Moving Forward

Metropolitan Bakersfield Major Transportation Investment Strategy

FINAL STRATEGY REPORT

PREPARED BY:
BARTON-ASCHMAN ASSOCIATES, INC.

DECEMBER 29, 1997

EMTIS

PREPARED FOR: CITY OF BAKERSFIELD
COUNTY OF KERN
KERN COUNCIL OF GOVERNMENTS
GOLDEN EMPIRE TRANSIT DISTRICT
CALIFORNIA DEPARTMENT OF TRANSPORTATION
SAN JOAQUIN VALLEY UNIFIED AIR POLLUTION CONTROL DISTRICT

TABLE OF CONTENTS

ACKNOWLEDGMENTS

The Metropolitan Bakersfield Major Transportation Investment Strategy (MTIS) was jointly conducted by the following agencies:

- City of Bakersfield
- County of Kern
- Golden Empire Transit District
- Kern Council of Governments
- California Department of Transportation, District 06
- San Joaquin Valley Unified Air Pollution Control District

The MTIS was sponsored by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) as a Major Investment Study (MIS) for the Bakersfield Metropolitan Area.

The participating agencies and their consultant, Barton-Aschman Associates, Inc., would like to acknowledge the following individuals for their performance and input to the MTIS process and products.

Policy Advisory Committee	Interagency Management Committee	
Barbara Patrick County of Kern Board of Supervisors	Jack Hardisty, AICP, Director City of Bakersfield Development Services	Lloyd L. Norton, P.E. Kern County Roads Department
Bob Price, Mayor City of Bakersfield	Jacques LaRochelle, Manager Eng. Services Dept. of Public Works	Steve Ruggenberg, Gen. Mgr. Golden Empire Transit District
Howard Silver, Bd. of Directors Golden Empire Transit District	Ronald E. Brummett, Exec. Director Kern Council of Governments	Chester Moland, Asst. Gen. Mgr. Golden Empire Transit District
Bryan Batey, Bakersfield Assoc. of Realtors & Kern High School District	Roger Taylor Kern Council of Governments	Joe O'Bannon, SJVU Air Pollution Control District
Mel McLaughlin, Bd. of Directors Kern Council of Governments	Alan McCuen, Planning Div. Chief Caltrans District 6	William Powell, Fed. Transit Admin. Region IX - San Francisco, CA
Bob Ortiz, Planning Commission City of Bakersfield	Mike Brady, Sr. Env. Planner Caltrans District 6	Erik Steavens, Fed. Highway Admin. Sacramento

MTIS Consultant Team		
Larry Wesemann, Project Manager Barton-Aschman Associates, Inc.	Robert Scales, Project Director Barton-Aschman Associates, Inc.	Tom Walb/Bob Stromsted De Leuw Cather & Company
Pat Griffin Griffin Communications	Ron Ruettgers/John Schuler Ronald F. Ruettgers, Civil Engineer	Dale Mills/Dale Hawley Hawley Mills Secor Consultants
Arthur Bauer/Derek Wong Arthur Bauer & Associates, Inc.	Cheryl Stecher/Jane Zhang Applied Management & Planning Group	Terry Schroepfer QUAD Consultants

EXECUTIVE SUMMARY

While the population of Metropolitan Bakersfield has nearly doubled during the past quarter century, the area's transportation system is essentially the same as it was in 1970. Up to now the area has been able to absorb increased traffic, and has met the community's transportation needs by adding some local roads and a few more buses. But the community can no longer do so because of the continuing growth in the Metropolitan Area. It is estimated that by the year 2015 the population of the Metropolitan Area will increase by more than 60 percent. Congestion on arterial roadways and city streets will become intolerable unless significant new transportation facilities and services are provided throughout the community.

Building a Strategy

To determine the future transportation needs of Metropolitan Bakersfield, six local, regional, and state agencies jointly conducted an extensive travel analysis in the area. The analysis included an examination of traffic patterns, an evaluation of alternative transportation systems, and the identification of existing and potential sources of revenue. With the ongoing participation of community groups and the public at large, the agencies then developed a strategy for implementing those projects that would be the most effective in eliminating congestion and would benefit the entire Metropolitan Area.

The proposed strategy has four main objectives, each directed toward enabling residents of the area to get around easily and quickly. The objectives are to:

1. Provide the most appropriate transportation response to the area's anticipated growth patterns.
2. Ensure the mobility of transportation to and through central Bakersfield, which is expected to become increasingly congested as growth occurs.
3. Offer residents a variety of transportation choices and connections to major travel destinations throughout the community.
4. Reduce, or at least not increase, transportation-related emissions affecting the area's air quality.

Traffic congestion on 24th Street near Oak Street.

Funding Shortfalls

The big question is, Where will the money come from for the transportation projects envisioned by this strategy. Cost estimates range from $940 million to $1.5 billion or more. Current expectations are that $860 million will be available from anticipated funding sources by year 2015. But with the considerable demands on local, state, and federal financial resources, it will be very difficult to obtain the necessary additional money for transportation. Realistically, there probably never will be enough funds available for everything that should be done to eliminate traffic congestion in Metropolitan Bakersfield. In developing this strategy, the principal challenge was to make sure that the anticipated expenditures produce the best possible transprtation system for the area.

View of 24th Street intersection with Oak Street.

Components of the Strategy

The transportation strategy developed and endorsed by the participating agencies has eight basic components:

1. **Fundable Roadway Projects**. High-priority projects for which funding will probably be available.

2. **Unfunded High-Benefit Roadway Projects**. Important major roadway projects for which funding should be sought.

3. **Maintenance of Existing Roadways**. Intensification of preventive and rehabilitative maintenance programs to preserve existing roads and streets.

4. **Expansion of Golden Empire Transit (GET) Service**. Addition of bus routes and vehicles to meet the needs of the growing Metropolitan Bakersfield population.

5. **Funding Deficiency for Operating Transit in the Future.** GET estimates that it can buy more vehicles; but funds for operations are likely to be more limited.

6. **Connections Between Transportation Modes**. Creation of more transit hubs for convenient transferring from one bus route to another and between buses, shuttles, AMTRAK, and a possible future high-speed rail line.

7. **Pedestrian and Bicycle Facilities**. Development of more pedestrian and bicycle lanes and other facilities.

8. **Land-Use Planning**. Encouragement of mixed-use, in-fill, and other balanced land development to minimize the increase of vehicular traffic.

New transit hubs will make it more convenient to transfer between buses and from one mode of transportation to another.

Fundable Roadway Projects

Assuming that $860 million will be available from local, state, and federal sources between now and year 2015, this strategy identifies the following high-priority roadway projects for the Metropolitan Area.

Kern River Freeway. Construction of the western segment of State Route 58 (SR-58)—the Kern River Freeway—from State Route 99 (SR-99) to Renfro Road and ultimately Interstate 5. This will yield several important benefits. The SR-58 Freeway will remove trucks and other traffic from busy streets, increase the capacity for crosstown traffic, and improve crosstown travel times for emergency and other vehicles.

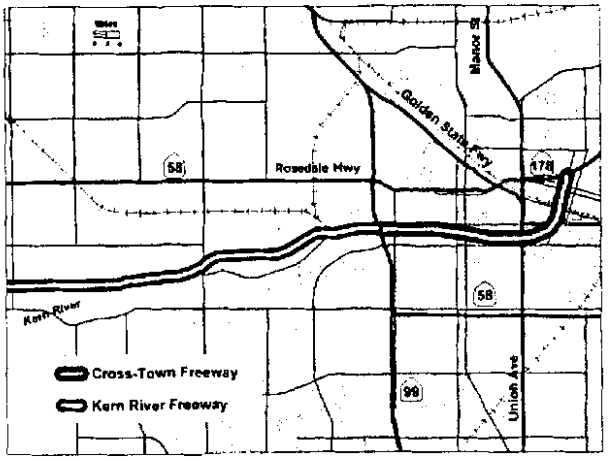
Improvements of Roadways. Traffic flow will be improved by widening, extending, or realigning more than 60 segments of existing major roadways and city streets throughout the Metropolitan Area.

Traffic Operations. Control of the flow of traffic will be enhanced by the installation of over 200 new traffic signals and a computerized "SMART Street" program for adjusting traffic signals in response to traffic incidents and surges.

River, Canal, and Railroad Crossings. Two new bridges will be built over the Kern River, and others over canals at many locations. Construction of underpasses or overpasses at the Oswell Street and Coffee Road railway crossings will eliminate traffic backups when trains are operating through the area.

Unfunded High-Benefit Roadway Projects

Based on forecasts, the funded roadway projects will only solve about one-half of the intolerable traffic congestion because there will be significant growth in the area's population during the next two decades. If more local financing can be found, additional important roadway construction, river crossings, and underpasses or overpasses at railway tracks will go much farther toward achieving a congestion-free transportation system for Bakersfield.



The strategy includes construction of the Kern River Freeway from Renfro Road to State Route (SR) 99 and, eventually, a connecting Crosstown Freeway from SR-99 to east of Union Avenue, in the Centennial Transportation Corridor.

Crosstown Freeway (Southern Alignment) in the Centennial Transportation Corridor. The Centennial Transportation Corridor is the major intermodal and multimodal corridor in the Kern Region. The Centennial Transportation Corridor includes both highway and rail facilities. The Corridor is the main rail and truck freight corridor for agricultural products from the San Joaquin Valley to the Midwestern and Eastern markets. Additionally, the Corridor connects to the daily San Joaquin AMTRAK passenger trains. The Centennial Transportation Corridor Project consists of an unconstructed multimodal transportation corridor through the central portion of the Metropolitan Bakersfield Area. The completion of the Centennial Transportation Corridor will close the "gaps" for both SR-58 and SR-178.

Construction of a six-lane freeway as part of the Centennial Transportation Corridor, from east

of Union Avenue to SR-99, will add considerable capacity for east-west traffic. Connecting with the proposed Kern River Freeway, the new freeway will make it possible to drive across town in about 24 minutes. If these two roads are not built, it will take 44 minutes to make the same trip in year 2015. Moreover, the Crosstown Freeway will remove more than 50,000 daily vehicle trips from busy downtown streets. Additionally, the Crosstown Freeway will create a new direct connection between the existing eastern leg of SR-58 and the future western leg of SR-58 (the Kern River Freeway).

River Crossings. Existing bridges over the Kern River on Manor Drive and Chester Avenue will be widened, and one will be built on Renfro Road.

Railroad Crossings. Either underpasses or overpasses will be built at nine or more railroad-track crossings.

Beltways. Rights-of-way (ROWs) will be bought for the eventual construction of south and west beltways around Bakersfield, in addition to those already earmarked for purchase by the city.

Maintenance of Existing Roadways

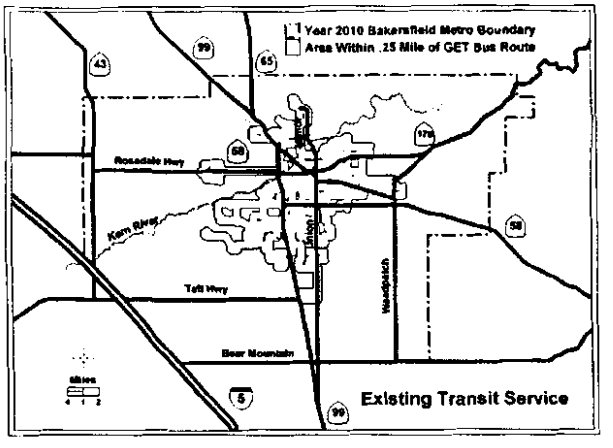
In addition to new projects, the proposed Strategy takes into account the urgent need for preventive and rehabilitative maintenance of existing roads and city streets. Metropolitan Bakersfield contains 934 miles of county roads, 715 miles of city streets, and segments of several state routes. Deterioration of the roadways is increasing because of age and deferred maintenance due to funding shortfalls. About $487 million will be needed between 1997 and the year 2015 just to maintain and rehabilitate roadways. But funding remains critically inadequate, despite aggressive efforts to obtain more funding money. A shortfall of more than $115 million is expected by year 2015.

Expansion of Golden Empire Transit (GET) Services

Another major consideration in the Strategy is the expansion of GET bus services, especially in the southwestern and northwestern parts of the Metropolitan Area. Recommendations include the establishment of community circulation routes in lower density neighborhoods, fast-frequent-limited-stop crosstown routes, and new bus transfer centers. Innovative concepts, such as shuttles that stop on demand anywhere along the route or nearby, will be tested in the near future. A primary goal is to improve service to schools, employment sites, and other key activity centers. GET plans to increase the number of buses in service during peak periods from the current 55 to 114 by the year 2015.

Funding Deficiency for Operating Transit in the Future

Funding will probably be available for the purchase of more buses, but there will be a shortfall of $46 to 78 million in the amount needed to operate them between now and 2015.



To provide transit service for the expected growth areas, GET must create new bus routes and add buses to its fleet.

Connections Between Transportation Modes

Wherever feasible, buses and shuttles will be routed to a number of new transit hubs, including the new downtown AMTRAK station. The downtown AMTRAK station might also eventually serve as the boarding location of a high-speed intercity rail line running between Los Angeles and San Francisco. The practicality of building this high-speed line in the future is currently being studied.

Pedestrian and Bicycle Facilities

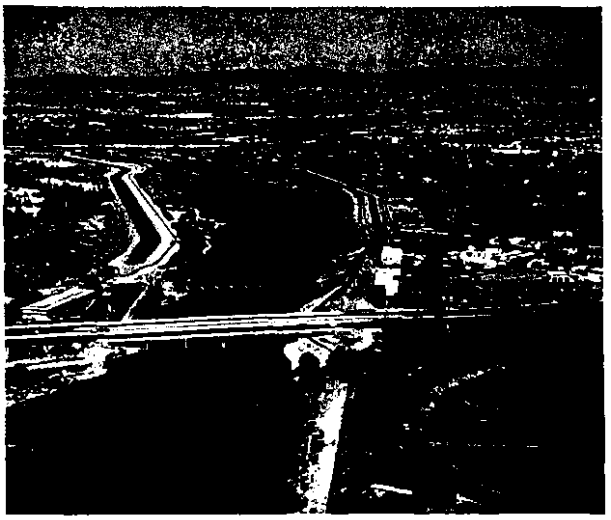
The program for establishing pedestrian and bicycle lanes and other facilities for nonmotorized modes of travel will continue. If funds become available, the program will be expanded.

Land Use

The Bakersfield Metropolitan General Plan encourages more intensive use of land in developed sections of the Metropolitan Area, rather than in the sparsely built-up city outskirts. Particular attention will be paid to development within corridors where service is provided by higher-capacity roads, GET buses, and—perhaps in the distant future—the contemplated light-rail transit system. The program also emphasizes mixed residential and commercial growth to minimize travel for shopping and entertainment. Developers that comply with the program might qualify for reductions in the higher transportation-impact fees that became effective in February 1997.

Community Consensus on Transportation

The agencies that developed the endorsed strategy used a wide variety of communications as well as other avenues for obtaining input and finding out what the community wanted for its transportation future. Through workshops, surveys, focus groups, and interviews with community leaders, a community consensus was reached on how to provide the transportation facilities and services that Bakersfield must have to help maintain its reputation as one of the state's most enjoyable places to live.



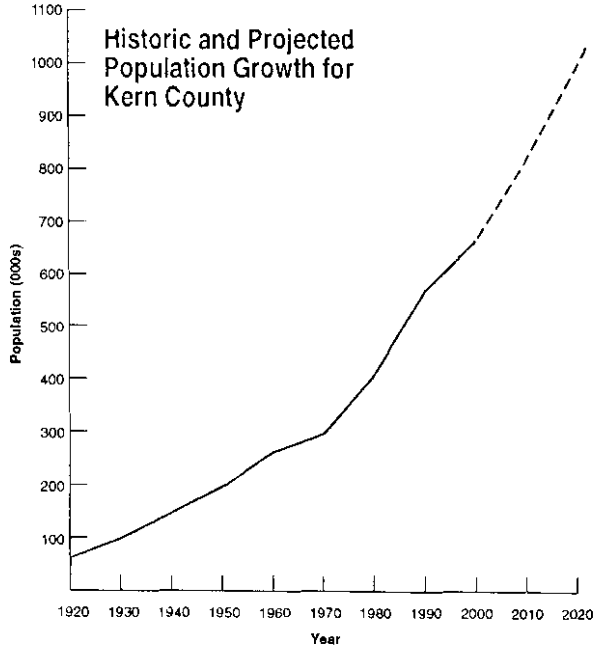
24th Street river crossing looking northeast.

Need to Develop a Financial Strategy

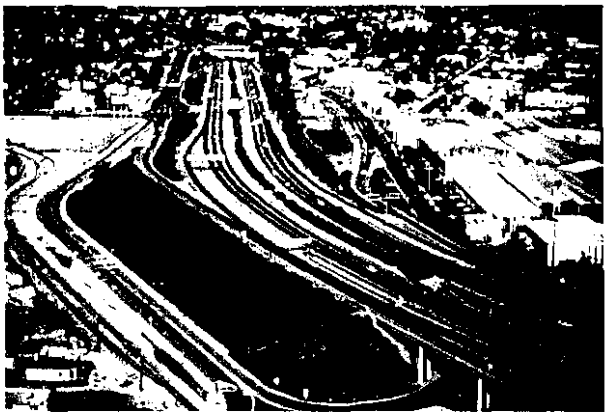
Now is the time to develop a financial strategy so that program priorities, project development, and project deliverables can be reconciled and the needed resources determined. The financial strategy must be embraced by the community as the outgrowth of a process that defines community transportation investment requirements; and it must be inclusive as to its participation. The financial strategy must ensure that expected revenues for each transportation element in the strategy will be used in the most efficient manner possible, and that opportunities to generate new funds will be aggressively pursued by the agencies involved in the Strategy. Given the revenue shortfalls identified in the Major Transportation Investment Strategy (MTIS), more local, state and federal funds must be secured to build the high-benefit projects that now have no secured funding.

1. PURPOSE AND NEED FOR THE STRATEGY

The population of Kern County and Metropolitan Bakersfield has nearly doubled over the past 25 years. During the same time period, the transportation system has remained essentially the same. Though some local roads have been added to serve new residential developments and a few more buses purchased for local transit service, there has not been the kind of expansion in facilities and services that will be needed to accommodate the sizable Metropolitan Area's growth which is forecasted to take place between now and year 2015. While the congestion on Bakersfield's streets and arterial highways is not yet intolerable, it is increasing. To meet this challenge, local transportation agencies decided to act now to reach community consensus on a plan for transportation in the future. Also clear is the need to plan for a total transportation system, one which includes provisions for highway and transit projects, and possibly even programs designed to meet expected demands on the transportation system.



Bakersfield and Kern County are projected to have 60 percent more persons by the year 2015. This will create much more traffic on the city's roadway system.



SR-178 looking east.

A good deal of coordinated planning is already under way by local agencies. For example, the 1996 Regional Transportation Plan is a "long-range" planning document prepared by the Kern Council of Governments (Kern COG) that consolidates city, county, Golden Empire Transit District (GET), and Caltrans planned and funded transportation projects. Hundreds of highway, roadway, pedestrian/bicycle, and bus projects are included in the plan to be accomplished over the next 20 years. Projects include new bridges across the Kern River, improvements to Rosedale Highway, partial construction of the State Route 58 (SR-58) "Kern River Freeway" west of State Route 99 (SR-99), further grade separations of roadways over or under railroads, and various traffic signalization projects.

These are all fine projects, but they are not enough to keep up with the 300,000 new residents expected to arrive over the next 15 years. Traffic congestion will worsen unless new major investments are made in the Metropolitan Area's transportation system between now and year 2015.

Recognizing that these projects will not be able to maintain basic mobility (i.e., the quality of transportation that Bakersfield has today), six local, regional, and state agencies teamed together to develop a transportation strategy for Metropolitan Bakersfield, known as the Major Transportation Investment Strategy (MTIS).

By means of an extensive analysis of travel in the area and through consensus building in the community, the MTIS determined the future transportation needs of Metropolitan Bakersfield. The analysis included an examination of traffic patterns, an evaluation of alternative transportation systems, and the identification of existing and potential sources of revenue. With the ongoing participation of community groups and the public, the agencies then developed a strategy for implementing those projects that would be the most effective in eliminating congestion and identified those that would benefit the Metropolitan Area as a whole.

The participating agencies looked at several alternative transportation investments (over a 20-year horizon period) that incorporated different mixes of highway and transit projects, and they searched for a strategy and a consensus plan that would be the most beneficial to the community.

New Golden Empire Transit District bus propelled by compressed natural gas (CNG).

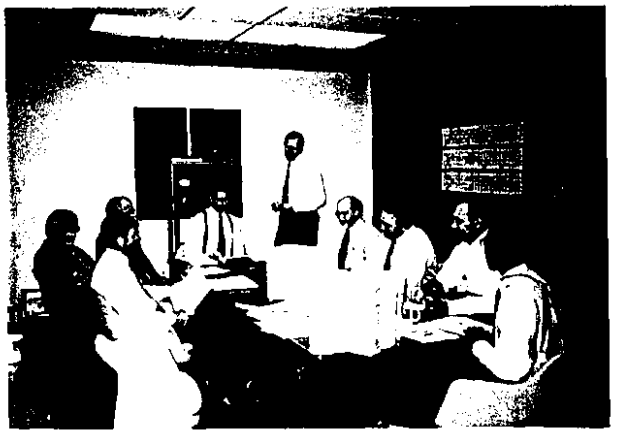
This consensus plan is not a hollow phrase, but one to be taken seriously by all of its participants. It was designed with the community's help. Simply stated, the consensus strategy evolved from the process as the most feasible package of projects with the broadest community support and most overall benefits to the community and to the greater Bakersfield Metropolitan Area.

Based on current funding trends, there will never be enough transportation money available in the future to eliminate all traffic congestion in the ever expanding Bakersfield Metropolitan Area. Therefore, the challenge will be to manage Bakersfield's public resources (tax dollars) wisely and make the best transportation investment choices for the community. Along these lines, the recommended transportation strategy is an important stepping stone toward better mobility for Bakersfield's future.

Purposes of this Transportation Strategy

- To provide the most appropriate transportation response to projected growth patterns and the continuing expansion of the Bakersfield Metropolitan Area.
- To maintain, and possibly improve, transportation mobility to and through the central portion of Bakersfield which will become increasingly congested as more growth occurs.
- To reduce, or at least not increase, transportation-related air quality emissions.
- To provide residents with more mobility choices and connections to major travel destinations.

The participating agencies used a comprehensive process to identify and select the best long-range improvements for the Bakersfield Metropolitan Area. This was the most significant process of its kind for determining transportation solutions in Bakersfield. It required that the agencies involve policy makers of the Bakersfield Metropolitan Area and the general public. The results of this process determined where and how federal, state, and local transportation dollars are spent over the next 20 years. The agencies developed an Action Plan to guide the implementation of recommended elements and accommodate needed annual updates for the phased implementation of the recommended elements. This Action Plan is linked to the adopted plans and programs of the participating agencies.



The MTIS focuses on developing multiagency transportation recommendations and an action plan for project implementation, and it will be updated annually.

Major Transportation Investment Strategy for Metropolitan Bakersfield

MTIS

A 20 Word Definition

A Strategic Transportation Planning Process that Selects the Best Package of Short- and Long-Range Improvements for Implementation in Bakersfield.

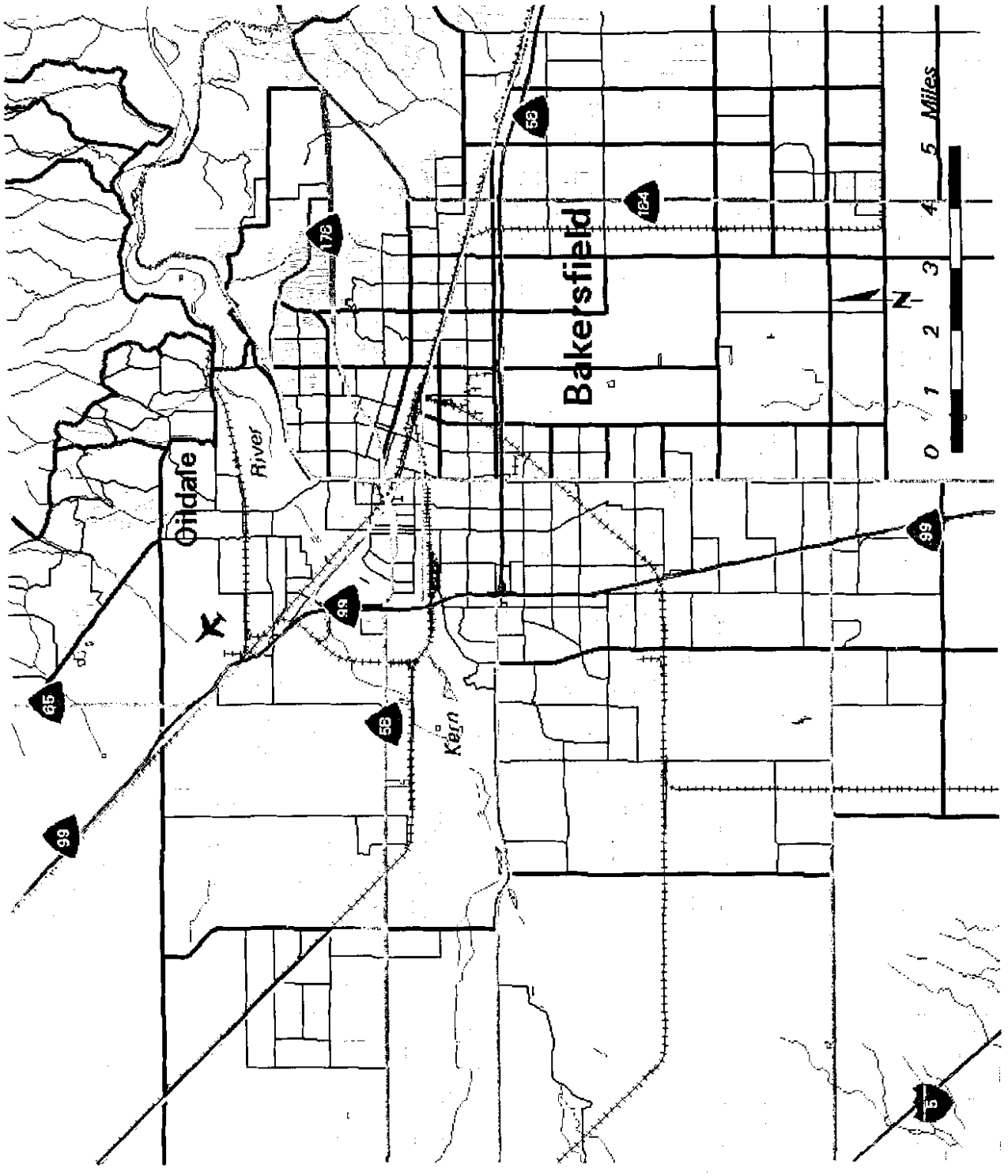
MTIS Response to Transportation Challenges

Seven Transportation Challenges for Bakersfield's Future

- ➢ Population and Traffic Growth
- ➢ Metro Area Expansion and Traffic Burden
- ➢ Funding Shortfalls and Recapture of Locally Generated Federal Monies
- ➢ Deferred Roadway Maintenance and Underfunding of Transit Service
- ➢ Air Quality
- ➢ Maintain Livability of Community by Ensuring Future Mobility
- ➢ Agreement on Transportation Priorities

MTIS - A Coordinated Response to Meet These Challenges

Central Themes	
★ Comprehensive	Long Range/Short Range, Transportation Improvements for Highway and Transit, Metropolitan Areawide
★ Cooperative	GET, Kern, COG, County of Kern, City of Bakersfield, Caltrans, San Joaquin Valley Unified APCD, Federal Agencies
★ Conformance	Streamline Planning Process for New Projects
★ Community Involvement	Proactive/Innovative Public Outreach
★ Consensus Building	Develop a Preferred Package of Projects Supported by the Community
★ Continuing	Develop a Multiagency Action Plan for Implementation and Update Annually



Bakersfield and Environs

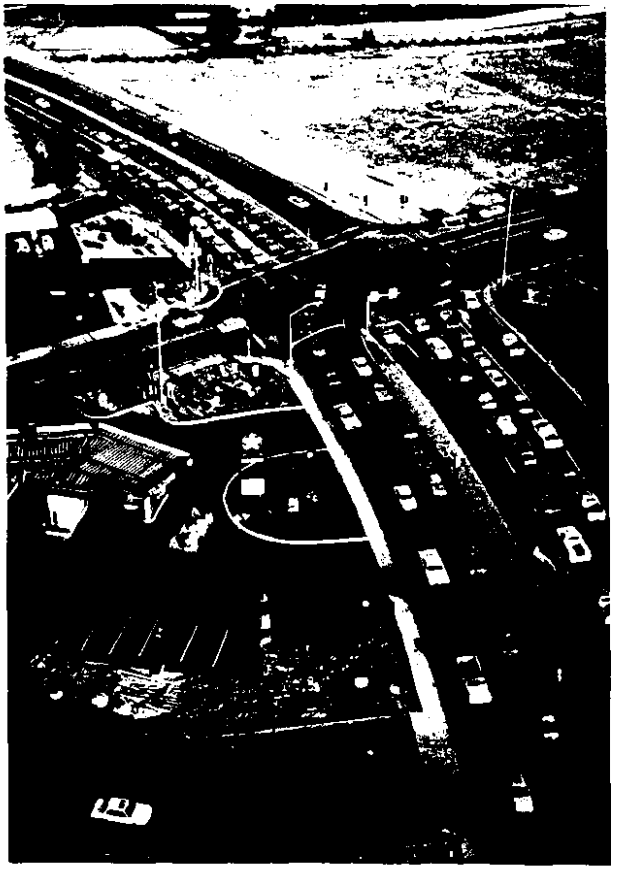
In the coming years, the Bakersfield Metropolitan Area will be faced with many transportation challenges. Some of the most crucial challenges are:

1. **Population Growth.** The Bakersfield Metropolitan Area has a population of 382,000 (1995) and is projected to grow to 612,000 over the next 20 years (year 2015), an increase of over 60 percent.[1] By then, Kern County's population will number over one million people.

2. **Metro Growth and Traffic Burden.** Much of the projected growth in the Bakersfield Metropolitan Area is expected to occur at the fringes of the city and, as a result, the Bakersfield Metropolitan Area boundary will expand greatly. Given the expansive nature of this growth, a significant investment in Bakersfield's utilities and infrastructure (sewer, water, gas, roads, etc.) will be needed. New transportation facilities, services, and maintenance will be needed to handle all the anticipated growth in traffic generated by these dispersed land uses.

   The Bakersfield Metropolitan Area already consists of approximately 715 miles of city streets and 934 miles of county roads. Within the Bakersfield Metropolitan Area, SR-99 has average daily vehicle counts as high as 100,000 vehicles. Trucks account for as much as 37 percent of the average daily traffic.[2] On SR-58, trucks presently account for 33 percent of all traffic traveling through Bakersfield.

3. **Funding Shortfalls.** Realistically, there may never be enough transportation money available (even under the most optimistic scenario) to eliminate all future congestion in the ever-expanding Bakersfield Metropolitan Area. Therefore, the challenge will be to not only apply available public resources (tax dollars) to the best transportation investment choices for the community, but also to find new sources of funds for transportation. The transportation strategy is an important stepping stone toward continued mobility. The Strategy will cost over $1 billion, but according to the Kern COG, a much higher total investment ($2 to 3 billion or more), would be required to totally address future congestion by year 2015 if dispersed growth patterns continue.



Oak Street and 24th Street intersection.

[1]Estimates developed based on information provided by Kern COG.

[2]1996 Regional Transportation Plan, Kern COG.

Funding is also at risk for transit. Between Fiscal Year (FY) 1986-1987 and FY 1996-1997, GET's bus annual ridership increased by 91 percent, or from 2.5 million passengers to nearly 4.7 million passengers.[3] This positive trend is now in jeopardy, and so is the availability of local, state, and federal money for GET's operations. More funding for expanding transit operations must be sought in the future.

4. **Roadway Improvements and Maintenance.** A key transportation objective is to aggressively seek funds for maintaining and improving our transportation system and to establish Kern County as a self-help county to raise matching funds. The Kern County-maintained road system is the second largest in the state with over 3,330 miles, but is 37th in the amount spent per mile on maintenance. An average of approximately $3,000 per maintained mile of roadway is spent annually on preventive maintenance ($10 million total), but this is $2,000 below the statewide per mile/per year average. The estimated cost to rehabilitate the existing system (new construction, overlays, and safety projects) is an additional $13.5 million annually. In addition, Caltrans estimates that some state highways in Kern County have existing service deficiencies and several will become deficient over the next 10 years.

5. **Air Quality.** Kern County is classified as a nonattainment area for both ozone and respirable particulate matter. Metropolitan Bakersfield Area is also classified as a federal nonattainment area for carbon monoxide. Approximately 70 percent of the carbon monoxide generated in Kern County is from motor vehicles.

[3]Golden Empire Transit District Ridership Reports.

Transportation Issues Addressed in the Consensus Strategy for Metropolitan Bakersfiled

Issue	Transportation Issue Statement
1	Growth of the Metropolitan Area and the continued sprawl of development and activity centers.
2	Growth in internal and external travel markets, primarily journey to work, but also school/university, and shopping trips, as well as regional "through" traffic, especially truck traffic.
3	Orientation of travel. The fastest growing travel markets will be on the west side of town and east-west crosstown travel. All trip purposes will increase.
4	Geographic constraints/barriers. SR-99 is a barrier that limits crosstown travel options and crosstown roadway capacity. The Kern River, railroad lines, and rail yards also funnel travel into concentrated corridors.
5	Growth in crosstown travel will exceed the peak-period carrying capacity in the central Metropolitan Area. In the coming years, traffic congestion will grow and air quality may worsen.
6	Inadequate financial resources. Limited funds require finding the optimal (most cost-effective) solutions to emerging transportation problems (capital, operating, and maintenance).
7	Balanced transportation and good multimodal connections. The variety and extent of possible multimodal connections will grow in the future and are key to good transportation in the Bakersfield Metropolitan Area.

6. **Maintain Livability of Community.** One indicator of livability is the assurance of continued mobility throughout the Bakersfield Metropolitan Area. As growth occurs and if no investments in new transportation infrastructure are made, travel times will deteriorate.

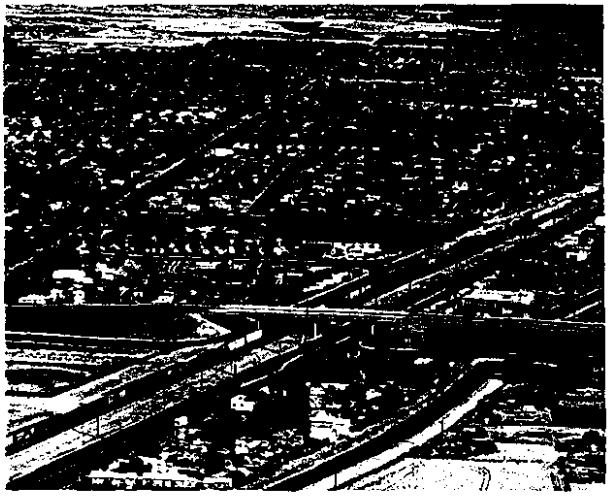
The big question is where the money is to come from for the transportation projects envisioned by the Strategy. Cost estimates range from $940 million to $1.5 billion or more. Current expectations are that approximately $860 million will be available from anticipated funding sources for both roadway and transit projects. But with the considerable demands on local financial resources, it will be difficult to obtain the necessary additional money. Realistically, there probably never will be enough funds available for everything that should be done to eliminate traffic congestion in the ever expanding Metropolitan Bakersfield Area.

In developing this Strategy, the principal challenge was to make sure that the investments produce the best possible transportation system for the Bakersfield Metropolitan Area. The MTIS Action Plan and its process for annual updates will ensure that the highest priority projects receive the greatest consideration for implementation.

In addition to new roadway and transit projects, this proposed strategy emphasizes the urgent need for preventive and rehabilitative maintenance on existing roads and city streets. At present, the Metropolitan Bakersfield Area contains 934 miles of county roads, 715 miles of city streets, and segments of several state routes.

Deterioration of the roadways is increasing because of age and deferred maintenance due to funding shortfalls. About $487 million will be needed between 1997 and 2015 just to maintain and rehabilitate the roadways. But funding remains critically inadequate despite aggressive efforts to obtain more money. A shortfall of $115 million is expected.

Funding will probably be available to purchase more buses so that Golden Empire Transit (GET) can meet future service demands. However, there will not be enough money between now and year 2015 to operate an expanded GET service. There will be a shortfall of $46 to $78 million in GET operating funds between now and year 2015.



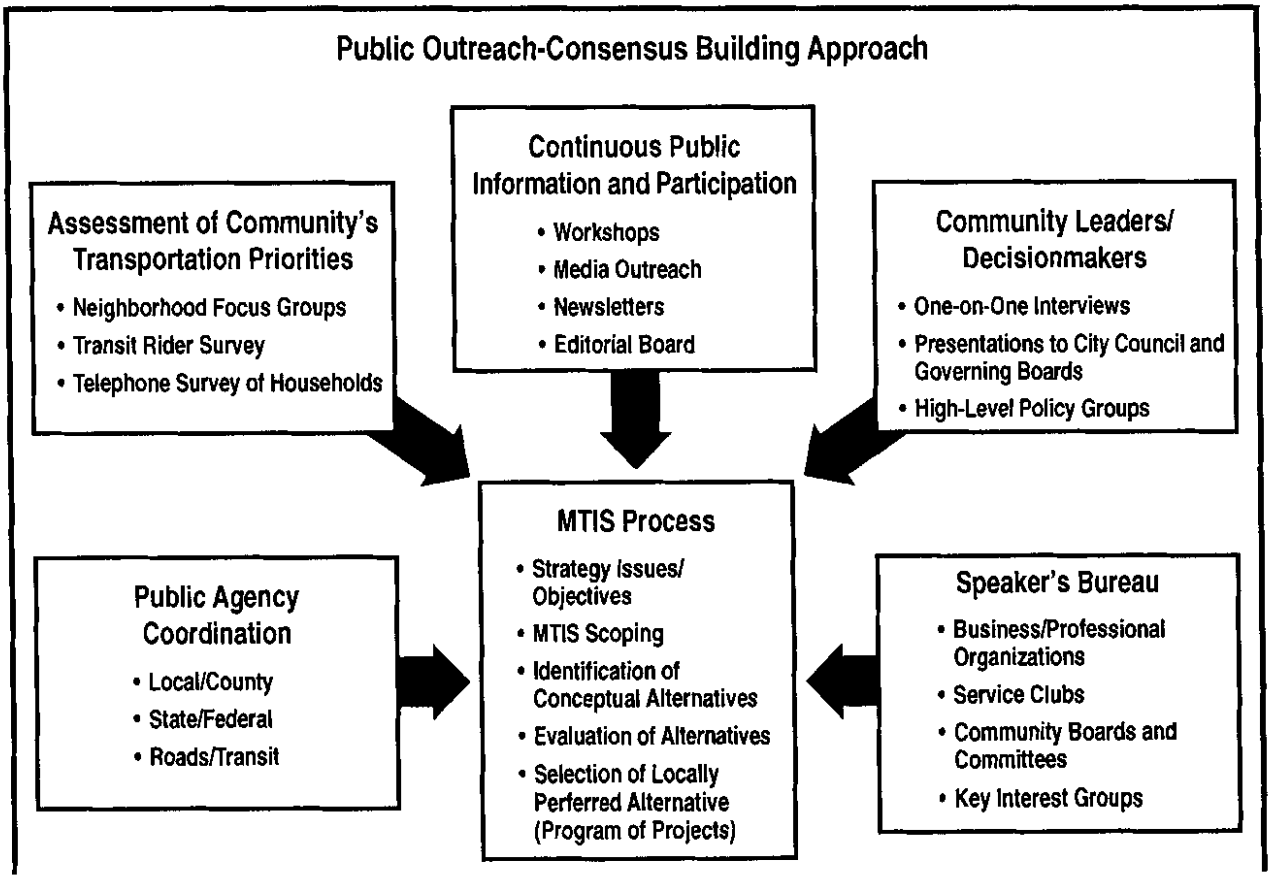
Fairfax Road grade separation over UP Railroad and Edison Highway.

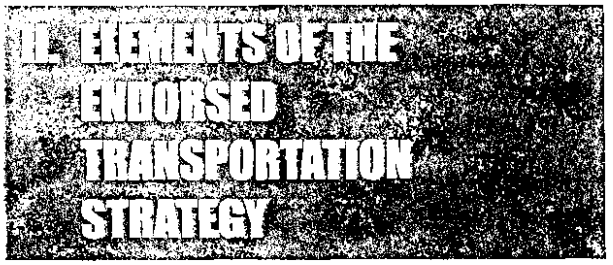
Over the past two years, a continuous community outreach program has been in place to build consensus on Bakersfield's transportation improvements. The program includes the following:

- Over 130 one-on-one interviews with key community leaders.
- Newsletters, information brochures, and questionnaires mailed to over 1,500 households in Bakersfield.
- Media outreach/press conferences. Newspaper, radio and television spots, community and professional newsletters, etc.

- Sample surveys of 800 households in the community and over 2,200 riders of GET District buses.
- Strategic presentations to the governing bodies of the participating agencies and jurisdictions throughout the process.
- Four community focus groups and four public open houses.
- An MTIS Speakers Bureau that made presentations to over 50 community groups and organizations.
- Active participation of a high level policy advisory group.

The Bakersfield Metropolitan Area has now developed community consensus on short- and long-term transportation priorities for the Bakersfield Metropolitan Area through this transportation strategy. With this consensus supporting them, local leaders can now begin building public support for finding the new funds that are needed for more high priority transportation improvements between now and year 2015.





The sponsoring agencies have purposely structured the Major Transportation Investment Strategy (MTIS) to focus on all facets and modes of transportation in Metropolitan Bakersfield. This was done because of projected funding shortfalls, and because no one mode or element of travel can meet all the diverse transportation needs of the community in the future. By more fully coordinating all the separate roadway, transit, and intermodal programs and better integrating planned improvements through the Strategy, local and state agencies can maximize their benefits to the community.

As described earlier in this report, the eight transportation elements and their project lists were crafted through an in-depth consensus-building effort in the community. Strong community support has been documented for the multimodal recommendations included in this Strategy. The community has voiced a need to do more than just build new projects. Expanded transportation services, better traffic signalization, and good roadway maintenance are also key elements between now and the horizon year 2015.

The 18-year Strategy for Metropolitan Bakersfield has been endorsed by the governing bodies of the participating jurisdictions and agencies. The eight elements endorsed for programming and implementation are described in the following pages. The implementation phasing for the individual projects and services of these elements are described in the Action Plan at the end of this Strategy Report.

Transportation Strategy Recommendations for Metropolitan Bakersfield

Eight Elements of MTIS Strategy

ELEMENTS THAT CAN BE FULLY FUNDED

Fundable Roadway Projects. High-priority roadway projects for which funding will probably be available by year 2015. State, regional, and local roadway extensions and widenings are included, as well as traffic signals, bridges, and grade separations over or under railroads.

Fundable Transit Component – Expansion of Golden Empire Transit (GET) Service. Addition of improved frequency of service, bus routes, transportation centers and new vehicles to meet the needs of the growing Metropolitan Bakersfield population.

Connections Between Transportation Modes. Creation of more transit hubs for convenient transferring from one bus route to another and between buses, AMTRAK, and a possible future high-speed rail line.

Ridesharing/Nonmotorized Modes and Pedestrian and Bicycle Facilities. Development of more pedestrian and bicycle lanes and other facilities are included in this strategy.

ELEMENTS WITH FUNDING DEFICIENCIES

Unfunded High-Benefit Roadway Projects. Important roadway projects in the Metropolitan Area for which funding should be sought, including the SR-178 Crosstown Freeway, more river crossings, and railroad grade separations.

Maintenance of Existing Roadways. Intensification of preventive and rehabilitative maintenance programs to keep existing roads and streets in top operating condition.

Unfunded Transit Component. Based on current funding projections, additional funds will be needed for operating an expanded GET bus system.

Land-Use Element. Encouragement of mixed-use, in fill, and other balanced land development to minimize the increase of vehicular traffic and maximize the livability of the community.

A. Fundable Roadway Components

Between now and the year 2015, and based on current funding expectations, nearly $750 million will be available from local, state, and federal sources to build the highest priority highway and street projects throughout the Bakersfield Metropolitan Area. High priority roadway projects include:

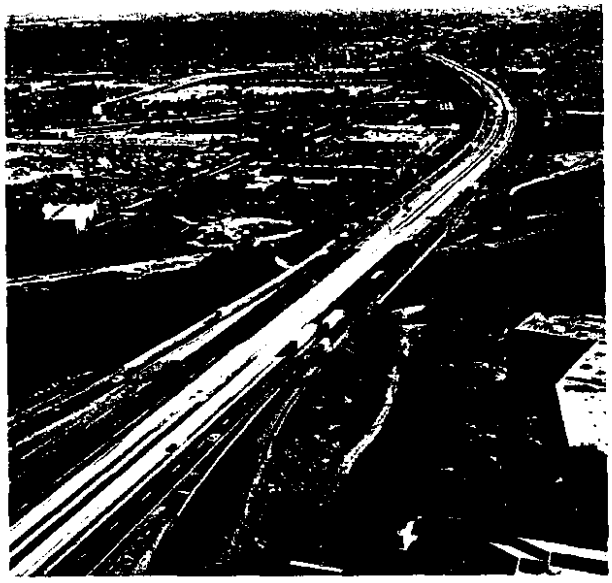
1. **Build SR-58 Western Segment (Kern River Freeway).** One of the most beneficial roadway projects for Metropolitan Bakersfield is the construction of the western segment of SR-58, known as the Kern River Freeway. The project will link with the Centennial Transportation Corridor and has been defined in a series of past route studies and environmental analyses. As defined, it will extend from SR-99 to the west along the Kern River alignment (six lanes from SR-99 to Allen Road and four lanes from Allen Road to I-5).

   The Kern River alignment would be connected with the existing eastern leg of SR-58 by means of the SR-178 Crosstown Freeway and a connecting facility on the east side of Bakersfield. The benefits of constructing SR-58 are several. They include:

H Street grade separation in downtown Bakersfield under the BNSF railroad.

- **Safety and Traffic Flow Benefits on Arterials such as Rosedale Highway, Truxtun Avenue, and Stockdale Highway.** Removing traffic (especially truck traffic) from city streets and moving it to a parallel grade separated roadway will improve safety and better optimize traffic flow.

- **Expanding Crosstown Capacity.** SR-58 would add badly needed crosstown traffic capacity to absorb future traffic growth forecasted for the west side of Bakersfield.



SR-99 river crossing looking southeast.

- **New Regional Connection.** The SR-58 Kern River Freeway will ultimately be extended to the west to connect with I-5, thereby creating a new link in the regional system.

- **Improving the Reliability of Crosstown Travel for Emergency Vehicles and All Traffic** and improving overall travel times during peak hours.

2. **Roadway Widenings, Extensions and Realignments** include the following:

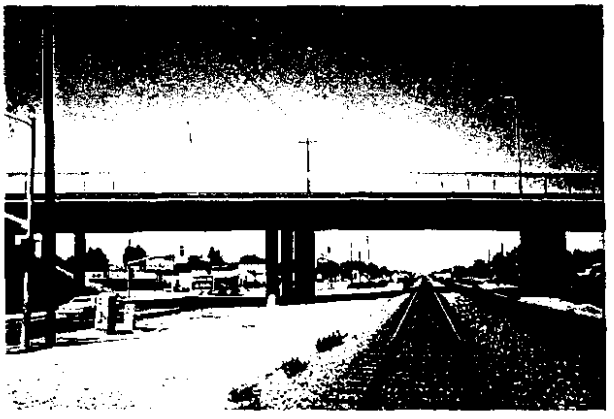
   - Widen bridges/interchanges on Panama Lane at SR-99, White Lane at SR-99, Olive Drive at SR-99, SR-58 at Fairfax Road and at Fairfax Road and Alfred Harrell Highway.
   - Extend SR-119 from Buena Vista to SR-99.
   - Extend SR-184 from Panama to SR-58.
   - Widen SR-178 to four lanes with interchanges (Morning Drive and Fairfax Road) from east of Oswell Street to Morning Drive.
   - Construct SR-178 on a new alignment (Kern Canyon Expressway) from Morning Drive to Alfred Harrell Highway.
   - Widen the segment of SR-58 from SR-99 to Cottonwood Road from four to six lanes.
   - Major widening projects on Rosedale Highway, Weedpatch Highway, and Taft Highway.
   - Approximately 50 strategic widenings of streets.
   - Additional street improvements and signals would be constructed by private developers.

3. **Traffic Operations/Safety Projects** include the following:

   - 213 new traffic signals throughout the Metropolitan Area (this includes the 62 signals in current programs).
   - A full Metropolitan areawide computerized traffic control and monitoring program (SMART streets), which allows for real-time adjustments to the signal system in response to incidents or traffic surges.

4. **Grade Separations and River Crossings** include the following:

   - Adding two grade separations of railroad tracks at Oswell and Coffee Road.
   - Constructing River Crossings at Mohawk and Allen Road.
   - Adding numerous Canal crossings and safety projects.



Fairfax Avenue over the UP railroad.

As mentioned, nearly $750 million will be available between now and year 2015 to build a number of roadway projects needed around the Bakersfield Metropolitan Area. The projects listed above are projected to solve about 50 percent of the most severe congestion areawide. Even with this substantial investment, these projects will only move Bakersfield about half way to maintaining a healthy transportation system that is reliable and free of congestion.

If only short-term projects are built, congestion in the year 2015 will become pervasive, with about 150 roadway locations suffering severe traffic backups. This compares to the three links experiencing severe afternoon peak congestion today. If the Strategy's fundable roadway system is built, the number of severely congested links in year 2015 will be greatly reduced (to 64), but not eliminated.

Given the assumption that present land use trends will continue and an ever-increasing strain will be placed on the transportation system, a total solution to congestion is not financially realistic. However, this element of the Strategy does eliminate some future congestion. Less urban sprawl in the future would place less of a burden on the current roadway system.

Projected Roadway Links With Congestion During Peak Periods in Bakersfield

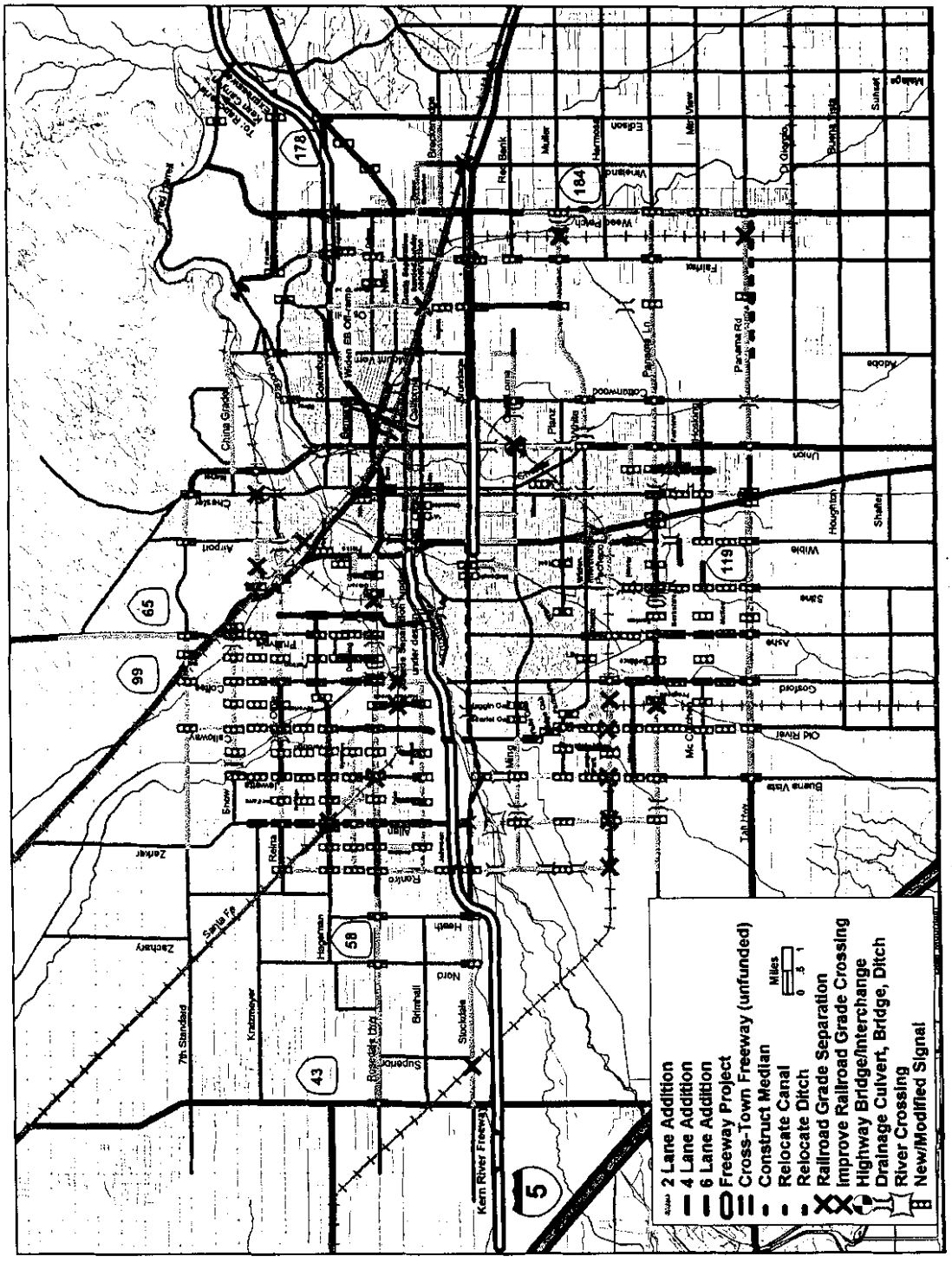
	Today	Existing Plus Short-Term Projects	Year 2015 Fundable Roadways
With Moderate Slowing or Worse			
AM Peak Period	14	164	100
PM Peak Period	40	367	267
With Severe Congestion			
AM Peak Period	2	56	25
PM Peak Period	3	150	64

Note: Metropolitan Area in year 2015 (links vary in distance from two blocks to one mile in length).

Traffic to and through central Bakersfield is increasing, and congestion could become intolerable.

Costs for the Fundable Roadway Element (to Year 2015)
Projected Metro Roadway Capital Costs
(in Millions of Dollars)

Projected Projects	Fee Program	Federal/ State	Funding Not Identified	Total
Major Roadway Projects				
Crosstown Freeway (Right-of-Way only)	-	10.0	-	10.0
Kern River Freeway (SR-99 - Stockdale Highway)	24.6	384.8	-	409.4
SR-178 - Oswell to Morning	-	14.0	-	14.0
Kern Canyon Expressway (Alfred Harrell - Morning Drive)	-	25.0	-	25.0
SR-58 Renfro to SR-99 (Rosedale Hwy.)	17.6	17.0	13.1	47.7
SR-58 Freeway (99 to Cottonwood)	-	9.0	9.1	18.1
SR-184 (Panama to SR-58)	4.4	40.0	-	44.4
Beltways (Right-of-way only)	4.7	-	17.3	22.0
SR-119 - Buena Vista to SR-99	5.7	-	-	5.7
Subtotal Major Roadway Projects	57.0	499.8	39.5	596.3
Collectors and Arterials				
Roadwork	107.5	-	-	107.5
Traffic Signals	21.5	-	-	21.5
Traffic Control/Safety Projects	-	5.6	-	5.6
Bridges	17.0	-	-	17.0
Culverts	6.3	-	-	6.3
Railroad Overpasses/Underpasses	17.2	12.0	36.3	65.5
Railroad Crossing Improvements	1.9	-	-	1.9
Subtotal Local Metro Projects	171.4	17.6	36.3	225.3
OVERALL ROADWAY TOTAL	228.4	517.4	75.8	821.6



Funded Roadways for the Endorsed Transportation Plan

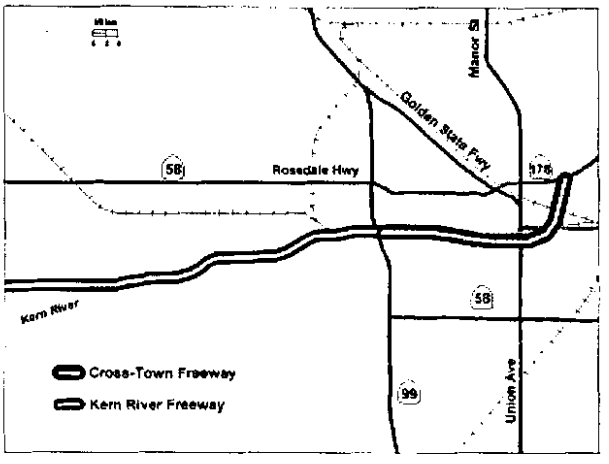
B. Unfunded Roadway Components with High Benefits

If more funding can be found, other high priority roadway projects could be added, such as the SR-178 Crosstown Freeway (in the Centennial Transportation Corridor). Strategic roadway grade separations, river and canal bridges and roadway widenings, and extensions could also be added to the fundable list of projects described earlier. Although some of these strategic roadway projects the city of Bakersfield may be able to partially fund from the transportation fee program, none have secured matching state and federal funds.

1. **SR-178 Crosstown Freeway (Southern Alignment).** A new 6-lane Crosstown Freeway using the previously identified SR-178 southern alignment as specified in the Regional Transportation Plan (RTP) and the city's Year 2010 General Plan Circulation Element is a key component of the Centennial Transportation Corridor. The Crosstown Freeway would add additional capacity for east-west traffic and replace a possible 24th Street Super Arterial as the primary central Bakersfield roadway project. This alignment runs from east of Union to SR-99 along the Burlington Northern Santa Fe (BNSF) Railway yard alignment. Only $10 million is currently identified in the RTP for this project, and $4.66 million is earmarked in the new transportation fee program. Therefore, significant additional funds must be generated.

   The addition of the SR-178 Crosstown Freeway (southern alignment), which connects with the SR-58 Kern River Freeway, creates a continuous crosstown freeway link (the Centennial Transportation Corridor) which would relieve significant traffic from several parallel arterial roadways and city streets, such as California, Truxtun, and 23/24th Streets.

   The Centennial Transportation Corridor is the major intermodal and multimodal corridor in the Kern Region. The Centennial Transportation Corridor includes both highway and rail facilities. The Corridor is the main rail and truck freight corridor for agricultural products from the San Joaquin Valley to the Midwestern and Eastern markets. Additionally, the Corridor connects to the daily San Joaquin AMTRAK passenger trains.



The Strategy includes construction of the Kern River Freeway from Renfro Road to SR-99, and a connecting Crosstown Freeway from SR-99 to east of Union Avenue, in the Centennial Transportation Corridor.

The Centennial Transportation Corridor Project consists of an unconstructed, multimodal transportation corridor through the Metropolitan Bakersfield Area. The completion of the Centennial Transportation Corridor will close the gaps for both SR-58 and SR-178. SR-58 is the main connection in the San Joaquin Valley between Interstate 15 and Interstate 40 (I-15/I-40) near Barstow, California, and Interstate 5 (I-5) west of Bakersfield. SR-178 is the main access to the BNSF freight yard, the Union Pacific (UP) freight yard, and the AMTRAK passenger station.

A primary goal of the Strategy is improved vehicle carrying capacity in key travel corridors to help crosstown traffic flow in the future. This is particularly true on the west side where SR-58 (Kern River Freeway) will remove auto and truck traffic from parallel surface streets.

An important measure of future system performance and reliability is mobility (travel time) during busy times of the day from one point in the Bakersfield Metropolitan Area to another. Today during the busy morning rush hour, it takes approximately 30 minutes to travel from the west side of town (Stockdale Highway/Renfro Road) to the East Hills Mall approximately 13 miles away. In year 2015, short-term projects will not be enough to maintain today's mobility, as shown in the table at right. With only short-term improvements, the crosstown trip is projected to take 50 percent more time and lengthen to 45 minutes during peak times of the day.

The Strategy's recommended projects will greatly improve east-west mobility. When the SR-178 Crosstown Freeway (southern alignment) and SR-58 Kern River Freeway are included in the roadway system, the crosstown trip described above will take an estimated 24 minutes, which betters today's travel time in spite of the great increases in overall traffic projected by year 2015. This will be a 21-minute improvement over the existing roadway system added to other short-term improvements.

The proposed SR-178 Crosstown Freeway would remove traffic from several busy downtown streets that run parallel to its proposed alignment. Based on 1994 traffic counts, 23rd/24th Streets, Truxtun Avenue, and California Avenue are busy crosstown arterial routes that carry a combined total of 103,672 daily vehicle trips. Based on travel forecasts for the year 2015, the traffic on these four roadways will reach a projected 171,083 daily vehicle trips if no parallel routes are built to relieve traffic. As shown in the table below, the SR-178 Crosstown Freeway (southern alignment) project would remove approximately 44,000 daily vehicle trips from these roadways by the year 2015. The Kern COG travel model reveals that trips would divert from local streets to the new parallel Crosstown Freeway to get improved travel times during peak hours.

Mobility Benefits of the SR 178 Crosstown Freeway Project

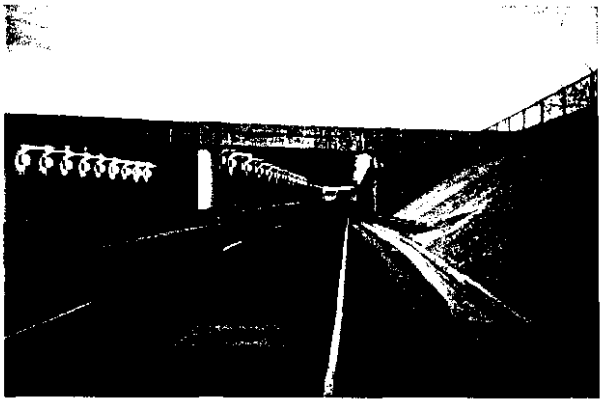
Projected AM Peak Travel Time (in minutes) from the West Side to the East Side of Bakersfield (Rosedale Highway/Renfro Road to East Hills Mall)				
	Today	Short-Term Projects	Fundable Roadways	With Crosstown Freeway
Minutes	30	45	34	24

Projected Total Daily Traffic Volumes on Major East/West Roadways through Downtown Bakersfield

	Today	Existing and Short-Term	Long Range Fundable Projects	With Crosstown
23/24th Streets, Truxtun Ave. and California Ave. Combined	103,672	171,083	177,668	127,200
Other East/West Roadways	93,072	172,405	171,022	138,732
SR-178 Crosstown Freeway	—	—	—	88,639

2. **Other Roadway Widenings, Connections and Extensions.** Longer term, additional roadway widenings, connections, and extensions will be required within the Bakersfield Metropolitan Area to increase capacity and keep pace with traffic growth. A key connection for the future is the SR-178 Crosstown Freeway with the SR-58 east of SR-99. A number of alternatives for this connection have been identified and will be studied by local agencies.

   In terms of other new widenings and extensions to city roadways, the city of Bakersfield recently identified the extension of Hageman Road between Mohawk and SR-204 as an essential project for the future.



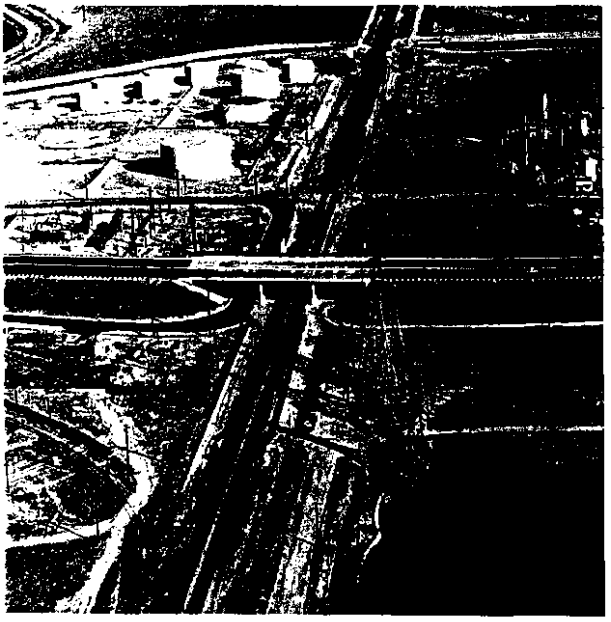
7th Standard Road tunnel under Meadows Field runway.

3. **Additional River Crossings.** Beyond those included in the funded roadway program, other river crossings have been identified as having merit by the city and county. These crossings will allow for better north-south traffic flow on the western and eastern sides of Bakersfield. These include:

   - Manor Drive (widen)
   - Chester Avenue (widen)
   - Renfro Road
   - Others are currently on the lists of projects for the City/County Circulation Element

4. **New Grade Separations Over/Under Railroads.** Beyond the new grade separations over or under railroads included earlier in the funded roadway program, several others have been identified as having a high benefit by the city and county. These include:

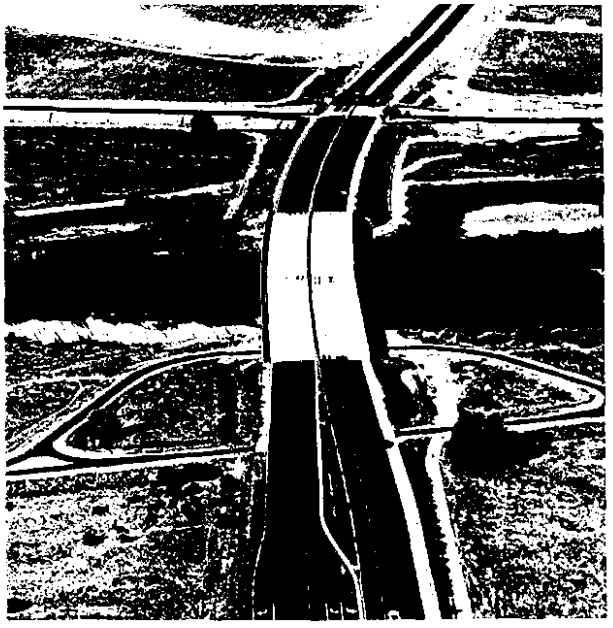
   - Calloway Road
   - Seventh Standard
   - Olive Drive
   - Airport Drive (expand existing overpass)
   - Weedpatch/Morning Drive (SR-184)
   - Mohawk Street (Extension to North)
   - Q Street at the BNSF Railway
   - Q Street at the UP Railroad
   - East Truxtun Avenue at the BNSF Railway



Coffee Road grade separation over BNSF Railway looking east.

5. **South and West Beltways Around the City.** This element includes a 20-mile West Beltway connecting I-5 on the south with 7th Standard Road and possibly SR-99 on the north. In addition, the element contains a South Beltway approximately 25 miles long connecting the West Beltway (and I-5) on the west to SR-99 and SR-58 on the east. The city and county are proposing beltways

to draw traffic away from the heavily congested central Metropolitan Area in the future. Except for some right-of-way funds, these projects are currently unfunded and not yet beyond conceptual status.



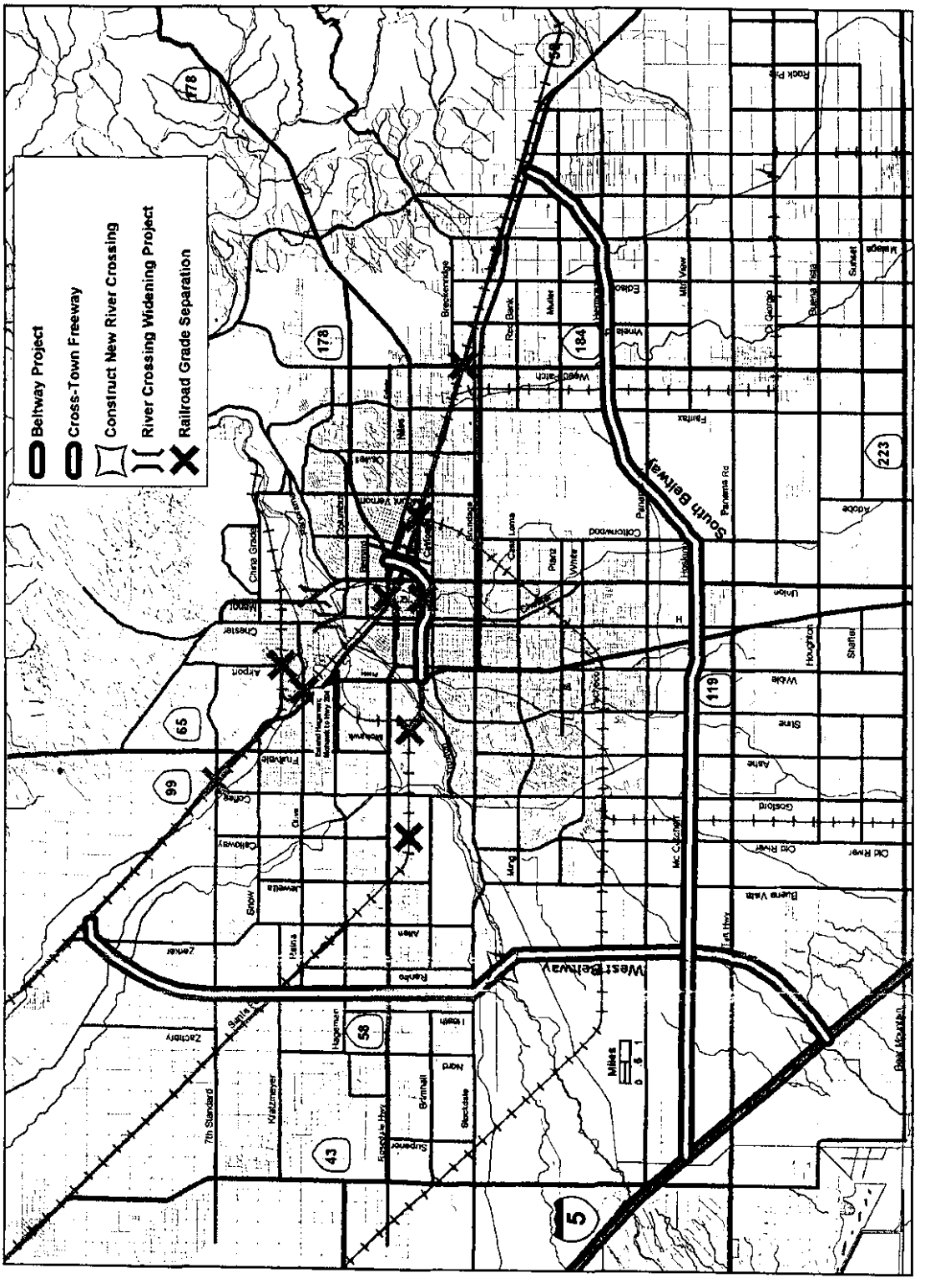
Calloway Drive river crossing looking north.

Over the years, local agencies have studied several different beltway alignments (both freeways and expressways) around the southern and western developed portions of the Bakersfield Metropolitan Area. The Adopted Regional Transportation Plan for Kern County and the city's Year 2010 General Plan identify the most current west and south beltway alignments (see the map on the next page).

The concept of beltways has been used extensively in metropolitan areas throughout the country with some benefits and some drawbacks. Traffic benefits may be outweighed by adverse impacts on land-use growth over the long term. Beltways often encourage new development on the periphery of metropolitan areas at the expense of the central area. Beltways also can create longer trips, thereby adversely affecting an area's air pollution.

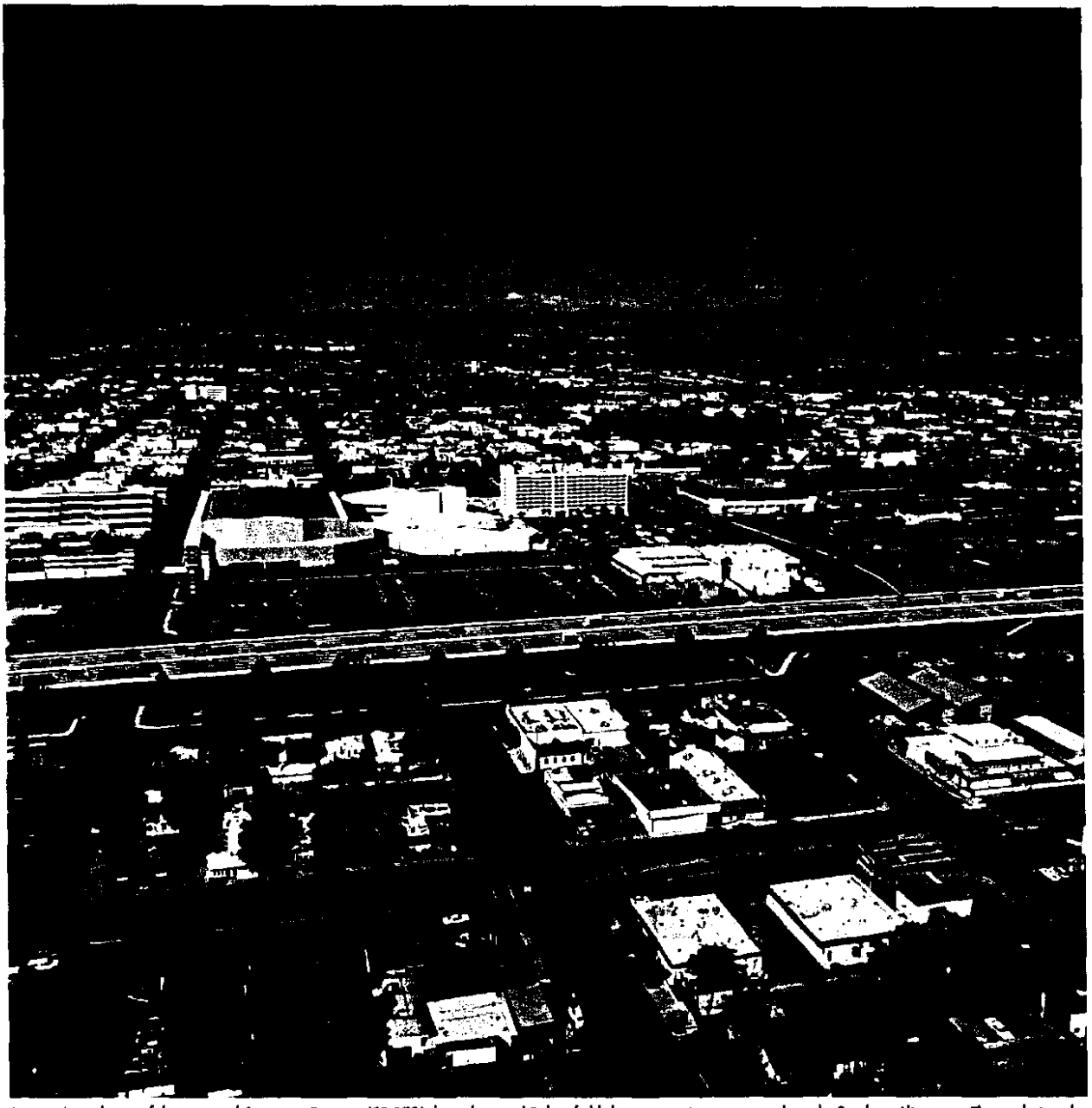
Based on current conceptual plans for the beltways, the projects would have a combined cost of approximately $330 million for ROW and construction. Only $4.7 million is earmarked for ROW purchases for beltways and SR-178 in the Rio Bravo area from the transportation fee program adopted by the city and county in February 1997. It is estimated that the $4.7 million for ROW for the south and west beltways is approximately 21 percent of the total ROW costs required for these alignments.

Morning traffic congestion on 24th Street near Oak Street.



Unfunded Roadway Projects

Proposed Crosstown Freeway in the Centennial Transportation Corridor in Bakersfield



An artist's rendering of the proposed Crosstown Freeway (SR-178) through central Bakersfield shows it running east-west along the Southern Alignment. The rendering also shows a funded Q Street grade separation under the BNSF railroad tracks (center right), the new Downtown Arena (center left) next to the Convention Center, and the proposed Downtown AMTRAK Station (on the right side of the photo). Parking for the new Arena is proposed south of the BNSF railroad tracks. The proposed Crosstown Freeway would give direct access to all activity centers (existing and proposed) in downtown Bakersfield and reduce traffic volumes on parallel arterial streets such as 23rd/24th Streets, Truxtun, and California.

C. Maintenance of Existing Roadways

The community-endorsed transportation strategy integrates projects with the current infrastructure while still addressing the Area's growing mobility issues. Therefore, it is imperative to encompass all costs associated with transportation infrastructure when selecting a preferred strategy. Specifically, operations and maintenance (O&M) costs represent one area worthy of recognition at a time when transportation funding is scarce and the viability of the current infrastructure continues to erode.

More emphasis must be placed on the roadway maintenance element, by local and state agencies, as roadway programs are established in the future. After all, good roadway maintenance makes good sense since it ensures safe operation and efficient use of investments in roadways and bridges already made by taxpayers.

Kern County's maintenance expenditures have dropped annually because of shrinking street and road budgets, although yearly needs have remained steady. Kern County's maintained road system is the second largest in the state (over 3,000 miles) but ranks 37th in the amount spent per mile on maintenance. The county reports that roads require $10 million annually for routine preventive maintenance. In addition, $13.5 million is needed for rehabilitative maintenance to keep servicing the existing system. County rehabilitative efforts (overlays and reconstruction projects) have decreased well below the $13.5 million threshold. This is a serious indication of inadequate road funding. Likewise, the city's street maintenance efforts have also experienced average annual declines from FYs 1991 through 1995, resulting in deferment of maintenance which accumulates with each passing year.

Although the maintained street and road systems have either increased or remained fairly constant in size, both budgets and the shares for maintenance have been decreased during the past fiscal years. During FYs 1991-1995, Kern County's road budget has been reduced by about 3 percent annually on average and the Bakersfield's street budget has shrunk by roughly 5 percent annually on average. Similarly, the percentage of street budget allocated to maintenance has decreased annually, and this has resulted in an average annual decrease of over 24 percent in maintenance expenditures. Consequently, historical data shows increased deferment of necessary maintenance and constant or even smaller annual roadway budgets. With deferred maintenance expenditures comes increased costs, because there is more deterioration of the area's streets and roads as facilities become older. As shown in the chart on page 22, the average life cycle of a well maintained road is approximately 16 years. The longer maintenance is delayed in this cycle, the more costly it is to renovate neglected roads. Thus, supplemental funding will be required in the future to address these needs.

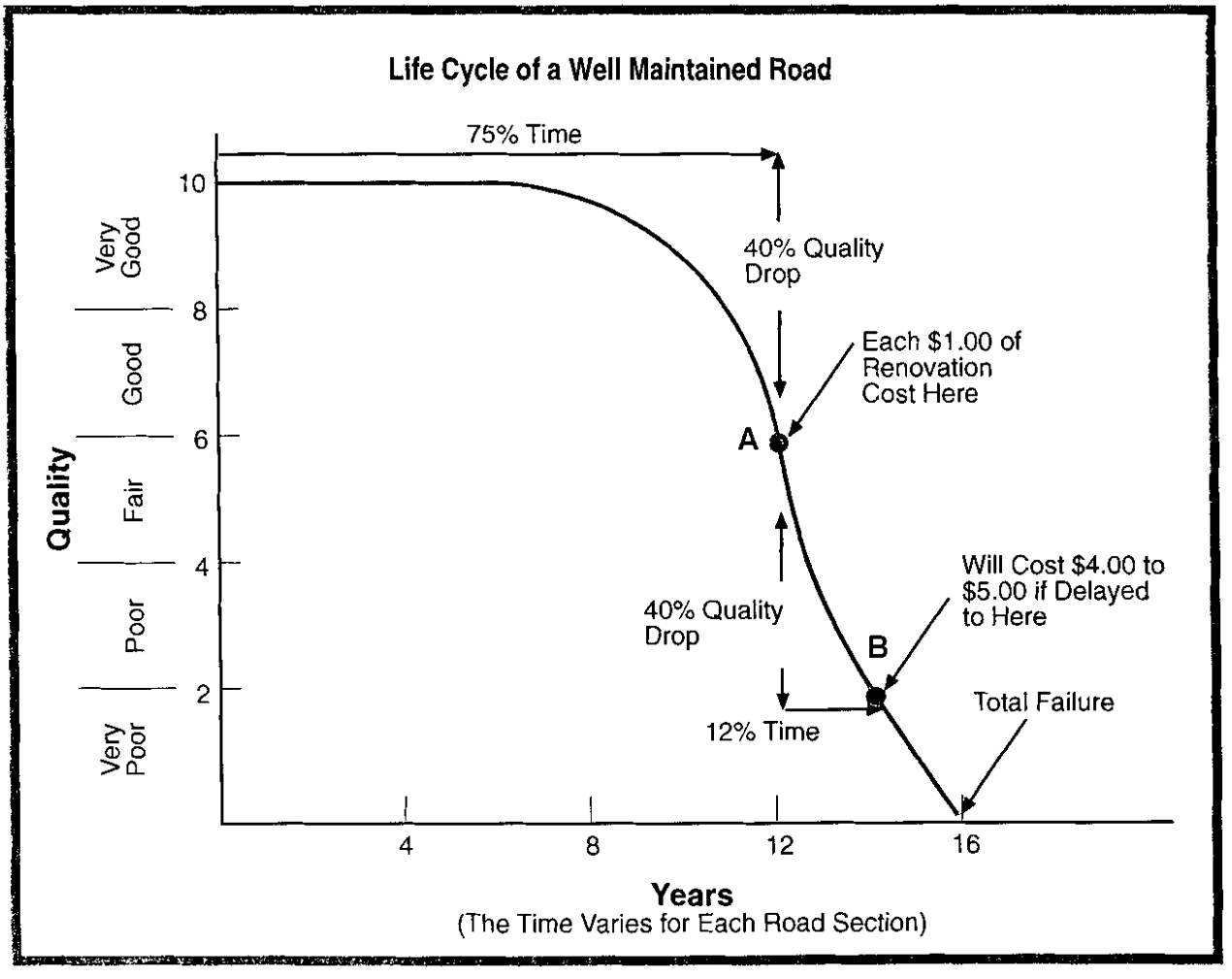
The current roadway rehabilitation for state facilities in the Metropolitan Area is not as bleak as the city and county programs. While the state O&M budget declined by 12 percent per year between FY 1993 and FY 1995, the California Transportation Commission (CTC) augmented the Caltrans State Highway Operations Protection Programs (SHOPP) by $600 million statewide for the FY 1995 through FY 1998 funding cycle. This has allowed Caltrans to catch up with much of the deferred state highway rehabilitation and roadway maintenance.

Metro Area Total Roadway Rehabilitation and Maintenance Costs
FY 1996 – 2015 (in Millions)

Metro Area Roads	Funded	Unfunded	Total
Local Streets	$204.9	$35.1	$240.0
County Roads in Bakersfield	108.6	74.4	183.0
State Routes in Bakersfield	58.3	6.0	64.3
Total	$371.8	$115.5	$487.3

Metro Area Subtotal Roadway Maintenance Costs
FY 1996 – 2015 (in Millions)

Metro Area Roads	Funded	Unfunded	Total
Local Streets	$118.2	$12.2	$130.4
County Roads in Bakersfield	61.7	16.0	77.7
State Routes in Bakersfield	31.0	2.0	33.0
Total	$210.9	$30.2	$241.1



D. Fundable Transit Components

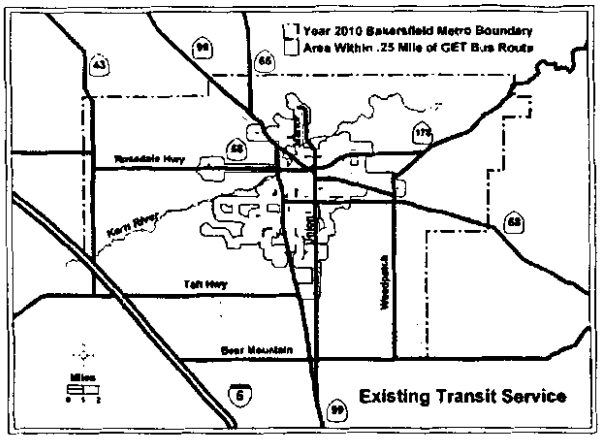
The endorsed strategy is one of balanced transportation, and this includes a strategic expansion of the Golden Empire Transit (GET) District service area as well as its fixed route bus service into new neighborhoods. Gains in transit ridership will help to improve the Metropolitan Area's air quality by removing more automobile trips. Also, new GET bus service concepts such as high-speed limited-stop cross-town routes and neighborhood circulator routes will be added to improve the overall quality of service to the public. As the service area grows, new transit centers must be developed at strategic locations that will function as timed transfer points between intersecting routes. The GET fleet size in operation during peak periods is projected to double by year 2015 to approximately 114 buses serving 21 routes throughout the Bakersfield Metropolitan Area.

Given its limited resources, GET must carefully choose its opportunities to serve Metropolitan Bakersfield residents. GET now carries between 18,000 and 19,000 bus passengers per day on its routes and—measured by transit industry norms—is quite productive with an average of between 27 and 30 passengers boarding for every hour a bus is in service. By 2015, with a great deal of low-density growth predicted, Bakersfield will be a challenging place for cost-effective transit service.

To keep pace with development and remain productive, the GET system tested as part of the MTIS will continue to expand bus service into new areas. As shown in the table on page 24, ridership for the fundable bus system is projected to double by year 2015. Productivity is projected to drop to slightly lower but still acceptable levels.

A major future challenge for GET will be to provide bus service in the fast growing southwestern and northwestern portions of the Metropolitan Area. As shown on the map below, GET currently serves only a small portion of what will be the total Metropolitan Area in year 2010, since it now operates most of its service east of SR-99. With lower residential and commercial densities, the southwest and northwest will be difficult to serve with conventional bus routes.

GET is purchasing a fleet of new full size coaches that will be propelled by compressed natural gas (CNG). These clean burning vehicles will help improve air quality.



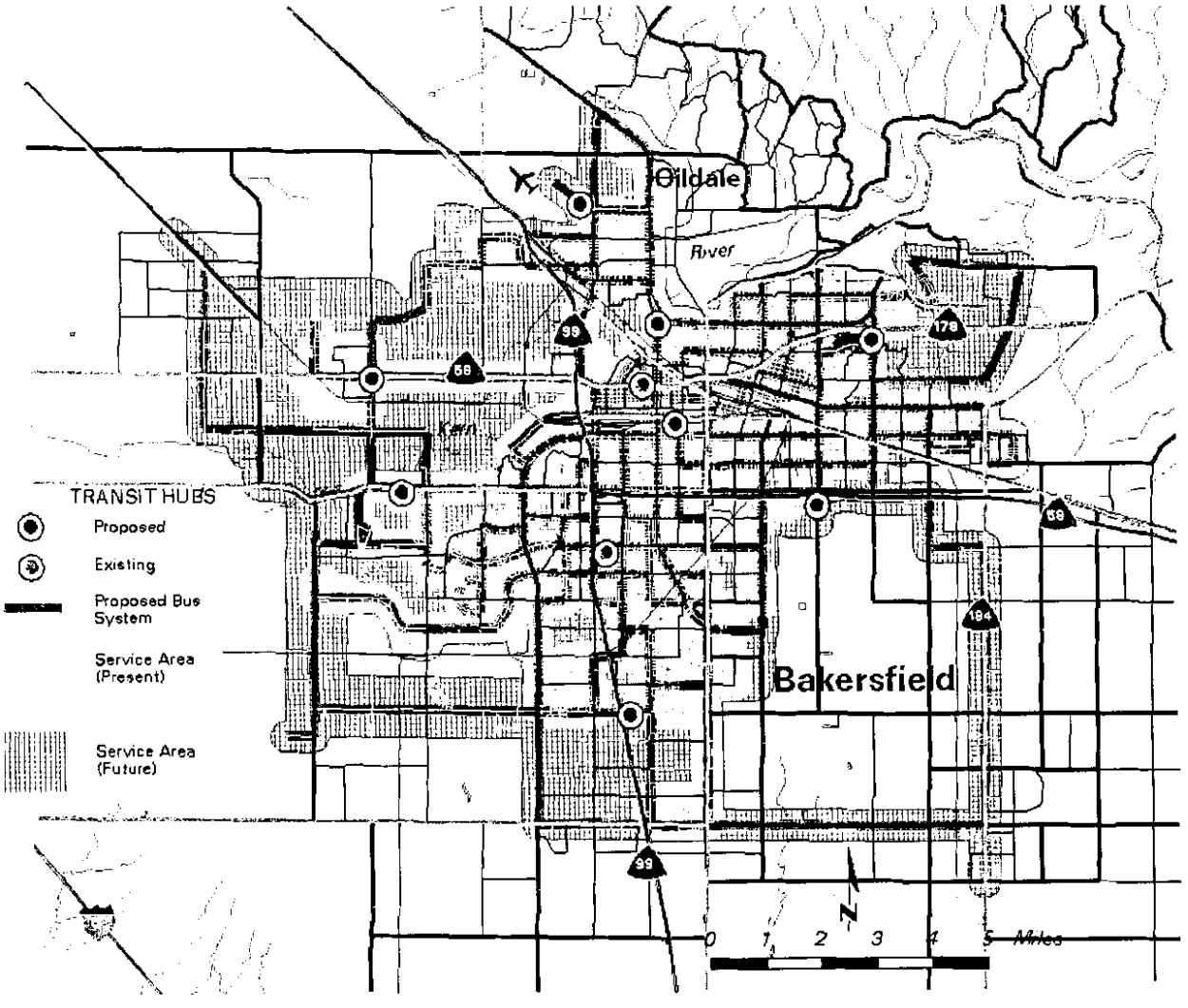
To provide transit service for the expected growth areas, GET must create new bus routes and add buses to its fleet.

Comparison of Total Daily Bus Transit Ridership and System Productivity for the Fundable MTIS Elements

	1994	Fundable Transit (Year 2015)
Total Daily GET Bus Passengers	18,000-19,000	35,000 - 40,000
In-Service Fleet Size in Peak Period	55	114
Boarding per Vehicle Hour	27-30	20-23
Note: Transit Industry Standards for Productivity on Fixed-Route Transit Service in Medium-Sized Metropolitan Areas range between 15 and 20 boardings per vehicle service hour.		

Projected Transit Capital Costs 1997 to Year 2015 (in Millions)

A. GET Fleet Requirements (114 Buses in Service)		
Small Buses	**Large Buses**	**Totals**
$2.20	$45.50	$47.70
B. GET Transit Center Costs		$9.94
C. Downtown Intercity Rail Terminal (AMTRAK)		$12.80
D. Expansion of GET Maintenance Facility		$0.30
Transit Total		$70.24



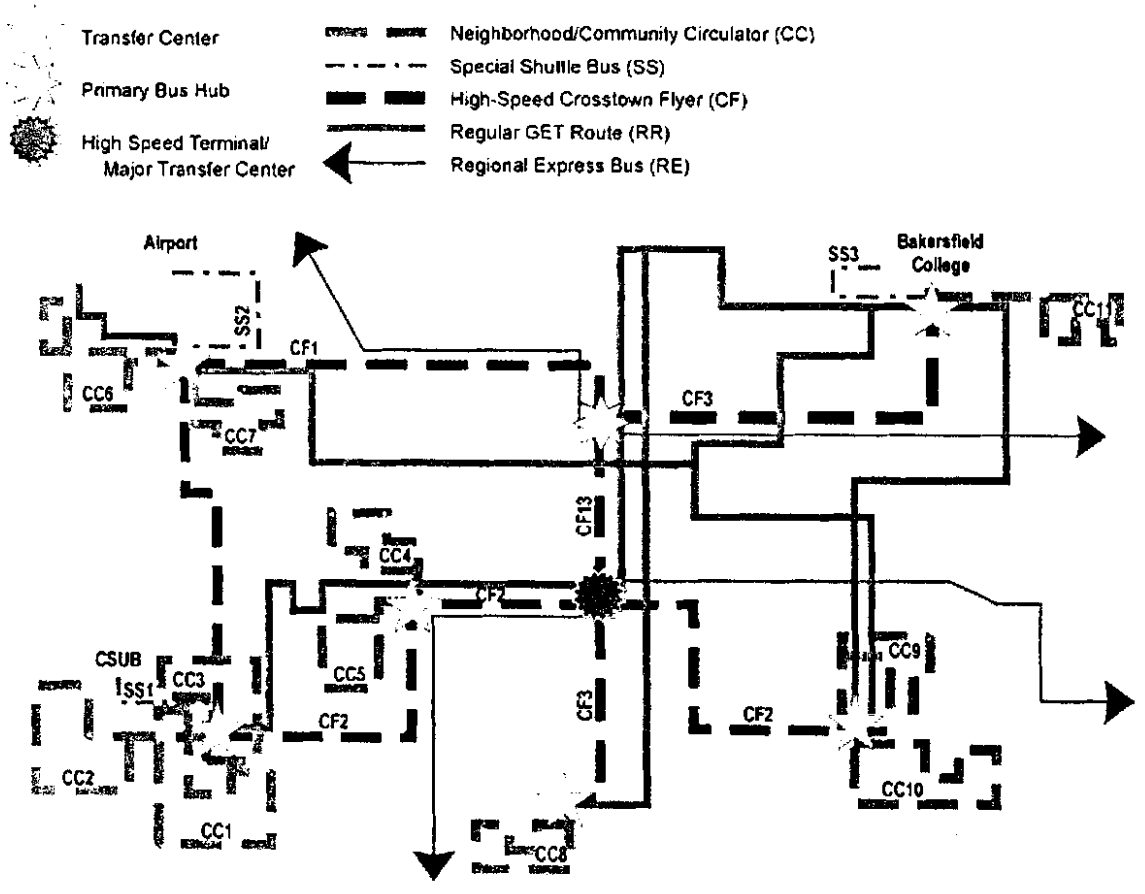
Golden Empire Transit District's proposed service expansion will extend its coverage into new areas not previously served by transit.

In addition, many of these walled communities are difficult to access with standard large buses. Therefore, to provide more transit service to these low density neighborhoods and still maintain good system productivity, GET will need to test new bus service concepts such as demand-response shuttles, point or route deviation, or other nontraditional types of transit service. These community circulator services will use smaller transit vehicles more suitable for operating in neighborhoods. The community circulator services will have timed transfers, with existing GET fixed routes at designated transfer centers. The recommended bus system contains four new community circulator routes at various locations in the Metropolitan Area.

Transit Components:

Future Bus Transit Concepts/Service Area Expansion

Under this strategy the GET bus system is redesigned for better areawide coverage, more direct service with better frequency and more hours of operation. Fleet size in excess of 115 vehicles providing a variety of specialized routes including express routes, high-speed crosstown routes, and neighborhood routes.

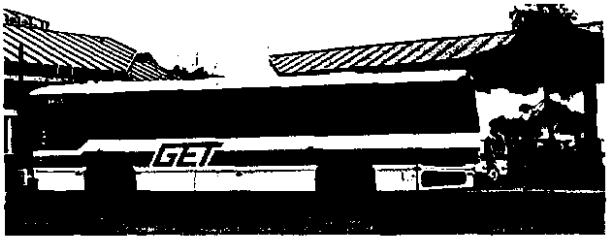


GET now has two operational transit hubs: the downtown and Valley Plaza Transit centers. In the coming years, as GET's service area expands, GET will need to develop new hubs and transfer centers in other portions of the greater Bakersfield Metropolitan Area. As new bus transit services are developed and existing routes are expanded into new areas, GET will need to evaluate various candidate sites for suitability as transfer centers. Over the long range, possible transfer centers could be located at:

1. Adult school at Mt. Vernon south of SR-58 to serve as the Southeast Transfer Hub.
2. Calloway/Rosedale Shopping Center to serve the northwest.
3. California State University Bakersfield to serve the southwest.
4. Home Base site at Panama Lane and SR-99 to serve the south Metropolitan Area.
5. East Hills Mall to serve the eastern Metropolitan Area.
6. Bakersfield Airport Multimodal Terminal to serve the north.
7. High Speed Rail/AMTRAK Multimodal Terminal in downtown Bakersfield as an additional central transfer site.
8. Chester/Columbus Routes 1 and 2.

As bus transit service is expanded, a primary goal will be to better serve as many activity centers and new employment sites as possible. For example, GET is determining whether it has the resources to provide better service to schools in the Metropolitan Area such as CSU-Bakersfield, Centennial High School, and Ridgeview High School. GET is also evaluating new connector services to Mercy Southwest Hospital and other newly developing trip generators.

Many new riders could be attracted to high-speed, crosstown bus routes instead of driving their cars. The routes are being designed to be as direct as possible with only limited stops to keep operating speeds close to automobiles traveling along the same arterials. Four of these limited stop routes are included in the recommended Strategy's future bus system which connects key transit hubs and activity centers throughout the Metropolitan Area. Thus, transit could remove some auto trips from congested streets and benefit air quality.



GET bus at downtown transit center.

E. Unfunded Transit Components

Although the GET District projects will have sufficient funds in the coming years to purchase the recommended bus fleet, it will not have sufficient funds to operate all future services. Over the 18-year period from 1997 to 2015, GET may have a shortfall in transit operating funds of between $46 and $78 million. The specific operating deficit will depend on service phasing, projected operating costs, and fare revenues.

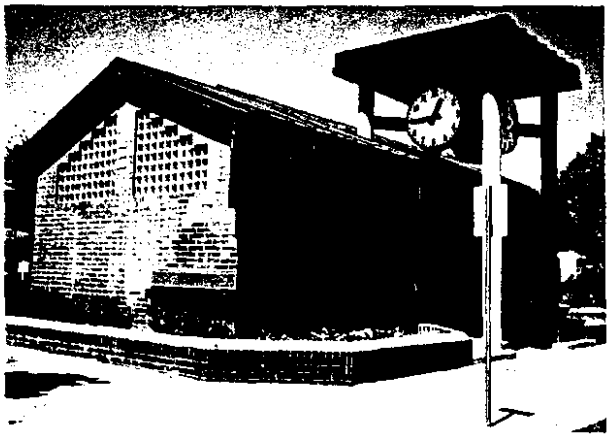
GET Transit Operating Costs to Year 2015 (in Millions)

	Funded	Unfunded	Total
GET Bus Routes	$346-371	$46-78	$392-449

F. Connections Between Transportation Modes

A primary goal of the Transportation Strategy for Metropolitan Bakersfield is balanced transportation. This means providing good linkages between all modes of travel such as good roadway connections and intermodal terminals and transit hubs where transfers can occur at strategic points in the system. In the future, as more modes of travel and services are provided, more locations throughout the Metropolitan Area will need to be found for connections between modes.

The variety and geographic extent of possible connections between surface transportation modes will continue to grow with the aforementioned GET transfer centers (hubs) that will be built throughout the Metropolitan Area and the development of a new downtown AMTRAK station [eventually expanded to serve as a possible high-speed-rail (HSR) terminal]. The central intercity transit terminal will eventually be served by a variety of bus transit and shuttle services. The AMTRAK station and some of the GET transit centers will also be able to accommodate park and ride trips. With the development of new bus transit centers in other quadrants of the Bakersfield Metropolitan Area, more opportunities will exist for transfers between various modes of travel and urban and intercity services.



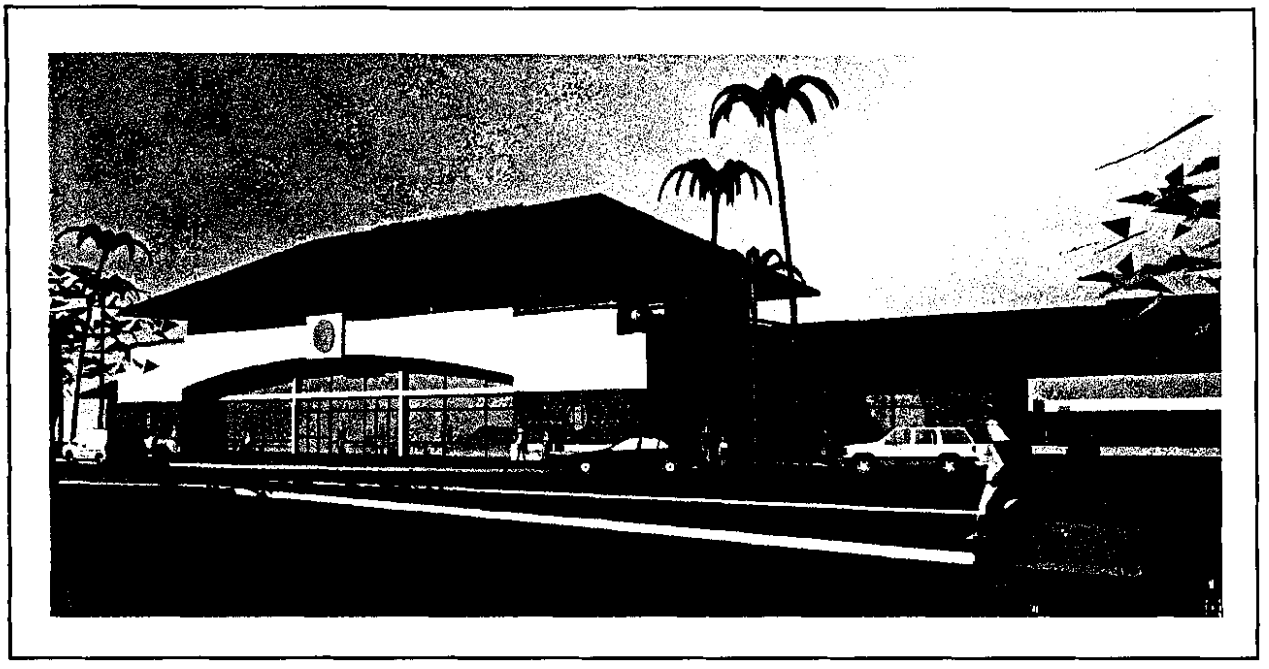
GET transit center on Chester Avenue in downtown Bakersfield.

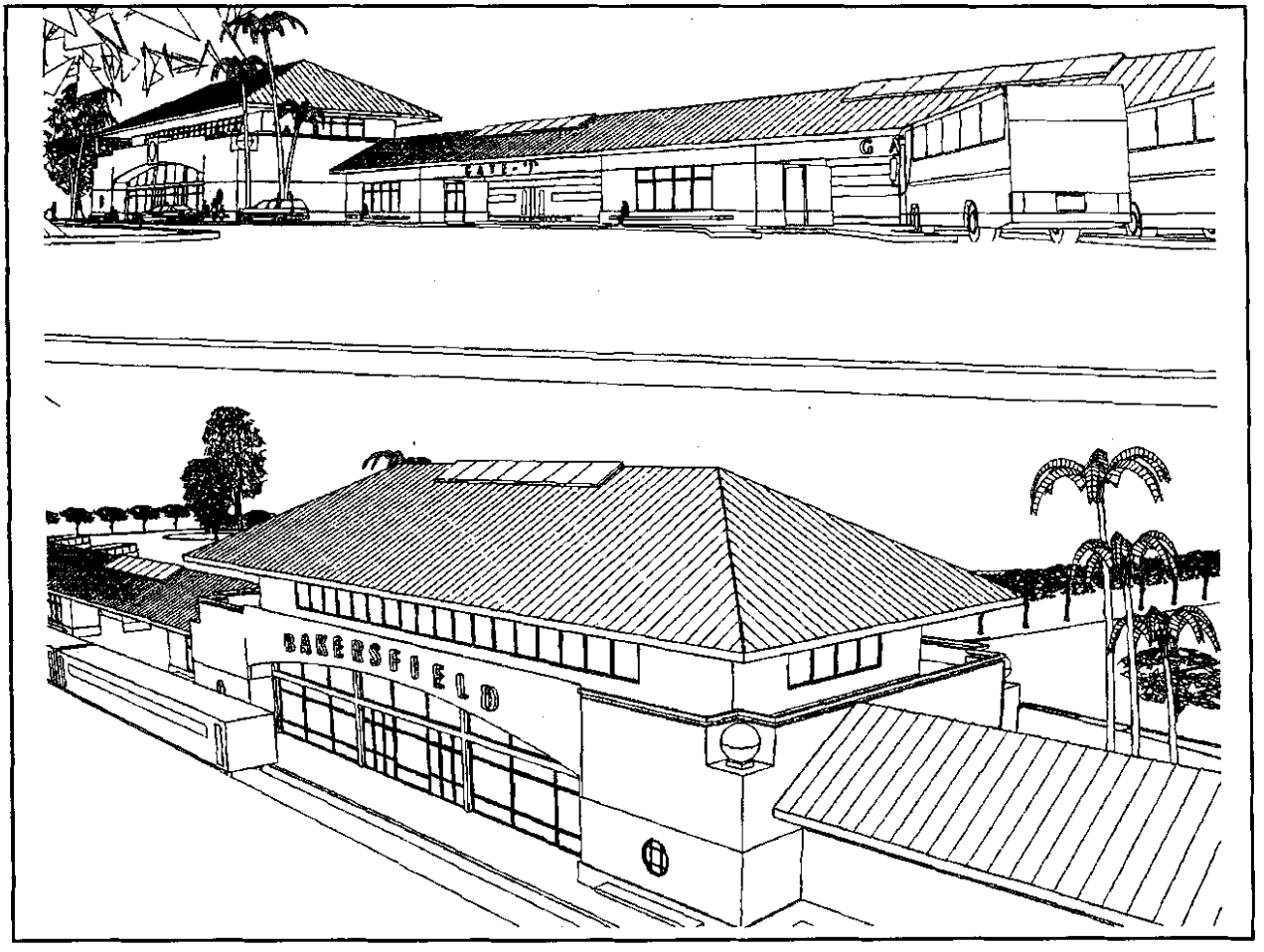
Another aspect of multimodal connections for the Metropolitan Bakersfield Area in the future is ensuring good ground access to Meadows Field, the area's primary commercial airport. Not only is it important to provide good roadway access to Meadows Field, but also good multimodal connections by bus transit and/or shuttle service. Good ground access to the airport is an important criterion as Kern County upgrades and expands the airport's infrastructure to attract expanded commercial air service in the future.

Meadow Field, operated by Kern County, serves the Bakersfield Metropolitan Area and the Southern San Joaquin Valley. Meadows Field is classified as a commercial service primary airport in the National Plan of Integrated Airport Systems (NPIAS). This facility serves both commercial and general aviation needs for Bakersfield and the southern San Joaquin Valley region. The airport is located on 1,017 acres of land four miles northwest of central Bakersfield.

The County of Kern is embarking on a new terminal project for Meadows Field. The current airport terminal is a 16,400-square-foot complex of two-story buildings that has served the community well, but it is insufficient in size to meet the needs of a fast-growing Metropolitan Area.

Currently, Meadows Field handles a variety of air cargo. This includes the package express services, such as United Parcel Service (UPS), Airborne Express, Federal Express, and DHL, and other more specialized air cargo. With the recent designation of a foreign trade zone to be located north of the airport, air cargo activity at Meadows Field could increase in the future.





Proposed Downtown AMTRAK Station

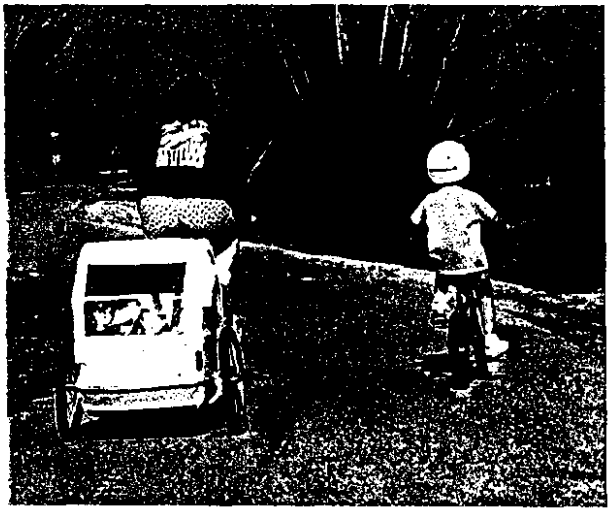
G. Ridesharing/Nonmotorized Modes

A major criterion for measuring the livability of a community is the quality and extent of facilities for recreational uses by citizens. The use of bicycle facilities and pedestrian trails has been on the rise over recent years and public support for extending these facilities has grown.

Both Bakersfield and Kern County have established plans for pedestrian and bicycle facilities as part of their current General Plan Circulation Elements. The current system of pedestrian and bicycle facilities and lanes (signing and striping) will continue to be built throughout the Bakersfield Metropolitan Area. In the future, as additional funds become available, new segments of the Bicycle Facilities Master Plan can be developed throughout the expanded Metropolitan Area.

H. Land Use Element

The Land Use Element of the new updated Bakersfield General Plan will contain a program that encourages in-fill development. It will also designate key transportation corridors which allow for land use intensification that is compatible with transit and the eventual development of a Light Rail Transit (LRT) line through the city. A livable community component will identify specific incentives for encouraging in-fill development and a better mix of land uses that reduce the overall number of vehicle trips and the average length of trips. The component will also demarcate the geographic limits (service area boundaries) that GET transit will serve in the Metropolitan Area.



The creation of bicycle and pedestrian lanes are an integral part of the Strategy. View of Kern River bicycle path.

Sprawling low-density development, with widely separated land uses, creates extra vehicular tripmaking and longer trip lengths for all categories of trips. For the most part, residents in these low-density areas are unable to walk to shopping, recreation, or entertainment; they must use their automobiles for all trips. This places extra burdens on the transportation system because the total miles vehicles travel grows out of proportion to the city's general growth. This extra travel also has a detrimental effect on the community's air quality and livability. Citizens will have to spend more time in traffic and will have less time for more enjoyable activities and personal time.

Parade on Chester Avenue.

10 Principles for a Balanced Community

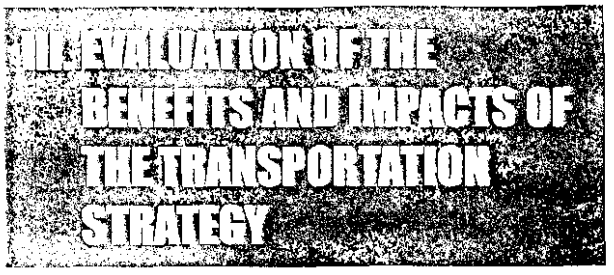
1. Create a pedestrian-friendly environment and include an ample supply of open spaces whose placement encourages frequent use.
2. Make pedestrian facilities a priority.
3. Design building sites to serve many users.
4. Encourage a mixture of land uses to encourage more walking and less driving.
5. Provide appropriate densities in key transportation corridors and encourage in-fill projects.
6. Interconnect the street and roadway system north-south and crosstown.
7. Narrow neighborhood streets to encourage community cohesiveness, but maximize capacity on major streets to promote better vehicle flow.
8. Create a "Central Place" within Metropolitan Bakersfield with several uses tied together and served by transit. A Central Place should have a cross-section of uses including commercial, civic, cultural and recreational uses.
9. Integrate transit facilities and services into the community's fabric.
10. Consider transit linkage in advance as development is planned.

More in-fill development will lessen the burden of growth and promote more efficient transportation in Bakersfield's future. The 10 principles shown above should be considered by the city to create a more balanced community and maintain Bakersfield's livability.

Along these lines, the city and county have included waivers and reductions in the new 1997 transportation fee program for development that minimizes or avoids new traffic impacts. These incentives will hopefully lead to more balanced development that places less burden on the future transportation system.

Replica of historic clock tower, originally on Chester Avenue. Tower located at Kern County Museum.

Old church plaza on Truxtun Avenue.



The individual projects and components included in the eight elements of the Endorsed Transportation Strategy were selected on the basis of strong community support, and because of their superior potential benefits to the community and their high cost-benefit ratios. At the beginning of the Major Transportation Investment Strategy (MTIS) for Metropolitan Bakersfield, a wide variety of roadway and transit projects were identified and evaluated by means of a comprehensive technical analysis. The technical evaluation looked at, among other things, costs, forecasted travel, engineering feasibility, and potential environmental issues associated with each candidate project or service. As a result of this comprehensive evaluation, many projects and services initially identified in the process were dropped because they were too costly, could not achieve a reasonable cost-benefit ratio, or would create too many adverse impacts. Certain projects proposed early in the MTIS process, such as beltways around the city and a crosstown Light Rail Transit (LRT) line, did show possible longer range promise, but not within the MTIS timeframe—1997 to year 2015. Therefore, these projects were not deleted from consideration, but merely deferred to the post-year 2015 timeframe.

Evaluation Screening Process

The sponsoring agencies concluded the comprehensive evaluation of potential roadway and transit projects for Metropolitan Bakersfield with a detailed ranking of candidate projects using a broad set of measures (criteria) that accounted for costs, benefits and impacts in the five major areas shown in the table below. Twelve separate criteria or measures were used to evaluate all candidate projects. These are listed below.

The Transportation Strategy was narrowed to only the most beneficial and feasible projects for each of the eight transportation elements.

Evaluation Screening Criteria Used in the MTIS

A. Transportation System Performance

1. Ensure future mobility and congestion relief (measured in point-to-point travel times within the Metropolitan Area).
2. Increased carrying capacity (measured in lane miles added to the roadway system and additional transit seats added).
3. System connectivity/multimodal connections.

B. Community Livability and Economic Vitality

4. Land use: Encourage balanced growth and development throughout the Metropolitan Area (discourage uncontrolled urban sprawl).
5. Revitalization of the Central Area and orderly development in key transportation corridors.
6. Encourage future economic development and growth in jobs.

C. Environmental and Quality of Life

7. Air quality benefits (measure reductions in vehicle miles traveled and vehicle hours traveled).
8. Minimize adverse impacts on neighborhoods and the human and natural environment.

D. Cost and Financial Feasibility

9. Total estimated capital costs.
10. Operating and maintenance costs (transit and roadway).
11. Overall financial feasibility.

E. Effectiveness/Efficiency

12. Comparison of overall costs and benefits.

These proposed projects are located throughout the Metropolitan Area and are summarized as follows:

Summary of MTIS Elements 1997 to Year 2015	
Major Roadway Projects	**Total**
SR-178 Crosstown Freeway (Centennial Transportation Corridor)	X
SR-58 Kern River Freeway (SR-99 – Stockdale Highway)	X
SR-178 – Oswell to Morning	X
Kern Canyon Expressway (Alfred Harrell – Morning Drive)	X
SR-58 Renfro to SR-99 (Rosedale Hwy.)	X
SR-58 Freeway (99 to Cottonwood)	X
SR-184 (Panama to SR-58)	X
Beltways (Right-of-way only)	X
SR-119 – Buena Vista to SR-99	X
Collectors & Arterials	
Roadwork (Strategic Widenings)	52
Traffic Signals	213
Traffic Control/Safety Projects	Several
Bridges Over River	5
Culverts Over Canals	Numerous
Railroad Overpasses/Underpasses	11
Railroad Crossing Improvements	Numerous
Transit Projects	
New buses purchased to add to fleet	60
New buses purchased to replace fleet	96
New minibuses for community circulators	10
Demand response vans (Get-A-Lift)	5
Total Fixed Route Fleet in Service (Year 2015)	114
Number of Bus Routes (Year 2015)	21
Proposed Transit Centers	8
CNG fueling station	1
GET facility expansion (adjacent land)	1
Multimodal Downtown AMTRAK Station	1

Environmental Issue Identification

As shown in the table on screening criteria, the effects or impacts (both positive and negative) that a major transportation project may have on the community or the natural environment was an important part of the MTIS evaluation and project selection process. The purpose of the environmental studies included in the Strategy was to identify potential social, economic, and physical environmental issues which may be attributed to each of the transportation components. The underlying assumption of this work was that the environmental analyses be performed at a level to allow for informed decision making. Also, the early identification of environmental issues in the MTIS will help streamline the more detailed studies that must be performed to environmentally clear individual projects as they move forward in the future.

The following text and the accompanying table summarize environmental issues associated with the recommended MTIS elements. As shown in the table, none of the elements selected in the Strategy is seen as having any substantial negative impacts (designated by a solid square in the matrix). Any project that might have significant negative impacts was dropped from further consideration early in the MTIS process. The solid circles or dots indicate potentially minor or moderately negative impacts that will need to be studied in more detail as projects are developed in the future. Overall, the elements of the Endorsed Transportation Strategy have many more potentially positive impacts and benefits than negative impacts. Therefore, most of the symbols shown in the table are either open circles or squares which denote positive impacts to the environment or potential benefits to the community.

Topography, Geology, and Seismicity – This category of impacts is important if projects traverse known earthquake fault lines or steep topography. None of the projects in the Strategy are deemed to have significant negative impacts in this category.

Hazardous Waste – The primary concern with regard to hazardous waste is the property acquisitions necessary for the SR-178 and SR-58 freeway alignments, especially if a portion of the SR-178 Crosstown Freeway is constructed on and above the BNSF rail yard, a known contaminated site.

Biological Resources/Agricultural – Since virtually all improvements will be in developed areas, no effect on native vegetation, endangered species, or prime agricultural land is expected. Riparian vegetation and water quality along the Kern River may be issues that need coverage for new river crossings.

Hydrology/Water Quality – Other than the abovementioned potential issues with river crossings, no meaningful issues are expected.

Oil and Gas Resources – Since virtually all of the endorsed projects are in developed areas, little or no effect on present or future drilling extraction or transmission of oil or gas resources is expected.

Air Quality – The entire package of projects included in the Strategy is expected to meet air quality standards for the area and may have a net positive effect on air quality because of improved traffic flow and increased use of transit.

Noise Impacts on Neighborhoods – The potential for noise impacts on neighborhoods adjacent to new roadway projects such as the SR-178 Crosstown Freeway will need to be more closely analyzed as environmental review for these projects occurs in the future.

Traffic/Induced Growth – In general, new roadway projects will induce some additional travel because of their convenience. However, the major impacts in this category are likely to be positive because the Strategy's major recommendations (SR-58 and SR-178) add much needed new capacity, close missing gaps in the system and improve roadway safety by removing trucks from surface streets.

Quality of Life/Community Livability – The Strategy focuses on projects such as the SR-178 Crosstown Freeway that will improve the vitality of the downtown and by improving transit that discourages urban sprawl.

Cultural Resources/Historic – Impacts on the community's cultural resources and historic properties will need to be analyzed in detail as projects are examined in detail from an environmental perspective in the future.

Aesthetics/Visual Impacts on Adjacent Neighborhoods – As individual alignments are established for the SR-58 and SR-178 and other roadways in the future, visual impacts on adjacent neighborhood will be analyzed.

Community Vitality and Economic Growth – The Strategy's endorsed elements will cumulatively have substantial benefits to the community's vitality and economic growth because they will improve mobility for residents and create better continuity in Bakersfield's roadway system.

Burden on Public Services and Utilities/Induced Urban Sprawl – Few negative impacts are expected in this category since the Strategy's elements focus on serving in-fill development rather than urban sprawl.

Better Access to Public Schools – The transit and roadway elements of the Strategy will greatly improve accessibility to Bakersfield's schools.

Improve Emergency Response Time – The response times for emergency vehicles traveling across town will be greatly improved if the SR-58 Kern River Freeway and SR-178 Crosstown Freeway are built.

Land Use Compatibility – Some potential issues in this category will need to be closely analyzed as the SR-58 and SR-178 projects are environmentally reviewed.

Neighborhood/Community Impact – Specific analyses of this category of impacts will occur as individual projects are environmentally reviewed and cleared in the future.

Metropolitan Bakersfield Major Transportation Investment Strategy
Environmental Issue Identification

Environmental Impact Category		Transit		Road Improvements		Major Roadways	
		Bus Service	Transit Centers	Signals/ Widenings	Bridges/ Grade Separations	SR-58	SR-178
Topography, Geology, and Seismicity			•			•	•
Hazardous Waste				•	•	•	●
Biological Resources/ Agricultural	Displacement of Flora and Fauna/ Endangered Species/Loss of Prime Agricultural Land	O	•	•	•	●	•
Hydrology and Water Quality	Risk from Flooding/Change in Siltation		•	•		•	
Oil and Gas Resources	Preclusion of Future Drilling or Current Operation			•	•	•	
Air Quality	Mobile Source Emissions Consistency with Air Pollution Guidelines	O □	O □	• O	• ◦	• O	• O
Noise	Noise Impacts on Neighborhoods	•	•	•	•	●	●
Traffic/Induced Growth	Increased Traffic Generation Added Roadway Capacity Continuity of Road Network Improved Roadway Safety	◦ O	◦ O	● ◦ ◦ O	● ◦ ◦ O	● □ ◦ □	● □ □ □
Quality of Life/ Community Livability	Vitality of downtown Bakersfield Ensure mobility for all residents Discourage Urban Sprawl	O O O	O O O	• O •	◦ O •	O □ •	□ □ •
Cultural Resources/Historic	Historic/Archaeological			•		•	•
Aesthetics/Visual	Views from adjacent Neighborhoods			•		•	•
Community Vitality and Economic Growth	Ensure Mobility/Stimulate Economy Economic Benefits Induced Population Growth	O O	O O	◦ ◦ •	◦ ◦ •	□ ◦ •	□ ◦ •
Burden on Public Services and Utilities/ Induced Urban Sprawl				•	•	•	•
Better Access to Public Schools		O	O	O	O	O	O
Improve Emergency Response Time				◦	O	O	O
Land Use Compatibility	Compatibility with Adjacent Land Uses	O	O	•	•	●	•
Neighborhood/ Community Impacts	Residential/Commercial/Displacements Creation of barriers/division Recreation and Parks and Sensitive Uses	 O	• O	• • •		● • •	• • •

■ ● • ◦ O □

Negative **No Impact** **Beneficial**

The solid circles or dots that are shown indicate potentially minor or moderately negative impacts that will need to be studied in more detail as projects are developed in the future.

ACTION PLAN

The Metropolitan Bakersfield Major Transportation Investment Strategy (MTIS) has instituted a set of core activities that will guide the implementation of new roadway and transit projects identified during the MTIS process. These core activities are derived from the need to establish a strategy for setting priorities and timelines to successfully implement the various capital projects envisioned by the MTIS. From the short term to the long term, a strategy for success is imperative.

This chapter outlines the action-oriented plan for the capital projects contained in the preferred MTIS alternative. Maintenance and rehabilitation initiatives for both the roadway network and transit system are also included. As timing is crucial for project delivery, so is maximizing available resources, and the implementation program carefully outlines the critical success factors and steps necessary for each project. A key factor underlying the success of the Action Plan will be its ability to deliver the projects.

The Action Plan contains three primary sections. The first section establishes an overall set of guiding principles that provides the direction and the foundation for the steps to be taken in carrying out the endorsed transportation program. These eight guiding principles promote a balanced transportation system and on the ground delivery of projects.

This section also describes a consensus agreement entered into by the Interagency Management Committee (IMC) for this MTIS Action Plan. The agreement fosters ongoing interagency cooperation and coordination toward the implementation and updating of the endorsed transportation program. The IMC will review the implementation status of the endorsed transportation program and produce an Annual Report and Annual Action Plan.

Stockdale Highway river crossing looking northwest.

The second primary section contains the strategy timeline which is a project implementation phasing plan. The phasing plan shows a schedule of activities that will direct the various timely efforts to be undertaken by participating local agencies. The plan is composed of three separate sets of tables. The first set identifies the roadway projects and nonmotorized projects designated for delivery between 1997 and 2015. The second set of tables contains roadway projects that do not have funding but have been identified as having high benefit to the community in the future. The third set of tables identifies the transit activities that are planned through year 2015.

The final primary section of this Action Plan describes the financial strategy which links project priorities, project development, and project delivery with anticipated future resources. It is recognized that not enough resources are available to implement all the

projects in the endorsed transportation program; therefore, the financial strategy defines a work plan to further the objective of obtaining additional funds. Tables and graphs conclude this section with cash flow projections and the anticipated distribution of available revenues.

Annual Update

The project timeline and lead agency identified for each specific project match the plans and programs in place in 1997. In all likelihood, many things will be different in 1998 and 1999 and so on. Therefore, this MTIS Action Plan is dynamic because of future uncertainties stemming from budgetary, political, and economic stimulants affecting local, state, and federal levels. As needed, the MTIS will be modified and updated by the six participating agencies and jurisdictions on an annual basis to accommodate needed changes. The governing boards of each participating agency in the MTIS will then endorse the updated Action Plan and project prioritization.

Given these dynamics, the IMC has entered into a consensus agreement for this MTIS Action Plan to foster ongoing interagency cooperation and coordination toward the implementation and periodic updating of the endorsed transportation program. The IMC will review the implementation status of this endorsed transportation program and produce an Annual Report that serves two primary purposes: to document the status of implementation of the endorsed transportation program for each of the partner agencies, and to inform and receive endorsements from elected officials, local organizations, and the public of the progress toward implementation of this endorsed transportation program.

The Action Plan Sets Priorities

An Action Plan implements the recommended elements of the Transportation Strategy.

The Action Plan addresses the following:	
Phasing	Defining usable project segments.
Timing	Managing available resources to maximize project implementation.
Priorities	Demonstrating local commitment through early actions.
Community Support	Promoting public awareness of the implementation strategy.
Consensus	Linking these investments to the Regional Transportation Plan and city and county plans and programs.
Operations	Addressing maintenance and operations costs as well as capital costs.
Planning	Annually updating priorities and periodically revising transportation plan elements.
Shortfalls	Determining what additional funds are needed for unfunded projects with high-benefits.

Based on the annual review and status of implementation of the endorsed transportation program, the IMC will develop an Annual Report and a new Annual Action Plan that will update this plan. The Annual Action Plan will address the specific roles, responsibilities, and deliverables in following the guiding principles described above. More specifically, the Annual Report will serve two primary purposes: to document the status of implementation of this endorsed transportation program for each of the partner agencies, and to inform and receive endorsements from elected officials, local organizations and the public toward implementing the transportation program. The annual update will give credence to the MTIS process in ensuring its continued implementation and flexibility to reflect future conditions.

Action Plan Principles

An overall set of guiding principles for the Action Plan has been identified to drive the action-oriented plan. These basic principles provide the direction and foundation for steps to be taken to move recommended roadway and transit projects along in the development and implementation process.

1. *Phasing: Define and deliver usable project segments that have high immediate benefits.*

Typically large-scale transportation projects are built in phases or segments. Therefore, to generate and maintain community interest in the project, it is important that the sponsoring agency identify and deliver the fundable portions of a roadway or transit project that the community can immediately have access to and use for its benefit. For example, a large highway project may have various segments of arterials constructed first so that the public has access to them, even before completion of the entire highway itself. If an immediate public benefit is realized from the initial phases of construction, then continuous support for the entire project is most likely to be realized.

2. *Timing: Manage revenues as they become available through effective partnering to maximize project implementation.*

Resources, both monetary and time, are limited and must be efficiently managed to achieve the maximum community benefit from a transportation investment. Many qualified transportation projects are vying for the same limited resources, which requires an effective prioritization plan of projects. Effective prioritization requires a close working relationship between the agencies sponsoring the projects to ensure that there will be a consensus developed in the community on the important tradeoffs necessary when resources are limited.

3. *Priorities: Demonstrate local commitment through on-time delivery of projects.*

Citizens are often skeptical about local government's abilities to deliver on promises. If early actions through the delivery of the first phase of a transportation project can materialize in a timely and cost-effective manner, a commitment is demonstrated to citizens that local government can indeed follow up on projects. This demonstration will be an outgrowth of the first guiding principle to deliver projects for immediate public benefit.

4. *Community Support: Promote public awareness of MTIS progress and strategy.*

The MTIS process is the first step toward improving present and future mobility problems in the Metropolitan Bakersfield Area. Therefore, the public should be made aware of the progress of the MTIS and its contents. Presentations by IMC members to community groups and public workshops are prime examples of promoting this project as well as receiving feedback. Enlisting the support of local transportation groups such as the Kern Transportation Foundation (KTF), and business and professional organizations such as the Building Industry Association (BIA) will strengthen the position of the MTIS and the strategies developed from this process.

5. *Consensus Planning: Link the Locally Preferred Alternative to the Regional Transportation Plan and the City and County General Plan Transportation Elements.*

The overall transportation planning document for the Metropolitan Area is the Regional Transportation Plan (RTP) developed by the Kern Council of Governments (COG) with input from local agencies and jurisdictions. The RTP is updated every two years and contains the major transportation projects planned for a 20-year period. The capital projects and strategies developed from the MTIS should be included in the RTP and in the biennial updates so that interagency commitments are achieved and maintained and that MTIS projects can be recognized as having both local and regional significance. At the same time, the recommended elements should feed into the periodic updates of the city and county General Plan Transportation Elements.

6. *O&M Requirements: Factor in operations and maintenance components as part of the transportation responsibility.*

In some cases, operations and maintenance (O&M) for both roadways and transit have been de-emphasized in favor of construction of new facilities. However, O&M has been recognized as a major component in the feasibility of the MTIS and deserves significant attention because the replacement value of the existing transportation investment exceeds the cost of the new facilities. The present transportation system in the Bakersfield Metropolitan Area is beginning to weaken and crumble, leaving users of the system to voice demand for repairs and maintenance. For transit, the ability to expand services will be curtailed by inadequacies in funds to operate a larger fleet. We believe that O&M is a real and serious factor that must be integrated in the Action Plan so that the existing system is not left behind as new projects are constructed.

7. *Dynamic Planning: Emphasize dynamic nature of project development and the need to regularly update the document.*

With the development phase of the MTIS process now completed, it is up to the participating agencies to continue its deployment. The process of negotiating, selecting, and implementing infrastructure projects is not static and short-term, but rather a dynamic, long-term, challenging operation. The MTIS project horizon is through the year 2015, which is relatively a long time for project development. Therefore, it is more of a requirement than a choice to regularly update the document resulting from the MTIS. As the circumstances change over time, so should the document. Not doing so could jeopardize the core strategies and reduce the effectiveness of the entire process on building the future transportation network in the Bakersfield Metropolitan Area.

8. *Shortfalls: Determine amount of additional revenues required and initiate a funding strategy.*

There are not enough revenues to fully fund all the transportation projects proposed in the endorsed transportation program. It is imperative to determine the revenues that will be needed to fill the funding gap and develop a strategy to obtain the additional funds. Reallocation of existing revenues and/or the generation of a new funding source requires that priority projects be identified and ready to be delivered once the funds become available.

Project Implementation Phasing Plan

This section presents the Action Plan's timeline for phasing the MTIS projects through the year 2015. The Action Plan mirrors a schedule of activities that will direct the various timely efforts undertaken by the participating local agencies.

As shown below, a key part of the timeline for project implementation involves ongoing planning and programming activities by the city, county, state, and in particular the Kern Council of Governments, the Metropolitan Planning Organization (MPO) for Kern County. It is paramount that all of these planning and programming activities be kept up-to-date to facilitate the expeditious implementation of transportation projects.

Ongoing Planning Activities for Kern County and Metropolitan Bakersfield 1997 to Horizon Year 2015

City and County

- Updates to the General Plan circulation element.
- Updates to the Capital Improvement Program.

Kern COG

- RTP updates.
- RTIP updates.
- FTIP updates.
- MTIS updates.

State

- STIP updates.
- SR-178 route adoption (crosstown).
- SR-178 to SR-58 connection route adoption.

Each MTIS project is applicable to one of seven core categories:

1. Roadway projects
2. Roadway operations and maintenance
3. Transit projects
4. Transit operations and maintenance
5. New connections between transportation modes
6. Nonmotorized modes
7. Land use elements

The project implementation phasing plan is reported in four separate tables. Table 1 identifies the roadway projects and nonmotorized projects designated for implementation between 1997 and 2015. The timeline for the delivery of these projects is divided into three phases. The first phase is from years 1997 through 2002, the second is from 2003 through 2006, and the third is from 2007 through 2015. Roadway operations and maintenance programs are also shown and are continuous from 1997 to year 2015.

The lead implementation agency (city of Bakersfield, county of Kern, or Caltrans) responsible for the project is identified on one axis while the various roadway activities, such as engineering and construction are listed on the other axis. Planning activities will also be continuously under way through 2015. The specific roadway projects planned for delivery in each increment are contained in the appropriate phase. Planning and engineering studies and right-of-way preservation are included in the tables, as these initiatives are important in the phasing of actual construction.

Action Plan to Guide the Implementation of Projects for All Eight Elements of the Strategy

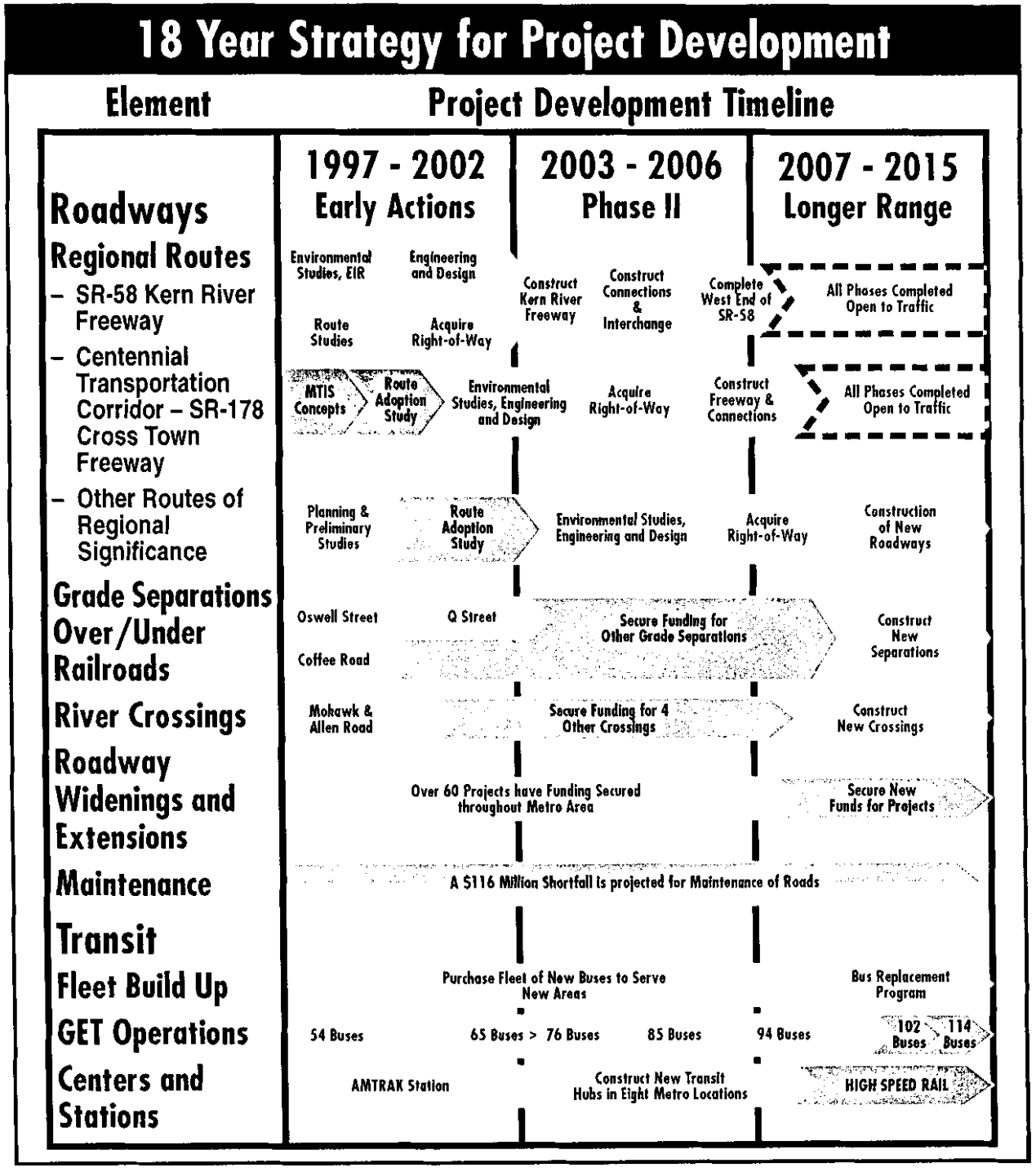


Table 1 - Fundable Roadway Projects

	City	County	State
1997-2002 Engr. & Environ.			SR 58 Stockdale to Truxtun
Right-of-Way	SR 178 ROW preservation SR 58 ROW preservation Beltways ROW preservation	SR 178 ROW preservation SR 58 ROW preservation Beltways ROW preservation	
Construction	96 minor street widenings 5 street construction projects 58 new traffic signals 9 signal modifications Safety projects 2 off-street pavement or landscaping projects 2 street reconstruction projects 9 Bridge improvement/construction projects Canal crossings Other street improvements (culverts, etc.) Grade separation at Coffee Road Widen bridges/interchg on Panama Lane at SR 99 River crossing at Mohawk Q Street grade separation at BNSF RR	Minor road widenings and improvements New and minified traffic signals, and Signal coordination Safety projects Grade separation at Oswell street Grade separation at Calloway road	Widen bridges/interchanges on White Lane at SR 99
Road Maintenance	73 street resurfacing projects 5 chip sealing projects	Overlay, at rate of $2.5 million per year Reconstruction, at rate of $1 million per year Hazard elimination Safety improvements Grade crossing improvements Routine maintenance	Preventive maintenance and rehabilitation
Pedestrian/ Bike	Citywide bike lanes Road widening for Class 2 bikeway projects	Road widening for Class 2 bikeway projects	
2003-2006 Engr. & Environ.			SR 178 engineering studies and environmental studies (Crosstown) SR 58 from SR 178 Connection
Right-of-Way	SR 178 ROW preservation SR 58 ROW acquisition Beltways ROW preservation	SR 178 ROW preservation SR 58 ROW acquisition Beltways ROW preservation	
Construction	Major widening project to Rosedale Highway Minor street widenings Other street improvements 45 new traffic signals SMART streets Canal crossings Safety projects River crossing at Allen Road	Minor road widenings and improvements (1) New and modified traffic signals, and Signal coordination (2) Safety projects	SR 58 from Stockdale to Truxtun Widen SR 178 from Oswell to Morning Dr., including interchange at Fairfax
Road Maintenance	Develop maintenance plan	Overlay, at rate of $2.5 million per year Reconstruction, at rate of $1 million per year Hazard elimination (3) Safety improvements (3) Grade crossing improvements (3) Routine maintenance	Preventive maintenance and rehabilitation
Pedestrian/ Bike	Various Class 2 and Class 3 bikeway projects (primarily paving, road striping, and signage)	Road widening for Class 2 bikeway projects	
2007-2015 Engr. & Environ.	West/South beltway engineering West/South beltway environmental review		
Right-of-Way	SR 178 ROW preservation Beltways ROW preservation	SR 178 ROW preservation Beltways ROW preservation	
Construction	Minor street widenings Other street improvements 90 new traffic signals SMART streets Canal crossings Safety projects	Minor road widenings and improvements New and modified traffic signals, and signal coordination Safety projects Grade Separation at Mohawk Widen bridge/interchg at Olive Drive at SR 99 Widen bridge/interchg at Fairfax Road and Alfred Harrell Highway Major widening projects to Rosedale Highway Build interchange on SR 58 at Fairfax Road	Widen SR 58 from SR 99 to Cottonwood SR 178 from Morning Dr. to Alfred Harrell Highway SR 199 from Buena Vista to SR 99 SR 184 from Panama to SR 58 Major widening projects to SR 119 and SR 184 SR 58 from SR 178 connection
Road Maintenance	Develop maintenance plan	Overlay at rate of $2.5 million per year Reconstruction at rate of $1 million per year Hazard elimination Safety improvements Grade crossing improvements Routine maintenance	Preventive maintenance and rehabilitation
Pedestrian/ Bike	Various Class 2 and Class 3 bikeway projects (primarily paving, road stripping, and signage)	Road widening for Class 2 bikeway projects	

The transportation projects to be delivered between 1997 and 2002 are based on the respective agencies' Capital Improvement Programs. The target dates for the longer range projects have been endorsed based on the revised transportation impact fee program and the expected levels of revenues from the program from all funding sources.

Table 2 contains roadway projects that do not have funding but have been identified as having high benefit to the community in the future. Funding should be sought for these projects. Tables 3 and 4 identify the transit activities planned through year 2015. Capital as well as operations items for Golden Empire Transit District are included in the table as are capital costs for the proposed multimodal (AMTRAK) station.

The time frame and lead agency identified for each specific project are accurate at the time the Action Plan was developed in late 1997. However, this Action Plan is dynamic because there are uncertainties stemming from future budgetary, political, and economic constraints on local, state, and federal programs. Actions are also subject to modification by the annual updating process, as described earlier in this section.

Early Deployment and Immediate Action Items

An integral part of the eight elements of the endorsed transportation strategy was the identification of immediate or early action items for roadways and transit. For roadways, the city is moving ahead with several roadway widenings, grade separations, and traffic signalizations at key intersections.

For the SR-58 Kern River Freeway, the city is strategically acquiring rights-of-way. Caltrans, Kern COG, and the city are moving quickly in establishing a route alignment, engineering concepts, and a phasing plan. The agencies are also considering strategic early acquisitions of ROW for other major roadway projects in the Metropolitan Area.

Table 2 - Unfunded High Benefit Roadway Projects

	City/County Responsibility	Cost (mil. $)	State Responsibility	Cost (mil. $)
Planning			PSR, SR 58 East-West Connection	
Engr. & Design			SR 58 East-West Connection	
Construction	E. Truxtun grade separation BNSF RR	14.0	SR 178 Crosstown Freeway	261.0
	Q Street grade separation at UP RR	7.0	East Beltway	40.0
	Grade separation at 7th standard	8.0	SR 58 West interchange at SR 99	75.0
	Grade separation at Olive Drive	7.0	SR 58 West from I-5 to Stockdale Highway	125.0
	Airport Drive (expand existing overpass)	1.5		
	Ext. of Hageman Road between Mohawk and SR 204	15.0		
	Grade separation at Weedpatch/Morning Dr. (SR 184)	1.5		
	River crossing at Chester Ave. (widen)	2.0		
	River crossing at Manor Drive (widen)	2.0		
	River crossing at Renfro Road	3.5		
	West Beltway	127.0		
	South Beltway	156.0		
Total		344.5		501.0

For transit and connections between transportation modes, GET, Bakersfield, Kern COG, Kern County, and Caltrans are moving ahead on several fronts. As shown in Table 3 below and in Table 4, GET is purchasing 50 new compressed natural gas buses over the next two years to expand and modernize its operating fleet.

In addition, GET is instituting new innovative bus routes to better serve the community. Early in 1998, GET will initiate a new crosstown flyer route from Valley Plaza to the downtown area, and then to Bakersfield College. This new bus route will provide high-speed, limited-stop service between these key activity centers and therefore should attract new riders to transit. In the near future, GET will also initiate its first community circulator route as shown in Table 4. This service will be a point deviation type of service that allows for buses to better penetrate neighborhoods; and it can be used by people who call in advance for bus service pick up at their home or business.

GET
Golden Empire Transit District

Table 3 - Fundable Transit Projects for GET and Other Local Agencies

Transit Project	Time Frame 1997-2002	2003-2006	2007-2015
New buses purchased to add to fleet (shown 2 years before service intro.)	18	26	16
New buses purchased to replace fleet	32	16	48
New minibuses	4	3	3
Demand response vans	4		1
GET facility expansion (adjacent land)	Expand	Operational	Operational
Transit center construction (location)	(1) East Hills	(2) Home Base (3) Cal State (4) Adult School	(5) Calloway (6) Intermodal (7) Airport (8) Columbus/Chester
CNG fueling station	Construction	Operational	Operational
Transit O&M costs	$66.5 million	$86 million*	$280.9 million*
Multimodal station (modes connection)	Studies, ROW acquisition, initial construction	Construction	Operational
*Additional funding required.			

Table 4 - Long-Range Service Plan for Fundable Transit Component

FY	Route	Service Change	No. Small Buses Added	Total No. Buses Added	No. Buses in Service on Route	Total System Buses in Service
97/98	CTG3	Initiate S. West/Dntn/e. Hills Flyer		3	3	
	1	Improve Headways to 30 min.		1	2	
	4	Improve Headways to 20 min.		1	3	
	7	Improve Headways to 15 min. East End		3	8	
	8	Improve Headways to 15 min. East End		0	10	62
98/99						62
99/00						62
00/01	1	Extend Route in Northwest		1	3	
	5	Improve Headways to 15 min.		3	11	
		Construct Home Base Transit Center				66
01/02	2	Shorten & Add 15 min. Headway All Day		-1	8	
	4	Improve Headways to 15 min.		1	4	
	13	Improve Headways to 15 min. & Combine with RT 15		3	4	
	15	Eliminate & Combine with RT 13		-1	0	
	CC3	Initiate Greenfield/South Circulator	2	2	2	
	CC4	Initiate Ridgeview/South Circulator	2	2	2	72
		Construct Home Base Transit Center				
02/03	11	Improve Headways to 15 min.		5	10	
	CT1	Initiate Western Flyer		5	5	
	CT3	Improve Headways to 15 min.		3	6	85
		Construction Cal State Transit Center				
03/04	7	Improve Headways to 15 min.		2	10	87
04/05	14	Improve Headways to 30 min.		2	4	89
05/06	6	Eliminate & Combine with CT4		-3	0	
	CT4	Initiate S. West/N. East Flyer		9	9	
	CC1	Initiate Hills Circulator	3	3	3	98
		Construction Adjust School Transit Center				
06/07	10	Improve Headways to 15 min.		3	4	101
07/08	CT2	Initiate Rosedale Hills Flyer		7	7	108
		Construction Calloway Transit Center				
08/09		Construct Intermodal Transit Center				108
09/10	9	Improve Headways to 15 min.		2	10	110
10/11	CC2	Initiate Oildale/Airport/Pegasus Circulator	3	3	3	113
		Construct Airport Transit Center				
11/12						113
12/13		Construct Columbus/Chester Transit Center				113
13/14				1	2	113
14/15	3	Improve Headways to 30 min.				114

Financial Strategy

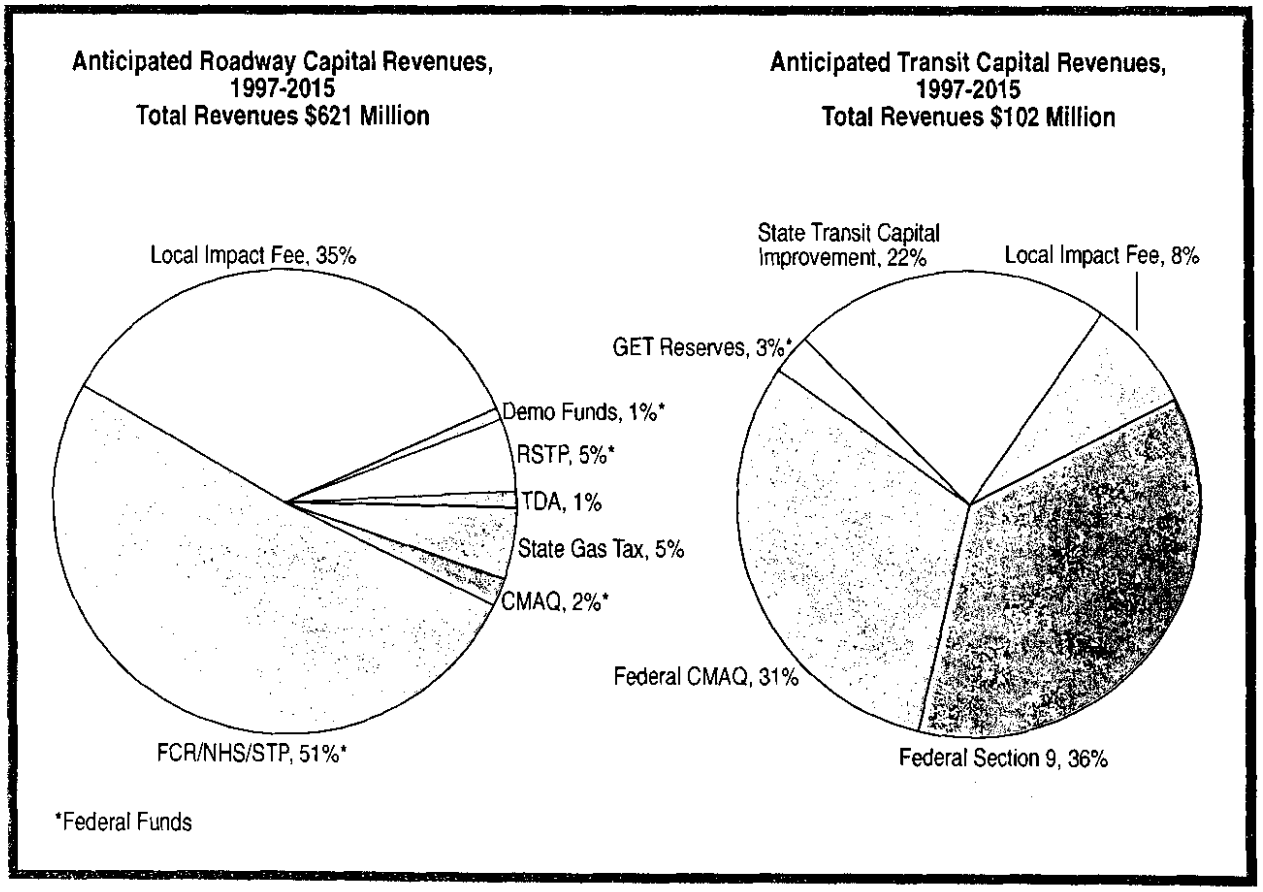
A financial strategy is necessary to link project priorities, project development, and project delivery with needed resources. This Strategy must be recognized by the community as the outgrowth of a process that defines community transportation investment requirements and it must be inclusive as to participation. This has been developed with the assumption that expected revenues for each element of the strategy will be used in the most efficient manner possible and opportunities to generate new funds will be aggressively pursued by the agencies involved in the strategy. The various funding sources are shown in the pie chart below which highlights the capital roadway and transit projects for the MTIS period 1997 through 2015.

To help further the financial strategy, several conditions should be met:

Recognition of Need. The MTIS is a definition of need and possible solutions. This recognition of need requires that the entire MTIS be adopted by the participating agencies. This action acknowledges the importance of the total transportation program for Metropolitan Bakersfield with all eight elements addressed.

Program Legitimacy. The MTIS must be incorporated in the Regional Transportation Plan (RTP), the Circulation Element of the city and county, and GET's Short-Range Transit Plan and Long-Range Strategic Plan. The appropriate elements must be incorporated into all appropriate agency planning and capital improvement programs.

MTIS Roadway and Transit Capital Expenditures



Agency Performance. The responsible agencies must identify usable segments or components of MTIS projects that can be implemented using existing revenues. These projects must be delivered on time and within budget. This will undoubtedly require some adept programming on the part of Kern COG.

Each of the above actions provides an opportunity to draw attention to the agreed upon transportation needs of Bakersfield and the agreed upon program of projects necessary to address those needs.

Assignment of Leadership Responsibility. It is also necessary to assign leadership responsibility to a project participant for managing the ongoing communication requirements that are necessary to build public support for the projects. In addition to reacting to opportunities as they emerge, proactive actions such as periodic reports on the state of transportation in the metropolitan region, at the beginning of the vacation season, or the beginning of winter might be an effective way of drawing attention to the transportation needs of the region. It is also necessary to conduct periodic polls of the public perception of transportation requirements and the alternatives available to fund them.

Build the Base of Support. Beginning with the city government and agencies, initiate activities (e.g., presentations) on the transportation requirements and what is being done with the limited existing resources. After securing the base, the next group of potential supporters must be addressed. For example, a critical group to have on board is the senior community. Therefore, projects and programs that appeal to seniors should be highlighted.

Formation of a Transportation Coalition. It is necessary to create a broad-based coalition for the MTIS program. There may be an existing organization that could be used for this purpose, e.g., the Kern Transportation Foundation (KTF). However, other organizations may need to be brought in to the coalition where appropriate.

Craft Strategies to Increase Revenues. A variety of approaches should be explored for increasing transportation revenues for Bakersfield. These range from reallocation of existing revenues to transportation (e.g., monies raised from transportation services that now go elsewhere) to establishing new local sources of revenues.

If a new source of local revenues is to be pursued three basic conditions exist that must be followed for success:

1. Develop a sound investment program.
2. Develop a broad inclusive base of community support.
3. Make informed political decisions through market research.

Potential New Revenue Sources

At the time of preparing this plan, several potential new revenue sources were discussed as having some possible future application in Metropolitan Bakersfield. However, given the size of the anticipated funding gap between currently available revenues and project costs, only a substantial new dedicated source of revenue could generate sufficient additional funds. A new countywide or metropolitan revenue source and potential federal demonstration funds could raise enough monies to implement most or all of the unfunded projects in the Strategy.

For example, revenues from a possible sales tax could be used for any transportation purpose, including construction and maintenance pro-

grams for roadways and transit, provided the uses are identified at the time of the vote. Certainly for other counties, sales tax revenues have proved to be a valuable commodity to add to the funding stream.

The Project Implementation Phasing Plan relies on a new local revenue source to fund many projects. As for timing of the need for the new local revenue, large unfunded infrastructure projects such as the SR-178 Crosstown Freeway are slated for construction sometime after the year 2006. Therefore, it would be prudent to have the new local source in place by then. Thus, the actions described above must be done to increase the support for whatever course of action is selected in the end for the MTIS.

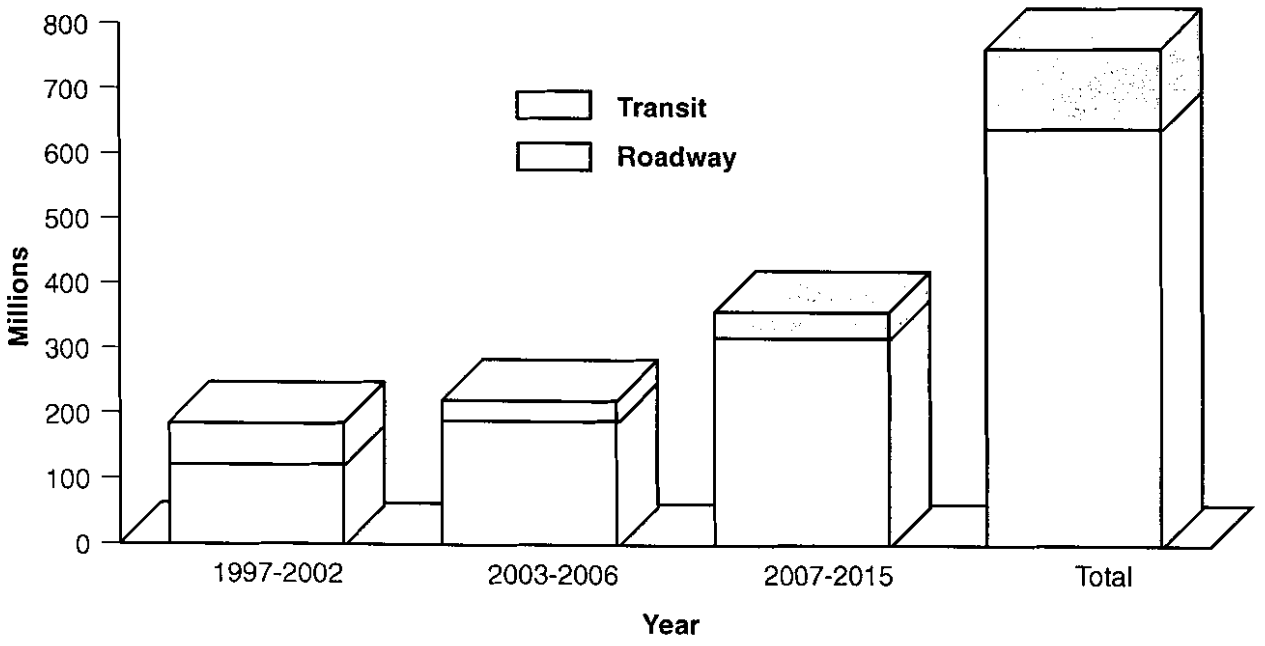
As for federal demonstration funds, participating agencies submitted an application in February 1997 to the United States Congress requesting approximately $55 million to build the SR-178 Crosstown Freeway. However, there is no guarantee to the receipt of these funds as the Intermodal Surface Transportation Efficiency Act (ISTEA) reauthorization proceedings continue. These demonstration funds and their timely receipt would greatly improve the future delivery status for the Crosstown Freeway.

Fundable Program

Although a funding deficit exists to deliver all transportation projects, transportation revenues are available to fund various projects listed in the phasing plan. Transportation revenues from governmental sources typically can be used for certain uses, whether they be for road projects, maintenance, or transit projects. The amounts of the transportation impact fees in the early years are based on the current rates of collection, with an accelerated collection schedule in the later years.

The graph below presents the funded amounts for roadway and transit for the three Action Plan time increments. If a new local revenue source (such as a sales tax) becomes available, the revenues generated from the new source would increase funding for additional projects.

MTIS Roadway and Transit Capital Expenditures



CATALOG OF REPORTS FOR MAJOR TRANSPORTATION INVESTMENT STRATEGY

Reports and working papers prepared as part of the Metropolitan Bakersfield Major Investment Strategy are listed below by category.

I. Planning Guidance and Evaluation	II. Public Involvement Program/ Consensus Building
• Final Strategy Report • Consensus on Major Transportation Investments (Recommendation on Strategy Elements) • Action Plan for Implementing the Locally Preferred Alternative • Final Detailed Definition of Alternatives Report • Scoping Information Report • Notice of Preparation Report • Communications Plan for MTIS Consensus Building and Community Involvement • Review of Funding Outlook • Financial Results Report for Detailed Transportation Alternatives • Environmental Issues Identification • Screening of Conceptual MTIS Transportation Alternatives	• Public Involvement Program Methods Report • Communications Plan for Consensus Building • Newsletters and Mailings • Speakers Bureau and Presentations • One-on-One Interview of Community Leaders 1995 and 1997 • Public Open Houses • Public Workshop No. 1: June 1995 • Open House No. 2: December 1995 • Open House No. 3: September 1996 • Open House No. 4: May 1997 • Compilation of Respondents Opinions from Surveys and Comment Sheets, April 1996 - May 1997 • 1995 On-Board Survey of GET Riders • 1995 Community Focus Group Results • 1995 Community Home Interview Survey • Media Outreach Summary Report: 1996-1997 • Media Outreach • Press Releases • Press Conferences • Newspaper Articles
III. Concept Engineering/ Travel Forecasting	**IV. Master Plan of Transit Facilities and Services**
• Final MTIS Concept Engineering Report • Capital Cost Estimating Methodology Report • Capital Cost Estimates Working Paper • Roadway Operating and Maintenance Cost Methodology Report • Financial Analysis Methodology Report • Revised Evaluation Criteria and Methodology Report • Transit Operating and Maintenance Cost Methodology Report • Bus Transit Operating and Maintenance Cost Estimates Working Paper • Concept Definition of a Crosstown LRT Line • Travel Demand Forecasts Report • Travel Model Methodology Report	• Strategic Action Plan for Transit Facilities and Services • Existing Transit Conditions and GET Ridership Profiles • 1995 On-Board Survey of GET Riders • Bakersfield Amtrak Station Project Study Report • Transit Operating and Maintenance Cost Methodology • Bus Transit Operating and Maintenance Cost Estimates • Concept Definition of a Crosstown Light Rail Transit (LRT) Line • Conceptual Definition of MTIS Transportation Alternatives