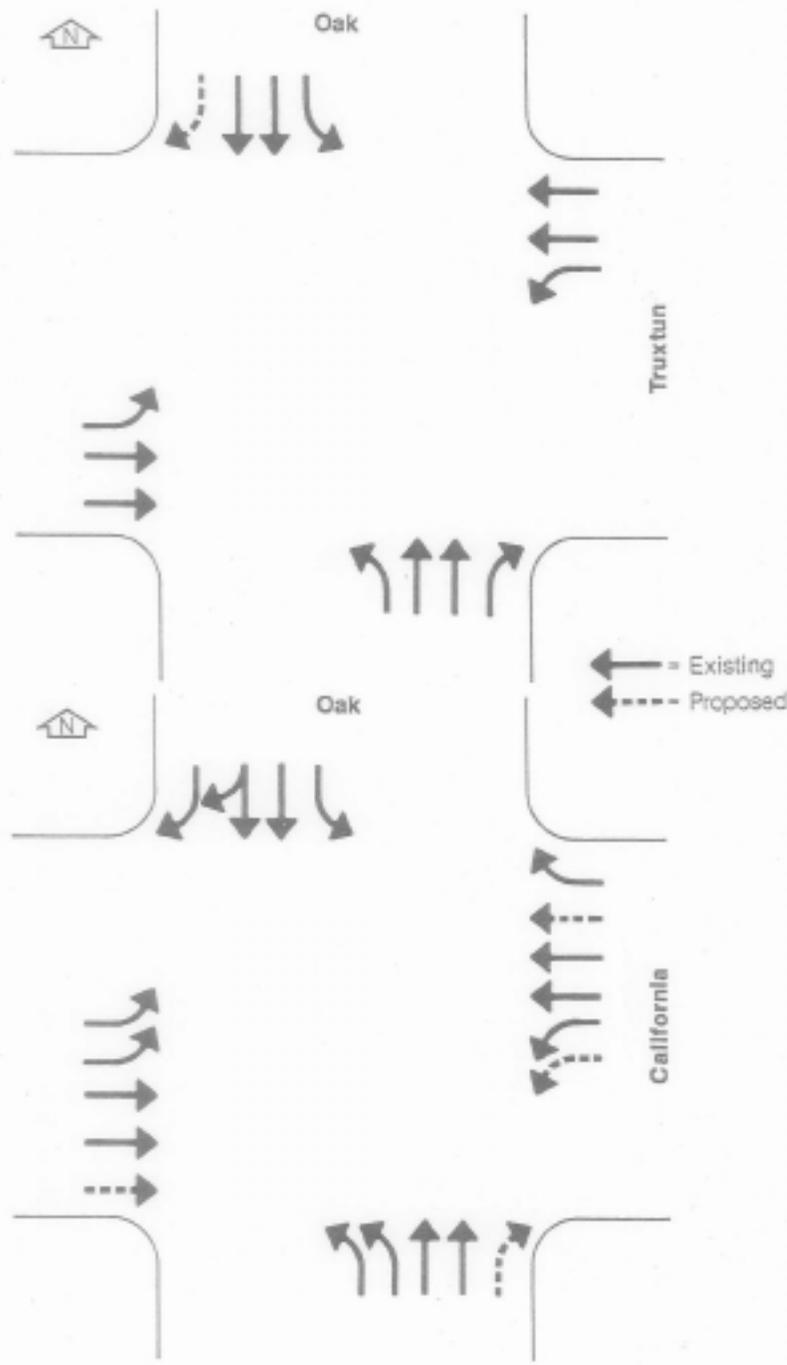


Figure-30

OAK & TRUXTUN AND OAK & CALIFORNIA IMPROVEMENTS

## SHORT-RANGE PLAN VERSUS OBJECTIVES

This section describes the impacts and benefits of the short-range plan relative to the study objectives.

Support Downtown Growth. The short-range plan does not affect downtown access, except to the extent that additional capacity is available across Oak Street. The proposed improvements to California Avenue would add capacity, which could be used to accommodate greater travel demand between downtown and southwest Bakersfield. The greatest benefit of the short-range plan to downtown would be the improved aesthetics along 23rd and 24th Streets as a result of landscaping. This would make Route 178 a more attractive gateway and may help create a positive image of the downtown area.

Accommodate Regional Travel Growth. The short-range plan is designed to relieve the traffic bottlenecks that now occur in the Route 178 corridor. This would also result in an increase in capacity sufficient to accommodate about 10 years of projected traffic growth. Beyond that time period, the recommended long-range improvements would be necessary.

Minimize Environmental Impact. The short-range plan would have little environmental impact (see Appendix). Greater traffic volume could be accommodated, which may result in marginally greater noise and vibration impacts. Energy consumption and air pollution would probably be reduced, however, because the elimination of traffic bottlenecks would reduce idling time and starts and stops, which are the primary sources of vehicle emissions and fuel consumption. The short-range plan would require no additional right of way so no homes or businesses would need to be removed. The most noticeable effect of the plan would be an improvement to aesthetics resulting from the additional landscaping.

Preserve Westchester. The short-range plan consists of median construction and street beautification through the Westchester area. This is intended to substantially reduce the visual impact of 24th Street on the neighborhood. Traffic volume on 24th Street is expected to increase 10% to 15% over the next ten years prior to completion of the long-range plan. Traffic speeds would remain the same as existing. Turning vehicle and pedestrian conflicts would be reduced by median construction and left-turn channelization. Also, the plan would be compatible with signalization, if necessary, through Westchester.

Minimize Cost. The recommended short-range plan would be relatively inexpensive. The downtown improvements consist only of restriping, possible signal modifications, and landscaping. The Westchester improvements consist of median construction and landscaping. Most of the improvements at Oak Street are already planned to be funded by separate sources. The modifications recommended herein could be added to the designs at little cost.

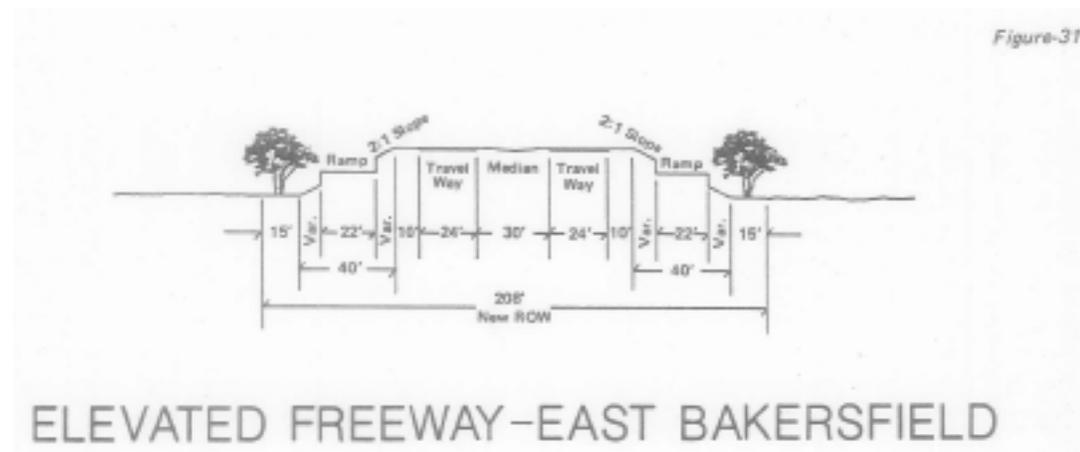
## RECOMMENDED LONG-RANGE PLAN

The examination of future volume projections discussed in Chapter 3 showed that total travel demand in the Route 178 corridor would reach 107,000 vehicles per day by 2005. This volume would exceed the capacity of the recommended short-range plan; a higher volume facility is needed within 20 years.

Of the four alternatives developed and evaluated for a new freeway in the Route 178 corridor, the southern alignment emerged as the preferred alternative. It offers the greatest east-west capacity, and since each alternative would be roughly equal in cost, the southern alignment would be the most cost-effective. At the same time, it would help enhance the Westchester neighborhood by cutting traffic in half along 24th Street. The southern alignment was also the alignment receiving the most public support.

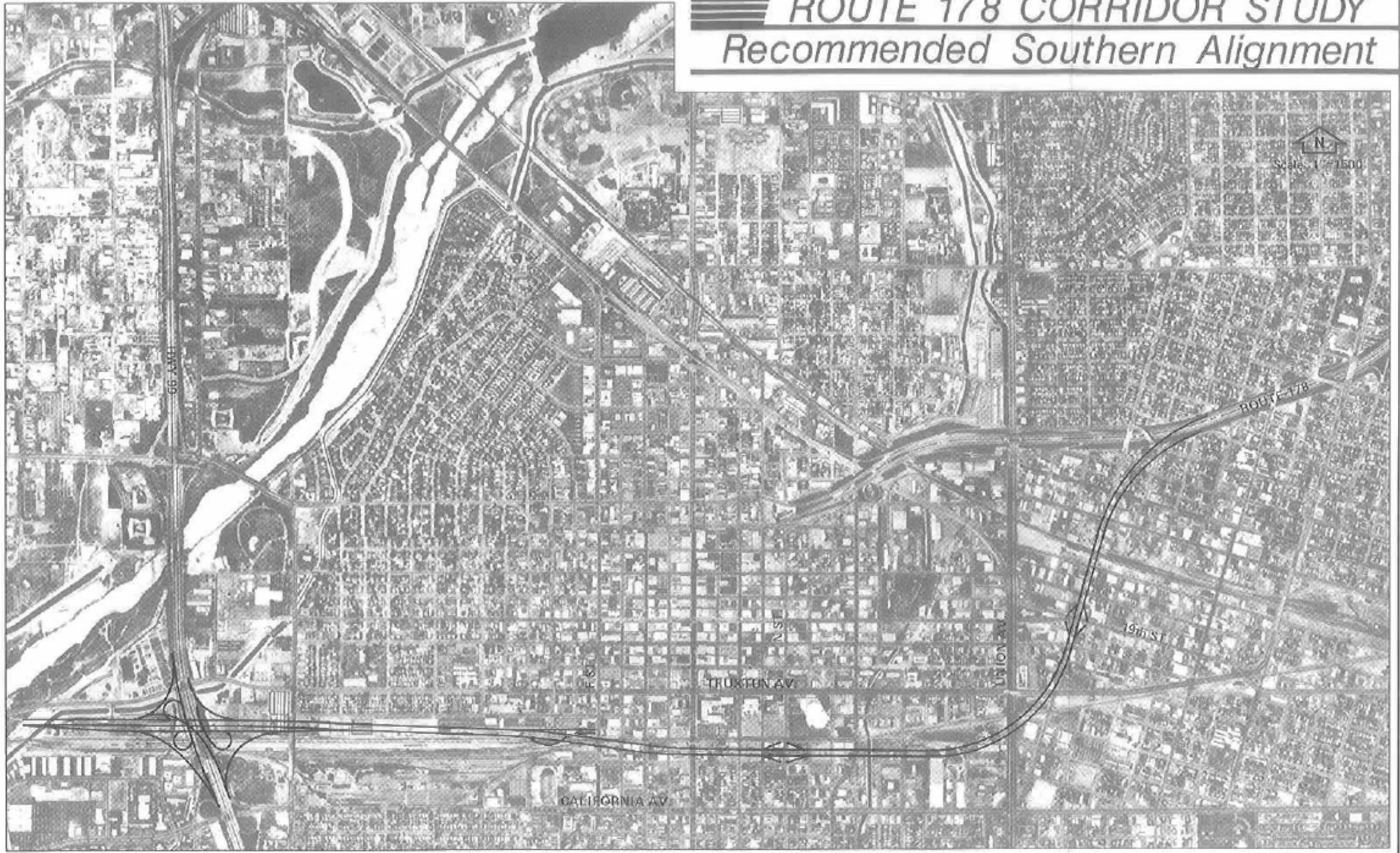
Details about the recommended southern alignment, as conceptually designed, are provided below (refer to the following plate).

Route 178 to Truxtun Avenue. The southern alignment freeway would be connected to Route 178 in the vicinity of Niles Street. Connection would be via a partial interchange featuring freeway-to-freeway ramps such as those connecting Highway 99 to Highway 58 in the southwest. Connection would be provided northbound to eastbound and westbound to southbound. The route would continue southwest as an elevated four-lane freeway through East Bakersfield along Sonora Street (see Figure 31). Cross streets would pass under the freeway, and on- and off-ramps to serve East Bakersfield would be provided. Initially, a diamond interchange at 19th Street is planned.

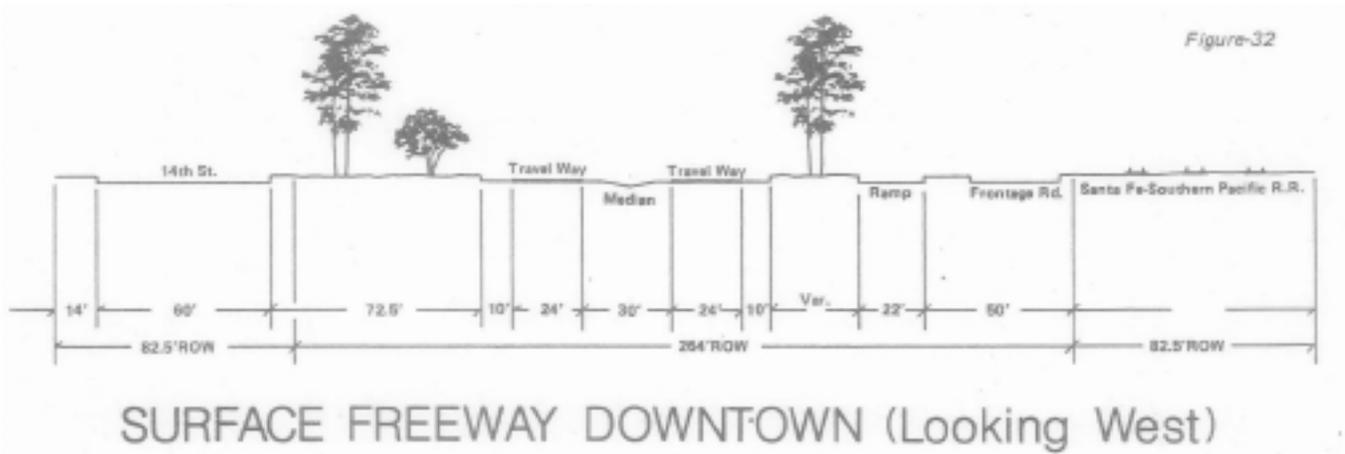


# ROUTE 178 CORRIDOR STUDY

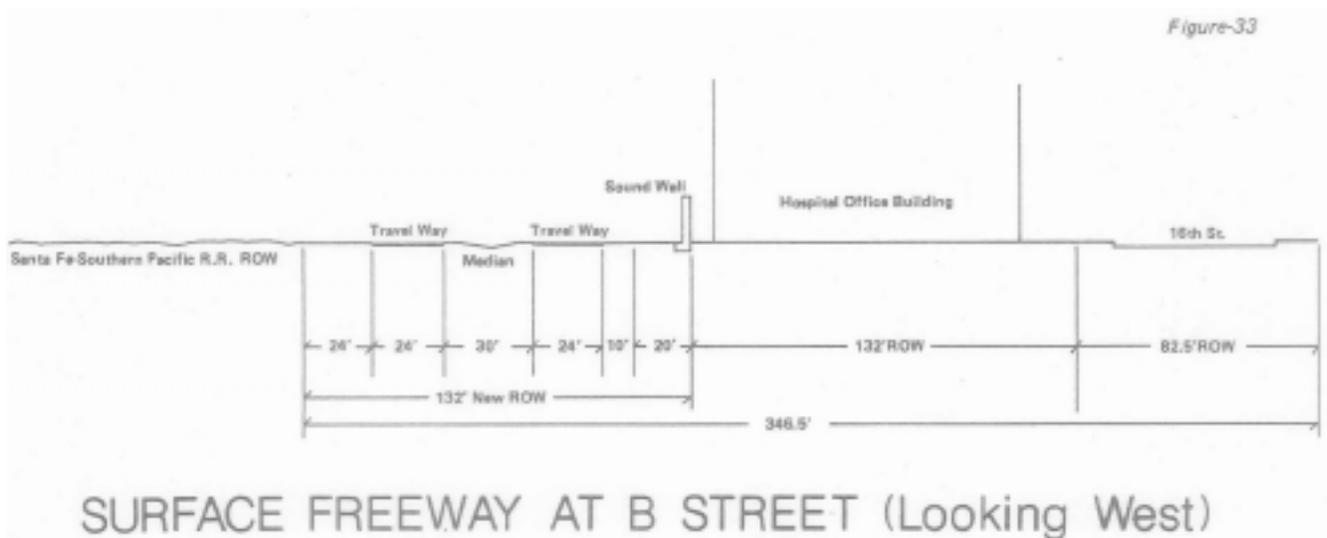
## Recommended Southern Alignment



Truxtun Avenue to F Street. Nearing Truxtun Avenue the alignment would curve west to parallel the Santa Fe railroad tracks (see Figure 32). The freeway would be located at-grade between the railroad tracks and 14th Street. Selected cross streets would pass under the freeway and the tracks. Initially, a diamond interchange is planned at N Street.



F Street to Highway 99. Beginning at G Street, the freeway would enter an elevated structure to allow it to pass over to the north side of the railroad tracks, preserving the Santa Fe switching yard. The overpass would touch down around C street, and from that point west, the freeway would be at-grade between the railroad tracks and 16th Street (see Figure 33). A partial interchange allowing access to and from the west is planned for F Street. The F Street location would take advantage of the freeway still being elevated to incorporate an underpass into the interchange design.



Highway 99 Interchange. The freeway would have a full interchange with Highway 99 north of the railroad tracks. The initial interchange design calls for the following movements to be accommodated with direct freeway-to-freeway ramps: southbound to westbound, westbound to northbound, northbound to eastbound, northbound to westbound, and eastbound to southbound. The other three possible turning movements would be accommodated with loop ramps. The new freeway-to-freeway interchange may require alteration of the existing Highway 99/California Avenue interchange.

West of S.R. 99. The southern alignment freeway would continue as the Westside Highway west of S.R. 99. Access would be provided to southwest and west Bakersfield and beyond to Interstate 5. The alignment of the Westside Highway was not addressed in the Route 178 Corridor Study and has not been specified in the southern alignment conceptual design. Kern COG intends to sponsor a corridor study during 1987 to address the location of the Westside Highway.

#### LONG-RANGE PLAN VERSUS OBJECTIVES

This section provides additional details about the impacts and benefits of the long-range plan relative to the study objectives.

Support Downtown Growth. The southern alignment would provide greatly expanded capacity for downtown access. In addition to the existing access system (24th Street, Truxtun Avenue, California Avenue, Oak Street), the freeway would represent a new gateway. Two interchanges would be built in the downtown area. Also, additional north-south streets would be grade-separated from the Santa Fe railroad tracks in conjunction with freeway construction. This would enhance downtown access from the south. Altogether, the recommended long-range plan would support 7.5 million square feet of new development downtown.

Accommodate Regional Travel Growth. The southern alignment would provide the greatest additional capacity in the Route 178 corridor compared to other alternatives. This is because it would be a completely new facility and not an enlargement or enhancement of an existing highway. The existing parallel facilities—California Avenue, Truxtun Avenue, 24th Street, and the Golden State Highway--would remain in place. Capacity of the new freeway alone would be 90,000 vehicles per day, and the corridor would have a total capacity of 260,000 vehicles per day. Comparison to the year 2010 total corridor travel demand forecast of 160,000 vehicles per day shows that the future levels of service would be good.

Minimize Environmental Impact. The southern alignment would have some negative impacts and some positive impacts on the environment. The primary negative impact would be the displacement of about 170 homes and businesses, mostly in the East Bakersfield area. In a positive sense, however, the improved access to East Bakersfield provided by the freeway may spur redevelopment efforts there and improve the prosperity of the area. Downtown Bakersfield may also benefit from improved access in terms of attracting new development. The freeway would have a visual and noise impact on East Bakersfield, but in the downtown section, the freeway would not have a substantially greater visual or noise impact than the railroad tracks it parallels. The freeway would cause an increase in air pollution in areas directly adjacent to it but would probably have a negligible impact on overall pollution levels in Bakersfield. Because the freeway is designed to serve existing and expected future

demand and because it is located within the already built-up area of Bakersfield, it is not expected to generate much additional travel beyond what would take place without it.

Preserve Westchester. The construction of a freeway along the southern alignment would not have any physical impact on the Westchester neighborhood. Twenty-fourth Street would remain as specified under the short-range plan (median and landscaping added). The southern alignment freeway, however, should attract traffic away from 24th Street, reducing volume through Westchester. Future 24th Street traffic volume with the freeway is expected to be 25,000 vehicles per day, compared to existing volume of 43,000 and future volume without the freeway of 57,000. Traffic speeds would remain the same as existing, but the lower traffic volume should make cross-street access easier.

Minimize Cost. Cost of the southern freeway, like the other three freeway alternatives, would be high. An order-of-magnitude cost estimate is \$100 million, half of which would be for the interchange with Highway 99. The southern alignment is the most cost-effective alternative, however, because it provides the greatest amount of capacity per dollar.

## *Chapter-7*

# *CONCLUSIONS*

The purpose of the Route 178 Corridor Study was to determine the magnitude of transportation needs for east-west travel in the vicinity of downtown Bakersfield and to evaluate and recommend alternative improvements, if necessary. The analysis of existing conditions showed existing transportation problems, most notable being traffic congestion during peak hours. Future demand projections show that traffic congestion will worsen considerably unless something is done. Other corridor problems identified include poor roadway aesthetics and traffic impacts on the Westchester neighborhood. Based on technical analysis and public input, the recommended long-range solution is the construction of a new freeway around downtown on the south linking S.R. 99 at California Avenue to S.R. 178 at Niles Street. Because of the long lead time necessary to plan and build a new freeway, a short-range plan is also recommended to address some of the existing corridor problems and accommodate traffic growth. The short-range plan consists of a median through Westchester, landscaping, pavement restriping on 23rd and 24th Streets, and intersection improvements along Oak Street.

# *APPENDIX*

- A- Public Participation Program
- B- Initial Environmental Assessment

# ROUTE 178 CORRIDOR STUDY

## ROUTE 178 CORRIDOR STUDY FIRST PUBLIC MEETING SUMMARY

The first public meeting for the Route 178 corridor study was held Tuesday, May 28, 1985 at 7 p.m. in the Weill Institute (Bakersfield College Downtown Center). In attendance at the meeting were representatives of the Kern Council of Governments (Kern COG), the City of Bakersfield, and Barton-Aschman Associates, Inc. (the study consultant); newspaper and television reporters; and about 175 concerned citizens.

### Notification

Kern COG and the City of Bakersfield prepared a list of about one hundred persons thought to represent a cross-section of the community interested in the Route 178 corridor. The list included residents along 24th Street, business owners, land owners, and representatives of Route 178 users. Notice of the public meeting and a brief background report were sent to each of the one hundred persons on the list. Representatives of the Bakersfield Californian and local TV stations were also notified approximately one week prior to the meeting. Notification about the meeting appeared in the "Metro" section of the Bakersfield Californian on Monday, May 27, 1985.

Many more corridor residents came to the meeting than those receiving official notification. They were undoubtedly aroused by a neighborhood notification project undertaken by some concerned residents who thought that a freeway was being proposed for the corridor.

Many residents who came to the meeting expressed their anger about not receiving notification; they thought they were being intentionally excluded. Although the original mailing list of about 100 persons was thought to accurately represent those having an interest in the study, all citizens were assured that notification of future meetings would reach them more directly.

## The Meeting

Persons began arriving at about 6:30 p.m. for the 7:00 p.m. meeting. Each was asked to sign the mailing list and fill out a name tag, which was numbered to facilitate the formation of smaller discussion groups. The number of people attending the meeting was larger than expected. Two logistical problems that developed will need to be corrected next time: the sign-in procedure was slow, and the meeting room was too small.

The first one hundred persons who signed in were assembled in the large meeting room for an introductory presentation. The remaining persons were assembled in a nearby, smaller room to receive the same introductory material.

The introductory presentations were made by Mark Gibb, executive director of Kern COG, and Bob Scales, study director for Barton-Aschman Associates, Inc. They explained that the Route 178 corridor study is sponsored by Kern COG, Caltrans, and the City of Bakersfield. The purpose of the study is three-fold:

1. To identify transportation needs (problems) in the Route 178 corridor, both existing and future.
2. To establish goals that improvement strategies will strive to meet (one goal might be to reduce accidents, for example).
3. To devise and evaluate improvement alternatives.

It was also explained that the entire study will last approximately nine months and involve at least three more public meetings. Future meetings are tentatively scheduled for sometime in September, October, and November 1985. These meetings will discuss improvement alternatives, evaluate those alternatives, and discuss the recommended improvements.

Once the brief introductory remarks were concluded, persons were divided into smaller discussion groups. The purpose for the small groups was to give each individual a chance to be heard in the short time available. Seven smaller discussion groups were

formed, each with a discussion moderator. Because of space limitations two of the groups had to be combined, resulting in five groups of about 25 persons each and one group of 50 persons. A person was assigned to take notes of the discussion for each group. In some cases this was the moderator, and in other cases it was one of the citizen participants.

In addition to providing a forum for questions and comments from the public, the discussion groups had a pre-arranged agenda of specific items to be addressed. Because of the range of viewpoints that were expected, the purpose of the public meeting was not to achieve consensus on the issues but to hear as many opinions as possible. A summary of the discussion on each of the specific topics follows.

Problem Identification: Persons were asked what specific transportation problems they knew about in the corridor. They were also asked to consider how significant these problems are compared to transportation problems elsewhere in Bakersfield. A list of comments is presented below, with those receiving the most mention listed first.

1. Traffic volumes are heavy, which results in problems with noise and pollution.
2. Vehicles are travelling at high speeds through the residential neighborhood, which creates a safety problem.
3. Congestion occurs around the intersection of 24th and Pierce and 24th and Oak.
4. There is too much through traffic using 24th Street (as opposed to traffic destined to Westchester or downtown). This results from conscious decisions by highway planners to channel travel between the northeast and southwest through 24th Street, rather than onto Truxtun or California.
5. There are no real congestion problems or problems with high traffic volumes in the corridor, especially when compared to other parts of Bakersfield, e.g., Ming Avenue.

6. There are too many trucks on 24th Street. They create a noise problem.
7. The traffic volumes and speeds on 24th Street make crossing difficult between Oak Street and F Street. There is no signal or adequate crosswalk along the stretch. This creates a safety problem for children who must cross the street to get to school.
8. There are too many accidents along the Route 178 corridor.
9. Route 178 does not present an attractive entrance to downtown Bakersfield.
10. The Westchester neighborhood does not have adequate transit service.
11. The transition curve from 24th to 23rd Street is too tight to be negotiated without significant slowing.
12. Public officials have been unresponsive to the needs of Westchester residents.

Goals: Persons were asked to consider what would be desirable goals for an improvement to the Route 178 corridor. A possible list of goals was passed out to spark discussion. This list included the following goals:

- o Enhance image of Bakersfield with an attractive gateway to downtown.
- o Accommodate downtown growth with increased capacity.
- o Improve public safety.
- o Mitigate impacts of noise, visual intrusion, air quality, etc. created by increasing traffic volumes.
- o Accommodate regional growth in traffic with increased capacity.
- o Other.

Most persons in the group were dissatisfied with the list of goals provided, and they put together a list of their own. The following goals received the most support:

1. Preserve the Westchester neighborhood.
2. Mitigate the impacts of safety, noise, and pollution by reducing traffic volumes on 24th Street.
3. Accommodate through traffic and regional traffic growth by developing an alternate transportation facility.

Concerning the issue of access to downtown Bakersfield, some persons thought that the Route 178 corridor was an appropriate gateway, while others felt that alternative access points needed to be developed.

Improvement Alternatives: Persons were asked for ideas about how to improve the Route 178 corridor. A list of possible improvements was handed out to most discussion groups. The list included the following:

- Limited-access freeway entire length of corridor.
- Parkway (6-lane divided at-grade arterial) entire length of corridor.
- Parkway through residential area (Oak Street to D Street) with freeway elsewhere.
- As existing through residential area with parkway or freeway elsewhere.
- Minor engineering modification (adding medians, turn lanes, etc.) entire length of corridor.
- Consolidated cross-streets and intersection grade separations entire length of corridor.

- o Align freeway with Golden State Highway and rebuild 99/204 interchange, or build new interchange.
  
- o Do nothing.

Two of the groups did not receive the list because the discussion facilitators felt that the citizens had already made their views clear regarding improvements.

All groups seemed to agree that the best long-range solution to Route 178 problems would be to develop a freeway somewhere else. Various possible alignments were suggested including along the Golden State Highway, the Southern Pacific railroad right-of-way, the Santa Fe railroad right-of-way, Truxtun Avenue, California Avenue, the Kern River, and north of the Westchester neighborhood through industrial lands.

Although a minority opinion, a significant number of people in two of the groups felt that no improvement was necessary.

Other improvement suggestions were as follows:

1. Build a pedestrian overpass/underpass or install a new pedestrian traffic signal between Oak Street and F Street.
  
2. Ban trucks from 24th Street.
  
3. Restrict turning movements along 24th Street through the Westchester neighborhood to make travel safer.
  
4. Reduce the speed limit on 24th Street.
  
5. Improve the intersections at Pierce and at Oak.
  
6. Build a tunnel to carry heavy traffic volumes under the Westchester neighborhood.

At about 9 p.m. the small group discussions were completed, and interested persons were invited to reassemble in one large group to hear summaries of the small group discussions. The persons responsible for taking notes in each group presented their individual summaries. Mr. Scales concluded the meeting by asking citizens whether they preferred to meet in one large group or break into smaller discussion groups for subsequent meetings. The majority favored one large group, although some preferred the smaller groups. The meeting concluded at about 9:30 p.m.

# ROUTE 178 CORRIDOR STUDY

## **QUESTIONS REGARDING PROCEDURE/OVERALL PROCESS AND QUESTIONS OF A GENERAL NATURE**

**1. How can we consider what to do about 178 when the Westside Highway location has not been defined?**

While Caltrans has already studied many alternative locations for a possible Westside Highway, none has been chosen. The City of Bakersfield and Kern COG have the opportunity to support any of the alternatives, or even a previously unstudied alignment, and Caltrans will consider their recommendation. Given the competition for highway funds in California, Caltrans would never promote an improvement that didn't have local support. Thus, the chosen alignment for Route 178 would probably influence the location of the Westside Highway, rather than vice versa.

**2. What has been defined as the Route 178 Corridor?**

For the study of short-range improvement alternatives, the corridor has been specifically defined as encompassing 23rd and 24th Streets between Highway 99 and M Street. For the long-range scenario, the study is generally concerned with east-west travel problems as they are manifested in congestion on Route 178. In devising long-range solutions to congestion, we are considering alternative improvements in the area roughly bounded by the Golden State/99 interchange to the north, California Avenue to the south, Highway 99 to the west, and Union Avenue to the east.

**3. Why conduct additional studies when the residents have already made it clear that they favor Route 178 being relocated around the Westchester neighborhood?**

The study has a broader scope beyond considering simply whether a freeway should be built through or around the Westchester neighborhood. First, the study must address the question of whether a new freeway is even needed or whether the existing street system can be better utilized. Second, if a new freeway is needed, the study must determine where best to put it. If an alignment around the Westchester neighborhood is preferred, we must still determine where else a freeway could go. Before funds can be committed to expenditures for construction projects, the Federal Highway Administration and Caltrans require that all viable alternatives be addressed. The intent of this process is to provide local, state and federal decision makers information in order that informed decisions can be made. In addition, both state and federal environmental guidelines require that all alternatives be addressed. The consultant and staff are responsible for providing elected officials with all available information, both positive and negative. All alternatives must be evaluated from both a technical and political perspective.



**4. Has the State of California allocated any money to implement any project in the corridor?**

No, the State of California does not allocate funds for construction of any project until the planning process is complete, and the recommended project has been added to the State Transportation Improvement Plan (STIP).

**5. What did the City Council approve one year ago (in reference to this corridor?)**

The City Council adopted the Redevelopment Element of the General Plan, a plan that identified SR178 as a corridor requiring further specific study. This project represents that specific further study.

**6. What is the time frame for this study? This**

study will be completed about March 1986.

**7. Please describe the process that will take place once the study is completed. Who will choose an alternative? Who will approve of the alternative choice? How will money be allocated? How long will the process take?**

After the full range of alternatives have been described in terms of costs and benefits, a preferred alternative will be chosen by Kern COG, Caltrans, and City of Bakersfield staff. This alternative will need to be approved by the Bakersfield City Council and the Kern COG Board of Directors. Following local approval the project must be approved by the California Transportation Commission (CTC) and added to the list of projects in the State Transportation Improvement Plan (STIP). As projects move up the list, they are funded, and the process of environmental review and project design begins. Following approval of the design and environmental document, construction can begin. The entire process, from the choosing of a preferred alternative to project completion, often takes about 10 years. Some counties in California have decided to speed up the process by voting for an additional tax to fund transportation system improvements. The availability of local funding would reduce the need to wait for State funding as the project moves up the list in the STIP.

**8. Has the preservation of the Westchester neighborhood been adopted as a goal for this study?**

Yes, preservation of the Westchester neighborhood has been adopted as a goal of the study.

**9. How is this study going to be coordinated with the City of Bakersfield General Plan study?**

The City of Bakersfield General Plan study has not yet begun so the Route 178 corridor study is well ahead in time. In fact, the corridor study will be largely

completed by the time the General Plan study begins in earnest. The conclusions of the corridor study, therefore, will be taken as input to the General Plan process. The consultant conducting the corridor study -- Barton-Aschman Associates, Inc. -- will also be preparing the circulation element of the General Plan.

**10. Route 178 is primarily for tourists. Why are tourists receiving more consideration than Bakersfield residents?**

Our studies thus far indicate that Route 178 is not used primarily by tourists. We estimate that 10% of the traffic on Route 178 originates outside the Bakersfield metro area. Any improvement recommended by this study, therefore, will be designed to best serve the needs of Bakersfield residents.

**11. How do you plan to reach all the residents that would be affected by a Route 178 freeway so they may voice an opinion?**

It is impossible to reach all Bakersfield residents that would be affected by a Route 178 freeway. Not only people living in Westchester, but any person using Route 178 would be affected by a freeway. We intend to conduct numerous public workshops to gain input into the evaluation of alternatives. In addition, the City of Bakersfield will hold public hearings prior to endorsing any of the alternatives. These hearings will be well-publicized. While not all persons affected by a possible freeway will be reached, we are confident that those persons with an interest in this issue will have ample opportunity to be heard.

**12. What affect has this study, i.e., the talk of a possible freeway, had on property values in the corridor?**

We do not know what effect this study has had on property values. Any effect from the study itself, however, will be shortlived since the study will be completed in about 6 months. Long term effects on property values resulting from the conclusions of the study can not be predicted at this point. Some of the alternatives being studied would enhance the residential character of 24th Street, while others would detract. Residents should note that if nothing is done, increasing traffic volumes will lead to a further erosion in residential character.

**QUESTIONS REGARDING THE MEMORANDUM SUMMARIZING EXISTING  
AND PROJECTED TRAFFIC CONDITIONS**

- 1. The first memorandum states that traffic will increase 70% on Route 178 over the next 20 years. The second memorandum has a table showing increases more on the order of 40%. Which is correct?**

The projected increase in traffic on 24th Street depends on which segment of the street is analyzed and on whether the Westside Highway is assumed completed or not. Traffic volumes on the segment between 99 and Oak are projected to grow more than volumes on the segments further east. Also, the addition of the Westside Highway would cause volumes to grow much higher than otherwise. In this regard, the projections shown in the second memorandum are the more accurate. The 70% growth figure included in the first memorandum was an average over all segments both with and without the Westside Highway. It was not intended for use in planning but merely to demonstrate that further traffic growth is expected in the corridor.

- 2. Why does the proposed Westside Highway seem to have a much greater impact on Route 178 traffic volumes than the existing Rosedale Highway?**

There are two reasons behind the high traffic volume projections under the "with Westside Highway" scenario. First, the time horizon for the projections is 2010 and volumes are expected to increase significantly with the projected growth of Bakersfield. Second, because it will be a freeway and because it will probably be located to serve people in the southwest, the Westside Highway will attract a lot of traffic that would otherwise use arterial streets, such as Truxtun Avenue and California Avenue. The existing Rosedale Highway is not a freeway and is not located near the southwest so it doesn't attract traffic from other arterials like the Westside Highway would.

- 3. When the traffic study shows that Route 178 volumes are at 80-90% of capacity at major intersections already, how can minor improvements, such as the short-range alternatives, be considered?**

Major freeway projects take a long time to plan and construct. The short-range alternatives represent a way to accommodate increasing traffic volumes until a higher-capacity facility can be built.

## QUESTIONS REGARDING THE SHORT-RANGE ALTERNATIVES

1. What is meant by short-range? Long-range?

The short-range alternatives may be thought of as solutions to the existing traffic problems in the corridor and those that will appear in the next five to ten years. The long-range alternatives are much more expensive and time-consuming to build, and they will have the capacity to accommodate traffic growth at least 25 years into the future.

2. Are there any short-range alternatives that would not affect 24th Street?

No, all of the short-range alternatives would affect 24th Street. This is true because the purpose of the study is to solve the existing and projected congestion problems on 23rd and 24th Streets.

3. How would the residential section of **24th Street** be **relandscaped** considering that many mature trees already exist **and what** would be the impact **on the houses?**

The "street beautification" alternative would not affect any of the existing trees or homes along 24th Street. It would consist of the addition of a landscaped median to 24th Street, like that added to Truxtun Avenue. On-street parking would be eliminated and the existing traffic lanes realigned to allow room for the median. No additional pavement width would be required. In addition, more trees could be planted adjacent to the homes to provide a better screen from the street. The overall effect would be the creation of a more attractive street both for motorists and residents.

4. How would more **trees on** 24th Street remedy traffic congestion and what would be their **effect on safety?**

Trees and landscaping are not intended to reduce traffic congestion but to mitigate the impacts of traffic. In terms of trees increasing accident potential, this is not the case. A car could only hit a tree if it went off the road, which in itself would constitute an accident. Thus, trees would not increase the frequency of accidents. They may change the characteristics of accidents, however. A car that hits a tree may have otherwise hit nothing, but it may be equally likely to have hit a house or another car.

5. **What is meant by "providing a pedestrian and turning vehicle refuge" on 24th Street?**

The "street beautification" alternative would involve the construction of a median along 24th Street. This median would be a place where pedestrians could safely stand, after crossing one-half of 24th Street, while waiting to cross the other half. The median would make crossing the street easier because pedestrians would have to wait for a gap in traffic in only one direction at a time, rather than gaps in both directions as now. Similarly, cut-outs in the median could be installed to facilitate left-turns from the side streets. Left-turn acceleration and storage lanes would mean that left-turning vehicles would only have to cross one-half of 24th Street before entering the storage lane to wait for a gap in the other direction. Vehicles crossing 24th Street could also use the median for refuge since it would be 22 feet wide. Both left turns and crossing would be easier because vehicles would have to wait for gaps in only one direction at a time.

6. **Considering the list of short-range improvements, what is meant by "maximum capacity?"**

The short-range alternatives called "maximum capacity" consist of restriping the existing pavement to provide the maximum number of travel lanes possible. The right-of-way would not be widened, but the capacity of the street would be increased because of the greater number of lanes. The restriping could be accomplished by eliminating parking and narrowing the sidewalks.

7. **Why not consider a short-range alternative that would reduce traffic volumes on 24th Street by improving alternative routes such as Golden State, Truxtun, and California? For example, why not improve the Golden State/99 interchange and change the route signs to encourage use of Golden State?**

Reducing traffic volumes on 24th Street is not an objective of this study. Accommodating growth in traffic demand is a primary objective, and in that regard, alternatives for improving parallel routes are being considered. These improvements relate specifically to increasing the capacities of California and Truxtun Avenues at Oak Street and SR99 and improving the Golden State/SR99 interchange. Regarding the use of Golden State as a bypass for 24th Street traffic, this route is not convenient for east-west and east-southwest travel, which accounts for about 80% of the travel on Route 178. In length, Golden State represents 1.7 miles of additional travel. In terms of travel time, the Golden State alignment requires about one additional minute assuming free flow (uncongested) travel conditions at the Golden State/99 interchange. From a traveler's perception, Golden State Avenue is simply out of the way for east-west and east-southwest travel. We do not believe that changing route signs would make a significant difference in traffic volumes - considering that over 90% of the traffic using 24th Street originates in the Bakersfield metropolitan area. Also, reducing the capacity of the 23rd - 24th Street corridor to discourage its use is not an alternative that will be considered by this study.

**8. Will the short-range improvements on 24th Street eventually lead to a freeway?**

The short-range and long-range improvements are not tied together as a package except in the sense that the short-range alternatives should be designed to be compatible with the long-range alternatives.

**9. Would the parkway require acquisition of some homes and property for widened right-of-way?**

Yes, the parkway alternative would require on additional 127.5 feet of right-of-way. Assembling the right-of-way would require the acquisition of some homes, but the exact number is unknown at this time.

**10. One of the drawings in the handout, section A-A, shows 14 feet of right-of-way beyond the curb on either side of the road. Does this mean that part of my yard is within the highway right of way?**

Section A-A in the handout refers to the downtown section of the corridor, i.e., where 23rd and 24th Streets are a one-way couplet. The 14 feet of right of way on either side of the pavement represents the sidewalk area. Along the residential section of 24th Street, there are four feet of right-of-way on either side of the pavement. Because there are no sidewalks in this section, you could say the State owns four feet of your yard (if you live on 24th Street).

**11. Why haven't any of the alternatives addressed what I consider to be the major problem in the corridor, the 24th Street and *Pierce Road* intersection?**

The alternatives do address the congestion problem at the 24th Street and Pierce Road intersection, but the improvement was not shown in the handout. Along with the grade separation of the 24th Street and Oak Street intersection, Oak Street would be extended across the river to connect with Sillect Avenue. In conjunction with this, Pierce Road would be closed at 24th Street or turned into a right turn in and out only configuration. This improvement would eliminate the congestion on 24th Street at Pierce Road.

**12. Which of the short range alternatives would require the acquisition of homes along 24th Street?**

Of the short-range alternatives, only the parkway would require the acquisition of homes along 24th Street.

**13. How wide would 24th Street be under the street beautification alternative, property line to property line?**

## QUESTIONS REGARDING LONG-RANGE ALTERNATIVES

1. **If Caltrans goes ahead with planned improvements at the 99/Rosedale Highway/178 interchange, does that mean that only the alternatives involving 24th Street will be considered?**

No, investment in the 99/Rosedale/178 interchange does not mean that Caltrans is committed to any other improvements on Route 178. The interchange improvements are designed to relieve a point of congestion rather than to increase capacity on Route 178.

2. **Since one of the problems in the corridor is getting on, off, and across 24th Street, how will a freeway help?**

If a freeway is built along the central Route 178 alignment, it would be built alongside 24th Street. 24th Street, and 23rd Street in the downtown area, would remain for local circulation. To cross the freeway, several overcrossings would be built. Overcrossings would be at every second block in the downtown area and at every third or fourth block in the residential area.

3. **Why has transit not been considered to relieve congestion in Bakersfield?**

Only very large and densely-populated cities, such as New York, Chicago and San Francisco, can expect transit to play a significant role in moving people. Medium-sized cities, like Bakersfield, have a great deal of trouble attracting even 3% of total travel demand to use transit. While transit can play a role in serving future demand, the automobile will remain the mode of choice for most people. Road system improvements need to be constructed to serve this demand or severe congestion will occur.

4. **How would the tunnel alternative affect the surface property?**

The tunnel alternative would not affect surface property except during the construction phase. Depending on the width of the tunnel, it may extend under the yards of homes along 24th Street, but the surface would remain as existing. In fact, 24th Street would probably be narrowed since it would carry only local traffic. Properties along 24th Street, therefore, would have their yards **extended**.

5. **Would the tunnel be earthquake safe? Yes, the tunnel would be designed and constructed to withstand earthquakes.**

Under the "street beautification" alternative, 24th Street would remain the same width as it is now, 82.5 feet from property line to property line.

**6. Have you considered an alternative that would bring the Golden State Highway back down closer to the existing 99/178 interchange, perhaps by following the Kern River?**

**Yes**, we have considered an alternative that would route a freeway from Golden State along the Kern River to the existing 99/178 interchange. We found, however, that this alignment would either take out numerous homes in the upper Elm Street area or would require a curve with a radius of less than 1,000 feet, which is in violation of federal and Caltrans freeway design standards.

**7. In the face of opposition from local residents, why is a freeway along 24th Street still being considered?**

The scope of work for this study required the analysis of many alternatives, including a freeway along 24th Street. Unfortunately for the Westchester neighborhood, previous transportation investments have left a system that focuses traffic along 24th Street. This existing infrastructure would be very costly to abandon. The system planned and constructed in the past would be completed with a freeway link along 24th Street. Of course, this does not mean that an alternative alignment is precluded; Bakersfield planners may decide that past freeway location decisions were a mistake and embark on a different course for the future. Decision makers, such as the Bakersfield City Council and the Kern COG Board of Directors, must decide which course of action is best for all citizens of Bakersfield, not just which is best for Westchester residents. Many factors will enter into this choice, one of which is cost, which hasn't yet been determined for any of the alternatives. In order to make the best choice, the decision makers need information about the full range of alternatives, including a freeway along 24th Street. Nevertheless, the project study team has adopted the preservation of Westchester as a goal and are working to devise alternatives that will accomplish this goal while at the same time serving future demand in a cost effective manner.

**8. If the southern freeway alignment alternative is chosen, how can East Bakersfield residents ensure that ramps will be built to serve them?**

The level of detail in this study to date has not defined ramp locations for all alternatives. If the southern freeway alignment is the preferred alternative, there will be extensive further planning studies in which ramp locations are determined. East Bakersfield residents will have ample opportunity to voice their opinions, provided they follow the planning process and are aware of meeting dates and times. They should stay in touch with City of Bakersfield or Kern COG staff to help keep up with the planning process.

**9. Wouldn't a freeway attract more and faster traffic than existing streets and, therefore, cause more accidents?**

Freeways are safer than arterial streets because they don't have the turning vehicle conflicts that occur at intersections. Attracting vehicles from arterial streets to freeways, therefore, will actually reduce traffic accidents.

# ROUTE 178 CORRIDOR STUDY

## SUMMARY OF THIRD PUBLIC MEETING

Date: May 20, 1986 7:00 pm  
Place: Bakersfield High School Cafeteria  
Attendance: Approximately 120 people  
Purpose: Evaluation and Comment on Improvement Alternatives

Mark Gibb (Kern COG, project sponsor) opened the meeting by explaining the study and inviting all attendees to make comments and ask questions about the improvement alternatives. He pointed out that the meeting was not a public hearing but an informal discussion session.

Bob Scales (Barton-Aschman Associates, Inc., project consultant) then gave a slide presentation outlining the improvement alternatives and the results of the technical evaluation. All persons on the study mailing list had been mailed a brief report discussing these topics so the slide show was for the benefit of those who had not yet read the mailed material and new participants in the community involvement process.

### **Public Comments**

Following the slide show, attendees were invited to make comments and ask questions. The following statements summarize the comments that were made.

- Easy access should be provided to downtown Bakersfield.
- Westchester neighborhood should be preserved.
- Traffic signals should not be added on 24th Street through Westchester. Traffic signals cause congestion.
- Parking should be removed from California Avenue, Truxtun Avenue, and 23rd and 24th Streets.
- One alternative should have been an at-grade freeway along the Golden State alignment.
- One alternative should have been to extend Highway 58 west through the Stockdale area.
- The southern alignment is very impressive. It will benefit downtown and East Bakersfield.
- The tunnel alternative will be noisy because of trucks climbing the grades at either end.
- The tunnel alternative may not be feasible because of the high water table.
- Freeways always hurt somebody's house or business.

We've been waiting 30 years for a freeway and traffic is getting worse. The central alignment is better than nothing.

- The southern route will not work. It doesn't matter what we say; Caltrans will put the freeway where it wants.
- Both of the central alignment alternatives will ruin the Westchester neighborhood.
- The southern alignment will reinforce the northeast-southwest spread of land development in Bakersfield, which is undesirable.

The northern alignment will encourage development in the northwest and Oildale, which is desirable.

We need something for the next few years, not a long-range solution.

- The parkway is good — it offers beauty and capacity.
- The northern or southern alignments are good because they would not divide any neighborhoods.

We should put up signs directing Route 178 traffic onto Golden State rather than 24th Street.

The southern alignment is good — it directly serves northeast-southwest travel.

The tunnel is not desirable because it would involve removing some homes.

Let's get behind the street beautification alternative for the short range.

Signals should be installed on 24th Street to discourage through traffic.

I am concerned about traffic disruption during construction of any of the alternatives.

A northern bypass should be considered as a short-range alternative.

(East Bakersfield businessman) We would love to have the freeway in our area.

(lives near the Santa Fe railroad) The railroad is already noisy and visually unattractive, a freeway would not really make matters worse.

We should build freeways in both the northern and southern alignments.

(Lake Isabella resident) We want a new Route 178 alignment in the Kern River Canyon.

If parking is removed from 23rd and 24th Streets, the City of Bakersfield should provide off street parking to replace the lost spaces.

- A. The tunnel would be eight-tenths of a mile long.

### **Informal Poll**

Bob Scales asked for a show of hands in support of the various alternatives (which would be your first choice?). The results were as follows:

	<u>number in favor</u>
Northern alignment	10
Central — depressed freeway	1
Central — tunnel	0
Southern alignment	80
Both southern and northern alignments	40
Short-range alternatives:	
Do nothing (could include some signals or pedestrian walkways)	15
Beautification	30
Maximum Capacity	0
Parkway	0

Bob Scales also asked for a show of hands about where attendees live. Most of the people in attendance signified that they were Westchester residents.

### **Questions**

The following questions were raised and answered during the public meeting. Q.

What does Caltrans think about any of the alternatives?

A. First, Caltrans does not have an opinion about any of the alternatives. The community must demonstrate solid support of an alignment before Caltrans will study it. Second, implementation of the preferred alternative does not depend solely on Caltrans. Local support and funding can influence the decision about what and when to build.

Q. What would be the traffic volume on 24th Street with each of the long-range alternatives?

A. With the northern alignment traffic on 24th Street would remain about the same as existing (40,000 vehicles per day). With the southern alignment traffic would drop to 25,000 vehicles per day and would be even less with either central alignment.

Q. How long would the tunnel be?

- Q. How would the neighborhood be disturbed with the tunnel?
- A. To permit construction, homes would have to be removed along 24th Street. These could be replaced with new homes once the tunnel was completed.
- Q. How much right-of-way would be required for the depressed freeway?
- A. In addition to the existing 24th Street right-of-way, the depressed freeway would require about one-half block along 24th Street through Westchester.
- Q. If a depressed freeway or tunnel were built through Westchester, what would be built through downtown?
- A. Either of the central alignment alternatives through Westchester, depressed or tunnel, would involve an open, depressed freeway between 23rd and 24th Streets in the downtown.
- Q. Would the short-range beautification alternative improve traffic flow?
- A. No, the beautification alternative would not affect capacity or traffic volume.
- Q. Who are the developers behind these freeway alternatives?
- A. To our knowledge, no developers are "behind" any of the alternatives. Some developers may be coming to these public meetings as private citizens and expressing opinions like all of you.
- Q. What is the percentage of through traffic using the Route 178 corridor?
- A. The study has not accurately measured the amount of through traffic. Our educated guess is that through traffic comprises at most 30% of total corridor traffic.
- Q. How much would the southern alignment alternative cost?
- A. Accurate cost estimates have not been prepared. An order of magnitude cost figure would be \$100 million.
- Q. Have people living or operating a business along the northern or southern alignments been informed of the study through mailings?
- A. Most people along those alignments have not been contacted individually, but their elected representatives have been kept informed, and business organizations have been contacted. The recommendations of the Route 178 Corridor Study will be incorporated into the Bakersfield General Plan Study, and all interested metro area residents will have another chance to comment on the plan at that stage.
- A. The tunnel would be eight-tenths of a mile long.

Q. Has the study considered improvements along Oak Street at Truxtun and California Avenues, i.e., have improvements at other locations been considered to relieve traffic congestion on 24th Street?

A. Yes, the impact of improvements at other locations has been considered in assessing corridor capacity needs. The City of Bakersfield is planning to improve Oak Street and to extend Mohawk Street across the Kern River; both projects will ease congestion in the Route 178 corridor.

Q. What are the chances of getting the necessary easements from the Santa Fe Railroad in order to proceed with the southern alignment?

A. Santa Fe is in the land development business in addition to the transportation business. The southern alignment would make their south-of-downtown property very attractive to development, so we believe the railroad could be encouraged to cooperate with these plans. The southern alignment alternative could however be implemented without disruption to Santa Fe, if necessary.

Q. How would the southern alignment interchange with State Route 99?

A. We have developed three possible interchange configurations thus far (illustrations were shown). Some would involve moving the S.R. 99/California Avenue interchange.

Q. How many more meetings will there be?

A. There is a need to meet with other groups besides Westchester residents.

Q. Do you plan to meet with land owners along the southern alignment?

A. Yes.

Q. When will the final recommendations of this study be made?

A. In two to three months.

Q. What would happen to traffic during construction of the beautification alternative through downtown and Westchester?

A. Construction of the beautification alternative would cause little disruption. Parking could be removed to provide room for construction equipment while maintaining the same number of travel lanes as existing.

Q. Would the beautification alternative involve widening pavement downtown?

A. No.

Q. Will we be kept informed as to the study's progress through the mailing list?

A. Yes.

# *INITIAL ENVIRONMENTAL ASSESSMENT*

## SHORT-RANGE PLAN

The following is a discussion of the environmental features that will be affected by the short-range plan. Environmental features not discussed — wildlife habitat, for example, will not be affected. An environmental impact summary checklist follows this discussion.

### Air Quality

The Short-Range Plan would not affect regional air quality because it would not result in additional travel, but it might have a localized air quality impact.

The short-range plan would result in greater traffic capacity on Route 178 through downtown. To the extent that this capacity was utilized, more vehicle traffic, and more emissions, would result. Due to population and employment growth in Bakersfield, however, this traffic growth would occur whether or not the short-range improvements were built. The improvements would result in a better level of service along Route 178, fewer stops and starts, less idling time, and reduced emissions compared to keeping the existing street configuration. The vehicle emission impacts of increased traffic volume and increased average speed would be offsetting.

The improvements to Route 178 through downtown may attract traffic that would otherwise use parallel routes. However, improvements to Truxtun Avenue and California Avenue are scheduled in conjunction with the short-range plan and would reduce the incentive for diversion.

### Noise

Much that is stated about air quality impact can also be stated about noise impacts. Traffic volume, and noise, along Route 178 would increase with or without the project. Increased noise would occur to the extent that the Short-Range Plan facilitates or hastens traffic volume growth. This induced growth is not expected to be significant because the capacity-adding improvements would occur only along a short section of the route (the section through downtown).

### Traffic and Parking

The project would have a positive impact on traffic in that it would improve levels of service, reduce delays, and reduce conflicting turning movements through Westchester. The project would also remove curb parking from Route 178, which would improve traffic flow. Elimination of the parking spaces would increase demand at the remaining facilities. These facilities have excess capacity so no general parking shortage in the area is expected. However, some businesses and homes may be affected by the loss of curb spaces directly in front of the property.

### Energy

The same comments made about air quality and noise impacts are applicable to energy impacts. Energy consumption would increase with an increase in region-wide vehicle miles travelled, but the Short-Range Plan is not a significant enough improvement to induce any travel that would not otherwise occur. By reducing idling time and stops

and starts, the Short-Range Plan may actually reduce energy consumption in the corridor.

#### Construction

The major construction work necessary to implement the Short-Range Plan is the addition of a landscaped median to 24th Street through Westchester. As road projects go, the construction of a median is a relatively minor operation. Nevertheless, impacts would include noise, dust, and some minor disruption of traffic flow. Disruption causing traffic backups or detours is not expected. Construction along the downtown portion of Route 178 is minor, consisting mostly of pavement restriping. This would have short-lived noise and traffic disruption impacts.

#### Aesthetics

The Short-Range Plan would improve aesthetics in the corridor. A landscaped median would be built along 24th Street through Westchester, and landscaping would be added to 23rd and 24th Streets through downtown.

#### Consistency with Local Plans

Both the City of Bakersfield and Kern County are in the process of updated their general plans and circulation plans. These will undoubtedly adopt the recommendations of the Route 178 Corridor Study, which has preceded them. The recommendations are generally in conformance with the planning and design guidelines of each jurisdiction.

The adopted Downtown Redevelopment Plan of the City of Bakersfield calls for construction of a "parkway" along Route 178. The design and location of the parkway are not specified. The recommended Short-Range Plan roadways would not be described as constituting a "parkway," but they are landscaped and provide relatively high capacity, like a parkway.

## LONG-RANGE PLAN

The following is a brief discussion of the impacts of the southern alignment freeway, which constitutes the recommended long-range plan for improvement of the Route 178 corridor. A checklist summary of impacts follows this discussion.

### Land Acquisition and Displacement

Substantial land would need to be acquired for the freeway right of way. The freeway right-of-way would be 208 feet wide through East Bakersfield, 264 feet wide north of 14th Street to B Street, and 132 feet wide west of B Street. The entire right-of-way is now occupied by homes and businesses, although many are old and in disrepair. It is estimated that a total of 170 homes and businesses would need to be removed.

### Land Use

Freeways typically attract development because of the increase in accessibility and visibility they provide. It is expected that the freeway would result in redevelopment (or demand for development) of the East Bakersfield area. In addition, more development would be attracted to the south part of downtown. This may be considered as a positive or negative impact depending on one's point of view. Some persons prefer redevelopment and modernization, while others prefer preservation of existing ways. The freeway would result in increased property values, which would increase City tax revenues. Some existing families and businesses, however, might eventually be priced out of the area. The business district in East Bakersfield would evolve from the primarily neighborhood-serving orientation it now has to more of a regional shopping area.

Freeways represent a major physical and psychological barrier to interchange between areas on either side. Thus, cohesive neighborhoods in East Bakersfield may be divided, depending on the location chosen for the freeway. The same phenomenon would not occur south of downtown because the freeway would parallel the Santa Fe railroad tracks, which have already divided this area.

### Physical Features

The freeway would be elevated through East Bakersfield, creating a change of relief in the area. There may be an increase in erosion due to the sloped embankments. At other locations the freeway would be at-grade, so it would not alter the existing physical features.

### Air Quality

The freeway might or might not cause an increase in regional emissions. Because of the greatly improved access it would provide, the freeway might induce some travel that would not otherwise occur. On the other hand, the freeway would attract traffic off the existing arterials, which would reduce emissions. Because of fewer stops and starts, vehicles on freeways emit fewer pollutants per mile than vehicles on arterials.

While the freeway's impact on regional emissions is unclear, it would definitely increase localized pollutant levels. Areas immediately adjacent to the freeway would be affected because of the substantial traffic volume the freeway would carry. The

recommended right-of-way passes through mostly industrial and commercial areas, although some houses are located along the right-of-way in East Bakersfield.

#### Noise

The freeway would have a localized noise impact. As stated above, most of the right-of-way passes through industrial and commercial areas so the noise impact would not be a problem. Some houses are located along the right-of-way in East Bakersfield, however. In this area the noise impact would be lessened by the freeway elevation. South of downtown the railroad has created a noisy environment so the addition of freeway noise wouldn't be as noticeable. The freeway, however, passes near Mercy Hospital and would increase noise levels there. A sound wall is planned.

#### Traffic and Parking

The freeway would change traffic patterns in the downtown and East Bakersfield. Volumes on the streets in East Bakersfield would probably increase due to traffic attracted to the area by better accessibility. Traffic patterns would change because some east-west streets would be cut off by the freeway. Selected streets would cross the freeway with underpasses; these would experience an increase in traffic, while parallel streets cut off by the freeway would experience a decrease in volume. At this point, the location of cross-streets versus cut-off streets has not been determined.

In the downtown area, the freeway would attract traffic away from parallel arterials, including 23rd and 24th Streets, Truxtun Avenue, and California Avenue. These would experience a decline in volume. North-south traffic patterns would change because some streets would be cut off and others would pass under the freeway. The streets that would pass under have not yet been identified. In general, access to the downtown from the south would increase because more streets would be grade-separated from the Santa Fe railroad tracks in conjunction with freeway construction. Presently, only Chester Avenue is grade-separated.

The freeway would affect parking only to the extent that parking lots were removed for the right-of-way. The exact effect can not be determined at this time because the freeway alignment has not been set. No significant existing parking facilities lie within the possible right-of-way being considered.

#### Energy Consumption

The freeway may increase vehicle energy consumption to the extent that it induces travel that would otherwise not be made. However, the freeway is proposed to accommodate existing traffic and projected demand in the corridor. To the extent that it attracts trips that would otherwise use arterials, the freeway would reduce energy consumption due to fewer vehicle stops and starts and idling time.

#### Historic Properties

There are historic structures that lie within the proposed freeway right-of-way. In East Bakersfield the alignment has not been determined so the exact buildings affected can not be named. However, because of the large number of historic buildings in the area, the alignment would be certain to affect some. In the downtown area the freeway would displace some historic homes and one commercial building on

K Street north of 14th Street. Further west, the freeway would displace the Manual Arts building, an historic part of Bakersfield High School located on G Street north of 14th Street.

#### Construction

Construction of the freeway would cause substantial temporary impacts in terms of noise, dust, vibration, and traffic circulation disruption. A construction impact plan would need to be prepared to identify strategies for minimizing these adverse effects.

#### Aesthetics

The freeway would have an adverse aesthetic impact in the East Bakersfield area. By being elevated, the freeway would be highly visible, might block some residents' views, and might cast shadows over some homes and businesses. One benefit of elevation, however, would be a reduction in nighttime glare in the area.

In the downtown area, the aesthetic impact of the freeway would be less adverse. It would be at-grade, and there are fewer homes to be affected. In addition, the existence of railroad tracks and a railroad switching yard in the area creates a negative visual environment that would not be significantly worsened with a freeway. Buildings in the area generally turn their backs to the railroad tracks so they would also be facing away from the freeway.

#### Consistency with Local Plans

The Kern County Circulation Plan shows the completion of Route 178 as a freeway parallel to 24th Street. The City of Bakersfield plan shows Route 178 as a parkway through downtown and Westchester. Thus, the southern alignment freeway is not shown on either circulation plan. Both are being updated now, however, and can reflect the southern alignment freeway, if adopted. The City of Bakersfield land use plan, which does not reflect a freeway in the southern alignment, is also being updated and can be made compatible with that freeway alignment.

## ENVIRONMENTAL SIGNIFICANCE CHECKLIST

	IF YES, IS IT SIGNIFICANT?	
	YES OR NO	YES OR NO
<b>PHYSICAL.</b> Will the proposal either directly or indirectly:		
1. Change the topography or ground surface relief features?	No	
2. Destroy, cover, or modify any unique geologic or physical features?	No	
3. Result in unstable earth surfaces or exposure of people or property to geologic or seismic hazards?	No	
4. Result in or be affected by soil erosion or siltation (whether by water or wind)?	No	
5. Result in the increased use of fuel or energy in large amounts or in a wasteful manner?	No	
6. Result in an increase in the rate of use of any natural resource?	No	
7. Result in the substantial depletion of any nonrenewable natural resource?	No	
8. Violate any published Federal, State, or local standards pertaining to solid waste or litter control?	No	
9. Modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	No	
10. Encroach upon a floodplain or result in or be affected by floodwaters or tidal waves?	No	
11. Adversely affect the quantity or quality of surface water, groundwater, or public water supply?	No	
12. Result in the use of water in large amounts or in a wasteful manner?	No	
13. Affect wetlands or riparian vegetation?	No	
14. Violate or be inconsistent with Federal, State, or local water quality standards?	No	
15. Result in changes in air movement, moisture, or temperature, or any climatic conditions?	No	
16. Result in an increase in air pollutant emissions, adverse effects on or deterioration of ambient air quality?	Maybe	
17. Result in the creation of objectionable odors?	No	
18. Violate or be inconsistent with Federal, State, or local air standards or control plans?	No	
19. Result in an increase in noise levels or vibration for adjoining areas?	Maybe	
20. Violate or be inconsistent with Federal design noise levels or State or local noise standards?	No	
21. Produce new light, glare, or shadows?	No	
<b>BIOLOGICAL.</b> Will the proposal result in (either directly or indirectly):		
22. Change in the diversity of species or number of any species of plants (including trees, shrubs, grass, microflora, and aquatic plants)?	No	
23. Reduction of the numbers of or encroachment upon the critical habitat of any unique, rare or endangered species of plants?	No	
24. Introduction of new species of plants into an area, or result in a barrier to the normal replenishment of existing species?	No	
25. Reduction in acreage of any agricultural crop or commercial timber stand?	No	
26. Removal or deterioration of existing fish or wildlife habitat?	No	
27. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?	No	
28. Reduction of the numbers of or encroachment upon the critical habitat of any unique, rare or endangered species of animals?	No	
29. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	No	

\*See following section: Discussion of Environmental Evaluation and Mitigation Measures.

ENVIRONMENTAL SIGNIFICANCE CHECKLIST (cont'd.)

	YES OR NO	IF YES, IS IT SIGNIFICANT? YES OR NO
<b>SOCIAL AND ECONOMIC. Will the proposal directly or indirectly?</b>		
30. Cause disruption of orderly planned development?	No	
31. Be inconsistent with any elements of adopted community plans, policies or goals, the Governor's Urban Strategy, or the President's National Urban Policy (if NEPA project)?	No	
32. Affect the location, distribution, density, or growth rate of the human population of an area?	No	
33. Affect life-styles, or neighborhood character or stability?	No	
34. Affect minority or other specific interest groups?	No	
35. Divide or disrupt an established community?	No	
36. Affect existing housing, require the acquisition of residential improvements or the displacement of people or create a demand for additional housing?	No	
37. Affect employment, industry or commerce, or require the displacement of business or farms?	No	
38. Affect property values or the local tax base?	No	
39. Affect any community facilities (including medical, educational, scientific, recreational, or religious institutions, ceremonial sites or sacred shrines)?	No	
40. Affect public utilities, or police, fire, emergency or other public services?	No	
41. Have substantial impact on existing transportation systems or alter present patterns of circulation or movement of people and/or goods?	No	
42. Affect vehicular movements or generate additional traffic?	Maybe	
43. Affect or be affected by existing parking facilities or result in demand for new parking?	Yes	
44. Involve a substantial risk of an explosion or the release of hazardous substances in the event of an accident or upset conditions?	No	
45. Result in alterations to waterborne, rail or air traffic?	No	
46. Affect public health, expose people to potential health hazards, or create a real or potential health hazard?	No	
47. Affect a significant archaeological or historic site, structure, object, or building?	No	
48. Affect natural landmarks or man-made resources?	No	
49. Affect any scenic resources or result in the obstruction of any scenic vista or view open to the public, or creation of an aesthetically offensive site open to public view?	No	
50. Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours and temporary access, etc.)?	Maybe	

MANDATORY FINDINGS OF SIGNIFICANCE.

YES OR NO

51. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	No
52. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)	No
53. Does the project have environmental effects which are individually limited, but cumulatively considerable? Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. It includes the effects of other projects which interact with this project and, together, are considerable.	No
54. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	No

\*See following section: Discussion of Environmental Evaluation and Mitigation Measures.

## ENVIRONMENTAL SIGNIFICANCE CHECKLIST

	YES OR NO	IF YES, IS IT
		SIGNIFICANT? YES OR NO
<b>PHYSICAL.</b> Will the proposal either directly or indirectly:		
1. Change the topography or ground surface relief features?	Yes	
2. Destroy, cover, or modify any unique geologic or physical features?	No	
3. Result in unstable earth surfaces or exposure of people or property to geologic or seismic hazards?	No	
4. Result in or be affected by soil erosion or siltation (whether by water or wind)?	Maybe	
5. Result in the increased use of fuel or energy in large amounts or in a wasteful manner?	Maybe	
6. Result in an increase in the rate of use of any natural resource?	No	
7. Result in the substantial depletion of any nonrenewable natural resource?	No	
8. Violate any published Federal, State, or local standards pertaining to solid waste or litter control?	No	
9. Modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	No	
10. Encroach upon a floodplain or result in or be affected by floodwaters or tidal waves?	No	
11. Adversely affect the quantity or quality of surface water, groundwater, or public water supply?	No	
12. Result in the use of water in large amounts or in a wasteful manner?	No	
13. Affect wetlands or riparian vegetation?	No	
14. Violate or be inconsistent with Federal, State, or local water quality standards?	No	
15. Result in changes in air movement, moisture, or temperature, or any climatic conditions?	No	
16. Result in an increase in air pollutant emissions, adverse effects on or deterioration of ambient air quality?	Maybe	
17. Result in the creation of objectionable odors?	No	
18. Violate or be inconsistent with Federal, State, or local air standards or control plans?	No	
19. Result in an increase in noise levels or vibration for adjoining areas?	Yes	
20. Violate or be inconsistent with Federal design noise levels or State or local noise standards?	Maybe	
21. Produce new light, glare, or shadows?	Yes	
<b>BIOLOGICAL.</b> Will the proposal result in (either directly or indirectly):		
22. Change in the diversity of species or number of any species of plants (including trees, shrubs, grass, microflora, and aquatic plants)?	No	
23. Reduction of the numbers of or encroachment upon the critical habitat of any unique, rare or endangered species of plants?	No	
24. Introduction of new species of plants into an area, or result in a barrier to the normal replenishment of existing species?	No	
25. Reduction in acreage of any agricultural crop or commercial timber stand?	No	
26. Removal or deterioration of existing fish or wildlife habitat?	No	
27. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms, insects or microfauna)?	No	
28. Reduction of the numbers of or encroachment upon the critical habitat of any unique, rare or endangered species of animals?	No	
29. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	No	

\*See following section: Discussion of Environmental Evaluation and Mitigation Measures.

ENVIRONMENTAL SIGNIFICANCE CHECKLIST (cont'd.)

SOCIAL AND ECONOMIC. Will the proposal directly or indirectly?		YES OR NO	IF YES, IS IT SIGNIFICANT? YES OR NO
30.	Cause disruption of orderly planned development?	Maybe	
31.	Be inconsistent with any elements of adopted community plans, policies or goals, the Governor's Urban Strategy, or the President's National Urban Policy (if NEPA project)?	No	
32.	Affect the location, distribution, density, or growth rate of the human population of an area?	Yes	
33.	Affect life-styles, or neighborhood character or stability?	Yes	
34.	Affect minority or other specific interest groups?	No	
35.	Divide or disrupt an established community?	Yes	
36.	Affect existing housing, require the acquisition of residential improvements or the displacement of people or create a demand for additional housing?	Yes	
37.	Affect employment, industry or commerce, or require the displacement of business or farms?	Yes	
38.	Affect property values or the local tax base?	Yes	
39.	Affect any community facilities (including medical, educational, scientific, recreational, or religious institutions, ceremonial sites or sacred shrines)?	Yes	
40.	Affect public utilities, or police, fire, emergency or other public services?	No	
41.	Have substantial impact on existing transportation systems or alter present patterns of circulation or movement of people and/or goods?	Yes	
42.	Affect vehicular movements or generate additional traffic?	Yes	
43.	Affect or be affected by existing parking facilities or result in demand for new parking?	No	
44.	Involve a substantial risk of an explosion or the release of hazardous substances in the event of an accident or upset conditions?	No	
45.	Result in alterations to waterborne, rail or air traffic?	No	
46.	Affect public health, expose people to potential health hazards, or create a real or potential health hazard?	No	
47.	Affect a significant archaeological or historic site, structure, object, or building?	Yes	
48.	Affect natural landmarks or man-made resources?	No	
49.	Affect any scenic resources or result in the obstruction of any scenic vista or view open to the public, or creation of an aesthetically offensive site open to public view?	Yes	
50.	Result in substantial impacts associated with construction activities (e.g., noise, dust, temporary drainage, traffic detours and temporary access, etc.)?	Yes	
<b>MANDATORY FINDINGS OF SIGNIFICANCE.</b>			<b>YES OR NO</b>
51.	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		No
52.	Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time, while long-term impacts will endure well into the future.)		No
53.	Does the project have environmental effects which are individually limited, but cumulatively considerable? Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects. It includes the effects of other projects which interact with this project and, together, are considerable.		No
54.	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		Yes

\*See following section: Discussion of Environmental Evaluation and Mitigation Measures.