The Bus Riders Union Transit Model:

Why a Bus-Centered System Will Best Serve U.S. Cities

April 2009

Written by Ryan Snyder for the Labor / Community Strategy Center

Labor/Community Strategy Center
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Ryan Snyder was trained at the UCLA School of Public Affairs, Department of Urban Planning. He studied with Dr. Martin Wachs during Wachs' tenure as Director of the UCLA Institute of Transportation Studies. Over the last twenty years Mr. Snyder has specialized in transportation planning and environmental planning. He brings expertise in lawmaking at the state level and ordinance drafting at the local level, including serving as Vice President of the Los Angeles Board of Transportation Commissioners 1993-1994. He is president of Ryan Snyder and LLC (RSA), a new-urbanist transportation planning consulting firm he founded in 1987 whose clients include Caltrans, San Diego County, the Orange County Transportation Authority and the Cities of San Diego, West Hollywood, Santa Monica, Long Beach, Burbank, Anaheim, Santa Barbara, Honolulu, Pasadena, and Texas. Ryan Snyder and LLC specializes in transit and paratransit planning, taxi regulations and taxi industry development, Transportation Demand Management (TDM), clean fuel vehicles, as well as bicycle and pedestrian planning. Mr. Snyder has given lectures on transportation planning at the UCLA Graduate School of Architecture and Urban Planning, in the UCLA Geography Department, and in the UCLA Extension. He has presented papers and talks at transportation and urban planning conferences all over the country.

The Labor/Community Strategy Center is a "think tank/act tank" for regional, national and international movement building, founded in 1989 and based in the 10 million-person world city of Los Angeles. Our campaigns, projects, and publications are rooted in working class communities of color, and address the totality of urban life with a particular focus on civil rights, environmental justice, public health, global warming, and the criminal legal system. We build consciousness, leadership, and organization among those who face discrimination and societal attack--people of color, women, immigrants, workers, LGBT people, youth, all of whom comprise our membership. Our work challenges both major political parties and takes on the organized Right.

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Preface

The Bus Riders Union Model Shapes the National Debate

For the past 15 years, the Bus Riders Union has re-shaped the debate about transportation in Los Angeles and has had a growing influence on urban centers throughout the U.S. Today, the Strategy Center and BRU have initiated a new national campaign—Transit Riders for Public Transportation—that tries to bring the lessons of our work, and many others, into a coordinated national campaign.

Our first demand is that Congress should reverse the formula in federal transportation bills from 80% for highways and 20% for public transportation to 80% for public transportation and 20% for highways. This is based on our studies of greenhouse gas emissions, air toxics, and what it will really take to create an environmentally sustainable public transit future. Whether Congress keeps the 20% for public transportation or moves in the direction of our 80% proposal there will still be an important debate about which mode of transportation should be the centerpiece for sustainable cities based on an environmental justice worldview. The purpose of this report is to generate the most fundamental discussion about three competing modes of transit: bus, rail, and auto.

Surprisingly, even many environmentalists do not share our adamant view that auto use in urban centers must be reduced by 80 percent—through strict regulation and restriction of auto use. This can be achieved through auto free zones, auto free days, auto free rush hours, and of course, a first class transit system. We believe that a bus-centered system—with bus only lanes on major surface streets and highways, and major investment in bus capital and operations—can create an affordable, dynamic, comfortable 24/7 transit system with little time between transfers and a seat for everyone. This is the best systemic alternative to the auto that can meet the climate's most urgent timeframe.

In later publications we will go into greater detail about why, in the face of global warming and public health concerns, auto use must be dramatically restricted now. For those who agree, or those who are still thinking it out, there is another major question facing us: what is the most cost effective mode of public transit that can, with declining local, state, and federal funding, create a truly viable mass transit system that can replace the auto as the primary mode of transportation? What is the best mode of transportation that can really blanket a city and dramatically reduce greenhouse gas and air toxics emissions?

Hard Choices: Rail vs. Bus

Out of our studies as transit planners, our direct experience as bus riders and rail riders, as expert witnesses in front of the federal courts, we have grasped that the environmental movement, the environmental justice movement, and all those concerned about public transit must understand there are hard choices to be made. We have to be able to engage with intellectual honesty the bus versus rail debate. We understand that some may say, "Why can't we have it all?" In principle, bus and rail are public transportation modes that can be complementary. But in actual practice over the past twenty years, we have seen rail too often

play a regressive role. Its advocates have ended up fostering racial discrimination in many urban settings. The exorbitant costs of rail have led to few rail lines actually being built. Further, to pay for them, government transit agencies have carried out massive raids on capital and operating funds for buses, buses which we believe must be the centerpiece of urban transportation planning.

How has this happened? At $150 million a mile for above-ground construction and $350 million a mile for subway construction, rail is prohibitively expensive and fosters an aggressive, destructive competition for bus transit funding. Today, at a time of fiscal decline at all levels of government, a local transit agency can only afford a few rail projects before it runs up against cost overruns and disappointing ridership levels that break its own bank. Rail has become a very bad transit investment. In Los Angeles, the rail obsession created a financial "crisis" and forced the MTA in 1992 to try to "balance its budget on the backs of bus riders," as the NAACP Legal Defense Fund argued so persuasively in federal court. The court agreed and issued a temporary restraining order against the MTA's move to raise bus fares and eliminate the monthly bus pass as a way to resolve their budget woes. The MTA was planning to fund a new rail line with, in part, these higher fare revenues.

By raiding bus-eligible funding to pay for rail construction, the MTA was destroying the bus system, the single most important mode of transit for over 90 percent of its ridership: the 500,000 daily bus riders, of whom almost 80 percent are people of color, majority women, making an average of $12,000 a year. These are the "transit dependent riders," that is, the real people who most rely on public transportation. No matter how many times we tried to explain this argument we received strong resistance from many in the environmental establishment and those who thought rail would be cool in the abstract but did not have the energy or commitment to really study the facts. In the end, it wasn't until we won a landmark ten-year federal Consent Decree—in which the MTA had to agree that it had in fact raided bus funds to pay for rail construction costs and overruns—that credence was given to our argument.

The result of our fight for buses over rail has been a brand new state-of-the-art bus system, with 2,500 new compressed natural gas buses and lower fares. This has reduced emissions from the diesel buses we replaced and involved a transfer of $2.7 billion in public funds to 500,000 daily bus riders. We have a chance to build a world-class 24/7 bus system in LA with 5,000 buses. But what happened after our Consent Decree with the MTA expired three years ago? Despite the dramatic success of the bus system, which the MTA now touts as "the largest clean fuel bus system in the U.S.," no sooner did the Consent Decree expire than they began moving again to build more rail lines, dramatically increase bus fares, and cut bus service.

Indeed, there are class and race dynamics in our society that have an influence far beyond reasonable arguments based on cost-effectiveness and equity. The power of developers, corporate greed, and institutional racism over the lives and needs of low-income working class people of color are deep in the body politic. This report is an effort

to reach out to environmentalists, urban planners, scientists, government officials and all people of good faith. There are hard choices to make when it comes to planning the future of transportation. As we consider how to expand and develop our public transit systems to avert the coming ecological crisis and to build sustainable cities, we believe bus-centered systems are the way to go.

From Los Angeles to a national transit model

Ryan Snyder speaks with the authority of an urban planner who has taken on the bus versus rail debate since the reincarnation of rail in Los Angeles over twenty years ago. His focus is on Los Angeles—a sprawling megacity of 4,000 square miles, 11 million people and 7 million cars—but his project is to advocate for a national model. His thesis is that if rail fails to meet the most basic planning thresholds to warrant its construction in the most auto-centered, sprawling city in the nation, it cannot work in any other similar urban setting.

While of course we respect the specificity of each urban and rural experience, we also are convinced that the Bus Riders Union model is not primarily place specific. Struggles against the bankruptcy of rail and toxic highway expansion are being mounted in other urban centers across the U.S., including Boston, Atlanta, Austin, and San Francisco amongst others. We think the preponderance of the evidence calls for a major investment in bus capital and bus operations funds, and the dramatic reduction of funds for constructing new rail and highways. In the case of L.A., we believe a moratorium on rail and highway expansion is warranted. In other cities we support a complete moratorium on highway construction alone and urge organizers, advocates and scholars to consider moving toward a clean-fuel bus-centered system.

Transit Operations Crisis and Green Jobs

The convergence of the climate and economic crises has raised "green jobs" as a crucial concern for national policy. What we know is that massive investment into mass transit not only creates better and more affordable transit service, but it also means green jobs. Over the past 15 years the Bus Riders Union has created over 5,300 new green jobs through the expansion of the MTA's fleet by 500 new compressed natural buses, now billed as the "largest clean-fuel fleet in the country." Yet, in this time of financial hardship, when public transit has become one of the most basic needs of the social safety net, transit agencies are facing dire operations funding deficits that are forcing a crisis of service cuts and fare hikes across the country, from New York City to St. Louis to Los Angeles.

We need a massive infusion of local, state and federal funds not only to protect transit service levels and fare accessibility but also to create thousands of environmentally sustainable jobs in the process. According to the American Public Transportation Association, 60,000 jobs are created

for every $1 billion invested into mass transit. On the other hand $1 in service cuts resulting from operating deficits yields $10 in harmful local economic impacts, from lost wages to increased transportation costs. These worst impacts are borne by the poorest Black, Latino and Asian/Pacific Islander and white communities who are the most dependent on transit service, further discouraging people who have a choice to leave their cars at a time when ridership increasing across the country.

The good news

We commissioned this paper from noted transit planner Ryan Snyder to help grassroots groups, transit planners, and government officials understand the compelling argument for a bus-centered system. Since then we have taken our theory forward into two exciting fields of work:

- **Bus Only Lanes**. In March of this year, the federal government formally approved $9 million for bus only lanes on Wilshire Boulevard—the corridor with the highest bus ridership in the country. The victory comes on the heels of a three year hard fought public health and environmental justice campaign waged by the Bus Riders Union and the Clean Air Campaign to move MTA and the L.A. City Council to prioritize bus only lanes to reduce auto emissions and greenhouse gases
- **The Wilshire bus only lanes project**, which will begin this September, is the first down payment on a countywide bus-only lanes network.
- **Transit Riders for Public Transportation**. TRTP is an environmental justice and civil rights campaign advocating for a flip in the current funding formula of the $500-billion federal surface transportation act from 80% for highways and roads and 20% mass transit to 80% for mass transit and 20% for *maintenance* of highways, freeways and roads. Endorsers include WEACT for Environmental Justice in New York, Atlanta Transit Riders Union and Advocates for Environmental Human Rights. The current act, reauthorized every six years is set to expire in September of this year, with the next act hailed as the next "six year stimulus." TRPT is meeting with congressional representatives from Oregon, to New York, to New Orleans to San Francisco and leading grassroots district campaigns with a civil rights and environmental justice agenda.

We urge elected officials, foundation officers, environmental scientists, and grassroots organizers to read The Bus Riders Union Transit Model: Why a Bus-Centered System Will Best Serve U.S. Cities with an open mind and heart, and with a sense of the urgent choices facing us today.

Francisca Porchas
Lead Organizer
Clean Air, Clean Lungs, Clean Buses Campaign

Eric Mann
Executive Director
Labor/Community Strategy Center

Los Angeles
April 2009

Introduction

With the historic court-ordered civil rights Consent Decree that they won in their "Fight Transit Racism: Billions for Buses" campaign, the Bus Riders Union and Labor/Community Strategy Center have created a transit model in Los Angeles that compels us to debate fundamental transit policy issues.

This report examines these issues, and puts forth a set of policies for the MTA, as well as local and state governments to follow. It also urges members of Congress to base federal transit policy and funding on some of the conclusions of this report.

From 1996 to 2006 the Consent Decree protected bus riders from fare increases and severe cuts in service. In the aftermath of the expiration of the court-ordered Consent Decree, Los Angeles bus passengers face new threats.

The Consent Decree resulted from a hard-fought struggle. In 1992, the Labor/Community Strategy Center (LCSC) began a campaign to represent the interests of the transit-dependent in Los Angeles County. The campaign "Fight Transit Racism: Billions for Buses" was based on an environmental justice and public health perspective. The efforts were rooted in civil rights concerns since, under the law, race was a protected category that allowed litigation to remedy racial inequality in transportation. The transit dependent in Los Angeles County are profoundly poor and are overwhelmingly African-American, Latino, and Asian/Pacific Islander. The Strategy Center, represented by the NACCP Legal Defense and Educational Fund, presented a compelling case to a federal court that the civil rights of 450,000 bus riders were being violated and that a strong disparity existed along racial lines.

For the urban poor of color and the urban working class, public transit is their primary means of getting to work, school, the doctor, shopping, to visit friends or relatives, to worship, and attend cultural and artistic events. For many years, the transit-dependent in Los Angeles County have ridden on inferior transportation. Through an examination of budget priorities of the Los Angeles County Metropolitan Transportation Authority (MTA), LCSC and the Bus Riders Union argued that the disparity in the quality of transportation that people have is not simply incidental. The disparity has much to do with the priorities of the MTA and broader transportation policy. The disparity leaves transit-dependent people with fewer choices of where they can work, go to school and seek medical attention. It also leaves them unable to access shopping, recreation and other amenities. The federal court judge, Terry Hatter, agreed that the case had merit and issued a Temporary Restraining Order to stop an MTA fare increase. Through his intervention, he oversaw the negotiation of the Consent Decree.

The Consent Decree was a legally binding agreement between the MTA, the Bus Riders Union and the federal court. The Consent Decree required the MTA to do the following:

- **By 1997, reduce overcrowding** on buses so that on average no more than 15 passengers are standing, and by 2002 graduate down to 8 passengers standing.
- **Maintain fares** no higher than $1.35, lower monthly bus passes to $42 and establish a bi-monthly pass for $21.50 and a weekly pass for $11.
- **Initiate regional bus service** linking passengers with educational and medical institutions throughout the county.

This court order intended to force the MTA to elevate bus service to the top budget priority. While the MTA never fully complied with the Consent Decree,[i] it nevertheless forced them to purchase more buses, improve service, and keep fares down.

The Consent Decree expired in 2006, removing federal protection that passengers had. Already, it has become clear that the MTA wants to de-prioritize bus service. It raised the price of the regular monthly pass from $52 to $62 and day passes from $3 to $5 in 2007. Currently MTA's Long Range Transportation Plan is locking in multiple fare increases every other year for the next 30 years. The MTA also seeks to change service which will negatively impact passengers and to fund new rail lines that will require the agency to cut operating funds for the bus in order to pay for them.

Within this context we must again debate fundamental transit policy issues with implications far beyond Los Angeles itself.

- **First**, how can we protect the needs of the transit dependent and work to ensure that their transportation—and access to it—loses its inferior status?
- **Second**, what type of transit is most appropriate for Los Angeles?
- **And third**, how do we challenge the primacy of the automobile?

I. Appropriate Transit for Los Angeles

Sound transit policy and sound transit budgeting should rest on a thorough examination of appropriate transit technology for Los Angeles County. It's a matter of selecting the right tool for the right job. It makes no sense to use a wrench to pound a nail when a hammer will do a much better job. Similarly, a good surgeon wouldn't perform a heart bypass on a patient whose problem is torn ligaments in a knee. By applying appropriate technology to the task at hand, we can better serve our transit needs and make wise use of our transit budget. This report makes the case that bus-centered transit can much better serve us than rail-centered transit given the conditions in Los Angeles County, and that based on this model, bus transit will be a better choice in most urban centers of the U.S.

A. The Nature of Transit

Public transit is collective transportation. It "collects" people who are traveling the same direction at the same time along the same corridor into a vehicle. The size and type of vehicle, as well as the frequency with which the vehicle comes, depend on the critical mass of people who are making that trip at the same time, along the same corridor, and in the same direction. Certainly a small vehicle can do the job where only a handful of people are traveling. Buses are needed when we have hundreds and thousands of people traveling. And only when we have enough critical mass to fill trains does the expenditure make sense.

What type of transit vehicle is suitable for each situation? Most people would agree that a small van-like vehicle is appropriate in a small community. Such a vehicle is flexible and can travel on smaller streets. It is also less costly to purchase and operate than a larger vehicle. Therefore, it is more *appropriate* in such a setting. Rail transit is appropriate in very large, dense urban settings with very little parking for autos. Rail transit provides efficient and economical transportation in places like Hong Kong, Tokyo, Paris or Manhattan where millions of people board trains traveling in multiple directions. These cities are highly compact and passengers can conveniently walk to their destinations from train stations. Small transit vehicles may play a supplemental role in transporting passengers in these cities, but they cannot carry such masses of people efficiently.

Buses offer the most economical and efficient transportation in cities that lie between these two extremes and in cities where fiscal realities no longer allow the building of rail without severe harm to the overall transit system. Buses can carry many more people than small vans and do so more economically, because there are more passengers per driver and more passengers per vehicle. Buses are much more flexible than rail transit in that they are not stuck on fixed guideways. They can travel on many streets that are already paid for so they do not require massive investments in new infrastructure. Bus service also has the flexibility of adjusting to changes in development and demand.

Transit planners use various criteria to decide whether bus or rail is most appropriate in a given situation. Some say that 15,000 to 20,000 passengers per hour justify expenditure in rail. One sensible criterion lies in comparable subsidies that are required. Including both capital and operating expenditures, which requires the least subsidy per passenger? A second valid criterion looks at who is served. Transit service for the transit dependent is most important.

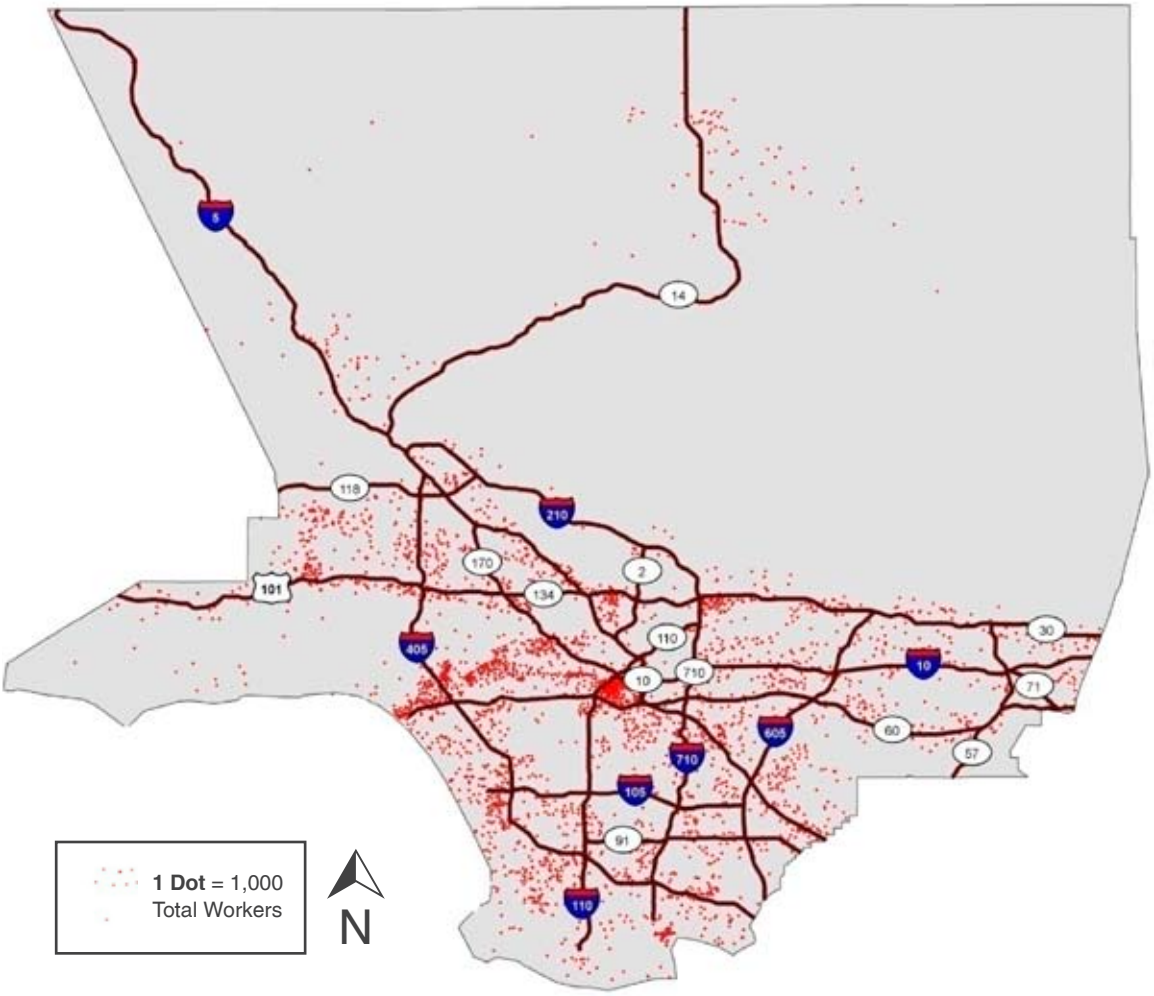
The debate in Los Angeles rests on where we fit onto this spectrum. This report will make the case that, given land-use and trip patterns in Los Angeles County, a combination of neighborhood shuttles, local buses, rapid buses and regional buses on freeways can best serve the region.

B. Land Use and Trip Patterns in Los Angeles County

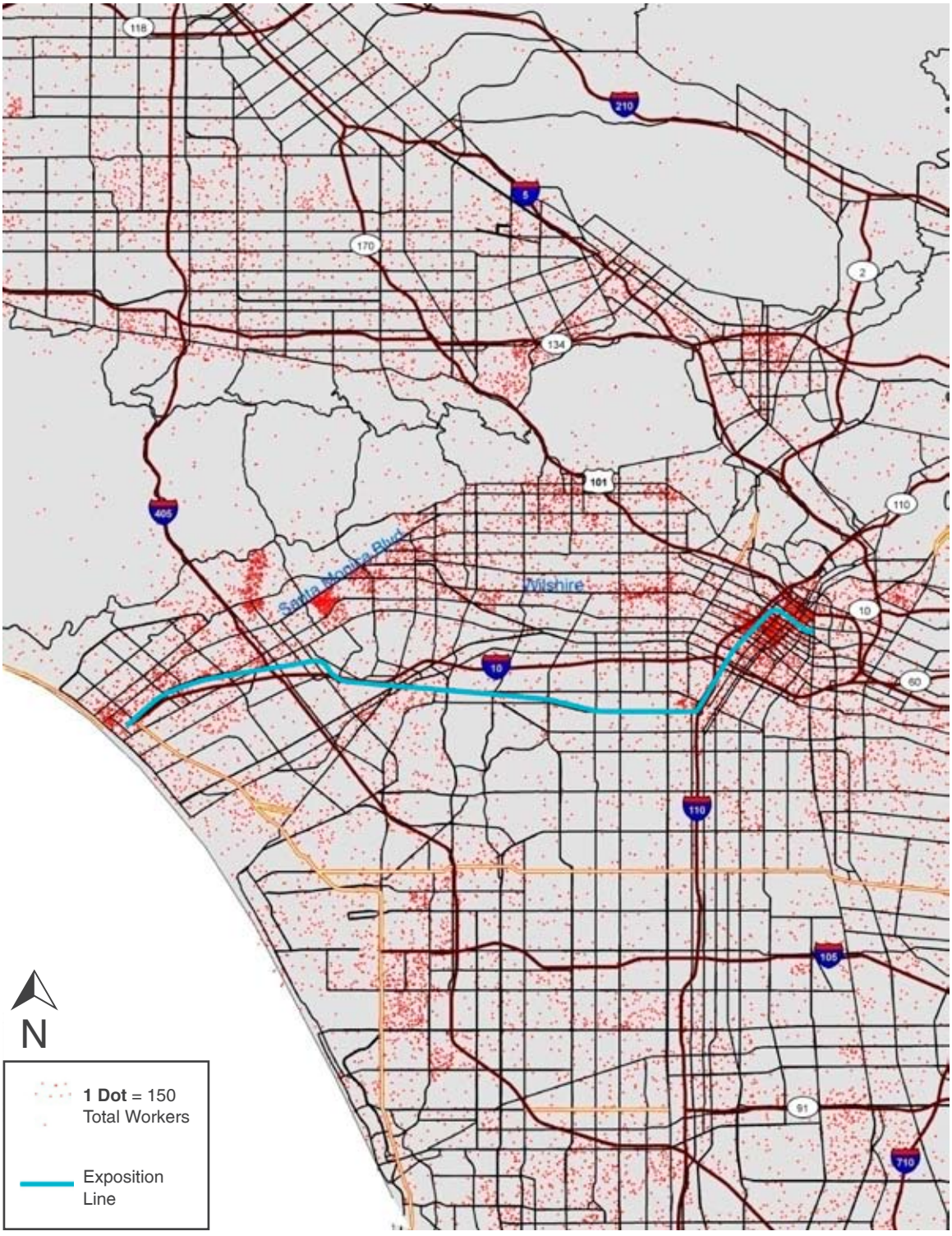
Transportation can be thought of as movement from one land use to another. We travel from home to work, from home to school, from work to the store, etc. Therefore our land-use patterns determine how we travel. Our ability to collect people to travel together along the same corridor, at the same time, in the same direction depends on density, location and juxtaposition of buildings. In understanding what type of transit will most optimally serve Los Angeles we need to understand our land use and trip patterns. Below the case is presented that our land use is pretty scattered, and our trip patterns dispersed.

a. Dispersion of land use

Origins and destinations in Los Angeles County are quite dispersed. While Downtown Los Angeles hosts the largest concentration of Los Angeles County work sites (only 6.6%)[ii] the vast majority of work sites are scattered around the county. Maps 1 and 2 illustrate the dispersion of employment



Map 1:
Los Angeles County Employment Density by Block Group
source: 2000 US Census



Map 2:

Central Los Angeles County Employment Density

source:
2000 US Census

sites. Some concentrations of worksites can be seen in Central Los Angeles, the Westside, the LAX area, Pasadena, Glendale, Burbank and the West San Fernando Valley. But many worksites are scattered across the county. Map 2 shows the densest concentration of jobs in Los Angeles County spanning from Santa Monica to East Los Angeles. Even here, the jobs are not located in just a few centers, or along a few corridors. Wilshire Boulevard and Santa Monica Boulevard both show the greatest density of worksites, but many others are located along other streets. People will generally not walk more than ¼ to ½ mile to a transit stop. So, even where some concentration appears, much of it lies outside of the transit shed of would-be rail transit lines.

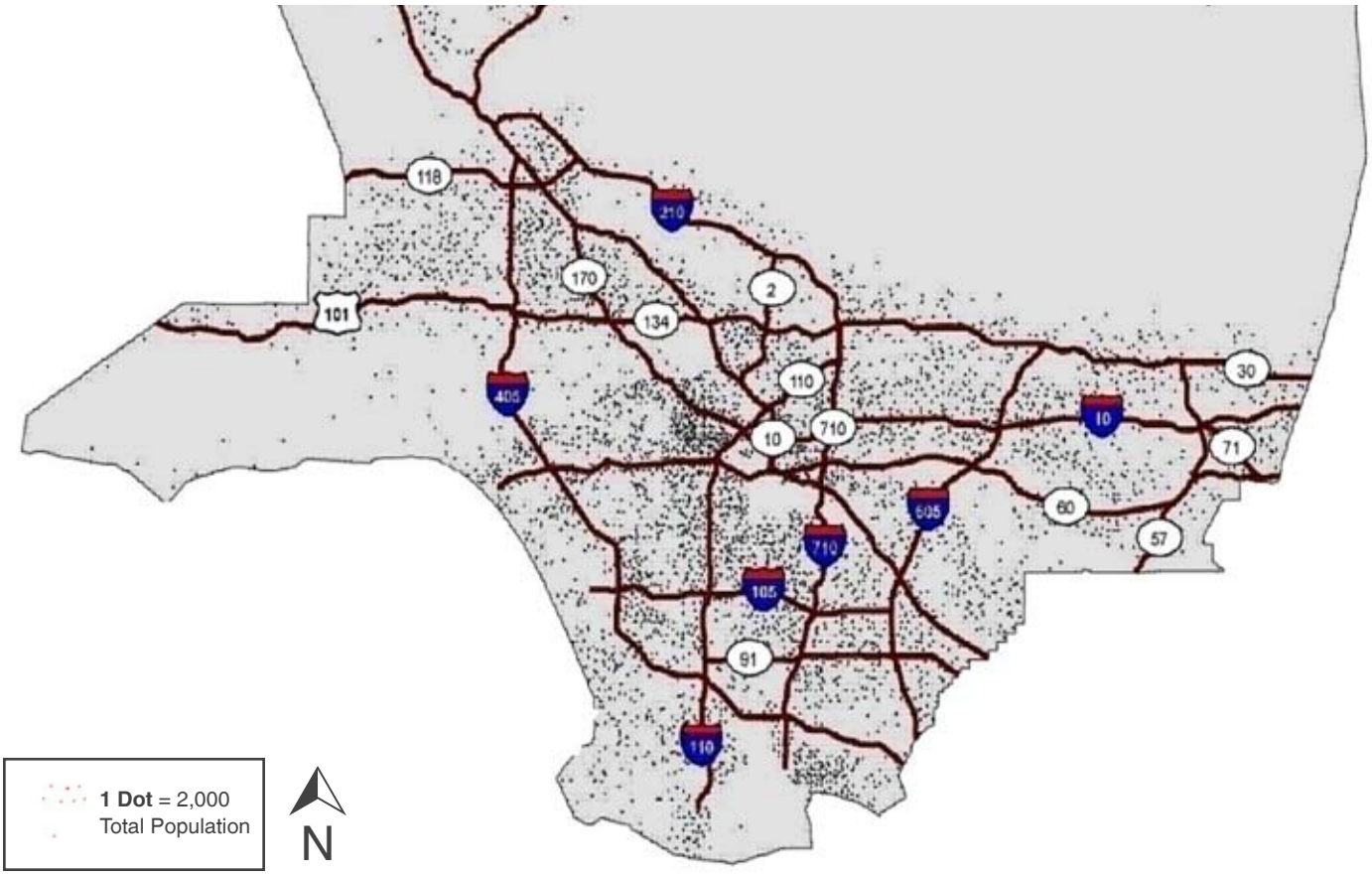
The lack of concentration of jobs along the Exposition light rail line that is under construction is particularly remarkable. Clearly, the rail line is being built not where the need is, but where the right-of-way exists.

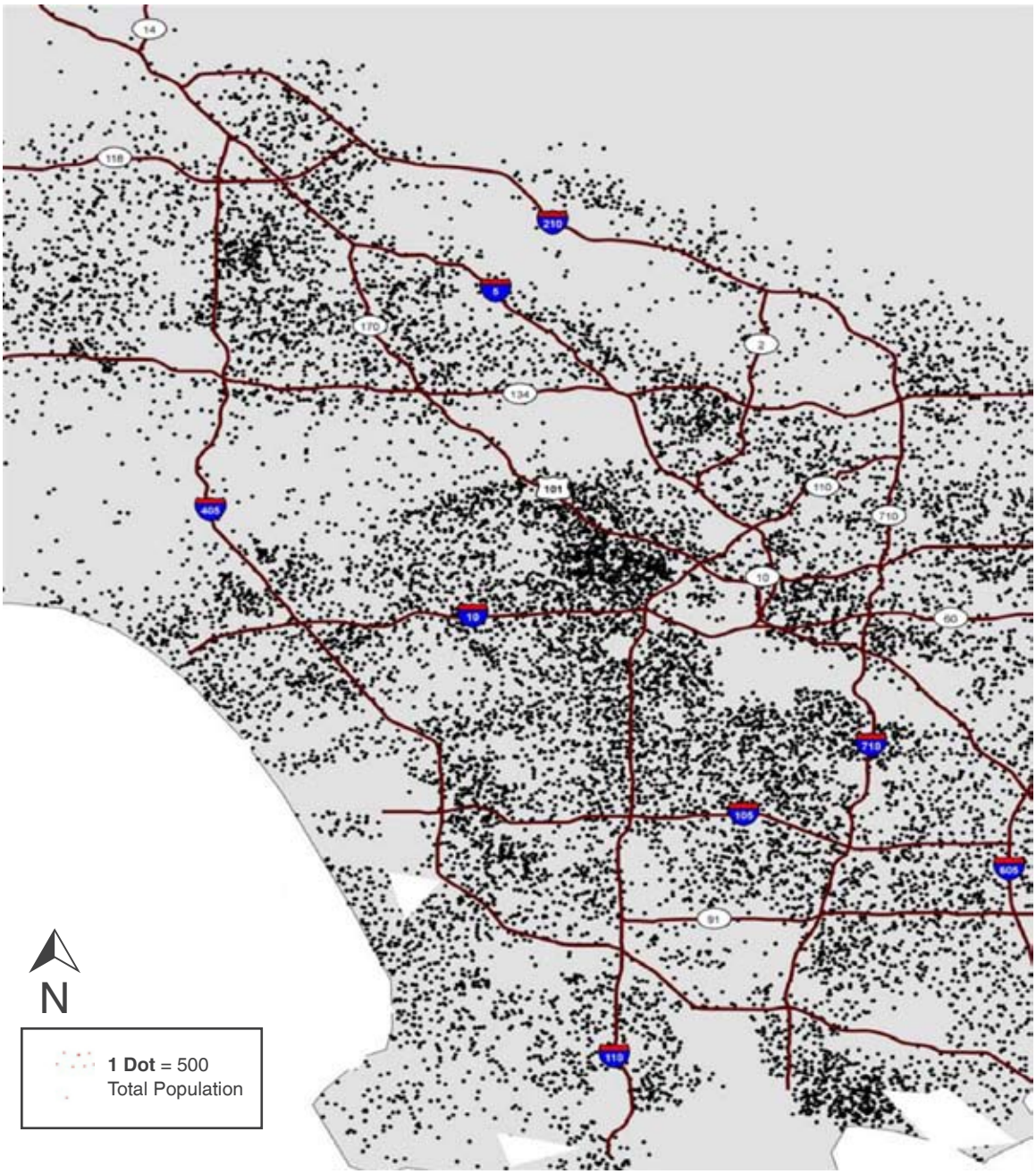
Map 3 illustrates population density around Los Angeles County. It shows that population is more spread than worksites and high numbers of people live throughout the county, at least as far north as the San Gabriel Mountains. Map 4 zooms in on the greatest population concentration and shows that people reside along many streets in many communities. The highest density shows up to the northwest, west and south of downtown Los Angeles. However, within these areas, no one corridor stands out.

Map 3:

Los Angeles County Population Density by Block Group

source:
2000 US Census





Map 4:

Central Los Angeles County Population Density

source:
2000 US Census

b. Where are we going?

Trip patterns reveal Angelenos travelling in many different directions along many streets. We start at home and will typically travel on more than one, and often six or eight streets to get to work or school. Our trips do not concentrate along a few major corridors; they spread out. The following tables show traffic volumes along some of the primary arterial streets in Los Angeles. The numbers record the highest volume along each street. The cross street tells where that highest number is.

Table 1:
Highest Daily Traffic Volumes on East-West Streets
In Los Angeles South of Santa Monica Mountains[iii]

Primary Street	Cross Street	# Daily Vehicles*
Sunset Bl.	Woodburn Dr.	62,570
Santa Monica Bl.	Sepulveda Bl.	68,391
Beverly Bl.	Formosa Ave.	45,233
Third St.	Grove Dr.	43,580
Wilshire Bl.	Veteran Ave.	111,024
San Vicente Bl.	Gale Ave.	40,446
Olympic Bl.	Beverly Glen Bl.	66,418
Pico Bl.	Motor Ave.	55,836
Venice Bl.	National Bl.	54,072
Washington Bl.	Alameda St.	29,256
Exposition Bl.	Pardee Way	30,920
Century Bl.	Avion Way	64,651

**# Daily Vehicles on Primary Street at That Location*

Table 2:
Highest Daily Traffic Volumes on North-South Streets
In Los Angeles South of Santa Monica Mountains[iv]

Primary Street	Cross Street	# Daily Vehicles*
Central Ave.	Imperial Hwy.	45,670
Alvarado St.	Hollywood Bl.	47,888
Vermont Ave.	Beverly Bl.	52,445
Western Ave.	Park Western Dr.	45,432
Cahuenga Bl.	Mulholland Dr.	52,792
La Brea Ave.	21st St.	71,232
Fairfax Ave.	Venice Bl.	42,944
La Cienega Bl.	Fairview Bl.	88,184
Robertson Bl.	24th St.	47,938
Westwood Bl.	Ohio Ave.	32,458
Sepulveda Bl.	Century Frwy.	90,227
Bundy Dr.	Pico Bl.	53,634

**# Daily Vehicles on Primary Street at That Location*

Table 1 shows Wilshire Boulevard to have the greatest number of vehicles daily. However, six other east-west streets have over 50,000 vehicles per day.

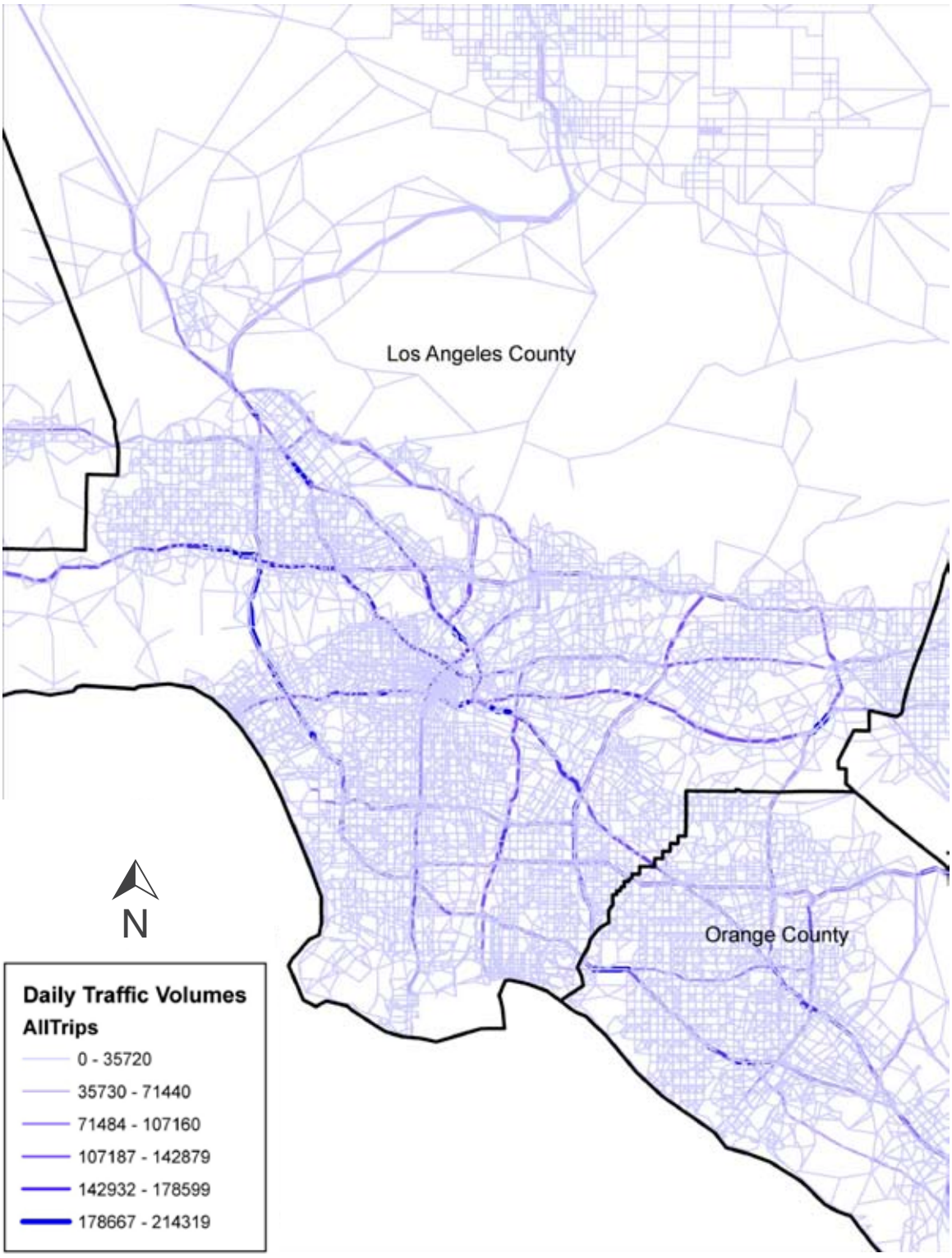
Table 2 shows that many people travel in a north-south direction as well as east-west.

Tables 3 and 4 below show traffic volumes on a few selected streets in the San Fernando Valley.

These tables reveal a pattern – that travel in Los Angeles occurs on many different streets and they go north-to-south as well as east-to-west and vice versa. These streets sample some of the busiest in Los Angeles, but not all are listed. At final count, 31 of the streets listed in these tables carry over 40,000 vehicles per day. Other streets in Los Angeles, as well as other streets in the rest of Los Angeles County, do as well. Seventeen streets on these tables have over 50,000 vehicles per day, and seven have over 60,000. This dispersion shows a need for good quality transit on many streets throughout Los Angeles County.

Furthermore, trips do not take place on one street at a time. People start driving on one street, turn on another, another, another and often more streets to reach their destinations. Somewhere along the way, they may enter a freeway, transfer to many other freeways before exiting and driving on several more streets to their destination. The only way for transit to serve this type of travel is to come as close as possible to mimicking the flexibility of the automobile in its ability to move from one street to another seamlessly. This means having frequent, reliable transit on many streets so that transferring can be done with minimal waiting.

Map 5 shows the dispersion of travel throughout the County. The thickness and darkness of the lines indicate the number of vehicles per day that travel each of those freeways and streets. The above maps graphically illustrate how dispersed our trips are.



Map 5:

Trip Patterns in Los Angeles County
source:
SCAG 2005 Regional ADT Data

Table 3: Highest Daily Traffic Volumes on East-West Streets in the San Fernando Valley[v]

Primary Street	Cross Street	# Daily Vehicles
Devonshire St.	Langdon Ave.	37,142
Nordhoff St.	Haskell Ave.	52,215
Roscoe Bl.	San Diego Frwy.	55,262
Burbank Bl.	Havenhurst Ave.	46,274
Ventura Bl.	Sepulveda Bl.	57,401
Riverside Dr.	Fletcher Dr.	40,024

**# Daily Vehicles on Primary Street at That Location*

Table 4: Highest Daily Traffic Volumes on North-South Streets in the San Fernando Valley[vi]

Primary Street	Cross Street	# Daily Vehicles
Laurel Canyon Bl.	Valleyheart Dr.	49,240
Van Nuys Bl.	Sherman Way	44,516
Reseda Bl.	Burbank Bl.	47,205
Canoga Ave.	Oxnard St.	41,517
Topanga Canyon Bl.	Burbank Bl.	63,307

**# Daily Vehicles on Primary Street at That Location*

They point out the need for good transit in many locations. It also shows that good freeway transit could serve a significant number of trips.

c. Trip length, Ends of Trip

Commute-to-work trips (outboud and inbound) tend to be the longest daily trip that we take. According to the 2000 U.S. Census, the median commute time in Los Angeles County is 25 minutes, and the average (mean) is 29 minutes. The 2001 National Household Travel Survey (NHTS)[vii] found that commute-to-work trips comprise about 14.8% of all daily trips. Trips to visit friends and family are generally the longest trips we make, but they are less regular than work trips. This means that other trips—to school, the store, doctor and others—are generally shorter. The commute to work is the most likely trip to capture passengers on transit since the ends of the trip are shorter relative to the entire trip. According to the MTA's 2002 On-Board Bus Survey[viii], 58% of all transit trips are commute-to-work trips. So, in planning for transit, although we need to think about all trips, the commute-to-work trip is the most important to serve.

What planners call the "ends" of the trip involve the time one spends *before* actually boarding the transit vehicle (the time it takes to get to a transit stop, and then wait for the transit vehicle to arrive), and the time one spends *after* getting off the transit vehicle (the time it takes to get from the transit stop to one's actual destination). People are less likely to want to to use transit for a 25 minute trip if they have to spend 15 minutes on the ends and just 10 minutes on the transit vehicle, than they are if the time on the bus or train is 20, with just 5 minutes on the ends. This is especially true of discretionary riders who can drive a car. Transit-dependent people are more likely to walk than take transit for very short trips.

The ends of the trip play a paramount role in mode choice for those who can choose between public transit and another mode of travel. People who have choices select a transportation mode based primarily on door-to-door travel time, and secondarily on cost. Safety, stress, environmental concerns and other criteria also affect mode choice, but usually time determines how someone will travel. If someone who has a car can drive the average 29 minutes to work, and it would take him or her 45 minutes to take transit, most will drive. But the key is, why does it take so much longer taking transit?

On a typical trip, the time spent riding on a bus or train would not be much more than the time in the car. Most of the time difference between auto and transit trips lies on the ends of the trips. It is the time getting to and from transit, and the time waiting for the transit vehicle that adds up to make driving significantly faster. MTA's 2002

survey[ix] found that the average time on a transit vehicle was 30 minutes, and passengers spent 10 minutes getting to their transit stop, another 10 minutes waiting for their transit vehicle, and 10 more minutes getting from their destination stop to their destination. So they spent 30 minutes on board, and 30 minutes at the ends of the trip. With door-to-door flexibility and flexibility of departure time, autos eliminate most of the time on the ends of the trip. So, this same average trip would take about 30 minutes on an auto, close to the average of 29 minutes shown in the Census data. Most people who own cars value their time and won't take transit if it takes them 60 minutes when it would only take them 30 minutes by car.

C. Why Buses Can Better Serve Us Than Trains

a. The need for ubiquitous transit

Based on the discussion above regarding the importance of trip time, transit planners that want to attract people out of their cars need to focus most on reducing the time it takes to get to and from a transit stop, and reducing the wait time. In other words, to make transit more competitive vis-à-vis the auto, we need to run more transit vehicles along more lines so that transit is closer to origins and destinations, and so that the wait time is insignificant.

The 2002 MTA on-board survey[x] revealed that 93% of all bus and train passengers walk to their transit stops, and 94% of those alighting walk to their destinations. How long will people walk to a transit stop? Most people will say several blocks, or a ¼ to ½ mile. Planners typically use ¼ to ½ mile as the primary transit shed. This was borne out in a travel survey[xi] of Metro Rapid riders conducted in 2003 that showed the average walking distance on Line 720 (Wilshire-Whittier) was 0.26 of a mile, and 0.42 of a mile on Line 750 (Ventura)[xii]. People without cars will walk further if they have no choice. The auto offers point-to-point service so for transit to be competitive, the distance to transit stops must be short.

How long will people wait for a transit vehicle? Private automobiles offer the flexibility of time departure. In order to remain competitive with the auto, transit must run frequently. It is likely that waits over five minutes cause discretionary riders to lose interest.

Moreover, since most trips involve travel on more than one street to get to a destination, it does us little good to have fabulous transit service on one line, and lousy service on the connecting streets. We need attractive service throughout so that transfers are quick and convenient.

In planning transit that competes well with the auto, and in planning transit improvements, we need to consider the best way to reduce the cumulative travel time on transit throughout the County. Rail advocates point to the advantage of a separate right-of-way that allow trains to avoid traffic and to operate on dependable schedules. It is true that having a separate right-of-way will reduce travel time, but by how much compared to other ways?

According to a sampling of inbound morning peak MTA schedules, the speed of different types of transit is:

- Local bus (Wilshire Blvd.): 9 miles per hour
- Local bus (Roscoe Blvd.): 14 miles per hour
- Metro Rapid bus (Wilshire Blvd.): 16 miles per hour
- Metro Rapid bus (Ventura Blvd.): 17 miles per hour
- Orange Line bus: 18 miles per hour
- Harbor Transitway bus (freeway): 40 miles per hour

- Blue Line light-rail: 24 miles per hour
- Gold Line light-rail: 28 miles per hour (34 mph for the new Gold Line Express)
- Red and Purple Line subway: 33 miles per hour

While these all seem slow, auto travel is not much faster, especially on city streets. It is interesting to note that even the subway averages a speed less than widely believed. People often talk about a train "whisking" them to downtown in a short time as if they are envisioning a 90-mile per hour adventure.

The 2004 Caltrans survey[xiii] of MTA Metro Rapid passengers found an average trip length of 7.6 miles on the 720 (Wilshire-Whittier) and 8.6 miles on the 750 (Ventura) line. Using a trip length of 8 miles, we can make a comparison. At 33 miles per hour, the time on board the subway is just under 15 minutes. By comparison, a passenger on the Blue Line Light rail would go the same 8 miles in 20 minutes, and a Metro Rapid passenger would ride for 30 minutes. However, we have to add 4 minutes to each subway trip to account for the time getting in and out of the subway station. Then we have to add the time on the ends of the trip (Using an average of 30 minutes as determined in the 2002 on-board survey). Table 5 shows total trip time of these three modes.

Table 5: Trip Time by Different Transit Modes

Mode	On-Board Time	End-of-Trip Time	Total Door-to-Door Travel Time
Subway	15 minutes	34 minutes (includes in-and-out of station)	49 minutes
Light rail	20 minutes	30 minutes	50 minutes
Metro Rapid	30 minutes	30 minutes	60 minutes

What can we do to make transit more competitive? The rail lines are already going as fast as they can, but we can speed the buses more with pre-board fare payment to reduce dwell time at the stops and increase the priority that buses have at traffic signals. Dedicated bus lanes on top of this would give the bus the majority of the speed advantage of subways. But, we can accomplish much more in improving transit by reducing the time on the ends of the trip than we can by making the vehicles go faster. There are several ways to do this. First, running more vehicles will reduce wait time. MTA runs its rail lines every five minutes at the peak, whereas buses can run as frequently as one per minute or more. Running buses every two minutes instead of every six minutes would cut an average of two minutes off each trip. We can gain significant time by having local bus stops every few blocks (common) and running local buses frequently to get passengers to transit stops faster. Since rail and Metro Rapid stops are spaced about every mile, passengers often have to walk 10 minutes or more to the stop. With frequent local service, we can gain several more minutes. For transferring passengers, more time can be saved by having the transit vehicle they transferred from running more frequently. By reducing headways on transfer lines from 20 minutes to 10 minutes the average passenger would save another five minutes. So adding up all of these ways to improve the ends of the trip, we have given nearly the same time advantage to bus passengers, as to subway passengers making the same trip.

Thus far, we have only compared trip times for different transit modes traveling along the same line. However, by far the greatest time will be gained by having frequent service throughout the county, rather than speeding up travel on any single line or small set of lines. In order to assess the true value of our transit investments and the service to our passengers, we have to look at total

passenger time reduced countywide. Rail transit will only serve a few corridors in Los Angeles County, whereas the bus picks up and drops off in nearly every neighborhood, therefore, subways and light-rail can save a small number of passengers several minutes along those lines. However, bus improvements countywide will add up to many more transit passenger minutes reduced. For the investment that Los Angeles County has made in rail transit over the past 23 years, we could have approximately doubled bus service in the county from today's 7.8 million hours, to perhaps 15 million hours of service or more. This would cut the waiting time at bus stops and transfer stops in half. (This calculation uses the annualized cost of the roughly $10 billion capital expenditure in rail lines.)

Last, the time on the ends of the trip becomes less significant for longer trips. The speed advantage of rail is greater for longer trips because a smaller percentage of total trip time is spent on the ends. Ironically, freeway buses have the potential to serve these trips much faster than rail. The Harbor Freeway buses average approximately 40 miles per hour, whereas the subway averages about 33 miles per hour, and light rail 24 to 34 miles per hour. The September 2008 Metrolink Fact Sheet shows that Metrolink trains average 41 miles per hour, about the same as freeway buses. However, Metrolink comes at great cost, only serves a small number of trips (47,000 per day or about 1/10 of 1% of our region's trips), and runs very infrequently.

b. Flexibility

Trains run on a fixed track and therefore provide less flexibility than buses. Trains can be thought of as simply "a series of connected buses on a fixed guideway." Since this guideway is fixed, trains are also like "large buses that can't turn." The only advantage trains have in cities with our travel patterns is that they have a dedicated right of way and they don't get stuck in traffic. But, we can give that same advantage to buses. Does it make a difference if the "train" has steel wheels or rubber tires? Does it make a difference if the "train" has a steel track or asphalt one? For service, the answer is no, neither makes a difference. However, if we dedicate right-of-way for buses, it is much cheaper than for trains. The bus rapid transit Orange Line was built for about $24 million per mile, whereas light rail costs about $70 or $80 million per mile and the subway for $300 million per mile (MTA Facts at a Glance). Moreover, buses can get on and off the Orange Line to pick up and drop off passengers. While it is currently running slower than light rail, this is primarily because it does not have the same treatment at street crossings that light rail does.

More importantly, buses can run on our surface streets throughout all communities and take people close to their destinations. They can change routes and schedules depending on demand. This offers a significant advantage over trains. Dedicating bus only lanes on surface streets costs even much less than the Orange Line busway and can be implemented on many streets in a short time.

c. How rail only serves a few

Rail transit in Los Angeles County will always serve only a small percentage of our trips because it will never be able to be as ubiquitous as buses. If people walk between ¼ and ½ mile to a transit stop, only those living that close to rail stations will be candidates for using the train. Some people will transfer from buses on to rail, but they could also transfer onto buses. Furthermore, only those that have *both origins and destinations* within ¼ to ½ a mile of a train station will be candidates to ride. Since worksites are so scattered, the majority of people who live near train stations will not work somewhere near another station.

Since buses travel countywide, people living in all neighborhoods and working in all neighborhoods could use buses if the service is good.

d. Needed infrastructure

Buses require very little infrastructure compared to trains. Since they use existing streets, bus stops are the primary infrastructure. Bus stops with benches, shelter, maps and scheduling information accommodate passengers. With rapid buses we add enhancements such as "next-bus" readouts and signal prioritization. We could also add pre-board fare payment structures like in Curitiba, Brazil, but this may become unnecessary as electronic fare payment becomes more viable. Dedicated bus only lanes require some paint and signs. Streets with lots of buses should have concrete pavement. This entire infrastructure is much cheaper than rail lines.

Freeway buses can also use simple bus stops. However, in the long run, they will be better served with off-line stops like those on the Harbor Freeway. They will also need transfer facilities. Eventually, freeway buses should run on dedicated lanes. Again, since these lanes already exist this infrastructure is much cheaper than for rail lines that need dedicated right-of-way, significant grading, rail track, stations and expensive vehicles.

One of the big advantages of bus-related infrastructure is that it can be put in over time. Investments in improvements can happen gradually. With rail, the infrastructure has to be put in all at once.

e. We need *some* rail, right?

Rail proponents often remark that Los Angeles County needs both rail transit and buses. It is not clear what sort of mix they think is best. Would it be rail on the most productive transit lines? That is not what we have been building.

Our first rail line, the Blue Line, was not built along a particularly well used transit line. Neither was the Green Line or the Gold Line. The authorized Exposition Line shows very little promise as a transit corridor (see Map 2), and if we look at existing ridership along nearby parallel lines, it certainly would not rank in the top 10, or even top 20 of present day bus lines. The proposed extension of the Gold Line to Claremont does not stand out as a heavily used transit corridor either. In fact, it is highly suburban without much density of either population or employment. If a mix of rail and bus would suit Los Angeles County best, then at the very least, we need a clear concept of what that mix should be, clear criteria for determining where rail is appropriate, and where bus transit makes the most sense. Rail proponents have never put forth such a concept or its criteria.

If wise transit policy were applied to this issue, lines serving the densest population and employment with proven transit ridership would be the first to convert to rail transit. Only the proposed Purple Line extension on Wilshire Boulevard would follow from this criterion. None of the other existing or proposed rail lines would. Next, even the most promising transit lines would have to pass some rational threshold ensuring that they are ready for rail, and that the investment in rail transit makes sense from both a local and countywide perspective.

Wilshire Boulevard currently stands out as having the most motor vehicle traffic, the highest transit ridership, and the greatest employment density and among the highest population densities in Los Angeles County. Yet, there is plenty of room to improve bus service on Wilshire Boulevard without having to build a $475 million per mile subway. MTA representatives have said that Wilshire Boulevard is clogged with buses and it is not possible to add many more buses. But passengers who wait at stops along lines 20, 21 and 720 on Wilshire Boulevard know that is not the case. While

Metro Rapid service on Wilshire Boulevard is quite good with headways as short as 2 to 3 minutes in the peak, they often bunch and leave passengers waiting. In the off peak, waits can be longer than 10 minutes. More significant, lines 20 and 21 only run every 5 to 10 minutes. When they are not on time, the wait can be 15 minutes. This local service is important to take people to the Metro Rapid stops. These buses could also improve with pre-board fare payment, higher signal prioritization and dedicated lanes. When we examine the potential to reduce door-to-door travel time, these improvements would offer perhaps 80 percent of the speed benefits of the subway along the Wilshire corridor as compared with existing local bus service.

While Wilshire Boulevard stands above the other transit corridors in Los Angeles County, it does not stand out that much. It has the most traffic because of its density, at over 111,000 vehicles per day, yet it has only 20%, 30% or 40% more than other busy streets and its transit investment should be proportionate. If we spend $5 billion on Wilshire Boulevard, there will be little left for the transit corridors that collectively account for 60%, 70% or 80% of the ridership potential. While Wilshire Boulevard definitely justifies more transit investment, the investment should be proportional so that other busy transit streets can realize improvements as well. And if rail transit cannot pass the test on Wilshire Boulevard, it can not anywhere else in Los Angeles County.

Further, the threshold for transitioning a transit corridor from bus to rail should be at the point where the subsidy per passenger, and the subsidy per new transit passenger, would be comparable to that of the bus. With rail transit subsidies running at 5 to 10 times that of the bus in Los Angeles County, no lines have come close or are likely to come close in the near future. When we look at the cost for new transit riders, the picture looks even less promising for rail transit. We will look at this issue more closely in Section F.

D. Who Are We Trying to Serve?

a. Transit-dependent (priority)

The first priority of public transportation is to provide access for people who have no other transportation choices, the transit-dependent. Most of these people do not have the means to own automobiles. Others are too young, too old or disabled. They depend on transit to get to work, to school, to shop, to visit friends and relatives, and to go anywhere they need to go beyond walking distance of their homes. Transit provides access to all daily necessities for these people. Thus, the transit dependent need reliable, convenient transit throughout Los Angeles County.

b. Discretionary riders (How do we entice them to use transit?)

Transit should also attract discretionary passengers, or those who travel on transit by choice. As of spring of 2004, 29 % of MTA bus and rail riders owned cars. Discretionary passengers have cars, yet they choose to take transit for environmental reasons, to save money, to avoid traffic or to escape the stress of driving. These passengers are seen to hold potential to reduce congestion, air pollution, energy consumption and global warming gases. The more discretionary riders we can entice to leave their cars at home, the more we can achieve towards these goals. Since discretionary riders have the choice of driving, transit service has to compete well with the car to attract them to transit. The average commute that will take auto drivers 29 minutes, and transit riders 60 minutes will not cause many to leave their cars at home. The cost of parking will influence their choice, but only if the time of the commute is not significantly longer than the drive. Transit also competes with carpooling for discretionary riders. Where transit service is not so good, carpooling offers a more advantageous option for those who want to drive less.

Interestingly, the same policies that can attract the greatest numbers of discretionary riders to transit also best serve the transit dependent. That is, by improving bus service in many neighborhoods along many lines.

c. The racial and class implications of transit policy

MTA's 2002 On-Board Bus Survey revealed that the median annual household income for weekday bus riders is only $12,000 per year. Only 2% of riders make over $50,000 annually. Latinos make up 58% of the riders, while African-Americans comprise 20% of the passengers and Asians another 8%. Whites make up only 12% of MTA passengers. Over half of the passengers are female, 57% of them, while only 43% are male. Thus, the profile of the typical MTA bus passenger is overwhelmingly poor, non-white, and female.

The survey did not query MTA train riders. There are no recent surveys of MTA train riders. An MTA on-board survey of Blue Line passengers conducted in the early 1990s showed that 39% were Black, 29% Latino, 7% Asian and 23% White. The median annual income was between $15,000 and $20,000 and 18% made over $50,000 per year. Only 30% did not own cars. While the Blue Line riders had lower income than the countywide median and were predominantly non-White, there was a difference between them and bus passengers. Adjusted for inflation the difference between Blue Line riders and bus passengers would be more significant.

The difference is more striking when Metrolink riders are considered. According to a Metrolink customer survey in 2000[xv], the median household income of their passengers was $61,100 ($77,000 adjusted for inflation). A 2004 Metrolink, customer satisfaction survey[xvi] showed that 46% of the passengers were White. Even if there were no difference in the community served by the Metrolink - the fares alone would cause a difference. For example, the round trip fare between El Monte and Los Angeles is $10.50. Most MTA bus passengers could not afford this.

Not only is there a difference in rail vs. bus ridership, there is also a difference in what policy-makers intend when they advocate for rail. Construction of rail lines is intended to attract discretionary riders onto transit in order to reduce congestion and environmental externalities. This mission is seen as more important than improving service to the transit dependent. We often hear that a more upscale rider would never ride on a bus. In order to attract them it is commonly believed that it is necessary to provide train service. This is partly due to a belief that trains offer more comfortable service, but there is also an assumption that the discretionary rider prefers not to sit next to poor people of color.

d. Why transit policy is a civil rights issue

The profoundly poor bus passengers—who are predominantly people of color—need transit to get to work, to school, to the doctor and for all of their daily needs. Their access to these necessities is not only part of their daily struggle to get by; it is also crucial to their social-economic mobility. In order for them to better their lives they need to be able to get to higher-paying jobs, and to improve their job skills through schooling. In order to send their kids to college they need access to public schools. In order to receive good health care they need access to good doctors, clinics and hospitals. And so on. Good, dependable transit service provides a tool for upward mobility. Insufficient service helps to lock transit dependent people in the lowest-income strata of society.

While some improvements to MTA bus service were realized under the Consent Decree, MTA

buses are still overcrowded, they do not run as frequently as needed, they do not run often at night, and transfers can be time-consuming experiences. People often take two-hour one-way trips to get to their destinations. With the expiration of the Consent Decree, fares are rising and cuts in service are eminent as the MTA moves forward to build more rail lines. The prospect of being fired for arriving late to work or missing class because someone missed a transfer will increase. More women will be stuck late at night at corners waiting for their transfer bus. More parents will arrive home late, unable to provide the kind of guidance their children need. And more people will have to choose between paying for transportation and paying for medical care.

The disparity between the treatment of transit-dependent people versus discretionary riders becomes most apparent when one examines the disproportionality of transit investments. The charts in Section F illustrate the difference. We can see that the average per passenger subsidy (including both capital and operating costs) for MTA buses is $1.93, while the average per passenger subsidy for MTA rail lines is $12.90, nearly 7 times as great as the bus.

The difference is even more striking when one looks at Metrolink expenditures. Approximately $2 billion have been invested to construct Metrolink. The annual operating cost of Metrolink is $159 million. Approximately $73 million are collected in fares. Using an amortization rate of 6% over 40 years, the annual debt service on Metrolink is about $132 million. With these numbers, the subsidy per passenger on Metrolink is about $17 each way, approximately 9 times that of the bus subsidy. This adds up to a subsidy of nearly $9,000 per passenger each year. The MTA has budgeted $60.1 million for Metrolink in FY 2009.

Is a rail passenger worth 7 times or 9 times that of a bus passenger? The MTA subsidies would imply that. Moreover, for discretionary riders the train is a nice amenity. For bus passengers, transit is an absolute necessity. The fact that the MTA would go out of its way to provide this amenity to discretionary riders while leaving transit-dependent bus passengers to sit on overcrowded buses and wait for an hour or more late at night for the next bus reveals the disparity. Particularly difficult for bus riders is the fact that this helps to cement their low-income status. Los Angeles' transit policies prefer to provide the $77,000-per-year Metrolink rider a comfortable air-conditioned seat with laptop tables, etc. instead of making sure a poor Latina keeps her job by getting to work on time. Not only is it more important – *it is 9 times* as important. The effects of these policy choices made by MTA greatly and disproportionately impacts low-income people of color. This is why it is a civil rights matter.

E. Background of LA's Rail System

a. Proposition A

Los Angeles County voters had rejected ballot measures to increase sales tax for a rail transit system in 1968 and in 1976. In 1980, a more politically viable plan was crafted. Proposition A would increase Los Angeles County sales-tax by ½ cent. Revenue was to be split, with 35% funding rail construction and operation, 25% to be returned to cities for local transit, and the remaining 40% for discretionary purposes. The map in the rail transit plan showed rail lines branching out to various parts of the county from downtown Los Angeles. Rather than being designed to improve transit where needed or where demand had demonstrated it, Proposition A was designed to gain voter approval. Because it needed votes from throughout the county in order to pass, its transit blueprint tried to show how it would benefit every district. One

line was shown from Downtown Los Angeles to the Westside, another to Long Beach, one to the harbor, one to the San Fernando Valley, one to the Eastside, a line to Glendale, another to Pasadena, one to Norwalk, one line between Norwalk and LAX and another line from the San Fernando Valley to LAX. The plan also showed express buses on nearly all of our freeways, as well as a network of commuter rail. Seemingly the entire county would be served with transit. To further ensure passage, for the first three years 35% of the revenue dedicated towards rail construction operation would lower bus fares from $.85 to $.50. The plan worked and 53% of the voters approved Proposition A. Although several modifications have been made since, the Proposition A *rail* plan remains the basis of planning today. Unfortunately, the express bus-on-freeway plan has been forgotten.

Proposition A came with the promise that the revenue would be sufficient to build the system it promised. So far, it has fallen very short. We have the Blue Line, the Green Line, the Red Line, part of the Gold Line, the Orange Line and Metrolink. To get just this much built has taken all of the 35% of Proposition A, some of the 40% of "discretionary" revenue, and the City of Los Angeles has dedicated much of its local revenue from Proposition A to building rail lines. Additionally, we have used quite a bit of revenue from Proposition C, State Propositions 108 and 116, as well as a significant amount of federal money.

Los Angeles County still depends on Proposition A to fund transit operations—which includes subsidizing bus service—and development but much of the revenue continues to build new rail lines.

b. Background of Blue Line, Green Line, Red Line, Gold Line

Each of the existing Metro Rail lines has a political history behind them. The Blue Line was first conceived in order to get votes from Long Beach in the south part of the county for Proposition A. For political reasons rather than transit need, the Blue Line was the first built. The Green Line came about as part of a court settlement as mitigation to the impact of the new Century Freeway. Originally intended to serve employees working in large aerospace industry in the El Segundo/LAX area, strong Green Line ridership has not materialized, partially due to the major downturn in federal aerospace subsidies and the subsequent loss of jobs in that area.

Plans for the Red Line began before the others under Mayor Bradley. The Red Line was held up as the backbone of rail transit in Los Angeles within the Proposition A plan. It was the only proposed line that was truly selected because of its potential as a transit line. Although not demonstrating much potential as a transit line, the Gold Line moved forward and was constructed to Pasadena under the strength of a strong lobbying effort from the City of Pasadena and others in the area. The Gold line extension, currently under construction through East Los Angeles, has moved forward largely through the promotion of Eastside elected officials. They argued that the Eastside deserves to get its fair share of rail transit money as well. While the Eastside certainly deserves its fair share of transit money, especially since it is heavily transit dependent, none of these elected officials bother to ask what type of transit would best serve their community.

Today, the MTA is moving forward with plans for new rail lines. The Exposition Line will be next. Plans to extend the Gold Line to Claremont, to extend the Purple Line (western leg of the Red

Line) to the beach and others are moving forward. The current fiscal problems at the MTA may delay construction of these lines, but the MTA seems willing to raise fares and cut bus service in order to construct future rail lines.

F. Costs and Subsidies of Buses and Trains

We subsidize public transportation to meet several goals. The most important of these are:

- To provide access to transit-dependent people
- To provide alternatives to congestion and driving
- To reduce air pollution and global warming gases
- To reduce energy consumption

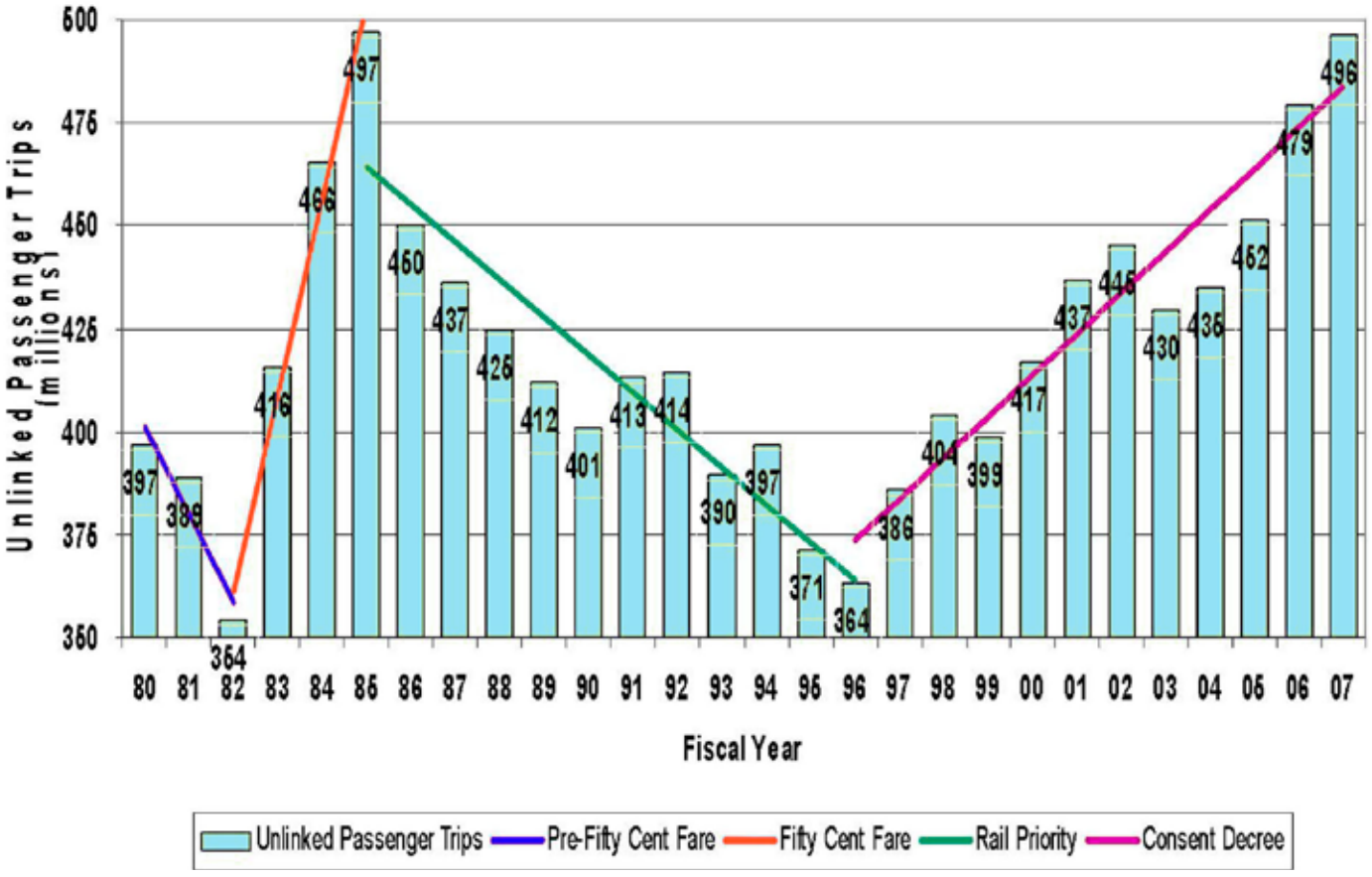
How well we meet those goals with our transit investments is reflected in several key indicators:

- Ridership
- Subsidy per passenger
- Subsidy per passenger mile
- Cost of new transit riders

The following charts created by Tom Rubin using Southern California Rapid Transit District, MTA and Federal Transit Administration statistics shows how well we are doing with some of these indicators.[xvii] Rubin acquired these statistics from the MTA budget, the MTA website, New Start Applications to the Federal Transit Administration,

L.A. County MTA

Annual Ridership by Period and Trend Lines [xviii]



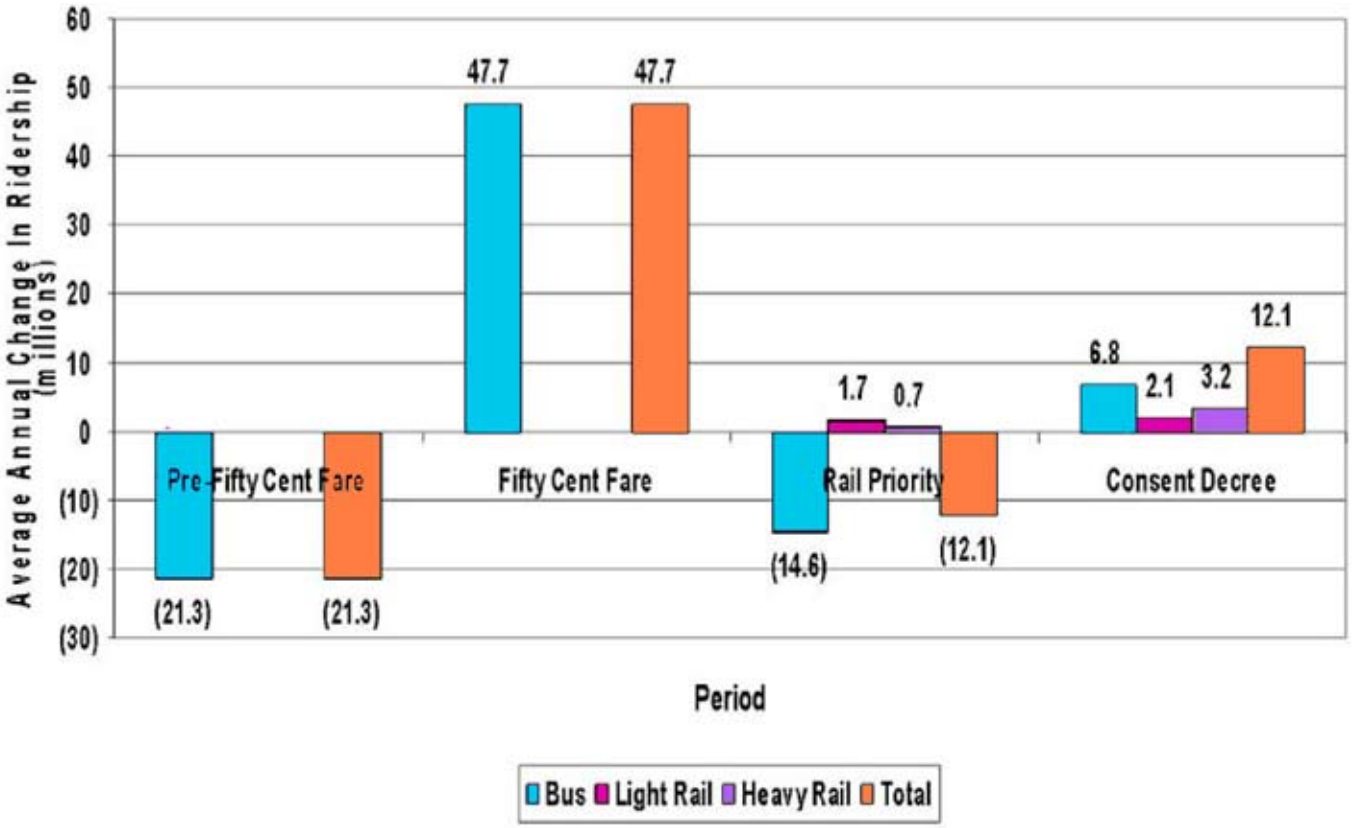
and 2005 Performance Indicators of the National Transit Database.

The first chart shows how ridership has gone up and down over time since 1980. It clearly indicates that fares have a dramatic impact on ridership. Our highest ridership was in 1985 while the $.50 cent fare was in place. We have never achieved that level of ridership since. Every time fares increased ridership dropped. Extrapolating out current trends for 2007, we would come close to our highest ridership at 496 million. The recent upturn in ridership reflects the improvements in bus service and maintenance of fares as mandated by the Consent Decree. It also reflects recent increases in the cost of gasoline.

Even as today's numbers approach the numerical levels of ridership in 1985, they are lower in proportional terms adjusted for population growth. In 1985, 58.1 passenger trips were taken per Los Angeles County resident per person per year. MTA projects 474 million annual riders in 2008, about 45.8 transit trips per person per year. If we add in Metrolink ridership (about 13 million) the 487 million annual passengers represent 47.0 transit trips per person per year, a 19% decrease in the proportion of trips taken. Clearly, this illustrates the failure of rail transit in Los Angeles County. Including Metrolink, we have invested approximately $10 billion in rail capital since 1985, and we have decreased the proportion of trips taken! Our rail investment has come with a list of promises that have not been fulfilled. "It will reduce

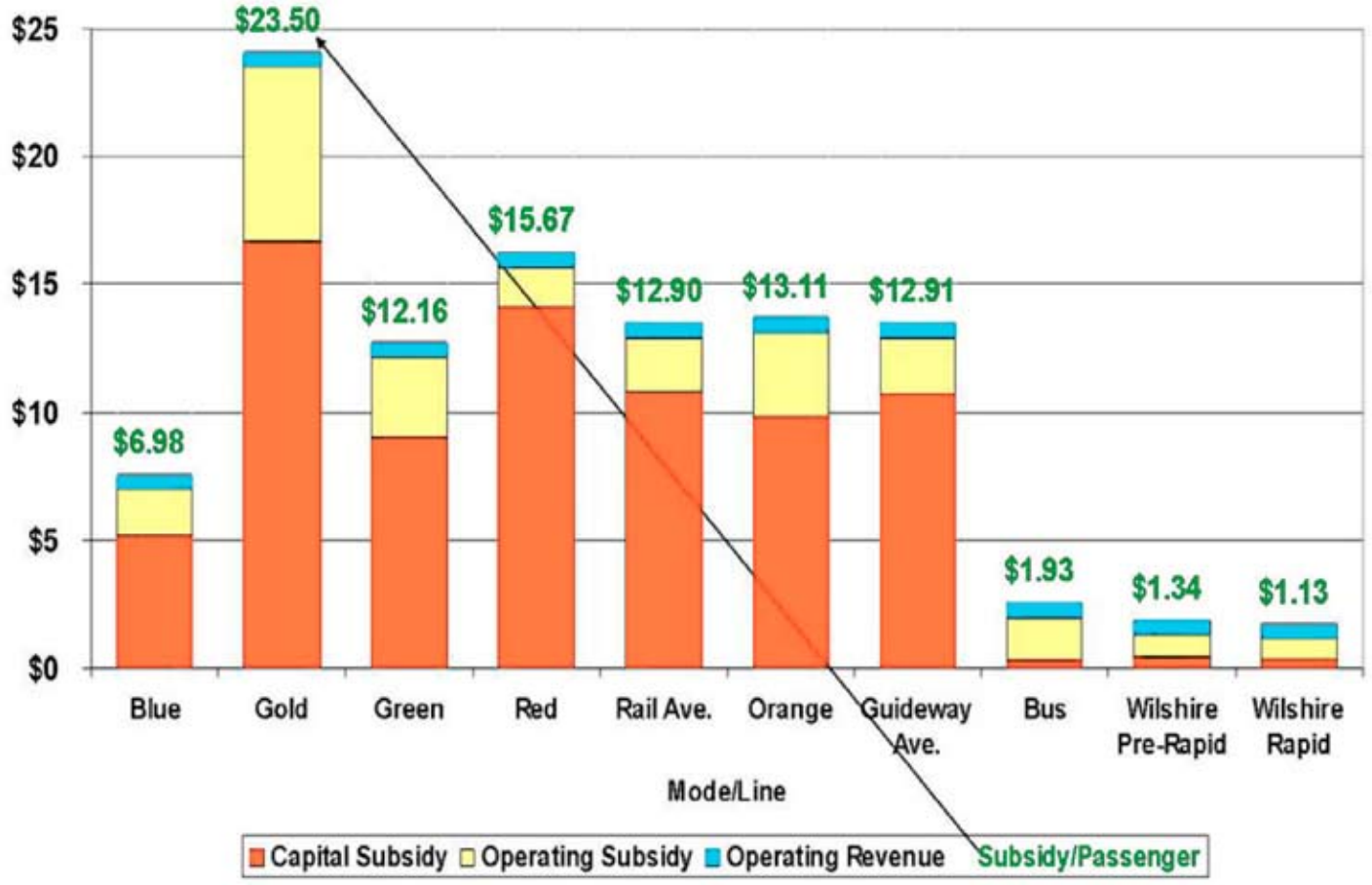
L.A. County MTA

Annual Change in Ridership by Mode by Period[xix]



MTA Fiscal Year 2007

Capital Subsidy, Operating Subsidy, and Operating Revenue per Passenger[xx]



congestion." "We have to have rail to improve air quality." And so on. Why is this not seen as one of the greatest wastes of taxpayer money in Los Angeles County history?

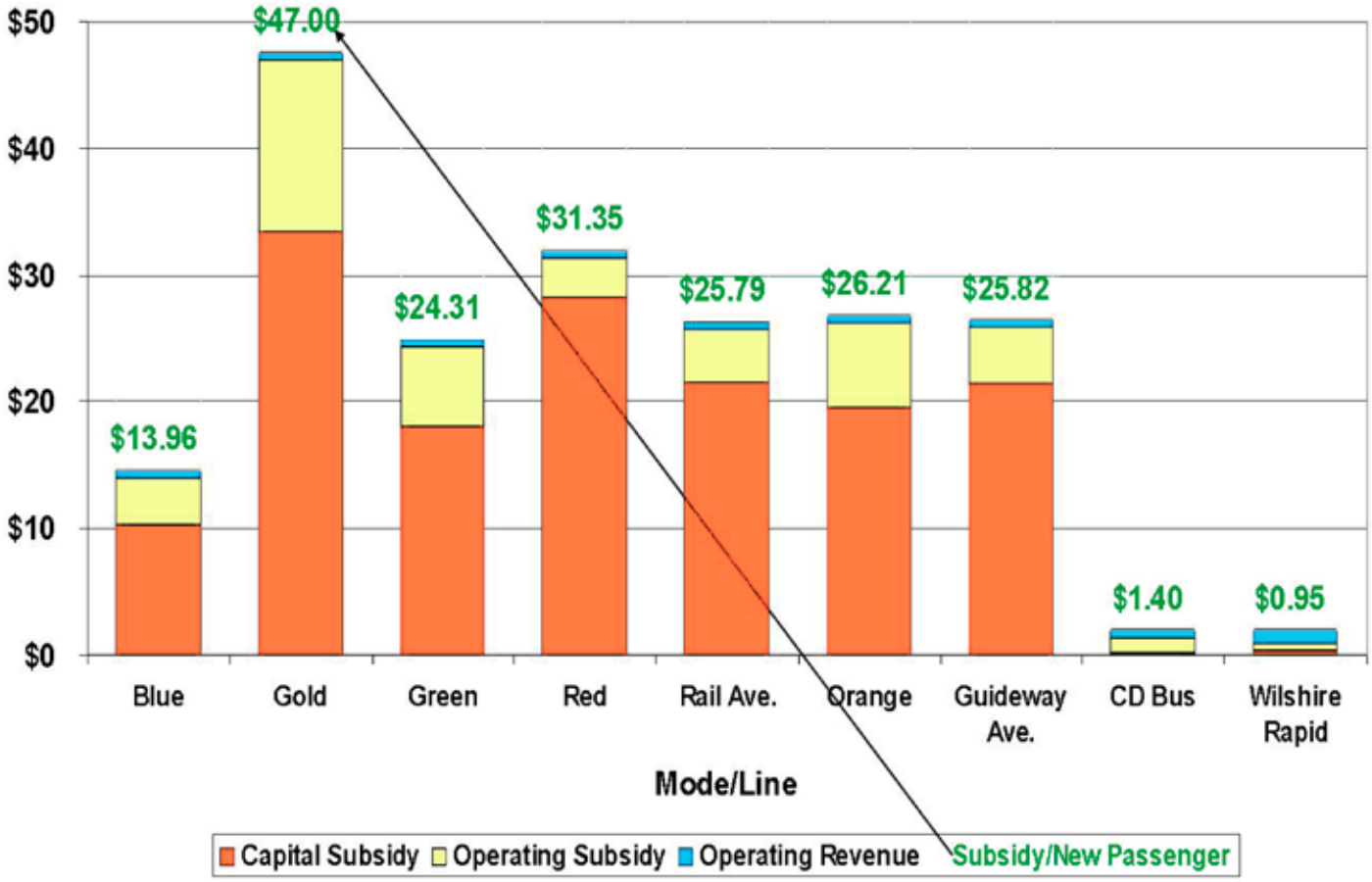
Only when we have kept fares low and improved bus service have we seen significant increases in ridership as shown in the second chart above. If we want to increase ridership, we need to lower fares and improve bus service.

The chart on this page illustrates subsidies per passenger of different lines and modes. The bus clearly requires less subsidy than rail. On average, each rail passenger is subsidized at $12.90 each, while each bus passenger is subsidized at about $1.93 each. As pointed out earlier, rail transit here is requiring about 7 times the subsidy of buses. The subsidies on the Wilshire bus line have even decreased as a result of the Metro Rapid service there.

One interesting note is that the Orange Line busway is currently receiving a subsidy close to that of rail lines. It is likely that this will improve over time as ridership increases, especially if new safety measures are added to the street crossings so buses can go faster. However, the Orange Line subsidies also point out that we are better off investing in low-cost improvements over many lines and especially where the ridership is concentrated, than

MTA Fiscal Year 2007

Capital Subsidy, Operating Subsidy, and Operating Revenue per New Passenger Trip[xxi]



investing a lot of money in a few lines where right-of-way exists.

The chart on this page illustrates the cost of each new transit trip. New transit trips are achieved by attracting new riders. These are the trips that provide an alternative to congestion, and reduce environmental externalities. This chart easily demonstrates that the most cost effective way to reduce the number of people driving and get them onto transit is to invest in bus service and lower fares. (CD stands for Consent Decree and embodies both strategies.) Not only is the bus more cost effective, it is 18 times more cost effective with Consent Decree strategies, and 27 times as cost effect with Metro Rapid bus improvements as demonstrated on Wilshire Boulevard.

G. Meeting Environmental Goals

a. Environmental issues

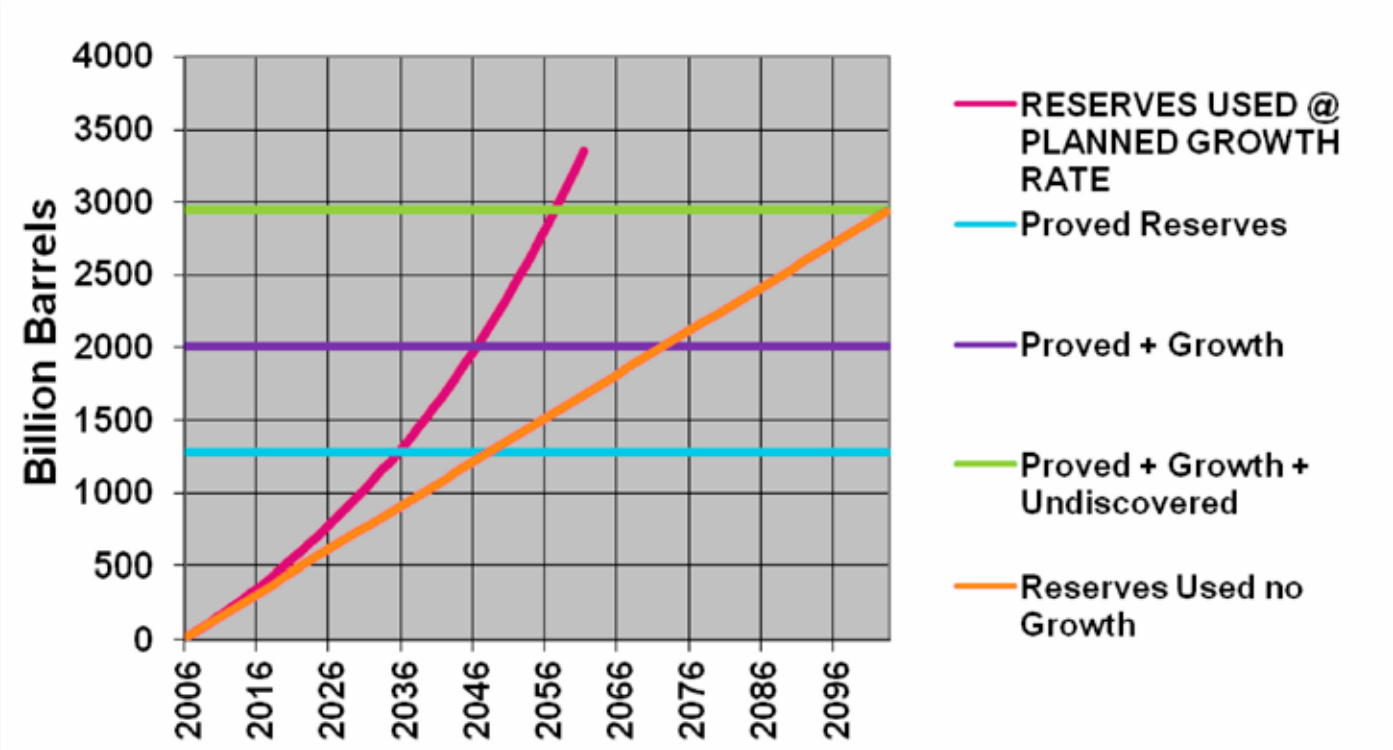
Many advocates and public officials promote public transportation as a means of addressing key environmental issues. Well-planned public transportation can in fact become an important tool in reducing environment impacts of transportation. About 75% of our air pollution in the Los Angeles

region is emitted from mobile sources.[xxii] The US Energy Administration reports that about 28% of our energy is used for transportation. The US Environmental Protection Agency attributes 20% of global warming carbon dioxide to cars.[xxiii] To the degree that we can reduce driving, we can address each of these issues.

Although much progress has been made, people in the South Coast Air Basin still breathe the most polluted air in the country. The health impacts include lung diseases such as emphysema and asthma, heart disease, brain cancer, a loss of energy, headaches and more.

Global warming brings the potential to throw the Earth's ecological systems out of balance with all sorts of cataclysmic changes. In California, the first effects will likely be forest fires and droughts. (In 2008 it seems like this may have begun.) Water shortages here loom from droughts, but also from loss of snow pack in the Sierra Nevada Mountains. As precipitation falls warmer, more of it will be rain rather than snow so less water will be stored, and existing snow will melt from the rain. Insect infestations, crop failures and disease will also likely rise as warmer temperatures favor some insects, viruses and bacteria. Rising water levels from melting of the polar ice caps threaten to raise sea levels to a point where many coastal cities will be underwater.

As the temperature in Gulf of Mexico rises, so does the likelihood of hurricanes and the their severity. We will see more storms like Katrina along with their devastation to communities near the Gulf. As we saw after Katrina, hurricanes in the Gulf of Mexico affect our petroleum supply. Much of our petroleum is imported and refined in Gulf of Mexico and adjacent cities. Once this is interrupted, we could see gasoline prices skyrocket overnight. With the price of petroleum rising, crop failures, droughts, fires and more, our economy will also take a large hit. One of the worst possible consequences of global warming would be the reversal of the Gulf Stream current which could trigger a new ice age. The Gulf Stream has already



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slowed significantly. Indeed, global warming will likely alter our planet's biological and geological history if we do not quickly make severe reductions in global warming gases.

Although global warming holds the greatest potential for planetary disaster, peak oil may hit us first and force us to change. Various estimates of known oil reserves in the world range from 1 trillion barrels to 1.4 trillion barrels. The US Energy Administration estimates the number at about 1.2 trillion. The following chart shows that with current trends (current consumption and current rates of increase in consumption) the earth would hypothetically run out of oil in 2035, just 28 short years from now. It will not happen that way because as petroleum becomes scarcer, the price will rise. The $4.50 per gallon that shocked us in the summer of 2008 will seem dirt cheap as gasoline goes to $8, $10 and higher in the near future. The economic impact will be severe. Since the price of oil is reflected in nearly everything we buy, the cost of our consumer goods will bring significant inflation. Peak oil will change the way we live. It will become clear that we cannot continue to carry a ton of steel around with us in the form of a car wherever we go. People commuting from far-flung suburbs will become economically isolated. Those in the cities will have to walk, bicycle and take transit more.

We will have to depend more on alternative sources of energy. But all of them together will not begin to make up for what we are now using in oil. Petroleum packs a lot of energy in small volume and is very versatile. It is easily transported and can be used for motor vehicles or to generate electricity. Natural gas will be the next most likely energy source. But its supply is limited too. Coal emits far too many global warming gases. Solar is renewable and may some day supply much of California's electrical needs. But likely not enough sun falls on our collection areas to power as much motor vehicle transportation as we now have. We will have to drive less. Much, much less.

b. An issue of how many drivers we can entice out of their cars

Public transportation can play an integral role in reducing the environmental impacts of transportation. What we gain environmentally will depend primarily on how many people we can attract out of their cars and into transit.

Rail advocates point to the fact that trains can run on electricity and are therefore more environmentally beneficial than buses. It is true that electric vehicles emit less pollution than fossil fuel vehicles on a one-for-one basis. But this argument weakens with a few facts. First, not all of our trains run on electricity. Metrolink trains run on diesel. And trains that run on electricity still produce some emissions where the electricity is generated. Second, we can also power buses by less polluting fuels. Nearly all of our buses now run on natural gas. We may also be able to produce economical electric and hydrogen buses someday. Third, people who use park-and-ride to get onto trains emit a large part of their pollution with the cold start and short drive to the local park-and-ride lot. Metrolink passengers that do this, then ride on diesel trains may not produce any environmental benefit at all.

The most important criterion in judging whether rail or bus is more environmentally beneficial, however, is the number of people that each can attract out of cars and onto transit. As illustrated in the previous section, our investment in rail transit has not yielded increases in transit passengers or decreases in motor vehicle miles travelled. In fact, we've backslidden significantly. When we have 19% fewer of our trips made on transit than before the rail investment, this only exacerbates the environmental consequences of transportation. As shown in the chart on new transit riders ("Capital

Subsidy, Operating Subsidy, and Operating Revenue per New Passenger Trip"), the bus is 18 times more cost effective than rail with Consent Decree strategies, and 27 times as cost effective when factoring in Metro Rapid bus improvements as demonstrated on Wilshire Boulevard. Clearly, lowering fares and improving bus service have done much more to reduce auto travel than building rail transit.

H. Subway to the Sea

Mayor Villaraigosa and others have promoted the concept of a "Subway-to-the-Sea" that would extend the existing Red Line subway along Wilshire Boulevard to the ocean. As pointed out earlier, this is the first rail line proposal in Los Angeles County that can show any planning basis that corresponds with employment density, residential density, activity centers, existing travel and existing transit ridership. Wilshire Boulevard has more transit potential than any line in Southern California. It makes sense to invest more in transit along Wilshire Boulevard. However, a subway along Wilshire Boulevard cannot be justified as the best public policy. As the MTA embarks on a new study of the corridor, the argument below deserves attention.

a. Costs and likely ridership

In 2000 the MTA released the "Mid-City/ Westside Transit Corridor Study" to look at transit alternatives to the Westside from Mid-City.[xxv] The ridership from Western Avenue to Federal Avenue was estimated to be 33,500 weekday passengers. Extrapolated to Ocean Avenue, the ridership estimate would be 48,400 passengers per weekday. (Although the forecast should be based on land uses and their intensity, this assumes similar patterns from Federal Avenue to Ocean Avenue. This is generous to the subway.) Current cost estimates are between $6 billion and $7 billion. Many of these passengers would have been former Metro Rapid bus passengers so the number of new transit riders would not be so great. The MTA study estimated that the subway to Federal Avenue would gain 15,300 new transit passengers. Extrapolated to Ocean Avenue this would be 22,100 new transit passengers. The study also estimated the cost of each new transit boarding to be $63 in 2008 dollars.

MTA studies have a history of overestimating ridership on rail lines, and underestimating the cost, so this should be taken into consideration. If we build this subway the real ridership might be lower and the cost higher. However, even accepting these numbers does not make the subway appear a good investment. At $63 per new transit rider, this would be more than twice the cost of new transit riders on today's rail lines, about 43 times the cost of Consent Decree strategies, and 63 times the cost of new transit riders on the Wilshire Metro Rapid.

b. Bus rapid transit alternative

The subway would take someone from downtown Los Angeles to Ocean Avenue in Santa Monica in about 30 minutes once the passenger has boarded. The total subway time would be 34 minutes to account for getting in and out of the station. No time is added for getting to the station, or waiting for the next train. The Santa Monica Blue Bus line 10 currently makes a similar trip in about 48 minutes. It also picks up passengers on surface streets before getting on the freeway. Travel time on the freeway is 20 minutes. If the Santa Monica Freeway ran on a dedicated bus lane, or carpool lane, and the bus entered the freeway in Santa Monica it could make the same trip in less than 20 minutes. This longer distance trip is where the subway competes best because the ratio of time on the vehicle to the ends of the trip is higher.

Metro Rapid currently makes the same trip in about 70 minutes. Adding on typical times for the ends

of the trip, the subway would take 64 minutes, and the Metro Rapid 100 minutes door-to-door. (Neither would present an attractive alternative for a discretionary rider.) However, time on the Metro Rapid could be improved with more signal priority, pre-board fare payment and dedicated lanes to a point that the time difference would be perhaps only 10 minutes or so. And, as discussed earlier, Metro Rapid can gain more time with more frequent service. It currently runs every four minutes in the peak, as opposed to 8 minutes for the subway lines. Metro Rapid buses could run as often as every 90 seconds or so, further cutting the time on the boarding end of the trip. More important, most trips along this line would be shorter. The shorter the trip, the better Metro Rapid buses compare to Metro Rail because of the time it takes to get in and out of the subway and the ratio of time on the ends of the trip versus time on board. For longer trips a bus-based system would have frequent freeway service so that a passenger would opt for this instead of taking the bus the entire distance of Wilshire Boulevard.

c. Countywide opportunity costs

The above exercise showed that, for riders wanting to travel the line all the way from downtown Los Angeles to Ocean Avenue, a subway would have a modest (10 mins or less) time advantage over well-planned Metro Rapid bus service. That modest advantage would grow ever smaller for riders not traveling the whole length of the line. To decide whether or not to build the subway we must weigh the issue in terms of the opportunity costs. How much do we pay for this modest gain in travel time? Indeed, subway proponents frame the issue solely in terms of how the subway would would improve transit on Wilshire Boulevard, a single transit corridor. However, the investment must be examined in the countywide context since it would be a countywide investment. Is this the best use of $6 or $7 billion for the county? What else could we do with the same money?

Rail proponents point out that this comparison could not be made because the state and federal governments would help to pay for it. True, but there is no excuse for wasting state and federal money. More importantly, if Los Angeles went to the state and feds with an ambitious plan to expand bus service it, too, would stand a good chance of securing new funding.

The annual value of the $6.5 billion budgeted for the new subway would be about $429 million (40 years @ 6%). That is enough to subsidize 306 million new transit trips annually (59% increase) with Consent Decree strategies, or 513 million new transit trips annually (95% increase) at the rate of the Metro Rapid bus on Wilshire Boulevard. *This would translate into about 900,000 to 1.47 million new transit trips per day*. Of course these are "back-of-the-envelope" calculations that should not be taken as forecasts. Nevertheless, it is clear that investing in better bus service and lowering fares would yield far more service to those who need it, and attract many more people out of their cars than investing in the Subway-to-the-Sea.

I. Fare Increase

a. What is the increase

The MTA Board raised the price of a monthly pass from $52 to $62 in 2007 and voted to raise it again to $75 in 2009. It raised day passes from $3 to $5 in 2007. It will raise single-trip fares from $1.25 to $1.50 in 2009, and day passes to $6 in 2009.

b. Impact on passengers

Two types of passengers will be impacted. The first type is the transit-dependent passenger. The second is the discretionary rider who has a personal car, but takes transit sometimes out of choice.

First, the financial impact on transit-dependent people will be devastating. With the median annual income of MTA passengers at $12,000 per rider, taking another $23 per month ($276 per year) out of their budget will impact their ability to house themselves, feed themselves, get medical care, go to school and many other necessities. At a time when we should be adding rungs on the ladder of socio-economic mobility, this removes them. For people with children, the situation is even worse. In order to move out of poverty, people need good access to jobs, school, medical care, shopping alternatives and more. This fare increase will put hundreds of thousands of Angelenos deeper into poverty and further cement their situation.

Second, the travel patterns of the transit-dependent will change. Some of them will run the numbers and buy clunker vehicles to drive themselves in, putting more cars onto the streets, emitting more pollution and global warming gases. They will not be able to afford clean vehicles so the cars they drive will be the dirtiest of all. Some people will walk or bicycle more. Many people will carpool with family, friends and co-workers. Some people will forego certain trips. All in all, the fare increases will reverse the progress made under the Consent Decree that boosted ridership.

c. Impact on ridership

As noted above, the transit dependent will forego some of their transit trips, and take other transportation modes for others.

Some discretionary riders will drive instead of take transit. Discretionary riders are less likely to purchase transit passes than the transit-dependent, and more likely to use day passes since many ride less frequently. The increase from $3 to $6 for a day pass will be enough to tip the scale for some in favor of driving, particularly when parking can often be found for less than $6. Some discretionary riders take transit when they can to save money. This will eliminate this advantage for some of their trips. This is especially critical as the cost of gasoline rises. Part of the summer 2008 uptick in MTA ridership and transit ridership nationally resulted from the cost of gasoline. As the cost of gasoline rises further, as it will, the MTA should be positioning itself to capture more of these discretionary trips. Instead, the MTA is pursuing fare increases that makes the car more competitive with transit.

Overall, transit ridership will decrease significantly with fare increases. Using the American Public Transit Association's findings that fare elasticity is -.36, the impact of the transit pass going from $52 to $75 will result in a 16% reduction in ridership. The single fare increase of $1.25 to $1.50 will cause a 7% decrease in ridership and the day pass increase from $3 to $6 will lose 36% of passengers. According to the 2002 On-Board Bus Survey , 52% of passengers use passes to board. Using this number, the total drop in ridership would be about 26%. In other words, annual passenger transit trips will drop from about 496 million in 2007 to 367 million. Daily transit patronage would decrease from 1.5 million passengers to 1.1 million. This would take us back close to the low points in patronage of 1996 when 364 million boarded MTA transit lines, just before the Consent Decree took effect. It would also bring us close to a low point in 1982 just before fares were lowered from Proposition A revenues. However, our population has grown significantly since then; in 1982 we had 45 passenger trips per person. Taking this into account would bring us to 36 passenger trips per person, a decrease of 20% in the proportion of our trips made on transit in 2007.

II. A Transit Vision for Los Angeles County

A transit vision for any urban center should start with the goals of providing good access for transit-dependent people, eliminating any racially discriminatory policies or policy impacts, and reducing the environmental footprint of passenger transportation by attracting discretionary riders out of their cars. In Los Angeles and many U.S. cities that have been shaped by car-dominated planning and development, we can move towards all these goals with the same strategies. By recognizing our geography and trip patterns, we can devise an appropriate bus-centered transit system that brings success because it mimics the flexibility of the auto. The transit vision presented here as a Los Angeles model seeks to make transit attractive because it is *flexible*, *ubiquitous* and *frequent*. It includes a mix of services to bring these attributes.[xxviii]

a. Neighborhood service

Most trips that we take are short. Neighborhood transit service can take people to local destinations, such as the grocery store, the post office, the bank, and places of worship or neighborhood restaurants. They can also get passengers to bus stops. Small vehicles offer flexibility and can nimbly travel on narrower streets than large buses. The DASH bus in Los Angeles provides neighborhood service and is popular in the areas that it serves. Neighborhood transit needs to operate frequently, at least every 10 minutes, but preferably 5 minutes. Otherwise, people may simply walk.

These buses can operate on a fixed route, or as "smart shuttles" on a semi-fixed route with the ability to veer off route to pick up someone who has called in, or to drop off someone needing to go to a destination off the route. Smart shuttles have computer dispatch capabilities with global positioning systems and automatic vehicle locator systems. This technology enables the dispatcher to send the nearest bus to pick up someone, select the optimal route, as well as the optimal order to pick someone up.

b. Smart jitneys

Smart jitneys would be publicly owned and operated van-like vehicles that would have computer dispatch capabilities with global positioning systems and automatic vehicle locator systems like smart shuttles. These jitneys would be more like "shared-ride" taxi service. Like smart shuttles, the technology enables the dispatcher to send the nearest bus to pick up someone, select the optimal route, as well as the optimal order to pick different passengers up. The fare would be between that of a bus and a taxi, and the service would as well. It would be more direct than a bus, but not as direct as a taxi.

c. Local bus service

Although not sexy, local bus service picks people up near where they live, and drops them off near where they are going. Quality local bus service provides the foundation of a transit system that is ubiquitous. Local buses bring service to most origins and destinations. Good local service can reduce the time on the ends of the trip. Local bus service is also critical in feeding rapid and regional service. In order for local bus service to attract passengers, it needs to be frequent. Ideally, it should run every two to five minutes, depending

on the community and time of day. If it runs less frequently, people with the option to drive will often do so. Moreover, frequent local service allows passengers to transfer without losing much time. We can realize significant improvements in our transit system by improving its foundation – simply running more local buses along more streets.

d. Rapid service

Rapid bus service provides a faster trip than local service for passengers traveling more than a couple miles. MTA's Metro Rapid buses run the best rapid bus service in the United States. Simple, inexpensive technologies speed these buses to make them more attractive. Signal priority that holds green lights green longer, and turns traffic signals green sooner make these buses faster than local buses. Stopping only at major intersections reduces the time making stops. Low-floor boarding reduces dwell time at each bus stop.

Rapid buses can add features over time that speed them more. Giving them even greater priority at traffic signals would allow rapid buses to hit more green lights. Pre-board fare payment could significantly reduce dwell time. Wide-door buses coupled with pre-board fare payment could reduce dwell time even more. Bus only lanes would give rapid buses an advantage in not getting stuck in traffic. Running more local buses would better feed rapid buses. And, running more rapid buses along each line, and running them on more lines would give them further advantage. Ideally, rapid buses should run every two to five minutes. Only some of them presently do during peak hours. The MTA plans to operate rapid bus on 26 of the most promising lines. This is a big step in the right direction. Like the new Wilshire Bus-Only Lanes project moving that just received federal funding, all these rapid buses should have their own lanes. Later, rapid bus service should be added to more lines throughout the County.

e. Freeway regional service

In order for transit-dependent people to access more jobs, schools, medical institutions, etc. they need to be able to make regional trips. Today these trips can be made, but to go to another part of Los Angeles County using public transit can take three hours each way. What is the solution? Our freeways exist, with four or five lanes in each direction. This infrastructure should be used for more buses. Some buses already operate on our freeways today, but too infrequently, and most only travel into downtown Los Angeles in the morning, and back out in the afternoon.

Good freeway bus service should run in all directions throughout the day. Similar to the Harbor Freeway transitway, we need stations every two or three miles. The stations should connect to rapid, local and neighborhood buses. Passengers also need transfer points at freeway interchanges so that they can transfer just like motorists connect from one freeway to another. Ideally freeway buses should run every five to eight minutes. With this type of service, passengers could take a local or rapid bus to a freeway stop, take a freeway bus, transfer to another freeway bus, connect to rapid bus service at the destination end and finally transfer to a local bus to their final destination. The total trip time would be very competitive with the car.

This example brings up the importance of frequent service at all levels. With three or four transfers this could also be a very long trip if there are long waits for transfers. But with frequent service at all levels, passengers could easily hop off one bus and onto another.

The infrastructure for freeway bus service can gradually evolve from simple bus stops on freeway ramps to off-line stations as on the Harbor Freeway. Buses can begin to operate on any freeway right now with simple bus stops. Then, they can be made to benefit from using carpool lanes, and later dedicated bus lanes. Freeway bus transfers can at

first take place with "dog-leg" buses that transfer riders from one freeway to another. Later, the "dog leg" can be eliminated with the construction of transfer stations at freeway interchanges. Freeway service could begin with stops at every stop, but later add freeway-level "express" service that goes long distances and stops less frequently. Where pairs of destinations and origins have enough demand, direct service—that circulates on city streets, gets on the freeway, transitions to other freeways and gets off the freeway—could also continue to run like today's freeway buses.

f. Transit-oriented development

In order to bring people more conveniently to transit, we should concentrate new development along transit lines. "Transit-oriented development" has become a popular concept among transit advocates, planners and policy makers. It most frequently refers to building around rail stations. But if we recognize the bus as our primary transit vehicle, we should plan new housing and commercial development along bus lines. Many of our arterial streets have one- to two-story buildings. These could become streets where we concentrate 3, 4, 6 and 8-story buildings. These could be housing, office or other uses. Along some streets it would make sense to build housing on top of retail, office and retail. The intersections of rapid bus lines could support more development. This type of development should take place with wide sidewalks and safe street crossings for pedestrians. Transit passengers are usually pedestrians on both ends of the trip. Well planned, this type of development would bring about more "walkable" neighborhoods.

g. Fares

According to the MTA FY 2008 budget, the MTA collects about $.66 per boarding. The MTA projected that it would collect about $322 million in FY 2008. This would cover about 28% of the operating budget for both bus and rail. Without this revenue, another revenue source would have to be found, or something in the budget cut.

Lowering fares make transportation, and all destinations, more accessible to people who depend on transit to get around. As described in the discussion about the fare increase, lowering fares also increases ridership, while raising them decreases it.

Those favoring a fare increase argue that users should cover a larger portion of the cost of operating service. But transit is a social service. We do not ask students to pay to go to public schools. Public schooling is paid for by general taxation. Even those who do not use transit benefit when other people do. There are fewer cars on the road and less air pollution, energy consumption and emission of global warming gases.

Fares should be low and affordable. One dollar is better than $1.50, $.75 is better than $1, and $.50 is better yet. A fare of $.50 with $20 monthly passes, $7 weekly passes and $2 day passes would bring more passengers in and better serve those who need transit. Some of the lost revenue would be made up by the increase in ridership. The increase in ridership would require that MTA run more buses to relieve overcrowding.

A free fare would offer even strong advantages. Transit-dependent people would have more access and more money. Ridership would likely go well above levels ever seen. The ease of getting on and off buses would attract discretionary riders and make more of them accustomed to riding buses. The MTA also spends a significant amount of money on fare collection equipment ($5,000 per bus), fare collection administration, maintenance of collection boxes and security to ensure that people have paid. The cost and hassle of fare collection could be foregone. Moreover, elimination of fares would allow for less dwell time at bus stops and

wide-door buses for fast boarding and alighting of passengers. Although fare revenue would be a loss, the subsidy per passenger would still likely be quite low, certainly much lower than incurred by rail lines. If the revenue could be made up through other sources, the benefits would be significant.

h. Hours

Passengers need 24-hour service. Many of the jobs of transit dependent passengers--hotel and restaurant staff, security guards, health care aides--get off late at night.These people need to be able to get home. Service should run very frequently from 6 am to midnight, but continue to run regularly throughout the night.

i. Clean fuels

Buses burn fuel and emit air pollution. Therefore, they should use the cleanest fuels available that are reasonably economical. This particularly affects passengers waiting at bus stops who breathe the exhaust of buses passing by. Most of the MTA buses in service now operate on natural gas and are relatively clean. As cleaner fuels become available the MTA should stay at the forefront and operate buses on the new fuels or technology.

III. Reclaiming Our Streets

In addition to the question of determining and planning appropriate transit—bus-centered or rail-centered—we must also consider how best to challenge auto-oriented transportation planning itself. Since the end of WWII, transportation policy in the United States has put the auto at the top of planning concerns. Auto-oriented transportation and land use planning policies have assumed that people will, and should, travel by car. Our communities have been planned for cars rather than people. Yet many cities in the U.S. and around the world have begun to pursue alternatives. This section examines how Los Angeles County, perhaps the most auto-oriented urban center in the country, could reclaim its streets from cars for higher and better uses and to create more equitable transportation, more environmental lifestyles and healthier neighborhoods.

A. Auto-Oriented Transportation Planning

At the federal and state levels most transportation funding has paid for highways and streets. In fact, for many years transportation agencies were called "Traffic Departments."

Regional transportation plans show vast networks of freeways linking every corner of developed suburbia and beyond. Suburban development has followed construction of freeways. That development is served by wide, high-speed arterial streets that take people on their way to isolated residential neighborhoods past long strips of tacky office parks and billboard-loaded retail dominated by national chain stores with a sea of parking in front. Local transportation agencies have concentrated on funding streets and access to freeways. Their land use planning has separated housing from retail and work sites, while requiring plenty of parking for cars at every building.

The aggregate of these policies has yielded, to a large degree, the desired result. The vast majority of our trips are made by car, and those who do not or cannot travel by car are disadvantaged. It has been a self-fulfilling prophecy. Along with the mobility to travel long distances, we are left with global warming, rapidly diminishing energy resources, communities where people do not get regular exercise through daily walking, and a large disenfranchised portion of our people who cannot afford transportation to their daily destinations. Ironically, it has also left us with worse access. Before the car, people lived near their work and could get to school, the store, the doctor and other destinations within minutes. Now we often travel long distances for daily needs and spend significant time traveling.

These policies continue in many ways. In Los Angeles the new plan to make Pico and Olympic Boulevards more efficient for traffic flow embodies a philosophy of solving transportation problems by moving more cars faster, even at the expense of other community objectives. Caltrans' plan to add yet a sixth lane to the San Diego Freeway, for $700 million to $1 billion, reveals a willingness to spend gargantuan sums of money to speed up cars, even if only for one or two years until those lanes fill up and congest. Some office buildings constructed in Warner Center in the 1980s were required to provide preferential parking to encourage employees to commute by vanpool. These were constructed on the first floor, the most convenient floor and the entrances to first floor parking spaces were made high enough for vanpools to get under.

However, with the growing number of commuters arriving in large SUVs that are too tall to park on upper floors, these premium parking spaces that were meant to encourage vanpool commuting are now given to SUVs.

However, a growing number of communities are turning transportation policy around 180 degrees to slow cars down, to restrict their movement and even eliminate them from some neighborhoods.

B. Leading the Way

a. The European Context

European cities have done the most to clamp down on autos. Holland started experimenting with "woonerven" in the 1970s and as of 1999 had some 6000 woonerven streets and neighborhoods.[xxvii] The term "woonerf" means, "living street" (woonerven is plural). Woonerven incorporate a range of features that give priority to pedestrians and bicyclists over autos. These include pavers, landscaping, barriers, street furniture and other physical features that limit where cars can go, and slow cars to very slow speeds, or eliminate them altogether. Some narrow the streets and cause motorists to travel along a slow "S" course. Children can play in these streets and cars are guests, not kings. Often, curbs, signs and other features of typical streets are stripped from woonerven forcing motorists to pay attention to other users as well as obstructions (see fig 1). Different woonerven have different designs and purposes. Some slow cars only to 20 mph, while others slow them to 3 or 4 mph. While woonerven exist in many Dutch cities, Groningen, Delft and Den Haag stand out.

Other European cities have adopted the concept of woonerven in many of their streets. Denmark, Germany, Belgium and France all have embraced the concept of better urban living through lowering the status of cars on, at least, selected streets. More are calling theirs "shared streets" or "shared space." The Shared Space Project is an information-sharing program that seeks to improve policies and planning for shared space streets with pilot projects in:

- Fryslan, Holland
- Emman, Holland
- Haren, Holland

Fig 1:
Implemented in many European cities, "woonerven" use a range of features to give priority to pedestrians over autos.

Fig 2:
Stroget in Copenhagen is the longest, oldest, best known pedestrian retail street in Europe.

Fig 3:
In Den Haag, some streets have been downgraded to make room for bicycles.

- Ejby, Denmark
- Bohmte, Germany
- Suffolk County, UK
- Oostend, Belgium

Many European cities prohibit cars altogether from selected streets. Often these are popular retails streets. Stroget in Copenhagen is perhaps the largest, oldest and best known (fig 2). A long list of cities in northern Europe, as well as some in Austria, Italy, Greece, Spain, Switzerland and other countries as well have restricted or prohibited autos on public streets.

Fig 4:
Pitt Street Mall, a car-free promenade, is the retail center of downtown Sydney, Australia

In some European cities, entire city centers are also auto free. Many of these are older, sometimes medieval, areas where there is not much space for autos. The City of Gent, Belgium has a car-free center. This zone is home to approximately 80,000 people. Much of Siena, Italy is car-free, as is Freiburg, Germany. Some islands and resorts are also largely car-free. Venice, Italy is perhaps the best known example. Many French and German islands are car-free. A number of alpine resort towns in Switzerland are also car-free. However, many of these places are car-free due to historic circumstances, rather than progressive policies. Others are in isolated resort towns or islands with special circumstances. Nevertheless, these communities recognize the value of maintaining their history and ambiance that remains only in a car-free environment.[xxix]

Some streets have been downgraded for cars to make room for bicycles. Den Haag, Holland stands out as having done this (see fig 3).

b. Around the World

Examples of policies to restrict autos can be found in many parts of the world. A few of the most notable ones are listed below:

- The modern residential neighborhood of Discovery Bay in Hong Kong prohibits private cars. People walk and travel by bus. The island of Ma Wan in Hong Kong prohibits cars as well. No full-size autos are allowed on Cheung Chau Island or on Lamma Island in Hong Kong. [xxx]
- Tokyo, Japan prohibits cars on some retail streets in the Shinjuku district, in Harajuku, as well as near the Buddhist temple in Asakusa. Much of the well-known Ginza district is closed to cars on Sundays.
- Pitt Street Mall, a car-free promenade, is the retail center of downtown Sydney, Australia

(fig 4). The city also has a pedestrian mall in Manly Beach.

- Fes, Morocco has the most populated car-free district in the world. Approximately 156,000 people live in the center of the city that is car-free. The center is historical and contains residences and businesses alike. [xxxi]
- Marrakesh, Morocco has car-free streets in its central area.
- The city center of San Jose, Costa Rica has some of its most popular markets along car-free streets (fig 5).
- Several car-free streets in central Buenos Aires, Argentina comprise a whole network of pedestrian-oriented streets. [xxxi]
- Curitiba, Brazil has 24 blocks of car-free streets that pedestrians use and are well-served by its bus system.[xxxiii]
- 110 kilometers of Ciclovía roads in Bogotá, Colombia are closed to traffic on Sundays and holidays. The city plans to become primarily car-free during rush hours by 2015.[xxxiv]
- An organization in Ecuador named "Quito Para Todos" is working to create car-free days in Quito.
- The Zona Peatonal in Guadalajara, Mexico has 15 streets that are restricted to pedestrians in its central area. [xxxv]
- Victoria, British Columbia, Canada has a large car-free area in its downtown that is used for retail as well as arts and crafts (fig 6).

c. Domestic Examples

A growing number of cities in the United States are taking steps to slow cars, and to prevent them from traveling on certain streets. Some create pedestrian malls, while others have transit malls. A few of the most notable examples follow:

Fig 5:
In downtown San Jose, Costa Rica, popular markets are car-free.

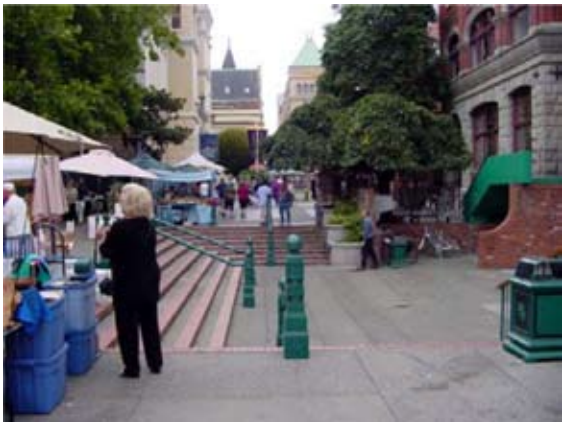


Fig 6:
Bastion Square is a large pedestrian and retail zone in Victoria, British Columbia that features local artisans' stalls.

- Denver, Colorado has a transit mall that only buses and pedestrians use. The buses run frequently (every few minutes) along 16th street for 13 blocks next to a pedestrian promenade. Passengers ride for free. The buses connect with buses to other parts of the Denver region to provide time advantages for people arriving on transit (fig 7).
- Portland, Oregon also has a transit mall that consists of a street in a central pedestrian-oriented area that only buses can travel. The transit mall has numerous bus bays that serve as stations for buses that run on different lines.

Fig 7:

Denver, CO has a thriving downtown transit mall that only pedestrians and buses use.

- Car-free Faneuil Hall Marketplace in Boston, Massachusetts creates a lively gathering place for shoppers, restaurant goers, and those on historical tours.
- The Lincoln Road Mall in Miami Beach draws thousands to this pedestrian street.
- The Pearl Street Mall in downtown Boulder, Colorado is a car-free, pedestrian street that is well served by local transit and bikeways.

Fig 8:

Portland, Oregon, Palo Alto and Berkeley all have streets that are designated as "bicycle boulevards" that accommodate through-bicycle traffic, and prevent through- auto traffic.

- State Street in Madison, Wisconsin prohibits autos, except for deliveries, along the one-mile stretch from the State Capitol to the University of Wisconsin campus. It is Madison's "main street." Hoards of bicyclists and pedestrians use State Street. State Street also has frequent bus service.
- The City of Chula Vista in San Diego County is planning to convert several alleys used by school children to "home zones," the US version of shared streets. These home zones will downgrade these streets for cars, and improve them for pedestrians.
- The City of Santa Barbara has plans to expand its historic network of car-free pedestrian "paseos" in its downtown core.
- Portland, Oregon, Palo Alto and Berkeley all have streets that are designated as "bicycle boulevards" that accommodate through-bicycle traffic, and prevent through- auto traffic (fig 8).
- San Francisco has a plan for its main downtown artery, Market Street, to de-emphasize autos and upgrade conditions for transit and bicycles. It includes several options, among them one that would reduce auto traffic by requiring them to turn right (get off) at one or more locations. The reduced traffic would help to speed the many buses that use Market Street, as well as improve conditions in the bike lane.

d. Local Examples

A number of local examples of auto-restricted areas and efforts to lower the status of cars demonstrate an appetite for this in Los Angeles.

- The City of San Fernando is aggressively looking to calm traffic and to de-emphasize the

auto (fig 9). It has plans for, and has funded, a "road diet" that will reduce the number of travel lanes along Brand Avenue in front of a middle school. These plans also include wider sidewalks, bike lanes and a variety of traffic control devices that will slow cars down.

- The popularity of the car-free Third Street Promenade shows that people gravitate to such places. The numerous bus lines and bike lanes that serve the Promenade, along with nearby housing ensure that fewer people arrive by car there than many other retail areas.
- The Venice Beach boardwalk also shows how popular auto-free areas can be.
- The walk streets in Venice and Manhattan Beach put cars in the back of homes and pedestrians in the front, creating better opportunities for neighbors to get to know one another.
- Santa Catalina Island restricts the number of autos permitted in order to preserve the quality of life and environment. Only one new permit may be given to a resident when two existing permits are turned in. Over time, this reduces the number of cars on the island. The City of Avalon prohibits cars from using one residential street (fig 10).
- Periodically, streets are closed for events. The LA Marathon, the Cinco de Mayo Festival in downtown Los Angeles, and numerous 10-K races exemplify these. A few years ago, the Pasadena Freeway was closed for a bicycle ride. Wilshire Boulevard will be closed for Earth Day this year. On these days, Angelenos flock to these places to enjoy street life without cars.

Fig 9:

The City of San Fernando is aggressively looking to calm traffic and de-emphasize the auto.

Fig 10:

Santa Catalina Island, CA restricts the number of autos permitted. Cars are prohibited from one street in the City of Avalon.

Towards a Car-free Los Angeles

Global warming and peak oil loom as catastrophic events certain to happen in the near future, unless drastic measures are taken, and taken very soon. It is simply unsustainable for people to travel around with a ton of steel with them wherever they go in the form of a car. This wasteful habit exhausts energy supplies while causing a significant portion of global warming.

The examples of policies described above to restrict autos around the world show that it is possible to do so. They also show a variety of ways to clamp down on the car. However, many of these examples stem from historical consequences, rather than conscious policies to de-emphasize the car. Many others happen in resort communities, or in shopping districts that people have to transport themselves to in the first place. This report advocates going beyond what others have done in these examples. It advocates for conscious actions directed at curtailing use of the car for the survival of humankind. More aggressive action is needed. The following describes the initial steps that should be taken to graduate us toward a future free of the private auto beginning in Los Angeles.

These measures to restrict the auto will seem drastic. Make no mistake about it – they are drastic. But they are not unreasonable. In fact, they are necessary measures to ensure that life on Earth can go on. Without such measures, we will face a future with all of the horrors of climate change, and with the economic catastrophes awaiting us if we do not wean ourselves quickly from the diminishing supply of petroleum. The sooner we adopt such policies, the better life will be for us and future generations.

1. Car-free Downtown Los Angeles

Downtown Los Angeles has the most transit service available in our region, as well as the lowest proportion of people arriving by car. It should be the first large-scale car-free zone. Some people would likely drive from outer areas and park. But to arrive, they will have to take transit or bicycle at some point. These transfers will take time, and will cause these commuters to seek better transit service. When the office executives need better transit service, they will demand it, along with everyone else in downtown.

Later on, other urban centers in the Los Angeles region should follow Downtown and eliminate cars. Hollywood, Westwood, Century City, Burbank, Pasadena, Long Beach, LAX area and others should rise to the top of the list.

2. Transit-Pedestrian Mall on Wilshire Boulevard

Wilshire Boulevard has the most transit service and transit passengers in the Los Angeles region. It should become a transit mall with more bus service with a more varied mix of rapid, express, local and neighborhood transit. With good planning, sidewalks should be widened, and Wilshire Boulevard could become a very lively spine of Los Angeles teeming with transit passengers, shoppers and local residents.

Other streets such as Vermont Avenue, Western Avenue, Santa Monica Boulevard and Venice Boulevard could follow.

3. Bus Only Lanes on Arterial Streets

Many of our bus lines should run on bus lanes created by removing lanes for private automobiles. These lanes would be able to move people quickly and conveniently with added service. Buses on these streets would become a more attractive alternative to being stuck in a car on a congested street.

4. Car-free Peak Periods

Commuters taking transit to work should be given the advantage of being able to travel congestion-free on buses, on bicycles and on foot from local neighborhoods. If all commuters had to use transit, bicycle or walk to get to work, conditions for these modes would improve rapidly. Cars would be disadvantaged.

5. Car-free Days

Los Angeles could emulate other cities that restrict cars on weekends. We could extend this further from recreational purposes to commuter and other utilitarian travel and restrict cars on certain weekdays. This would require that all commuters find transit or other alternatives to get to work.

6. Convert Many Residential Streets to Home Zones

Los Angeles should follow the European model of "woonerven" and shared streets to create "home zones" on many of our residential streets. This will enliven the streets, will encourage people to walk and bicycle, and will diminish the dominance of the auto.

7. Create a Network of Bicycle Boulevards

Many of Los Angeles' streets form a well-connected grid. Such a street grid is well suited to selecting some of those streets as bicycle boulevards in order to create a network of quiet, inviting streets that people can bicycle on to get to local destinations.

Endnotes

[i] Consent Decree, October 29, 1996, LABOR/COMMUNITY STRATEGEY CENTER, et al., Plaintiffs, VS. LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY and JULIAN BURKE, Defendants, United States District Court, Central District of California, Western Division, CASE NO. CV 945936 TJH (MCx).

[ii] 2000 US Census

[iii] Los Angeles Department of Transportation traffic counts – 2002 to 2006

[iv] Ibid. Los Angeles Department of Transportation traffic counts – 2002 to 2006

[v] Ibid. Los Angeles Department of Transportation traffic counts – 2002 to 2006

[vi] Ibid. Los Angeles Department of Transportation traffic counts – 2002 to 2006

[vii] 2001 National Household Travel Survey (NHTS)

[viii] MTA's 2002 On-Board Bus Survey (Rea & Parker Research)

[ix] Ibid. MTA's 2002 On-Board Bus Survey (Rea & Parker Research)

[x] Ibid. 2002 MTA on-board survey

[xi] 2003 Metro Rapid Travel Survey

[xii] Community-Based Transit Improvement Project, for Caltrans, by TDA Inc. and Ryan Snyder Associates, 2004

[xiii] 2004 Caltrans survey of MTA Metro Rapid

[xiv] 2004 Caltrans survey of MTA Metro Rapid

[xv] Metrolink customer survey in 2000

[xvi] 2004 Metrolink customer satisfaction survey

[xvii] These charts were taken from Rubin's Presentation to the MTA Fare Increase hearing on May 24, 2007.

[xviii] Los Angeles County MTA Annual Ridership Period and Trend Lines

[xix] LA Co. MTA Annual Change in Ridership

[xx] MTA FY 2007 Capital Subsidy, Operating Subsidy and Operating Revenue Per Passenger

[xxi] MTA FY 2007 Capital Subsidy, Operating Subsidy, and Operating Revenue Per New Passenger

[xxii] "AQMD Adopts Comprehensive Clean Air Plan," South Coast Air Quality Management District news article, June 1, 2007.

[xxiii] US Emissions Inventory – 2004.

[xxiv] US Energy Administration

[xxv] 2000 MTA "Mid-City/Westside Transit Corridor Study"

[xxvi] Ibid. 2002 On-Board Bus Survey

[xxvii] See also BRU Five-Year Plan for Countywide New Bus Service, by Bus Riders Union, 2005.

[xxviii] Home Zones briefing sheet, Robert Huxford, Proceedings, Institution of Civil Engineers, Transport, 135, 45-46, February, 1999.

[xxix] Wikipedia, Car-Free Places

[xxx] Ibid. Car-Free Places

[xxxi] Carfree.com

[xxxii] Ibid. Wikipedia Car-Free Places

[xxxiii] Ibid. Wikipedia Car-Free Places

[xxxiv] Ibid. Wikipedia Car-Free Places

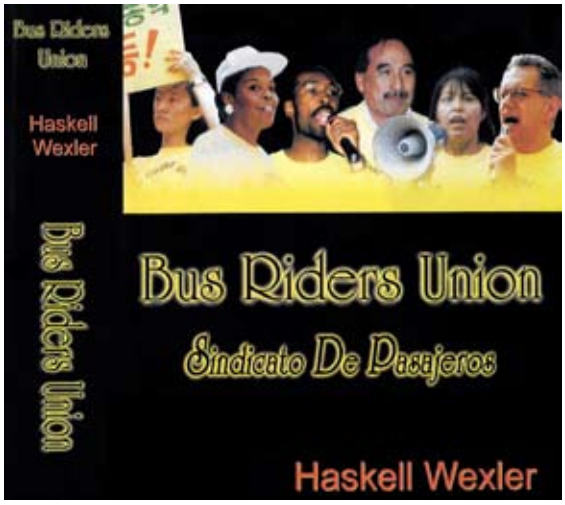
[xxxv] Ibid. Wikipedia Car-Free Places

Also from the Strategy Center

BRU Five-Year New Service Plan

Designed to increase LA countywide access to employment, education and healthcare for the transit dependent.

- An integrated three-tier service program: a freeway bus service, Metro Rapid Bus expansion, a community shuttle program.
- a countywide network of high-quality, interdependent, long-distance and local service that provides fast, reliable bus service during the week, in the evenings, and on weekends.



BUS RIDERS UNION: the Film

The film traces three years in the life of Los Angeles' Bus Riders Union as it forges a powerful multiracial movement to fight transit racism, clean up LA's lethal auto pollution and win billion-dollar victories for mass transit for the masses.

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