

# Southern California Rapid Transit District



## "The Right Thing to Do" Clean Air Curriculum Workshop

0610 04 02 03 01 840

SCRTD

THE RIGHT THING TO DO/CLEAN AIR  
CURRICULUM WORKSHOP



SCRTD  
1990  
.R53  
T62

28558950



To The Educator,

Southern California Rapid Transit District is proud to sponsor "The Right Thing to Do," an RTD multi-resource program that explores the environmental, economic and social dynamics in our choices of transportation, with emphasis on public transit.

This subject is particularly vital now as we face the rapid depletion of our energy reserves and the spiraling costs of fuel. Additionally, more of us than ever before are deeply concerned about the quality of life, the community we live in and the air we breathe. Our private choices in transportation have a profound public impact in all aspects of our lives. It's time for everyone to take a serious look at public transit and alternate modes of transportation.

Through this program, we at Southern California Rapid Transit District hope to make students aware of our society as a structure whose shape is determined by the individual choices of people. Each of us can make decisions that make a difference. Not only is it our right to do so, it is also our responsibility.

A handwritten signature in black ink, appearing to read "Nick Patsaouras". The signature is fluid and cursive, with a large initial "N".

Nick Patsaouras  
President  
Board of Directors  
Southern California Rapid Transit District

RTD  
*"The Right Thing to Do"*





## INTRODUCTION

In its more than 25 years of existence, the Southern California Rapid Transit District has operated with one mission in mind: To provide every passenger with safe, reliable and efficient transportation. With more than 1.3 million weekday boardings, the fulfillment of this mission is no easy undertaking. RTD serves Southern Californians in a 1,442-square mile service area, operating an active fleet of more than 2,600 buses along 213 routes.

And in July 1990, RTD initiated service on the new state-of-art trains, the Metro Blue Line, operating between downtown Los Angeles and downtown Long Beach. Average weekday passenger boardings is more than 18,000.

The Metro Rail is but a first glimpse into the future. In the next 25 years, RTD is committed to making public transportation a major force in one of the busiest and most vital regions in the world.

To reduce smog and traffic congestion, RTD is working with agencies such as the South Coast Air Quality Management District (AQMD) to help people comply with new air quality regulations.

RTD is also actively experimenting with alternative fuels such as methanol in an effort to find ways to cut down on emissions, so that our children and their children can enjoy cleaner air.

In the same spirit, RTD is working with interested agencies and corporations in this program, "The Right Thing To Do," to educate tomorrow's drivers and -- we hope -- bus riders, carpoolers and other commuters about alternative modes of transportation and their impact on our environment.

These lesson plans represent a prototype that RTD will share with teachers, public agencies and other interested parties as starting point in developing practical education materials on this important issue.

The pilot program has as its objectives:

- To provide information and education about public transit, alternative modes of transportation and air quality in Southern California.
- To develop an interest and incentive for the use of public transit and other kinds of transportation by future generations of riders and commuters.
- To increase awareness of transportation habits and their implications for our environment.
- To make available to teachers a set of practical resources necessary to make the curriculum exciting and relevant.

RTD  
*"The Right Thing to Do"*





## TABLE OF CONTENTS

Lesson Plans	Section One
California Congestion Now and in the Future	Section Two
The Need for Improved Passenger Transportation in California	Section Three
RTD Clean Air Fuels	Section Four
News Articles	Section Five
Resource Guide •Speakers Bureau •Class Tours	Section Six
Bibliography	Section Seven

RTD  
*"The Right Thing to Do"*



**LESSON 1**  
**TRANSPORTATION YESTERDAY**

**Objective**

Students will learn about transportation in the 1800's and how they were precursors to the modern public transit system

**Activities**

**1**

**D**iscuss with students the kinds of transportation that were available in the 1800's.

More than 100 years ago, transportation meant horses, steam-driven trains, horse-drawn trolleys and stage coach.

In 1879, the first electric streetcar was invented. Electric power dramatically changed public transit. Vehicles powered by steam had to stay above ground because of all the smoke coming out of them. Electric powered vehicles don't give off smoke and polluting gases, so they can run underground. Thus, electricity made it possible to build subways.

## LESSON 2 TRANSPORTATION TODAY

### Objective

The purpose of this exercise is to help students recognize the variety of available means of public transit.

### Topics for Discussion

What are examples of private transportation?

What are forms of public transportation? (bus, light rail, rail transit, cable car, mini-buses, Dial-A-Ride).

Do Southern Californians use public transit more or less than people in other parts of the United States, such as New York City, Chicago or Boston? Why?

### Activities

1

Have your class create a public transit display, bulletin board, or collage out of pictures from newspapers. These pictures can be organized and labeled according to type, or you may choose to paste them onto pictures of urban and suburban landscapes.

2

Invite a representative of Southern California RTD to speak to your class. The topic could center on the different types of public transit available in the community, as well as in other parts of the country. The difference that public transit makes should also be presented.

3

Discuss with students the most common forms of public transportation in use today in Southern California, and in other parts of the United States.

### LESSON 3

## GETTING AROUND –MODES OF TRANSPORTATION

#### Objective

Students will synthesize information from a number of sources, interpreting simple graphs to describe how people travel in Southern California.

#### Activities

1

**H**ave students talk about transportation needs and how to best meet those needs. (Going to school, work, hospital, shopping, etc.) Which transportation modes best meet those needs?

2

**D**iscuss with students the use of a survey. Show students examples of surveys.

A survey is a set of questions which seeks to answer certain questions. A survey may be conducted by interviewing people by telephone, in person, or by mail. For example, a survey is used to find out how the people of a community feel about a political candidate or a new product.

3

**T**ell students they will conduct a survey by collecting information from two sources: other students and parents or adults. Let students know that they will interview other students, using the Student Survey Form (Activity Sheet 1) and the Adult Survey Form (Activity Sheet 2).

4

**O**nce the data are collected, the students will organize the findings using the forms which are provided (Activity 3).

5

**H**elp the students analyze the information using Activity Sheet 4, **Data Analysis**, and Activity Sheet 5, **Presentation of Ideas**.

6

**A**fter the data are organized, the students will chart and graph the findings, using the graphing paper which is provided (Activity Sheets 6 and 7).

**RTD**

*The Right Thing to Do*"



7. Check the places you have visited using bus service.

<input type="checkbox"/> Sporting event	<input type="checkbox"/> Classes (art, piano)	<input type="checkbox"/> Museum
<input type="checkbox"/> Restaurant	<input type="checkbox"/> Movie	<input type="checkbox"/> Hospital
<input type="checkbox"/> Doctor	<input type="checkbox"/> Library	<input type="checkbox"/> Relative's house
<input type="checkbox"/> Shopping-clothing	<input type="checkbox"/> Shopping-food	<input type="checkbox"/> Downtown

8. If the school organized direct bus service to some of the following places, would you go? Answer "yes" or "no" on the space provided.

Library

Movie

Concert

Tour

Sports event

9. How would the bus service be different if the school organized the service for a specific event as opposed to an individual securing the services?

A. Which would you prefer?

B. What advantages does it have - save time, save money, meet people, etc.?

Activity Sheet 1

Adult Survey

Name \_\_\_\_\_ Age \_\_\_\_\_ Date \_\_\_\_\_

Identification Number \_\_\_\_\_ City \_\_\_\_\_

1. Have you ever ridden the bus? Yes No

2. When was the last time you rode the bus? \_\_\_\_\_  
month year

3. Where did you go? \_\_\_\_\_

4. Do you ride the bus to work? Yes \_\_\_\_\_ No \_\_\_\_\_  
If the answer is yes, ask question number 5; if it is no, ask question number 6.

5. What is the main reason you ride the bus to work?

\_\_\_\_\_ I don't drive.

\_\_\_\_\_ It is cheaper than buying a car.

\_\_\_\_\_ It is difficult to find parking spaces close to work.

\_\_\_\_\_ I avoid irritating traffic problems.

\_\_\_\_\_ I conserve energy.

\_\_\_\_\_ Other (specify) \_\_\_\_\_

6. During the past year, how many times did you visit the following places? (Write on the blank space the number provided by the interviewee.)

\_\_\_\_\_ Sporting event

\_\_\_\_\_ Classes (art, piano)

\_\_\_\_\_ Museum

\_\_\_\_\_ Restaurant

\_\_\_\_\_ Movies

\_\_\_\_\_ Hospital

\_\_\_\_\_ Doctor

\_\_\_\_\_ Library

\_\_\_\_\_ Relative's house

\_\_\_\_\_ Shopping-clothing

\_\_\_\_\_ Shopping-food

\_\_\_\_\_ Downtown

7. Check the places you have visited using bus services.

- |                         |                            |                        |
|-------------------------|----------------------------|------------------------|
| _____ Sporting event    | _____ Classes (art, piano) | _____ Museum           |
| _____ Restaurant        | _____ Movies               | _____ Hospital         |
| _____ Doctor            | _____ Library              | _____ Relative's house |
| _____ Shopping-clothing | _____ Shopping-food        | _____ Downtown         |

8. Name one place you would like to visit but do not because there is no direct bus service.

---

---

---

9. What do you believe is the major advantage of riding the bus?

---

---

---

Total Student Response

Places	Purposes	Frequency

Total Adults Response

Places	Purposes	Frequency

Total Group Response

Places	Riders (students, adults)	Purposes	Frequency



## DATA ANALYSIS

1. What was the main reason for riding the bus?

\_\_\_\_\_ Convenience

\_\_\_\_\_ Economy

\_\_\_\_\_ Companionship

2. How did you arrive at this conclusion? Did you:

\_\_\_\_\_ Categorize responses?

\_\_\_\_\_ Count all responses?

\_\_\_\_\_ Tally the responses?

\_\_\_\_\_ Compare the totals?

## PRESENTATION OF DATA

1. Why are you reporting these data? How did this project get started? What did you want to know?

---

---

---

2. Describe what you did to find the answers.

Step 1:

---

---

---

Step 2:

---

---

---

Step 3:

---

---

---

3. List the places visited most frequently.

---

Activity Sheet 5

4. Identify two places no one ever visits using bus service.

---

---

5. What conclusions did you reach? What did you learn from this activity?

---

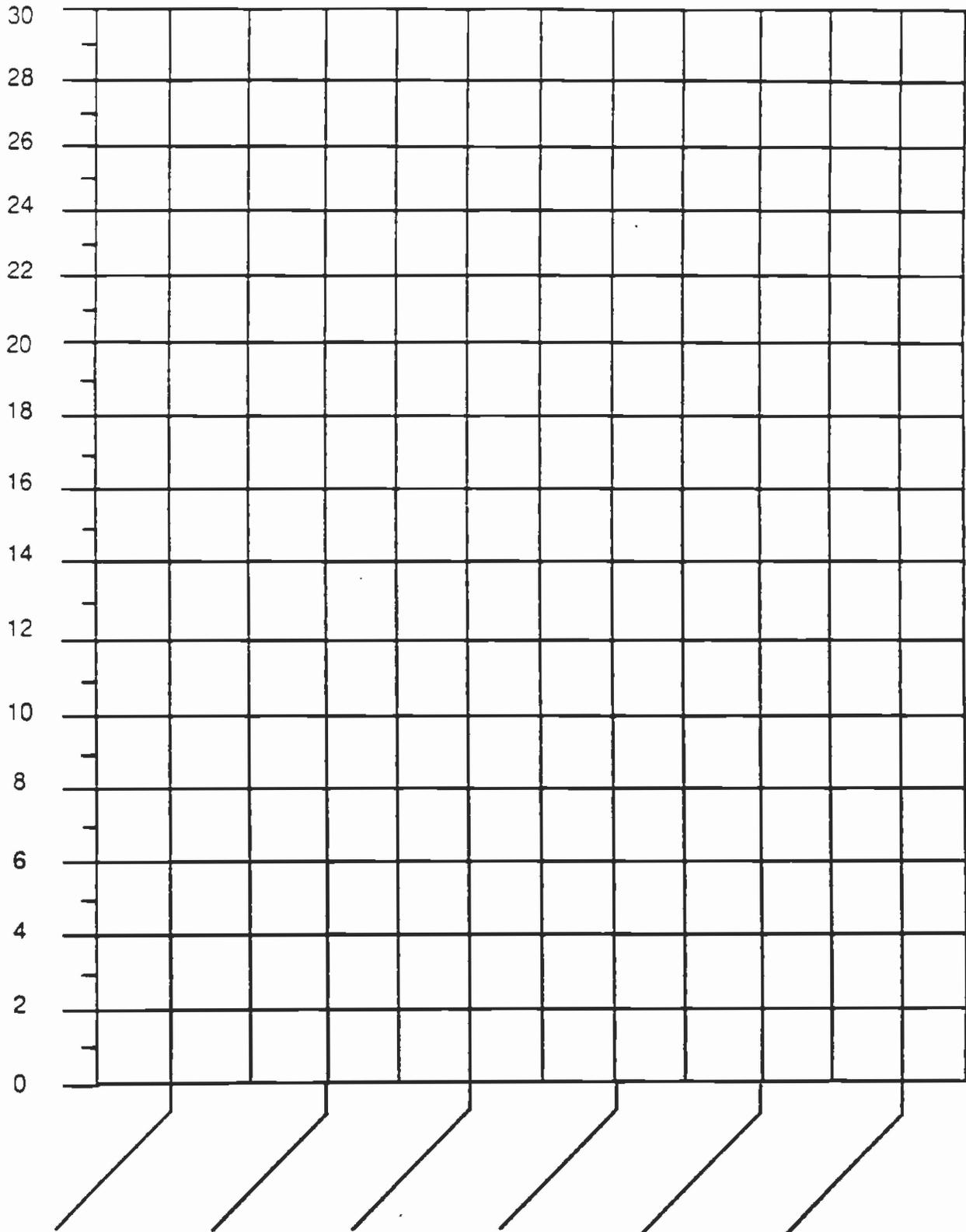
---

---

6. What recommendation would you make to the transit authority to increase the number of people who ride the bus?

Line Graph

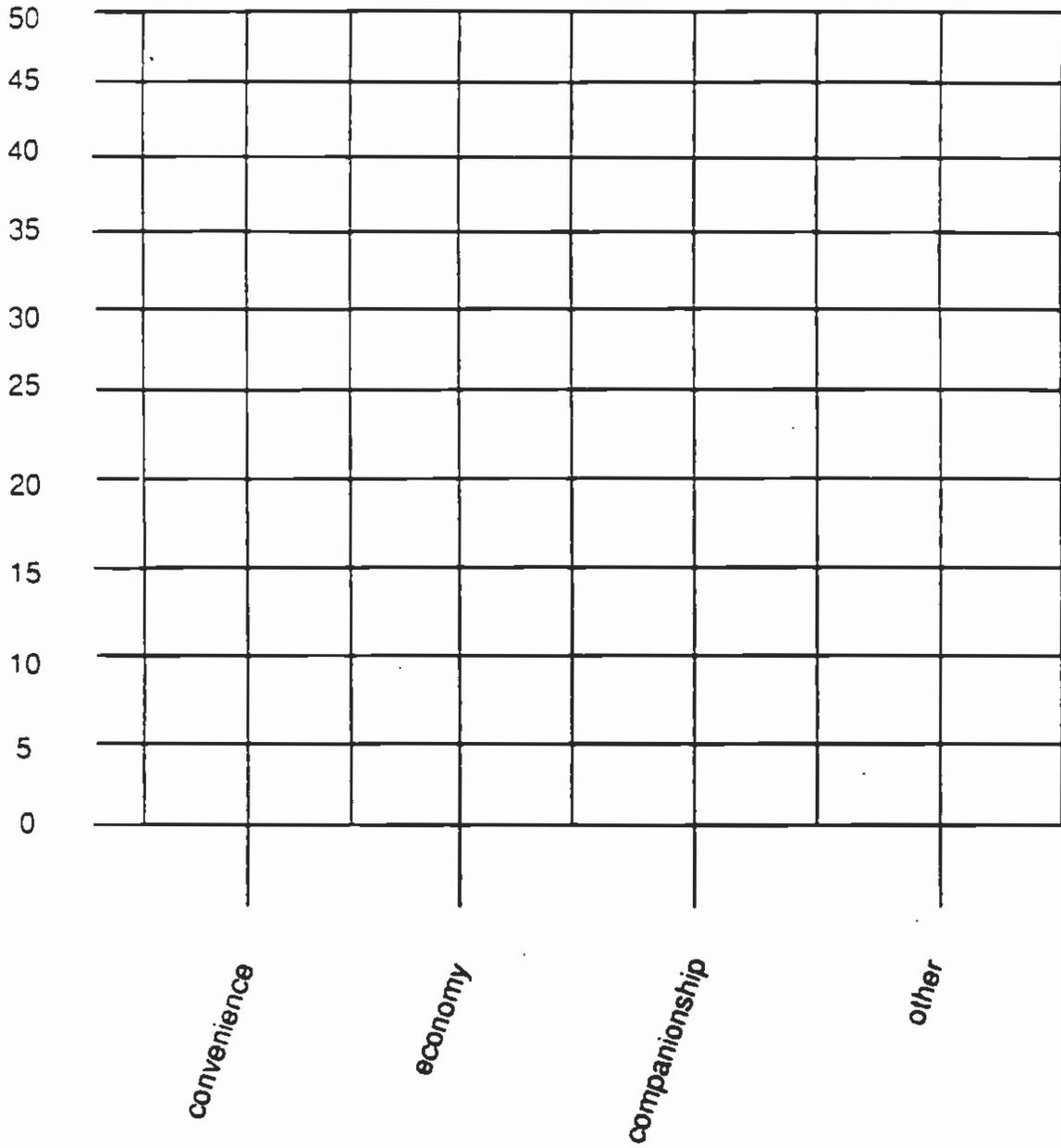
Most Visited Places Using Bus Service



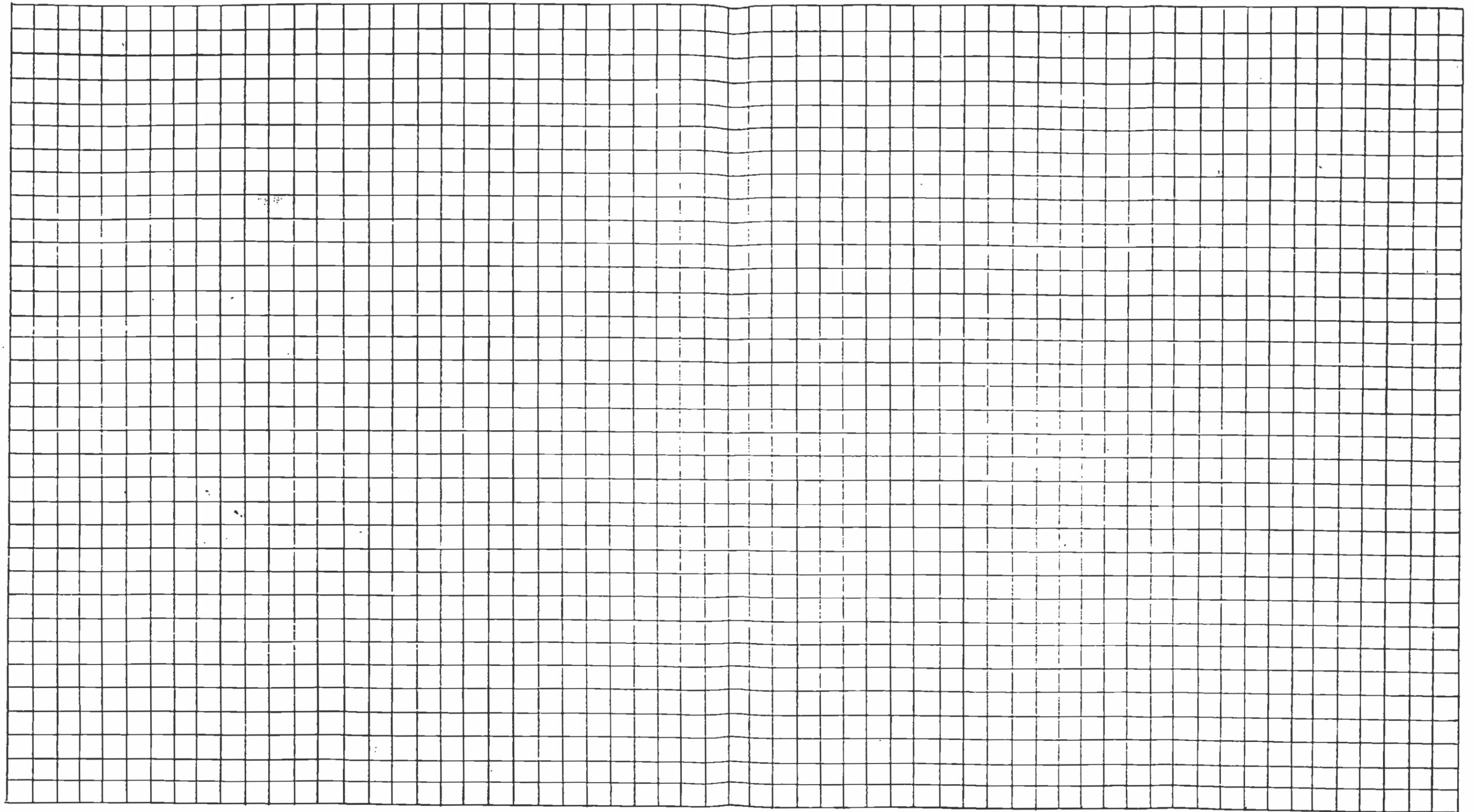


Bar Graph

Reasons for Riding the Bus







**LESSON 4**  
**HOW DO PEOPLE TRAVEL?**  
**ANALYZING THE FINDINGS**

**Objective**

Students will be able to identify the math operations for interpreting and analyzing charts and graphs.

**Activities**

1

**D**iscuss with students the purpose of a graph and a chart. Have the students discuss the following statement: ``A picture is worth a thousand words.''

2

**S**how students a bar graph and a line graph. Be sure that both graphs contain the same information. Ask students to identify the graph they prefer and express their reasons for selecting that graph.

3

**R**eview the information gathered in the survey. Identify the information which could be displayed in a graph or chart. Assign information to groups of students and have them decide the type of graph they will use. Have them display the information on a graph.

4

**P**repare a bulletin board with a display of all the graphs prepared by the different groups of students.

**LESSON 5**  
**HOW DO PEOPLE TRAVEL?**  
**PRESENTING THE FINDINGS**

**Objective**

Students will develop skills analytical and oral skills in making presentations and using visual aids.

**Activities**

**1**

**U**sing analytical and oral skills, students will discuss the findings as shown in their graphs and charts. In addition, they will discuss the transportation habits and preferences of their community.

**2**

**H**ave groups of students study the findings and prepare recommendations on why people should use public transportation more frequently.

**LESSON 6**  
**GETTING AROUND – MODES OF TRANSPORTATION**  
**PRIVATE TRANSPORTATION**

**Objectives**

Students will learn the public costs of private habits as they pertain to the automobile.

**Topics for Discussion**

The automobile is undoubtedly the most popular form of transportation in California. Discuss with students why the automobile is so popular. Why is it preferred over public transit? What are the various ``hidden'' costs in driving a car (e.g. traffic delays, fuel consumption, air quality)?

A 17 percent increase in population to 33.5 million people by the year 2000 will be accompanied by a 26 percent increase in the number of drivers (26.9 million) and 26 percent more vehicles.

**Why do Southern Californians drive so much?**

People tend to live in outlying counties where housing is more affordable, but most jobs are in Orange and Los Angeles counties. So people drive across the region every day to go to work. We have traffic jams morning and evening because housing and jobs are located far apart.

**The implications of this increase are ominous:**

In 1988, California motorists wasted 1.19 billion hours -- or about 20 minutes a day each -- sitting in traffic. That's an average of 84 hours per driver each year -- or about three and a half continuous days sitting in gridlock.

Also, idling and stop-and-go driving in 1988 cost motorists an estimated 753 million gallons of motor fuel. The value of this

**RTD**

*"The Right Thing to Do"*

**LESSON 6 : Continued**  
**GETTING AROUND – MODES OF TRANSPORTATION**  
**PRIVATE TRANSPORTATION**

**Topics for  
Discussion**

wasted motor fuel and time amounted to an estimated \$16.97 billion, or \$1,194 per motorist.

Of major concern is Californians' continued and growing reliance on the private car. The fast and steady growth in vehicle usage over the past 20 years has resulted not only in worsening traffic congestion, but in increased air pollution.

Twelve million residents of Southern California are exposed regularly to levels of air pollution that can cause nausea, headaches, eye irritation and dizziness, even in healthy adults.

**What are the alternatives to driving to and from school or work?**

Carpooling, vanpooling and using public transit are some of the most common and popular shared transportation options. Other forms traveling, for those who live near school or work, are

**LESSON 7**  
**GETTING AROUND: MODES OF TRANSPORTATION**  
**PUBLIC TRANSIT**

**Objective**

The purpose of this exercise is to teach students how public transit transfers can help them to get around efficiently.

**Topics for Discussion**

Instead of transfers, why don't transit systems simply create more bus lines?

The key advantage of the bus is its flexibility. It can travel wherever roads have been built. Transit systems, like RTD, create bus lines wherever there is a real need to get around. The purpose of transfers is two-fold: 1)to make bus travel more convenient; and 2)to make the system more efficient by scheduling buses only where they are needed. Creating new bus lines where there aren't enough people to support them is wasteful. It is more efficient to let existing lines overlap or connect with rail lines so that people have more choices of destination without the extra expense of buying more buses.

**Activity**

**1**

Obtain bus route maps from RTD. Pass the maps around the class and encourage students to identify actual transfer points: bus to bus, or bus to light rail. Ask students if they have ever transferred. What happened? Where were they going? Is transferring a good or bad idea?

**LESSON 8**  
**GETTING AROUND: MODES OF TRANSPORTATION PUBLIC  
TRANSIT AND ALTERNATIVE FUELS**

**Objective**

The purpose of this exercise is to help students recognize the advantages of bus transit in the areas of energy efficiency, pollution, cost and flexibility in meeting urban and suburban needs.

**Activities**

**1**

**Discuss how a diesel engine works. Why is it more efficient? Why is diesel fuel less expensive?**

Both the normal internal combustion car engine (gasoline engine) and the diesel engine work by burning fuel in a cylinder. The burning fuel releases energy which forces a piston set in the cylinder to move downward. This motion, in turn, spins a shaft which is connected to the wheels. The diesel engine, unlike the care engine, does not use spark plugs to ignite the fuel. It uses pressure to compress air. The diesel principle is quite simple: when air is compressed rapidly, it increases in temperature. The heated air then ignites the fuel. Diesel fuel is heavier than gasoline and contains more energy unites per gallon. Also, a diesel engine burns its fuel more completely which means it wastes less energy than a gasoline engine. Diesel fuel is less refined than gasoline. This less refined, cruder fuel costs less to produce and is therefore less expensive to buy. The cost per mile to move passengers by diesel power is much less than to move them by gasoline power.

**LESSON 8: Continued**  
**GETTING AROUND: MODES OF TRANSPORTATION PUBLIC**  
**TRANSIT AND ALTERNATIVE FUEL**

2

**Why is diesel power less polluting?**

Diesel engines burn up fuel more efficiently. Less waste is poured into the atmosphere. For the record, bus engines produce significantly less of the following pollutants: hydrocarbons, nitrogen oxides, carbon monoxide, and particulate matter such as soot and ash. In the area of sulfur oxide pollution, the bus produces slightly more than a car: 15 grams per 100 passenger miles, compared to 9 grams per 100 passenger miles.

**LESSON 9**  
**GETTING AROUND: MODES OF TRANSPORTATION**  
**RIDESHARING AND DIAL-A-RIDE**

**Objective**

Students will learn that transportation also extends to specialized services involving commuter transportation and ridesharing.

**Activities**

**1**

walking, jogging or bicycling.

**What are the benefits of these various alternatives to the solo commute?**

Saving money is the most tangible benefit. Ridesharing or using public transit can save a person anywhere from a few hundred dollars to more than \$2,000 a year. Money is saved on gasoline, auto maintenance and parking fees.

**2**

**What are ways students can be encouraged to rideshare or to use public transit? Should students be charged for parking in school lots?**

**3**

**Have students find out all they can about local Dial-A-Ride facilities. You may want to contact Commuter Transportation, social service organizations dealing with the elderly or a local hospital.**

**LESSON 10**  
**WHY PUBLIC TRANSIT/RIDESHARING**  
**ENERGY, ECONOMY AND ENVIRONMENT**

**Objective**

Using charts or graphs, students will learn how public transit/ridesharing can make a difference in terms of fuel, expenses and air quality.

**Activities**

**1**

**H**ave students develop a bar chart to compare fuel costs, money costs, pollution costs.

**2**

**A**sk students to poll their families about costs involved in owning and operating an automobile. Students should ask families how much they spend each year on: car finance payments, auto maintenance, auto repair, new tires and parts, insurance, gasoline and parking.

**3**

**A**sk students to show their findings on the chart.

**LESSON 11**  
**WHY PUBLIC TRANSIT/RIDESHARING?**  
**PART TWO**

**Objective**

Students will grasp the concept of efficiency as it relates to public transit and ridesharing. They will also see connections and consequences in transportation habits and their environment.

**Activities**

**1**

**D**iscuss the findings of the charts with students. Why is the car less efficient than public transit or ridesharing? What are some other ways that using a car affects the environment -- the air, water and land around us?

**LESSON 12**  
**THE FUTURE OF PUBLIC TRANSIT PART ONE**

**Objective**

Students will be encouraged to be creative in visualizing the role of public transit will have in their future. Educational skills will include creative thinking, writing and drawing.

**Activities**

**1**

**Discuss with students how they think things will change between now and 2001. New forms of energy will certainly have been introduced. Homes will probably be heated and cooled by some combination of solar power and electricity. Electricity will probably be generated using ocean tides to power generators, windpower, sunlight or nuclear power. Coal may become more easily converted into a liquid fuel for transportation.**

Public transportation -- especially rail and possibly alcohol-burning buses -- will grow in importance. The population of the United States is expected to remain stable (about 200 million to 250 million), but Southern California is growing significantly.

**2**

**Discuss with students how public transit today can help to shape the world of the future. For instance, public transit will help bring Americans closer together. New urban and suburban complexes will grow up along established transit routes. Communities that are in decay will become rejuvenated as transit attracts new businesses and populations. Transit will reduce our dependence on foreign oil and eventually improve our economic situation. Also, transit will replace many of the privately owned cars that cause so much air pollution. As more transit becomes computerized, they will grow seven more efficient. Finally, suburbs will be forced to become more compact and centralized as using a private car becomes more expensive.**

**LESSON 12: Continued**  
**THE FUTURE OF PUBLIC TRANSIT PART ONE**

**Related  
Activities**

**S**outhern California RTD has begun operating a transportation system using buses and light rail. What are the features of this new system?

**T**ake a class field trip to ride RTD's new light rail, the Blue Line.

**LESSON 13**  
**FUTURE OF PUBLIC TRANSIT PART TWO**

**Objective**

Students will apply their creative skills to imagine what a public transit system of the future will be like and how it will change people's lifestyles.

**Activities**

**1**

**Tell students to search for answers to the following questions:  
What are the positive features of this system?**

- Passenger convenience
- Flexibility of use
- Traffic patterns
- The environment
- New places to go

**2**

**Summarize the features of the future of public transportation systems.**

**It will be a system that:**

- Incorporates rail and bus
- Takes advantage of public facilities, such as malls, libraries, and hospitals
- Links the scheduling of several services to transport passengers from one place to another quickly and efficiently.

## LESSON 14 RAIL SAFETY

### Objective

The purpose of this exercise is to help students understand how to use public transit safely and courteously.

### Topics for Discussion

RTD's Light Rail train travels at speeds of up to 55 miles per hour. It is fast and quiet. Danger can come suddenly and with little warning. There are four basic rules of safety to remember: They cover track safety, station platform behavior, purchase of tickets and rail car behavior.

Everyone should remember to cross the rail line tracks only at marked intersections. No one should ever climb the fences which separate the tracks from the street, or walk along or play around the tracks.

It is important for passengers to keep away from the station platform edge until the train has come to a full stop.

Passengers should have the correct ticket when boarding a train.

There is no eating, drinking or loud noise on the cars.

Why is it important to know where you're going and the best way to get there when you are using public transit?

Why is it important not to fool around or get too close to the edge of a light rail platform?

What's wrong with moving from one car to the next on a moving train?

### Related Activities

Take a ride on RTD's Blue Line between Los Angeles And Long Beach. Develop a list of places students can visit with their families on weekends by taking the Blue Line.

**LESSON 15**  
**PUBLIC TRANSIT AND RESPECT FOR PROPERTY**

**Objective**

The purpose of this lesson is to help students understand that the public transportation system belongs to everyone, including them and their parents.

**Activities**

**1**

**F**ocus the students' attention by raising the following questions:

**H**ow would you feel if someone broke into your house and broke all of the things that belong to you?

**S**uppose you invited someone to your house and they began writing on your walls with paint. How would you feel?

**W**hy do people vandalize property by damaging or defacing them with paint?

**H**ow can students help to prevent such vandalism?

**2**

**H**ave students write a position paper on what they feel should be done to people who destroy the property of others. They should present their argument and explain their position. They should present their papers to the class.

CALIFORNIA CONGESTION NOW AND IN THE FUTURE:

THE COSTS TO MOTORISTS

January 1990

prepared by

THE ROAD INFORMATION PROGRAM

1200 18th Street, N.W., Suite 314

Washington, D.C. 20036

(202) 466-6706

Western Office

(415) 984-6161

for

**CALIFORNIANS FOR BETTER TRANSPORTATION**

Sacramento, California 95814

(916) 446-3275

Founded in 1971, The Road Information Program (TRIP) of Washington, D.C. is a non-profit organization that researches, evaluates and distributes economic and technical data on highway transportation issues. TRIP is sponsored by energy and insurance companies; equipment manufacturers, distributors and suppliers; businesses involved in highway engineering, construction and financing; labor unions; and organizations concerned with an efficient and safe highway transportation network.

### Summary of Findings

- A 17 percent jump in population by the year 2000, accompanied by a 26 percent jump in the number of drivers, 26 percent more vehicles and at least 33 percent more traffic is expected to have a dramatic impact on the quality of life of most Californians.
- Traffic on all roads in the state has increased 55 percent between 1980 and 1988 (from 155.89 billion to 241.58 billion vehicle miles a year), and is expected to jump another 33 percent (to 320 billion vehicle miles a year) by the end of the century.
- Meanwhile, actual miles of road have increased just 1.9 percent (from 142,737 miles to 145,495 miles) between 1980 and 1988. By the year 2000, the average amount of traffic carried per mile of California roadway will reach 2.20 million vehicle miles, compared with 1.66 million vehicle miles in 1988.
- In 1988, California motorists wasted some 1.19 billion hours -- or about 20 minutes a day each -- sitting in traffic. That's an average of 84 hours per driver each year -- or about three and a half continuous days sitting in gridlock.
- Also, idling and stop-and-go driving in 1988 cost motorists an estimated 753 million gallons of motor fuel. The value of this wasted motor fuel and time amounted to an estimated \$16.97 billion, or \$1,194 per motorist.
- If congestion delays double by the year 2000, the average motorist will waste an estimated \$3,498 annually and sit in traffic the equivalent of 7 continuous days a year. And if congestion delays triple in the next 10 years, costs will escalate to \$5,238 per motorist, including lost time equal to ten and a half days per year. (See chart on page 12.)
- In addition to the costs of traffic congestion, Californians pay a premium to drive on rough, rutted roads. For instance, in 1988, motorists paid \$108.50 each in wasted vehicle operating costs caused by driving on rough roads. By 2000, unless recent road deterioration trends are slowed, California motorists will waste \$148 each per year -- an increase of about 36 percent.
- More than 63 percent (35,170 miles) of California's main roads are in fair to very poor condition and in need of resurfacing or reconstruction. Improvements are estimated to cost \$8.6 billion.
- Also, in 1989, 5,949 miles of main roads in the state were operating near or at capacity during peak traffic hours -- a 45 percent increase in the past five years. Cost estimates for congestion relief are not available due to the wide variety of solutions possible, including signalization, adding lanes, intersection modifications, mass transit utilization and others.

### Population Growth in California

In a May 1988 study, TRIP reported that California's population has grown at a rate one-and-a-half times faster than the national population growth rate. Between 1950 and 1980, population in California increased 123 percent while the total U.S. population grew just 49.7 percent.

New data show California continuing to outpace national population growth. For instance, according to the Bureau of the Census, between 1980 and 1989, California's population increased 26 percent (from 22.69 to 28.61 million) while national population grew by just 9 percent.

By the year 2000, the Census Bureau projects California's population will top 33.5 million, a 17 percent jump from 1989; U.S. population, by comparison, is expected to climb just 8 percent in the same time. (The California Assembly Office of Research predicts the state's population will grow by 34 percent between 1987 and 2000.)

Despite the state's size, California's population is primarily urban in nature. Rural suburbanization and deconcentration of businesses from city cores to outlying suburban areas in recent years have been the main causes of this increased urbanization.

In fact, the state's 11 designated Metropolitan Statistical Areas (MSAs) -- each with more than 250,000 people -- make up nearly 98 percent of California's total population.

Between 1980 and 1987, growth in these areas (+ 3.70 million) comprised more than 97 percent of total state growth (+ 3.79 million):

<u>MSA</u>	<u>1980</u>	<u>1987</u>	<u>% Change</u>
Bakersfield	403,000	505,000	+ 25.3%
Fresno	515,000	597,000	+ 15.9%
Los Angeles/Anaheim/ Riverside	11,498,000	13,471,000	+ 17.2%
Modesto	266,000	327,000	+ 22.9%
Sacramento	1,100,000	1,336,000	+ 21.4%
Salinas/Seaside/ Monterey	290,000	343,000	+ 18.3%
San Diego	1,862,000	2,286,000	+ 22.8%
San Francisco/Oakland/ San Jose	5,368,000	5,953,000	+ 10.9%
Santa Barbara/Santa Maria/Lompoc	299,000	341,000	+ 14.0%
Stockton	347,000	443,000	+ 27.7%
Visalia/Tulare/ Porterville	246,000	292,000	+ 18.7%
<b>TOTAL</b>	<b>22,194,000</b>	<b>25,894,000</b>	<b>+ 16.7%</b>

In 1987, TRIP surveyed five heavily populated areas of the state and found that these areas -- Fresno, Sacramento, San Diego, San Francisco and Southern California -- anticipated at least two million more residents between 1990 and 2000.

## Introduction

"Traffic jams, once the exclusive province of central cities, have migrated to the suburbs and threaten to undermine the very mobility that has been the mainstay of suburban economy and lifestyle. Getting stuck in traffic jams, once the dubious privilege of the downtown commuter, now affects everyone."<sup>1</sup>

So writes C. Kenneth Orski, founder and president of the Urban Mobility Corporation. Orski's words describe growing traffic congestion nationally, but they are particularly on target in discussing California's number one transportation problem.

In fact, California's transportation situation has become a microcosm of America's transportation trials and tribulations. Personal mobility via the automobile was born in California. Idealistic suburban living reached new heights of desirability in California. Before the recent population booms in America's Southeast and Southwest, California was growing faster than any state (and continues to grow rapidly). With tremendous increases in population, California licensed millions of drivers and registered millions of vehicles, resulting in dramatic and overwhelming increases in traffic.

---

<sup>1</sup> Orski, C. Kenneth: "'Managing' Suburban Traffic Congestion: A Strategy for Suburban Mobility," Transportation Quarterly, Vol. 41, No. 4, October 1987, Eno Foundation for Transportation, Inc., Westport, Connecticut.

The traffic is everywhere. Suburb-to-downtown (radial) commuting is no longer the most common trip. Far more prevalent is suburb-to-suburb commuting, a phenomenon that has overwhelmed local roads and streets and quickly outdated spoke-oriented mass transit systems.

"Freeway systems are planned and designed to provide high-speed, high-volume road facilities for the movement of goods and people ... Congestion generally causes slower-than-desired travel speeds, increased and unpredictable travel times, increased accident frequencies, erratic stop-and-go driving, and increased operating costs. These symptoms of congestion usually lead to motorist frustration and discomfort."<sup>2</sup>

This study examines the effect of California's number one transportation problem -- traffic congestion -- on the people who experience it daily. TRIP projects traffic congestion into the next decade and measures the continuing inconvenience and expense for motorists all over the state.

Sources of information include the Federal Highway Administration, the California Department of Transportation and Transportation Commission, the Transportation Research Board, the Eno Foundation for Transportation and other public and private organizations.

---

<sup>2</sup> Rong-Shyang Ju, Allen R. Cook and T.H. Maze, "Techniques for Managing Freeway Traffic Congestion," Transportation Quarterly, Vol. 41, No. 4, October 1987, Eno Foundation for Transportation, Inc., Westport, Connecticut.

More Cars, More Drivers, More Traffic

In its May 1988 study, TRIP also reported that driver licenses and vehicle registrations in California were outpacing the national rates: between 1975 and 1985, drivers increased by 29 percent in California and 21 percent nationally; vehicle registrations jumped 34 percent in California and 29 percent nationally.

Between 1988 and the end of the century, licensed California motorists are expected to increase in number by 26 percent (from 18.9 million to 23.8 million) and registered vehicles also by 26 percent (from 21.3 million to 26.9 million). Nationally, licensed motorists are expected to increase 16 percent and registered vehicles, 18.5 percent.

Also, traffic on California's road systems has grown faster than nationally. The 1988 TRIP study reported that, between 1975 and 1985, vehicle miles traveled (VMT) jumped 57 percent on California roads and just 33 percent on all public roads nationwide.

Updated numbers show that traffic volumes in California between 1980 and 1988 jumped dramatically in California -- up 55 percent -- while the actual number of miles of roads have increased less than 2 percent. Traffic climbed from 155.89 billion vehicle miles in 1980 to 241.58 billion in 1988. But the number of miles of public roads (excluding roads on federal property) increased by just 2,758 miles (1.9 percent), from 142,737 miles in 1980 to 145,495 miles in 1988.

By the end of the century, traffic in California is expected to exceed 320 billion vehicle miles a year -- up 33 percent over 1988 levels. That means that the average amount of traffic carried by each mile of roadway in California will jump from 1.66 million vehicle miles to 2.20 million vehicle miles in just 12 years.

However, despite rapidly increasing traffic, California motorists are actually paying less in motor-fuel taxes to fund improvements to their roads and bridges. More fuel-efficient vehicles are the primary reason. The following chart -- which estimates 1990 and 2000 data -- shows how growing vehicle fuel-efficiency decreases per-motorist fuel consumption and taxes.

	<u>1970</u>	<u>1980</u>	<u>1990</u> (est.)	<u>2000</u> (est.)
Annual travel/driver (VMT)	10,000	10,000	10,000	10,000
Avg. fuel consumption (miles per gallon)	13.6	15.4	21.2	27.2
Gallons consumed	735	649	472	368
State gas tax <sup>3</sup>	7¢	7¢	9¢	9¢
Annual gas taxes paid per motorist	\$51.45	\$45.43	\$42.48	\$33.12

The Costs of Congestion to Motorists

The costs to motorists of sitting in traffic congestion are very real, particularly in terms of wasted motor fuel and wasted time. A number of estimates of the amount of time lost have been made recently, including some by TRIP in 1987.

TRIP estimated that Californians wasted at least 300,000 hours a day due to traffic congestion on freeways. The California Department of Transportation has estimated the loss on state highways at 200,000 hours a day for recurrent, or regular daily, congestion and another 200,000 hours a day for congestion caused by traffic accidents.

---

<sup>3</sup> On a national basis, California has one of the lowest state gasoline taxes, at 9 cents per gallon. The lowest is Georgia at 7.5 cents per gallon and the highest is Nebraska at 22.0 cents per gallon. The national average state gasoline tax, as of December 31, 1989, is 15.8 cents per gallon -- up 7.2 cents, or 84 percent since 1980.

In his article, "Resolving Gridlock in Southern California,"<sup>4</sup> author Robert Poole wrote that, in 1988, in Los Angeles County alone, drivers waste 458,000 hours a day stuck in traffic on all roads. In the San Francisco Bay Area in 1985, motorists wasted an estimated 112,000 hours a day, according to state traffic planner Ed Boyle in his report, "District 4 System Management Plan."

A new study of traffic congestion by the Texas Transportation Institute at Texas A&M University has found that congested roads in 29 U.S. cities cost drivers an estimated \$24.25 billion in 1986. Los Angeles topped the list with the worst congestion, costing its motorists some \$9.44 billion in wasted time, fuel and higher insurance costs. The study noted that congestion in the 29 cities worsened by 12 percent between 1982 and 1986.

TRIP has examined the costs of traffic congestion in California and has found similarly exorbitant costs, although these estimates do not include the additional costs of insurance. In examining time and motor fuel wasted, TRIP has found that, in 1988, California motorists -- driving on all traffic-congested roads in the state -- wasted an estimated 1.19 billion hours a year. This lost time, averaging 20 minutes a day per motorist, includes sitting at stop signs, traffic signals, waiting in turn lanes and just sitting in traffic jams. It is the equivalent of 10,000 motorists sitting in gridlock for 13.6 years.

---

<sup>4</sup> Poole, Robert W., Jr., "Resolving Gridlock in Southern California," Transportation Quarterly, Vol. 42, No.4, October 1988, Eno Foundation for Transportation, Inc., Westport, Connecticut.

Each motorist also wastes about 43 gallons of motor fuel every year due to this congestion -- amounting to more than 753 million gallons statewide.

The annual dollar value of this lost motor fuel and lost time -- which could be called a "congestion tax" -- totals \$1,194 per driver, or \$16.97 billion statewide.

This congestion cost estimate is based on the following factors:

- There are 250 commute days a year, and an estimated 14.2 million motorists are on the roads during peak travel periods;
- some 90 percent of the vehicles in traffic congestion are automobiles and 10 percent are commercial vehicles;
- average occupancy per automobile is 1.1 persons, and the average value of a person's time is \$10.55 per hour;<sup>5</sup> and
- the value of a commercial vehicle with driver is estimated to be about \$30 per hour.

#### Traffic Congestion in 2000

A 17 percent jump in population by the year 2000, accompanied by a 26 percent jump in the number of drivers, 26 percent more vehicles and at least 33 percent more traffic is expected to have a dramatic impact on the quality of life of most Californians.

---

<sup>5</sup> Urban Freeway Operations, Transportation Research Board, National Research Council, Washington, D.C., 1988.

With limited construction of new roads as well as inadequate transit utilization, traffic congestion is expected to worsen until it virtually chokes off many major arteries and vital connector routes all over the state. Daily periods of congestion are expected to lengthen until morning and afternoon rush hours are indistinguishable from other hours.

In fact, according to the state Department of Transportation, delays caused by traffic congestion already are increasing 15 percent annually in the Los Angeles area and 25 percent annually in the San Francisco Bay area. In ten years, traffic densities will be worse by 150 percent in Los Angeles and 250 percent in San Francisco. Traffic planner Ed Boyle predicts a nine-fold increase in traffic density in the Bay Area between 1985 and 2005.

The California Assembly Office of Research reports that traffic speeds on some Los Angeles Freeways could be as low as seven miles per hour by the year 2000.

Should traffic worsen overall by just 100 percent between 1990 and 2000, the cost to the average motorist in wasted time and motor fuel could soar to \$3,498 a year, or \$62.3 billion statewide by the end of the century.

This projection considers the following probabilities:

- a doubling of time spent sitting in traffic (20 to 40 minutes a day);
- an additional 3.6 million motorists;

- higher values of both personal and commercial time; and
- increased overall fuel consumption (although better individual vehicle fuel efficiency).

If traffic congestion delays double, the average motorists will waste 40 minutes a day due to traffic congestion, amounting to 168 hours, or seven days, annually. The total time wasted -- an estimated 2.99 billion hours a year -- is the equivalent of 10,000 motorists in gridlock for 34.2 years.

Even if, vehicle fuel efficiency improves 30 percent in the next 10 years, the delays for motorists will mean the loss of an estimated 1.6 billion gallons of motor fuel -- or an average of 90 gallons per driver -- by 2000. At today's prices<sup>6</sup>, that would amount to about \$110 per motorist, or \$1.96 billion statewide.

A 100 percent increase in traffic congestion actually is a conservative estimate, according to many planners. In fact, a new GAO report estimates urban congestion levels nationwide will increase nearly 300 percent over 1985 levels by the year 2005. And urban traffic in California is increasing faster than it is nationally.

---

<sup>6</sup> Statewide average of \$1.217 per gallon, November 1989, American Automobile Association

A 200 percent increase in congestion levels, then, is not unreasonable. The following chart shows the estimated impact, both statewide and on the average motorist, should traffic congestion increase 100 percent, or 200 percent, in the next 10 years.

(Note: Projections assume increases in value of time and vehicle fuel efficiency; however, the value of motor fuel has been left constant, at 1988 levels, due to the unpredictability of prices.)

	1988	2000	
		(Increase in Traffic Congestion)	
		100 percent	200 percent
Time wasted per driver annually:			
Hours	84 hours	168 hours	252 hours
Days	3 1/2 days	7 days	10 1/2 days
Hours wasted statewide annually:	1.19 bil.	2.99 bil.	4.49 bil.
Equivalent of 10,000 motorists in gridlock for:	13.6 years	34.2 years	51.2 years
Value of wasted time:	\$16.05 bil.	\$60.35 bil.	\$90.53 bil.
Total wasted motor fuel (gallons):	753.3 mil.	1.60 bil.	2.26 bil.
Value of wasted fuel:	\$916.8 mil.	\$1.95 bil.	\$2.76 bil.
<b>TOTAL WASTED TIME/FUEL</b>			
Statewide	\$16.97 bil.	\$62.31 bil.	\$93.29 bil.
Per Driver	\$1,194	\$3,498	\$5,238

A doubling of traffic congestion will cost the average California motorist \$2,304 more per year (+193 percent over 1988) and a tripling of congestion will cost \$4,044 more per year (+339 percent over 1988). Fuel consumption alone could jump 200 percent -- wasting an estimated 1.5 billion gallons of motor fuel -- if traffic congestion indeed triples by the end of the decade.

These dollar savings could be spent on other things, including house payments, new furniture, major appliances, automobiles and vacations -- purchases that tend to provide greater personal satisfaction than sitting in traffic a half hour a day, five days a week, 250 days a year.

For instance, the average motorists now wastes the equivalent of \$1,194 a year in excess motor fuel and idle time. This dollar amount would purchase \$100 worth of groceries every month for a year. It would buy a camcorder, a stereo or compact disc player, or even two weeks in Hawaii.

If traffic congestion doubles or triples in the next decade, that cash equivalent will jump, also. In 1989 dollars, \$3,498 (per motorist per year) would be a substantial downpayment on the purchase of a car. It represents nearly a year of child care, several months' rent of a two-bedroom mid-range apartment, or a large-screen television.

And \$5,238 would provide even more. Most importantly, these estimated dollar amounts represent additional leisure time that will be unavailable to Californians in coming years as gridlock strangles metropolitan areas all over the state.

Rough Roads Increase Drivers' Costs

Sitting in traffic congestion costs Californians billions of dollars in wasted time and motor fuel each year -- dollars that clearly could be spent on other things. But driving over deteriorated road surfaces also costs motorists money in wasted vehicle operating costs, including fuel and oil, vehicle repairs and tire wear.

More than 63 percent of California's arterial and collector (main) roads are in fair, poor or very poor condition. Roads in fair condition are beginning to deteriorate and have cracks, ruts and bumps that cause drivers to slow occasionally, providing somewhat uncomfortable "rideability." Poor and very poor roads have many surface deficiencies (including extensive cracks and potholes), and are very uncomfortable to ride on.

## THE NEED FOR IMPROVED PASSENGER RAIL TRANSPORTATION IN CALIFORNIA

This paper was prepared to investigate the air quality and other environmental benefits associated with modernizing California's urban passenger rail transportation network. The study was conducted in 1988 and 1989 by Charles P. Carson, an undergraduate student at the University at the University of California, Santa Cruz, under the supervision of Dr. Gerald H. Meral, Executive Director of the Planning and Conservation League Foundation.

The purpose of the paper is to assess the need for additional investment in rail transportation, evaluate local projects, and educate the public about the potential benefits of additional urban rail transportation in California. It will be distributed to the public at large and to decision makers in the field of transportation.

Additional copies are available from the PCL Foundation for a cost of \$3.

4

quality, energy use, and land use problems facing California as a result of our current transportation system. It also examines the possibilities and potential for alternative transportation systems, such as urban rail transit.

### The Pain Alternative

The scene has become increasingly familiar in California. On the way to work every morning and back home every evening, the commute is unbearably heavy and slow. In the distance is the destination, a metropolitan area engulfed in a persistent blanket of haze. The people in front and behind you for miles are very much like yourself, single passengers in vehicles which use fossil fuel.

Whether for the morning commute or any other type of trip, people in California use their cars because it is one of the few choices for transportation available. And despite the waiting, expense and problems, Californians continue to regard the auto as the transportation mode of choice for the seeming independence and convenience it offers.

The transportation situation in many of California's metropolitan areas has become quite serious. The long-running love relationship with the automobile has led to increased traffic congestion and gridlock, reduced air quality, record levels of fuel consumption, and accelerated urban sprawl throughout the state.

The problems associated with the use of the automobile were formerly considered exclusive to Southern California, particularly the South Coast Air Basin. However, with California's rapidly increasing population and relatively healthy economy, a prodigious amount of growth has resulted, creating with it a greater demand for automobile use in all areas of the state.

Some of the most seriously affected areas include the San Francisco Bay Area, the South Coast Air Basin, the San Diego region, and the San Joaquin and Sacramento Valleys. These areas are now experiencing severe impacts as a result of automobile usage, and the prognosis for the future is fairly bleak.

Public transit has long been proposed as at least a partial remedy for these auto-oriented problems. Fixed guideway public transit, or urban rail transit, is one mode of public transit which has proven highly successful at moving large numbers of people in a metropolitan area. It also helps relieve the air quality and energy consumption problems created by the automobile.

Urban rail systems generally refer to two different types:

has a number of metropolitan areas which have these factors at levels sufficient to create serious air quality problems.

The pollutants which currently cause the greatest amount of concern in California's metropolitan areas are carbon monoxide (CO), ozone (O<sub>3</sub>), particulate matter (PM 10), and nitrogen dioxide (NO<sub>2</sub>).

Carbon monoxide (CO) is a by-product of the incomplete burning of fuels in industrial processes or automobiles. CO, when inhaled, enters the blood stream where it binds chemically to hemoglobin, thus reducing the total amount of oxygen delivered to all tissues of the body. CO also weakens contractions of the heart, and affects mental functions, visual acuity and alertness of humans, most notably those individuals who are elderly or who have heart or respiratory ailments.

Ozone (O<sub>3</sub>) is a colorless, toxic gas which is created when hydrocarbons and automobile emissions and nitrogen oxide emissions from industrial sources react chemically with sunlight. At high levels, ozone impairs the normal functioning of the respiratory system. Like CO, ozone is a health threat to the elderly or those with heart or lung ailments, even at low concentrations.

Particulate Matter (PM 10) is made up of dust, smoke, soot, and polluting gases which are transformed into small particles as a result of a number of chemical reactions. PM 10 refers to particulate matter which is 10 micrometers (millionths of a meter) in diameter. These particles are a particular concern since they can more easily penetrate the natural human defenses of the respiratory system. A great portion of PM 10 is made up of nitrates and sulfates, which are due in part to automobile emissions.

Nitrogen dioxide (NO<sub>2</sub>) is introduced into the environment through high-temperature processes from sources such as automobiles and industry. High levels of NO<sub>2</sub> exposure have been shown to induce pulmonary edema in humans and impair resistance to infection in laboratory animals. NO<sub>2</sub> emissions also reduce visibility, and play a significant role in the creation of PM 10.

---

<sup>6</sup>Measuring Air Quality: The New Pollutant Standards Index, July, 1978, Env. Protection Agency, p. 8.

<sup>7</sup>Ibid... p. 10.

<sup>8</sup>The Path to Clean Air: Attainment Strategies, SCAQMD, SCAG, December, 1987. p. 2.

The South Coast Air Basin

The South Coast Air Basin has the worst air quality of any region in the United States. This basin has the unfortunate combination of a high population concentration and a geographical location which tends to contain pollutants and prohibits their dispersal.

The activities of 10-12 million people (particularly their automobile use) in a basin surrounded by mountains which traps pollutants lead to a drastic reduction in air quality.

Tight controls have been placed on industrial sources of pollution in the Basin, and the typical "industrial" pollutants have been reduced appreciably as these types of industries have moved out of the Basin.<sup>13</sup>

Nonetheless, air pollution is still a problem in the Basin, and the automobile is the primary culprit. Mobile sources currently account for approximately 60% of Basin-wide emissions.<sup>14</sup>

The South Coast Air Basin exceeds air quality health standards for a number of pollutants. The Basin is currently the only region in the country which exceeds the federal nitrogen dioxide standards. These high concentrations of NO<sub>2</sub> also contribute to the creation of acid rain and fog, increased PM 10, and reduced visibility.<sup>15</sup> In the Los Angeles Basin itself, automobiles contribute 60% of nitrogen oxides (NOx) emissions.<sup>16</sup>

The South Coast Air Basin is also a problem spot for exceeding federal standards for carbon monoxide. Automobiles contribute an overwhelming 85% of the carbon monoxide in the Los Angeles area.<sup>17</sup>

The ozone problem in the Basin is by far the worst in the nation. The National Ambient Air Quality Standard (NAAQS) for ozone was exceeded in the South Coast Air Basin an average of 140 days per year during the period from 1984 to 1986.<sup>18</sup>

<sup>13</sup>SCAQMD, SCAG, Op. Cit. p. 1.

<sup>14</sup>SCAQMD, SCAG, Op. Cit.... p. 1.

<sup>15</sup>SCAQMD, SCAG Op. Cit.... p. 4.

<sup>16</sup>Clean Air Act, Issue Paper No. 7: Motor Vehicle Emission Standards, California Air Resources Board, Nov. 12, 1987, p. 1.

<sup>17</sup>Ibid.... p. 1.

<sup>18</sup>SCAQMD, SCAG, Op. Cit.... p. 2..

most frequent violators of federal standards for ozone.<sup>22</sup>

The PM 10 problem in the San Joaquin Valley is currently one of the most serious and complex air problems in the state. Over the years, PM 10 emissions have been increasing in the Valley, and their source has been difficult to pinpoint. However the automobile is known to be a primary culprit.<sup>23</sup>

Emissions of all major pollutants in the San Joaquin Valley will increase by the year 2000. Such emission level increases not only adversely affect humans, but they also drastically impair the productivity, quality, and yields of California's agricultural products.<sup>24</sup>

The San Joaquin Valley is famous for the food and fiber which it produces. However, the yields in the Valley have been impaired by heavy air pollution in the region. Numerous crops have suffered yield losses due to reduced air quality (see Table 1). Some of the more serious cases include: grapes, cotton, and oranges, with a 10-20% loss per year; and tomatoes and alfalfa with up to a 10% loss per year.<sup>25</sup>

The air quality conditions in the Valley are expected to worsen since all of the reasonably-applied control technology (RACT) has been implemented for the sources of the various pollutants in the area.

The region is also experiencing a major boom in growth. Projected population growth for the region from 1987 to 2005 is a very high 43%, with a real personal income growth of 100%. Such growth in population and income characteristically leads to a steady increase in the purchase and use of automobiles, a factor which will only add to the regional air quality problems.<sup>26</sup>

The San Joaquin Valley is another California region which would benefit from further development of a rail transit system. With a growing regional economy and population, the San Joaquin Valley can wisely invest in the future and plan for a transportation system which will accommodate growth while at the same time address the issue of cleaner air in the Valley.

---

<sup>22</sup>-bid...

<sup>23</sup>presentation on San Joaquin Valley Growth and Air Quality Impacts, Air Resources Board, April 7, 1988.

<sup>24</sup>-bid.

<sup>25</sup>-bid.

<sup>26</sup>-bid.

### The San Francisco Bay Area

Air quality in the Bay Area has shown improvement over the past few decades, but the region is still working to maintain the state and federal standards for the major air pollutants.

A 34% reduction in vehicular carbon monoxide emissions will be needed basin-wide by the year 2000 if the region is to achieve the desired attainment standards. The standards for both ozone and carbon monoxide are not expected to be achieved in the near future. Ozone and carbon monoxide pollutants in the Bay Area are produced largely by automobiles.<sup>32</sup>

PM 10 levels in the Bay Area will need to be reduced by a projected 30-40% in order to achieve the air quality standards for this pollutant. Unfortunately, PM 10 levels are forecasted to increase by 25% from 1987 to 2000.<sup>33</sup>

The San Francisco Bay Area now has a population of approximately 5.4 million people and 3.6 million automobiles.<sup>34</sup> A rapid increase in population and auto use has resulted in record emissions. Rail transit projects can help to alleviate the problem of reduced air quality which has and will become worse in the Bay Area because of the use of the automobile.

### San Diego Region

The air quality in the San Diego region has shown steady improvement in the last two decades, but the area still has, and is expected to continue to experience, air quality problems.

Over 90% of the carbon monoxide in San Diego is emitted by automobiles.<sup>35</sup> Total auto emissions of carbon monoxide in San Diego are currently under federal standards, and they are forecasted to remain so until the end of this century. After that time, the standards will be much more difficult to attain, and further stringent emission reductions will have to be implemented.

The case is the same for nitrogen oxide emissions, where emission reductions are expected to meet federal standards until

---

<sup>32</sup>Recent Progress in the San Francisco Bay Area Air Basin, Air Resources Board, 1987.

<sup>33</sup>Ibid

<sup>34</sup>Air Quality Handbook, 1987-88, Bay Area Air Quality Management District, p. 43.

<sup>35</sup>Footnote 35

more automobile use. Steps need to be taken now to address the air quality problems that will exist in the near future.

Expansion of the existing public rail transit system could help to mitigate the adverse effects of the growth of both population and vehicle miles traveled in San Diego.

Air pollution is one of the most pressing problems affecting our metropolitan areas. It is very unlikely that the continued use of the automobile as the major means of transportation in our metropolitan areas will ever lead to substantially improved air quality. Improving California's air quality means improved health to its citizens and reduced damage to property as a result of auto pollution.

Our state's metropolitan areas need to curb auto emissions while at the same time providing a viable, convenient, and environmentally safe transit system for the citizens.

Rail transit has the potential to reduce auto emissions in metropolitan areas by diverting drivers from private automobiles and thus reducing vehicle miles traveled (VMT) and emissions.

Stanford Research Institute (SRI) conducted a cost-benefit analysis of a five-corridor rapid transit system for the Southern California Rapid Transit District.<sup>42</sup>

SRI examined the reduction of pollution which would result from the diversion of automobile commuters to rapid transit. The study projected a diversion equivalent of 4,600,000 vehicle miles for the proposed five-corridor rapid transit system. From this 4,600,000 VMT diversion it was estimated that emissions would be reduced by 231 tons per day.<sup>43</sup>

Commute patterns heighten the air quality advantages provided by rail transit. During peak traffic periods, urban rail systems perform their best, emitting the least amount of pollutants per passenger mile.<sup>44</sup> In contrast, the automobile performs worst during peak traffic periods. The stop-and-go traffic and slower speeds cause autos to operate at their lowest efficiency and emit the highest degree of pollutants per passenger mile (See graph #1).

---

<sup>42</sup>Benefit/Cost Analysis of the Five-Corridor Rapid Transit System for Los Angeles, California. Stanford Research Institute, 1968, p. 14.

<sup>43</sup>Ibid... pp.

<sup>44</sup>Air Pollution by Urban Transportation Mode, (Graph #1) Transit Fact Book, 1978-1979, American Public Transit Association, Washington, D.C., December, 1979, p. 54.

"Hints of vulnerability emerged with the oil price increases of the seventies...rampant inflation, declining rates of economic growth, and rising unemployment. Whether oil-dependent nations successfully adjust to a reconcentration of oil production in the Middle East, and to the inevitable decline in total production, will strongly influence prospects for economic growth and social stability."<sup>49</sup>

The United States imports approximately 40% of the oil it uses on a national level, and this percentage is growing.<sup>50</sup> At the same time, U.S. oil production has been declining steadily, and is predicted to drop off sharply in the next 20-30 years. The U.S. will be essentially out of oil by the year 2020, and world supplies are estimated to run out by 2040.<sup>51</sup>

Our transportation systems nationwide, including the state of California, are dangerously dependent on oil as a fuel source. The high percentage of oil imported from other countries to maintain our transportation systems has been a major contributing factor to the U.S. trade deficit.

Additionally, our national security and prospects for economic growth and social stability are threatened when we become dependent upon imports of oil from nations which are highly unpredictable, hostile, or in politically or militarily sensitive regions.

Urban rail systems have been proven to be an energy saving transportation mode in metropolitan areas.

A study published in 1974 by Bezdek and Hannon<sup>52</sup> examined the impact and changes that would occur in energy consumption and employment if the modes of transportation within and between cities were modified. They considered a \$5 billion redirection of 1975 Highway Trust Funds away from typical highway construction to the development of railroads and mass transit.

Such a redirection would have a 61.6% decrease in energy consumption for the construction of railroads and mass transit, relative to the energy consumed in the highway program. Additionally, a 3.2% increase in employment would result from the

---

<sup>49</sup>State of the World 1987. A Worldwatch Institute Report on Progress Toward a Sustainable Society, 1987, p. 17.

<sup>50</sup>Trans. 2020, Loc. Cit... p. 83.

<sup>51</sup>Trans. 2020, Loc. Cit... p. 87.

<sup>52</sup>R. Bezdek and B.M. Hannon, Energy, Manpower and the Highway Trust Fund, Science 185(4152), 1974, pp. 669-675.

Urban rail transit systems are a mode of transportation that can be developed and constructed in metropolitan areas, producing a significant savings in energy as well as creating employment opportunities.

#### Land Use

Building new rail lines for public transit in California has the potential to dramatically affect land use development patterns in metropolitan areas.

The construction of a rail transit system in a metropolitan area has been shown to stimulate real estate development; however, certain other factors must be present to create a demand for development. Some of these include the following:

- There must be favorable conditions in the market for real estate, a vital prerequisite is a strong and growing regional economy.<sup>58</sup>

- The sites developed in conjunction with the rail system must hold other redeeming qualities. The land must be developable and a suitable physical setting or aesthetically pleasing neighborhood are significant factors.<sup>59</sup>

- Incentives to stimulate for growth must exist. Public policies must favor development. This could mean the implementation of certain policies or practices, such as density bonuses, tax increment financing, industrial development bonds, joint development, or parking disincentives.<sup>60</sup>

With the proper conditions existing, public rail transit can, and has been shown to, increase development in metropolitan areas throughout the United States.

A 1979 study examined the growth in downtown office floorspace in 25 major American cities in relation to the presence of rapid transit (see graph #2).

The nine cities with rapid transit systems in existence or under construction showed an average of 17% greater per capita

---

<sup>58</sup>Robert Certero, Exploring the Land Use Potential of Light Rail Transit, Presentation to Transportation Research Board Meeting, January, 1984, p. 19.

<sup>59</sup>Ibid...pp. 19-20.

<sup>60</sup>Robert Certero, "Light Rail Transit and Urban Development," Journal of American Planning Association, Spring, 1984, 50(2):141.

public.<sup>66</sup>

For example, the city of Toronto experienced significant growth along its own Yonge Street Subway Line, compared to the rest of the city. The new growth, as at least a partial result of the subway line, was enough to generate \$5 million in annual property taxes, with the annual carrying charges for the bonds issued for construction totaling \$4 million per year.<sup>67</sup>

Similarly, the city of Washington D.C. has seen a \$3 billion increase in ongoing or private development related to its Metrorail transit project since 1976.<sup>68</sup>

The development potential of urban rail transit can be quite significant, if other development factors are present and local public policies are adequately supportive.

It is clear that if urban rail transit is to influence local development, the proposed transit system must be carefully planned with the aforementioned significant development factors in mind.

If such care is taken, an urban rail transit system can play a major role in improving the transportation of an area while increasing the likelihood of urban development.

California has long been a leader in the field of transportation and related concerns. From the development of the first freeway to the implementation of the most stringent state auto emission standards in the nation, California has always sought highly innovative, state-of-the-art solutions to its transportation problems.

However, innovative approaches to transportation have been traditionally focused upon the automobile, a flaw which is now causing serious problems statewide with traffic congestion, reduced air quality, and high energy use.

We must expand our options for urban and regional transportation, weaning ourselves from a transportation mode which has always been one of the few choices available to California citizens.

---

<sup>66</sup>Nancy W. Sheldon and Robert Bradwein, The Economic and Social Impact of Investments in Public Transit, (Toronto:Lexington Books, 1973), pp. 41-44.

<sup>67</sup>Staff Report on Metro-Related Private Investment in the Washington Metropolitan Area, Federal City Council, (Washington, D.C.: July, 1979).

<sup>68</sup>Ibid.

Bibliography

- Adams, Gerald D., "Department Stores in S.F. Hit Big Time," S.F. Chronicle, September 11, 1988, p. A-15.
- American Public Transit Association, "Air Pollution by Urban Transportation Mode" (Graph #1), Transit Fact Book, Washington D.C., December, 1979.
- Bay Area Air Quality Management District, Air Quality Handbook, 1987-88, p. 45.
- Bezdek, R. and B.M. Hannon, "Energy, Manpower, and the Highway Trust Fund," Science, 185(4152), 1974, pp. 669-675.
- California Air Resources, California Air Quality: A Status Report, 1985, p. 6.
- California Air Resources Board, Clean Air Act Issue Paper No. 5: Attainment Dates for Ozone, November 12, 1987, p. 1.
- California Air Resources Board, Presentation on San Joaquin Valley Growth and Air Quality Impacts, April 7, 1988.
- California Air Resources Board, Recent Progress in the San Francisco Bay Area Basin, 1987.
- California Air Resources Board, Status of Air Quality in Sacramento, 1987.
- California Department of Transportation, Natural Resources Defense Council, Robert Watson, California Transportation 2020 Forum.
- Cervero, Robert, "Exploring the Land Use Potential of Light Rail Transit," Presentation to Transportation Research Board Meeting, January, 1984.
- Cervero, Robert, "Light Rail Transit and Urban Development" Journal of American Planning Association, Spring, 1984, 50(2):141.
- Cleaner Air Partnership of California, Sacramento Has An Air Pollution Problem!, July, 1987.
- Congressional Budget Office, Urban Transportation and Energy: The Potential Savings of Different Modes, 1977.
- Dalson, Gary, "Capital Air Is Still Among Nation's Dirtiest, US Reports," Sacramento Bee, 1 Aug. 1988, p. A-16.
- Energy Information Administration, International Energy Outlook, 1985.



TABLE 3

Table 12-3. The impact of energy consumption and employment of a \$5 billion investment (1975 dollars) in seven federal programs. Five billion 1975 dollars are equal to \$3.65 billion in 1963 and \$3.165 billion in 1955. Data calculated from 1, 2, 3. No attempt was made to correct for the technological impact on energy use efficiency between 1963 and 1975. It is generally expected that 1975 technology will be more energy intensive.

Federal program	Energy consumption			Employment demand		
	Requirement per 1963 dollar of program \$10 <sup>6</sup>	Total requirement (10 <sup>9</sup> Btu)	Decrease* (%)	Jobs per \$100,000 of program (1975)	Total no. of jobs	Increase (%)
Highway construction	112,200 <sup>†</sup>	409.53		3.1	256,150	
Railroad and mass transit construction	43,100	157.32	-61.6	3.4	264,430	+2
Water and waste treatment facilities construction	55,400	223.71	-41.7	3.2	259,490	+1
Educational facilities construction	70,800	257.69	-37.1	3.3	268,950	+4
National health insurance	40,400	147.46	-64.0	13.4	423,320	+65
Criminal justice and civilian safety	115,500	432.53	-3.4	12.4	383,520	+50
Personal consumption expenditures (tax relief)	36,000 <sup>‡</sup>	313.90	+23.4	3.7	273,150	+7

\* Percent changes are relative to highway construction program.

<sup>†</sup> As in all programs this number is for a technology of estimated efficiency. The actual energy intensity of all highway construction in 1963 was 98,000 Btu per dollar (3.4). Similar construction (Army Corps of Engineers) varied from 92,000 to 146,000 Btu per dollar (the avg. of all government programs).

<sup>‡</sup> Includes direct energy purchases and the energy and labor required for trade and transportation margins.

Note. From "Energy, Manpower and the Highway Trust Fund" by R. Bezzik and B. M. Hannon, 1974, *Science*, 155:4132, pp. 669-71. Copyright 1974 by American Association for the Advancement of Science. Reprinted by permission.



Alan F. Pegg  
General Manager

July 26, 1990

TO: Board of Directors

FROM: Alan F. Pegg

SUBJECT: Receive and file Status Report and Report on a New Element of the District's Clean Air Promotional Program

Recommendation

It is recommended that the Board of Directors receive and file this status report on the District's Clean Air promotional program.

Summary

Currently the District is operating a peak fleet of nearly 2000 diesel buses. Based on current passenger-mile data, the District's diesel fleet is reducing air pollution by approximately 20 thousand tons per year, compared to the amount of pollution that would be produced if the District's 450 million annual riders utilized private automobiles. This amounts to an 80% reduction in the amount of pollutants released into the air.

The District is currently testing a variety of clean fuel buses. Based on one year of data, it is estimated that these clean fuel buses are reducing the emission of bus pollutants by an additional 54%, as compared to diesel engines.

SCRTD is working on a two pronged approach to educate the public on the SCRTD's clean air efforts and generate additional revenues to offset the potential costs. First, a new promotional program will be developed to inform people about SCRTD's contribution towards cleaning the air. The program will quantify initial results of the District's Clean Air Program in terms of the amount of air pollutants SCRTD is eliminating. Second, staff will be informing various audiences, including Congress and the transit industry, of the cost associated with an increased clean air effort and seek support for specific funding to address these needs.

Background

In 1985, the SCRTD Board of Directors approved an ambitious alternative fuels testing program. Since then, the District has begun testing several types of alternative fuel and clean emission buses and has become a nationally recognized leader. By late 1990, the District will be testing a project total of 74 vehicles. The District has also demonstrated national leadership in the area of emissions testing.

**SCRTD Clean Emissions Programs**Methanol

The District is currently testing thirty buses designed to run on 100% Methanol. This demonstration project is being funded through an Urban Mass Transportation Administration grant and is the District's largest alternative fuels testing program.

One of the primary aspects of the project is to examine the cost differential between Methanol and diesel buses. Areas of study and evaluation also include the operational and maintenance costs, as well as engine and accessory component reliability.

By the end of 1990 the Methanol fleet will have accumulated over one million revenue service miles. During the first year of operation, the District has identified several areas which have required modification and/or retrofitting of the vehicles. Trouble shooting resulted in solutions such as; finding an additive to prevent leaking fuel injectors and adding catalytic converters to eliminate formaldehyde emissions. The fleet is now operating at a level almost comparable to the diesel bus fleet.

Compressed Natural Gas (CNG)

Eleven CNG buses are scheduled for revenue service by the end of 1990. The first CNG bus arrived in January, 1990, with three additional buses arriving in April.

The CNG fueled bus project is a cooperative effort between the District and the Southern California Gas Company. The project team will be compiling data on the operating and maintenance costs associated with CNG buses, the preventative maintenance cycles necessary and in-service reliability. Presently there are several major mechanical issues in the process of being resolved.

The District is also in the process of converting a 30-foot Carpenter diesel bus to operate on CNG as a demonstration of the feasibility of bus conversion. Further, the District has applied to the California Energy Commission for funding to pay for the conversion of 10 automobiles that will operate on compressed natural gas. Five of the automobiles will operate on both gasoline and compressed natural gas.

Currently a "slow fueling" facility has been temporarily installed at Division 15 located in the San Fernando Valley. This site was chosen as a result of the availability of space. A permanent "fast fueling" facility is planned for the same location in the near future. The development of a fast fueling facility is one of the most challenging aspects of the CNG bus demonstration. The prototype facility will be the first in the country. The District, in cooperation with the Southern California Gas Company, has completed initial specifications and is preparing to contract for construction.

#### Methanol with Avocet

The District has converted three buses to run on Methanol with an ignition enhancer called Avocet. An additional nine buses are slated for conversion by the end of FY 91.

This project is a cooperative effort between the District and the South Coast Air Quality Management District. The project is designed to study the feasibility of operating diesel buses on Methanol with an ignition enhancer additive. The additive allows the Methanol to burn in a diesel engine without an expensive engine conversion process.

The District has discovered that the conversion of a diesel bus to run on Methanol is a viable technique for reducing air emissions. These conversions have provided the opportunity for a 1981 bus to meet 1991 emission standards.

Currently, Methanol with avocet buses have logged approximately 22,000 revenue service miles and have proven quite reliable on inner-city routes. The District will continue to study these modified buses to determine the financial viability of this technology. While the capital cost of utilizing Methanol with Avocet are low, the cost of the additive more than triples the fuel cost.

### Particulate Traps

The District is testing four diesel buses equipped with particulate traps. Seventeen additional buses are scheduled for revenue service by late 1990.

This project is a cooperative effort between the District, California Air Resources Board (CARB) and LACTC. Particulate trap systems may represent the least expensive technology to meet the 1991 emission requirements.

Particulate (smoke) emission reduction is one of the major concerns in the South Coast Air Quality region. A particulate trap will provide the District with the means to meet the 1991 emission standards with older existing buses and with newer buses recently purchased. Initial data show as much as a 70% reduction in particulate emission. Particulate traps, however, barely meet the nitrogen oxide (NOx) requirements and it is unclear whether the current technology will suffice as the equipment ages.

### Emission Testing Facility

Construction of a new Emissions Testing Facility at the Central Maintenance Facility is planned for completion by mid 1991. This facility is the first of its kind in the United States and will enable the District to complete an array of complicated heavy-duty vehicle engine clean air tests. Since no such test facility exists in the State of California, the facility will be accessible to private manufacturers and other public and private transit operators. The testing facility will be utilized by the California Air Resources Board to develop practicable air quality regulations for the state.

### Initial Clean Emissions Testing Results

#### **Reduction in Air Pollutants**

Based on one year of data, it is estimated that these clean fuel buses are reducing the emission of bus pollutants by 54%, as compared to diesel buses. The total of 74 buses that are scheduled to be in operation by late 1990 are estimated to reduce bus pollutants by 83 tons annually. As the number of clean fueled buses in the fleet increase, this figure will increase accordingly.

Table A, Exhaust Emissions, is a comparison chart of exhaust emissions resulting from the various technologies being tested by the District. Current federal standards are also provided for a reference point. Conclusions that can be drawn from this table, based on initial data, are;

1. The Clean Diesel with Particulate Trap technology does an excellent job with regard to filtering particles, and could meet the requirements of the House Clean Air Bill. The factor upon which Clean Diesel has little effect is nitrogen oxides (NOx), which is a particular problem in the Southern California air basin.
2. Methanol with a catalytic converter provides very good overall performance. This technology is well suited to Southern California, where the climate allows outdoor fueling.
3. CNG also provides very good performance. CNG requires the most initial capital costs of the three technologies, but fuel costs are lower than for Methanol.

#### Costs

Table BH, Clean Emission Impact on Transit Buses, demonstrates the initial cost impacts of the clean emissions technology currently being tested by the District. Some areas are more easily quantified than others. Estimates of the initial capital costs, as well as comparative fuel costs, are available at this time. Hard data concerning maintenance and durability is not yet available. An explanation of the table is as follows:

1. The initial cost of a new bus ranges from an additional \$15,000 for Clean Diesel with a Particulate Trap to an additional \$55,000 for a Compressed Natural Gas (CNG) bus. (The aggregate incremental cost for purchasing an entire "clean fleet" ranges from approximately \$48 million for Clean Diesel to \$175 million for CNG over a 12 year replacement cycle.)
2. The capital cost of converting an existing bus to clean emissions ranges from \$20,000 for Methanol with Avocet to \$40,000 for CNG.
3. Fueling facilities range from no extra cost for Clean Diesel to \$2.5 million for a fast fueling CNG facility. This CNG facility is a prototype technology and the cost will probably decline as the facilities become more common. (The aggregate cost of installing CNG fueling facilities at all eleven operating divisions could reach as high as \$28 million.)

4. Fuel costs range from \$.19/mile for Clean Diesel to \$.71/mile for Methanol with Avocet. These costs can vary significantly depending on fuel prices. (The incremental cost for "clean fuel" could range from an additional \$2 million per year for Clean Diesel to \$52 million per year for Methanol with Avocet.)
5. These new technologies add additional bus weight, which can affect the number of passengers that the bus can carry, the wear and tear on tires and brakes, and the general durability of the vehicle. The increased weight ranges from an additional 350 pounds for Clean Diesel (a loss of 3 passengers that can be carried) to 2700 pounds for CNG (a reduction of 15 passengers).
6. The affect on maintenance is still not clearly quantifiable. Initially, SCRTD was incurring a much higher incidence of maintenance with the Methanol buses. However, the District has become more expert at monitoring fluids and other measures and better performance is finally being realized. Initially, at least, some additional spare buses may be required.

#### Regulatory Oversight

Currently the District falls under the jurisdiction of three agencies with air quality regulatory responsibilities. These agencies include: 1) the United States Environmental Protection Agency (EPA), 2) the California Air Resources Board (CARB), and 3) the South Coast Air Quality Management District (SCAQMD).

The EPA maintains air quality regulatory functions at the federal level and is responsible for implementing the Clean Air Act of 1970. The EPA will also have the responsibility to oversee the implementation of the Clean Air Act of 1990 which is currently under consideration by a Conference Committee of the United States Senate and House of Representatives. A complete discussion of the 1990 Clean Air Act is contained within this report.

The CARB is responsible for adopting regulations and has imposed a series of emission standards. The emission based standards are generally viewed as providing operators with flexibility to determine the best technology feasible to meet the emission standards.

The SCAQMD is responsible for adopting regulations relative to all forms of stationary and mobile air pollution sources in the four county South Coast Air Quality region. These regulations cover a broad spectrum ranging from mandatory reductions in a company's average vehicle ridership (AVR) to emission reductions. The District works closely with the SCAQMD and provides input in the development of the proposed regulations.

Clean Air Act

It is anticipated that Congress will pass the 1990 Clean Air Act later this year. Currently the bill is under consideration by the Conference committees. A complete list of the Senate and House conferees is attached for your review (Attachment C).

The Clean Air Act will implement sweeping air quality reforms and, for the first time, mandate specific clean air technologies. The bill will also specify milestone dates for the purchase of clean air vehicles and emission standards. The House version (HR3030) also includes "clean diesel" as an acceptable alternative fuel. The differences between the House and Senate versions are delineated in the attached chart (Attachment D).

Surface Transportation Act Reauthorization

Although the details of the Clean Air Act are not yet finalized, it is clear that implementation by the transit industry will require additional funding. One strategy to provide that funding is to link funding for transit capital and/or operating costs to the Surface Transportation Act which will be reauthorized next year.

On Monday, July 2, 1990, SCRTD Board President Nick Patsaouras, SCRTD General Manager Alan Pegg, LACTC Commissioner Ray Grabinski, and LACTC Executive Director Neil Peterson testified before the House Sub-committee on Surface Transportation regarding the Reauthorization of the Surface Transportation Act. President Patsaouras stressed the need for an allocation to offset the costs of implementing the Clean Air Act in addition to requesting sufficient federal operating and capitol funds (Attachment E). Referring to the increased mode split required by the EPA mandated Air Quality Management Plan, Patsaouras noted that:

"The Southern California region is currently the most underserved transit market in the country. RTD buses work longer and harder than any other American city. In order to meet the demands placed on the District by the Clean Air Act and the SCAQMD, transit services will need to be tripled. It is estimated that two-thirds of the additional service will be provided by bus transit, presuming construction of all rail lines planned for implementation by the year 2010 are completed."

It is therefore imperative that the federal government maintain current capital and operating assistance programs and consider specific line items to fund the incremental costs associated with implementing the alternative fuel, as well as the vehicle mile provisions, of the Clean Air Act.

It should be noted that there is precedent for the principle of having the federal government assist in meeting environmental costs mandated by federal law. Currently the federal government has allocated over \$55 billion in construction grants to state and local governments for compliance with the Clean Water Act.

#### SCRTD OUTREACH PROGRAMS

SCRTD has actively participated in numerous clean air symposiums and alternative fuel workshops. In April, 1990, the District sponsored the 1990 American Public Transit Association (APTA) Bus Clean Air Workshop. Over 350 technical experts from all over the country attended the three day event and were treated to many workshops led by District maintenance personnel.

In May, 1990 District staff shared the preliminary clean air cost figures accumulated by the SCRTD with several members of Congress and UMTA Administrator Brian Clymer. Mr. Clymer expressed approval of the District's efforts and urged District staff to convene a meeting of other large transit agencies to stress the importance of the development of similar figures.

In June, 1990 the SCRTD convened a meeting in Washington D.C. with eight of the largest transit districts in the nation. The District shared with their colleagues the cost figures accumulated by the SCRTD. A comprehensive worksheet (Attachment F) developed by District staff for developing clean air cost figures was distributed subsequent to the meeting. Other transit districts are compiling similar statistics to reflect their projected costs for implementing the Clean Air Act, based on relevant factors in various regions of the country.

In September, District staff will return to Washington and meet with large urban operators to develop a "national cost of implementation" figure. The group plans to convey to Congress: (1) Seek language from the Clean Air Act Conference Committee acknowledging the role of the federal government in providing funds to implement federally mandated requirements, and (2) Pursue the strategy of including a specific funding allocation for Clean Air Act implementation within the Surface Transportation Reauthorization next year.

District personnel have also been invited to address other groups. In late July SCRTD Maintenance personnel and General Manager Alan Pegg made a presentation to the APTA General Managers meeting at which UMTA Administrator Brian Clymer was also in attendance. SCRTD personnel made a similar presentation to the APTA Board Members Seminar in late July.

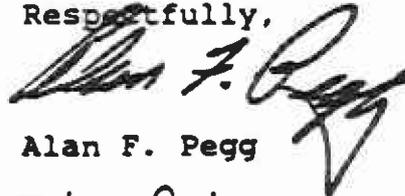
Furthermore, in October the SCRTD will be honored by the American Public Transit Association (APTA) for, among other things, the significant contribution the District has made to developing clean emission technology. A local presentation ceremony is also being planned.

Promotional Program

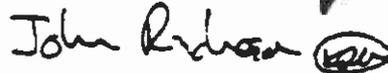
District staff is planning a promotional program for print and electronic media to reflect the results of the District's Clean Fuel efforts. This program will provide positive information about a socially responsible and successful RTD program.

Staff will provide periodic updates on the status of this program and the District's clean air activities.

Respectfully,



Alan F. Pegg



John W. Richeson  
Assistant General Manager  
Equipment and Facilities



Gary Clark  
Acting Manager Legislative Affairs

Attachment

TABLE A

# EXHAUST EMISSIONS

	HC	NO <sub>x</sub>	CO	PART	ALDH (18)
<b>1991 STANDARDS</b>	<b>1.3</b>	<b>5.0</b>	<b>15.5</b>	<b>0.1</b>	<b>0.1</b>
<b>1991 DIESEL W/O TRAP</b>	<b>0.73</b>	<b>4.90</b>	<b>1.97</b>	<b>0.333</b>	<b>N/A</b>
<b>1991 DIESEL W/TRAP</b>	<b>0.68</b>	<b>4.92</b>	<b>2.62</b>	<b>0.044</b>	<b>N/A</b>
<b>1991 METHANOL W/O CATALYST</b>	<b>0.7</b>	<b>2.3</b>	<b>2.0</b>	<b>0.08</b>	<b>0.08</b>
<b>1991 METHANOL W/CATALYST</b>	<b>0.1</b>	<b>2.3</b>	<b>0.2</b>	<b>0.03</b>	<b>0.04</b>
<b>METHANOL/AVOCET CONVERSION (19)</b>	<b>0.47</b>	<b>4.70</b>	<b>0.65</b>	<b>0.043</b>	<b>N/A</b>
<b>CNG<sub>(20)</sub></b>	<b>0.66</b>	<b>4.00</b>	<b>1.5</b>	<b>0.05</b>	<b>0.03</b>



TABLE II

## CLEAN EMISSIONS IMPACT ON TRANSIT BUSES

	DIESEL	CLEAN DIESEL W/PART. TRAP	CNG	METHANOL	<u>CONVERSIONS</u>		
					METH/ AVOCET	CNG	PART TRAP
FUEL FACILITIES	BASE	BASE	+2.5M <sup>1</sup>	+15% <sup>2</sup>	+15% <sup>2</sup>	+2.5M <sup>1</sup>	BASE
PASS. LOADING	60 PASS.	-3 PASS.	-15 PASS.	-10 PASS.	-10 PASS.	-15 PASS.	-3 PASS.
FUEL COSTS	\$.17/MI <sup>3</sup>	\$.19/MI <sup>4</sup>	\$.25/MI <sup>5</sup>	\$.37/MI <sup>6</sup>	\$.71/MI <sup>7</sup>	\$.25/MI <sup>8</sup>	\$.19/MI <sup>9</sup>
MAINTENANCE	BASE	INC.	INC.	INC.	INC.	INC.	INC.
BRAKE/TIRES <sup>10</sup>	BASE	BASE	INC.	INC.	INC.	INC.	INC.
INITIAL COST <sup>11</sup>	\$190K	\$205K	\$245K	\$230K	\$20K/ CONV. <sup>10</sup>	\$40K/ CONV. <sup>11</sup>	\$25K/ CONV. <sup>12</sup>
DURABILITY	BASE	LESS <sup>13</sup>	? <sup>14</sup>	LESS <sup>15</sup>	LESS <sup>16</sup>	? <sup>14</sup>	LESS <sup>13</sup>
BUS WEIGHT	BASE	+350#	+2700# <sup>10</sup>	+1600#	+1600#	+150# <sup>17</sup>	+350#

## **CLEAN EMISSIONS IMPACT ON TRANSIT BUSES FOOTNOTES**

- 1) Facility will accommodate fast fueling for a large fleet.**
- 2) New construction. Methanol compatible outdoor fueling facility with vapor recovery.**
- 3) Assume: \$.57/gal; 3.3 mpg.**
- 4) Assume: \$.57/gal; 3.0 mpg.**
- 5) Assume: Diesel efficiency; \$.5374/therm; \$.12/KWH  
\$.02/mile for compression.**
- 6) Assume: \$.44/gal meoh; 1.2 mpg.**
- 7) Assume: \$.44/gal meoh; \$16.4/gal Avocet;  
3% Avocet concentration; 1.3 mpg.**
- 8) An increase in vehicle weight will increase tire and brake wear rates.**
- 9) Best estimates for prototype buses.**
- 10) Price does not include engine rebuild.**
- 11) Price does not include engine.**
- 12) Price includes materials and labor.**
- 13) Requires periodic filter element replacement.  
Regeneration component durability concerns.**

**CLEAN EMISSIONS IMPACT ON TRANSIT BUSES**  
**FOOTNOTES (cont.)**

- 14) Durability unknown at present.
- 15) Wear rates are higher.
- 16) Increased GVWR.
- 17) 30 ft. bus. Operating range is one third of diesel.
- 18) Proposed standard for California.
- 19) Steady-state results in g/RHp-Hr.
- 20) Projected optimized technology.

final-6/28/90-4:15

## Suggested conferees on S. 1630-Clean Air

From the Committee on Energy and Commerce, for consideration of the Senate bill (except that portion of section 702 adding a new section 812(a) to the Clean Air Act), and the House amendment, and modifications committed to conference:

Messrs. Dingell *-Chair*  
 Scheuer  
 Waxman  
 Sharp  
 Thomas A. Luken  
 Swift  
 Synar  
 Tausin  
 Wyden  
 Hall (TX)  
 Eckart  
 Slattery  
 Sikorski  
 Boucher  
 Rowland (CA)  
 Nanton

Messrs. Lent  
 Madigan  
 Moorhead  
 Danneneyer  
 Whittaker  
 Bliley  
 Fields  
 Oxley  
 Nielson (UT)  
 Bilirakis

From the Committee on Public Works and Transportation, for consideration of sections 106(g) and (h) of the Senate bill, and that portion of section 101(e) adding a new section 110(m) to the Clean Air Act, sections 101(f) and 102(g) of the House amendment, and modifications committed to conference:

Messrs. Anderson  
 Roe  
 Mineta  
 Oberstar  
 Novak  
 Rahall  
 Applegate  
 Savage  
 DeLoach  
 Borski  
 Katter  
 Valentine  
 Lipinski  
 Visclosky  
 Traficant  
 Lewis (CA)

Messrs. Hammerschmidt  
 Shuster  
 Stangeland  
 Clinger  
 McEwen  
 Petri  
 Packard  
 Boehlert  
 Lightfoot  
 Mastert

From the Committee on Public Works and Transportation, for consideration of sections 103, 106(f), those portions of section 106(g) adding new sections 108(f)(3) and (4) to the Clean Air Act, those portions of section 107 adding new sections 183(b)(4)(B) and (c)(1) to the Clean Air Act, that portion of section 108 adding a new section 189(a) to the Clean Air Act, 222, 226, and that portion of section 301 adding a new section 112(n) to the Clean Air Act of the Senate bill, and for sections 102(d), those portions of section 103 adding new sections 182(c)(8), (d)(1) and (e)(4) to the Clean Air Act, that portion of section 104 adding new section 187(a)(2) to the Clean Air Act, 108(a) and that portion of section 301 adding a new section 112(n)(1) to the Clean Air Act of the House amendment, and modifications committed to conference:

Messrs. Anderson  
Ros  
Mineta

Messrs. Hammerschmidt  
Shuster

Except that, for consideration of that portion of section 301 adding a new section 112(n) to the Clean Air Act, of the Senate bill, and for consideration of that portion of section 301 adding a new section 112(n)(1) to the Clean Air Act, of the House amendment, Mr. Novak is appointed in lieu of Mr. Mineta, and Mr. Stangeland is appointed in lieu of Mr. Shuster.

From the Committee on Ways and Means, for consideration of that portion of section 702 adding a new section 512(a) to the Clean Air Act of the Senate bill, and modifications committed to conference:

Messrs. Rostenkowski  
Gibbons

Mr. Archer

From the Committee on Ways and Means, for consideration of section 111 of the House amendment, and modifications committed to conference:

Messrs. Rostenkowski  
Ford (TN)  
Downey  
Fease  
Katsui  
Mrs. Kennelly  
Messrs. Andrews  
Coyne  
Gibbons  
Pickie  
Rangel  
Stark  
Jacobs  
Jenkins  
Quarini  
Russo

Messrs. Archer  
Vander Jagt  
Crane  
Frenzel  
Schulze  
Gradison  
Thomas (CA)  
McDrath  
Chandler  
Shaw

From the Committee on Ways and Means, for consideration of those portions of section 103 adding new sections 183(a)(4), (a)(5), and 185 to the Clean Air Act, that portion of section 108 adding a new section 302(y) to the Clean Air Act, and that portion of section 401 adding a new section 401(b)(3) to the Clean Air Act, and section 802 of the House amendment, and modifications committed to conference:

Messrs. Rostenkowski  
Pickle  
Rangel

Messrs. Archer  
Vander Jagt

Except that, for consideration of section 802 of the House amendment, Mr. Gibbons is appointed in lieu of Mr. Rangel.

From the Committee on Education and Labor, for consideration of section 303 of the Senate bill, and sections 112-114, and 302 of the House amendment, and modifications committed to conference:

Messrs. Hawkins  
Ford (MI)  
Gaydos  
Clay  
Killer (CA)  
Murphy  
Kildee  
Williams  
Martinez  
Owens (NY)  
Hayes (IL)  
Perkins  
Sawyer  
Payne (NJ)  
Pohard  
Mrs. Unseid

Messrs. Goodling  
Gunderson  
Henry  
Smith (VT)  
Mrs. Roukens  
Messrs. Fevall  
Ballenger  
Petri  
Grandy  
Robinson

From the Committee on Interior and Insular Affairs, for consideration of section 112 of the Senate bill, and section 712 of the House amendment, and modifications committed to conference:

Messrs. Udall  
Miller (CA)  
Levine (CA)

Messrs. Young (AK)  
Craig

From the Committee on Merchant Marine and Fisheries, for consideration of sections 112, that portion of section 101 adding a new section 112(n) to the Clean Air Act, 411, and 412 of the Senate bill, and that portion of section 103 adding a new section 103(f) to the Clean Air Act, that portion of section 301 adding a new section 112(n)(1) to the Clean Air Act, sections 712, 805, and 901(e) of the House amendment, and modifications committed to conference:

Messrs. Jones (NC)  
Studds  
Teuzin

Messrs. Davis  
Shurway

From the Committee on Science, Space and Technology, for consideration of that portion of section 304 adding a new section 129(a)(7) to the Clean Air Act, sections 310, 408 and 1103 of the Senate bill, and Titles IX and X of the House amendment, and modifications committed to conference:

Messrs. Roe  
Brown (CA)  
Mrs. Lloyd  
Messrs. Glickman  
Volkmer  
McCurdy  
Mineta  
Valentine  
Toricelli  
Stallings  
Novak  
Nagle  
Hayes (LA)  
Costello  
Tanner  
Browder

Messrs. Walker  
Sensenbrenner  
Ms. Schneider  
Messrs. Boehlert  
Lewis (FL)  
Morrison (WA)  
Packard  
Henry  
Mrs. Marella  
Mr. Campbell (CA)

From the Committee on Science, Space and Technology, for consideration of those portions of section 301 adding new sections 112(n) and (r) to the Clean Air Act of the Senate bill, and those portions of section 301 adding new sections 112(i) and (n)(1) to the Clean Air Act of the House amendment, and modifications committed to conference:

Messrs. Roe  
Brown (CA)  
Mrs. Lloyd

Mr. Walker  
Ms. Schneider

As an additional conferee, for consideration of subtitle B of title I of the House amendment, and modifications committed to conference:

Mr. Wise

As an additional conferee, for consideration of section 709 of the House amendment, and modifications committed to conference:

Mr. Cooper



ATTACHMENT D

COMPARISON OF HOUSE AND SENATE CLEAN AIR BILLS

SCRTD

Position: Support in concept and work with authors.

Purpose: Provisions affecting transit are summarized and compared below (see Exhibit A for details).

<u>Provision</u>	<u>Senate Bill</u>	<u>House Committee Bill</u>
Year particulate emission standards must be met.	1992 for 10 gbh standard	1991 for .25 standard and 1993 for .10 gbh standard.
Year particulate reduction standard applies to rebuilt engines.	1992	1996, with flexibility
Inclusion of "diesel" under definition of "clean alternative fuels."	No	Yes. However, there are limitations on the amount of NO <sub>x</sub> and particulate emissions (limits particulate to .05 gbh).
Proposed phase-in schedule for alternative fuel buses in largest urban areas.	1991-94	1994-96
Size of urban area included in above phase-in schedule.	Over 1.5 million population	Over 750,000 population
Requirements for large urban non-attainment areas to adopt transportation control measures.	Allows states to use highway funds for public transit capital programs (e.g. busways and HOV lanes). Large employers must establish programs to increase employee vehicle occupancy by 25% of the area average.	Areas with severe ozone pollution must adopt specific, enforceable control measures to offset growth in VMT.

# Comparison of Clean Air Bill

page 2

<u>Provision</u>	<u>Senate Bill</u>	<u>House Committee</u>
Percentage of alternative fuel vehicles in fleet.	1-1-95, 30% of new vehicles purchased for fleets of 20 or more vehicles.	30% of new vehicles purchased in 1995 to 70% in 1998 for fleets of 10 or more vehicles.

Impact on  
RTD:

The alternative fuel requirements for new and rebuilt bus engines will have a substantial cost and operational impact. The provision to allow the use of "clean diesel" vehicles initially, while other technologies are being tested and refined, will contribute to a smoother transition to alternative fuels.

The region and the country will need to address the funding sources for implementing these new technologies. Government Relations staff is working with the District's Washington Consultants and American Public Transit Association (APTA) to develop a strategy for obtaining a line item in the 1991 Budget to help offset the tremendous costs to implement the Act's provisions.

The transportation control measures in non-attainment areas will create more demand for transit. Sufficient resources will be needed to fund the additional demand.

ATTACHMENT E

Statement by Nick Patsouras, Board President of the Southern California Rapid Transit District before the Subcommittee on Surface Transportation of the Committee on Public Works & Transportation of the United States House of Representatives, July 2, 1990

Chairman Anderson, Chairman Mineta, Members of the Subcommittee, I want to thank you for this opportunity to present the Southern California Rapid Transit District's (SCRID's) views on reauthorization of the Surface Transportation Assistance Act and, particularly, for coming to Los Angeles to see, first hand, the transportation needs of our metropolitan area.

We at the SCRID are proud of the progress we have made in meeting these needs. We realize that there is much that remains to be done if our region is to meet the transportation challenges of the '90s and into the next century.

The Southern California region is currently faced with tremendous unmet demands for transit service, as well as future demands that are staggering. California voters recently indicated their support for transportation by passing a comprehensive financing package which included funds for streets and roads, rail transit and other demand management improvements. However, the revenues created do not address the overwhelming need for rail and bus operating funds, as well as the additional capital funding that will be needed to expand the bus fleet.

I will briefly review the factors that are generating the tremendous current and future demand for transit in the region. These demands include:

- o Population growth and a flourishing economy that continues to increase congestion in the area,
- o The imposition of stringent Clean Air requirements,
- o An increasing emphasis by employers to encourage employees to utilize mass transit,
- o A growing elderly population that tends to be more transit-dependent, and
- o The mainstreaming of a growing number of disabled persons, who are increasingly relying on public transit.

The Southern California region is currently the most underserved transit market in the country. SCRID ridership is third highest in the country, right behind Chicago. I would like to refer the members to the attached tables. Tables A and B clearly demonstrate transit's vital role in an area where "the car is king." RID buses work longer and harder than any other American city. The addition of Light Rail in just a few weeks will further assist in meeting Los Angeles County's transportation needs. However, the added rail lines in the County will still only address a portion of the growing demand.

In Los Angeles, our local Air Quality Management District has imposed sweeping air quality reforms, in conformance with EPA requirements. These measures increase the transit mode split for workers in Los Angeles County from 9 percent to 25 percent by the year 2010. In order to meet this requirement, transit services will need to be tripled. We estimate that about two-thirds of the additional service will be provided by bus transit, presuming construction of all rail lines planned for implementation by 2010. This will require an increase in the active bus fleet from nearly 2000 buses to almost 5000 buses. Based upon these requirements, the total unfunded operating and capital needs over the next twenty years is estimated to be \$11.2 billion for SCRTD's service area.

Further, Congress is poised to enact within the next few weeks legislation that will materially add to the burdens and responsibilities of transit districts throughout the nation. We speak, of course, of the Clean Air Act, now in conference between the House and Senate, and the Americans With Disabilities Act which may soon find its way to the President's desk.

The SCRTD is committed to meeting these new responsibilities. We are in the forefront of those transit districts that are testing alternatively fueled vehicles. The District is currently testing over 40 alternatively fueled vehicles including the largest methanol and compressed natural gas fleets in the nation. By the end of this year, we will be testing over 60 clean fuel vehicles. We have also implemented a very successful program to increase the mobility of the disabled. Currently, over 90 percent of the District's fleet of 2300 vehicles is lift-equipped. We will be 100 percent lift-equipped by 1994.

Recently, SCRTD representatives met with top UMTA officials to explore the concept of expanding the existing federal transit program to address the funding requirements of these two major pieces of legislation. UMTA supported the District's efforts to canvass other large metropolitan transit districts to determine the impact of this legislation on their properties.

The SCRTD convened a meeting in Washington with eight of the largest transit districts in the nation. We shared with our colleagues the cost figures accumulated by the SCRTD in meeting the strictures of the California clean air requirements which, in large measure, coincide with those that will most likely emerge from the House-Senate conference. Attached to our testimony (Table C) is a footnoted chart delineating the costs of clean emissions. Mr. Alan Pegg, General Manager of Southern California Rapid Transit District, will be pleased to provide for the hearing record a full explanation of these costs.

We have asked transit districts to compile similar statistics that will reflect their projected costs in meeting clean air requirements, so that you will have a fair estimate as to those incremental costs. As you know, there is precedent for the principle of having the federal government assist in meeting environmental costs mandated by federal law. One need look no further than the Clean Water Act which has made some \$55 billion in construction grants to state and local entities since 1972.

You should be aware too, Mr. Chairman, as you continue your hearings throughout the country, that transit districts will be compiling their projected costs of meeting those capital and operating requirements anticipated by the passage of the Americans With Disabilities Act. Once again, California is proud to have anticipated the national will in this regard.

Overall, we cannot overemphasize the importance of Section 9 operating funds and Section 3 capital funds. As you are well aware, the Administration is proposing drastic cuts in these vital programs. These proposed Section 9 cuts would amount to a \$1 billion shortfall for SCRTD over the next 20 years. Currently, SCRTD receives about \$41 million, or seven percent of annual operating assistance from Section 9. Loss of these funds would translate into a 23 percent fare increase or a 10 percent service reduction.

Table D illustrates the direct correlation between transit subsidies and ridership. These subsidies only enhance the District's 43 percent farebox recovery ratio.

We recognize that some of these problems are peculiar to the Southern California region. But in many cases California is a trend setter, and leads the nation in issues that soon will affect the rest of the nation. It is time to address these needs now.

Therefore, I respectfully request the Committee to consider the following, when deliberating on the reauthorization:

- o Maintain current capital and operating assistance programs;
- o Consider a specific line item to fund the incremental costs associated with implementing the provisions of the Clean Air and Americans with Disabilities Acts;
- o Consider recommending a 7 cent federal gas tax increase for transit purposes; and
- o Mandate the expenditure of the \$3.9 billion in unobligated balance that currently exist in the Transit Account of the Highway Trust Fund.

Because so many miles of main roads are deteriorated, Californians pay a premium to drive on them. For example, in 1988, motorists logged some 152.7 billion vehicle miles on fair, poor and very poor main roads. The total cost of driving on these bad roads amounted to some \$16.48 billion. Had these substandard roads been in good condition, total driving costs would have amounted to about \$14.43 billion -- a difference of about \$2.05 billion, or about \$108.50 a year in added driving costs for each of California's 18.9 million licensed motorists.

Together, commuting in traffic and driving on rough roads cost the average California motorist about \$1,302.50 above routine vehicle operating costs in 1988.

#### Rougher Roads: Higher Vehicle Operating Costs

Unless California's roads are resurfaced or reconstructed more quickly, the current rate of deterioration will continue. By the year 2000, TRIP estimates that more than 70 percent of Californians' driving will be on poor or fair road surfaces. The premium to drive on these bad roads will climb to an estimated \$148 per motorist, or \$3.5 billion for all motorists statewide, representing a jump of \$39.50 (36 percent) from the 1988 vehicle operating cost figure of \$108.50.

Together, traffic congestion and driving on rough roads will cost the average California driver between \$3,646 and \$5,386 by the year 2000, depending on how seriously traffic congestion worsens.

#### Deficient, Congested Roads

More than 63 percent of California's arterial and collector road system<sup>7</sup> is in fair, poor or very poor condition, according to a Federal Highway Administration (FHWA) inventory.

These 35,170 miles represent an increase of 1,581 miles (4.7 percent) over the 33,589 miles rated deficient in 1987, and an increase of 3,409 miles (10.7 percent) over 1983 (31,761 miles).

Fair-rated roads need to be resurfaced at an average cost of \$160,000 per two-lane mile. Poor- and Very Poor-rated roads have lost their basic structural strength and must be completely reconstructed at an estimated cost of \$755,000 per mile, or about four-and-a-half times the cost of resurfacing.

Therefore, it will cost an estimated \$4.83 billion to resurface the 30,175 miles rated fair, and some \$3.77 billion to reconstruct the 4,995 miles of poor and very poor pavement. Together, pavement needs total \$8.60 billion, not including routine maintenance (pothole patching, minor pavement repairs, etc.).

---

<sup>7</sup> The arterial and collector system makes up just 34 percent of all roads in the state but carries 94 percent of all traffic.

In addition, the California Department of Transportation reports 5,949 miles of main roads operating near or at capacity during peak traffic hours in 1989 -- a 45 percent increase in just five years (from 4,100 miles in 1983).

The cost to alleviate congestion is more difficult to estimate since improvements vary from adding signal lights to adding lanes to rebuilding major intersections. Also, congestion relief usually involves coordinated solutions that include mass transit and transportation system management programs, such as van pools, car pools, staggered work hours and high occupancy vehicle lanes.

#### The Need to Improve Roads and Bridges

In March of 1988, the "Little Hoover Commission" (Commission on California State Government Organization and Economy) issued a report, citing estimated highway revenue shortfalls of between \$800 million and \$1.8 billion annually. The commission concluded that "state funding available for transportation is inadequate," and presented both short- and long-term recommendations that included establishing a Blue Ribbon Ad Hoc Commission on transportation, urging the state and local governments to develop long-term transportation plans and encouraging greater public-private funding partnerships.

In May 1988, TRIP published a study that found California invested less in 1985 (in constant, inflation-adjusted dollars) construction and improvements that it did in 1948. However, between 1948 and 1985, traffic on California's roads increased 450 per

The California Transportation Commission, in its "Fourth Annual Report to the California Legislature," noted that the state budget increased 2.3 times in real terms in the 21 years between 1966 and 1987: education increased by 200 percent, health and welfare increased by 250 percent, but transportation funding climbed by just 50 percent.

During the same period, the Commission pointed out, education's share of the state budget expanded from 35 to 46 percent; health and welfare's share increased from 17 to 25 percent; but transportation's share actually decreased from 13 to just 6 percent.

Another way to measure this decreasing public investment in California's road systems is to compare it with personal expenditures for private automobiles. TRIP's 1988 study pointed out that, in 1960, the average driver invested about \$916 in purchasing and maintaining a car while public spending on roads amounted to about \$408 per driver -- a ratio of about 2 to 1. In 1987, by comparison, the average motorist invested about \$1,150 a year in his car while the government spent just \$104 per driver -- a ratio of 11 to 1.

Clearly, this "disinvestment" in the highway system is a major factor in today's worn, rutted road surfaces and overwhelming traffic congestion.

### Social and Environmental Impacts

Traffic congestion affects people and communities in significant social and environmental ways. A study by civil engineers K.C. Koutsopoulos and V.H. Surti in the Transportation Engineering Journal found that bad road conditions can lower the total number of automobile trips in a community, resulting in "decreased social contacts with friends and relatives, less recreational travel and fewer trips to cultural events."

Environmentally, traffic congestion is one of the major causes of air pollution in metropolitan areas. Vehicle emissions have been found to increase when speed is reduced and to increase in severity when a number of speed changes must be made over short distances.

A National Academy of Sciences research report found that pavements in poor condition cause vehicles to slow down whether or not there is heavy traffic. The report said that cracked, rutted and uneven road surfaces force motorists to change speeds, thus contributing significantly to air pollution problems.

Conclusion

Traffic congestion is steadily worsening on roads all California, and its effects are becoming more painful to the average driver, who already pays a nearly \$2,000 annual premium in traffic jams.

If congestion increases -- and all signs indicate that -- motorists will have to dig deeper into their pocketbooks to pay the costs. This study estimates that a doubling of traffic congestion will boost individual costs by \$2,304 annually, a tripling of congestion, by \$4,044 annually. These are just the direct increases; over 10 years, cumulative losses could exceed \$40,000.

Traffic congestion makes getting from here to there time consuming, frustrating and costly. The California Transportation Commission, the California Department of Transportation and regional metropolitan governments all recognize the growing problem of immobility and its consequences: new businesses will not locate in congested areas, costs of goods and services increase with higher transportation costs, workers cannot get to jobs, emergency services are delayed and the overall quality of life declines.

Legislators and citizens alike need to understand the growing critical consequences of traffic congestion on their lives and on the state's economy. Creative solutions must be found soon to the problem of mobility in California or the unthinkable -- total gridlock -- may happen. A U.S. News and World Report article, entitled "Jam Sessions,"<sup>6</sup> concluded that "... the plain fact is that in the world's most prosperous society more people are destined to spend more frustrating hours in more overheated cars on more jammed highways in more places than anyone now imagines."

# # #

For further information, please contact: Sally Thompson  
Director of Research  
(202)466-6706

---

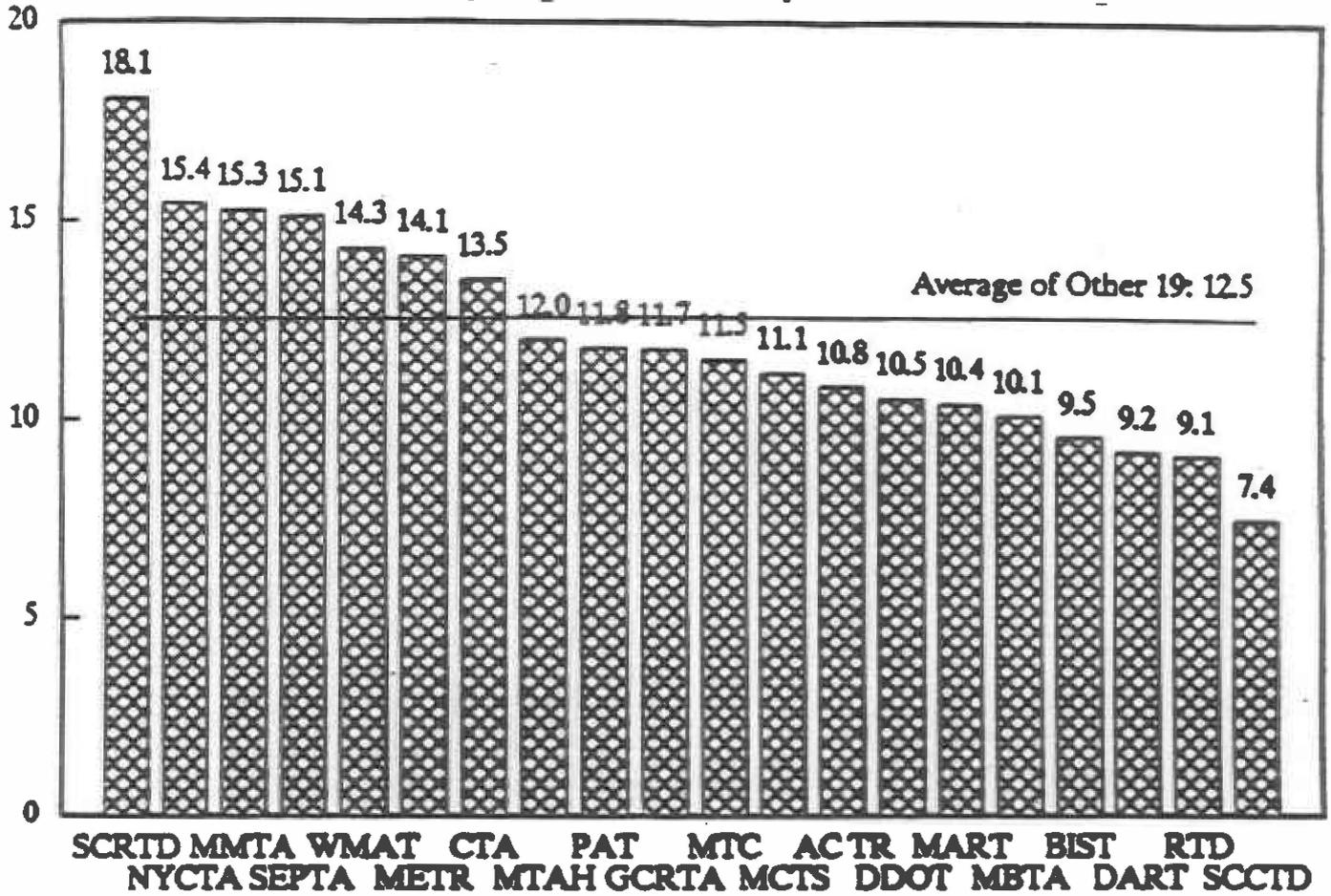
<sup>6</sup> "Jam Sessions," U.S. News and World Report, September 7, 1987, pp. 20-27.

Mr. Chairman, we do not apologize for asking for this assistance. Facing these demands head-on is critical to the economic vitality and competitiveness of this country, just as the need for highways was critical to the nation's growth and vitality in the 1950's and 1960's. -

We applaud you, Chairman Anderson, Chairman Mineta, and other members of the Committee for your dedication to improving the mobility of our great country. Through a cooperative federal, state, local and private partnership we can meet the present and future needs of our economically vital and dynamic nation.

# AVERAGE PASSENGER LOAD

Twenty Largest Urban Bus Operators - 1988

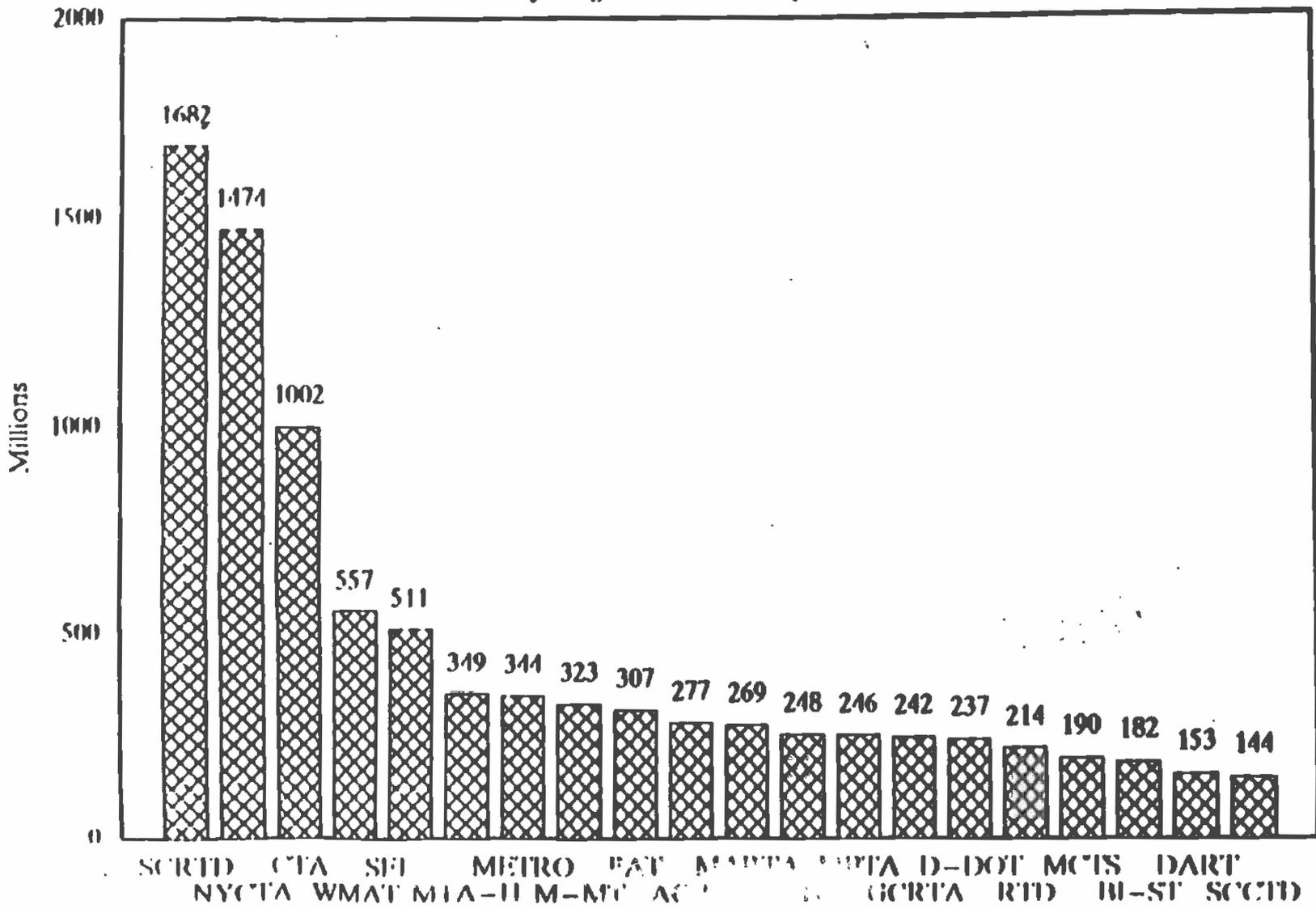


TRANSIT OPERATOR ABBREVIATION LIST

<u>ABBREVIATION</u>	<u>OPERATORS FULL NAME</u>	<u>LOCATION</u>
AC TRANSIT	Alameda-Contra Costa Transit District	Oakland, California
BI-STATE	Bi-State Development Agency	Saint Louis, Missouri
CTA	Chicago Transit Authority	Chicago, Illinois
D-DOT	Detroit Department of Transportation	Detroit, Michigan
DART	Dallas Area Rapid Transit	Dallas, Texas
GCRTA	Greater Cleveland Regional Transit Authority	Cleveland, Ohio
M-MTA	Mass Transit Administration of Maryland	Baltimore, Maryland
MARTA	Metropolitan Atlanta Rapid Transit Authority	Atlanta, Georgia
MBTA	Massachusetts Bay Transportation Authority	Boston, Massachusetts
MCTS	Milwaukee County Transit System	Milwaukee, Wisconsin
METRO	Municipality of Metropolitan Seattle	Seattle, Washington
MTA-HC	Metropolitan Transit Authority of Harris County	Houston, Texas
MTC	Metropolitan Transit Commission	Minneapolis, Minnesota
NYCTA	New York City Transit Authority	New York, New York
PAT	Port Authority Transit	Pittsburgh, Pennsylvania
RTD	Regional Transportation District	Denver, Colorado
SCCTD	Santa Clara County Transit District	San Jose, California
SCRTD	Southern California Rapid Transit District	Los Angeles, California
SEPTA	Southeastern Pennsylvania Transportation Authority	Philadelphia, Pennsylvania
WMATA	Washington Metropolitan Area Transit Authority	Washington, D.C.

# PASSENGER MILES

Twenty Largest Urban Bus Operators - 1988





## CLEAN EMISSIONS IMPACT ON TRANSIT BUSES

	DIESEL	CLEAN DIESEL W/PART. TRAP	CNG	METHANOL	CONVERSIONS		
					METH/ AVOCET	CNG	PART TRAP
FUEL FACILITIES	BASE	BASE	+2.5M <sup>1</sup>	+15% <sup>2</sup>	+15% <sup>7</sup>	+2.5M <sup>1</sup>	BASE
PASS. LOADING	60 PASS.	-3 PASS.	-15 PASS.	-10 PASS.	-10 PASS.	-15 PASS.	-3 PASS.
FUEL COSTS	\$.17/MI <sup>3</sup>	\$.19/MI <sup>4</sup>	\$.25/MI <sup>5</sup>	\$.37/MI <sup>6</sup>	\$.71/MI <sup>7</sup>	\$.25/MI <sup>8</sup>	\$.19/MI <sup>9</sup>
MAINTENANCE	BASE	INC.	INC.	INC.	INC.	INC.	INC.
BRAKE/TIRES <sup>5</sup>	BASE	BASE	INC.	INC.	INC.	INC.	INC.
INITIAL COST <sup>6</sup>	\$190K	\$205K	\$245K	\$230K	\$20K/ CONV. <sup>10</sup>	\$40K/ CONV. <sup>11</sup>	\$25K/ CONV. <sup>12</sup>
DURABILITY	BASE	LESS <sup>13</sup>	? <sup>14</sup>	LESS <sup>15</sup>	LESS <sup>16</sup>	? <sup>17</sup>	LESS <sup>18</sup>
BUS WEIGHT	BASE	+350#	+2700# <sup>18</sup>	+1600#	+1600#	+150# <sup>17</sup>	+350#

# EXHAUST EMISSIONS

	HC	NOx	CO	PART	ALDH (18)
1991 STANDARDS	1.3	5.0	15.5	0.1	0.1
1991 DIESEL W/O TRAP	0.73	4.90	1.97	0.333	N/A
1991 DIESEL W/TRAP	0.68	4.92	2.62	0.044	N/A
1991 METHANOL W/O CATALYST	0.7	2.3	2.0	0.08	0.08
1991 METHANOL W/CATALYST	0.1	2.3	0.2	0.03	0.04
METHANOL/AVOCET CONVERSION (19)	0.47	4.70	0.65	0.043	N/A
CNG(20)	0.66	4.00	1.5	0.05	0.03

## CLEAN EMISSIONS IMPACT ON TRANSIT BUSES FOOTNOTES

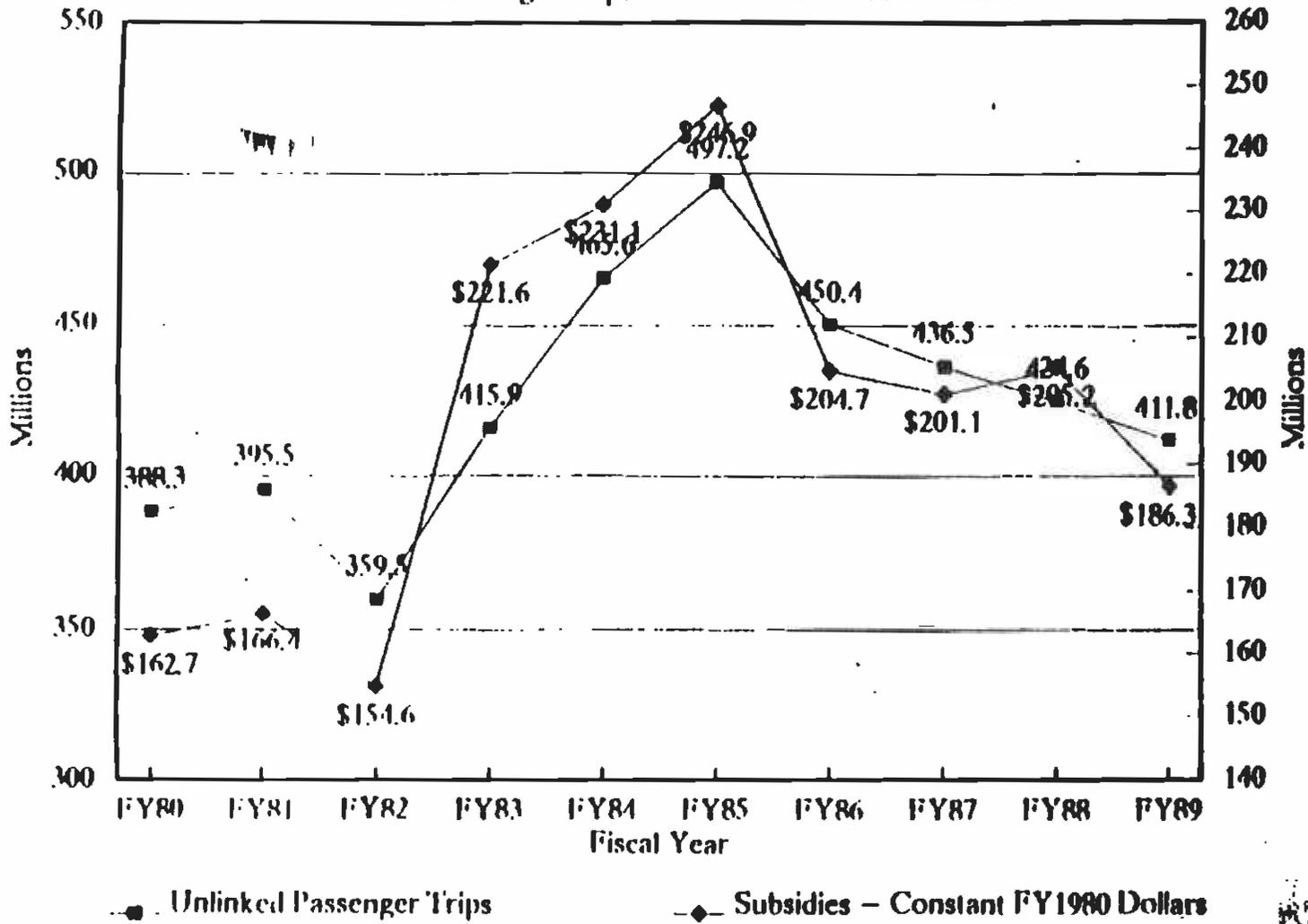
- 1) Facility will accommodate fast fueling for a large fleet.
- 2) New construction. Methanol compatible outdoor fueling facility with vapor recovery.
- 3) Assume: \$.57/gal; 3.3 mpg.
- 4) Assume: \$.57/gal; 3.0 mpg.
- 5) Assume: Diesel efficiency; \$.5374/therm; \$.12/KWH  
\$.02/mile for compression.
- 6) Assume: \$.44/gal meoh; 1.2 mpg.
- 7) Assume: \$.44/gal meoh; \$16.4/gal Avocet;  
3% Avocet concentration; 1.3 mpg.
- 8) An increase in vehicle weight will increase tire and brake wear rates.
- 9) Best estimates for prototype buses.
- 10) Price does not include engine rebuild.
- 11) Price does not include engine.
- 12) Price includes materials and labor.
- 13) Requires periodic filter element replacement.  
Regeneration component durability concerns.

CLEAN EMISSIONS IMPACT ON TRANSIT BUSES  
FOOTNOTES (cont.)

- 14) Durability unknown at present.
- 15) Wear rates are higher.
- 16) Increased GVWR.
- 17) 30 ft. bus. Operating range is one third of diesel.
- 18) Proposed standard for California.
- 19) Steady-state results in g/RHp-Hr.
- 20) Projected optimized technology.

Table 10

**SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT**  
**Unlinked Passenger Trips and Constant Dollar Subsidies**



ALTERNATE FUELS/LOW EMISSIONS TECHNOLOGY  
COST ANALYSIS WORK SHEET

SOUTHERN CALIFORNIA  
RAPID TRANSIT DISTRICT  
ALTERNATE FUELS SECTION

JULY 1990



**RTD**

**COMPANY:**.....

**NAME:**.....

**TITLE:**.....

**PHONE:**.....

**ALTERNATE FUELS/LOW EMISSIONS TECHNOLOGY  
COST ANALYSIS WORK SHEET**

**Introduction**

The attached work sheet is designed to assist in deriving the range of cost incurred by purchasing and operating buses that utilize clean fuels, including; "clean diesel" (particulate trap technology), methanol and compressed natural gas. The work sheet also addresses the costs to convert existing capital stock to the above clean fuels.

The work sheet provides a methodology and includes certain cost factors, based on the Southern California Rapid Transit District's experience. However, much of the actual cost information will be specific to the individual operator's situation and is therefore left for each operator to address. These variations include regional differences in fuel costs, cold weather fueling requirements and availability of land for fueling and tank storage.

The total cost for an operator to comply with the provisions of the Clean Air Act will depend upon the operator's fleet replacement needs, as well as the final provisions of the legislation concerning the phase-in schedule and requirements concerning conversion of the existing fleet. The work sheet package includes tables to derive a very rough total cost range. These cost estimates will require fine tuning by the operator once the final provisions of the Clean Air Act are known.

**Instructions**

1. Steps 1 through 20 (pages 1-5) of the Alternative Fuels/Low Emissions Technologies Work Sheet are self explanatory.
2. Table A, "Clean Emissions Impact on Transit Buses" summarizes the results of the calculations in Steps 1 through 20 of the work sheet. The numbers and letters in parentheses reference the location within the work sheet where the information is derived.
3. Tables B-E are rough estimates of the total cost of replacing and operating a fleet utilizing each respective fuel type; Table B is baseline diesel, Table C is diesel with a particulate trap, Table D is compressed natural gas and Table E is Methanol.
4. Complete the title sheet, including a phone number for a contact person.

**Questions**

If you have any questions regarding the questionnaire, please contact Vince Pellegrin, at (213) 972-5844, or David Meyers, at (213) 972-5866, in SCRTD's Alternative Fuels Section.

ALTERNATE FUELS/LOW EMISSIONS TECHNOLOGIES  
WORK SHEET

1. Please estimate the cost to build an average size fueling facility for your fleet operating on each of the following fuels.
  - a. Diesel \_\_\_\_\_
  - b. Methanol \_\_\_\_\_
  - c. Compressed Natural Gas (CNG) \_\_\_\_\_
  - d. Propane \_\_\_\_\_
  - e. Other \_\_\_\_\_
  
2. How many bus fueling facilities do you operate? \_\_\_\_\_
  
3. What is the underground storage capacity (gallons) of your average diesel fueling facility?  
\_\_\_\_\_
  
4. What is your average diesel bus mileage between refuelings?  
\_\_\_\_\_
  
5. Please estimate the initial purchase price for buses at your property using each of the following technologies.
  - a. Diesel \_\_\_\_\_
  - b. Diesel w/Particulate Trap \_\_\_\_\_
  - c. Methanol \_\_\_\_\_
  - d. Compressed Natural Gas (CNG) \_\_\_\_\_
  - e. Propane \_\_\_\_\_
  - f. Methanol w/Ignition Improver \_\_\_\_\_
  - g. Other \_\_\_\_\_

FUELS/LOW EMISSIONS TECHNOLOGIES  
WORK SHEET

6. Please estimate your total costs to convert an existing diesel bus to each of the following technologies. Include costs for both material and labor.
- a. Diesel w/Particulate Trap \_\_\_\_\_
  - b. Methanol \_\_\_\_\_
  - c. Compressed Natural Gas (CNG) \_\_\_\_\_
  - d. Propane \_\_\_\_\_
  - e. Methanol w/Ignition Improver \_\_\_\_\_
  - f. Other \_\_\_\_\_
7. Please estimate the price each of the following fuels would cost you per gallon (per therm (100,000 Btu) for CNG). Include the cost of delivery.
- a. Diesel \_\_\_\_\_
  - b. Low Sulfur Diesel (<500 ppm) \_\_\_\_\_
  - c. Methanol \_\_\_\_\_
  - d. Compressed Natural Gas (CNG) \_\_\_\_\_
  - e. Propane \_\_\_\_\_
  - f. Other \_\_\_\_\_
8. Please estimate the impacts on the overall maintenance costs to your bus fleet (Decrease, Same, Slight Increase, Large Increase) operating each of the following technologies compared to the maintenance of your existing diesel fleet.
- a. Diesel w/Particulate Trap \_\_\_\_\_
  - b. Methanol \_\_\_\_\_
  - c. Methanol w/Ignition Improver \_\_\_\_\_
  - d. Compressed Natural Gas (CNG) \_\_\_\_\_
  - e. Propane \_\_\_\_\_
  - f. Other \_\_\_\_\_

FUELS/LOW EMISSIONS TECHNOLOGIES  
WORK SHEET

9. Please estimate the cost impacts on the overall durability of your bus fleet (Increase, Same, Slight Decrease, Large Decrease) operating on each of the following technologies compared to the durability of your existing fleet.
- a. Diesel w/Particulate Trap \_\_\_\_\_
  - b. Methanol \_\_\_\_\_
  - c. Methanol w/Ignition Improver \_\_\_\_\_
  - d. Compressed Natural Gas (CNG) \_\_\_\_\_
  - e. Propane \_\_\_\_\_
  - f. Other \_\_\_\_\_
10. How much do you spend on tires and brakes per year? \_\_\_\_\_
11. How many buses are in your fleet (Include spares)? \_\_\_\_\_
12. How many total miles does your fleet accumulate per year?  
\_\_\_\_\_
13. What is your fleet average diesel bus fuel economy (mpg)?  
\_\_\_\_\_
14. What is the on-board diesel storage capacity (gallons) of your bus?  
\_\_\_\_\_
15. What is the tare weight of your diesel bus (Include full load of fuel)?  
\_\_\_\_\_

ALTERNATE FUELS/LOW EMISSIONS TECHNOLOGIES  
WORK SHEET

16. How many passengers does one of your diesel buses carry?  
(include standees.)

---

17. Calculate bus weights for each of the following technologies  
(numbers in parentheses denote references within the work  
sheet to be used in the blanks).

a. Diesel =  $\frac{\quad}{(15)}$  lb.

b. Particulate Trap =  $\frac{\quad}{(15)}$  lb. + 350 lb. =  $\frac{\quad}{\quad}$  lb.

c. CNG =  $\frac{\quad}{(15)}$  lb. - (18 X  $\frac{\quad}{(14)}$ ) lb. =  $\frac{\quad}{\quad}$  lb.

d. Methanol =  $\frac{\quad}{(15)}$  lb. + (10.7 X  $\frac{\quad}{(14)}$ ) lb. =  $\frac{\quad}{\quad}$  lb.

18. Calculate bus passenger loading for each of the following  
technologies using the appropriate numbers shown.

a. Diesel =  $\frac{\quad}{(16)}$  passengers

b. Part. Trap =  $\frac{\quad}{(16)}$  - [(  $\frac{\quad}{(17b)}$  -  $\frac{\quad}{(17a)}$  ) / 150] =  $\frac{\quad}{\quad}$

c. CNG =  $\frac{\quad}{(16)}$  - [(  $\frac{\quad}{(17c)}$  -  $\frac{\quad}{(17a)}$  ) / 150] =  $\frac{\quad}{\quad}$

d. Methanol =  $\frac{\quad}{(16)}$  - [(  $\frac{\quad}{(17d)}$  -  $\frac{\quad}{(17a)}$  ) / 150] =  $\frac{\quad}{\quad}$

19. Calculate brake/tire wear increase over diesel bus wear rate  
for each of the following technologies using the appropriate  
numbers shown. (Multiply results by 100).

a. Diesel = Base

b. Part. Trap = (  $\frac{\quad}{(17b)}$  -  $\frac{\quad}{(17a)}$  ) /  $\frac{\quad}{(17a)}$  =  $\frac{\quad}{\quad}$  % increase

c. CNG = (  $\frac{\quad}{(17c)}$  -  $\frac{\quad}{(17a)}$  ) /  $\frac{\quad}{(17a)}$  =  $\frac{\quad}{\quad}$  % increase (17a)

ALTERNATE FUELS/LOW EMISSIONS TECHNOLOGIES  
WORK SHEET

19. (Continued)

$$d. \text{ Methanol} = \left( \frac{\quad}{(17d)} - \frac{\quad}{(17a)} \right) / \frac{\quad}{(17a)} = \frac{\quad}{\quad} \text{ \$ increase}$$

20. Calculate fuel consumption rates for each of the following technologies using the appropriate numbers shown.

$$a. \text{ Diesel} = \frac{\quad}{(7a)} / \frac{\quad}{(13)} = \quad \text{ \$ per mile}$$

$$b. \text{ Low S Diesel} = \frac{\quad}{(7b)} / \frac{\quad}{(13)} = \quad \text{ \$ per mile}$$

$$c. \text{ Part. Trap} = \frac{\quad}{(20b)} \times 1.1 = \quad \text{ \$ per mile}$$

$$d. \text{ Methanol} = \frac{\quad}{(7c)} / \left( \frac{\quad}{(13)} / 2.5 \right) = \quad \text{ \$ per mile}$$

$$e. \text{ CNG} = \frac{\quad}{(7d)} \times 1.3 / \left( \frac{\quad}{(13)} \right) + .03 = \quad \text{ \$ per mile}$$

$$f. \text{ Methanol w/Ignit. Imp.} = (.97 \times \frac{\quad}{(7c)} + .49) / \left( \frac{\quad}{(13)} / 2.5 \right)$$

$$= \quad \text{ \$ per mile}$$

**TABLE A  
CLEAN EMISSIONS IMPACT  
ON TRANSIT BUSES**

	CLEAN DIESEL W/PART. TRAP				<u>CONVERSIONS</u>		
	DIESEL	CNG	METHANOL	METH/AVOCET	CNG	PART TRAP	
FUEL FACILITIES	---(1a)---	---(1a)---	---(1c)---	---(1b)---	---(1b)---	---(1c)---	---(1a)---
PASS. LOADING	---(18a)---	---(18b)---	---(18c)---	---(18d)---	---(18d)---	---(18c)---	---(18b)---
FUEL COSTS	---(20a)---	---(20c)---	---(20e)---	---(20d)---	---(20f)---	---(20e)---	---(20e)---
MAINTENANCE	Base ---(18a)---	---(18a)---	---(18d)---	---(18b)---	---(18e)---	---(18d)---	---(18a)---
BRAKE/TIRES	---(18a)---	---(18b)---	---(18c)---	---(18d)---	---(18d)---	---(18c)---	---(18b)---
INITIAL COST	---(18a)---	---(18b)---	---(18d)---	---(18c)---	---(18e)---	---(18c)---	---(18a)---
DURABILITY	Base ---(18a)---	---(18a)---	---(18d)---	---(18b)---	---(18e)---	---(18d)---	---(18a)---
BUS WEIGHT	---(17a)---	---(17b)---	---(17c)---	---(17d)---	---(17d)---	---(17c)---	---(17b)---

TABLE B  
PROJECTED COSTS WORK SHEET  
BASELINE DIESEL

CAPITAL COSTS

Vehicle =  $\frac{\quad}{(5a)} \times \frac{\quad}{(11)} = \underline{\quad}$

Facility =  $\frac{\quad}{(1a)} \times \frac{\quad}{(2)} = \underline{\quad}$

---

Total =  $\underline{\quad}$

ANNUAL OPERATING COSTS

Fuel =  $\frac{\quad}{(20a)} \times \frac{\quad}{(12)} = \underline{\quad}$

Brakes/Tires =  $\frac{\quad}{(10)} = \underline{\quad}$

---

Total =  $\underline{\quad}$

TABLE C  
 PROJECTED COSTS WORK SHEET  
 O. E. M. PARTICULATE TRAP

CAPITAL COSTS

Vehicle	=	<u>          </u>	X	<u>          </u>	=	<u>          </u>
		(5b)		(11)		
Facility	=	<u>          </u>	X	<u>          </u>	=	<u>          </u>
		(1a)		(2)		
<hr style="border-top: 3px double #000;"/>						
Total	=					<u>          </u>

ANNUAL OPERATING COSTS

Fuel	=	<u>          </u>	X	<u>          </u>	=	<u>          </u>
		(20c)		(12)		
Brakes/Tires	=	<u>          </u>	X	(1 + <u>          </u> )	=	<u>          </u>
		(10)		(19b)		
<hr style="border-top: 3px double #000;"/>						
Total	=					<u>          </u>
	+	<u>          </u>	Maintenance			
		(8a)				

TABLE D

PROJECTED COSTS WORK SHEET

O. E. M. COMPRESSED NATURAL GAS (CNG)

CAPITAL COSTS

Vehicle =  $\frac{\quad}{(5d)} \times \frac{\quad}{(11)} = \underline{\quad}$

Facility =  $\frac{\quad}{(1c)} \times \frac{\quad}{(2)} = \underline{\quad}$

---

Total =  $\underline{\quad}$

ANNUAL OPERATING COSTS

Fuel =  $\frac{\quad}{(20e)} \times \frac{\quad}{(12)} = \underline{\quad}$

Brakes/Tires =  $\frac{\quad}{(10)} \times (1 + \frac{\quad}{(19c)}) = \underline{\quad}$

---

Total =  $\underline{\quad}$

+  $\frac{\quad}{(8d)}$  Maintenance

**TABLE E**  
**PROJECTED COSTS WORK SHEET**

**O. E. M. METHANOL**

**CAPITAL COSTS**

Vehicle =  $\frac{\quad}{(5c)} \times \frac{\quad}{(11)} = \underline{\quad}$

Facility =  $\frac{\quad}{(1b)} \times \frac{\quad}{(2)} = \underline{\quad}$

---

Total =  $\underline{\quad}$

**ANNUAL OPERATING COSTS**

Fuel =  $\frac{\quad}{(20d)} \times \frac{\quad}{(12)} = \underline{\quad}$

Brakes/Tires =  $\frac{\quad}{(10)} \times (1 + \frac{\quad}{(19d)}) = \underline{\quad}$

---

Total =  $\underline{\quad}$

+  $\frac{\quad}{(8b)}$  Maintenance

1 of 1 Complete Record

01645998 34536

COLUMN ONE

Gadgets to Cope With Gridlock

Commuters are filling their cars with devices from portable fax machines to  
s to take advantage of their time on the road.

Los Angeles Times (LT) - THURSDAY May 17, 1990

By: ERIC BAILEY; TIMES STAFF WRITER

Edition: Home Edition Page: 1 Pt. A Col. 1

Story Type: Non Dup

Word Count: 2,260

Squandering time in traffic? Not Bruce McGowan.

When the San Clemente computer operator hits the road each day steeled for a 90-minute commute to Chino, he totes all manner of gadgets to ensure drive time doesn't become wasted time.

Strapped to the passenger seat is a handy nylon pocket organizer stuffed with highlighter pens, cassette tapes and paper work. As traffic trickles to a stop, McGowan whips out a wooden plank he has fashioned into a portable desk and performs office chores amid the gridlock.

When the idling pack begins to poke along again, McGowan might even flip on two tapes at once: a self-help tape on a portable recorder gets his attention, while soft background music croons from the car's built-in cassette player.

"Essentially, I spend about three hours a day on the road," McGowan observed one recent afternoon before heading off into the ozone. "That's a significant amount of time to be wasted, so I try to make the most of it."

Just like McGowan, motorists in the Southland and across the nation are turning to a ready remedy for their traffic woes. Don't worry, they say. Get gadgets.

Like never before, commuters are filling their cars with all the comforts--and distractions--of home and office. Gone are the days when a wide-bottom coffee mug on the dash seemed exotic. Today, drivers have taken to outfitting their cars with a glitzy array of auto accessories--mobile fax machines, bucket seat massaging devices, portable refrigerators that plug into a car's cigarette lighter, even high-resolution mini-TVs.

"It certainly seems to be a growing trend," said Alan Pisarski, a Washington transportation policy consultant and author of "Commuting in America," an analysis of the nation's changing commute patterns in recent decades. "It's there because people want to make better use of their time. Who is it that said Americans feel guilty doing only one thing at a time? This is an outgrowth."

And why not? With commute times ballooning in urban areas throughout the nation, motorists are increasingly looking for new ways to better use those agonizing hours spent behind the steering wheel or in a passenger seat.

In Los Angeles and Orange Counties, delays caused by traffic congestion have been increasing 15% a year, while the San Francisco Bay Area is seeing the gridlock grow by 25% annually, state transportation experts say. Commute times for many motorists are surging well above an hour on each leg of the trip between home and work.

"I remember when you could get anywhere in L.A. in 30 minutes," said Perry Soloman, president of High Technology Distributing, a Van Nuys firm that

markets mobile office products. "Now that same trip can take three hours if there's one traffic accident. The dynamics of the traffic patterns create a need for products that weren't available just a few years ago."

Some corporate trend-watchers figure the proliferation of gadgetry will only continue. Campbell Soup Co., for one, predicts that by the year 2000 one in four cars will feature microwave ovens.

"We want to indulge ourselves in our cars," said David Hillburn, a Rancho Palos Verdes-based independent marketing analyst who specializes in the auto industry. "But it remains unclear whether this concept will explode. There's a fine line between entertaining yourself in your car and having some goofy gadget."

It's not all fun and games. Some highway safety experts fear that all that faxing and dialing and TV watching poses a serious accident risk.

Although authorities say no statistics are compiled on crashes caused by gadget-induced inattention, several examples have made headlines in recent years. In 1986, four bicyclists were killed along a scenic road near Gilroy in Northern California when an 18-year-old woman reached for a cassette tape in the back seat and plowed into them.

"People forget that driving a car demands 100% of their attention," said Peter O'Rourke, director of the California Office of Traffic Safety. "You can't give 100% when you're making a fax transmission . . . or typing a letter on your personal computer."

In some cases, use of gadgets behind the wheel is illegal. Watching television, operating a computer terminal or wearing stereo headphones in the driver's seat is prohibited. But there are no restrictions on cellular phones, even though a 1987 study commissioned by the California Highway Patrol found that manual dialing was "significantly more hazardous" than gazing down to tune a radio.

"Attention is a limited resource. You can only spread it out so far before you start missing things," said Fred Owens, a psychologist specializing in human perception and traffic safety at Franklin and Marshall College in Pennsylvania. "As a general principle, that's why I'm concerned when a driver's world becomes even more complicated than it already is."

Generally undaunted by such warnings, commuters have continued to splurge on a plethora of products, and marketeers have leaped at the opportunity to supply them.

Nationwide outfits like The Sharper Image are stuffing their catalogues with goodies for motorists, while mavens of the high-end gadget market at Beverly Hills Motoring Accessories have increasingly shifted their product lines to capture the commuter.

Recently, an Emeryville, Calif., firm--Commuter Products Corp.-- distributed a 24-page catalogue nationally featuring nothing but items aimed at commuters.

"A lot of people commuting in cars wish they could do something besides just driving," said the company's president, Mabel Yee.

Yee, who predicts her company will be recording \$200 million in annual sales within a decade, added, "People are trying to replicate their homes. If you're sitting there in traffic, you might as well make the ride just a little bit more comfortable."

Bob Johnson, a marketing manager for Pacific Bell who has studied the trend toward auto gadgetry, likens it to the nesting phenomenon of young families, often referred to as "cocooning." He calls it "car-cooning."

"It's a social change that has swept over the baby boomers of the nation. They've acquired material goods to build a fortress or wall to protect themselves from the pressures of the outside world," Johnson said. "The analysis I've done tells me that people faced with these long commutes are interested in extending that same type of environment in their homes to their cars."

It's not unique to the West Coast. Arnie Quirion keeps his mind occupied during his stop-and-go, one-hour commute through the sprawling suburbs east of Washington by jotting thoughts on a special note pad attached to his steering wheel or listening to books on tape.

"I turn a very unproductive hour into a productive hour," said Quirion, a hotel manager in Tysons Corner, Va. "My theory on commuting is it's not so much the drive that's the problem. The real issue is the time wasted. It's not too useful to spend an hour reading the guy's license plate in front of you."

But while the gadget vendors sell across the nation and in several foreign countries, the firms say they reap most of their revenue from the golden gridlock of California.

"It seems people on the West Coast have a greater interest," said Bruce Blackway, owner of 12 Volt Products of Holland, Pa., a mail-order company that specializes in gadgets that plug into a cigarette lighter. "There's a lot of cars, a lot of long commutes."

Blackway's firm and the other outfits feature an astounding menu of products.

There is a doughnut-shaped inflatable stereo neck rest that fits around a commuter's neck, holding a road-weary head aloft while playing a tune. Also available are a solar panel that can recharge a dead battery and a strap-on eye mask that purportedly relieves stress and strain by massaging the eyeballs. It's not recommended for drivers.

Add to the list all sorts of kitchen devices that can be plugged into a lighter: blenders, coffee makers, single-slice toasters, popcorn makers. Auto-gadget firms also stock plug-in curling irons, electric shavers, even a portable washing machine.

A garden-variety Garfield doll with suction-paws could get lost in the crowd.

And, of course, for those who want to dive into a good novel while crawling with traffic along the San Diego Freeway, there's the burgeoning "books on tape" market. In recent years, sales of the tapes have exploded, creating a \$100-million a year industry that executives say is growing between 25% and 50% annually.

Some people buy gadgets for urban survival. Lee Wygand, an accountant with Weyerhaeuser Mortgage Co. in Canoga Park, was getting sick of the smog during her 50-minute commute, so she purchased a portable air ionizer.

"It's really nifty how it works--it lightens up the air," Wygand said. But she confesses to thinking that most gadgets seem "sort of gimmicky. Some things are for people who just have money to burn."

Consider, for instance, a radio-controlled gizmo that can start a car from 400 feet away with the flick of a red button on a small black box. Commuter Products Corp. retails it for \$329.95. For \$379.95, the firm will sell the XPRES'R, an electronic signboard that can be set on the rear window panel and programmed with a hand-held control to deliver pithy messages like, "I'm Going Fast As I Can," "Let's Do Lunch," or even spicier thoughts.

In-car electronics are big these days. For the truly adventurous, there are items like the Whistler Interstate Travel Computer. This calculator-sized device, its makers boast, can with the touch of a few buttons ante up a road atlas-sized list of more than 30,000 gas stations, motels, restaurants and other services at more than 13,700 exits along every major highway in the continental United States.

Cellular phones, meanwhile, have become as ubiquitous a part of the Southern California landscape as the fender-bender. There are about 3 million cellular users nationwide, and market analysts predict that number will explode to 10 million by 1993. In the Southland, 275,000 cars are equipped with cellular phones, analysts say.

Sales of portable fax machines, which typically carry a price tag exceeding \$1,000 for the industry leaders, could grow by a hefty 300% in the next few years, some analysts predict.

"To be competitive in the '90s, one needs to have these tools," said Susan Curtis, Woodland Hills-based publisher of Mobile Office, a glossy new magazine for users of portable office devices.

Auto sound systems, of course, have achieved the status of an art form in some parts of the Los Angeles Basin. Surveys reveal that many auto buyers are willing to pay 10% of a new car's sticker price just for an audio system, one analyst said.

The true electronic connoisseur can hit places like Audio Chamber International in Buena Park, where Richard Shen and his high-tech team can fix you up with a voice-activated car phone, windshield wipers that operate automatically when it rains or a stereo system with compact-disc player, amplifiers and a price tag from \$1,000 to \$50,000.

You name it, they'll do it. One time Shen stuffed 56 speakers into a Mercedes, completely stripping and re-upholstering the car's interior to fit all the electronics.

"For a lot of people, it's a little bit of a walk on the wild side," Shen said. "I think most Americans really appreciate their vehicles . . . and there are people who can pay for it."

George Watkin, an orthopedic surgeon in San Bernardino, can do without all the extravagances--he just wanted to keep ketchup off his pants. Watkin bought a "Road Hog commuter apron," a vinyl-covered ensemble featuring a rigid lap tray and cup holder.

"People used to laugh at me because I'd use a beach towel," Watkin confessed. "Now they laugh at me because of this thing. But I'm a gadget freak and it keeps my clothes clean."

Not everyone, of course, is bullish on such gizmos.

"So many of these products seem to be sort of Hula-Hoop-ish," said William Tichy, a San Francisco financial analyst with Dean Witter Reynolds Inc. "I

think a lot of them are more faddish than real. The cost-to-benefit is relatively poor, so these gadgets aren't worth it for a lot of people."

Automotive executives in Detroit, meanwhile, have historically been reluctant to offer too many contraptions as built-in options. Officials at Chrysler, for instance, remember how the firm gambled in the mid-1950s by introducing 45-speed record players in some models, but the concept didn't stick.

Undaunted, the auto maker has just introduced the "Visorphone," a hands-off cellular unit built into the driver's sun visor. Ford now offers a similar system in some models, while the Cadillac division of General Motors has one featuring a microphone in the mirror of the 1990 Allante.

What else does the future hold? One free-lance inventor has already come up with a heads-up television display, but the idea must overcome safety concerns and anti-TV laws in dozens of states. Already there's an electronic navigation system featuring a video map. Two other firms plan to market an anti-theft system that would allow a car to be tracked by authorities.

Congestion is "going to get worse on the road," said Andrew Cohen, president of Beverly Hills Motoring Accessories, "so people will continue to dream up things to sell people who are stuck in traffic."

#### OUTFITTING YOUR CAR FOR THE DAILY COMMUTE

1. Radar detector: \$395
2. Remote car starter: \$330
3. Door ding protector: \$40
4. Back massager: \$80
5. Headrest speakers: \$70
6. Fax/phone machine: \$1,600
7. Portable car alarm: \$150
8. Miniature television: \$350
9. Refrigerator: \$120
10. Solar battery charger: \$60
11. Gas tank in spare tire: \$80
12. Message sign board: \$380

Note: Prices are all approximate, based on various automobile catalogs.

#### Caption:

Photo: Bruce McGowan has a nylon pocket organizer in car to help him work while stuck in traffic.

HENRY DiROCCO / For The Times

Drawing: OUTFITTING YOUR CAR FOR THE DAILY COMMUTE, SCOTT BROWN / Los Angeles Times

Descriptors: COMMUTING; TRENDS; TRAFFIC; SOUTHERN CALIFORNIA--TRANSPORTATION; AUTOMOBILES; QUALITY OF LIFE; EQUIPMENT; ELECTRONIC EQUIPMENT; CELLULAR TELEPHONES; VEHICLE EQUIPMENT

Copyright (c) 1990, Times Mirror Company

4 of 4 Complete Record

01637212 25289

Commuter Train's Inaugural Run a Success

Los Angeles Times (LT) - TUESDAY May 1, 1990

By: LEN HALL; ERIC BAILEY; TIMES STAFF WRITERS

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 2

Word Count: 638

Dee Molina not only got to work a lot earlier Monday, she also was a part of a bit of history in the making.

While a conga line of automobiles queued up on the ran-splattered Santa Ana Freeway, Molina and scores of other Orange County residents were all aboard a sleek rail car for the inaugural journey of what transportation officials billed as Southern California's first commuter train service.

Lured by promises of timely service, a more convenient departure schedule and ticket prices 20% cheaper than the typical Amtrak fare, about 200 commuters hopped aboard the train in Orange County for the early morning journey to downtown Los Angeles. Several hundred more boarded the 5:45 p.m. train after work Monday for the return trip back.

"This works much better for me," Molina said as she and other passengers watched the idling mass of cars poke along on the freeway Monday morning. Indeed, after the train chugged out of San Juan Capistrano at 6 a.m., it whisked Molina and the rest to Union Station in Los Angeles in 1 hour and 15 minutes, arriving 10 minutes ahead of schedule.

For experienced commuters on board, the early arrival was a welcome precedent.

"We're used to a variety of excuses for why the train is late," said Molina, who had been riding Amtrak for about eight months from her home in Dana Point to downtown Los Angeles.

Running from San Juan Capistrano to Union Station with three Orange County stops along the way and then retracing its route in the evening, the commuter line operates in addition to Amtrak service along the same line.

The new service is funded by the Orange County Transportation Commission, which is paying Amtrak \$1.8 million annually to run the five-car trains capable of carrying 400 riders each way. Fares represent a savings over those offered by Amtrak, with monthly rates between San Juan Capistrano and Los Angeles priced at \$281 aboard the commuter train compared to \$352 for the regular service.

Amtrak has two morning trains to Los Angeles that are heavily used, but the earliest arrives at 7:55 a.m., too late for many workers to get to their jobs on time.

In addition, transportation officials say the new morning train service should prove far more punctual than the other Amtrak trains, which often fall behind schedule during the trip from San Diego. The commuter train is specifically designated for Orange County, and is scheduled to be waiting in San Juan Capistrano when passengers arrive each weekday morning.

The late afternoon train, meanwhile, is scheduled to allow workers just enough time to reach Union Station after the typical close of the business day.

Monday's historic first run of the commuter train included festivities.

San Juan Capistrano City Councilman Anthony L. Bland marked Monday's occasion with a traditional ribbon-cutting ceremony before the train's departure from the city's century-old train depot.

At the Los Angeles end of the line, loudspeakers blared the Bangles' "Manic Monday" to welcome dignitaries and commuters alike as the train pulled into Union Station.

Orange County Supervisor Thomas F. Riley, who is also chairman of the Orange County Transportation Commission, called the occasion "day one of our entry into the rail age." By 1993, Amtrak and the Transportation Commission hope to add several more of the inter-county rail shuttles, Riley said.

For commuters like Phil Reed of Mission Viejo, an engineer for the city of Los Angeles, the early morning shuttle allows him to work an 8 a.m.-to-5 p.m. day. Before the new commuter service went into operation, the first train from San Juan Capistrano to Los Angeles had departed the Capistrano Depot at 6:40 a.m.

"That wouldn't allow me to get to my office until 8:15 or 8:30," said Reed, who finishes his commute with a 15-minute walk to Los Angeles City Hall.

Caption:

Photo: Commuters from Orange County arrive 10 minutes early at L.A. Union Station on the first day of new train service run by Amtrak.

Photo: On the Fast Track: Scores of Orange Countians were all aboard a sleek rail car for the inaugural journey of a commuter train service. Lured by promises of timely service and ticket prices 20% cheaper than the typical Amtrak fare, about 200 commuters made the 1 hour 15-minute trip--arriving in downtown L.A. about 10 minutes ahead of schedule.

RICK MEYER / Los Angeles Times

Descriptors: COMMUTING; ORANGE COUNTY--TRANSPORTATION; AMTRAK; RAILROADS; ORANGE COUNTY TRANSPORTATION COMMISSION

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01649542 38093

Travel Time for Commuters Up Sharply in Year

Traffic: Survey finds time on the road has increased 10 to 15 minutes while covering the same distance to work. In the Southland, 79% still drive to their jobs alone.

Los Angeles Times (LT) - THURSDAY May 24, 1990

By: TRACY WILKINSON; TIMES STAFF WRITER

Edition: Home Edition Page: 3 Pt. A Col. 5

Story Type: Poll or Survey

Word Count: 880

Fueling claims that the region's traffic jams are worse than ever, a survey of Southern Californians who commute to work has found that the average trip, while covering the same distance, has gotten 10 to 15 minutes longer in just one year's time.

The study, to be released today, also found that rush hour is becoming longer, drivers are becoming more pessimistic about traffic conditions, and there is more awareness of alternatives available to employees--from flexitime to working at home.

But the State of the Commute Report found that a whopping 79% of Southern California's residents are still driving to work alone in their cars--a number that decreased by a mere wisp from the previous year. Only 14% car-pool; 4% use public transit.

The report is sponsored by Commuter Transportation Services Inc., known as Commuter Computer.

"Ultimately, it is the individual commuter, making a decision to somehow change his or her commute, who is going to have the greatest impact on our transportation picture," the report stated.

The survey questioned 1,254 randomly selected commuters by telephone in 1989. While the vast majority of those polled lived in Los Angeles County, commuters from Ventura, San Bernardino, Riverside and Imperial counties were also included. A 2.8% margin of error was reported.

The previous year's study had surveyed 500 commuters in the same counties, excluding Imperial, with a 4.5% margin of error.

Among its results, the survey found that the median trip to work was 30 minutes, 10 minutes longer than in 1988. The median trip home from work was 40 minutes, compared to 25 minutes in 1988.

Distances remained fairly constant, however: 10 miles in 1989, nine miles the year before.

"The alarming fact that it takes 10 to 15 minutes longer than last year to make almost the exact same commute should be enough to convince even Pollyanna that we need to address this problem immediately," the report's authors wrote.

"Our system cannot handle the volume of cars and trucks it currently must hold, not to mention the 3 million or so people expected to move here in the next decade."

Caltrans last surveyed commute times in 1989; using 1987 data. It showed an average commute time of 24 minutes. But a spokeswoman said she had no reason to doubt the accuracy of the Commuter Computer results.

Jim Sims, president of Commuter Computer, conceded that the survey did not measure people's commutes but rather their perceptions of their commutes. And while many Southern Californians in the past have tended to underestimate the time it takes to drive to work, Sims said he believes commuters are now becoming more accurate in estimating their travel time.

"Simply," Sims said, "there are more cars on the road, and it is taking longer" to get anywhere.

Commuter Computer, which conducted the survey with the Southern California Assn. of Governments, is a nonprofit transportation research group that promotes ride-sharing. It is endorsing Proposition 111, a ballot measure that, among other things, would increase the state's gasoline tax by 5 cents per gallon to help finance construction of new roads and mass transit facilities. But Sims said release of the survey was coincidental.

For respondents to the survey, rush hour is starting earlier and ending later. The percentage of people who arrived at work before 7 a.m. had nearly doubled--from 15% to 28%--while 13% leave work after 7 p.m., compared to only 8% in 1988. At the same time, more people were leaving before 4 p.m. than in the previous year to avoid peak-hour traffic.

As a result, freeways are congested for a longer time, Commuter Computer concluded.

The survey also showed that, while car-pooling and van-pooling are the most appealing alternative modes of transportation, commuters were less interested in trying them than they were a year ago.

In 1988, 37% of the respondents said they "definitely would try" a car pool. But in 1989, only 16% gave the same answer.

Labeling the trend "alarming," the report suggested that some commuters, as they learn more, have become "more realistic" in deciding whether alternative transportation will work for them.

Awareness of the kinds of alternatives that are available has grown, the report concluded. Many more workers than in the previous year stated that their employers offered or encouraged use of flexible work hours, or flexitime, car and van pools and subsidized bus passes. About 26% said they had the option of working at home ("telecommuting") or working at a satellite office.

Only 7% of those surveyed said freeway traffic had improved over the previous year; 67% said it had gotten worse. At the same time, however, those commuters who say the trip home in the evening was "always good" grew by 8 percentage points to 27%.

Sims said that while commuters have to change their habits, businesses must take the lead in encouraging their employees to do so. The health of Southern California's economy depends on it, he maintains.

"Highly skilled and trained (workers) have choices," Sims said. "If we don't make the commute tolerable, their choice will be to move out of the state or out of Southern California."

#### COMMUTING IN SOUTHERN CALIFORNIA

Selected data from the 1989 Commuter Computer survey on Southern California commuting habits, as compared to 1988 study:

METHOD OF TRANSPORTATION

Mode	1988	1989	Difference
Drive alone	83%	79%	-4%
Carpool	11%	14%	+3%
Public bus	2%	4%	+2%
Other	4%	3%	-1%

DISTANCE AND TIME TO WORK

Distance in Miles	1988	1989	Difference
Under 5	19%	22%	+3%
5 to 9	23%	22%	-1%
10 to 14	17%	15%	-2%
15 to 19	13%	11%	-2%
20 to 24	10%	10%	0%
25 to 29	5%	5%	0%
30 to 34	3%	3%	0%
35 to 39	2%	2%	0%
40 to 44	1%	2%	+1%
45 and over	7%	8%	+1%

The median distance to work in 1988 and 1989 was 10 miles, according to the survey. The median time commuting to work in 1989 was 30 minutes--10 minutes longer than in 1988. The median time commuting to home in 1989 was 40 minutes--15 minutes longer than in 1988.

Caption:

Table: COMMUTING IN SOUTHERN CALIFORNIA

Photo: Going to Gridlock: A survey of Southland commuters found that the average trip to work takes 10 to 15 minutes longer than it did last year. Despite the increased frustration, the State of the Commute Report found a whopping 79% of Southern California's residents are still driving to work alone in their cars. Only 14% car-pool; 4% use public transit.

JORDAN KARP / For The Times

Descriptors: STATISTICS; COMMUTING; POLLS; SOUTHERN CALIFORNIA--TRANSPORTATION; TRAFFIC; SCHEDULES

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01665059 53640

Helping Motorists Out of a Jam

Transit: A computer system displays maps on a screen in the car and assists driver in avoiding congestion. It will be tested on Southland freeways.

Los Angeles Times (LT) - TUESDAY June 26, 1990

By: ERIC MALNIC; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 3 Pt. B Col. 2

Word Count: 676

You're behind the wheel of a car on the Santa Monica Freeway during the morning rush hour. You're new around here, so you're not sure where you are, or exactly where it is that you want to go. And the traffic looks like it might be building up ahead.

According to Caltrans, the Federal Highway Administration and General Motors, it's time for "Pathfinder."

You push some buttons, and a map appears on the bright little television screen mounted on your dashboard. An arrow shows you where you are and which direction you're headed. A series of triangles pinpoints the traffic congestion ahead.

You push some more buttons, and a voice tells you more about the traffic blocking the freeway. Or, if you prefer, the same information is printed on the screen.

You take an off-ramp, pull to the curb and punch in the address where you're headed. Within seconds, your destination is marked on the screen with a star.

Using alternate routes marked on your map, you avoid the congestion and keep going until your arrow and the star merge.

You're there.

In the meantime, data on the location and movement of your car has been fed into a centralized computer system to help monitor the overall flow of traffic and detour drivers around bottlenecks.

Of course, Caltrans already has sensors in the pavement of the Santa Monica, San Diego and Harbor freeways that do a lot of this sort of monitoring. There are broadcasts over dozens of radio stations that provide much of this information. And all of that is free to the individual driver, as opposed to the \$9,000 to \$10,000 it currently costs to equip a car with the Pathfinder system.

But the sensors and the radio can't tell you where you are or show you exactly where you want to go. They can't provide you with constantly updated, variable-scale maps that display all this, plus traffic congestion. And engineers say that once in general use, the per-vehicle cost would drop dramatically.

"We're not going to expand our highway system significantly, so we've got to learn to use it better," Jerry Baxter, Caltrans regional director here, told a news conference at the agency's downtown offices Monday. "We are confident that drivers have complete information, they will make wise commute decisions."

For now, the Pathfinder system is confined to 25 cars, all donated by General Motors, that will ply the Santa Monica Freeway and environs for a field test over the next year. The overall project, to be funded by Caltrans, the federal

Department of Transportation and GM, is pegged at about \$1.65 million.

The special electronic hardware in each car is based on an ETAK Travelpilot a-computer-driven navigational system that displays road maps on a dashboard television screen. In addition to an advanced ETAK system, each car has a two-way radio that receives traffic data from Caltrans' traffic operations center in downtown Los Angeles while providing the center with data on the car's speed, direction and location.

The maps used for the test cover the whole Los Angeles Basin. Using the smallest scale, the entire region is displayed on the screen, with only freeways and a few other major streets delineated. Using the largest scale, areas covering only a few blocks appear, with each street clearly marked and named.

Engineers say that within months, a single disc drive for the on-board computer will contain mapping data to cover the entire United States.

To minimize the dangers of distracting the driver, some of the functions--such as typing in the address of an intended destination--can only be entered while the car is stationary.

Steve Leung, a Caltrans engineer, said the yearlong test of the system will include three phases:

- \* Caltrans employees will commute to and from work along the Santa Monica Freeway to evaluate the system's usefulness in avoiding congestion.

- \* Drivers representing a cross-section of Southland residents will commute between a variety of origins and destinations.

- \* Commercial drivers will use the vehicles as part of their regular business trips.

Caption:

Photo: U.S. transit official Elaine L. Chao demonstrates use of the system that will be tested in Southland.

JOE KENNEDY / Los Angeles Times

Descriptors: DIAGNOSTIC TESTS; COMPUTER APPLICATIONS; FREEWAYS; COMMUTING; TRAFFIC MANAGEMENT; LOS ANGELES COUNTY--TRANSPORTATION

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01673927 62543

HOW TO RIDE THE TRAINS

Los Angeles Times (LT) - SUNDAY July 15, 1990

By: Compiled by Times researcher Cecilia Rasmussen

Edition: Home Edition Page: 30 Pt. A Col. 3

Story Type: Sidebar

Word Count: 298

Riding the Blue Line will be free for the first two weeks of operations, but, starting Aug. 1, passengers will be charged \$1.10. Following is information about purchasing tickets and using the line:

\* Self-service ticket-vending machines take up to \$5 bills and give change. RTD monthly bus passes, which cost \$42, may be used on trains without additional cost. Long Beach Transit monthly bus passes, which cost \$25, may be used, together with a 10-cent interagency transfer ticket.

\* Tickets entitle the purchaser to ride the entire length of the 19-mile Blue Line. Tickets purchased in the morning may not be used in the evening.

\* Once riders have bought tickets, they will wait in a specially marked "paid" area of the platform until their train arrives.

\* Uniformed sheriff's deputies will make random checks to ensure fare compliance. Violators are subject to citations or being removed at the next stop and made to buy a ticket.

\* Trains will arrive every 10 minutes during rush hours and every 15 minutes in off-hours.

\* Passengers do not have to pass through any turnstiles or barriers, allowing for easy boarding.

\* The Long Beach Transit will operate six shuttle buses every 10 to 20 minutes from the Anaheim Street station. The shuttles will run south on Long Beach Boulevard, west on 1st Street, north on Pacific Avenue, east on 8th Street and north on Long Beach Boulevard.

\* In Los Angeles, the Southern California Rapid Transit District will be meeting northbound trains at the Pico and Flower station and running shuttles every 5 minutes. Buses will run east on 12th Street, north on Hope Street, east on 11th Street, north on Figueroa Street, west on 6th Street and south on Flower Street.

\* For more information call (213) 620-RAIL

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; TRANSPORTATION ROUTES; LOS ANGELES--TRANSPORTATION; LONG BEACH (CA)--TRANSPORTATION; COMMUTING; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; FARES

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record  
01674573 63197  
A New Mind Trip

Lifestyle: Give up their cars? Ride trains? For L.A. commuters, as transit system debuts, attitude adjustments may be in order.

Los Angeles Times (LT) - MONDAY July 16, 1990

By: EDMUND NEWTON; TIMES STAFF WRITER

Edition: Home Edition Section: View Page: 1 Pt. E Col. 6

Word Count: 1,674

So you've turned your car into a sort of movable cocoon, with a sound system that's the next best thing to having the Tokyo String Quartet in the back seat and an air conditioner that can transport you, with the turn of a dial, from the late afternoon murk of the Long Beach Freeway to an autumn morning in Lausanne. And here come these people talking about the Blue Line.

It's this new light-rail system, they say. You can garage the car, hop on a train and, even if you live in Long Beach, be downtown in less than an hour. Ride in an airy new commuter rail car, they say, with 76 molded steel seats and enough space for about 150 standees. After weekend opening celebrations, the commuter line begins business today, with service between Long Beach and Flower Street.

But wait a minute. This sounds familiar. Electric-powered trains slicing through urban neighborhoods? Are they talking about a subway here? Is this Los Angeles' version of the A train?

Absolutely not, say officials of the Los Angeles County Transportation Commission.

These polyurethane-paneled electric-powered babies, manufactured by the Sumitomo Corp. of America at a cost of \$1.2 million a car, are a far cry from the trains that crawl through the gritty New York underground, commission officials insist.

Still, for some Angelenos, there's this eerie feeling about the Blue Line. A mode of transportation that involves the storing away of cars so that commuters can ride belly-to-belly with total strangers? That sounds suspiciously like what jaundiced ex-New Yorkers remember as the "iron horse."

"Yeah, it'll be great," deadpans television producer Richard Dubin, an ex-New Yorker who drives to work these days in a Mercedes. "Especially at Christmas, if they come up with a giant tree to run it around."

There may be some marketing problems here, Transportation Commission officials concede. If it's going to do its bit towards reducing automobile traffic, the Blue Line--along with its future brethren, the Red Line and the Green Line, as well as 100 miles or so of other planned or proposed light-rail projects--is going to have to change a lot of attitudes and behavior patterns among the city's pampered freeway travelers.

Can the freeway culture make room within its vast sweep for a light-rail system? Will large numbers of Southern California motorists ever choose to leave their cars in their garages? Can Los Angeles commuters learn the glazed-over "subway stare"?

Transportation advocates from other cities greet the news of the Blue Line's arrival with sunny approbation and with a lot of fatherly advice. "Keep in mind that it's not just the personal aspect (of getting to work)," says Stephan Chait, president of the Assn. for Public Transportation in Boston, which has

the nation's oldest subway system (founded in 1897). "There are the social benefits to being crowded in a train."

He ticks them off: traffic reductions, improved air quality, preservation of rural resources, getting to know people. That's right, getting to know people. "People meet each other on trains," Chait insists. "It can be very interesting and pleasant sometimes."

Or maybe interesting and unpleasant, some Angelenos reply. Despite a lot of Transportation Commission assurances about sophisticated electronic surveillance and a fast-moving rail security force, some people who live near the Blue Line are already worrying openly about gangs turning it into a hermetically sealed target range, with the passengers as moving ducks.

There's something about an urban commuter train, with 250 strangers sealed together in a moving rail car, that sets off people's anxieties.

Researchers at the Washington-based Anxiety Disorders Assn. of America say that urban mass transit can evoke a whole complex of phobias in people. "There are simple phobias, like the fear of the train itself," says psychotherapist Jerilyn Ross. "Or there can be a more generalized agoraphobia, the idea of being in a place where you don't have any control."

"It's the old 'Taking of Pelham One Two Three' syndrome," says one New York City official, referring to a 1974 movie about terrorists hijacking a New York subway train.

The often-chaotic New York subway system, with its 730 miles of track and 3.7 million passengers a day, is, of course, the Big Daddy of urban mass transit systems in the United States. Here's where urban commuter rail travel started getting a bad name, New York City Transit Authority officials acknowledge.

"In the early 1980s, it was an adventure getting from one stop to the next," Transit Authority spokesman Bob Slovak says. "There was a derailment on the average of once every 17 days and a major fire almost every day. The entire fleet was covered with graffiti."

But the system has seized control of itself, Slovak says. Graffiti have virtually been eliminated, equipment failures have been dramatically reduced and crime . . . well, that's edging upwards again. Last year, there were almost 17,000 felonies reported in the subways, up from about 14,300 the year before.

Transit Authority officials like to point out that crimes committed in the subways represent barely 3% of all the crimes committed in New York. "It's kind of ironic that people are so relieved when they get to the street," says Albert O'Leary, a spokesman for New York's Transit Police. "They're more likely to become victims on the street than in the subway."

Nevertheless, New York subway riders--"straphangers," they call themselves, though the last of the subway cars with leather balancing straps has long since disappeared--find themselves making some phenomenal psychic adjustments before they go beneath the sidewalks.

A lot of it involves getting used to the proximity of total strangers, straphangers say. After a while, having a fellow passenger or two wrapped around you like pretzels during rush hour gets to seem perfectly normal, says New York transportation advocate Joseph Rappaport. "If you're above ground, and someone you don't know moves too close to you, it's usually a sign that he's from another culture," says Rappaport, coordinator of the Straphangers Campaign, a subway riders' advocacy group. "But in the subway, your space is

violated all the time. You're a little closer to people than you're used to, but it's OK. You accept it."

There's even a kind of etiquette to being pressed into a crowd, like a cigarette in a pack. You can look at people, but not too closely. "And you can eavesdrop," Rappaport says. "That's one of the fun things about the subway."

"You have to learn how to go limp," adds Manhattanite William S. Whyte, author of "The Organization Man," and more recently "City: Rediscovering the Center." "It's a protective measure."

New York Newsday columnist Jim Dwyre, who is writing a book about subway travel, says experienced straphangers sometimes put themselves into a Zen-like trance. "Late at night, you go into the subway glaze," he says, "a state of near-sleep in which you're asleep enough to get some rest and awake enough to run for your life if necessary."

Other cities like to distance themselves from New York and its quaint practices. "New York is legendary," says Peter Dimond, public information director for the Massachusetts Bay Transportation Authority, which runs the Boston subways, where the biggest worry is pickpockets.

"They go after college students--kids who maybe haven't yet learned the rules of urban life and keep their wallets zippered in their backpacks," says Dimond.

By comparison to the Big Apple, San Francisco and Washington offer joy rides, with little subway crowding or crime. "For us, a big crime in the subway is Fawn Hall getting busted for eating a banana," says Washington Post columnist Bob Levey.

In fairness, the Los Angeles Blue Line's two-car trains with the antenna-like links to overhead power lines are not subway cars. And until a one-mile tunnel along Flower Street, between Pico Boulevard and 7th Street, opens next year, the Blue Line will be strictly surface transit.

Think of it as Los Angeles' version of San Francisco's Muni-Metro or maybe of the San Diego Trolley, says Edward McSpedon, acting president of the Rail Construction Corp., which engineered and constructed the Blue Line.

"We have a difficulty in this city, brought about by the lack of a model," McSpedon says. "There's little for people to compare with so that they can understand what it is we've been building here." Old-time Angelenos might think of the Blue Line as a modern version of the Red Cars, while people who have moved here from Eastern cities think in terms of the subways of their hometowns--neither of which please McSpedon.

But no matter how civilized the Blue Line is likely to be, it will mean sacrifices for those who give up their cars. You can catch up on your reading on the way to work, avoid freeway hassles, maybe even develop a new sense of community by rubbing actual shoulders with the commuting masses.

But there won't be any sudden left turns for cappuccino and cinnamon rolls, no spontaneous side trips to the beach. About 1.3 million daily RTD passengers can tell you all about it.

Sabette Wieland, a member of Disgruntled Ex-New Yorkers (DENY), a group that likes to needle elitist Angelenos, suggests that commuters from the palmier sections of the city pack carry-all bags for their trips on the Blue Line. "You'll absolutely have to have a mobile phone and a fax machine," she says puckishly. "You'll need a few magazines, an espresso maker and maybe something

cold to eat."

Wieland, a hospital administrator, rides an RTD bus to work. "People thought I was making a social statement," she says. "I just happen to live four miles from a straight line from where I work."

It's true, though. When you use urban mass transit, you make a kind of social statement, say straphangers and others. "The subway is a great equalizing force," says Rappaport. "There are a lot of \$100,000-a-year men and women in those trains, but everybody's equal down there."

For all of its faults, says Rappaport, urban mass transit has the capacity to be "democracy in action."

Caption:

Photo: Some Angelenos may have doubts about the Blue Line but a crowd turned out for test run at Del Amo station, above.

Photo: Blue Line trains will travel surface with antenna-like links to power lines.

Photo: Until a tunnel opens next year, the Blue Line will be strictly surface transit. Each car has 76 molded steel seats and room for 150 standees.

Photo: COLOR, (Orange County Edition) Blue Line trains will travel surface with antenna-like links to power lines.

Photo: COLOR, (Orange County Edition) Some Angelenos may have doubts about the Blue Line but a crowd turned out for test run at Del Amo station, above.

TONY BARNARD / Los Angeles Times

Photo: A crowd converges on a New York City subway. The system serves 3.7 million passengers daily.

Photo: New York transportation advocate Joseph Rappaport, right, says Angelenos will adjust to subway riding: "You're a little closer to people than you're used to, but it's OK. You accept it."

Photo: COLOR, (Orange County Edition) New York transportation advocate Joseph Rappaport, right, says Angelenos will adjust to subway riding: "You're a little closer to people than you're used to, but it's OK. You accept it."

ELENA SEIBERT

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRAINS; SOUTHERN CALIFORNIA--TRANSPORTATION; SOUTHERN CALIFORNIA--CULTURE; LIFESTYLES; TRENDS; TRANSIT SYSTEMS; PUBLIC TRANSPORTATION; COMMUTING; AUTOMOBILES; TRAFFIC; POLLUTION CONTROL; ENVIRONMENT; NEW YORK--TRANSPORTATION; PSYCHOLOGY; ANXIETY; PHOBIAS; CRIME; ROBBERIES

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01674669 63348

Blue Line Ridership Is Higher Than Expected

Los Angeles Times (LT) - TUESDAY July 17, 1990

By: RONALD B. TAYLOR; CHARISSE JONES; TIMES STAFF WRITERS

Edition: Home Edition Page: 1 Pt. A Col. 2

Word Count: 1,529

Los Angeles' new light rail line exceeded ridership projections on its first day of commuter operations Monday, but thousands of passengers had to endure travel times as long as two hours and the evening commute was marred by a train breakdown near a crowded downtown station.

By early afternoon 10,000 riders had used the 19-mile Los Angeles-Long Beach Light Rail Line, and transit officials predicted that a total of 15,000 passengers would ride by the end of the day--about three times the expected number.

"Things are running smoothly," said Art Leahy, director of transit operations for the Southern California Rapid Transit District.

Later, however, a train broke down a block from the Pico Station in downtown Los Angeles, tying up traffic on the northern end of the line for 35 minutes and delaying at least 250 commuters on their trips home, officials said.

"I'm going to jump a bus and go home," said Beatrice Hobbs, a computer operator from Long Beach.

Neil Peterson, executive director of the Los Angeles County Transportation Commission, said that the opening of the \$877-million Blue Line was successful despite the breakdown and other difficulties.

"We had a spectacular day going," Peterson said. "We expect things like this from time to time; they are unfortunate. We just hope the riding public has the patience with us as we all learn in this process."

The public's patience also was tested by the shuttle system that is linked to the ends of the train line. The shuttle trips added a half hour or more to the 55-minute Long Beach to Los Angeles trip, many riders complained in interviews.

The shuttles are being used temporarily because construction on several stations in downtown Los Angeles and Long Beach will not be completed until next year. Until then, trains are stopping short of their final destinations.

Transit officials say commuting times will be significantly reduced once the stations are completed. A number of riders said that even now it is worth the extra effort to ride in the comfort of a quiet-running, electric train rather than fighting traffic jams.

Other commuters said the added time needed to take the shuttles--and sometimes additional buses--into downtown Los Angeles had made them late for work and was too much aggravation.

"It took too much extra time today," said downtown librarian Judy Kamei. The expected 1-hour, 20-minute return to Long Beach would make her late picking up her youngster at the baby-sitter, she said.

The 26 train cars, which cost \$1.2 million each, had only a few minor mechanical problems early in the day, and two cars temporarily were pulled out of service.

Then, shortly before 6 p.m., a two-car train broke down on the northbound track as it approached the Pico Station, causing four trains to back up while hundreds of passengers were stranded on the trains and on the station boarding platform. While RTD officials said the cause of the power loss was not determined, passengers said that two teen-aged girls had tampered with an emergency switch, causing the train to stop and the doors to open.

After a few minutes, some passengers jumped off the trains, according to Robb Wagner, 24, a video technician from Los Angeles.

"People were helping each other off the train," Wagner said.

There were no reports of injuries. However, one North Hollywood woman passenger was crying and hyperventilating, and was driven home by transit workers.

During the breakdown, stranded passengers grew impatient and grumpy. At one point, transit workers told them that they could walk to the next station--about five minutes--and catch another train, but there were few takers.

When power was restored to the disabled car about 35 minutes after the breakdown, it was taken out of service, officials said.

With about 120 sheriff's deputies on patrol, there was little crime. One man was charged with battery after he allegedly shoved a woman during an argument on a train, and a drunken man was found wandering on the tracks. Deputies escorted him home, rather than arrest him.

During the morning commute, two gate crossings at intersections were knocked down by passing vehicles. Because the trains flash by these crossings every few minutes at 55 m.p.h., the situation was hazardous, but a deputy sheriff and a pedestrian quickly took action.

Sheriff's Deputy Rick Sukik backed his patrol car across the intersection of 24th Street and Long Beach Boulevard each time a train whistled its approach. "I am the guardrail," he said.

After a garbage truck tore off the crossing gate at Florence Avenue near the Florence Station, a pedestrian, Ignacio Marmolejo, voluntarily stopped traffic each time trains approached, giving workers time to fix the gate.

No traffic accidents were reported and little congestion developed along the route, officials said. RTD officials had been concerned that rush-hour traffic snarls might slow down the trains, especially along Washington Boulevard in downtown Los Angeles, but that did not happen.

Several commuters traveling from Long Beach told reporters they were getting a whole new perspective on the low-income neighborhoods of Los Angeles that they would not otherwise have seen.

"I saw the Watts Towers today," said one Long Beach woman, who requested anonymity. "I've never seen them . . . I didn't even know where they were and I've lived in Los Angeles all my life. . . . I think this (Blue Line) is going to be a great bridge for all of us."

As anticipated, Monday's ridership was far below the estimated 100,000 passengers that officials say rode the line during the two-day inaugural celebration over the weekend. But officials were more than happy with the line's popularity during the first day of commuter runs.

The county Transportation Commission--the agency that built the line--originally estimated 30,000 passengers would ride the first trains and that ridership would go to 54,000 within a decade.

The projection for the start-up period was scaled back to 12,000 a day, then recently to 5,000 a day. Officials said they believe that fewer passengers will ride the line while they are forced to ride shuttle buses to reach many destinations downtown.

Shuttles will continue to run until September, 1993, when work is completed on the Metro Rail subway station at 7th and Flower streets. When the Metro Rail subway is completed, Blue Line passengers will be able to transfer to the Red Line and ride into the heart of downtown.

Until then, the Blue Line ends downtown at Pico Station at Pico Boulevard and Flower Street, and commuters must either switch to the shuttle buses or walk the rest of the way.

Monday's morning commute started off slowly. The park-and-ride lots located near several of the 17 stations were nearly empty--a sign that rail transit authorities have yet to persuade large numbers of car-loving commuters that they should try the train.

Until midmorning, the trains were running at a fraction of their 450-passenger capacity, often with only 30 or 40 mostly white-collar riders.

Once the rush hour ended, the trains began to fill up with blue-collar workers, mothers with children, and teen-agers exploring the city.

By midday, patronage had increased abruptly, and by the end of the day, there was standing room only on many trains leaving downtown for Long Beach.

Many of the passengers gave the sleek, quiet Blue Line trains good reviews.

"This is a Godsend," said Connie Shirey, of Long Beach, a state employee who works downtown. She said that even though the train and the shuttles made her commute longer, "I'm going to try to make it work, I'm tired of trucks on the Long Beach Freeway."

Other people stepping off at Pico Station found themselves about 12 blocks away--much of it uphill--from the government offices and businesses in the Civic Center area. Free shuttle buses provided by the RTD only went as far as 6th and Flower, about halfway to the Civic Center. Some people got off there and literally turned in circles in confusion.

"There is no way I would do this when I have a time schedule to keep. I'd be too nervous," said Norma Komoroski, a courthouse volunteer who rode in from Long Beach. In the end, her trip to work took 90 minutes and four vehicles--her car to the station, the Blue Line, the RTD shuttle and the downtown DASH bus. By the time she stood at the corner of 1st and Grand, gazing at the Los Angeles County courthouse, her transit enthusiasm had worn a little thin, but she was forgiving.

"It is just the first day," she said. "I will continue to take it whenever I can."

Neil MacReady, a 31-year-old fund-raiser for USC, agreed. He said he drove his car from Newport Beach to a Long Beach stop--a 45-minute trip--then took the train another 45 minutes into downtown. It took 30 minutes longer than it

usually takes by car.

"It doesn't save time, but it saves stress," he said, patting the briefcase of paper work he planned to review while riding the train.

Times staff writers Fay Fiore, Andrea Ford and Richard Simon contributed to this story.

RELATED STORIES: A22.

Caption:

Photo: COLOR, Passengers in Long Beach board the morning's first train to downtown Los Angeles as commuter operations got under way on the Blue Line.

TAMMY LECHNER / Los Angeles Times

Photo: (Southland Edition) Blue Line trolley heads out from Long Beach along Long Beach Boulevard toward downtown Los Angeles.

CON KEYES / Los Angeles Times

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; TRANSPORTATION ROUTES; LOS ANGELES--TRANSPORTATION; LONG BEACH (CA)--TRANSPORTATION; COMMUTING; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; PASSENGERS

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01675212 63910

BLUE LINE JOURNAL

In the City of Cars, This Takes Some Training

Los Angeles Times (LT) - WEDNESDAY July 18, 1990

By: DAVID FERRELL; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 6

Word Count: 1,090

Dr. David Cundiff had seen the sign--no eating, no drinking, no smoking. But he boarded the Tuesday morning Blue Line before breakfast, so he faced a choice: Obey the rule or obey a more basic imperative.

As the train pulled out of Long Beach, heading toward Cundiff's clinical office at Los Angeles County-USC Medical Center, the doctor reached into his carry-on bag and pulled out a banana. He looked straight ahead as he ate, chewing quickly. He tucked the peel away as if it were contraband and reached for a peach.

"A little furtive," he conceded, taking an ample bite and holding the peach out of sight as he talked. But this was a new moral question, one that Cundiff had not yet resolved as he zoomed north during his first ride on Los Angeles' new mass transit rail line. "I always eat breakfast in my car on the way to work," he explained. "I don't know. If this doesn't work out, I may have to eat while I'm waiting for the train."

As the gleaming new Blue Line trains whisked from stop to stop, from suburb to inner city, a sort of etiquette was developing: the unwritten rules of rail car behavior. This was something entirely new in Los Angeles, where most commuting has been done in the relative privacy of automobiles.

Entirely new issues were arising by the minute: Do you eat? Do you talk to the person on the neighboring seat? Should men give up their seats to women and children? Is your deodorant working? Is your seatmate's? And, if not, what then? Should you--can you--open a window? Should you complain to a mother if her toddler is dripping saliva on your sport coat?

On one jam-packed train leaving downtown Monday evening, standing passengers filled virtually every foot of floor space. The rules seemed to be: Never give up a seat, but talking is OK. Riders loudly swapped stories and opinions of commuting. Two women who had engaged in a long conversation shook hands as one stood to exit at her stop. One tall young man told a series of jokes and was filmed by an enthusiastic listener with a video camera.

A 3-year-old girl sitting in her father's lap began emitting a series of squeals in the pitch of an air-raid siren. No one dared complain, nor did the father try to quiet her. Eventually, the girl began a shrill fit of crying, and one standing passenger fixed the father with an icy glare. The father then shushed her.

In cities where mass transit is more firmly established, such minor clashes occur constantly; a code of behavior has developed over time. In New York, for example, there are unwritten rules against carrying large objects onto a train during the rush hour. There seemingly are similar rules against starting conversations with other passengers, or even making eye contact.

"If someone makes eye contact or speaks to me, I can tell it's an out-of-towner or a mentally disturbed person . . . or both," said veteran subway rider Gail Collins, who has written about the subject as a columnist for the New York Daily News. Bodily contact is also governed by unwritten rules, she said.

"If you're about to stick your elbow into somebody's eye, you say, 'Excuse me.' It sort of takes the curse off. It's like (the poke in the eye) doesn't count."

Not surprisingly, however, the prevailing etiquette can break down. Collins has seen New York commuters carry aboard strollers, bicycles, an eight-foot tree (on one occasion), and even a German shepherd in a wooden crate. Twice, someone has tried to rob her--once successfully. She has yelled at seat-hogging men and taken the heat herself from a vagrant. Why? She was eating a garlic bagel, a flavor that incensed him.

In Chicago, it is even worse, if that is possible. At least that is the opinion of transportation writer Len Hausner of the Chicago Sun-Times, who says: "Believe me, there's no one ruder than a (train) rider in Chicago."

Once, Hausner watched a woman board the morning train in her nightgown. "She took quite a while to do her hair--took the rollers out and everything. Unabashedly, she took off her nightgown--she had a bra--and got dressed: a business suit, panty hose, high heels.

"She didn't look bad when she went to work."

The passengers who watched her were aghast, but "you just don't say anything," Hausner said. "If you do, you're the freak."

As Los Angeles lurches into the mass transit age, it can look forward to these sorts of high adventures. In the meantime, on the second commute day of the Blue Line, the sorting out of rules was framed in less spectacular moments. Admit it: We're novices.

On the Tuesday midmorning Blue Line in Los Angeles, Dianne Lopez, 35, of San Pedro, could be found reading a newspaper. She kept it neatly folded, out of the way of other passengers, and followed the caveat against drinking or eating.

"Since I can't drink coffee, I read," she said.

Nearby, 29-year-old banker Kevin McKenna watched passengers come and go on the half-filled train. "You can tell the people who are not used to public transportation," he observed. "They stumble awkwardly to their seats. They don't know whether or not to sit down next to someone."

On another train, several passengers entered into a sort of round-table discussion on train etiquette. Helga Dammann, a tourist from Germany, had just turned her knees to allow Philip Friedman, a Brooklyn-raised resident of Hollywood, to take the seat beside her. Friedman commented on the sleek cleanliness of the new trains and remembered that drunks were always a problem on the subways of New York.

"And they tend to be boisterous," he said. "The subway environment doesn't contribute to tranquillity."

"That's true in Germany," Dammann added.

Edward Fredericks, a product of inner-city Los Angeles, eavesdropped and talked about his fears of real crime on Metro Rail. "Are these windows bulletproof? That's what I want to know."

(They are not, Metro Rail officials say.)

Friedman watched through the window as the scenery whisked by. He said he hoped that the L.A. rail cars would stay clean, friendly and well-mannered. He was glad to be away from those New Yorkers who would spill their carry-on packages across the seat next to him, or who simply stepped aboard the train and spit on the floor.

"It won't get that bad here," he predicted, wincing at the memory.

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; TRANSPORTATION ROUTES; LOS ANGELES -- TRANSPORTATION; LONG BEACH (CA)--TRANSPORTATION; COMMUTING; PASSENGERS; BEHAVIOR; TRANSIT SYSTEMS--NEW YORK CITY; TRANSIT SYSTEMS--CHICAGO; ETIQUETTE

Copyright (c) 1990, Times Mirror Company

3 of 3 Complete Record

01675210 63908

Buses, Trains Added to Meet Rise in Riders on Blue Line

Los Angeles Times (LT) - WEDNESDAY July 18, 1990

by: VICTOR MERINA; CHARISSE JONES; TIMES STAFF WRITERS

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 2

Word Count: 797

With the number of train riders still soaring, operators of Los Angeles' new light rail line called in more workers, scheduled additional trains and beefed up local bus service on Tuesday to handle the continuing crush of business commuters and curious passengers on the Blue Line.

Delighted transit officials estimated that more than 32,000 people rode the 19-mile Los Angeles-Long Beach system on Tuesday--six times what had been forecast--and without a replay of the snags that snarled train traffic and delayed thousands of rail passengers the night before.

"It's been fantastic. It far exceeds what we imagined," said Art Leahy, director of transit operations for the Southern California Rapid Transit District.

Neil Peterson, executive director of the Los Angeles County Transportation Commission, called the figures remarkable but cautioned: "I don't think those numbers reflect what our ridership will be on a regular basis. As wonderful as these numbers are, I don't think we should draw any conclusions at this point."

In the second day of commuter runs and the fourth day of operations, the electrified trains were jammed throughout the day with families, elderly people, business-suited commuters and casually dressed riders who took advantage of the free fares and air-conditioned comfort to ride Los Angeles County's newest transit venture.

A hit-and-run collision Tuesday evening had threatened to disrupt the flow of rail cars. A driver, skirting a crossing gate near the Slauson Station in South Los Angeles, broadsided a southbound train carrying about 300 people. But no one was injured in the collision, authorities said, and the incident caused only a 10-minute delay.

The collision was the first between a car and a train. The incident caused an air leak and damaged several of the train's electrical cables, officials said. The driver was later arrested after passengers gave sheriff's deputies a license number, they said.

Transit officials had been determined to avoid a replay of Monday evening's troubles when a train broke down a block from the Pico Station in downtown Los Angeles and stalled traffic on the northern end of the line. Hundreds of passengers were delayed for 35 minutes, and some riders on other trains waited even longer before power could be restored to the disabled vehicle and service resumed.

Dan Ibarra, the RTD operations control superintendent, said Tuesday that mechanics blamed that problem on a malfunctioning door that would not close. He said that because the accident happened near a track switch, other trains could not go around the crippled cars.

Ibarra said earlier reports that two teen-age girls had caused the problem by tampering with an emergency switch could not be confirmed.

"The people on the scene said there was no evidence of tampering," he said,

adding that the only other major mechanical problem Monday was overheated brakes on a rail car that was quickly taken out of service.

Tuesday's crowds caused transit officials to send 40 more workers to station platforms to assist passengers, schedule two more trains during the non-rush-hour period when service is normally reduced and add 10 local buses on the Los Angeles-to-Long Beach route to handle any overflow of passengers. In an effort to make the line more convenient, RTD officials also relocated a shuttle bus stop across the street from Pico Station on Tuesday to assist riders who were unable to find the shuttles when they arrived in the downtown area.

Some passengers, however, still had complaints.

Abbas Ali stood at the Pico Station unable to find a schedule or anyone to tell him when the next train was coming.

"They should be sent to Canada to see how to run an efficient rail (system)," said Ali, a West Los Angeles resident who normally drives to work. "If someone has to go somewhere, they have to know the schedule."

Ali said he rode the train Sunday as well but was not sure if he was going to continue. "I'll give them a few chances. If it works out, good," he said. "If not, I'm back to the road."

Hector Gardea, a 14-year-old from South Gate, said that in the three days he had ridden the train, he had already begun to see the newness wear off and problems set in. "I've seen graffiti on the train already, on the windows," he said, adding that he was not surprised. "The police can't be watching all the time."

Lt. Jim Holts of the Sheriff's Transit Services Bureau said tight security will remain along the Blue Line and that the system has been largely free of vandalism. Two young men were arrested Tuesday for marking a wall outside an elevator shaft of the Slauson Station and a 14-year-old was booked after scratching a train window with a knife, Holts said.

Times staff writer Richard Simon contributed to this story.

Caption:

Photo: Passengers jam the Pico Station to board the Blue Line for the ride to Long Beach.

MIKE SERGIEFF / For The Times

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; TRANSPORTATION ROUTES; LOS ANGELES--TRANSPORTATION; LONG BEACH (CA)--TRANSPORTATION; COMMUTING; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; PASSENGERS; BUSES; TRAFFIC ACCIDENTS--LOS ANGELES; VANDALISM; EQUIPMENT FAILURES; SCHEDULES

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01676747 65459

BLUE LINE JOURNAL

Cares of the City Left Behind by Those on Day's Last Train

Los Angeles Times (LT) - SATURDAY July 21, 1990

By: DAVID FERRELL; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 5

Word Count: 1,023

"Last train to Long Beach!" Rita Malone hollered. "All aboard, we're leaving now! Last train to Long Beach!"

Toting a clipboard as she moved among the lengthening shadows of the Pico Boulevard station in downtown Los Angeles, Malone wearily but diligently ushered stragglers into the day's 70th southbound train. Her commitment to the success of the city's new Metro Rail Blue Line extended right down to her pinky fingernails--each one painted bright blue and etched with the word METRO. ("I'm trying to get in the spirit," she said.)

Soon, the doors slid closed and, with a powerful nudge, the half-filled, Japanese-built train cars began moving boisterously southward. Talk was loud, the passengers a miscellany of tourists, shoppers, train buffs and working commuters. The time was 7:15--the tail end of rush hour--and it would be after 8 o'clock and dark when the Blue Line rolled into Long Beach, 19 miles away.

Meanwhile, there was that special atmosphere, a general sense of release, that is found on the last train home. Everyone seemed aware that the day was winding down; they were leaving behind the cares of the inner-city. A teen-ager vigorously worked a toy Slinky. Two young shoppers, Lorena Castro and Brenda Cortiz, giggled as they rested their feet after three hours on hot sidewalks. First-time rider Jeannette Johnson of Los Angeles stood in the center aisle of the packed forward car watching the warehouses go by--and realized she was going in the wrong direction.

"Does it come back (downtown)?" Johnson asked, surprised that it did not. "Oh, how am I going to get back?"

She was advised to exit at the next stop.

"So I'm on this train and I've got to get off," she said, grinning but craning her neck to take worried glances out the window. "That's crazy. Now where's the next stop?"

Rapid Transit District officials face special challenges at the day's end, trying to assure that inexperienced passengers get to their destinations. The final northbound train leaves Long Beach shortly after 6 p.m., and the last southbound train departs from Los Angeles shortly after 7. Invariably, some commuters miss those trains, so the RTD runs buses along the route well into evening.

The buses pass each of the 17 existing train stops, whisking the stray riders (at no charge this month) to their home stations. On one recent night, a middle-aged man and wife showed up well after the last scheduled run, thanks largely to an inaccurate Blue Line schedule. A bus driver welcomed them aboard, laughing sympathetically: "We'll get you there. We won't leave you stranded."

The couple stepped to their seats without cracking a smile.

On the train, though, the commotion of the last run starts to die down as the train leaves the inner city and picks up speed. The riders on Wednesday night's

final Blue Line began to stretch out, despite the cramped seats, and watched scenery go by. Many were forming their first impressions of the newfangled technology.

"It's a darn sight better than taking the car," said Lee Morrison, 39, a video store manager from Long Beach who was traveling with an old high school buddy, Jim Noragon, also of Long Beach. "We wanted to take the last loop of the day and see what it was like. I've had so many friends get bargains at the (Los Angeles) Jewelry Mart and the garment district over the years . . . and it's just going to be super-convenient to get there. It's fantastic."

Until now, he had avoided Los Angeles because of parking difficulties downtown, Morrison added. "You look at the streets up there and you wouldn't leave your car for five minutes," he said. "Or you go to a parking lot and they charge you a buck an hour. I've been waiting years for this."

As the miles slipped by, Bill Peterson, a 44-year-old Long Beach shipyard clerk, sat alone in a section of car that had begun to clear out. "I'll probably ride every once in a while for fun," he said with a smile, granting his blessing. "Maybe I'll ride up to L.A. sometimes, you know, look around for the day, and get back on the train and take it back home."

Jose Orellana, a young bank messenger taking his second trip, planned to give up the frustrating commute to work by car. "This is going to be good," he said.

Veterinarian Anthony Onuoaha, 33, complained about the number of stops and fretted about the "bad areas" bordering the train route. "It's scary--scary," he said. "Especially riding the last train."

Fewer passengers were now boarding at each stop. Several times, the train doors opened and no one boarded. But Nurse Linda Helms, 32, of Long Beach, got on and talked of her lifelong love of trains. As a teen-ager, she recalled, she traveled cross-country every other year, taking the train to visit relatives in North Carolina.

"I just rode it for fun," Helms said. "If I had the money, I'd ride the Bullet (Train in Japan) and I'd fly the Concorde."

Darnell Johnson, 35, hurried on board at the Compton Station. He had just returned his girlfriend's car to her and had dinner with her at a local soul-food restaurant. Now, running a little late, he was heading home to Long Beach.

"I didn't realize this was the last (train)," he said. "What time is it? This is the actual last train to Long Beach this evening?"

He laughed. "This is great."

Only a third of the car was occupied now, and riders were looking more weary.

Turned sideways in his seat, Johnson watched the sun going down. As it hit the horizon, he was asked to describe the mood on the rail car. "Most tranquil," he said. "Everybody's enjoying it. The sun is setting. I can write your story for you. Poetry. The sun is setting as we gradually go up the hill. The sun will be dissipating. The sun will be dissipating into the north, toward the ocean."

He was laughing. "You can't beat it. This is just where I want to be too."

Caption:

Photo: (Southland Edition B1) Sleek Blue Line train carries passengers to

downtown.

DOUGLAS R. BURROWS / For the Times

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; LOS ANGELES METRO  
L; LOS ANGELES COUNTY--TRANSPORTATION; LONG BEACH (CA)--TRANSPORTATION;  
TRANSIT SYSTEMS--LOS ANGELES; PUBLIC OPINION; PASSENGERS; COMMUTING; BUSES;  
TRAINS

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01679833 03045

RTD OKs Free Rides if Buses Are Late

Transit: The trial program is an effort to regain lost ridership.

determined is whether the driver or rider will determine if a bus is late.

Los Angeles Times (LT) - FRIDAY July 27, 1990

By: GEORGE RAMOS; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 4 Pt. B Col. 1

Word Count: 562

A public relations experiment that would provide free rides whenever buses are 15 or more minutes late won the endorsement Thursday of the Southern California Rapid Transit District's governing board.

The board's 8-1 vote gave RTD officials the go-ahead to plan for the four-month program, which is slated to begin Sept. 1 and is designed to get people back on buses. Since the 1984 Summer Olympics in Los Angeles, RTD ridership has plummeted by about 500,000 customers from a high of 1.8 million daily.

"This is a good and bright idea," said RTD Director Marvin Holen, who supported the novel concept.

RTD board President Nick Patsaouras, who unveiled the proposal at a news conference Wednesday, told fellow board members that the RTD needs to do a better job of persuading consumers that public transportation is reliable.

The free rides, he said, are merely a way to provide an attractive alternative to cars and congestion.

RTD officials realize that many freeway commuters simply won't give up the cars.

"We've tried different things in the past," said one RTD official. "Maybe this will get them out of the car."

In addition, the RTD has been stung by publicity about problems, ranging from violence on buses to late buses. Officials concede that a 60-cent fare hike in 1985, bringing the basic one-way fare to \$1.10, drove off customers by the thousands.

The specifics of the experimental program, which may cost the RTD between \$1 million and \$2 million in lost revenue, have yet to be worked out. Among the unanswered questions is how the program might affect corporate-sponsored bus plans.

Also unanswered is who will decide if a bus is at least 15 minutes late--the driver or the rider. Patsaouras said he thought the often-heard axiom--"The customer is always right"--should prevail, even if a customer says the bus is 15 minutes and 1 second late.

"I believe the rider should be comfortable and depend (on the bus) to be on time," he said.

RTD officials are expected to work out the details and bring them to the board for approval next month.

Not everyone on the board, however, favored the idea.

"This is an ill-conceived plan," said La Puente City Councilman Charles H. Storing, who voted against it. "It assumes the buses are intentionally running

late, but a lot of the reasons are traffic congestion, traffic accidents, road repairs, engine trouble or train crossings.

"For us to penalize the district is unacceptable."

The leader of the RTD bus drivers' union said he favored the idea as long as the drivers did not become scapegoats for poor on-time performance.

"A driver could get into a dispute on whether a bus was 15 minutes or 14 minutes or 12 minutes late," said Earl Clark, general chairman of the United Transportation Union. "They got a lot of other things to deal with without getting into that."

Several bus drivers in downtown Los Angeles said they supported the RTD board's action.

"I want happy riders, not hassles," said one Route 30 bus driver as he headed toward East Los Angeles. "If it's my fault that the bus is late, the riders deserve a free ride."

Another bus driver, battling to keep his schedule to the Eagle Rock Plaza shopping center, tersely told a reporter, "Can't talk right now. You don't want to make me late, do you?"

Descriptors: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; LOS ANGELES COUNTY--TRANSPORTATION; BUSES; PASSENGERS; COMMUTING; CUSTOMER SERVICE; PUBLIC RELATIONS

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01681350 04577

Fares to Test Popular Blue Line

Transit: Introductory free rides end Wednesday. RTD officials hope commuters will pay the \$1.10 one-way fare.

Los Angeles Times (LT) - TUESDAY July 31, 1990

By: GEORGE RAMOS; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 3 Pt. B Col. 4

Story Type: Infobox

Word Count: 761

More than 600,000 passengers have tried the Los Angeles-Long Beach light rail service since it opened free of charge two weeks ago. Now comes the real test, RTD officials acknowledge, when the \$1.10 one-way fare takes hold Wednesday.

"We're delighted with the response," said Alan F. Pegg, general manager of the Southern California Rapid Transit District.

The high ridership has encouraged RTD officials, who are hoping that the 22-mile Blue Line will attract freeway commuters willing to give up their cars for a train ride to downtown Los Angeles.

"We think that the Blue Line is proving itself nicely," one RTD official said. "It's certainly better and, I might add, more comfortable than being stuck in freeway traffic."

As of midafternoon Monday, 624,000 riders had taken advantage of the free rides on the \$877-million system, which opened July 14.

The highest ridership has been on weekends, with almost 50,000 passengers a day, RTD figures show. Weekday ridership has averaged about 35,000--far surpassing RTD projections of 5,000 passengers a day.

RTD officials have said that many of the riders during the first two weeks were sightseers and not commuters, but they remain optimistic that many downtown Los Angeles office workers will ride the trains.

To help persuade downtown workers to use the Blue Line, the RTD has added two more shuttle bus stops to take people to the Los Angeles terminus at Pico Boulevard and Flower Street. The new stops are located at 8th and Flower streets and 7th and Hope streets.

The new buses will travel east on 6th Street to Hope, then south on Hope to 8th. The shuttles will go west on 8th to Flower to continue their routes.

Pegg also emphasized that Blue Line passengers can bypass boarding the trains at Pico and Flower in favor of less-crowded stops at the San Pedro and Grand stations, which are located along Washington Boulevard.

In anticipation of Wednesday's fares, transit officials said there will be no ticket sellers at any of the Blue Line's 17 stations.

A total of 34 vending machines at the stations will dispense one-way tickets for riders. Instructions for using the machines are provided in English and Spanish.

RTD monthly bus passes will be honored as payment on all Blue Line trains, officials said.

Transit personnel will be at each station to help riders deal with the new

ticket-vending machines, each costing about \$40,000.

RTD officials said there will be no ticket collectors at the stations, but roving fare inspectors will check to see that riders have tickets. Fines for violators are \$80 and can go up to \$250.

Trains run every 10 minutes during weekday rush hours--5:30 a.m. to 9 a.m. and 3 p.m. and 6 p.m. Trains operate every 15 minutes most other times.

The ride from Los Angeles to Long Beach takes 55 minutes.

#### HOW TO RIDE THE TRAINS

Beginning Wednesday, riding the Blue Line will cost passengers \$1.10. Here is information about purchasing tickets and using the line.

Self-service ticket-vending machines take \$1 and \$5 bills and give change. RTD monthly bus passes, which cost \$42, may be used on trains without additional cost. Long Beach Transit monthly bus passes, which cost \$25, may be used, together with a 10-cent interagency transfer ticket.

Tickets entitle the purchaser to ride the entire length of the 19-mile Blue Line one way. Tickets must be used within two hours of being purchased.

Once riders have bought tickets, they will wait in a specially marked "paid" area of the platform until their train arrives.

Uniformed sheriff's deputies will make random checks to ensure fare compliance. Violators are subject to citations or being removed at the next stop and made to buy a ticket.

Trains will arrive every 10 minutes during rush hours and every 15 minutes in off hours.

Passengers do not have to pass through any turnstiles or barriers, allowing for easy boarding.

Long Beach Transit will operate six shuttle buses every 10 to 20 minutes from the Anaheim Street station. The shuttles will run south on Long Beach Boulevard, west on 1st Street, north on Pacific Avenue, east on 8th Street and north on Long Beach Boulevard.

In Los Angeles, the Southern California Rapid Transit District will be meeting northbound trains at the Pico and Flower station and running shuttles every five minutes. Buses will run east on 12th Street, north on Hope Street, east on 11th Street, north on Figueroa Street, west on 6th Street and south on Flower Street.

For more information, call (213) 620-RAIL

Compiled by Times researcher Cecilia Rasmussen

Descriptors: FARES; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; LIGHT RAIL SYSTEMS; COMMUTING

1 of 1 Complete Record

01712468 35969

'Keep Moving Day' Called a Success

Los Angeles Times (LT) - THURSDAY October 4, 1990

Edition: Home Edition Section: Metro Page: 2 Pt. B Col. 5

Word Count: 128

Sponsors of an annual ride-sharing campaign aimed at luring commuters out of their cars proclaimed "Keep California Moving Day" a success Wednesday, with rush-hour speeds up an average of 5 to 8 m.p.h. on busy freeways in five Southern California counties.

"We are pleased with the results," said Peter Hidalgo of Commuter Transportation Services Inc., also known as Commuter Computer. "We didn't expect free-flow freeways."

More than 75,000 people signed cards pledging not to drive to work alone by taking a bus, car-pooling, van-pooling, biking or walking to work, according to organizers of California Rideshare Week 1990.

KNX radio traffic reporter Bill Keene said traffic was lighter in outlying areas Wednesday, but he told Associated Press, "I don't think the rideshare day worked too well in the downtown area."

Caption:

Photo: Diamond lane of the on-ramp to eastbound Ventura Freeway at Van Nuys Boulevard had few occupants on Wednesday.

MIKE MEADOWS / Los Angeles Times

Descriptors: LOS ANGELES--TRANSPORTATION; CARPOOLS; COMMUTING

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01713990 37501

Park the Car, Take a Hike

Even in L.A., Walking Remains in Style

Los Angeles Times (LT) - SUNDAY October 7, 1990

By: CHARISSE JONES; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 2

Word Count: 1,911

On a noisy street west of the Harbor Freeway, a man called Chief walks to clear his mind.

James Enox--known by most of his neighbors only as Chief--was forced to stop driving after some hoodlums pummelled him a while back. They fractured his skull and he has had blackouts ever since. So now he walks, sometimes for miles, all the way from Vermont and Manchester avenues to 7th Street and Broadway.

"I just can't sit and dry up. I walk to keep alive," said Chief, an old man in a fedora, dapper in stripes and suspenders.

Chief does not walk alone. In a city known for its symbiosis with the automobile--and, more recently, for the kind of random street-side violence that befell Enox--there are still many people who travel by foot, by choice or necessity, along the sands of Santa Monica beach, through the streets of Central Los Angeles, in the canyons of the South Bay.

Some of these walkers say a stroll through Los Angeles reminds them of country summers and child's play, of a time when their bones didn't ache so much and they didn't have to work so hard. Others walk to forget--that they are jobless, hungry or alone. Some walk because it gives a sense of community--they sometimes connect with those they otherwise might never meet. Or, they say it reunites them with nature, offering a sense of solitude in the midst of millions.

This being Southern California, there are legions of fitness buffs, their ranks at the vanguard of what some people maintain is a genuine, if hardly novel, trend: Walking.

"What's happened with walking is kind of like a quiet storm," said Jake Steinman, editor and publisher of City Sports magazine. "It's not like running where you have a few people at the top. This is really an activity that's worked its way into the mainstream."

Fifty-thousand Southern Californians chose to walk to work rather than drive last year, a number that should increase as employers and transportation officials advocate alternative means of commuting, said Peter Hidalgo of the Commuter Transportation Services, which promotes and develops new commuting concepts.

Carol Luttrell, an Echo Park real estate agent, said many of her clients desire homes in neighborhoods where they can feel safe walking: "I know a couple," she said, "who, before they do anything--before they make dinner, before they take their shoes off and put their feet up on the coffee table--they pick their children up from the baby-sitter and take them out for a walk."

Barbara Cadow, a USC psychology professor, said the stress of city living and the need to connect with fellow travelers is driving people to the sidewalks.

"When you're in your car, you tend to fade out," Cadow said. "You're very

isolated. . . . When you're walking you notice the smells, the temperature, the breeze."

Pedestrian numbers are hard to come by. No one is in charge of counting sidewalk traffic. But trust your eyes: It's not difficult at any hour, in any corner of the city to find serious walkers.

In South-Central Los Angeles, men stroll the streets in the late afternoon and meet for a moment of laughter and camaraderie on a bustling corner.

In the Fairfax District, the air sweet with the smell of fresh fruit and baked bread, giggling children and bustling shoppers stream up and down the street--an elderly man named L.G. among them, dispensing wisdom to a passerby as he does his morning shopping.

Across town in the Glendale Galleria, a collection of elderly men and women gather as early as 7:30 a.m. many days for brisk walks through the mall, the center's carpeted walkways and thick walls separating them from the smog and crime some fear lurks outside.

Some evenings, just before sundown, a group of professionals can be seen hiking deep into the hills of Palos Verdes, until the McDonald's and mini-malls below disappear. Only five miles of mountain trails remain.

"People have always walked in Los Angeles," said Robert Greene, director of education for the Los Angeles Conservancy, which provides walking tours of downtown Los Angeles for about 20,000 people a year. "What they haven't done in the last few decades is walk from one area to another. This is what we are trying to do, not just introduce tourists to parts of Los Angeles, but introduce ourselves."

Of course, there are some people too afraid to walk in Los Angeles at all, even in their own neighborhood and especially at night. A Times Poll in February showed that only a slim majority--55%--of Los Angeles County residents are not afraid to walk. Broken down geographically, the poll results showed a growing fear citywide about walking after sundown--42% of the Westside respondents, 41% in the San Gabriel Valley, 57% in Central Los Angeles.

Sadly, police concede the fear is not without foundation. "Any place in this city, there's a need to use caution and be aware of your surroundings," said Los Angeles Police Capt. Norman Rouillier, whose Central Division patrols neighborhoods from Elysian Park to Chinatown. "Of course, there's places that should be avoided, but any place where you're not aware of your surroundings is dangerous."

There are pressures beyond crime that make it difficult to be a Los Angeles pedestrian. The whole momentum of the city seems to revolve around vehicle traffic. This is a city known for an array of drive-through services, and not for kiosks. Even automatic bank tellers have become accessible by car. "Nobody walks in L.A.," goes one song.

When Gary Herman, West Coast bureau chief for the show "Inside Edition," moved to Los Angeles from New York in 1976, "I found myself driving two blocks to get the newspaper. Here the mentality is get in the car for everything. It's crazy."

Now, Herman regularly passes strolling neighbors as walks from his West Hollywood home to the supermarket or Beverly Center. And in a city where freeways sometimes do more to divide people than to connect them, Herman said he relishes this chance to meet strangers and discover his community.

Curtis Lee Ford, 60, is something of a neighborhood fixture in the South Los Angeles community where he takes his daily strolls. A former barber instructor, Ford started taking the walks after suffering a heart attack last year.

"Everybody down here knows me," Ford said one recent morning, strolling down Vermont Avenue, a cup of cold coffee in his hand. "So I can walk the streets in peace."

His route never varies. He hits the doughnut shop at Florence and Vermont first thing in the morning. Then he drops by Willie's for coffee and small talk before helping out at the Salvation Army store down the street. He takes a stroll down to 79th Street around 11 a.m., walks back to the Salvation Army in the afternoon and hits the doughnut shop one more time to finish his day with a cup of tea.

But, as Ford talks, he plants the notion that another force draws him to the sidewalks. A widower no longer in contact with much of his kin, Ford seems to have built a surrogate family of the hairdressers, shopkeepers and wanderers he meets on his daily route, ducking his head through doors, yelling hello through open windows.

"Willie, come here," Ford says one afternoon, beckoning playfully from a worn leather seat in Willie's homey coffee shop. "I've got something to say to you. And when I talk to you, I want you to listen with your good ear, not your bad one."

They talk briefly and then Ford is on his way, sauntering in his white coat and matching hat past Domino's pizza, Sneaker World and Fred's auto shop, where the mechanics used to see Ford with his worn-out coffee cup and think he was zzzling Ripple.

"When I walked," Ford said, "they'd say, 'There goes that wino with that wine-until they found out it wasn't nothing but coffee.' "

Move off the sidewalks and into one of those indoor malls. Ethel Latauska, a member of the Glendale GoGetters, is walking with her fellow club members through the Glendale Galleria. The GoGetters, mostly older people, take mile-long walks through the mall almost every morning.

"You don't get mugged and you build up bone mass," Latauska said.

She had been too afraid to walk the streets of Los Angeles, but she used to walk all the time when she was a girl in New England. "There weren't that many cars in those days," she said of her childhood just outside Boston. "My father was an avid walker. He had three daughters and he'd drag us out. It was wonderful."

Latauska, her Reeboks in constant motion across the malls' carpeted expanses, paused to think about her family. "I'm the only one left now," said Latauska, who gives her age as 70-something. But now "I'm walking again. It's memories. Even when you walk alone it brings back all those memories."

Other walkers gravitate toward the beaches or canyons.

David DiBernardo walks the beach to escape the streets and connect with nature. "When I don't come out here, when I haven't been out for two or three days, I feel funny. Like I'm trapped in the city," said DiBernardo, treading the sand in white shorts and dark shades.

Bob Patrick said he sometimes experiences that imprisoned feeling too. But then he takes off on mountain hikes and nature walks with fellow hikers and the stresses of day-to-day living seem to slip away. On a recent Thursday evening Patrick, 63, helped lead a group of doctors, engineers and other buttoned-down hikes down Silver Spur Road and up into the Palos Verdes Mountains.

"After you complete a hike, you're wringing wet with sweat," said Patrick, who has been hiking for nearly six years. "Your knees hurt and your back hurts. But you can look back and say, 'Look what I accomplished today.' You can go back and face the traffic, and it doesn't bother you at all."

For some in the city, walking is more than a pastime--it's a lifestyle.

Dean Jackson, a 46-year-old homeless man, walks the streets of Skid Row in worn-out shoes. Every day he strolls, from a shelter on 5th Street to Pershing Square to City Hall, and back again. The walks don't always make him feel good, he said. But they make him feel better.

"It's to kill time, kill the monotony," Jackson said as he searched up and down Broadway for cans to recycle. "You have nothing on your hands but time when you're unemployed."

The last time Jackson lived in Los Angeles, he said, was the 1960s. He was, he said, a television writer. "I rode then," he said smiling. "I was employed, doing well."

This time Jackson has no job. He grabs a berth at a church shelter called Gravy Joe's and hits the pavement by dawn. He said he isn't afraid of the sometimes dangerous streets of Skid Row. In fact, you can learn a lot about a city, said Jackson, walking and watching its people. "You're closer to humanity. When you're in a vehicle it's like watching a movie."

Sometimes, though, he gets tired of his life of endless walking. The blocks get longer past Olympic Boulevard, and sometimes instead of making him forget, they make him remember what life was like before things got so bad.

Caption:

Photo: Curtis Lee Ford is something of a neighborhood fixture on his walks.  
MINDY SCHAUER / For The Times

Photo: Sierra Club walkers begin their evening stroll in Palos Verdes.  
RANDY LEFFINGWELL / Los Angeles Times

Photo: (A2) Walking in Style: There are many people in Los Angeles whose preferred method of travel is by foot. In a city known for its symbiosis with the automobile, these people find that walking--whether by choice or necessity--is a worthy, if hardly novel, trend. Two such people are Al Fisher and his young daughter, shown here strolling through their neighborhood.

Photo: Al Fisher gives his daughter, Hannah, a "balcony" seat for a walking tour near the Beverly Center. Many parents stroll with their kids to relax after a long day.

GARY FRIEDMAN / Los Angeles Times

Descriptors: WALKING; EXERCISE; TRENDS; LOS ANGELES--TRANSPORTATION; COMMUTING

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01697831 21227

As Summertime Fades, So Does the Easy Commute

Traffic: With students and workers returning from vacations, heavier traffic  
ain clogs the freeways.

Los Angeles Times (LT) - TUESDAY September 4, 1990

By: ERIC BAILEY; TIMES STAFF WRITER

Edition: Home Edition Page: 1 Pt. A Col. 1

Word Count: 1,343

It might seem a commuting contradiction, but Sandi James practically savors driving to work during the lazy, hazy days of summer.

Sure, there are still plenty of cars clogging freeways between her home in Monrovia and her job in downtown Los Angeles. And the occasional jackknifed truck can just as easily cause a rush-hour rumba line. But overall, she says, traffic simply seems to flow better in the summertime.

Unfortunately, that blessed respite from the gridlock is about to end. With kindergartners and college students alike heading back to school, and workers returning from late-summer vacations, commuters once again will be slamming on the brakes across the Southland beginning today.

"I just dread it," said James, a legal secretary and seasoned commuter. "Right after Labor Day, the freeway once again becomes hell. Driving hell. I just don't like to think about it because I'd be looking for a new job--or a new city."

It is the goodbye-summer-hello-September surge. Traffic experts and commuters say it's as punctual as a groundhog, as reliable as the swallows' annual return Capistrano. The first weeks of September, they say, mark the traditional debut of the worst commuter congestion on freeways in Los Angeles and other metropolitan areas up and down the state, as society gears up again after a hiatus under the hot summer sun.

"I think it's generally recognized that commuter traffic tends to flow better during summer," said Nick Jones, a transportation engineer with the California Department of Transportation. "The week after Labor Day we'll all be out banging our heads in it again. More than anything else, it's people back from vacation. Everyone is just getting into the grind again."

It's just one of several traffic seasons on the state's network of freeways, which ebb and flow in a pattern that experts can forecast like changes in the weather.

"There's several big trends," said Keith Gilbert, highway engineering manager for the Automobile Club of Southern California. "During Christmas vacation, some of the aerospace plants are closed and schools are out, so this makes a difference in the commute hour, although it gets tight around the shopping centers. Traffic also tends to lighten during Easter Week."

Nothing, however, is quite like the jolt that follows the Labor Day weekend.

Take a look at rush hour on the San Bernardino Freeway. On a morning commute in mid-September last year, traffic was moving 25% slower than it had just one month earlier. Caltrans says that's because 12% more cars were on the road in September.

There are other signs that summer is the best time to commute. One day last spring, commuters on the San Bernardino Freeway in Alhambra didn't exceed 20

m.p.h. until 10:30 a.m. But on a July day, the commuter parade had accelerated to 40 m.p.h. or better by 9 a.m. In the transportation-speak of Caltrans, that's free-flow.

Experts say several factors blend to produce the smoother commutes of summer and the mind-boggling jams of September.

For starters, there are the crowds of students that descend on commuter campuses such as Cal State Fullerton, UCLA and Cal State Los Angeles for fall semester. At Cal State Northridge, for instance, only about 4,000 students and faculty drive to campus during the summer session, but that number quadruples to more than 16,000 when the regular school year starts today.

Elementary schools and high schools also have an impact, transportation planners say. School buses and moms toting kids to grade school add to September's traffic mix, as do high school students who roar into the gridlock lacing suburban communities.

While the elements seem to be on the side of the commuter during the summertime, that advantage vanishes as fall approaches. It gets dark earlier and, soon enough, drops of rain will muss the delicate driving sensibilities of Angelenos. With the change from daylight-saving time on the last Sunday in October, the freeways get downright ugly, grizzled commuters say.

"The first day it gets dark (earlier) it's like a kiss of death," said Tim Skrove, who has racked up more than 200,000 miles in seven years commuting 60 miles each way between his home in Riverside and job with the Metropolitan Water District in Los Angeles. "I don't know if it's that people have lost track of driving in the dark or what, but it just causes havoc for commuters for a substantial period of time."

But the most significant factor, experts say, is simply the marked reduction of rank-and-file commuters during the summer, as workers take advantage of sultry weather to pack up the kids and leap into a few weeks of vacation. Even a small drop in the horde of cars parading up on-ramps can transform a freeway into a model of transportation efficiency a Southland motorist would die for.

"I think we are talking about a 10% absence due to vacations for many weeks during the summer," Gilbert of the Auto Club said. "Even a 5% drop in the number of cars can mean a difference between 25 m.p.h. and 55 m.p.h."

Indeed, Southern California's freeways flow with the same symphony of motion as logs down a crowded river. While a roaring tributary can handle lots of logs, a few too many will cause a horrendous bottleneck. So it goes with a freeway. Add just a few too many cars and a highway that was operating efficiently is reduced to a crawling mass of disgruntled motorists.

Ken Bauer, who rides a van pool each morning for the 42-mile trip from his Westlake Village home near Ventura County to downtown Los Angeles, estimates that he saves anywhere from 10 to 20 minutes on each leg of his commute during the summer. Bauer said the congestion actually seems to grow through September, building up "a full head of steam" by month's end.

David Stein, a transportation planner for the Southern California Assn. of Governments, can even measure the differences on his short commute from South Pasadena to Los Angeles. During the school year, he hits a solid wall of traffic on the Pasadena Freeway anywhere from two to six miles from downtown. During summer, the queue of cars is only about a half-mile long, he said.

"It's a very big difference," Stein said. "The problem with traffic is that

congestion begins to increase sharply as you add just a few more cars. You literally get to the point where that one extra car is the straw that breaks the camel's back and causes congestion."

There's more than a touch of irony to the glowing reviews of Southern California freeways in the summer.

Because of the traditional flood of out-of-state visitors, California's highways actually handle more traffic during August than any other month of the year. Fortunately, all those cars are spread more evenly through the day. Tourists tend to steer clear of the freeways during peak commuting hours.

As a result, rush-hour speeds are better, but traffic during other times of the day can actually be heavier as tourists and vacationing locals hit the pavement, transportation experts say.

"The commute hours are slightly better in summer, but that's about it. The rest of the day is packed," said Jill Angel, a California Highway Patrol sergeant who doubles as on-air anchor for KNX-radio's afternoon traffic reports. "It all just depends what area you're talking about. The beach areas and the airport are always bad. The 5 through Anaheim is bad because of Disneyland and 101 through Hollywood because of all the attractions there."

And a seemingly insignificant event like a stalled pickup or a minor fender-bender can cause the speediest summer commute to screech to a halt.

"There's terrible days even in the summertime where you'll have accidents or those freak episodes when everyone just wants to drive slow and there is congestion for no apparent reason," noted Skrove, who shifted his working hours so he can leave at 5:30 a.m. to make his 90-minute commute. "My attitude is that the drive is just part of the day. I've just reconciled myself to an 11- or 12-hour day."

Descriptors: TRAFFIC; COMMUTING; TRANSPORTATION ROUTES; SUMMER; AUTOMOBILES; SOUTHERN CALIFORNIA--TRANSPORTATION; FREEWAYS

Copyright (c) 1990, Times Mirror Company

2 of 2 Complete Record

01716807 40341

Deal Hailed as Key to Regional Rail System

Commuter: New rights-of-way could be foundation for network that would rival  
use in Toronto, Paris.

Los Angeles Times (LT) - SATURDAY October 13, 1990

By: ELAINE WOO; TIMES STAFF WRITER

Edition: Home Edition Page: 1 Pt. A Col. 2

Word Count: 922

Los Angeles County and Southern Pacific Transportation Co. officials on Friday announced agreement on a landmark purchase of 177 miles of valuable rights-of-way that is expected to speed development of a regional commuter rail system.

Local transportation officials said the purchase of such long expanses of existing track removes a major obstacle in the construction of a public transit system that includes the Metro Rail subway currently under construction and the Los Angeles-Long Beach Blue Line, which began running last July.

After months of protracted negotiations, Southern Pacific agreed to sell the rights-of-way and adjacent land parcels for \$450 million, 40% less than its original asking price. The sale is expected to become final within six months.

Station locations have not been determined. But the purchase fills in large gaps in an envisioned rail network establishing links with Ventura, San Bernardino, Orange, Riverside and San Diego counties, as well as with existing light rail systems, such as the Blue Line, which has exceeded ridership expectations since it began operating between Los Angeles and Long Beach in summer.

County planners envision a public rail system that will put Los Angeles in a league with such cities as Paris, Chicago and Toronto, and believe that it will have a long-range impact in reducing traffic congestion and air pollution. Planners anticipate that the 280-mile commuter rail system can be completed in four years.

Neil Peterson, county transportation commission executive director, called the deal "the single most important step we have taken" to fulfill the desires of Los Angeles residents for easier commuting and cleaner air. Moreover, because the agreement covers rail lines in areas that are not yet congested, it provides flexibility for planning, he said.

"We don't want to repeat the mistake we made 30 years ago," when the county sold the rights-of-way to Southern Pacific, said Peterson.

Southern Pacific Vice Chairman Robert Starzel, in a statement released Friday, said that the transportation company could have sold the rights-of-way for twice as much money to other buyers but finally agreed to the sale in part because it was easier than selling off separately the hundreds of parcels of land included in the package.

The county is buying "assets worth more than twice what it is paying for," Starzel said, "but we've agreed to the price because we consider ourselves partners in the progress of Southern California and because we could sell all the lines at this time as a single package."

About \$245 million will be used to pay for railroad corridors, while \$205 million will go toward purchasing potential station sites, maintenance yards and track rights.

Track improvements, rail cars and construction of rail yards will cost an additional \$300 million, said commission spokeswoman Stephanie Rank Brady. Some of those funds will come from state Propositions 108 and 116, which voters approved last June. Proposition 108, a bond measure, provides \$1 billion for rail and commuter transit while Proposition 116 will provide \$1.9 billion for commuter rail systems to government entities throughout the state. Brady said the county hopes the remaining money will be provided by county Proposition C, a half-cent sales tax measure for public transit on the November ballot.

Three rail lines will open within two years--one through the San Gabriel Valley to San Bernardino, another to Simi Valley and Moorpark in Ventura County and a third via Glendale and Burbank to the Santa Clarita Valley, said Peterson.

"People . . . in Santa Clarita who are totally frustrated sitting on two-lane roads to get to Interstate 5 . . . will have some alternative to steaming in their automobile," said Christine Reed, a county transportation commissioner.

Commuter rail trains would travel up to 70 m.p.h. between stations spaced about five miles apart, transportation officials said. One train traveling at full capacity during rush hour could effectively reduce traffic congestion by the amount of passengers commuting on one freeway lane, Peterson said.

Said Jim Sims, president of Commuter Computer: "I think this is a great day for commuters. Had we lost these rights-of-way, we would always have regretted it. . . . What it means for commuters is that in addition to express bus, car pools and van pools and rail transit, they're also going to have one of the most extensive commuter rail systems in the entire country."

Peter Gordon, a professor of urban and regional planning at the University of Southern California, disputed such claims, however. Citing studies he and other mass-transit experts have conducted, he said there is "not a shred of evidence that commuter rail does a bit of good. . . . There (have) been about 25 years of literature saying that these rail systems don't work in modern American cities. (Commuter rail is not) a cost-effective investment."

More effective and less costly solutions lie in better highway system management, he said, such as tollways with different pricing for rush-hour and off-peak times.

Southern Pacific offered to sell the rights-of-way in May, 1989, but negotiations broke down over price last June.

Southern Pacific's Starzel gave Los Angeles Mayor Tom Bradley credit for getting county and Southern Pacific officials back to the negotiating table two weeks ago.

The purchase agreement includes rent-free use of 69 miles of the rail lines running to Moorpark and Saugus. Southern Pacific will continue to use those lines for carrying freight.

County transportation officials are negotiating with the Santa Fe rail company for 59 miles of rails in Los Angeles County and an additional 200 miles in the broader five-county region.

Caption:

Map: Commuter Rail System Plan: The agreement between Los Angeles County and Southern Pacific Transportation Co. on the purchase of 177 miles of rail rights-of-way lays the groundwork for an envisioned commuter rail network that

officials hope will eventually link a number of Southland counties. Los Angeles Times

Descriptors: SOUTHERN CALIFORNIA--TRANSPORTATION; COMMUTING; TRANSPORTATION  
=TES; SOUTHERN PACIFIC TRANSPORTATION CO; TRANSIT SYSTEMS--SOUTHERN  
CALIFORNIA; AIR POLLUTION CONTROL; TRAFFIC MANAGEMENT; LOS ANGELES COUNTY--  
TRANSPORTATION; TRANSIT SYSTEMS--LOS ANGELES COUNTY

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01724978 48574

3rd Train Added Between L.A. and Santa Barbara

Transit: Amtrak and Caltrans hope that the latest run will lead to more commuter rail service throughout the Southland.

Los Angeles Times (LT) - TUESDAY October 30, 1990

By: KENNETH REICH; TIMES STAFF WRITER

Edition: Home Edition Page: 3 Pt. A Col. 2

Word Count: 727

SANTA BARBARA - Bands played, politicians and transportation officials urged people to leave their automobiles behind and scores of travel agents were the honored guests Monday as more frequent train service began between Los Angeles and Santa Barbara.

Caltrans and Amtrak used the occasion of the addition of a third daily train each way to express hope for a series of expansions that will bring intercity and commuter rail service throughout the Southland by 1995.

By that time, if voter-approved bonds are well-spent and localities ante up a share, there could be regular commuter service to San Bernardino, Riverside, Santa Clarita, Moorpark and San Juan Capistrano, and more frequent service to San Diego and Santa Barbara, with perhaps some extensions to Goleta.

"Contrary to popular belief, Caltrans loves trains," said Jack Maloney, chief deputy director of Caltrans, at a series of ceremonies along the Santa Barbara route Monday. "We will work to add trains not only in this corridor but in all transportation corridors that can use them."

As the new service wended its way north, legislators and city council members piled it, saying the trains will reduce traffic congestion and be kinder to the environment than automobiles.

Because Amtrak gives preference to long-distance travelers--and the daily Coast Starlight to Seattle is heavily booked--reservations between Los Angeles and Santa Barbara on the 9:55 a.m. train often have been unavailable. The same has been true of the late-afternoon run.

But space is expected to be ample on the new morning train, which departs Los Angeles at 8:20 and arrives in Santa Barbara at 10:55. The return leaves Santa Barbara at 3:25 p.m. and arrives in Los Angeles at 6.

Another train, begun in 1988, leaves Los Angeles at 8 p.m., arriving in Santa Barbara at 10:30 p.m. The returning train departs Santa Barbara at 7:50 each morning and arrives in Los Angeles at 10:30 a.m. All trains continue to and from San Diego as part of Amtrak's San Diegan service.

Stops between Los Angeles and Santa Barbara are at Glendale, the Burbank airport, Van Nuys, Chatsworth, Simi Valley and Oxnard. A stop also will be made in Ventura, when a new station there is finished. Concrete platforms at many of the existing stops will be improved or converted into regular stations for commuter service, expected to begin in two or three years.

Not all the stations along the route had new schedules posted Monday, and there were fewer than 50 paying passengers in the regular cars to accompany a total of several hundred Caltrans guests in free cars.

But Ron Scolaro, an Amtrak administrator, joined Caltrans officials in predicting relatively quick financial success for the new train, whose start-up costs are being paid by the state. The next probable Amtrak service expansion

is a ninth daily train each way between Los Angeles and San Diego, he said.

He said the new service could have started earlier had it not been for a shortage of cars and locomotives. Some have been borrowed from Amtrak's Eastern line until newly ordered cars and locomotives are delivered here.

At the ceremony in Santa Barbara, City Council and Chamber of Commerce representatives said they now will try to sell a daily excursion to the city. Tourists arriving on the early train will have five hours to enjoy the beaches, restaurants and other attractions here before the last train returns to Los Angeles.

Paying passengers Monday generally expressed enthusiasm about the new Santa Barbara service.

Alexander Amaro of Oceanside said he will be able to commute much faster each Monday from his home to his job in Simi Valley. He returns home on Friday and has been using a bus between Simi Valley and Los Angeles.

Monday, however, Amaro left Oceanside at 5:56 a.m. and arrived in Simi Valley a little past the 9:30 scheduled time. He works just two blocks away from the train platform that local authorities contributed \$100,000 to build a few years ago.

Mark Armstrong, a counselor at UC Santa Barbara, was there to share in the spectacle.

"A train is the great American historical event," he said. "I've been watching the commercials, and I just didn't want to miss this."

Cathryn Bonnette, a Glendale pastor, said the new train will make scheduling her regular Santa Barbara trips much easier. Bonnette, who is blind, was on the train with her guide dog.

Caption:

Photo: Train breaks a ribbon in Glendale.

RICARDO DeARATANHA / Los Angeles Times

Photo: Crowd welcomes the train at Chatsworth, below.

HYUNGWON KANG / Los Angeles Times

Photo: Alexander Amaro of Oceanside said he will be able to commute much faster from his residence to his job in Simi Valley.

TONY BARNARD / Los Angeles Times

Descriptors: SOUTHERN CALIFORNIA--TRANSPORTATION; TRANSPORTATION ROUTES; COMMUTING; LOS ANGELES--TRANSPORTATION; SANTA BARBARA (CA)--TRANSPORTATION; TRAINS; AMTRAK; CALIFORNIA DEPARTMENT OF TRANSPORTATION

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01744113 02309

REGIONAL REPORT

Mass Transit Will Get You There--if You Have Time

Transportation: A cross-section of Southland residents takes buses and trains for ease and by necessity.

Los Angeles Times (LT) - SATURDAY December 8, 1990

By: PAUL FELDMAN; TIMES STAFF WRITER

Edition: Home Edition Page: 1 Pt. A Col. 1

Story Type: Infobox

Word Count: 2,996

Gerald D. Wagner hates driving his '87 Jaguar to work. Too much wear and tear on the vehicle, his psyche and his eyesight. "You're facing the sun in the morning," explains the tweed-jacketed First Interstate Bank vice president. "And you're facing the sun when you come back home."

Instead, Wagner hops the No. 10 Freeway Express, plunking down 80 cents for a 45-minute ride from Santa Monica to Los Angeles.

Ruby Baker also owns a car, a beat-up Nissan that's been in the shop a month while she scrapes together cash for a new transmission. Working the midnight shift at a catering company at LAX, Baker shells out \$4.30 as she climbs on the last bus nightly between San Bernardino and Los Angeles.

Problem is, the No. 110 Inland Empire Connection departs at 6:30 p.m., dropping her off four hours before work begins--and leaving her only six hours after she returns home before she begins her next nightly trudge.

Baker and Wagner are far from typical. For many Southern Californians--whose cars serve as rolling sound systems, grooming salons or telephone booths--the idea of taking a bus or train sounds as inviting as riding a rocket to Russia.

But the pair illustrate the kinds of people found by a Times reporter who spent a week traveling 1,000 miles on more than 40 buses, trains and trolleys in the Southland.

The five-day journey, at a time when the region's commitment to improved public transportation is greatest since the heyday of the Red Cars a half-century ago, showed the riders to be a diverse and resilient lot. It demonstrated that it is possible to reach almost any major destination--provided a passenger has the time, patience and cash.

But it also showed evidence of a two-tiered transit system.

Express buses and Amtrak trains, which generally transport an upper-crust clientele, are clean and comfortable, passengers say, while local buses, particularly on routes frequented by minority groups in central Los Angeles County, tend to be more crowded and less shipshape.

DAY 1: The Sea to the Desert

That old bromide "You can't get there from here," does not necessarily apply to public transit in Southern California.

A passenger can travel from the sea to the desert and back in a single day: more specifically, from fashionable Santa Monica, home of the \$3.50 cup of cappuccino, to rustic Yucaipa, home of the \$3.69 seven-course dinner at Mr. T's Family Restaurant.

The 200-mile, round-trip journey, which requires transfers in downtown Los Angeles and San Bernardino, begins at 8 a.m., in sight of the churning Pacific

Santa Monica Municipal's No. 10 Express is a sea of business suits half-hidden behind newspaper financial sections. No radios boom rock music here; a string quartet is more likely to be found on the "Big Blue Bus" as it rolls down the Santa Monica Freeway.

"I don't like to drive too much--I get too anxious," says Diane Allred, a Varig Airlines ticketing clerk. Allred, who is poring through a paperback collection of Plato, has taken the bus for two months since quitting a car pool.

Across the aisle, architect Kenny Turner stares at the bumper-to-bumper commuters. "I guess it's the individualism of Los Angeles," he muses. "A lot of people like to be alone."

Turner appreciates the 80-cent fare but wishes the express operated after 7 p.m. He can't stand the slow, gritty RTD local, he says, and when he works late, "I usually call my wife, who has to come from Santa Monica and pick me up."

From the Freeway Express stop at 1st Street and Broadway, Union Station is a short jaunt by DASH, the city's 25-cent downtown mini-bus service.

At noon, The Desert Wind pulls out of the train station, ultimately bound for Chicago. Most passengers are on for the long haul, but not Glen Ratcliff, an administrator for a security firm specializing in rock concerts.

-Today, he is headed for San Bernardino to submit a bid to provide security for the National Orange Show. He doesn't need the headache of driving, he says, although he's not looking forward to the trip back home either.

"I'm taking the bus back because there's no return train. You know, it was awful hard to learn about the bus service. They keep you on hold forever--with classical music. They're trying to improve the RTD image, I guess."

As the Amtrak churns past tract homes, tumbleweed and lots cluttered with car carcasses, travelers in the full-service dining car lunch on hot turkey sandwiches. Ratcliff snoozes in his \$15 one-way coach seat.

Once in San Bernardino, a traveler is faced with one of the all-too-frequent problems with Southern California's mass transit system--a dearth of adequate links between major service lines. Although the Amtrak station is several miles from downtown, only intermittent bus service is available.

Once one reaches downtown, though, Yucaipa is a clear shot on the Omnitrans No. 14, which offers a 63-mile tour of the Inland Empire for 60 cents. Some senior citizens ride the entire length from Montclair to Yucaipa for recreation.

Rolling past orange groves, the bus arrives in Yucaipa in 90 minutes, just long enough for a traveler to stop for coffee before heading back to San Bernardino to catch the day's final Inland Empire Express bus to Los Angeles

The finale--RTD Line 4--snakes down Santa Monica Boulevard. The commute costs 30 cents more than Santa Monica's Freeway Express and takes twice as long.

On board are a short-order cook, a Creative Artists Agency security guard, a

pair of homeless men and a plastics factory laborer.

The ambience aboard Line 4 shifts between high tension and low comedy.

"I have no money, they robbed me, they always rob me," shouts a homeless transvestite climbing aboard at Wilcox Avenue and exiting three blocks later. "Yup, this is my stop. That's my bed out there--that bus bench. Merry Christmas to you."

At 9:45 p.m., the ocean is finally back in sight.

## DAY 2: The Mission to Santa Barbara

Public transit between Los Angeles and Orange, Riverside and San Bernardino counties is extensive and well-publicized.

But crossing into Ventura County--where voters recently turned down a ballot measure to fund regionwide rail transit--is like traversing an international frontier.

Only four public buses provide service between Los Angeles and Ventura counties each day. What's more, there is no municipal bus link between Ventura and Santa Barbara counties.

To reach Oxnard from downtown Los Angeles, a traveler climbs aboard RTD local 424, which rumbles down the long retail corridor of Ventura Boulevard in the San Fernando Valley on its way toward Westlake Village.

During rush hour, the No. 424 bus is standing-room only, its riders primarily high school students and Latino domestic workers who commute daily to pricey Valley neighborhoods. The \$1.10 journey takes two hours--about 30 minutes longer than the early morning commuter express buses the RTD operates for inbound Valley residents only.

"Sometimes we spend more time on the bus than we work," muses Jona, a nine-year domestic worker. "But it's hard to find jobs nearer to home."

From Westlake Village, the Ventura County Interconnect bus departs from Westlake Boulevard just north of Agoura Road.

At the bus stop, a small blue sign features a drawing of a bus, but is otherwise generic. The sign does not state what bus stops there, who owns it or where it is going. The destination sign on the bus itself is similarly confusing. It reads "Antelope" rather than "Oxnard."

Only two people board the plush Interconnect, which descends down the picturesque Conejo Grade toward Oxnard.

To continue north to Santa Barbara, the only choice is Amtrak. However, the connection, the 9:55 a.m. South Coast Area Transit bus--a clean, comfortable Grumman--leaves Oxnard's Esplanade Shopping Center 10 minutes too late to link up with the 10 a.m. Amtrak commuter train.

Fortunately, the next train, a reservations-only "Coast Starlight," with rvice to Seattle through Santa Barbara, has an available seat.

Australian backpackers Julie Heriot and Hamish George are aboard, on their way to San Francisco after a hectic two-week stay in Los Angeles.

"Public transit in Los Angeles is crazy, really," George says. "We looked into it and it didn't seem convenient. I presume that's why there's so many traffic jams on the freeway. We got caught once in the parking lot from Los Angeles to San Diego."

In Santa Barbara, the MTD bus service is the choice of college students, senior citizens and otherwise mobile residents whose cars are laid up in the repair shop. From the waterfront, one can make it to the historic Mission Santa Barbara in two short bus rides--some seven hours after leaving Los Angeles.

### DAY 3: The Cross-Town Survivors

John Mills, 66, stands on a street corner in Skid Row, discussing the safety of RTD buses.

"On the east-west lines there's not a lot of fights," asserts the retired City Hall maintenance supervisor, "And on. . . ."

Just then, a half-filled Budweiser can whizzes past Mills' head and crash-lands on the pavement. A scraggly bearded street person, who flung the beer for no apparent reason, resumes his conversation with another lost soul. Mills, awaiting the Wilshire Boulevard local after delivering groceries to an old friend in an SRO hotel, concludes his thoughts.

"On the north-south lines," he says, "You have your problems. . . ."

In some Los Angeles neighborhoods, waiting at the corner for a bus can be a profile in courage. Climbing aboard, passengers add, is but the first step in a test of endurance.

"There's too many people riding the bus, it's too crowded," declares Wanda Arrowhead, 80, after struggling for a seat on a late-morning Wilshire local. "They bring baby buggies on board, everything but the kitchen sink. And they stuff them in here like sardines."

Others say that inner-city residents, many of whom are without their own wheels, seem more apt to be crammed onto aging, overcrowded buses than are suburbanites, whom transit officials hope to lure back to the mass transit system. Frequently, the windows of these buses have been scoured over so often to remove graffiti that it is no longer possible to see out of them.

"The buses on the Westside tend to be much cleaner," says college student Emily Jeter, taking a break from a chapter in her Sociology textbook titled "Hidden Injuries of Class." "But (overall) RTD is pretty decent."

Passengers on the city's busiest central city routes say that service has improved in the last few years. "The buses used to be pretty bad, but now they're pretty much on time," says Marva Martin, 51, a fund-raiser for the Watts-Willowbrook Boys and Girls Club. "But they do need to have security on the buses in the afternoon and at night."

As the typical RTD bus rumbles through central city neighborhoods, the elderly tend to congregate close to the driver. Teen-agers move to the back.

Because each bus route passes through a succession of neighborhoods, each claimed as the turf of a different street gang, bus transit can be a hair-raising experience shortly after public schools let out.

"Safe? It depends on the neighborhood," says college student Tracey Railey,

19. "Sometimes gang members are waiting at the bus stop to see who is on the bus or if a person gets off with the wrong colors. Then they might start nassling them, you know?"

Some riders say the safest mode of inner-city transportation is the new Blue Line, guarded by armed sheriff's deputies.

"Most people who ride the Blue Line feel relaxed," said Damon Brown, 27, of Southeast Los Angeles. "It's quiet and clean. There's no violence. On buses you can see shootings. (On the light-rail cars), the deputies make a difference."

#### DAY 4: Tourists' Special

What do Mickey Mouse ears, a ceramic Bart Simpson and an autographed copy of Richard Nixon's "Six Crises" have in common?

A traveler bent on a break-neck public transit tour of Southern California can pick up all three souvenirs in one day, riding trolleys, trains and buses to Disneyland, Tijuana and the Richard Nixon Library and Birthplace.

The journey begins at 6:20 a.m. on the Amtrak San Diegan at Union Station, which carries commuters to Orange County and San Diego.

"How you doin,' teach?" smiles conductor Wayne Norwood as he checks tickets on a no-smoking car near the snack bar.

Norwood is speaking to Marlys Marsteller of La Crescenta, an elementary school music instructor for the San Juan Capistrano school system.

Each morning, Marsteller commutes two hours to work--driving her car to Union Station, boarding the train and then hopping into her second car at the Orange County train stop.

"I really like living in the mountains . . . so it's worth it," said the 19-year teacher, who pays more than \$400 in monthly fares and parking to ride on this moving kaffeeklatsch. "There's a whole group of us on the train that have become friends. There's a jewelry designer, an interior decorator and a management consultant. . . . We ride together every day."

The No. 570 zips past surfers, the San Onofre nuclear power plant and the racetrack in Del Mar, arriving in San Diego just after 9 a.m. From there, it's a one-block walk to the San Diego Trolley.

The highly successful light-rail system, in operation since 1981, carries a diverse mix of local residents and tourists on its \$1.50-fare, 17-stop journey to the Mexican border.

A quick walk across the border provides a traveler with a large array of ceramic shopping possibilities--Bart on a skateboard, Bart on a surfboard, Bart on a football field. After making one's selections, the traveler simply strolls back through U.S. Customs to the trolley--ignoring the crush of cars waiting impatiently to cross from Mexico.

The return trip to Fullerton takes a little more than two hours, pulling into e Fullerton Transportation Center at 2 p.m. From there, one can catch the Orange County Transit District's No. 26 bus, which stops right in front of the Nixon museum.

Don Sedor, a driver education teacher at Esperanza High School in Anaheim, is

on the No. 26 headed back to Fullerton.

"It's convenient for me and I feel I'm saving the environment some," Sedor says. "But once in a while I drive to school so I won't lose credibility among the students."

#### DAY 5: Orange County and the SuperBus

The dearth of nighttime bus service is a common refrain among mass transit riders in Orange, San Bernardino, Ventura and Santa Barbara counties.

"Not everyone gets off work right at 5 p.m." says Carolyn Neu of Anaheim. "Sometimes you end up calling anyone you know to get home."

Neu, an office worker waiting for the No. 51 bus outside Disneyland, believes that more frequent service would also help commuters who face waits for connections. "Now, you really have to plan out your schedule. I have to get to work 30 minutes early to get in on time."

But in other ways, bus service in Orange County, appears to be user-friendly. Signs on buses include translations in Vietnamese as well as Spanish. And transit maps note that surfboards six feet and under are allowed on board.

Orange County Transit is also the operator of what is arguably the most futuristic, and impersonal, bus service in the region: the SuperBus, which leaves the Fullerton Park 'N Ride seven times daily for downtown Los Angeles.

Introduced in 1987, the experimental contraption is a truck-and-trailer rig which the driver, alone in a cab, keeps track of passengers via intercom and closed-circuit television.

"I laughed the first time I saw it," says Janelle Dauphin, a para-legal from Placentia. "It looked like a cattle car or a moving van."

Dauphin, 22, has since become a believer.

"Even if it looks like a cattle car, I don't feel uncomfortable in it. I mean, I don't feel like a cow."

The No. 721 provides a kaleidoscope view of the world out its oversized windows--passing from middle-class Orange County to the Skid Row world of cardboard condos and tattoo parlors in downtown Los Angeles.

The final truth deals with timing. Scheduled to arrive at 5th Street and Grand Avenue in 45 minutes, the 5:29 p.m. SuperBus arrives several minutes late.

No matter how up-to-date, it seems, a bus can't go any faster than the rest of the traffic on Southern California roadways.

#### BACKGROUND

Southland public transit riders, accustomed to standard bus service since the decline of the Red Car trolley system in the 1950s, now have several new options. Among them: Blue Line light-rail between Los Angeles and Long Beach; the San Diego Trolley; truck-and-trailer-style SuperBuses between Fullerton to Los Angeles, and daily commuter trains linking Santa Barbara, San Diego and Orange County with Los Angeles. In addition, the Metro Rail subway system is

under construction. Regional transit planners, buoyed by last month's voter approval of a half-cent transit sales tax in Los Angeles and Orange counties, are proceeding with the purchase of Southern Pacific rights-of-way to operate a 280-mile rail network linking Los Angeles, San Bernardino and the San Fernando Valley.

### Public Transit Traveler: A Day in the Life

How fare can a Southern California tourist go in one day by public transit? A Times reporter starting in downtown Los Angeles learned that with ample planning and punctual service, one can make it to Tijuana, Disneyland and the Richard Nixon Library. The 12-hour journey, on trains, buses and trolleys, cost \$34.80 in fares.

1. Tijuana: From the San Diego Trolley stop in San Ysidro, a short stroll across the border affords a shopper a wide choice of Bart Simpson busts.

2. Richard Nixon Library: The Orange County No. 26 bus stops in front of the Nixon Library, where autographed copies of the ex-president's literary works are on sale.

3. Disneyland: Mickey Mouse ears are available just down the block from the Disneyland Monorail station.

#### Caption:

Photo: Book of Richard Nixon

Photo: A woman with a small child begins her day at a bus stop as buses line up at 8th Street and Western Avenue. Rush hour will bring crowds.

Photo: Many elderly people, like this woman who doesn't talk to strangers, take the 90-minute, 60-cent ride from San Bernardino to Yucaipa.

MINDY SCHAUER / For The Times

Map: Public Transit Traveler: A Day in the Life. Los Angeles Times

Descriptors: SOUTHERN CALIFORNIA--TRANSPORTATION; COMMUTING; TRANSPORTATION ROUTES; TRANSIT SYSTEMS--SOUTHERN CALIFORNIA; BUSES; TRAINS

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01729807 53437

Slow Going

Thousands of Drivers Stranded on Both Sides of Fire

Los Angeles Times (LT) - THURSDAY November 8, 1990

By: SONNI EFRON; TIMES STAFF WRITER

Edition: Orange County Edition Section: Metro Page: 1 Pt. B Col. 2

Word Count: 816

SAN ONOFRE - A tower of smoke rose hundreds of feet above the blackened hills near Camp Pendleton on Wednesday, blotting the sun into a tiny orange dot, reducing freeway visibility to almost zero, and sprinkling deserted Interstate 5 with an eerie layer of white soot.

"It looks like a volcano," California Highway Patrol Officer Paul Golonski said as he drove the smoldering moonscape between San Clemente and Oceanside on Wednesday afternoon, trying to decide whether it would be safe to let motorists through. "A wind shift and we're going to be out of business again," Golonski said.

Thousands of commuters stranded on both sides of the 7,000-acre brush fire were having a similar nightmare.

"I've been stuck for almost three hours," said Evelyn Hernandez, 25, who left her San Clemente home for a six-mile trip to San Juan Capistrano--and had been hoping to get home by dark.

Hernandez spent an hour and a half traveling two miles south on Interstate 5 from Ortega Highway to San Juan Creek Road. Then her car overheated, and she joined about a dozen other motorists going nowhere on the shoulder of the freeway.

Together, they eyed a six-mile stretch of taillights and waited for repair trucks they knew weren't likely to be able to reach them through the traffic jam.

"I was supposed to pick up my little boy at school at 11:30," Hernandez moaned. She finally reached her husband through a highway call box.

"It's worse than being in Tijuana trying to cross the border," she said.

In addition to miles of cars parked on Interstate 5, backed-up traffic spilled over onto surface streets, creating a massive traffic jam from San Juan Capistrano to San Clemente.

"I couldn't even get out of my driveway" onto bumper-to-bumper Avenida del Presidente in San Clemente, complained Kelly Morris, a 25-year-old Saddleback College student.

A section of Coast Highway near the intersection of Interstate 5 was also closed for several hours Wednesday morning, resulting in delays of half an hour or more for trips between San Juan Capistrano and Dana Point.

The San Juan Capistrano CHP office was flooded with more than 1,500 calls. Three officers manning the phones advised frustrated motorists to avoid the area altogether. Those desperate to get to San Diego were told to take the Riverside Freeway to Interstate 15, but even that trip was taking up to three hours, said CHP Sgt. Bill Elliott.

Among the freeway-fatigued refugees were an exhausted couple from Macon, Ga.

Hugh and Gene Hanson had braved a snowstorm in the Grand Canyon and a dust storm outside of Las Vegas, only to find themselves in a Southern California firestorm.

"We turned off Interstate 15 to come by the beach, and danged if we didn't get caught in this mess," Hugh Hanson said. "It's been an adventure, all right."

At the Amtrak station in San Juan Capistrano, several people coming from Los Angeles found themselves stranded until a train for San Diego was finally permitted to depart shortly after noon.

"I'm just trying to get home," said Pat Nickols of Rancho Santa Fe, who had been visiting friends in Fullerton.

Greyhound buses from San Diego to Los Angeles were also delayed.

"Please, please, let this day end," said Bob Wagnon, terminal operations manager in San Diego.

At 2 p.m., the CHP began escorting groups of about 300 motorists through the 20-mile stretch of I-5 from San Clemente to Oceanside. Officers kept motorists from going faster than 35 m.p.h., fearful that sudden gusts of wind would once again obliterate the highway or that gawking motorists who slammed on their brakes could cause a chain collision.

Bright lines of fire still marched up hilltops, and giant clouds of black, white, gray and amber smoke poured out of canyons.

As the smoke began to clear, a few brave bicyclists pedaled south along the shore to the San Onofre nuclear power plant.

Many motorists abandoned the highways altogether, heading for the beach or the soothing shelter of a restaurant.

"I came here to have some coffee and regain my sanity," said Tracy Rumford, who left his home in Los Angeles at 7 a.m., pulled off the freeway in despair nearly three hours later, and fled to a San Juan Capistrano coffee shop to nurse his frayed nerves.

"I told myself I would stick it out for a half hour," Rumford said. "I think I went three-fourths of a mile."

Times staff writer John M. Glionna and correspondents Wendy Paulson and Len Hall contributed to this report.

#### Brush Fire Stalls Motorists

Interstate 5 southbound was closed at Camino Las Ramblas, causing a 6-mile backup.

Fire reported to have started in the northwest section of the camp, half a mile east of I-5.

Nuclear plant alert was triggered.

A 20-mile stretch of freeway from southern San Clemente to Oceanside was closed for 12 hours.

Passenger train service was intermittently halted until midday.

Caption:

Map: Brush Fire Stalls Motorists, THOMAS PENIX / Los Angeles Times

Photo: Southbound Interstate 5 backs up as the California Highway Patrol  
diverts traffic through Camp Pendleton.

DON BARTLETTI / Los Angeles Times

Photo: A huge plume of smoke spreads west over Interstate 5 from the brush  
fire in and around Camp Pendleton.

Photo: COLOR, (A1) When I-5 and Amtrak closed, commuters jammed Coast Highway  
in Capistrano Beach.

DON KELSEN / Los Angeles Times

Descriptors: CAMP PENDLETON; BRUSH FIRES--SAN DIEGO COUNTY; ROAD CLOSURES;  
INTERSTATE 5 (FREEWAY); SAN ONOFRE NUCLEAR POWER PLANT; COMMUTING

Copyright (c) 1990, Times Mirror Company

3 of 6 Complete Record

01745636 03843

OCTC Approves \$85-Million Rail Expansion Plan

Los Angeles Times (LT) - TUESDAY December 11, 1990

By: JEFFREY A. PERLMAN; TIMES URBAN AFFAIRS WRITER

Edition: Orange County Edition Page: 1 Pt. A Col. 3

Story Type: Infobox

Word Count: 1,116

SANTA ANA - Commuter trains may soon be pulling out of the station every 25 to 30 minutes during morning and evening rush hours under an ambitious, \$85-million plan approved Monday by transportation planners.

The Orange County Transportation Commission voted 6 to 0 to add eight commuter rail round trips between Oceanside and Los Angeles to the one currently offered, and to open four new stations in the county. Amtrak also operates eight round trips between Los Angeles and San Diego, with a ninth to be added next year. The commission's action Monday brings to 18 the number of round trips that will be running through Orange County by 1993.

The county's commuter rail service is one piece of what is expected to be a regional network. When completed, the network will allow passengers to ride for hundreds of miles over Southern California, using transfers to travel between places such as Riverside and Irvine, San Bernardino and Pasadena, Fullerton and Long Beach.

"I'm ecstatic," Commission Chairman Dana W. Reed said after the vote Monday. "This is absolute proof that we're going to do it."

To get the program going, the commission will invest \$13.2 million in six new locomotives, \$31.2 million in 24 rail coaches, \$27.6 million in double-tracking the rail line between Fullerton and Mission Viejo, and \$5 million in new stations. The money is expected to come from state rail bond measures and from Measure M, the half-cent county sales tax that takes effect April 1.

The panel voted Monday to borrow \$100 million against future revenue from Measure M to expedite the commuter rail program and four other traffic improvement projects. Those projects are car-pool lanes on the Orange Freeway; design work for remodeling the El Toro "Y"; improvements to Beach Boulevard, and purchase of right of way for future rail transit.

Under the OCTC rail plan, first unveiled in September, train service would be most frequent for northbound trains in the morning and southbound trains in the evening. For example, morning trains bound for Los Angeles would stop in Santa Ana at 6:03, 6:28, 6:48, 7:02, 7:38, 8:02 and 10:48. During the evening rush hour, southbound trains would leave Los Angeles' Union Station at 5:20, 5:45, 6:20, 6:45 and 8:30.

New stations are envisioned for Buena Park, Orange, northern Irvine or Tustin and either Mission Viejo or Laguna Niguel. Amtrak trains will not stop at these stations.

Before the vote Monday, OCTC Executive Director Stanley T. Oftelie was asked to reassure the panel that funds would be found to run the trains, because fares will not cover the operating costs.

Oftelie said he is formulating a plan to use interest earned on existing transportation funds to set up a rail service endowment. Although that may take money away from some street improvement projects, Reed said it would be a "good trade-off."

"Emphasis in Southern California on mass transit is going up, not down," Re said.

If Oftelie is successful in creating a rail service endowment fund, Orange County would leap ahead of other counties in the heated competition for state rail bond money because only counties that have identified sources of operating funds can even apply for the bond proceeds.

Officials cautioned, however, that the planned spending spree for rail improvements will raise ridership only gradually and will not solve traffic problems overnight.

An OCTC staff report estimates that total daily rail ridership could total 10,300 boardings per day by 1995, of which between 3,800 and 5,700 would be generated by the OCTC's planned expansion of commuter service and most of the rest by Amtrak.

OCTC officials acknowledged, however, that the ridership projections could be too optimistic. They said they are hoping for a 40% recovery of costs from fare box revenues but that this may not be possible until there is a regional network of commuter trains linking neighboring counties.

OCTC is in the train business in part because Amtrak is forbidden by Congress to offer intracounty service with frequent stops. However, Amtrak is permitted to operate the commuter service for the county.

The decision to borrow against future Measure M proceeds came after weeks of intense lobbying by bond underwriters seeking OCTC's business. One OCTC official said the commission had never been visited by "so many \$1,000 suits."

In the end, Kidder Peabody & Co. was named the senior managing underwriter, with Lehman Brothers and Goldman Sachs providing backup. Eleven firms bid on the contract

Kidder Peabody donated \$5,000 to the Measure M campaign. Both the firm and OCTC officials said the contribution played no role in the selection process. Goldman Sachs also donated \$5,000 to the campaign.

In 1988, according to James Martling, a senior vice president at Kidder Peabody in San Francisco, Kidder Peabody underwrote a \$50-million bond issue for Alameda County after voters there approved a sales tax for transportation projects. The firm handled a \$200-million offering for Santa Clara County under similar circumstances in 1986, he said.

## COMMUTER RAIL PLAN

The Orange County Transportation Commission approved a plan to greatly expand commuter rail service between Los Angeles and Oceanside. In addition to adding eight round trips to the schedule, the plan calls for building four new stations in Orange County and two in Los Angeles County. The new Orange County stations would be in Buena Park, Orange, Tustin or north Irvine, and Mission Viejo or Laguna Niguel. Los Angeles County would pay for new stations in Commerce and Norwalk.

### New Stations

1. Commerce

\* Along existing tracks at East 26th Street.

2. Norwalk

City maintenance yard intersection of existing tracks and Imperial Highway.

3. Buena Park

Two sites are under review:

\* North of Dale Street between Artesia and Malvern avenues, east of existing tracks.

\* South of Beach Boulevard between existing tracks and Cascade Way.

4. Orange

\* Existing but unused former Atchison Topeka & Santa Fe railway depot on Chapman Avenue between Batavia and Glassell streets.

5. Tustin/North Irvine

Four sites are under review:

\* North of Jamboree Road and east of Edinger Avenue, across from the Tustin Marine Corps Helicopter Station.

\* South of Jamboree Road and east of Irvine Center Drive, north of Harvard Avenue and west of existing tracks.

\* East of existing tracks between Harvard and Jamboree.

\* Southwest corner where Harvard crosses existing tracks.

6. Mission Viejo/Laguna Niguel

Four sites are under review:

\* South of Crown Valley Parkway and Cabot Road, west of Interstate 5.

\* North of Crown Valley Parkway near intersection of Falls and Cabot roads, west of Interstate 5.

\* La Paz Road across from Mission Viejo High School.

\* South of Alicia Parkway and east of existing railroad track, behind Gateway Shopping Center.

Source: Orange County Transportation Commission

Caption:

Map: COMMUTER RAIL PLAN, Los Angeles Times

Chart: COMMUTER RAIL PLAN, Los Angeles Times

Descriptors: ORANGE COUNTY TRANSPORTATION COMMISSION; ORANGE COUNTY--  
TRANSPORTATION; COMMUTING; RAILROADS--SOUTHERN CALIFORNIA; RAILROAD STATIONS;  
TRANSIT SYSTEMS--ORANGE COUNTY

1 of 1 Complete Record

01748021 06241

Expert Sees Less Car Use, More Mass Transit

Los Angeles Times (LT) - SUNDAY December 16, 1990

By: RONALD B. TAYLOR; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 2

Story Type: Interview; Series

Word Count: 1,455

Memo:

Series: AGENDA LOS ANGELES: The Search for Solutions. First in a series on interviews with front-line experts on L.A.'s toughest problems.

Few subjects are more talked about or boost drivers' blood pressure any higher than gridlock on Los Angeles freeways and streets.

"Congestion is the No. 1 transportation problem in Los Angeles County," says Jim Sims, 47, an urban planner and president of Commuter Transportation Services.

For more than 25 years, Sims has worked as a transportation specialist for several Southland cities, the Southern California Assn. of Governments and the Los Angeles County Transportation Commission.

CTS is an \$8-million-a-year, nonprofit company set up 16 years ago by local governments to help alleviate congestion problems. The first commuter computer service in the country has helped match more than 42,000 drivers with dozens of employer-sponsored car pools and van pools.

The commuter service also conducts transportation research. Its annual "State of the Commute" report for 1990 revealed that during the last year the average one-way commute of 35 to 40 minutes had gone up again--this time by 10 or 15 minutes.

With about 5 million drivers clogging freeways and streets, Sims said, rush hour now virtually lasts from dawn until after dark.

"Surveys show us that two-thirds of the people believe congestion is worse now than it was a year ago," he said.

As a result, motorists' attitudes are changing.

"People are telling us they are mad as hell and aren't going to take it anymore," Sims said, paraphrasing the line from a popular movie.

In a wide-ranging interview, Sims was asked about transportation problems and how they might be solved.

Q: Los Angeles has long been the leader in building more freeways to give Southern Californians the freedom to drive where and when they please. Now, it seems the system is breaking down. What went wrong?

A: You have to realize Los Angeles is no longer a big suburb. . . . Los Angeles is a very densely populated, world-class city with world-class transportation problems.

The idea that you can jump in a car anytime and go anywhere you like without encountering congestion is out of date. Those days are gone forever.

There are just too many more people and more cars on what is basically a

mature (completed) freeway system . . . (and) we are not likely to build any more freeways. . . . The Century Freeway (to be completed in 1994) is probably the last that will be constructed in Los Angeles.

== In the future, we will have to solve our transportation problems by making better use of what we have . . . (and by) developing other forms of transit.

Q: How can we make better use of what we have?

A: First, we must put more people in fewer vehicles by ride-sharing, using buses and trains. Second, we should stretch out the work hours . . . (give people) variable work hours. Third, we have to reduce the number of trips taken by using four-day workweeks, tele-commuting, things like that.

Q: That will require changes in the way motorists think and behave, won't it?

A: Certainly. And changing behavior may well prove more difficult than going out and building additional freeways.

Q: Why may changing behavior be more difficult?

A: We can always build a freeway. We know how to do that. But we only know a little bit about changing deeply entrenched behavior patterns. It's going to be hard to make the needed behavior changes.

Q: What kind of changes are you talking about?

A: Helping individual drivers figure out that there are better ways of getting to work than driving alone every day . . . (then) helping them find ways to ride-share or find alternatives like using rail or bus transit.

Q: Are you also talking about changing the behavior of companies?

A: Definitely. Private companies have had it their own way, they open the doors in the morning and it's up to the employees to be there on time. That has to change. . . . (Companies must) assist their employees in easing the commute if they want to be competitive.

Q: What do you mean "be competitive?"

A: Skilled workers have choices. They can choose to live and work elsewhere if the commute remains such a hassle in Los Angeles County.

Q: Are workers going elsewhere now?

A: Yes. Between 1986 and 1989 (Los Angeles) lost about 38,000 workers . . . (and) there is evidence that some of this exodus is a direct result of congestion, poor air quality and their impact on lifestyles.

Q: What can companies do to change?

A: Employers can set up ride-sharing, encourage the use of (buses and trains) by subsidizing fares. . . . They can let people work at home a day or two a week, change work hours and schedules, guarantee rides home anytime, that sort of thing.

Q: Changing the subject, Los Angeles has embarked on an ambitious plan to build a 300-mile rail transit network at a cost of \$7.5 billion. Some critics say rail is too expensive and want the money used for other transit forms. What do you think?

A: Rail transit works extremely well when you have corridors with high population densities. True, it is expensive, but in certain corridors there are no other options.

For instance, how do you push more people up and down Wilshire (Boulevard)? You can't do it in buses and you can't do it in cars.

But rail isn't the only answer. It should be a part of a larger solution that includes increased bus services and things like ride-sharing and improved signalization in traffic control systems.

Q: What part of the daily commute can rail handle?

A: Probably never more than 5% to 10% of the total commute, but that will be a very important 5% or 10% because the trains . . . will operate primarily into and out of downtown (Los Angeles), with its high density.

Q: Downtown Los Angeles continues its high-rise growth, while the freeways leading into downtown and the surface streets are approaching gridlock. Is the growth downtown overwhelming the existing and planned transit systems?

A: I don't think so. The rail systems and the new Harbor (bus) Transitway (now under construction) will add needed capacity to serve downtown. However, I think the days of the average worker driving downtown are numbered. (In the future), people . . . will either have to car-pool or ride the trains. And we must develop a decent circulation system downtown so people don't have to have their cars to get around.

Q: We hear talk of so-called "smart corridors" with high-tech solutions to speed up auto traffic on freeways and surface streets. How does this fit the transit equation?

A: What these (high-tech routes) will do is add up to 15% more capacity to the system . . . and that's a good idea, but it doesn't solve the larger problem and that is the fact there are too few people riding in too many cars.

Q: Continued growth raises the specter of more congestion. If we develop commuter trains to Riverside and Saugus, aren't we just inviting more growth which means more congestion?

A: As long as we have (population) growth and as long as we have a strong economy, we are going to have congestion. The question becomes: What level of congestion is tolerable? And the indications are that we are about to reach intolerable levels.

Q: Does this mean we need to set growth limits?

A: First off, you are not going to control growth. The forces that generate growth are bigger than either local government or state government. . . . We are not going to control people moving into Los Angeles . . . (so) what we do then is try to balance the growth with increased efficiency (moving people).

Q: How do you balance growth with efficiency?

A: You do it two ways: one traditional, one a bit unusual. First, you require developers to add new streets, widen old ones, which is done now. But we must also require developers to contribute to long-term transit subsidies that promote ride-sharing for the people living or working in these developments.

Q: What do you mean by long-term subsidies?

A: We would ask the developer to set up a fund to help provide subsidies for those commuters who ride-share. The money would pay for vans, help them buy discounted bus passes, that sort of thing.

Q: Do you have any final thoughts?

A: Yes. In the past, we've thought about work as a place; in the future, we are going to think about work as an activity that can be performed at various places . . . at different hours and days of the weeks. There are all sorts of options.

Caption:

Photo: Urban planner Jim Sims talks on the telephone in his Wilshire Boulevard office.

ROSEMARY KAUL / Los Angeles Times

Photo: Rush-hour traffic in Los Angeles usually lasts from dawn to dusk.  
Associated Press

Descriptors: SIMS, JIM; COMMUTER TRANSPORTATION SERVICES (COMPANY); LOS ANGELES--TRANSPORTATION; TRANSIT SYSTEMS--LOS ANGELES; TRAFFIC--LOS ANGELES; TRAFFIC MANAGEMENT; COMMUTING; EXPERTS

Copyright (c) 1990, Times Mirror Company

4 of 4 Complete Record

01703834 27276

REGIONAL REPORT

Congestion Fails to Drive Motorists to Car Pooling

Transportation: Interest in ride sharing is actually less today. Incentives need to be stronger, experts say.

Los Angeles Times (LT) - MONDAY September 17, 1990

By: ERIC BAILEY; TIMES STAFF WRITER

Edition: Home Edition Page: 1 Pt. A Col. 5

Word Count: 1,996

For years, the gospel according to car-pool prophets went something like this: Once the gridlock on Southern California's web of freeways got nasty enough, motorists would surely abandon the single-occupant automobile and team up with fellow commuters for the ride to work.

Well, things are pretty miserable out there these days, but most motorists are still clinging to that long-cherished Southland credo: One person, one car.

For proof, look no further than the other cars sardined on the freeway during rush hour. From Audis to Nissan Zs, they are, by and large, occupied by a solo motorist.

During 1989, nearly 4 out of 5 people in Southern California commuted alone, and only about 14% car-pooled, experts said. The average number of occupants in cars has actually dropped during the last decade, falling on Los Angeles freeways from 1.22 people per vehicle in 1980 to 1.19 so far this year. A recent survey showed that the percentage of people interested in car pooling plummeted from 62% in 1988 to 41% last year.

Reversing those trends could prove a tall order. Transportation experts say the reasons for ridesharing's lackluster performance are about as varied as the daily mix of cars on the Santa Ana Freeway.

"We don't have more car pooling in large part because people don't clearly perceive any advantages," said Peter Valk, president of Transportation Management Services, a Pasadena-based consulting firm. "I call it WIFM--what's in it for me. WIFM is what motivates all of us in our daily lives. There's economics, personal logistics, all sorts of factors. The WIFMs have to be strong enough to compel someone to change the routine."

So far, the routine for most motorists has not varied much, and that bodes ill for the region. If public transportation and ride sharing do not catch on, experts warn that in the next 20 years there could be a fivefold increase in congested freeway miles. Average speeds on roads and highways would drop to less than 20 m.p.h. from about 35 m.p.h. now.

"We need to almost double the number of people ride sharing to absorb the growth we face and maintain the level of mobility we have now," said Bob Huddy, associate transportation planner for Southern California Assn. of Governments.

The disappointing percentage of car poolers varies little from county to county. In Orange County, about 12% of the motorists car-pooled at least once a week in 1988, about the same percentage as residents of other Southland counties. The average occupancy of cars in Orange County is estimated at 1.1 people per vehicle, only fractionally lower than Los Angeles and San Diego counties.

Perhaps the greatest variations can be seen from freeway to freeway. Although they are two of the busiest highways in the world, the Santa Monica Freeway and

general-use lanes jam up, he said.

With a normal car-pool lane separated by a narrow yellow line, motorists have a natural tendency to hit the brakes when they see traffic slow in the other lanes. But with wide expanse of asphalt separating them from the heavy traffic, motorists in the Irvine car-pool lanes seem to have less reluctance to ease up on the gas pedal when traffic slows in the other lanes, El-Harake said.

Moreover, preliminary results show that the wide buffer acts as more of a deterrent to motorists who might otherwise skip across the double-yellow lines to sneak into the car-pool lane. As deciphered from the videotapes, the violation rate on any given day ranged from less than 1% to 1.5%, well below the current average of 4% on the Costa Mesa Freeway car-pool lanes, which feature a four-foot buffer along most of their length.

"I think this bigger buffer represents a real mental barrier for most people," El-Harake said. "They just don't want to risk crossing something that wide. They're almost behaving as if they have a physical barrier there."

An offshoot of the improvements, he said, may be reflected by the number of people using the commuter lanes. The San Diego Freeway's car-pool lanes through Irvine have managed to pick up a large number of users far more quickly than did the commuter lanes on the Costa Mesa Freeway.

During peak periods, about 1,450 cars an hour are using the Interstate 405 car-pool lanes, which opened in May. The lanes on the Costa Mesa Freeway had only about 800 cars an hour after they were in use a half-year, El-Harake said.

Such results have convinced El-Harake and other commuter lanes specialists at Caltrans that the wide-buffer car-pool lane is the wave of the future.

Although the larger buffer cannot prevent accidents--unlike a concrete barrier--they are far less expensive, he said. In addition, a concrete barrier takes up just about as much real estate because of the need for shoulder space.

While the cameras along the San Diego Freeway are providing authorities with rolls and rolls of videotape, none of it is being used by law-enforcement agencies for any purposes, El-Harake said.

But the cameras eventually might play a role in helping to police the freeways. After the car-pool lane study is completed next year, Caltrans plans to install microwave equipment at each overpass so the video pictures can be relayed to monitors in the newly opened Orange County traffic operations center in Santa Ana.

Authorities then will be able to detect traffic accidents or other problems much more quickly and dispatch help.

**Caption:**

Map: Design Demonstration Project, Los Angeles Times  
Photo: Joe El-Harake, Caltrans commuter lanes coordinator, shows video of traffic in new car-pool lanes with wider buffers on San Diego Freeway.  
AURELIO JOSE BARRERA / Los Angeles Times

**Descriptors:** CALIFORNIA DEPARTMENT OF TRANSPORTATION; ORANGE COUNTY--TRANSPORTATION; SAN DIEGO FREEWAY; COMMUTING; CARPOOLS; VIDEO EQUIPMENT; VIDEO RECORDINGS

2 of 2 Complete Record

01662150 50729

Shifting Gears

More Commuters Are Seeking, Finding Alternatives to the Car Lifestyle

Los Angeles Times (LT) - TUESDAY June 19, 1990

By: CONNIE KOENENN; TIMES STAFF WRITER

Edition: Home Edition Section: View Page: 1 Pt. E Col. 2

Story Type: Main Story

Word Count: 1,288

Ultimately, it is the individual commuter making a decision to somehow change his or her commute, who is going to have the greatest impact on our transportation picture.

--State of the Commute Report, May, 1990

For Brad Confer, administrative staff assistant for the West Hollywood City Council, the moment of decision occurred six months ago when his 1979 Buick broke down, again, on Sunset Boulevard during rush hour.

"It just died on the street and I'd had enough," he said. "My car insurance was \$1,400 a year and I was real tired of being hostage to insurance, gas station lines and traffic snarls. I decided to take a year off and see what it's like not having a car. So far I have been able to address all my needs."

For Monica Price of the City of Orange, it was the congested drive to her job at Burlington Air Express in Irvine. "I just couldn't deal with the traffic on the 55 Freeway," she said. "It's bumper-to-bumper from the 91 all the way to Costa Mesa. Now my husband and I drive together. We can take the inside (car-pool) lane and we just laugh as we pass everybody else. It's a wonderful feeling."

For Morgan Ferry of Costa Mesa, a computer programmer at Avco Financial Services, it was his company's highly promoted ride-share program, offering cash bonuses for car-pooling and double cash bonuses for any mode of transportation that wasn't a car.

"I'd ridden my bike to work a few times and decided to try it on a full-time basis," he said.

"Now I take an off-road bicycle trail around the Newport back bay--it's a wildlife preserve with rabbits and herons and hawks. I liked it so much, my wife Janet has started doing the same thing. The extra pay is a nice incentive, but I have to say if they stopped paying me I would still do it. It makes me feel good about myself."

These are three voices in a small but growing chorus of Southern California drivers who have made the decision to change their commuting habits. If they can't kick the habit, at least they can cut down. A few expert traffic-watchers detect something new stirring: These recovering single-passenger automobile addicts might be the leading edge of a movement to give up car dependency for getting to and from work.

The number of drive-alone commuters actually dropped 4% last year, according to the second annual State of the Commute Report issued by Commuter Transportation Services. At the same time, the level of awareness about alternatives to driving alone (car pools, van pools, telecommute, biking) increased substantially, as did commuter concern about worsening traffic.

So far their numbers haven't reversed the tide. Based on interviews with

commuters in five counties, the same report concluded that almost everything has gotten worse since last year. The average commute takes 10 to 15 minutes longer, freeway rush hour starts earlier and ends later and 79% of Southern California's commuters still drive alone in their cars.

But some observers see a flicker of real change.

"I am optimistic," said Jim Sims, president of Commuter Transportation Services Inc., which has been surveying Southland commuting patterns and perceptions closely for two years. "I believe we have some real potential to change peoples' habits in terms of the trip to work."

"I'm cheery. There are signs that didn't exist before," said Ralph Cipriani, principal planner for regional mobility for the Southern California Assn. of Governments (SCAG), whose plans call for a dramatic shift in commute patterns by the year 2010. "I think awareness is increasing rapidly that the single car isn't going to work anymore."

Even the most upbeat forecasters suggest that the situation may have to get a little worse before it gets better. "We are very optimistic over the long range," said Dana Woodbury, interim director of planning at RTD, which is looking at carrying a 300% increase in public transit commuters over the next 20 years.

"It hasn't become all that inconvenient yet for people to use their cars, but it's going to. In the meantime, there's a lot of stuff being put in place to accommodate them."

Los Angeles City Councilman Marvin Braude predicts that "we are on the verge of a big breakthrough."

A 25-year bicycle rider and environmental activist, he ticked off some of the signs of change: "The government policy is shifting very quickly to accommodate the needs of the commuter to get out of the single-occupied car. We know not everyone will, nor is it necessary, but a significant number of people will.

"We are improving the bus system, we are creating high-occupancy (HOV) lanes on freeways, we are inaugurating a light rail system in July, we are providing preferential parking for people who ride together or ride in van pools, corporations are subsidizing car pools and van pools, we are working to change the tax system so corporations are encouraged to assist employees to ride public transit or ride share, we have expanded the express commuter bus system."

On the side of negative pressure, Braude cited the increasing cost of commuting alone. "The cost of accidents, insurance, parking, is greater. The tax on gasoline is going up. There are going to be many more economic incentives to utilize public transit."

In addition to those tangible considerations, Braude, like others, talked about a changed attitude stemming from increased environmental awareness, something that was mentioned frequently in interviews with commuters and commuter watchers. "It's becoming more fashionable to ride-share or use public transit," said Braude. "It is becoming more healthy, people feel more human."

In short, the traffic crisis is producing ethical choices.

That's the way Mark Pisano, executive director of SCAG, which co-sponsored the State of the Commute Report, puts it.

"We are not yet seeing relief from congestion because of increased growth in population, automobiles and number of trips," he said last week. "However my sense is that we are beginning to see a change in the responsiveness of the driving public--a change from individuals just driving alone to individuals uling to car-pool, willing to take transit, more open to working at home at least one or two days a week, changing their hours when they go to work."

He characterizes the change as the development of a "congestion relief ethic," and he thinks it is the key to unlocking traffic gridlock in Southern California. "Just like we turn the light off when we leave a room or turn the shower water off when we soap up, in order to conserve energy and water, we need to make a conscious effort to reduce traffic."

That is not a new notion for everyone, however. Among the many Southern Californians who have long viewed commuting as an ethical choice is Ben Swets, 32, of Santa Monica.

A commercial photographer who regularly bikes to corporate clients in downtown Los Angeles loaded with 20 to 30 pounds of cameras, strobe lights and lenses, Swets can be lyrical about his commute style. "I've ridden bicycles all my life," he said.

"The bike is a metaphor for simplicity, and simplicity--of the way we eat, the way we purchase, the way we travel--implies responsibility. The work of pedaling a bicycle is a kind of responsible act toward our society, our descendants."

Pedaling downtown along Pico or Venice boulevards, Swets passes cars and "feels eternally grateful that I am not sitting down," he said.

"Sitting alone in a car habitually is sort of like a religious ritual: It promotes the notion that we have to consume, that we are living for the goal of our own pleasure.

"To me, the bicycle implies not taking more than your share."

Caption:

Photo: Morgan and Janet Ferry bicycle five miles each way to jobs as computer programmers at Avco Financial Services in Irvine.

KARI RENE HALL / Los Angeles Times

Descriptors: SOUTHERN CALIFORNIA--TRANSPORTATION; SOUTHERN CALIFORNIA--CULTURE; LIFESTYLES; TRENDS; TRANSIT SYSTEMS; PUBLIC TRANSPORTATION; COMMUTING; AUTOMOBILES; TRANSPORTATION ROUTES; TRAFFIC; CARPOOLS; ENVIRONMENT; POLLUTION CONTROL; FUTURE

Copyright (c) 1990, Times Mirror Company

1 of 2 Complete Record

01662152 50731

The Converts Go by Bus or Bike, on Skates or Foot

Los Angeles Times (LT) - TUESDAY June 19, 1990

By: CONNIE KOENENN; TIMES STAFF WRITER

Edition: Home Edition Section: View Page: 1 Pt. E Col. 2

Story Type: Sidebar

Word Count: 1,962

Is there a new "congestion relief ethic" growing among Southern Californians? Is the romance of being alone on the road with a car fading? Here are five examples of new commute relationships that experts hope will flourish in the 1990s.

\* BUS: Air quality consultant Mark Abramowitz thinks it is important to practice what he preaches. "I am a firm believer in people reducing their impact on pollution by playing their individual role," he says.

So he travels by bus, almost exclusively. This includes a commute from his Santa Monica apartment to El Monte, where he is a member of the South Coast Air Quality Management District's variance hearing board.

"I'm out there virtually every day," Abramowitz said. He leaves home at 6:30 a.m. for the two-hour, three-bus trip which he doesn't consider a waste of time. "I can sleep, I can read, and I have a laptop computer and can get work done."

"Once for a state Senate hearing on the AQMD budget, I drafted my comments on the bus and just opened my computer (a Toshiba 1100) and read the notes from my screen for the committee," he recalled. "It was my version of telecommunications."

Abramowitz, who graduated in 1983 from UCLA, developed an appreciation for the environment on backpacking trips in Canada. He has been a clean-air activist and a bus commuter since he moved here, without a car, from Detroit in 1976. "I took the bus everywhere," he says. "I believed in the importance of ride-sharing and public transit. I got married last September and my wife has a car we sometimes use, but I've been able to talk her into doing some car-pooling."

Getting around on the RTD, especially for someone who attends lots of meetings, rallies and hearings as program director for the Coalition for Clean Air has its ups and downs, he acknowledges.

"I've had lots of good experiences. There are some places I'd never take a car to, but would always take a bus to. For instance, in Westwood, it is very difficult to park. And downtown Los Angeles is a great place not to have a car in."

On the other hand, it can be a major challenge to get to Orange County, even with such bus-rider tricks as picking up a Disneyland shuttle at LAX. "Once I had someone drop me off at the John Wayne Airport to get a shuttle to LAX . . . that day turned into a real nightmare. On the whole, though, it's really not that much of a sacrifice and it makes me a more pleasant person."

\* BICYCLE: Actor Ed Begley Jr. owns several bicycles, including a collapsible Montague 1000. "I just rode into the hotel from the Amtrak station," he reported by telephone recently from Washington, where he was attending an NBC affiliates meeting. "I also ride it all around Manhattan. I just fold it up and check it at restaurants and clubs."

On East and West coasts, Begley frequently travels the celebrity circuit by bicycle. An environmental activist who has been seeking a serious alternative to the combustion engine since the first Earth Day in 1970, he essentially quit living about two years ago.

A San Fernando Valley resident, he can discuss bike routes into Los Angeles with the expertise of a veteran: "Cahuenga Pass is the easiest, the lowest grade; Laurel is just too tight with those cars coming around blind curves, but there's an adjacent fire trail; Sepulveda Pass is a wonderful option for going to Santa Monica."

"In addition to my bicycle, I have an RTD pass and an electric car which I charge with the solar panels on the roof of my garage, and that's how I get around. My methods may be a bit extreme for many people, but I think we have to begin to do something about the environment in our personal lives."

Begley acknowledges that he is using his celebrity status to make a statement about the imperiled environment. "There's not time to go door to door with this," he insists, in a rapid-fire conversation touching on everything from ozone depletion to waste disposal problems at Los Angeles' Hyperion Sewage Treatment plant.

"I'm first and foremost an actor, but I love the opportunity to share. I think the answer lies in personal action. We can't wait all day for legislatures or corporations to act."

Personal action, he suggests, can start with alternative transportation just one day a week. "You don't have to drive a 3,700-pound vehicle to pick up a dozen eggs and a loaf of bread. It's ridiculous."

"We had a romance with our car, but it is coming to an end. We have been jilted, we have been so badly abused by this lover, we have been cheated on, we have been lied to."

When he gave up his Volvo two years ago, he says, he was aware of the trade-offs. "I knew it would be very rough, extremely difficult and inconvenient and could cost me some work because of the time involved. But I am very stubborn."

To his surprise, travel by bicycle has been a bonus. "I have more time, I have better time. I'm a guy who will rush around in a Volvo, car phone in hand, trying to do everything. I've had to slow down. It's been medicinal for me: It has improved my character."

\* CAR-POOL: Linda Hinton grew up in the Southern California car culture. "The idea was to work hard so you could buy a nice car," she said. And, also in the Southern California tradition, she was a drive-alone commuter from her Huntington Beach condominium to her job at Southern California Edison, where she is a corporate services supervisor.

"First I commuted to Covina, and now to South El Monte," she said. "It's 30 miles one way."

She had a Camaro, then a Porsche ("fun to drive but too expensive to maintain") and in 1986 bought a silver Volvo GLE sedan. About that time she started to look at her commute with a new skepticism. "It seemed like freeway driving was not really fair to a car. You start to see all those miles adding up, all that stop and go, stop and go. You feel like you're mistreating it."

She began to think about changing her driving habits. "There were just too

many people on the road. I also was becoming aware of pollution. I've chosen to live near the ocean since I was 18 years old so I wouldn't be fighting smog all the time."

"And what impressed me in the office would be employees coming in who'd been stuck on the freeway. They would be so frazzled, so upset. I realized that traffic is something that's affecting not only your physical being, but your productivity in the work force.

"You start looking and see what is happening."

Southern California Edison has a bustling van pool program, but Hinton's work, supervising meeting planners who travel throughout the company's service territory, dictates a certain amount of mobility. So she decided to car-pool instead.

Now she shares the ride with one co-worker who is able to take a van home if Hinton needs the car. "I feel good," she said. "We can drive in the car-pool lane on the 405 and it's kind of a kick, although you really have to be alert."

"I feel like I'm saving my car."

And more than that is involved, she continued. "I'm a native Californian. I love this state and I hate seeing what is happening to it. We are trying different things and it isn't so hard--you just kind of switch your schedule around. We just have to change, we have to do it."

\* SKATES: Chuck Denman made the decision a year ago.

"I would drive home, then run two miles to the gym and work out for two hours. It was taking all my evenings. First I thought I would jog to work, then I decided to skate. I quit the gym, got a pair of in-line (Roller Blade) skates and started skating from Long Beach to Huntington Beach, nine miles. At first I skated early in the morning so no one would see me."

Today, Denman, 42, a strategic planner and technology analyst for McDonnell Douglas Space Systems, has become something of an environmental hero in Orange County, swooping along road or sidewalk, following the bicycle lanes ("You can go anywhere a bicycle can go") on skates, with backpack. He keeps business suits, shirts and ties at the office, and seldom drives his '87 Mazda.

The transportation change, which he made more than three years ago, was philosophical. Moving out of his car has been a liberation, he says.

"For me, life is full of enough boxes. I come to work in a box, a cubicle in a building. I go home to another box and watch TV in another box. For me expressing my freedom is breaking out of those boxes.

"It keeps me fit and lean and helps my attitude at work. It also rejuvenates me and makes me feel I have a choice. I am not captive to a car.

"Also, I am sensitive to the environment, in my own way. I don't litter, smoke or drink. It's my observation that there is a link between your internal system and the system around you."

Although Denman doesn't expect many people to emulate him in terms of skating to work, he does hope his public example will encourage people to "jog, park and ride, do something that would free us from the cars and help the environment.

"I see a lot of high school and elementary school kids biking: if we can slowly wean people from driving, taking the long-term view that maybe young people will realize they have a choice."

For me--and this is pretty Draconian--I wouldn't think, if I were a smoker, of being so inconsiderate of going into a restaurant or a private home and smoking, because secondary smoke impinges on peoples' health and I don't have the right to do that. I feel the same way about driving. It impinges on peoples' health. I think it has become an ethical matter."

\* FOOT: When Mike Rohrkastse moved to Glendale from Mission Viejo for a new job last January, he was pleased to find a place to live that was only a mile from work.

"I'd been commuting 20 miles to Santa Ana and it would sometimes take up to an hour because of the traffic situation in Orange County, so it was in the back of my mind to cut down on driving," said Rohrkastse, 31, a human resources manager for the Glendale division of Heller Financial, an international lending company.

After a couple of months, he took a close look at his reduced commute and realized that, with the time it took to drive and park, it might be easier to walk. "I decided it was ridiculous to run my car for a mile each way, then turn it off--kind of a waste of time and money."

Now he walks to his office on North Brand Boulevard. "I felt a little bit funny at first, but now I like it. It takes 10 to 15 minutes."

Rohrkastse doesn't consider himself an ardent environmentalist, but says "My wife Debbie and I are cognizant of environmental problems. We recycle, we try to watch what we buy in terms of plastic and things like that, and we get reading material from Greenpeace."

So it's a bonus that his new commute, which he describes as "short and convenient," is also helping the pollution problem.

"When you think about it, it's really kind of stupid to drive one mile."

Caption:

Photo: Mark Abramowitz commutes by bus from Santa Monica to El Monte. "I am a firm believer in people reducing their impact on pollution . . .," he says.

LARRY DAVIS / Los Angeles Times

Photo: CHUCK DENMAN

Descriptors: LOS ANGELES--TRANSPORTATION; LOS ANGELES--CULTURE; LIFESTYLES; TRENDS; AUTOMOBILES; TRAFFIC; TRANSIT SYSTEMS; COMMUTING; PUBLIC TRANSPORTATION; TRANSPORTATION ROUTES; CARPOOLS; BICYCLING; BICYCLE PATHS; ROLLER SKATING; WALKING; HEALTH; PHYSICAL FITNESS; EXERCISE; ENVIRONMENT; POLLUTION CONTROL; FUTURE

Copyright (c) 1990, Times Mirror Company

2 of 2 Complete Record

01753033 12239

RTD Gives Methanol Buses High Marks

Transportation: After 1 1/2 years of improvements, the cleaner engines promise to have an increased role in fighting air pollution.

Los Angeles Times (LT) - FRIDAY December 28, 1990

By: LARRY B. STAMMER; TIMES ENVIRONMENTAL WRITER

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 4

Word Count: 828

There is perhaps nothing more irritating to commuters and pedestrians than a foul-smelling diesel bus.

But after racking up 1 million miles with 30 methanol-powered buses, the Southern California Rapid Transit District said Thursday that the days of the smoking diesel may be numbered.

After 1 1/2 years of working out the bugs, the RTD said the methanol buses have dramatically improved reliability, offer better mileage and spew far less smoke, carbon monoxide and two smog-forming pollutants--hydrocarbons and nitrogen oxides.

Moreover, emissions of formaldehyde, which is known to cause cancer in humans, have been brought down through the use of an advanced catalytic converter to levels equal to or better than those from diesel buses, according to the manufacturer.

What all this adds up to is a far greater likelihood that methanol buses will have a larger role in advancing the cause of cleaner transit than previously thought possible. By the year 2010, RTD plans for all buses to be powered by the form of clean fuel, whether electricity, methanol, compressed natural gas or highly improved diesels.

It has long been known that methanol, a flammable alcohol sometimes called wood alcohol or methyl alcohol, offers a number of clean-air advantages over diesel--particularly the disappearance of the noxious black smoke.

But transit agencies have experienced persistent problems with experimental methanol buses.

When the RTD began its testing, for example, there were widespread problems with fuel injectors clogging up, and acceleration from a stop was sluggish. Now, however, the problems have been greatly reduced, the RTD said.

Fuel injector clogging was cut back by a fuel additive manufactured by Lubrizol, an Ohio company. RTD mechanics eliminated the sluggish start problem by modifying the amount of fuel delivered to the combustion chamber. This also resulted in better mileage.

"There were a lot of technical issues to overcome, but I think we've got the solutions," RTD equipment maintenance director L. Rich Davis said.

The methanol bus test program, financed by a \$3.4-million grant from the federal Urban Mass Transportation Administration and the Los Angeles County Transportation Commission, is being watched closely by other transit agencies around the country, as well as the state and federal governments.

Of particular interest was testing data from the engine manufacturer, Detroit Diesel, indicating that formaldehyde emissions were lower than those from diesel buses.

"That's very significant," said Alan C. Lloyd, chief scientist with the South Coast Air Quality Management District. "We expected the particulate emissions to be down. But the aldehydes (including formaldehyde) we were worried about. we didn't want to see a trade-off between reduced particulate levels and elevated formaldehyde."

Particulate matter is largely responsible for the smoggy haze so well known to Southern Californians. The microscopic particles absorb light, reduce visibility and pose a health threat to humans who breathe them.

RTD officials said Thursday they are not ready to say how big a role methanol buses will play, although they said there is little doubt that there is a bigger future for methanol than first thought.

"I think this is an excellent start. . . . I think it augurs well for methanol for the future," said Lloyd.

The agency has a total of 2,500 buses, almost all of them diesel. Well over half are older diesels that belch black smoke; the rest are newer diesels that are somewhat cleaner. The RTD purchases 200 to 250 new buses each year to replace older vehicles.

The transit agency is examining other alternatives, including compressed natural gas and so-called "clean diesels."

"We're looking for the lowest cost while still providing a clean atmosphere," Davis told reporters.

The average life of a methanol engine is 150,000 to 175,000 miles; a diesel engine will last an average 250,000 miles. Methanol engines also cost about \$30,000 to \$35,000 more.

Still, RTD officials said they are enthusiastic about methanol. "These are not buses in a laboratory. They are buses that are crisscrossing Los Angeles County. The results are tremendous," said Nick Patsaouras, RTD board president.

Lloyd said it is possible that compressed natural gas buses, which are about a year behind methanol in their development, may eventually take the "lion's share" of the transit bus market.

The drive toward cleaner buses is pushed in large part by a tough new state tailpipe standard that limits particulate emissions to 0.1 gram per mile.

The standard covers all buses built in 1991 and later and means that buses will be about 80% cleaner than they were just two or three years ago, according to state Air Resources Board spokesman Bill Sessa.

At the same time, RTD spokesman Jim Smart said public opinion has kept pressure on transit authorities to get rid of smoking diesels.

"It is definitely public sentiment. It is demanding change. They are not taking excuses, especially in Los Angeles. We have really tried to join the charge and work for clean air solutions," Smart said.

New TACK AGAINST SMOG

AQMD official explains the public outreach effort. B3

Descriptors: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; METHANOL; BUSES; VEHICLE EMISSIONS; ALTERNATIVE ENERGY; LOS ANGELES--TRANSPORTATION; AIR

POLLUTION--LOS ANGELES; POLLUTION CONTROL; ENGINES

Copyright (c) 1990, Times Mirror Company

≡

1 of 1 Complete Record  
01722356 45928

Program for Free Rides on Late Buses Called a Success

Transit: The RTD says it gave away 59,000 passenger trips last month, far fewer than it had expected.

Los Angeles Times (LT) - THURSDAY October 25, 1990

By: BETTINA BOXALL; TIMES STAFF WRITER.

Edition: Home Edition Section: Metro Page: 3 Pt. B Col. 5

Word Count: 577

The RTD's new program of letting passengers ride free if their buses are more than 15 minutes late was declared a major success Wednesday by bus system officials who say they gave 59,000 free rides last month--far fewer than they expected when they adopted the novel policy.

"We carried in September close to 34 million passengers and we only gave close to 60,000 free rides," boasted Nikolas Patsouras, board president of the Southern California Rapid Transit District. "That translates to 0.18 of 1%--phenomenal."

Before the free-ride program began Sept. 1, the RTD predicted that drivers might be handing out up to \$600,000 a month in free fares, based on the percentage of bus runs that are typically more than 15 minutes late in the countywide system. By contrast, only about \$61,000 worth of the \$1.10 fares was claimed by passengers complaining of tardiness last month.

But it was unclear whether the lower-than-expected free-ride rate could be attributed to more timely buses or to simple lack of interest on the part of passengers who, when questioned in press interviews about the program, often seemed ignorant of it or unsure how to take advantage of it.

"There are so many buses, I don't know which one is late," said one confused passenger last month after the new policy went into effect.

Under the program, passengers who would normally pay cash are allowed to board free if the bus is late. Those with monthly passes are supposed to get the driver to punch a warranty card for end-of-the-month cash refunds.

A bus stop survey taken early this summer indicated that about 2.5% of the system's daily runs were at least 15 minutes late, said RTD spokesman Greg Davy. But no new numbers were available to show whether that figure had improved last month.

Nonetheless, Davy defended the claims of success made at a downtown press conference.

"Nick's main point today is that the perception that RTD buses are always late is incorrect and he feels the first month of this program shows that," Davy said. "He's not saying no buses are late."

The free rides are part of a major public relations campaign on the part of Patsouras, who in July unveiled a Transit Rider Bill of Rights, guaranteeing RTD passengers good service and a safe journey.

Not everyone has been impressed. Veteran RTD Director Charles Storing criticized the free-ride proposal when it was first made and said Wednesday that he still doesn't think it's a good idea.

"I hate to see anybody have to wait for a bus," Storing said. "But there are just so many situations that cause this that I don't feel RTD should be

punished for circumstances beyond its control."

A spokesman for the bus drivers union, which had initially expressed concerns about the new policy, was more favorable.

"So far it's gone fairly well," said Goldy Norton, public relations representative of the United Transportation Union. "It has not to our knowledge had any great impact on our drivers."

Fatsaouras said the cost of the free-fares program--which will be continued until the end of the year on a trial basis--has been offset by ridership increases. Yet while ridership rose by about 60,000 between August and September of this year, it is only up about 30,000, or 2%, when compared with September of last year. And that, district planners say, is statistically insignificant, since the numbers are subject to a 10% margin of error.

Descriptors: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; LOS ANGELES COUNTY--TRANSPORTATION; BUS DRIVERS; FARES; CUSTOMER SERVICE; STATISTICS

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01708172 31646

Metro Digest / Local News in Brief

Study Finds RTD Has Most Bus Riders in U.S.

Los Angeles Times (LT) - WEDNESDAY September 26, 1990

—Edition: Home Edition Section: Metro Page: 2 Pt. B Col. 1

Story Type: Column; Brief

Word Count: 173

The Southern California Rapid Transit District carries on the average more bus passengers than any other public transit system in the nation, a federal study released Tuesday showed.

Nick Patsaouras, president of the RTD board, announced the findings in Los Angeles during the first of his planned quarterly "State of the District" messages.

The study of the nation's leading transit systems, conducted in 1988, found that the RTD carries an average of 18.1 passengers per bus at any given time, compared to 15.4 passengers for New York and 15.3 for Chicago, its two nearest competitors in the category.

In the study by the federal Urban Mass Transportation Administration, the RTD surpassed the other 19 largest bus operators in total passenger miles.

"We carry more people than any other system, excluding New York and Chicago which have both bus and rail service," Patsaouras said.

Patsaouras said that although RTD ridership has seen a steady decline since its peak of nearly 500 million passenger trips in 1985, the latest figures indicate the trend may be reversing.

Descriptors: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; STATISTICS; BUSES; SOUTHERN CALIFORNIA--TRANSPORTATION; TRANSIT SYSTEMS--SOUTHERN CALIFORNIA

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01721347 44912

Study Begun in Push for Electric Trolleys

Transportation: \$750,000 project to look at impact of changeover. Proponents such vehicles are quieter and less polluting.

Los Angeles Times (LT) - TUESDAY October 23, 1990

By: ELAINE WOO; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 3 Pt. B Col. 5

Word Count: 708

Los Angeles County transportation officials announced on Monday the start of a \$750,000, six-month study to replace the county's smoke-belching, diesel-propelled public transit buses with cleaner, quieter electrified trolleys before 2010.

Officials acknowledged that considerable public education will be needed to win support of the electric trolley bus system--long used in a few major U.S. cities such as Seattle and San Francisco and abandoned in Los Angeles in the early 1960s--largely because of concerns over the potential unsightliness of the overhead wires needed to power the vehicles.

They are pinning their hopes on public willingness "to have clean, noiseless buses and live with the overhead wires," said Nick Patsaouras, president of the Southern California Rapid Transit District board, which is conducting the study for the Los Angeles County Transportation Commission.

The electric trolley bus system was one of several sweeping changes ordered last year in a comprehensive clean air plan by the South Coast Air Quality Management District. Local transit authorities believe they can beat AQMD's deadlines, which require substantially reducing the number of diesel buses by 1998 and replacing all such vehicles with ones that are electric-powered or use lower-emitting fuels, such as methanol and natural gas, by 2010.

The study, which will explore environmental impacts, costs, routes and other operation aspects, will be "as close to an action plan as you can get," said Neil Peterson, executive director of the county transportation commission.

"The basic message of today is that the transit community is dead serious about looking at electric bus technology to see how we can bring it to the public a lot sooner than originally anticipated," he said.

Design and environmental analysis could begin in June on five trolley lines to be operated in heavy usage areas, such as the Wilshire Corridor or along the El Monte busway, RTD spokeswoman Andrea Greene said.

Electric trolley cars are more expensive than diesel buses but more cost-effective in the long run, according to local transit officials. An electric bus costs about \$400,000, compared to \$250,000 for a diesel bus, according to Green. But the trolley bus has a life expectancy of 25 years, compared to 12 years for a diesel bus, and costs 30% less for overall maintenance.

Patsaouras estimated that it would cost \$1.6 billion to convert 20% of the RTD's lines to trolley buses by 1998. The money would come from county Proposition C on the November ballot, which calls for a quarter-cent transportation tax.

Al Perdon, RTD assistant general manager, who recently returned from Seattle and Vancouver where he observed those cities' trolley bus systems, called the electrified buses "a really refreshing approach" to solving pollution and traffic problems.

"What is really exciting is that when you stand at a bus stop, the bus is there loading up passengers and it is absolutely quiet," said Perdon. "And . . . there are no fumes coming out the backs of buses."

Perdon said that the buses are so quiet that they could pose a hazard to pedestrians. Vancouver has reported a higher accident rate for electric than diesel buses. Green said that local transit authorities expect to install horns or other pedestrian warning devices on the trolley buses, as well as give trolley drivers extra training to avoid mishaps.

Perdon said the study will employ urban design experts to help devise ways to reduce the visual impact of the overhead wires needed to propel the trolley buses. He said it is possible to eliminate some of the bulky wires over intersections by equipping buses with a battery that would power the buses at street crossings.

Sierra Club regional director Bob Hattoy said Monday that the environmental group supports the move to electric buses because they are the most energy-efficient and least-polluting. He said that environmentalists will be monitoring how the electricity is produced to meet the heightened demand for electric power because "we don't want to replace (smog-producing buses) with the smokestacks of new electric power plants."

Los Angeles had the first trolley system in the country in 1910--the Red Cars, operated by the Pacific Electric Railway. The expansion of freeways and pressure from the oil industry brought an end to trolleys in 1963, when a switch was made to diesel buses.

Descriptors: TRANSIT SYSTEMS--LOS ANGELES COUNTY; TROLLEYS; LOS ANGELES COUNTY--TRANSPORTATION; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; ALTERNATIVE ENERGY; ELECTRICITY; AIR POLLUTION CONTROL; ELECTRIC VEHICLES

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01702692 26126

Bus Bravos

Riders Applaud RTD's Beefed-Up Security

Los Angeles Times (LT) - FRIDAY September 14, 1990

By: BETTINA BOXALL; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 2

Word Count: 857

It was in the 90s outside and not much cooler inside the lumbering No. 30 bus as it roared out of downtown, heavy with a standing-room-only load of shoppers sweating in the aisles. A few feet from Elaine Howard, a woman whispered, clucked and burred to herself.

But Howard uttered not a word of complaint. Things were looking up on the RTD these days, she allowed. "I had stopped riding buses for a while. They didn't show up on time--and the gang members. . . . Last year a lot of the buses were dirty and graffitied up. But this year is better."

This week, Howard actually saw a couple of transit police from the RTD's new uniformed bus patrols enforce the system's no-noshing, no-sipping commandment. "They got on and some lady had a soda. I think they gave her a warning because it was so hot," she theorized.

Still, Howard's true love is the new

Blue Line light rail service from Los Angeles to Long Beach, which she rides home to South-Central Los Angeles. "It's real nice. There's a lot of security. The sheriffs are so much better. . . . At each stop they get on and check."

The regulars on the Southern California Rapid Transit District's sprawling bus system bump along with a certain stoicism that occasionally can blossom into praise. Most have a tale or two of woe about pickpockets, drunks or the guy who exposed himself in the back of the bus.

But for the last few weeks they've had some good news--free rides if buses are late and beefed-up security. Most bus patrons don't have alternatives, anyway.

And hey, it's better than Russia.

"Very nice, very good. It has conditioning and everything," was the assessment of Shulim Shuster, recently of Odessa, U.S.S.R., and now of West Hollywood. "This is more comfortable. United States is more comfortable. Russia is very bad, very old bus, very old," Shuster explained as his relatively new bus trundled down Santa Monica Boulevard.

Bill collector Kelvin Easter has been angling for a free trip under the RTD's new program of free fares to riders if their bus is more than 15 minutes late. But so far, the RTD has not been cooperative.

"Saturday and Sunday they're usually never on time," he said on a Wilshire Boulevard bus as a man with a cast on his arm stretched out on the back seat nearby and took a nap. "Sunday night I tested it to see if I could get a free ride and it was right on time," Easter recounted with dismay.

Other passengers hadn't taken much notice of the late-bus, no-pay offer. For one thing, a good many of them would have to slice through the language barrier before they could even begin to negotiate for a free trip. "I no speak English, just a little bit," they explain with Spanish, Chinese and Eastern European

accents as they hold their fingers up, a quarter inch apart, to underscore just how little.

Even without a language problem Paul Weaver hasn't bothered about the free rides. "I don't even think about it. I never time the buses. I just run like hell to catch one," said Weaver, a faithful patron of Los Angeles public transit since 1962. Once aboard, his custom is to head to the back, often with difficulty. As he wrote in a poem he calls "City Buses": "There's always room in the rear, but too many rears in the way."

Riders exhibit more enthusiasm over the news that the RTD is augmenting its undercover police crews with a small number of uniformed transit police who will patrol downtown Broadway and buses countywide.

"I've never noticed (undercover) police because they're not noticeable" said a retired woman with eminent logic as her bus traveled down Pico Boulevard. "I think having police in uniform will be much better. But it's probably just a fad, for the time being," she added with a knowing air.

"I've had a near robbery," she continued. "A guy stuck his hand in my purse. I caught him and told him to get his hand out of my purse." Someone else reached in once and got away with a pack of Kleenex. "I don't carry a wallet. It's a bad thing to carry a wallet in your purse."

On another Pico Boulevard bus, a 21-year-old man said yes, he'd like to see more blue uniforms on the bus. "It's good. I just saw someone get killed while I was waiting for the bus," he said matter of factly, his voice expressing neither wonder nor fright. "Somebody got shot. I think he was dead. I guess it was drugs."

Police later said the shooting victim had survived and was hospitalized in stable condition.

At the stop at the corner of Pico Boulevard and Vermont Avenue, waiting passengers watched drug dealers peddle plastic bags and count up tangles of cash thrust into their hands. A few feet away, a young woman changed her baby's diaper while street vendors hawked perfume and cigarettes.

RTD riders may at times be late, scared and hot, but they're rarely bored.

Caption:

Photo: Paul Weaver, a rider since 1962, has written a poem about the RTD.

AL SEIB / Los Angeles Times

Photo: Russian immigrant Shulim Shuster says buses in Los Angeles are better than back in the USSR.

Photo: (A2) Smoother Ride: Most regular riders of Southern California Rapid Transit District's sprawling bus system have legions of tales to tell: drunks, accidents, pickpockets. But there's been some good news in the last few weeks: free rides if buses are late and beefed-up security.

AL SEIB / Los Angeles Times

Photo: Below, a bus on Broadway, now patrolled by officers.

Descriptors: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; LOS ANGELES COUNTY--TRANSPORTATION; COMMUTING; BUSES; PUBLIC TRANSPORTATION--SECURITY; CUSTOMER SERVICE; TRANSPORTATION SAFETY

1 of 1 Complete Record

01675210 63908

Buses, Trains Added to Meet Rise in Riders on Blue Line

Los Angeles Times (LT) - WEDNESDAY July 18, 1990

By: VICTOR MERINA; CHARISSE JONES; TIMES STAFF WRITERS

Edition: Home Edition Section: Metro Page: 1 Pt. B Col. 2

Word Count: 797

With the number of train riders still soaring, operators of Los Angeles' new light rail line called in more workers, scheduled additional trains and beefed up local bus service on Tuesday to handle the continuing crush of business commuters and curious passengers on the Blue Line.

Delighted transit officials estimated that more than 32,000 people rode the 19-mile Los Angeles-Long Beach system on Tuesday--six times what had been forecast--and without a replay of the snags that snarled train traffic and delayed thousands of rail passengers the night before.

"It's been fantastic. It far exceeds what we imagined," said Art Leahy, director of transit operations for the Southern California Rapid Transit District.

Neil Peterson, executive director of the Los Angeles County Transportation Commission, called the figures remarkable but cautioned: "I don't think those numbers reflect what our ridership will be on a regular basis. As wonderful as these numbers are, I don't think we should draw any conclusions at this point."

In the second day of commuter runs and the fourth day of operations, the electrified trains were jammed throughout the day with families, elderly people, business-suited commuters and casually dressed riders who took advantage of the free fares and air-conditioned comfort to ride Los Angeles County's newest transit venture.

A hit-and-run collision Tuesday evening had threatened to disrupt the flow of rail cars. A driver, skirting a crossing gate near the Slauson Station in South Los Angeles, broadsided a southbound train carrying about 300 people. But no one was injured in the collision, authorities said, and the incident caused only a 10-minute delay.

The collision was the first between a car and a train. The incident caused an air leak and damaged several of the train's electrical cables, officials said. The driver was later arrested after passengers gave sheriff's deputies a license number, they said.

Transit officials had been determined to avoid a replay of Monday evening's troubles when a train broke down a block from the Pico Station in downtown Los Angeles and stalled traffic on the northern end of the line. Hundreds of passengers were delayed for 35 minutes, and some riders on other trains waited even longer before power could be restored to the disabled vehicle and service resumed.

Dan Ibarra, the RTD operations control superintendent, said Tuesday that mechanics blamed that problem on a malfunctioning door that would not close. He said that because the accident happened near a track switch, other trains could not go around the crippled cars.

Ibarra said earlier reports that two teen-age girls had caused the problem by tampering with an emergency switch could not be confirmed.

"The people on the scene said there was no evidence of tampering," he said,

...ding that the only other major mechanical problem Monday was overheated brakes on a rail car that was quickly taken out of service.

Tuesday's crowds caused transit officials to send 40 more workers to station platforms to assist passengers, schedule two more trains during the non-rush-hour period when service is normally reduced and add 10 local buses on the Los Angeles-to-Long Beach route to handle any overflow of passengers. In an effort to make the line more convenient, RTD officials also relocated a shuttle bus stop across the street from Pico Station on Tuesday to assist riders who were unable to find the shuttles when they arrived in the downtown area.

Some passengers, however, still had complaints.

Abbas Ali stood at the Pico Station unable to find a schedule or anyone to tell him when the next train was coming.

"They should be sent to Canada to see how to run an efficient rail (system)," said Ali, a West Los Angeles resident who normally drives to work. "If someone has to go somewhere, they have to know the schedule."

Ali said he rode the train Sunday as well but was not sure if he was going to continue. "I'll give them a few chances. If it works out, good," he said. "If not, I'm back to the road."

Hector Gardea, a 14-year-old from South Gate, said that in the three days he had ridden the train, he had already begun to see the newness wear off and problems set in. "I've seen graffiti on the train already, on the windows," he said, adding that he was not surprised. "The police can't be watching all the time."

Lt. Jim Holts of the Sheriff's Transit Services Bureau said tight security will remain along the Blue Line and that the system has been largely free of vandalism. Two young men were arrested Tuesday for marking a wall outside an elevator shaft of the Slauson Station and a 14-year-old was booked after scratching a train window with a knife, Holts said.

Times staff writer Richard Simon contributed to this story.

Caption:

Photo: Passengers jam the Pico Station to board the Blue Line for the ride to Long Beach.

MIKE SERGIEFF / For The Times

Descriptors: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; TRANSPORTATION ROUTES; LOS ANGELES--TRANSPORTATION; LONG BEACH (CA)--TRANSPORTATION; COMMUTING; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; PASSENGERS; BUSES; TRAFFIC ACCIDENTS--LOS ANGELES; VANDALISM; EQUIPMENT FAILURES; SCHEDULES

Copyright (c) 1990, Times Mirror Company

2 of 3 Complete Record

01676750 65462

Doing the Rights Thing

Los Angeles Times (LT) - SATURDAY July 21, 1990

By: STEVE HARVEY

Edition: Home Edition Section: Metro Page: 2 Pt. B Col. 5

Word Count: 206

In this, the 214th year of our nation's history, we have a new Bill of Rights.

For bus riders.

Yes, they, the people of the Southern California Rapid Transit District, in order to form a more perfect bus line, insure domestic tranquility on board and promote the sales of monthly passes, do hereby issue their Transit Rider Bill of Rights.

The document, composed of seven amendments rather than the standard 10, shows the influence of Locke, Voltaire, Montesquieu, Madison and, of course, Patsaouras. The latter is Nick Patsaouras, who was recently elected president of the RTD's board of directors.

Troubled in recent years by complaints about safety violations, graffiti, tardiness and drug problems among drivers, the RTD is obviously trying to spruce up its image.

Written in less stately language than that other Bill of Rights, the framers of the RTD's version guarantee courteous and convenient service, timely and accurate information and access to transit stops, not to mention a safe journey.

Like its predecessor, the RTD's document is open to interpretation. For instance, does it guarantee that, if you are running toward the bus as it pulls away from a stop, the driver will pause to allow you on board? We await the judgment of history.

Caption:

Photo: Transit Rider Bill of Rights.

THEODORA LITSIOS / For The Times

Descriptors: SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; TRANSIT SYSTEMS--LOS ANGELES COUNTY; LOS ANGELES COUNTY--TRANSPORTATION; CUSTOMER SERVICE; PASSENGERS; BUS DRIVERS; BUSES

Copyright (c) 1990, Times Mirror Company

1ST STORY of Level 1 printed in FULL format.

Copyright (c) 1991 The Times Mirror Company;  
Los Angeles Times

January 17, 1991, Thursday, Home Edition

SECTION: Metro; Part B; Page 3; Column 4; Metro Desk

LENGTH: 1027 words

HEADLINE: BLUE LINE'S RIDERSHIP, SAFETY PRAISED AFTER INITIAL 6 MONTHS;  
TRANSIT: OFFICIALS SAY 18,000 COMMUTERS DAILY USE THE TRAINS, THREE TIMES THE  
NUMBER EXPECTED. CRIME IS LOW; ACCIDENTS WITH CARS AND PEDESTRIANS ARE MAIN  
PROBLEM.

BYLINE: By RONALD B. TAYLOR, TIMES STAFF WRITER

BODY:

Transit officials report that an average of 18,000 commuters have been riding the Blue Line trains each day between Long Beach and Los Angeles -- three times the number projected when the light rail line opened six months ago.

And the anticipated gang-related crime problems have not materialized along the 22-mile route, officials said.

"The first six months of operations have exceeded our expectations," said Neil Peterson, executive director of the Los Angeles County Transportation Commission. The rail line was built by the commission and is operated by the Southern California Rapid Transit District.

On the downside, four people have died in 35 train-and-car or train-and-pedestrian accidents and another 13 people have been injured, transit reports show.

In the most recent accident, Shyrril McDowell, 38, of Gardena was critically injured Tuesday when she drove her car around lowered safety gates on Alondra Boulevard at Willowbrook Avenue, police said. The car was struck by a fast-moving southbound Blue Line train, police reported.

All told, 26 cars have tangled with trains at gated grade crossings or while making left turns in front of oncoming trains on Washington or Long Beach boulevards. The trains travel down the middle of these two streets.

From the start, the biggest problem faced by train crews has been pedestrians and motorists trying to run or drive around barricades as the fast-moving train approach street crossings. The trains travel at speeds up to 55 m.p.h.

These trains run at 10- and 15-minute intervals, both northbound and southbound, between 5 a.m. and 10 p.m. That means a train flashes through each gated intersection every few minutes, officials warned.

The worst accidents have occurred in neighborhoods where the people were used to seeing slow-moving freights operating on tracks parallel to the Blue Line, investigators reported. Sheriff's deputies have cracked down on motorists driving around the rail-crossing barricades, issuing 1,400 tickets, but the latest accident shows that motorists are still risking an illegal crossing.

Because the \$877-million trolley line runs through several high-crime, gang-dominated areas in South-Central Los Angeles, transit authorities were initially afraid that vandalism, graffiti and crime would frighten riders away. To prevent that, the commission hired the Sheriff's Department to police the rail line.

The cost of about \$12 million a year makes the sheriff's Transit Services Bureau the most expensive light rail security system anywhere, transit officials said.

The bureau has 116 officers patrolling the platforms, riding the trains and checking fares. Deputies also prowl the transit corridor in black and white cars, and special undercover teams work where needed.

"We have taken a very strong enforcement posture," said Capt. Frank Vadurro, head of the Transit Services Bureau. In six months, deputies have written 8,000 citations for everything from drunk and disorderly conduct to jaywalking and fare evasion.

The crimes that have occurred have been "very minor," Vadurro said. There has been one purse-snatching and a gold chain was yanked from the neck of a woman standing on a station platform, he said.

During December, deputies made 82 arrests for crimes such as narcotics possession, carrying illegal weapons and simple assault, Vadurro reported. An anti-graffiti unit has kept the line free of "taggers" and their marks.

Ridership figures show that on weekdays an average of 18,000 passengers board the quiet, smooth-running white and blue electric trains. And the riders seem happy with the service between the 22 stations.

"I love the train," said commuter Ronald Cheatham, 35, of Compton. At first Cheatham was skeptical about the trains because they go through gang-dominated areas, but now he says, "The trains are safe . . . and comfortable. It's great."

The Blue Line is the first segment of a planned 300-mile, \$7.5-billion rail network that one day will stretch across Los Angeles County, linking five Southland counties, officials said. The system is to be completed within the next two decades, if all goes as planned.

A few minor problems developed in the \$1.2-million electric cars and the operating systems, but generally the Blue Line has worked well, said RTD representative Andrea Greene.

Automatic car doors have stuck open, shutting down a train. One train was derailed, another lost power when overhead power lines sagged and a section of the system had to be shut down for an hour to fix the wires.

When such problems disrupted services, buses carried passengers around the problem, Greene said.

The fare on the Blue Line is \$1.10 one way, for all destinations -- about 1/3 what it costs to ride an RTD express bus from Long Beach to Los Angeles. The \$42-a-month RTD bus passes also are honored on the trains, officials said.

(c) 1991 Los Angeles Times, January 17, 1991

The single-rate, introductory Blue Line fare was set low to lure riders, transit officials said. The fare eventually will be raised, with the price based on destination or length of ride.

Because of construction delays, the trolleys coming into downtown Los Angeles have had to stop at the Pico Station, at Pico Boulevard and Flower Street. That dropped commuters a mile short of the planned Blue Line terminus in the underground station at 7th and Flower streets.

Construction of the \$50-million, two-level subway station is a year behind schedule. Eventually, this station will be the transfer point between the Blue Line trolleys and the \$3.7-billion Metro Rail Red Line subway that is supposed to open in the fall of 1993.

The Blue Line area of the new station will open for train service Feb. 14. Starting then, the trains leaving the Pico station will go underground near 12th and Flower streets and travel the last mile into the subway station through a new tunnel, officials said.

"Opening of the station will make the Blue Line even more attractive," said Art Leahy, the RTD's supervisor of bus and train operations. He said 3,000 commuters board at the Pico station daily now. "We're certain the number will go up when the trains start using the station," he said.

SUBJECT: LOS ANGELES TO LONG BEACH LIGHT RAIL LINE; TRANSPORTATION SAFETY; TRAFFIC ACCIDENTS -- LOS ANGELES COUNTY; RAILROAD ACCIDENTS -- LOS ANGELES COUNTY; TRAFFIC ACCIDENTS -- LOS ANGELES; RAILROAD ACCIDENTS -- LOS ANGELES; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; TRANSIT SYSTEMS -- LOS ANGELES; TRANSIT SYSTEMS -- LOS ANGELES COUNTY; LOS ANGELES -- TRANSPORTATION; LOS ANGELES COUNTY -- TRANSPORTATION; STATISTICS

1ST STORY of Level 1 printed in FULL format.

Copyright (c) 1991 The Times Mirror Company;  
Los Angeles Times

January 30, 1991, Wednesday, Home Edition

SECTION: Metro; Part B; Page 1; Column 3; Metro Desk

LENGTH: 391 words

HEADLINE: RTD COMMUTER COMPUTER WILL OFFER CUSTOMIZED BUS SCHEDULES

BYLINE: By TINA ANIMA, TIMES STAFF WRITER

BODY:

It's the age of the customized commuter.

At least, that's the vision of Rapid Transit District officials.

In the latest move to encourage more drivers to leave their cars at home, the RTD announced Tuesday a computerized planning service that gives commuters a tailor-made schedule for taking the bus from home to work and back.

"It's a whole new way of reaching out and touching someone," RTD spokesman James Smart said at a news conference Tuesday.

Companies pay the RTD \$150 for a computer disc, where employers list the company location, workers' home addresses and times they travel to and from work. RTD customer service representatives then plan a route for each employee.

Within 10 days, the commuter receives a schedule, which includes an alternate route, the estimated trip time and the cost, said Nikolas Patsaouras, president of the RTD Board of Directors.

So far, 20 companies have signed up for the program's customized schedules, which cost 48 cents per employee. Eight account executives are recruiting more companies, said Gary Spivack, RTD assistant general manager.

In addition to trying to attract riders, the bus system is showing concern for the environment, Patsaouras said. "We're going to do our share in cleaning the air."

The program will help companies comply with air quality standards, he said.

District spokesman Paula Levy said that companies using the RTD's plan still will need to provide other incentives to meet requirements. Still, "Anything that helps people learn to use the mass transit system is something we promote," she said.

Plans for a telephone service that would allow callers to receive printouts instantly at their companies are under way, officials said. They are also planning a bilingual version of the service and a voice-activated computer calling system for fast information.

The trip planning service is the latest in a series of efforts to increase ridership. In July, the RTD unveiled a Transit Bill of Rights, giving free

Caltrans Study Focuses on New Car-Pool Lanes  
Los Angeles Times (LT) - SATURDAY December 22, 1990

By: ERIC BAILEY; TIMES STAFF WRITER

Edition: Orange County Edition Section: Metro Page: 1 Pt. B Col. 2  
Word Count: 914

IRVINE - It may look like just another crowded interstate, but a four-mile stretch of the San Diego Freeway running through this community is serving these days as a sort of laboratory.

The unveiling of the microscope took place Friday.

The California Department of Transportation has installed seven videotape cameras atop freeway overpasses between Jeffrey Road and Irvine Center Drive that will be used to study the demeanor of the new set of car-pool lanes that were opened along the freeway earlier this year.

These car-pool lanes, after all, are anything but typical. Instead of the usual double-yellow line separating them from the slow-moving masses, the Interstate 405 commuter lanes have a 14-foot-wide buffer of asphalt between them and general-use lanes.

Caltrans officials are eager to determine if the new car-pool lanes, which are the first of their kind in the United States, will perform better than the old ones. The \$48,000 worth of videotape cameras and recorders deployed along the freeway will help with that task, Caltrans officials say.

"What we're going to look at with these cameras is the operational characteristics of the 14-foot buffer," said Joe El-Harake, commuter lanes coordinator for Caltrans in Orange County. "Right now, there's no real design standard for the buffer between the lanes. This is an evolving science. We're trying to push the limits of design."

The cameras are mounted on freeway overpasses and feed their pictures to recorders in sealed boxes nearby. Each camera fires off a picture every few seconds, so when the tapes are played at normal speed the movements of cars are speeded up. With this time-elapsed video, a two-hour videotape can last three days before a Caltrans work crew has to install a replacement.

When the tapes are returned to Caltrans district headquarters in Santa Ana, El-Harake and other officials can monitor the disposition of the car-pool lanes with a simple TV screen and VCR, watching three hours worth of traffic rush by in less than half an hour. The tapes also carry the "real time" in minutes, the date and the location where the pictures were being shot.

By monitoring the videos, officials will learn how the car-pool lanes and their revolutionary 14-foot buffers perform. They can count the number of people who risk a ticket by violating the buffer, an offense that carries a \$246 fine, and study how well the car-pool lane performs as traffic slows in the mixed-use lanes.

Caltrans officials have been studying the pictures delivered by the cameras for only about a week, and the entire study will continue for another six months. But it already appears that the 14-foot buffers are a significant improvement on the old designs, El-Harake said.

There are fewer violations in the new lane. In addition, the buffer appears to help keep traffic in the car-pool lane moving at a good clip even when the

Copyright (c) 1990, Times Mirror Company



(c) 1991 Los Angeles Times, January 30, 1991

rides to passengers whose bus arrives more than 15 minutes behind schedule.

Although that program received a lukewarm response at first, Patsaouras said more people have heard about it now and it will continue indefinitely. Other programs have included discounts for corporate passengers and reduced fares for some sections of the Metro Blue Line.

SUBJECT: COMMUTING; SOUTHERN CALIFORNIA RAPID TRANSIT DISTRICT; BUSES;  
SCHEDULES; CUSTOMER SERVICE; COMPUTER APPLICATIONS; TRANSPORTATION ROUTES; LOS  
ANGELES COUNTY -- TRANSPORTATION

the Santa Ana Freeway from Orange County typically have the lowest vehicle occupancy, according to Caltrans. The Hollywood, Pomona and Harbor freeways, meanwhile, have the highest rates.

As transportation gurus see it, several factors have in recent years extinguished any embers of hope for a marked upswing in car pooling.

Relatively low gas prices through most of the 1980s and the unwavering practice by most businesses of subsidizing employee parking have eased the financial costs of driving a car and kept workers commuting alone instead of jumping with both feet into ride sharing.

Many motorists grumble about the inconvenience of car pooling--the time lost picking up passengers or the potential hassle of not having a way to run errands during the workday.

Others jealously guard the inner sanctum of their cherished vehicle. Car pooling, they worry, could mean opening the door to strangers who, God forbid, might have bad breath or a penchant for rock music instead of radio news.

"For me, it was the White Shoulders perfume," explained Martha Washburn, a legal assistant in Newport Beach who gave up car pooling after seven months. "It sounds like picky stuff, but in the morning the smell of this woman's perfume would just linger. I'd sometimes get nauseous, especially if I didn't have breakfast."

Status can also play a role. The task of prying someone from their Mercedes or BMW and putting them into something as sensible as a car pool has proven particularly vexing in car-crazy Southern California, where what one drives often equates to who one is.

"During the go-go '80s, people felt they would lose a few notches on the social scale if they even thought about ride sharing," said Peter Everett, a Penn State University marketing professor who has done extensive research on car pooling. "You're not going to get a guy out of his \$30,000 car to save a few dollars and lose an incredible amount of social status. Prestige is a big deal."

Proponents of car pooling are the first to admit ride-sharing fever is not exactly sweeping the Southland. But they see reason for hope.

The passage in June of a state gas tax increase to finance transportation improvements will fund construction of more car-pool lanes that should help encourage ride sharing along traffic-choked freeways.

Meantime, Commuter Transportation Services Inc., the nonprofit outfit that helps match car poolers in Southern California from a list of 500,000 commuters registered with its Commuter Computer service, is planning a campaign early next year stressing that occasionally ride sharing can help.

One day a week is all they ask.

"We'd see an immediate reduction in traffic by 20%," said Jim Sims, the agency's president. "It would mean free-flowing traffic, less pollution and a shorter trip to work for everyone."

Although it is too soon to tell the long-term effects, car-pool promoters are encouraged by an increase in the number of drivers calling for ride-sharing information since the Persian Gulf crisis created a price increase at the gas pump.

There also is the driving force of Regulation 15, the region's new air quality provision that requires employers to try to reduce the number of automobile trips to the workplace. The rule requires businesses with more than 10 employees to submit ride-sharing plans to the South Coast Air Quality Management District. While the companies are required to promote ride sharing, employees are not obligated to participate. The full effect of the regulation has yet to be felt, but many businesses already have embraced car pooling as their prime tactic for easing congestion.

"I think for most companies, car pooling is certainly the cheapest way to meet the goals," said Claudia Keith, an AQMD spokeswoman. "Employers have found car pooling helps get workers to the job on time and not as stressed out. A lot of companies are realizing it can be a bonus instead of a hindrance."

Critics say Southern California companies are not taking aggressive enough measures to promote widespread ride sharing. They argue that the battle to win car-pool converts must begin in the company parking lot.

Studies by SCAG show that if more commuters had to pay for parking in pricey high-rise lots, where the monthly tab can run upward of \$200, ride sharing would surge. Many employers seem reluctant to embrace the notion. When Los Angeles recently imposed a 10% parking tax, many companies simply absorbed the extra cost.

Moreover, workers tend to balk when their free parking is threatened. Los Angeles County officials encountered stiff resistance from unions over a plan to make county employees pay for parking. But last week, they instituted the plan.

Southland cities have not helped matters, doggedly sticking to the timeworn practice of requiring plentiful parking at new office buildings instead of advocating ride sharing and other alternatives. Most cities are reluctant to adopt the more progressive posture, fearful that businesses will move down the block to municipalities that do not limit parking.

Some ride-sharing advocates are pushing another tactic, urging companies to stop underwriting parking and instead offer workers a "transportation allowance" of perhaps \$100 if they car-pool or use public transit. Under this scenario, workers who continue to drive alone would be hit by a double whammy--they would pay for parking and not reap any monetary benefit.

"The way parking is now, it's a use it or lose it proposition for most workers," Huddy said. "Our evidence shows that given the choice, people would tend to keep the money and try to find another way to work."

Other factors--both philosophical and psychological--have conspired to stem the growth of car pooling.

Although freeways are getting more congested, the day-to-day changes are so minute that commuters are not spurred to take evasive action such as joining a car pool. Moreover, most do not perceive ride sharing to be a financial boon, even though studies by Commuter Computer indicate that it can save as much as \$2,000 in wear and tear on the car and gas costs.

Research also shows that many commuters are afraid to take the leap because of an initial shyness with strangers. Promoters have found that the most lasting car pools spring from the home or workplace.

Some people cannot seem to even buy a car-pool mate.

George Davidovich, a legal secretary at a downtown Los Angeles law firm, said he has come up empty handed after searching for a year. During the hunt, he advertised in the company newsletter, offered to make espresso each morning, and even promised to pay the full tab for parking.

"I found nobody," he muttered. "I'm still kind of shaking my head about it."

The workaday world can also infringe on car pools. A big overtime project may cause problems, or dropping the kid off at child care can get in the way.

"Car pooling is not very flexible," said David Stein, principal planner for SCAG. "If one person has to work even five minutes late, they either have to delay their partner or find another way home. For a professional, that's difficult."

Ken Bauer, a car-pool veteran of two decades, has a ready remedy.

"We don't wait for people if they're late," said Bauer, human resources manager for Arco in Los Angeles. "We have specific times and we leave at those times. And we leave people. It's amazing. You may leave someone once or twice and all of a sudden they get the message and aren't late any more."

Many commuters stay out of car pools because they think they would waste time.

"It's faster to go out into your garage, hop into the car and drive to work," said Elizabeth Deakin, a professor at UC Berkeley's Institute of Transportation Studies. "If you have to stop and pick someone up you can add five or 10 minutes to the trip. Unless there's some countervailing force like a car-pool lane to save a bit of time, it's hard for most people to justify that they're doing it for the good of society."

With the looming threat of Regulation 15, some businesses have retaliated by guaranteeing workers a ride home via taxicab if they miss their car pool. Others, such as IBM in downtown Los Angeles, have contracted with rental car firms to provide employees midday wheels if they need them.

Many firms continue to push car pooling with incentives such as mugs bearing the company logo or parking spaces a few steps closer to the office. Some authorities say it is not enough.

"As long as we restrict the incentives for car pooling to things that are really rather mild, like prizes and free lunch once a month, we're going to get a rather mild response," said Genevieve Giuliano, an associate professor of urban and regional planning at USC. "It's not enough to offset the extra time and loss of convenience."

#### Car-Pooling in Southern California

Through traffic is worse than a decade ago, car pools now make up a smaller percentage of the vehicles on the road, according to Caltrans. As a result, the average number of people per vehicle has dropped slightly since 1980.

'80: 1.22

'82: 1.20

'84: 1.18

'86: 1.17

'88: 1.17

'90\*: 1.19\*

\*Estimate for 1990

Caption:

Chart: Car-Pooling in Southern California, ANDERS RAMBERG / Los Angeles Tim

Descriptors: CARPOOLS; SOUTHERN CALIFORNIA--TRANSPORTATION; TRAFFIC  
MANAGEMENT; LIFESTYLES; COMMUTING; INCENTIVES

Copyright (c) 1990, Times Mirror Company

1 of 1 Complete Record

01314272 60706

CAR CZARS

A BRAVE BAND OF REFORMERS, THEIR MISSION IS TO GET YOU TO SHARE

THE RIDE TO WORK

LOS ANGELES TIMES (LT) - THURSDAY June 1, 1989

By: CONNIE KOENENN; Times Staff Writer

Edition: Home Edition Section: View Page: 1 Pt. 5 Col. 2

Story Type: Series

Word Count: 1,954

Memo:

Series: RESHAPING THE FUTURE

It took Janet Newton of Santa Ana eight months to find a car-pool partner. She called every person on the computerized ride-share match list at McDonnell Douglas Space Systems Co. in Huntington Beach, where she works.

"Everyone had a legitimate excuse," she said. "They had to pick up their kids school, or took an evening class, or had aerobics after work, or put in lots of overtime."

The realization that people had valid reasons for their drive-alone pattern was a valuable lesson for Newton because her job is to change that pattern.

#### Cutting-Edge Job

A year ago she came to McDonnell Douglas as the company's Commuter Services Administrator, a bland-sounding title for a job unknown 20 years ago and now considered cutting edge. In her new position, Newton's success will be measured the number of McDonnell Douglas' 8,400 Huntington Beach employees she can persuade to commute by car pool, van pool, bus, bicycle, walking or jogging--anything but driving alone in their cars.

"I know all the driver concerns, and you have to answer every negative with something positive," Newton said. "It's a tough job, it's very hard. But it's not going to go away: It's a career of the future."

The notion that prying Southern Californians out of their automobiles is a job with a bright future might be laughable, except for one phenomenon: Regulation XV--also known as the "Commuter Program."

Adopted in December, 1987, by the South Coast Air Quality Management District, the regulation is aimed at fighting air pollution by reducing Southern California commuter traffic, now estimated at nearly 7 million car trips daily. Its seemingly modest goal is to raise the number of human bodies in the average automobile from the present 1.13 to 1.5.

The unique aspect of the regulation--which has the enforcing clout of heavy penalties for noncompliance--is that it hands the responsibility for achieving this turnaround to businesses.

Thus, by January, every Southern California company with 100 or more employees at one site must submit to the AQMD a ride-sharing program--complete with incentives the company hopes will actually get employees to consider leaving their cars at home. The regulation also specifies that every qualified firm must have a staff Employee Transportation Coordinator--or ETC--to carry out the program.

Since an estimated 8,500 businesses will be affected, in effect, Regulation

XV has created 8,500 new full- or part-time positions in transportation management.

"Basically," transportation consultant Harold Katz says, "Regulation XV has created a whole new profession almost overnight."

By whatever name--Commuter Services Administrator, Transportation Demand Manager, Commuter Coordinator, or any of a number of variations--businesses are scurrying to find qualified candidates with the special talents to win converts to ride-sharing.

Not so incidentally, the men and women who had been struggling for years to launch company car-pool and van-pool programs, suddenly are being invested with new clout.

Says Lee Goldenberg, now manager of commuter services offices for the Department of Water and Power (which AQMD has cited as offering a model ride-share program): "I've been in this work for almost nine years, and I can guarantee you that ride-sharing has not been a popular topic with businesses. But now I can't go to a meeting without getting a job offer."

And newcomers, who sometimes hadn't even heard the phrase ETC before they became one, are finding themselves in a brand new world.

#### 'Started Reading'

At Litton Industries in Woodland Hills, Lorena Parker moved from the human resources department 15 months ago to her new post of Employee Transportation Coordinator.

"I walked into an empty office and there was a little stack of information on the desk," she said. "I started reading about Regulation XV."

Since then she has surveyed employees, isolated target groups, sponsored a transportation fair with free food and shuttle service, and spent a lot of time talking to employees about what they do and don't want.

"You wouldn't make it in this type of job if you weren't interested in people," she said. "It takes a lot of personal effort, and it can get very frustrating. The AQMD puts all the pressure on the employer but nothing on the employee."

In other words, ride-sharing has to be sold, and marketing is a word that sprinkles any conversation on the subject.

With no lesson plan to follow, resourcefulness is a driving force. At downtown Arco, Bob Johnston administers a comprehensive program that includes 55 vans and boasts an enviable 1.96 average vehicle ridership.

"You don't pick up a book and say here's the answer," Johnston said. "Whatever you can come up with, whatever you can sell your manager, whatever works, that will do it. We need new blood, and new ideas continually moving."

Brainstorming and networking, the transportation coordinators are coming up with a full range of promotional techniques. Some samples, from various companies:

Badges that entitle car-poolers to a special "car-pool" lane at the company cafeteria, new walking shoes for people who move closer to work, preferential parking spaces for car-poolers, showers and lockers for bicycle riders, on-site

bus pass sales, display racks of bus schedules, mailing bus passes to employees' homes so they won't have to stand in line, scheduling formation meetings for van pools on company time, lapel pins, rental libraries for audio tapes, ride-share contests with substantial prizes such as video Camcorders and large television sets, recognition lunches.

### A Major Breakthrough

And ride-share coordinators throughout the area think they have made a major breakthrough with the Guaranteed Ride Home program. It works in various ways, but essentially provides that in any family or personal emergency, the car pooler or van pooler will be given a car to drive home.

"You're not stuck at work, which is a major argument against car-pooling," said Johnston. "It gives people a warm, fuzzy feeling."

As Michael Soper, the first full-time transportation coordinator at Canoga Park's Rocketdyne, where 8,603 workers design and manufacture shuttle engines, put it:

"Promoting ride-sharing is overcoming peoples' objections."

But Soper, Parker and other newcomers, who are starting from scratch in their futuristic careers, have also discovered that they have a lot of support.

### 'A Little Community'

"The ride-share coordinators are almost like a little community," says Parker, who works with other coordinators in the heavily commercialized Warner Center area.

At McDonnell Douglas, Janet Newton who has a background in commuter coordinating, describes ride-share coordinators as "a neat networking group." Because she has experience, and her Regulation XV plan was accepted by AQMD (which bounces back plans that don't offer sufficient incentives), she gets frequent calls for advice.

"We don't keep secrets," she said. "Why re-invent the wheel?"

In addition to informal networks, the ETCs have their own organization, the Assn. for Commuter Transportation whose membership has jumped from 100 to 330 in the past year. Says chapter president Eric Schreffler: "We see our job as providing specific workshops, activities, networking, and support network for these coordinators. Some of them have become the resident expert in a hurry, and that can be tremendously stressful."

### Training Required

Official training is helpful but minimal. The AQMD requires a three-day training course, available at several locations. And for serious transportation students, UCLA Extension's Public Policy program offers the nation's only certification course in Transportation Demand Management.

Essentially, though, it is through networking that ETCs learn their new trade: speaking the language of HOVs (high-occupancy vehicles) and AVRs (average vehicle ridership), organizing a van pool then learning how to do conflict resolution in order to keep the fleet going ("you almost have to be a surrogate therapist," said one), learning to balance optimism with patience.

While practicing patience, the new transportation coordinators search

diligently for the keys to changing behavior patterns. Often success is counted in little victories.

Michael Soper, who has increased van pools from five to 18 at Rocketdyne, is proud of other strides.

#### Slow Progress With Passes

"Last month we started selling bus passes and sold zero passes. The second month I came up with a brochure, handed them out to 3,000 employees and we sold 18 passes. This month, I will have RTD offer a question-answer day, and hope we'll sell more."

But marketing techniques only work if, as Janet Newton observed, every employee negative can be answered with a positive.

"For instance, the myth of car-pooling is that people have to do it every day, and you are locked into some long-term commitment."

That's not the case, she said. Car-pooling twice a week can be looked on with great favor in the ETC office.

People who commute long distances in comfortable cars aren't going to trade them for uncomfortable vans, says Lee Goldenberg of DWP, which has 51 van pools on the road and 30 more on the way.

#### Went for Luxury Vans

"We look at cars as extensions of peoples' personalities, so we give them luxury vans," he said, "with 12 seats instead of 15 for lots of leg room, seats that recline with their own reading lights, personalized air conditioning and heating outlets."

The key is positive thinking. "We want to offer carrots (incentives) that are meaningful," says Ann Cousins at Hughes Aircraft Co. Her official title is manager support services, corporate administration for Hughes, but she's also been called the "czar of commuter services," said Cousins, who has spent the last three months working on Regulation XV plans for the company.

Hughes Aircraft Co., like several giant Southern California employers, started its first car-pool program in the late '70s because of the oil embargo. Now, with 52,000 employees covered, Hughes has 302 van pools on the road (for 2,400 commuters), 5,600 commuters car-pooling, about 400 people riding a bus, about 300 who ride a bike and about 325 who walk to work.

"That's a pretty fair achievement, but it has taken us 10 years to reach it," she said.

#### A Revolutionary Rule

"But Regulation XV is revolutionary: It sets a goal, but it tells us you don't have another 10 years to achieve the effort." (The regulation is being phased in through January. Each company receives AQMD notification that it has 90 days to submit a plan).

Although every ride-share coordinator has come up against the hard-line driver who thinks his or her constitutional rights are being threatened by even the prospect of sharing, there are increasing numbers of others who look at gridlock and decide to give it a try, said Cousins. She thinks critical mass is achievable.

"Some die-hards we will never get," she acknowledged, "but in this day and age, with the surge of interest in health, breathing clean air, not being stressed out by the commute, if we can educate people on what the problems are and how it will help their quality of life, we think we can make a lot of progress."

And, despite the fact that ETCs are sometimes called masochists, one element the new career that all ETCs mention is that their work is environmentally sound.

When Lee Goldenberg returns to his downtown office from a meeting in the Valley and passes the DWP Palmdale vans heading toward home, it's a "good feeling," he said.

"You know you're taking 600 vehicles off the freeways, you're conserving fuel, you're saving thousands of dollars per employee and keeping tons of pollutants out of the air.

"You just feel like you're doing everything right."

**Caption:**

Photo: Janet Newton, one of the new road czars, works to wrest McDonnell Douglas workers out of their cars.--THEODORA LITSIOS

**Descriptors: SOUTHERN CALIFORNIA--TRANSPORTATION; AIR POLLUTION--SOUTHERN CALIFORNIA; BUSINESS--SOUTHERN CALIFORNIA; CARPOOLS; TRAFFIC MANAGEMENT; AIR POLLUTION CONTROL; EMPLOYERS; GOVERNMENT REGULATION**

Copyright Times Mirror Company 1989

1 of 1 Complete Record

01750852 10036

Rail Report Predicts 23,000 Daily Riders, 27 Commuter Trains

Transit: The cost of right of way improvements, stations, rolling stock and shared facilities needed for start-up service is estimated at \$582 million.

Los Angeles Times (LT) - SATURDAY December 22, 1990

By: KENNETH REICH; TIMES STAFF WRITER

Edition: Home Edition Section: Metro Page: 3 Pt. B Col. 4

Word Count: 652

A draft report on the planned Southern California commuter rail system predicts that 27 round-trip trains will carry 23,329 one-way passengers a day by the time all but one of the lines are operating in 1995.

The 88-page report prepared by the new Southern California Commuter Rail Coordinating Council, consisting of transportation officials from five Southland counties, also disclosed plans to extend service to such outlying points as Hemet and Redlands in what eventually will be 412 miles of lines and 50 stations.

The report said Moorpark-Los Angeles, Santa Clarita-Los Angeles and San Bernardino-Los Angeles service would begin in 1992, Oceanside-Los Angeles service in 1993 and San Bernardino/Riverside-Irvine, Riverside-Los Angeles and Hemet-Riverside service in 1995. It said no start-up date is yet available for Redlands-San Bernardino service.

"The total estimated cost of right of way improvements, stations, rolling stock and shared facilities needed for start-up level of service is estimated at \$582 million," said the report, presented by Fred Reagan, executive director of the Riverside County Transportation Commission.

It estimated that initial annual operating costs would range between \$19 million and \$28 million.

As the report was submitted this week, it was disclosed that the state transportation commission is urging Southern California counties to defer purchase of Canadian-built bi-level commuter rail cars until Caltrans adopts performance specifications for such cars in April.

The Los Angeles County Transportation Commission approved the purchase of 40 of the 162-seat cars from the UTDC firm of Kingston, Canada, last month, with delivery set for 1992. But no final purchase agreement has yet been signed.

Neil Peterson, the executive director of the Los Angeles commission, expressed some impatience with the calls for delay, saying in an interview: "I can understand how some people would be upset that we were prejudging the results of their work (adopting the specifications). But are they moving in every way aggressively to get service to the public?"

Peterson said he is confident that the Canadian cars will meet the specifications that the state eventually adopts.

The commuter rail planning report, meanwhile, said it would be critical to provide adequate park-and-ride lots and connecting bus or light-rail services at the stations along the lines to get the highest possible patronage.

But in sketching financial details, the report said it would be up to local governments along the way to foot the entire bill for station development.

It estimated capital costs for starting service to be \$85.9 million for the

Moorpark-Los Angeles line, \$51.8 million for Santa Clarita-Los Angeles, \$115.2 million for San Bernardino-Los Angeles, \$121.4 million for San Bernardino/Riverside-Irvine, \$54.4 million for Riverside-Los Angeles, \$50.3 million for Hemet-Riverside and \$103 million for Oceanside-Los Angeles.

Several of the projected commuter lines now carry Amtrak intercity service, which would continue. Between Los Angeles and San Bernardino, there remains a choice to be made between two alternate routes.

The report said the most significant long-range technology issue affecting commuter rail development is the possible electrification of the lines. It said electrification would allow higher speeds and stem pollution, but also would entail major capital investments, which were not specified.

The report also recommended that the system have "a single management structure" and allow for the common use of equipment and facilities.

"Service should be provided by a single operator and passengers would be able to purchase a single ticket allowing transfer to other routes within the system and to connecting transit services," it went on. "Service schedules would be coordinated and there would be a unified fare structure and an integrated passenger information system."

Los Angeles, Orange, San Bernardino, Riverside and Ventura counties are in the process of forming a joint authority to administer the network, and San Diego County may be affiliated in a limited way, said Dana Reed, chairman of the coordinating council.

COMMUTER RAIL PLAN

Below are the estimates of daily ridership for the start-up-level service alongwith the train frequency rates during peak periods.

Route	Daily One-Way Passengers	Round trip Trains during peak periods	Service Frequency
Moorpark to Los Angeles	3,398	4	every 45 minutes
Santa Clarita to Los Angeles	2,688	3	hourly
San Bernardino to Los Angeles	4,490	5	every 40 minutes
Redlands to San Bernardino	-	-	-
San Bernardino/Riverside to Irvine	3,178	4	every 50 minutes
Riverside to Los Angeles	3,599	2	hourly
Hemet to Riverside	1,506	2	hourly
Oceanside to Los Angeles	4,470	3	every 30 minutes
Total	23,329		

Source: Los Angeles County Transportation Commission

Caption:

Table: COMMUTER RAIL PLAN, Los Angeles Times

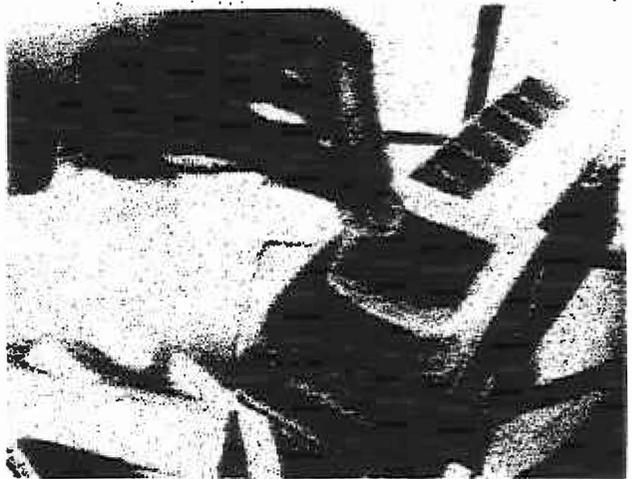
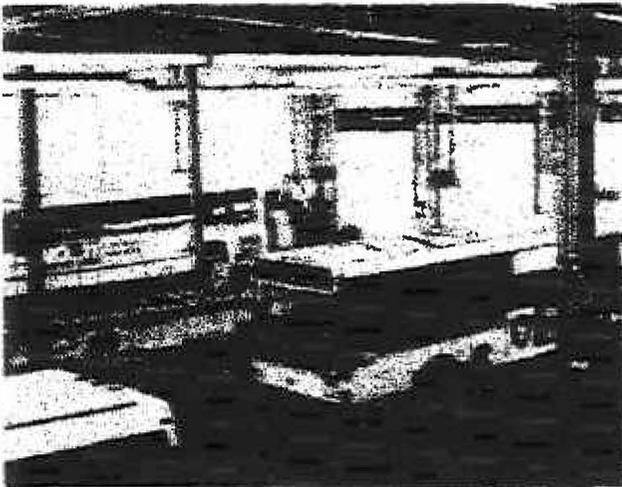
Map: COMMUTER RAIL LINES, Los Angeles Times

Descriptors: RAILROADS--SOUTHERN CALIFORNIA; TRANIST SYSTEMS--SOUTHERN CALIFORNIA; SOUTHERN CALIFORNIA--TRANSPORTATION; SOUTHERN CALIFORNIA--DEVELOPMENT AND REDEVELOPMENT; COMMUTING; FORECASTS



425 South Main Street  
Los Angeles, CA 90013

**For Tour Reservations:**  
RTD Local Government &  
Community Affairs Dept.  
Call (213) 972-4698



# L.A.'S NEWEST ATTRACTION

**RTD**  
*"The Right Thing to Do"*



ANNOUNCING  
**THE RTD SPEAKER'S BUREAU**  
*Our Region is on the Move!*



The RTD Speaker's Bureau has trained communications specialists available to speak to your group on a variety of transit related issues. Call now to schedule a representative for your next breakfast, luncheon, dinner or business meeting.

**FIND OUT MORE ABOUT THESE TOPICS:**

RTD METRO BLUE LINE  
METHANOL POWERED BUSES  
SENIOR CITIZEN DISCOUNTS  
ACCESSIBLE TRANSPORTATION (DISABLED)  
ANTI-VANDALISM AND ANTI-GRAFFITI PROGRAMS  
POLICY ISSUES  
STUDENT DISCOUNTS  
BUS DEMONSTRATIONS  
CAREER DAY  
BUS ROUTES

**PLEASE CONTACT: RTD SPEAKERS' BUREAU**  
**LOCAL GOVERNMENT AND COMMUNITY AFFAIRS**  
**(213)972-4698**  
**(213)972-4691**

**RTD**  
*"The Right Thing to Do"*

CLEAN AIR - TRANSPORTATION

BIBLIOGRAPHY

**RTD**

*"The Right Thing to Do"*

LEGISLATION

CLEAN AIR ACT, AMENDMENTS 1990. PL 101-549 (104 STAT. 2399)

**RTD**

*"The Right Thing to Do"*

ARTICLES

2-22-91  
File 6, 63

t s7/5/2-3

7/5/2 (Item 2 from file: 63)

488478 DA

MASS TRANSIT--THE CLEAN AIR ALTERNATIVE

American Public Transit Association 1201 New York Avenue, NW  
Washington D.C. 20005

1989 n.p.

SUBFILE: UMRIS

AVAILABLE FROM: American Public Transit Association 1201 New York  
Avenue, NW Washington D.C, 20005

The diminishing quality of air in communities across America, be they cities, suburbs or small communities, has led to increased attention to public transit as a possible alternative means of commuting. Points cited for promoting public transit includes: lower levels of hydrocarbon, carbon monoxide, and nitrogen oxide emissions, and larger carrying capacity (especially heavy and light rail vehicles) requiring fewer vehicles on the road. It is further stated that the nation needs to begin to address the problems of our air quality as it is expected to deteriorate even further due to increased automobile travel in the near future. A total plan should include mass transit as well as any and all forms of high occupancy vehicle and shared ride travel which will decrease the number of vehicles per person on the road adding to the dangerous levels of exhaust emissions released into our air.

DESCRIPTORS: AIR POLLUTION CONTROL; ALTERNATIVES; CAR POOLS, EMISSION RATES; ENVIRONMENTAL IMPACT, EXHAUST EMISSIONS; PUBLIC TRANSIT; RIDESHARING; VANPOOLS

7/5/3 (ITEM 3 FROM FILE: 63)

310616 DA

TRANSPORTATION PLANNERS JOINT BATTLE FOR CLEANER AIR

Seltz-Petrash, A (American Society of Civil Engineers)

American Society of Civil Engineers

ASCR Civil Engineering VOL> 49 No., 11 Nov 1979 pp 84-88

SUBFILE: EIT; HRIS; UMRIS

AVAILABLE FROM: Engineering Societies Library 345 East 47th Street  
New York New York 10017

Under the terms of the '77 Clean Air Act Amendments, transportation planners must find ways to reduce air pollution from mobile sources. Actions must begin in 1980. The article, based on interviews with transportation planners in Los Angeles, Boston, Baltimore and Denver, discusses common actions planned, including vehicle inspection and maintenance programs, car and van pools, priority lanes, flextime and improving mass transit. Case history of New Jersey's inspection and maintenance program included.

DESCRIPTORS: AIR POLLUTION; CAR POOLS; CLEAN AIR ACT; CONTROL; ENERGY AND ENVIRONMENT; MANAGEMENT; MASS TRANSIT; MASS TRANSPORTATION; PLANNING; RESERVED LANES; TRANSPORTATION; TRANSPORTATION PLANNING; VEHICLE INSPECTION; VEHICLE MAINTENANCE;

?

RTD

*"The Right Thing to Do"*

1 AST  
Crow, Patrick  
Alternate motor fuels debate peaks as action on Clean Air Act bill  
nears  
Oil & Gas Journal v87 p 21-3 October 9 '89  
il

SUBJECTS COVERED:  
Automotive fuel  
Alcohol fuels  
Clean Air Act

1 AST  
Rodriguez, Fred  
Digester gas is alternate fuel  
Water/Engineering & Management v 137 p 32-3 September '90  
diag

SUBJECTS COVERED:  
Sewage sludge/Gas production  
Gas fired boilers  
Sewage disposal plants/Power

3AST  
Malone, Michael P.  
Alternate fuels spark new concerns  
Traffic Safety v90 p 18021 July/August '90  
i.

SUBJECTS COVERED:  
Automotive fuel  
Gas as fuel/Natural gas  
Alcohol fuels

4AST  
Alternative motor fuels due extensive testing  
Oil & Gas Journal v87 p 24+ October 23 '89  
il

SUBJECTS COVERED:  
Alcohol fuels  
Automobile engines/Exhaust  
Fuel research

6 AST  
California alternate fuels competition heats  
Oil & Gas Journal v87 p 26 May 15 '89

SUBJECTS COVERED:  
Propane  
Alcohol fuels

9AST  
Congress, agency boost alternate motor fuels  
Oil & Gas Journal v 86 p26+ September 26 '88

RTD

—“The Right Thing to Do”

SUBJECTS COVERED:  
Automobile engines/Fuel

10 AST  
Worries about ecology revive alternate fuels  
Oil & Gas Journal v86 p 36+ September 13 '88

SUBJECTS COVERED:  
Coal research  
Fuel research  
Waste to energy plants

1 AST  
Sperling, Daniel, Deluchi, Mark A.  
Is methanol the transportation fuel of the future?  
Energy (Oxford, England) v14 p 469-82  
bibl (p481-2)

SUBJECTS COVERED:  
Alcohol fuels  
Gas as fuel/Natural gas  
Greenhouse effect

2 AST  
Diflilio, Carmen  
Timing of methanol supply and demand: implications for  
alternative transportation fuel policies  
Transportation Research. Part A, General v23A p229-41 May '89  
bibl diags

SUBJECTS COVERED:  
Alcohol fuels  
supply and demand  
Chemical plants/Construction

4 AST  
Kliman, Melvin L.  
Methanol, natural gas, and the development of alternative  
transportation fuels  
Energy (Oxford, England) v8 p 859-70 November '83  
bibl diag

SUBJECTS COVERED:  
Automotive fuel  
Gas as fuel/Natural gas  
Alcohol fuels

BOOKS  
FILE 470  
2-2-91

T S 5/5/1-3

5/51  
01286438 0029952XX STATUS: Active entry  
TITLE: Transportation and the 1977 Clean Air Act Amendments  
PUBLISHER: Am Soc Civil Eng PUBLICATION DATE: 1980 (800101)  
NO. OF PAGES: 440p.

RTD  
*"The Right Thing to Do"*

LCCN: 80-066291  
BINDING: pap. - \$34.00x  
ISBN: 0-87262-242-8  
VOLUME(S): N/A  
IMPRINT: N/A  
STATUS IN FILE: New (80-06)  
SUBFILE: pb (Paperbound Books in Print); ST (Scientific and  
Technical Books and Serials in Print); LB (Law Books in Print)

LIBRARY OF CONGRESS SUBJECT HEADINGS: TRANSPORTATION-LAWS AND  
REGULATIONS (00474435); AIR-POLLUTION (00008436)  
PAPERBOUND BOOK SUBJECT HEADINGS: TECHNOLOGY-TRANSPORTATION  
(00003980)

5/5/2  
01234983 0086702XX STATUS: Out of print (12-85)  
TITLE: Who Pays for Clean Air: The Cost & Benefit Distribution of  
Federal Automobile Emission Standards  
AUTHOR: Harrison, David, Jr.  
PUBLISHER: Ballinger Pub PUBLICATION DATE: 10/1975 (751001)  
NO. OF PAGES: 192P.  
LCCN: 75-022060  
BINDING: TRADE - \$20.00x prof ref  
ISBN: 0-88410-451-6  
VOLUME(S): N/A  
ORDER NO.: N/A  
IMPRINT: N/A  
STATUS IN FILE: New (81-06)  
NOTE(S): appendix. bibl. footnotes. index  
SUBFILE: LB (law Books in Print)

LIBRARY OF CONGRESS SUBJECT HEADINGS: AIR-POLLUTION (00008436);  
MOTOR VEHICLES (00316994)  
PAPERBOUND BOOK SUBJECT HEADINGS: TECHNOLOGY-TRANSPORTATION  
(00003980)

5/53  
00453992 1304732XX STATUS: Out of print (07-86)  
TITLE: Transportation Controls for Clean Air: A Manual for  
Citizen Participation in State Implementation Proceedings Under the  
Clean Air Amendment of 1970  
AUTHOR: Hawkins, David; Phillips, Cullen  
PUBLISHER: Natl Resources Defense Coun PUBLICATION DATE: 1972  
(720101)  
NO. OF PAGES: 53p  
LCCN: N/A  
BINDING: Trade - \$2.50  
ISBN: 0-318-15838-8  
VOLUME(S): N/A  
ORDER NO.: N/A  
IMPRINT: N/A  
STATUS IN FILE: New (81-03)  
SUBFILE: LB (Law Books in Print)

LIBRARY OF CONGRESS SUBJECT HEADINGS: AIR-POLLUTION (00008436);  
TRANSPORTATION-LAWS AND REGULATIONS (00474435)  
PAPERBOUND BOOK SUBJECT HEADINGS: NATURE-CONSERVATION (00002926);  
TECHNOLOGY-TRANSPORTATION (00003980); GOVERNMENT AND POLITICAL  
SCIENCE-LAW-STATE AND LOCAL (00001211)

RTD

*"The Right Thing to Do"*