

Metropolitan Center

White Paper # 3

*Miami-Dade County's
Transportation Funding Decision: An
Assessment of the Proposed One Penny
Sales Tax*

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Foreword

The Metropolitan Center at Florida International University began operation in July 1998, funded through the Office of the President's Quality Improvement Initiative. The mission of the Center is to provide urban research and technical assistance in support of city, county and state governments, the private sector and not-for-profit organizations in South Florida. To accomplish this mission, the Center brings faculty, students, experts and community members together around issues of critical concern to the South Florida metropolitan area. One goal of the Metropolitan Center is to create a locally integrated economic development database, combining historical data from the Florida Department of Labor and Employment Security, the Census Bureau, the Department of Commerce and private data sources. This database will be used to track major industries identified by "One Community, One Goal" and other economic development issues.

The Metropolitan Center houses the Florida Institute of Government, the Joint Center for Environmental and Urban Problems and the Dewey Knight Center for Public Service. By combining the staff of these organizations, the Center has extensive experience in urban and regional planning, growth management, economic development, public management and finance. Through these organizations, the Metropolitan Center provides professional training, technical support, community outreach, scholarship and applied research.

Recent applied research projects have included assessing private management of public housing, transportation options related to welfare-to-work and the impacts of transportation development on the Overtown community. The Metropolitan Center also produces "white papers" on topics of interest to local officials. Two such white papers have been produced so far. The first, "Spatial Patterns of Miami-Dade County Employment with Particular Reference to Entry Level Jobs," was published in October 1998 as part of broader research related to finding solutions for welfare clients' transportation problems. The second paper addresses legal aspects and best practices regarding public purchasing (procurement). Forthcoming white papers will cover such topics as brownfields, best practices in community oriented policing, inner city purchasing power and juvenile crime prevention policies and programs.

"Miami-Dade County's Transportation Funding Decision: An Assessment of the Proposed One Penny Sales Tax" represents the third white paper from the Metropolitan Center.

Note of Thanks

The authors would like to thank Dr. Ken Lipner, professor of economics and transportation economist at the Lehman Center for Transportation Research at FIU, staff at the Center for Urban Transportation Research (CUTR), the Metropolitan Planning Organization (MPO), the Miami-Dade Transit Agency (MDTA), the Miami-Dade Expressway Authority and others for providing us with information, advice and criticisms of earlier drafts of the paper. Any errors, interpretations, recommendations and conclusions in the paper are the sole responsibility of the Metropolitan Center.

About the Authors

This white paper is the product of a collaborative effort by a team of researchers from Florida International University led by Dr. Ronald Berkman, dean of the College of Urban and Public Affairs. The research team consisted of John Topinka, interim director of the Metropolitan Center, Dr. Sidney Wong, director of research and data services, Metropolitan Center, Dr. Keith Revell, assistant professor of public administration, College of Urban and Public Affairs and Jill Strube, research associate, Metropolitan Center and Ph.D. candidate in public administration.

Executive Summary

This paper addresses the issue of providing a dedicated funding source for transportation in Miami-Dade County and focuses on benefits that can accrue to this community if a dedicated source were to be established. Using research by other experts as well as our own efforts, this paper reviews traffic congestion and economic growth—two of the most important problems facing this community—and shows how a dedicated source of funding can provide part of the solution for both problems. The following eight items summarize the key points of the paper.

1. In the global economy, a community needs a good transportation system to remain competitive.
2. Miami-Dade County is the third most congested urban area in this country; our congestion, unlike other areas, is not a consequence of our economic success but a barrier to it.
3. Without a dedicated source of local funding for transportation, the county stands virtually no chance of receiving federal aid to expand transportation infrastructure.
4. The proposed sales tax is easily administered and raises sufficient revenue to fund the transportation plan.
5. On average, households in the county will benefit more from the proposed transportation improvements and community programs than the cost of the tax.
6. The proposed transportation spending plans are estimated to produce within the county:
 - \$10.4 to \$16.0 billion in additional output for local businesses.
 - \$3.0 to \$4.5 billion in new income for Miami-Dade households.
 - 110,770 to 156,499 person years of labor demand, which translates into the full-time equivalent of 5,539 to 7,825 jobs over the next 20 years
7. The proposed spending plan is not a panacea for our transportation crisis and may only slow the rate of increase in congestion, but it does offer a multi-pronged approach to addressing congestion and thus increases our competitiveness in the global marketplace.
8. Long-term solutions will require better coordination between land use and mass transportation planning and should include a regional focus for all of South Florida.

Miami-Dade County's Transportation Funding Decision

Background

In today's highly competitive, global marketplace, local economic growth requires substantial infrastructure development. Easy access to work, shopping and entertainment is a pre-requisite for attracting skilled workers and job-producing corporations that have literally an entire world of locations from which to choose.

Miami-Dade County has many attributes that would make it a power center in the emerging global economy—cultural diversity, strategic location, temperate climate, beautiful beaches and unique natural resources like the Everglades and Biscayne Bay; however, it lacks the indispensable local transportation infrastructure to fulfill its potential role as an international crossroads in the twenty-first century. Indeed, the current debate over “tolls versus taxes” as a means of funding highway and transit construction is really a debate about our community's long-term economic survival. If we fail to adopt a robust approach to transportation financing and continue to under-fund an essential element of our competitiveness, we will fall further behind our rivals—Ft. Lauderdale, Orlando, Jacksonville, Tampa, New Orleans, Charlotte and Atlanta—and diminish our chances to succeed economically in the coming century.

The Problem

Traffic congestion is the root of the problem. Miami-Dade is now the most congested metropolitan area of its size in the country and the third most congested in the nation overall (see Table 1), up from eighth in 1986. With the exception of Los Angeles, the other major congested areas have extensive mass transit systems that serve residents and visitors alike. More importantly, Miami is the only one of the top five congested areas that is an emerging economic power; Los Angeles, Washington, Chicago and San Francisco are all well-established communities with clearly defined economic niches. In other words, our congestion is not a consequence of our economic success but a barrier to it.

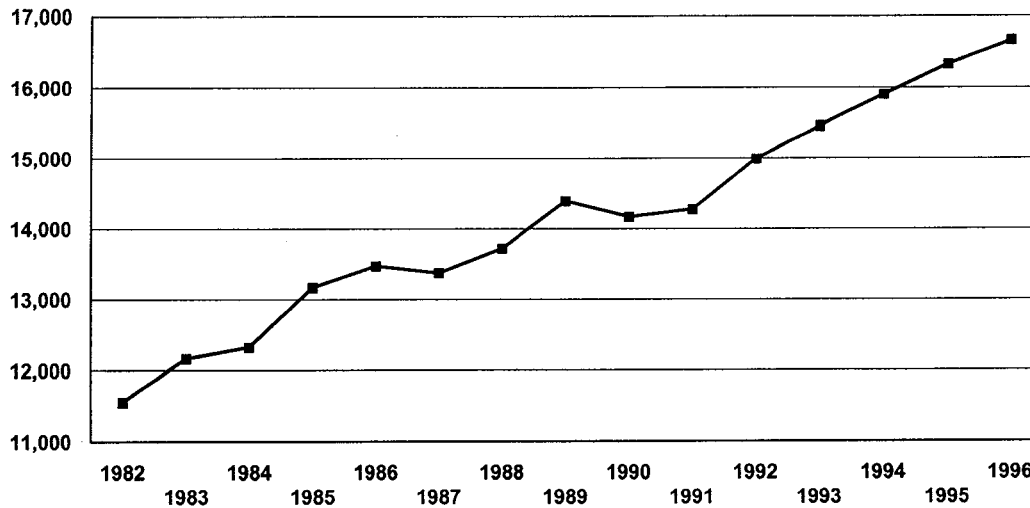
Table 1. Top Five Congested Metropolitan Areas in the United States

Rank	Metro Area	Congestion Index
1	Los Angeles	1.57
2	Washington, DC	1.43
3	Miami	1.34
4	Chicago	1.34
5	San Francisco	1.33
32	Ft. Lauderdale	1.03
	Median of 70 major urban areas	1.02

Source: The Texas Transportation Institute.

In part, the reason for this congestion crisis is simple: construction of new highways has not kept pace with population growth. Over the last twenty years, the volume of traffic on our major highways has nearly doubled, from about 6 million vehicle miles of travel per day to nearly 12 million. During this same period, however, we have increased highway lane-miles by only one-third, from 515 miles to about 700 miles (see Figure 1, which shows that the miles traveled per lane-mile have increased from about 11,500 in 1982 to almost 17,000 in 1996).

Figure 1. Miles Traveled per Lane-mile of Highway



Source: The Texas Transportation Institute.

Compared to other major metropolitan areas, our transportation networks are incomplete. We have been taking a band-aid approach to addressing gridlock, adding lanes to existing highways and expanding bus service in certain areas (like the South Dade bus-way), rather than systematically building the critical infrastructure elements and linkages to keep up with suburban growth.

Anyone who drives in Miami-Dade knows the practical consequences of this failure to develop adequate transportation infrastructure: stop-and-go traffic, long lines at tollbooths, wasted gasoline and mounting insurance rates—and thus a deteriorating quality of life. Continued population growth will only make congestion worse; perhaps as many as a million more people will live in Miami-Dade County by the year 2020 and they will be joining us on our already over-crowded highways.

Not only have we failed to invest in the necessary highway projects to keep pace with population growth, but we have also failed to create other means of getting around our far-flung metropolis. Metrorail, which might have provided a viable alternative means of travel, is too limited in scope to serve the needs of more than a fraction of the population. Compared to the extensive public transit systems of major cities like New York, Chicago, London, Paris, Madrid, Toronto, Tokyo and Washington, DC, Metrorail's twenty-one miles of track constitute only the beginnings of an effective rail transportation option. Our bus fleet—which is the most cost-effective means of providing transportation for our over-abundance of low-wage workers—has suffered a similar fate. We still have only 634 buses to carry a rapidly growing population, a number of whom are poor, elderly and handicapped citizens often dependent on public transportation for mobility, even though a larger bus fleet has been a perennial political promise since the 1970s.

The Role of Federal Transportation Funding

The county's plans for expanding our highway and public transit systems, which will improve our quality of life and economic competitiveness, will cost nearly \$16 billion—a huge sum of money by any community's standards. Because the cost of highways and transit lines is so great, American cities and counties have not been able to pay for such projects themselves. Instead, since the Great Depression they have relied heavily on federal money to create their critical strategic infrastructure. Miami-Dade County is no exception; critical infrastructure projects in our community—water and sewer systems, highways, bridges and mass transit projects—have been built with federal dollars. Since the 1980s, however, the federal government has steadily decreased aid to cities and counties. Miami-Dade County must now compete with other metropolitan areas around the country for scarce, but essential, federal funding to pay for infrastructure needs.

Under current programs, the federal government will only help those cities that are willing to help themselves. Cities must now provide a dedicated funding source for transportation in order to be eligible for federal matching grants. Federal officials have become increasingly explicit about this requirement. According to its *Annual Report on New Starts: Proposed Allocations of Funds for Fiscal Year 2000*, the Federal Transit Agency (FTA) “must find that projects are supported by an acceptable degree of local financial commitment” before the Department of Transportation considers them candidates for federal grants—a point dramatically illustrated by the FTA's funding recommendations for Miami-Dade's East-West Corridor project.¹

When completed, the East-West project would provide an additional 25.4 miles of Metrorail, extending from west of the Palmetto Expressway near Florida International University, along State Road 836, into the airport area, through downtown to cruise ship terminals at the Port of Miami and continuing on to Miami Beach. County planners estimated that the federal government would contribute \$1 billion (about 42 percent) of the \$2.4 billion needed to construct this massive project. Yet the FTA has not recommend federal funding for the East-West Corridor because “a large share of the proposed non-federal funding has either not been committed by participating agencies, or exact funding sources and financing mechanisms have not been specified.”²

Because “no sources of ongoing operating funds have been committed by participating agencies at this time,” Miami-Dade County will not receive federal aid.³ Without federal aid, the citizens of Miami-Dade alone will have to provide the billions of dollars for transportation improvements to make our community an attractive, livable alternative in the competitive global marketplace—or risk slipping further behind those cities that are successfully competing for federal monies. As Gordon Linton, head of the FTA, told the *Miami Herald*, “there are 200 projects under consideration for construction nationwide. Competition around the country is severe.”⁴

While we debate the merits of the sales tax plan, many of our competitors have already pledged local tax revenues in order to secure their share of federal transportation funding. As Table 2 illustrates, other emerging economic centers, such as Atlanta, Houston, Dallas, Seattle and Portland, now have dedicated local transportation funding sources in place, including sales taxes, excise taxes and passenger fares. In fact, Seattle's new Sound Transit (Sounder)

¹ Federal Transit Agency, *Annual Report on New Starts: Proposed Allocations of Funds for Fiscal Year 2000*, page 2.

² Federal Transit Agency, *Annual Report on New Starts*, page A-219.

³ Federal Transit Agency, *Annual Report on New Starts*, page A-219.

⁴ Alfonso Chardy, “Dade seeks financing for transit,” *Miami Herald*, May 29, 1999, 1B, 2B.

Table 2. Comparisons of Sources of Local Funding and Fares for Selected Urban Areas in the United States

Urban Area	Sources of Local Funding	Regular Fare / Monthly pass †
Tampa (Hartline)	<ul style="list-style-type: none"> ▪ Ad valorem taxes from county (sales and gas taxes) ▪ Passenger fares 	\$1.15 / \$35
Orlando (LYNX)	<ul style="list-style-type: none"> ▪ No dedicated local source through taxes ▪ Passenger fares ▪ Jurisdictions provide specific revenue associated with use 	\$1.00 / \$35
Jacksonville (JTA)	<ul style="list-style-type: none"> ▪ Sales tax ▪ Passenger fares ▪ City subsidy from a local option gas tax 	\$0.75 / \$40
Atlanta (MARTA)‡	<ul style="list-style-type: none"> ▪ 1-cent sales tax ▪ Passenger fares 	\$1.50 / \$45
Dallas (DART)‡	<ul style="list-style-type: none"> ▪ Dedicated 1-cent sales tax (60% funding) since 1984 ▪ Passenger fares 	\$1.00 / \$30 (Local trains & buses)
Houston (Metro)	<ul style="list-style-type: none"> ▪ Dedicated 1-cent sales tax ▪ Passenger fares ▪ Local matches through sales tax, farebox and interest on capital investment portfolio 	\$1.00 / \$35
Portland (Tri-Met)	<ul style="list-style-type: none"> ▪ 67% Payroll tax (dedicated source) ▪ 20% Passenger fares ▪ 13% Various 	\$1.10 / \$39*
Puget Sound (Sound Transit) ‡	<ul style="list-style-type: none"> ▪ Excise taxes ▪ Sales tax ▪ Tax on rental vehicles ▪ Passenger fares (when operational) 	Express Bus: \$1.25 / \$45 Rail: \$2.00 / \$72
Seattle-King Co. (Metro)	<ul style="list-style-type: none"> ▪ Excise taxes on motor vehicles ▪ Sales tax ▪ Passenger fares (\$52.5 million) 	\$1.50 / \$45
Bay Area (BART) ‡	<ul style="list-style-type: none"> ▪ 48% Passenger fares ▪ 34% Sales tax ▪ 4% Property tax ▪ 15% Investments and other 	(Fare depends on distance traveled on system)
San Francisco (MUNI)	<ul style="list-style-type: none"> ▪ 25% dedicated funds from fees on parking (including traffic fines, parking meters and garages) ▪ Passenger fares ▪ Funds from neighboring transit agencies ▪ (Paratransit) Transit impact fee on development in the downtown area 	Bus/Streetcar: \$1.00 Cable Car: \$2.00 Monthly pass: \$35

Source: Interviews and websites, as compiled by the Metropolitan Center, Florida International University, 1999.

† Non-discounted (regular) fares, based on peak time and one zone where applicable.

‡ Includes a rail component or is the rail component of transportation system.

* In September 1999, fares may increase to \$1.15 for a regular fare and \$41 for a monthly pass.

System will be built with 50 percent local funding. In other words, because these communities have already taken the necessary steps to make their transportation projects competitive, we stand almost no chance of receiving federal monies for our projects without adopting a similarly ambitious local funding plan, such as the proposed sales tax.

Sales Tax Versus Tolls: Costs and Benefits for Consumers

In order to compete for federal dollars that will help construct Miami-Dade's transportation infrastructure, it is necessary to commit to a dedicated source of funding. The analysis in this white paper supports a one-cent sales tax as the best means of doing so at this time.

The sales tax is an incredibly powerful tool for raising money, and it is easily administered; the collection infrastructure is already in place. Once approved by the voters in a referendum, sales tax revenues are projected to grow from a low of \$246 million in year one to over \$355 million in year twenty; these figures have been adjusted for the effects of revenue growth and inflation. Without discounting for inflation, the current dollar revenue growth would reflect over \$700 million in sales tax revenue in year twenty of the program. Table 3 shows the unadjusted and adjusted revenue figures for the sales tax as well as the estimated allocation of tax revenue by program area. The allocation figures, however, have been adjusted for the effects of inflation, and thus match the figures in the revenue column that also have been adjusted for growth and inflation.

These huge sums of dedicated local money will go a long way toward making Miami-Dade eligible for federal and state matches for transportation infrastructure. Since the sales tax will raise billions of dollars relatively quickly, it will also allow for the:

- elimination of tolls on 4 of Miami-Dade Expressway Authority's highways
- funding of other transportation projects that have been sitting on the shelf for years due to lack of funds and
- replacement of county general revenues currently funding transportation that can be reprogrammed to fund community enhancement programs.

Though it will bring in hundreds of millions of dollars each year, the overall impact of the sales tax on households will be positive. Individuals and families will have to pay more taxes, but as the University of South Florida's Center for Urban Transportation Research (CUTR) has shown, the net direct benefits of the sales tax exceed the direct costs for individuals of every income level.

Table 4 is a summary of the average cost and benefits to families at certain income ranges over the 20-year plan. Individuals and families will continue paying the higher sales tax after 20 years,⁵ but they also will continue receiving benefits after this time period. Even though the revised program plan devotes all of the sales tax to transportation, Table 4 is a reasonable summary of the costs and benefits of the program, since community enhancements will still be funded, albeit from a different source of revenue.

⁵ The 20-year period is the estimated amount of time it will take to complete all of the projects in the long-range transportation plan.

Table 3. Sales Tax Revenues and Proposed Spending

Year	Estimated Total Tax Revenues		Estimated Allocation of Tax Revenue by Program Area (1997 Dollars)			
	Current \$	1997 Dollars	Tolls	Community	Mass Transit	
			Eliminated	Programs +	Fare Reduction	Improvements
2001	\$277.0	\$246.1	\$28.8	\$91.7	\$11.5	\$114.2
2002	290.9	250.9	30.9	89.0	11.1	119.9
2003	305.4	255.8	37.7	86.4	10.8	120.8
2004	320.7	260.8	38.1	83.9	10.5	128.3
2005	336.7	265.8	57.4	81.5	10.2	116.8
2006	353.6	271.0	60.9	79.1	9.9	121.1
2007	371.2	276.2	71.0	76.8	9.6	118.9
2008	389.9	281.6	69.3	74.5	9.3	128.4
2009	409.3	287.1	78.6	72.4	9.0	127.1
2010	429.8	292.6	79.1	70.3	8.8	134.5
2011	451.3	298.3	105.8	68.2	8.5	115.8
2012	473.8	304.1	102.7	66.2	8.3	126.9
2013	497.5	310.0	99.7	64.3	8.0	138.0
2014	522.4	316.0	96.8	62.4	7.8	149.0
2015	548.5	322.2	94.0	60.6	7.6	160.0
2016	575.9	328.4	91.2	58.8	7.4	171.0
2017	604.7	334.8	88.6	57.1	7.1	182.0
2018	635.0	341.3	86.0	55.5	6.0	192.9
2019	666.7	347.9	83.5	53.8	6.7	203.9
2020	700.1	354.7	81.1	52.3	6.5	214.8
Average	\$445.0	\$297.3	\$74.1	\$70.2	\$8.8	\$144.2

Source: Miami-Dade Transit Agency as found in Center for Urban Transportation Research, *Economic Incidence of Revenue and Spending Proposal for Funding MDTA 2020 Transportation Plan*, University of South Florida, May 1999, p. 2. Figures have been adjusted for inflation, except for the first data column, which shows the estimated sales tax revenue in current dollars, as computed by the Metropolitan Center. If approved, the county should receive partial year sales tax revenue of approximately \$185 million in the year 2000.

+Note: Table 3 was calculated prior to the mayor's recent plan revision, which stipulates that all sales tax funding will be dedicated to transportation and placed in a trust fund, and that other county general revenues currently earmarked for transportation will be placed in a second trust fund for community programs. Because revenues currently spent on transportation from the general fund will be exchanged with this trust fund for community projects, the spending plan, as shown in Table 3, will likely stay the same. The mayor's proposal also calls for establishing an autonomous board to govern allocations from the two trust funds. This will ensure that program and spending decisions are made separately from other county business, providing a clear record that the public may use to monitor progress towards achieving the 20-year transportation goals.

Table 4. Average Cost and Benefits per Household per Year of Transit 20-Year Spending Plan : Taxes versus Tolls (in 1997 Dollars)

Household Income Bracket	Estimated Sales Tax Paid	Estimated Benefit by Program Area					Total Benefit	Net Benefit
		MDTA Expansion	Fare Reductions	Tolls Eliminated*	Community Programs+			
> \$10,000	\$107	\$188	\$23	\$26	\$82	\$319	\$212	
\$10 - \$20,000	130	160	14	42	82	298	168	
\$20 - \$30,000	190	157	11	49	82	299	109	
\$30 - \$40,000	265	122	8	76	82	288	23	
Over \$40,000	355	199	6	78	82	365	10	

Source: Center for Urban Transportation Research, *Economic Incidence of Revenue and Spending Proposal for Funding MDTA 2020 Transportation Plan*, University of South Florida, May 1999.

* Tolls will be eliminated by providing the Expressway Authority with replacement funds through the sales tax for its 20-year plan.

+ Community programs are now to be funded by non-sales tax revenue.

Table 4 demonstrates that:

- Reduced fares and expanded service on public transit will benefit the lowest income groups in Miami-Dade County. Because low-wage workers make up a large proportion of Metrobus's estimated 200,000 daily riders, lower fares and new routes will allow them to keep more of their earnings while giving them a greater variety of transportation options.
- Toll reductions will benefit middle- and higher-income groups, who proportionately own more vehicles than lower-income groups.
- Households making more than \$40,000 a year will benefit more from the expansion of Metrorail, since higher-income users currently account for a large proportion of the Metrorail's 50,000 daily riders. This heavy usage is likely to continue for major portions of the proposed rail expansion.
- All households will spend less in sales taxes than they receive in benefits, assuming that residents only pay approximately 70 percent of sales taxes.
- Additional benefits will accrue to households of all income levels, since the sales tax will be used to leverage state and federal transportation monies that would not otherwise be spent in the county.
- The elimination of tolls and the enhanced provision of services offset the typically regressive nature of the sales tax.

In the absence of the sales tax, we will have few alternatives but to collect more revenues through tolls. While tolls certainly have their advantages, especially for traffic management, even an increase in existing tolls (scheduled to begin in July 1999) and the addition of new tollbooths where none exist today will not generate the level of revenue that would be available from a sales tax. Higher tolls will not be sufficient to pay for capital-intensive expressway projects, to serve as a dedicated source of local funding for mass transit projects and to provide the other proposed benefits of the sales tax plan, such as fare reductions and

community programs.⁶ In fifteen to twenty years, perhaps, some of the toll revenue could be used for mass transit projects. By that time, however, it would undoubtedly be too late for Miami-Dade to catch up with other communities—in Florida and around the nation—that are willing to tax themselves modestly now in order to secure federal aid for needed transportation improvements.

Impact of Sales Tax Revenues on Transportation Problems

The cumulative impact of the anticipated sales tax revenue on transportation projects will be significant. By allowing Miami-Dade County to secure federal matching funds, a small increase in local taxes will translate into dozens of needed transportation projects throughout the county. With the sales tax, Miami-Dade can begin to implement previously dormant transportation plans and to combat the inevitable consequences of growth—longer commute times, delayed deliveries and shipments, more accidents, greater energy usage, decreased work productivity and lost time with family.

With new sales tax revenues, our incomplete transit system will finally be upgraded and expanded. In the short-term, fares will be reduced or eliminated for some riders on Metrorail and Metrobus, mid-day bus service will be increased, new routes will be added and the 16 busiest routes will begin around-the-clock service. In the mid-term, park-and-ride lots will be added in south Miami-Dade, a passenger center will be built in northeast Miami-Dade and the intermodal center will be constructed in central Miami-Dade. In the long-term, 92 miles of Metrorail track will be added in the northern, southern, eastern and western parts of the county (more than quadrupling existing mileage), which will provide thousands of people with a viable mass transit option for getting around the county.

The sales tax plan will also allow us to expand our vital highway, county road and street networks. When combined with federal and state matching funds, sales tax revenues will make it possible to increase car pool lane-miles from 22 to 116, to build 86 miles of new expressways and to widen 363 lane-miles of expressways and 452 lane-miles of county roads. Improvements will also be made to the traffic signal control system, which regulates the timing of traffic lights to ensure a reasonable flow of traffic under a variety of conditions.

Finally, the sales tax plan will allow the Expressway Authority to address the long-neglected problem of freight transportation while simultaneously widening, rebuilding and expanding many of our heavily traveled expressways. Miami International Airport and the Port of Miami are the two biggest economic engines in the county. Moving cars, trucks and buses in and out of these activity centers is critical to our future as a community.⁷ The Expressway Authority has long-range plans for improving access to the port—including the construction of a tunnel from I-95 to route cargo and other trucks off major downtown roads and streets—and for building new expressways to connect State Roads 836, 112, 924 and 826.

Because our local transportation system is incomplete, these improvements will have an important collective impact on our ability to deal with congestion. Miami-Dade County has relatively few major thoroughfares. Interstate 95 and the Palmetto Expressway provide the primary north-south corridors in the county; the Dolphin Expressway continues to serve as the principal linkage between downtown and the rapidly growing areas west of the airport. These roadways experience bumper-to-bumper traffic at the same points every workday because

⁶ See “Projecting New Transportation Revenue Sources for the 2020 Transportation Plan” prepared by KPMG under contract to Parsons Transportation Group as present to the Transportation Action Group of the Miami-Dade Board of County Commissioners, May 19, 1999.

⁷ See “Freight Movement Study” prepared by the Corradino Group in 1996 for the Metropolitan Planning Organization.

commuters have very few other choices for traveling long distances. Unlike other major metropolitan areas, Miami-Dade does not offer drivers a variety of bypass options, nor can many commuters choose to avoid overcrowded highways by taking mass transit. The sales tax plan will allow the county to make strategic additions to this incomplete transportation network. These improvements will therefore have a relatively greater impact on our congestion problems than similar improvements would have on an elaborate transportation system. In other words, we have more to gain by financing these projects than urban areas that have more developed transportation systems.

Taken together, the proposed new, expanded and enhanced transportation services should provide commuters, tourists and businesses with enough transportation choices to ensure that the county will not be overwhelmed by traffic. Because reasonable travel times are essential for job growth, both high- and low-wage workers will benefit from the transportation improvements made possible by the sales tax plan. In addition to being an important quality-of-life factor for all income groups (who have grown weary of long commutes), access to workplaces is now recognized as a crucial issue for entry-level job seekers. This is especially true for individuals living in inner-city areas, where fewer entry-level jobs are being created. In order to reach the entry-level jobs which, in Miami-Dade, are scattered throughout different parts of the county, these individuals must have a reliable means of transportation. Given its current limitations, our existing transit system cannot meet their needs, especially during off-peak hours and for locations west of the airport.⁸ By helping to keep travel times within reason and by providing new transportation options for all commuters, the projects funded by the sales tax plan will make Miami-Dade County more job-friendly in the coming century.

Economic Development Impact of the Sales Tax Plan

Transportation projects of this magnitude will have an impact on the county's economy for years to come. Billions of dollars in construction spending will produce new jobs, increased incomes and more spending on non-transportation goods and services throughout the community. The infusion of state and federal dollars in particular will have significant multiplier effects on the local economy, stimulating real growth as construction workers and new permanent employees spend their wages on clothing, food, housing and entertainment.⁹

Expressway Projects

In *The Economic Impact of the Miami-Dade Expressway Authority Work Program*, the Washington Economics Group concluded that the Miami-Dade Expressway Authority's 20-year construction work plan would produce:

- \$5.2 billion in additional output for local businesses.
- \$1.5 billion in additional income for Miami-Dade households.
- 52,261 additional person-years of labor demand, which translates into direct and indirect employment for 2,613 individuals over the 20-year period (see Table 5).

⁸ FIU Metropolitan Center, *Welfare-to-Work Transportation Issues and Opportunities in Miami-Dade County, Final Report*, 1998.

⁹ The "multiplier effect" is the additional economic effect indirectly produced as a byproduct of direct expenditures.

Table 5 provides data relating to the gross economic impact¹⁰ for the first five years as well as the 20-year total of the Expressway Authority's 20-year expressway construction plan. The data in the previous bullets have been highlighted in the table.

Table 5. Gross Economic Impact of Expressway Authority 20-Year Work Plan (1998 Dollars)

	Fiscal Year					5-Year Work Program	20-Year Construction Program
	Year 1	Year 2	Year 3	Year 4	Year 5		
Gross Value of Output (in millions)	\$13.4	\$74.8	\$127.7	\$232.8	\$310.8	\$759.5	\$5,228.6
Household Earnings (in millions)	\$4.8	\$23.3	\$38.9	\$67.7	\$86.3	\$221.0	\$1,471.8
Employment (jobs in person-years)	204	1,004	1,653	2,898	3,779	9,539	52,261
Annual Average Persons Employed						1,908	2,613

Source: Washington Economics Group, *The Economic Impact of the Miami-Dade Expressway Authority Work Program*, February 4, 1999. Figures were derived by applying various multipliers for spending on construction, design and acquisition of rights of way.

Anyone who drives an automobile will feel the effect of these expressway projects in their pocketbooks. According to the Washington Economics Group study, expressway construction will reduce the growth of congestion and thereby save an estimated \$170 million in annual fuel costs—which translates into \$2.4 billion in additional income for local residents over the 20-year period. This income will then influence consumer spending in the local economy, which means more jobs, higher incomes and increased business revenues.

The same study indicates that these \$2.4 billion in fuel savings, along with the construction program highlighted above, will produce a total impact of \$8.7 billion in additional output for local businesses and 4,100 additional jobs over the 20-year period in Miami-Dade County alone. When the entire state is taken into consideration, the economic impact increases to \$8.9 billion of additional business revenue, \$3 billion in additional household income and 95,900 additional person-years of employment, or enough demand to keep 4,795 persons employed for 20 years.

Transit Projects

The long-term economic impact felt by the county's transit plans will be even greater than that of the Expressway Authority. Although it is difficult to forecast economic impacts precisely, it is nonetheless clear that building an additional 92 miles of Metrorail track (including the extension to Florida City) and expanding the bus fleet will influence job creation, directly and indirectly, through the multiplier effects of construction dollars. In addition, expanding mass transit services will lead to permanent, direct job growth even after the construction is completed. Based on the anticipated addition of new buses, rail lines and paratransit service, the Miami-Dade Transit Agency has tentatively estimated that it will need 2,500 to 2,800 new employees—bus drivers, maintenance workers, mechanics, rail operators

¹⁰ Gross impacts are those which have a higher impact on the regional economy; in other words, they do not take leakage into consideration.

and others—to run its expanded services. As Table 6 illustrates, over the next two decades the net direct and indirect impact in the county of transit-related spending would produce:

- \$7.2 to \$11.8 billion in additional output for local businesses.
- \$2.1 to \$3.4 billion in new income for Miami-Dade households.
- 79,078 to 116,128 person years of labor demand, which translates into the full-time equivalent of 3,954 to 5,806 jobs over the next 20 years (see Table 6).

Table 6. Net Low and High Economic Impact in Miami-Dade County of Transit 20-Year Work Plan (1999 Dollars)

	Fiscal Year					5-Year Work Program	20-Year Construction Program
	Year 1	Year 2	Year 3	Year 4	Year 5		
Net Low Estimates							
Gross Value of Output (in millions)	\$16.8	\$81.2	\$146.1	\$221.2	\$276.6	\$742.0	\$7,196.1
Household Earnings (in millions)	\$6.0	\$28.0	\$48.7	\$71.4	\$86.4	\$240.5	\$2,056.0
Employment (jobs in person-years)	231	1,078	1,873	2,744	3,325	9,251	79,078
Annual Average Persons Employed						1,850	3,954
Net High Estimates							
Gross Value of Output (in millions)	\$32.7	\$135.1	\$229.4	\$377.1	\$464.1	\$1,238.5	\$11,787.0
Household Earnings (in millions)	\$11.7	\$46.6	\$76.5	\$121.7	\$145.0	\$401.5	\$3,367.7
Employment (jobs in person-years)	403	1,606	2,637	4,195	5,002	13,843	116,128
Annual Average Persons Employed						2,769	5,806

Note: Data in this table reflect the net impact of the county's bus expansion and mass transit spending plan, which excludes impacts outside of the county. The low and high estimates for the net figures reflect adjustments for such factors as fare box recovery ratio, federal funds leverage, percent sales tax paid by visitors, transfer and leakage effects, job multipliers and average earnings.

We also computed gross impact figures for the county's transit plan, which include impacts outside the county but exclude any estimated fuel savings that might occur because of reduced congestion due to increased use of mass transit. These calculations reflect a total 20-year output from \$11 billion to \$14.7 billion, household income of \$3.2 to 4.2 billion and total person years of employment of 120,624 to 144,430, which translates into 6,031 to 7,221 full-time equivalent jobs for the 20-year period.

Combined Expressway and Transit Projects

The figures in Tables 5 and 6 were derived using somewhat different methodologies and assumptions, but it is important to provide a rough estimation of the combined effects of the proposed expressway and transit improvements. Thus, Table 7 illustrates a reasonable projection of likely future economic impacts of the proposed capital projects for expressways and mass transportation. Actual results for output, income and employment figures will depend on project timing, magnitude and duration. When reviewing Table 7, it is also important to keep in mind that neither external impacts nor fuel savings impacts were calculated and that not all of the \$15.8 billion spending plan is for capital projects; a portion of this total will subsidize transit operations.

Table 7. Combined Net Economic Impact within Miami-Dade County of Expressway and Transit 20-Year Work Plan (1999 Dollars)

	Fiscal Year					5-Year Work Program	20-Year Construction Program
	Year 1	Year 2	Year 3	Year 4	Year 5		
Net Low Estimates							
Gross Value of Output (in millions)	\$25.1	\$127.7	\$225.3	\$365.6	\$469.4	\$1,212.1	\$10,439.7
Household Earnings (in millions)	\$9.0	\$42.5	\$72.8	\$113.3	\$140.0	377.6	\$2,969.1
Employment (jobs in person-years)	355	1,687	2,875	4,502	5,616	15,035	110,770
Annual Average Persons Employed						3,007	5,539
Net High Estimates							
Gross Value of Output (in millions)	\$43.3	\$194.2	\$330.4	\$561.1	\$709.7	\$1,838.7	\$15,918.9
Household Earnings (in millions)	\$15.5	\$65.0	\$107.2	\$175.1	\$213.2	\$576.1	\$4,530.9
Employment (jobs in person-years)	561	2,382	3,914	6,434	7,921	21,211	156,499
Annual Average Persons Employed						4,242	7,825

Note: Data in this table reflect the net impact of the county's bus expansion and mass transit spending plan, which excludes impacts outside of the county. The low and high estimates for the net figures reflect adjustments for such factors as fare box recovery ratio, federal funds leverage, percent sales tax paid by visitors, transfer and leakage effects, job multipliers and average earnings.

As Table 7 shows, over the next two decades the net direct and indirect impact of expressway and transit-related spending would produce:

- \$10.4 to \$16.0 billion in additional output for local businesses.
- \$3.0 to \$4.5 billion in new income for Miami-Dade households.
- 110,770 to 156,499 person years of labor demand, which translates into the full-time equivalent of 5,539 to 7,825 jobs for the 20-year period.

Conclusion

To be sure, an increase in the local sales tax is not a panacea for our transportation crisis. Highway construction is likely to disrupt the flow of traffic in the short run. In the long run, even the multi-billion dollar projects specified in Miami-Dade County's plans may only slow the rate of increase in congestion, rather than actually reduce commuting times. Experience has shown that building more highways tends to create more traffic, since increased driving room only invites more drivers onto the roads. Indeed, in addition to expanding highway lane-miles and providing additional transportation options for commuters, the real long-term solution for congestion will require better coordination between land use planning and mass transportation planning and must include a component of regional coordination throughout all of South Florida.

Moreover, it would not be prudent to eliminate the toll option from future use. Some analysts suggest that tolls should be used to deal with highway congestion. Many communities around the country (especially the congested urban areas in California and Maryland) have increased their use of tolls and have begun to implement congestion pricing in order to create incentives for commuters to change their driving habits. Congestion pricing follows a "business model" in which the price of tolls varies with the volume of traffic on the roads—when traffic is heavy, tolls are increased to discourage unnecessary trips and to encourage the use of other forms of transportation (like mass transit). Were Miami-Dade to follow this approach, we would increase tolls (which are relatively low—only about three cents per mile compared to a national average of about 10 cents per mile)¹¹ rather than eliminate them. For these reasons, tolls should be kept as an option for transportation management in this community in the coming decades, particularly on special purpose roadways like the planned truck freight tunnel to the Port of Miami.

In spite of its limitations, however, Miami-Dade County's plan to replace Expressway Authority tolls on four highways with a one-cent sales tax provides a first step in the long and difficult process of developing a comprehensive local transportation system. Most importantly, it appears to be the only plan that will make the county eligible for federal assistance for infrastructure development, at least in the near term. In the absence of the sales tax plan, we would appear to have no choice but to pay for transportation exclusively from our own pockets, without federal aid, as congestion grows even worse.

By providing immediate relief from tolls, encouraging job growth in the construction industry and supplying revenue for mass transit projects, the sales tax plan will have a positive economic impact on the county. Given these benefits—and in light of the costs of further delays—building more and better highways, eliminating tolls and constructing additional mass transit facilities constitute a viable, multi-pronged approach to addressing congestion and thereby increasing our competitiveness in the global marketplace.

¹¹ Miami-Dade Expressway Authority pamphlet.

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