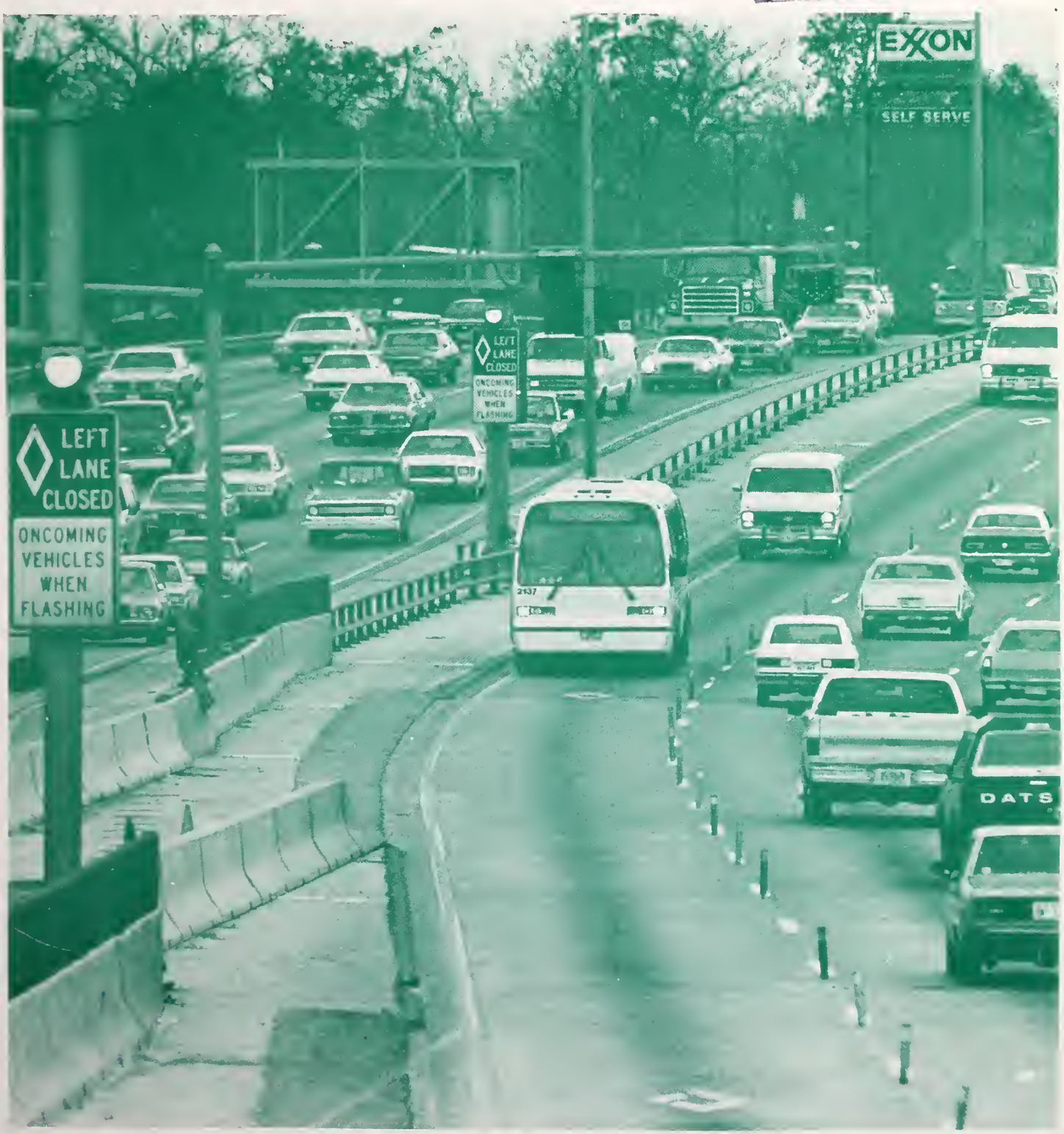
U.S. Department of Transportation

# Alternative Financing for Urban Transportation

## State-of-the-Art Case Analyses



October 1983



# Alternative Financing for Urban Transportation
## State-of-the-Art Case Analyses

Final Report
October 1983



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# Credits

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# Table of Contents

# Introduction

Alternative Financing for Urban Transportation: State-of-the-Art Case Analyses is a summary of the use, by 43 agencies, of non-traditional techniques for funding transit and urban highway services. This report is designed to introduce public officials and transportation planners at the state and local levels to a range of available funding sources and to facilitate their efforts in determining whether these sources will be useful in meeting their area's transportation needs.

The 49 brief case analyses included in the report reflect the variety of efforts being made by large and small transit agencies and highway departments to cope with shortfalls in funding. These efforts were selected for inclusion, because they entailed one or more of the following characteristics:

- o use of non-traditional source of revenue (sources other than fare box or property tax revenues)
- o strong involvement of the private sector
- o use for the first time in the transportation field (although there may have been previous non-transportation applications)
- o creative examples of public-private cooperation.

## Case Analysis Locations

# Overview

Alternative Financing for Urban Transportation is divided into 4 sections: (1) Funding Sources, (2) Cost Reduction Measures, (3) Measures to Shift Costs to the Private Sector, and (4) Debt Financing Techniques.

Funding Sources are defined to be measures that allow agencies responsible for transit or highways to collect funds on a singular or periodic basis. This category is the largest of the four categories in the report. One funding source, the local fuel tax, offers a long term, relatively stable stream of revenues. Assessments and private donations, on the other hand, usually are tied to the value of specific benefits received and consequently are collected in a lump sum or over a limited period of time. Private donations and subsidies entail examples of the private sector approaching the public sector for provision of a service in exchange for a contribution. These examples are included to demonstrate the range of opportunities within which a public agency can take the initiative and approach the private sector, requesting a contribution in return for a service.

Cost Reduction Measures are defined as techniques which permit agencies to provide services at a lower cost to the public sector than otherwise would have been possible. Planning and productivity improvements that will save money for transportation agencies range from designing roads requiring less repair to cash flow management systems. This report addresses only two types of cost reduction measures, those that reduce expenditures for land and those that reduce expenditures for operation of services.

Measures to Shift Costs to the Private Sector are defined as ways in which agencies can accomplish their objectives without direct expenditures. For example, local governments utilize land use controls to require developers to pay for road improvements or to provide traffic reduction measures, such as a car pool program. During financially difficult times, it is not uncommon to see the public sector intentionally or unintentionally shift costs to the private sector. Two forms of this are discussed in the report: (1) measures imposed through land use controls and (2) private provision of a service. The examples of each type specifically illustrate the role played by the public sector.

Debt Financing Techniques are defined as measures which reduce the costs of borrowing funds. Debt financing requires a reliable stream of revenues for repayment purposes. As pointed

out earlier, many of the more creative techniques in use today are one-time payments or are collections over a relatively short period of time. The techniques discussed in this section focus primarily on those means by which interest costs on the issuance of debt can be reduced.

## Case Analyses

Each case analysis of the creative financing techniques is divided into seven sections:

| | |
|---|---|
| EXPERIENCE | Description of the technique and the conditions under which the technique was used. |
| RESULTS | The direct or indirect benefit to the transportation agency and other parties participating in the implementation of the technique. |
| LEGAL ISSUES | Any legislative or legal requirements associated with use of the technique and any legal problems encountered. |
| POLITICAL ISSUES | Political events that helped or hindered successful use of the technique. |
| TIMING | The amount of time needed to implement the technique. |
| CONTACT | Name and telephone number of the local official to contact for further information. |
| REFERENCES | Published material pertaining to the project. |

Information for most of the case analyses was gathered through telephone interviews with the planners and engineers involved in the projects, and through materials published by the particular agencies. Three of the case studies were abstracted from The Use of Private Funds for Highway Improvements: Draft Final Report (Kimley-Horn and Associates, May 1983.)

1980 population figures are drawn from the U.S. Bureau of the Census. Undated population figures were provided by project officials or by case analysis reference materials. The population figure for Windsor, Ontario was taken from the 1981 Census of Statistics Canada.

# I. Funding Sources

TECHNIQUE SPECIAL BENEFIT ASSESSMENT DISTRICT

EXPERIENCE Los Angeles, California (1980 pop. 2,966,763): California legislation which allows special benefit assessment districts to be set up around Metro Rail rapid transit stations was recently enacted. The assessments will fund capital, maintenance, and operations costs.

The Southern California Rapid Transit District (SCRTD) Board asked State Senator Diane Watson to sponsor the assessment bill, S.B. 1238, which she introduced in March 1983. The bill amends the Public Utilities Code to allow assessment districts for the construction, maintenance, and operation of transit. (The Code already allows benefit assessment districts for other types of infrastructure, such as fire protection districts and water districts.) Assessment districts would be set up for each of eighteen stations on the rapid rail line which will connect downtown Los Angeles and the San Fernando Valley. The districts can extend no further than one-half mile in radius from the station if outside the central business district and no further than one mile if within downtown, and may also be divided into zones. Undeveloped land will be assessed according to parcel size and land improvements according to total floor area.

A proposed district will be described in detail by the SCRTD Board, and its creation resolved by it. The county board and city councils in the district's area then have the choice of approving, amending, or disapproving the resolution. After the SCRTD Board and the local governments reach agreement on the details of the assessment district, it becomes operational. Property owners in the area still have the option of petitioning for an election on the matter, however. The assessment invoice will be included with the county tax invoice.

RESULTS Five percent of the $3.4 billion construction cost of the Metro Rail, or about $170 million, is to be raised through benefit assessments. The remainder is to come from UMTA Section 5 funds (62%, or about $2.1 billion), UMTA Section 9 funds (7%, or about $240 million), two California Transit Capital Guideway programs (11%, or about $370 million), a

1/2¢ sales tax generated locally and taken from Los Angeles County (13%, or about $440 million) and from the City of Los Angeles (2%, or about $68 million).

LEGAL ISSUES — Senate Bill 1238 amends the California Public Utilities Code to allow special benefit assessment districts to be used for mass transit. To create a district, the steps detailed above would be followed.

POLITICAL ISSUES — The California Chamber of Commerce opposes the use of assessment districts for transit operation and maintenance, though not for capital costs.

TIMING — The bill was introduced in March 1983 and amended in April. It became law on October 1, 1983, without the governor's signature.

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REFERENCES

SCRTD Metro Rail Project information packet.

Senate Bill No. 1238.

TECHNIQUE **SPECIAL BENEFIT ASSESSMENT DISTRICT**

EXPERIENCE Madison, Wisconsin (1980 pop. 170,616): The construction of a pedestrian and transit mall near the state capitol was financed in part with revenues from a city-imposed special assessment district. The maintenance of the mall is partly financed by "charges for services rendered" to property owned in that district.

The State Street Mall transformed a mile-long street connecting the state capitol and the University of Wisconsin into an auto-free pedestrian mall. For six blocks from the capitol, the street pavement was narrowed from about 40 feet to 22 feet to provide only bicycle and bus lanes. (All major bus routes traverse this street.) The last two blocks leading to the university became pedestrian only, and multi-use speakers' platforms and a fountain/stage were added. Vending of homemade foods and handcrafted items is allowed on the mall after approval by the Mall Coordinator, who also approves any stage performances.

The street circling Capitol Square also was narrowed so that it accommodates one lane of passenger vehicles, one lane of buses, and one lane of legislative parking. This concourse now has 45-foot sidewalks, trees, shelters, and benches, and is the site of many free performances which are well-attended. (The State of Wisconsin arranged to have the capitol terrace redone at state expense to complement the new concourse.)

The next outer ring of streets was made one-way in the direction opposite that of the inner capitol ring to force much of the original capitol traffic off the concourse. The streets connecting the two rings were improved as well, though to a lesser extent than were the mall and concourse.

RESULTS Capital improvements cost $9.49 million, $1.01 million under the original budget of $10.5 million. (The Chief Engineer attributes this to tight fiscal control over the contractors, retention of veto power over the design process, and latter-stage planning done in-house.)

An UMTA grant covered 20% of the costs, or about $1.9 million; City of Madison general funds paid

for 30%, or approximately $2.8 million; and the remaining 50%, or $4.7 million, was raised through the benefit assessment district. An area of 1,675,607 square feet was divided into three zones and given weights of 100%, 70%, and 30% respectively. Assessments were based on area rather than linear front footage.

Two-thirds of the maintenance costs, which will amount to over $300,000 in 1983 (not including normal street repair and repaving costs), will be paid by the city's general fund, which is derived from property taxes. The remaining one-third will come from "charges for services rendered," collected from the same area as were the assessments. The 1981 base rate was 5.4¢ per square foot, which dropped to 4¢ in 1982, but has risen to 5.97¢ in 1983. This produces a maintenance charge of about $10 per year for a small business to about $5,000 for the largest properties.

**LEGAL ISSUES**

While Wisconsin state law provides for assessment districts for capital improvements, there are no such provisions for maintenance. Therefore the maintenance costs are treated under a state provision for "charges for services rendered," whereby costs are calculated at the end of the year and property owners are then billed. Both the assessments and the charges were levied under the "police powers" provision, so that only reasonable benefit had to be shown; a complicated calculation of monetary value for damages would have been required before "assessments for benefits and damages" could have been approved.

**POLITICAL ISSUES**

Original opposition to the project and its financing was overcome by a slow process of appealing to neighborhood organizations for support before officially proposing the improvements. Opposition also arose to the removal of parking places from the mall and concourse, so parking was added elsewhere.

**TIMING**

The State Street Mall and Concourse were planned in 1973. In 1982, construction was completed.

**CONTACT**

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TECHNIQUE **SPECIAL BENEFIT ASSESSMENT DISTRICT**

EXPERIENCE Miami, Florida (1980 pop. 346,931): A special assessment district has been formed in downtown Miami. It will generate revenue to retire a bond issuance which will finance approximately $27 million of the cost of constructing a downtown people mover.

The Miami Downtown People Mover (DPM) was begun in 1982 and is to be completed in 1985. The project will cost $60 to $100 million; $20 million for construction and $7 million for fees and interest will be financed by a bond issue. The assessment district will repay the bonds at a fixed rate over a fifteen-year period.

The bonds have not yet been issued; however, planning calls for revenue or general obligation bonds with a 9 1/2% to 11% interest rate. Assessment rates are estimated to be 20¢ to 25¢ per square foot of net leasable office space, to decrease to about 10¢ per square foot as office space increases in the area. Churches and federal buildings will be exempt from this charge. The district includes over 700 properties, or 16.78 million square feet of net leasable space.

RESULTS The fifteen-year assessment charges will repay the approximately $27 million bond issue. Businesses being assessed in the area are expected to benefit from the estimated 40,000 passengers per day who will ride the DPM.

LEGAL ISSUES The Dade County Manager commissioned a group of representatives from private and public agencies to study the DPM's financing. They recommended the assessment district to the Board of County Commissioners, which passed an enabling ordinance in 1983. As the basis is not ad valorem, no referendum was required. The Dade County Code limits the term of the bond to fifteen years. The County Board will approve the assessment ratio yearly, based on annual property appraisals. Liens will be placed on property whose owners refuse to pay the assessment charges.

POLITICAL ISSUES During the public hearings, some opposition arose from property owners with under-leased buildings and owners who could not pass on increased taxes to their tenants because of terms of their contracts.

**TIMING** The Downtown People Mover project was initiated in September 1982, with construction due to be completed in 1985. Enabling legislation for the assessment district was passed in July 1983. Bonds will be issued sometime before September 1984 and fully retired fifteen years later.

**CONTACT**

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TECHNIQUE **LOCAL IMPROVEMENT DISTRICT**

EXPERIENCE Seattle, Washington (1980 pop. 493,846): A local improvement district has been established to fund a portion of the construction costs incurred in building a streetcar line along the city's waterfront.

The City of Seattle leased the land for the 1.6-mile streetcar line from three railroads operating in the area. Construction was financed through a $1 million UMTA grant, a $13,000 community development block grant, $1,299,000 in city funds, and $27,000 of private donations. The local improvement district will provide $1,124,430 towards repaying the city's costs.

The district is divided into three rate zones, based on distance from the street car line. Zone A, incorporating 2.1 million linear feet, has a charge of 25.64¢ per linear frontage foot; Zone B, incorporating 1.9 million feet, has a 16.61¢ per front foot charge; and Zone C, with 1.7 million feet, has an 8.86¢ per front foot charge. The charge will be a one-time assessment which may be paid off over ten years.

RESULTS The city will receive about $1.1 million from the assessments.

Paying ridership for July 1983 was 56,800. Fare box revenues, which cover about 30% of total operations costs, were $170,000 for 1983.

LEGAL ISSUES The City of Seattle established the local improvement district through city ordinance. The city council approved the final rates after public hearings.

POLITICAL ISSUES The streetcar line received much support from area merchants who see its potential as a tourist attraction and who were instrumental in the creation of the improvement district. Condominium owners in the area are dissatisfied with the district, arguing that the streetcar line's orientation toward the tourist trade produces no benefits for them. Ridership figures may support their contention; local ridership (measured by number of transfers from the main system) was down almost 50% in 1983 from 1982, while non-local ridership (measured by fare box receipts) was not down by nearly as much.

TIMING

Planning for the electric streetcar line began in 1975. The lease agreement for the land was signed in 1978, and construction began in September 1981. The system went into operation in June 1982, but was not fully completed until May 1983. The construction delays were caused mainly by the contractor, who went bankrupt. Assessment rates were approved in September 1983.

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TECHNIQUE

# LOCAL FUEL TAX

EXPERIENCE

State of Alabama: Between 1947 and 1978, counties and cities in Alabama were enabled on an individual basis by the state legislature to impose a local privilege tax on businesses that sell motor fuels. The amount of this tax, which varies from county to county, is set on a per-gallon basis. Since 1947, thirteen counties and 268 cities have been authorized to charge such a privilege tax.

In all but one case, these privilege taxes are collected by the counties and cities. Collection is on a monthly basis and is based on wholesale receipts. For some counties and cities, the enabling legislation dedicates the tax proceeds to transportation improvements; in others, the money goes into the general fund.

RESULTS

No records or projections have been kept by the state on local privilege tax revenue streams. Some information is available from local governments. Jefferson County reports the following revenue stream from a 1¢ per gallon tax:

| Year | Vehicle Registration (thousands) | Total Gallons (millions) | Fuel Tax (millions) |
|---|---|---|---|
| 1970 | 357 | 271 | $2.71 |
| 1971 | 372 | 288 | 2.88 |
| 1972 | 395 | 315 | 3.15 |
| 1973 | 418 | 335 | 3.35 |
| 1974 | 430 | 347 | 3.47 |
| 1975 | 439 | 344 | 3.44 |
| 1976 | 457 | 363 | 3.63 |
| 1977 | 475 | 373 | 3.73 |
| 1978 | 481 | 397 | 3.97 |
| 1979 | 493 | 394 | 3.94 |
| 1980 | 491 | 371 | 3.71 |
| 1981 | - | 359 | 3.59 |
| 1982 | 513 | 362 | 3.62 |

LEGAL ISSUES

In 1978, the Alabama Supreme Court ruled that privilege tax legislation which was set on an individual county by county or city by city basis, rather than by a state-wide provision, was unconstitutional, and none has been passed since that decision. Currently, the state legislature is

engaged in a constitutional revision process. One provision being considered in the new constitution would allow counties to impose a fuel tax or privilege tax without legislative approval.

POLITICAL ISSUES — No political problems were reported.

TIMING — Local privilege taxes were implemented between 1947 and 1978.

CONTACTS

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REFERENCES

"A Guide to Alternative Financing Mechanisms for Urban Highways: Draft Technical Report," Rice Center, October 1983.

TECHNIQUE LOCAL FUEL TAX

EXPERIENCE State of Florida: Florida has two types of local fuel taxes. The first, the voted gas tax, was approved by the state legislature in the early 1970s. This tax is limited to 1¢ per gallon and is subject to voter approval via county-wide referendum. Eleven counties have exercised the voted gas tax. The second local tax, the local option gas tax, was approved by the state legislature in 1983. The tax rate is limited to not more than 4¢ per gallon (in whole pennies). Implementation of a local option fuel tax of 1¢ or 2¢ requires a majority vote of a county's governing body, while a tax of 3¢ or 4¢ requires a majority plus one.

The state's Department of Revenue is responsible for collection of local fuel taxes from the wholesalers. 94% of the funds collected are distributed, on a monthly basis, back to the counties/cities according to a distribution formula established in an Interlocal Agreement. The state keeps 6% of the revenues collected to cover administrative and overhead costs.

Funds are dedicated for transportation items, both highway- and transit-related. The specific categories on which local fuel tax revenues can be spent include the following:

- Public transportation operation and maintenance
- Road and right-of-way maintenance and equipment
- Road and right-of-way drainage
- Street lighting
- Traffic signs, engineering, signalization, and pavement markings
- Bridge maintenance and operation
- Debt service and current expenditures for capital projects in the above areas, including construction and reconstruction of roads.

RESULTS Eleven counties have passed a voted gas tax, and twenty-nine counties now have a local option gas tax. Hillsborough County, with a voted gas tax

rate of 1¢, received $3.1 million in tax revenue in 1982. Dade County, with a local option gas tax rate of 4¢, has an estimated annual revenue of $28 million.

**LEGAL ISSUES**

Both the voted gas tax and the local option gas tax were legislated by the state to be carried out at the county level. Both are optional taxes. The voted tax requires a referendum, while the local option tax is implemented by a county governing board.

**POLITICAL ISSUES**

The voted gas tax has been more difficult to impose as it requires electoral approval. The counties which have adopted this tax successfully are geographically concentrated along a major interstate highway. Therefore, the tax has been largely passed on to tourists.

In the case of Hillsborough County, which has both types of local fuel taxes, the voted gas tax failed the first time it was put before the voters. During the second time it was put on the ballot, a well-funded and highly publicized campaign was mounted to promote and advertise the tax.

Another issue of interest is that two of the 31 counties that have passed a local option fuel tax now have repealed it. The first county to repeal the tax, Gladstone, did so when adjacent counties failed to pass it. The major concern expressed by the county commissioner was that revenue would be forfeited to the surrounding counties having no local fuel tax. Holmes County, which also repealed the tax, did so on similar grounds.

**TIMING**

Legislation for the voted gas tax was approved in the early 1970s. It was first utilized in 1980. Local option gas tax legislation was passed in April 1983.

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REFERENCES

"A Guide to Alternative Financing Mechanisms for Urban Highways: Draft Technical Report," Rice Center, October 1983.

TECHNIQUE **LOCAL FUEL TAX**

EXPERIENCE State of Nevada: County commissioners can approve a 1¢, 2¢, 3¢, or 4¢ per gallon fuel tax based on retail sales. As of 1983, 10 of Nevada's 17 counties had adopted a fuel tax. At the same time, these counties must form a regional transportation commission, and must have adopted a streets and highway plan.

The county board, if it chooses, may call an election about imposing the tax. The tax is collected by the state and refunded to counties, except for 0.5% which the state retains for administrative costs.

Local fuel tax revenues are dedicated to street and highway improvements by state law. All revenues are placed in a separate regional street and highway fund.

RESULTS The following table outlines local fuel tax revenues collected in each county for 1982/83.

| County | Tax Rate | 1982/83 Revenue |
|---|---|---|
| Humboldt | 2¢ | $ 107,462 |
| Pershing | 1¢ | 22,270 |
| Washoe | 4¢ | 2,530,536 |
| Churchill | 2¢ | 84,094 |
| Lander | 2¢ | 42,480 |
| White Pine | 2¢ | 71,967 |
| Hye | 4¢ | 220,168 |
| Clark | 4¢ | 4,116,927 |
| Douglas | 2¢ | 117,325 |
| Carson City | 4¢ | 469,157 |

LEGAL ISSUES The legislation which enabled Nevada's local option fuel tax requires any county which adopts a local fuel tax to establish a regional transportation commission. This commission has fairly broad powers which include the following:

1. Receiving and disbursing federal funds for transit or other highway and transportation purposes;

2. Submitting project applications and programs of projects to the Urban Mass Transportation Administration or to other federal agencies;

3. Entering into formal project agreements with the Urban Mass Transportation Administration;

4. Conducting public hearings on transit and other highway and transportation matters and certifying that such hearings were conducted;

5. Establishing a fund consisting of contributions from private sources, the state, or the county, cities, and towns within the jurisdiction of the commission for the purpose of matching federal funds;

6. Disbursing monies for transit or other highway and transportation purposes pursuant to written agreements executed by the board and the respective governing bodies of the cities and towns within the jurisdiction of the commission.

POLITICAL ISSUES — No political problems were reported.

TIMING — Enabling legislation was passed in 1981.

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REFERENCES — "A Guide to Alternative Financing Mechanisms for Urban Highways: Draft Technical Report," Rice Center, October 1983.

Chapter 373 of the Nevada Revised Statutes: County Motor Vehicle Fuel Tax Law.

TECHNIQUE **LOCAL FUEL TAX**

EXPERIENCE State of Tennessee: Any county or city which operates or intends to operate a public transportation system either on its own or through a transit authority may levy a 1¢ per gallon special privilege tax on the retail sale of gasoline. Voter approval is required before such a tax can be levied by the local government.

This tax is collected by the state, which retains 2% for administrative costs and returns the balance to the local government. If a county levies such a tax, all the cities within it are precluded from imposing such a tax; however, any of these cities operating a public transportation system will receive a share of the fuel tax revenues apportioned according to population.

Revenues from the local option fuel tax can be used only for support of public transportation services (carriage of persons for hire).

RESULTS No cities have been able to gain voter approval to date.

LEGAL ISSUES Enabling legislation was passed in 1982.

POLITICAL ISSUES Only two cities have tried to gain voter approval for a local option gas tax, Nashville and Chattanooga. Both failed. In Nashville, where the proposal was defeated 70% to 30%, the general sentiment was that a city-wide negative attitude toward the transit system caused the referendum to fail. The prevailing public opinion is that Nashville's bus system serves primarily the transportation disadvantaged of the community, and that users rather than the community as a whole should pay for transit. Community-wide benefits from improved traffic flow did not seem to be a major consideration.

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REFERENCES

"A Guide to Alternative Financing Mechanisms for Urban Highways: Draft Technical Report," Rice Center, October 1983.

Title 67, Chapter 63 of the Tennessee Code: Local Transportation Funding Act of 1982.

TECHNIQUE **TRAFFIC IMPACT FEES**

EXPERINCE Palm Beach County, Florida (1980 pop. 573,125): In 1981, Palm Beach County enacted the Fair Share Contribution for Road Improvements Ordinance (Ordinance #81-4) to require new land development activity to pay a "fair share fee" for reasonably anticipated costs of new roads needed by the development. The theory behind the fee is that newcomers to the area will share the cost of maintaining the existing quality of life by providing the immediate money needed to pay for the increased services they initiate and require. However, the ordinance clearly states that the impact fees are not to exceed the activity's pro rata share of the actual cost to make the necessary improvements.

The ordinance sets forth a schedule of impact fees which are based on trip generation by type of land use activity, the cost of constructing additional lanes, and the lane capacity. The fee schedule is based on square footage, number of dwelling units, rooms, or beds, or amount of parking space depending on the particular land use. The collected funds are deposited in the trust fund of the designated impact zone, 40 of which are created by the ordinance. The zones are approximately 3 miles on a side. The funds can be spent only for the following purposes in a particular impact zone: design and construction plan preparation; right-of-way acquisition; construction of new through lanes, turn lanes, bridges, and drainage facilities; purchase and installation of traffic signalization; construction of new curbs and medians; and relocation of utilities to accommodate new roadway construction.

The impact fees are levied at the time the building permit is issued for any new land development activity within the county and municipalities that have adopted the ordinance.

RESULTS Under this ordinance, 1,000 units of single family houses would be required to pay $300,000. A shopping center of 20,000 square feet would pay $25,000 or $1.25 per square foot. A 300,000 square foot shopping center would pay $171,186.

The fee schedule is based on the following fair share formula, as stated in the ordinance.

Residential Fair Share Fee:

1/2 external trips (given a 50/50 directional split) per 1 lane capacity, multiplied by the cost of constructing 1 lane for 1 mile.

Non-residential Fair Share Fee:

1/2 external trips (given a 50/50 directional split) per 1 lane capacity, multiplied by the cost of constructing 1 lane for 1/2 mile.

The schedule is based on the theory that the fee equals road construction costs due to new development minus tax credits attributable to the portion of gas taxes and property taxes available for the new roads. Tax credits are extremely difficult to calculate because they depend on many variables, including inflation, average miles per gallon of gasoline, taxes per gallon of gasoline, and percent of future taxes used for roads. To avoid the complicated calculation, the formula was simplified to the one presented above. The formula limits the impact fee to paying for the actual capacity of the road used for 1 mile. It is assumed that the tax credits will cover the impact of the new traffic on the other miles. It also assumes a 50% split in the direction of traffic.

The ordinance includes different formulas for residential and non-residential traffic generators. The reason is that many of the non-residential trips are "captured" from traffic already on the road. Many trips are not "new" trips, but are trips which are reoriented by the development. Therefore, the formula for non-residential developments requires a fee sufficient to replace the capacity of 1/2 mile of road.

The ordinance sets forth the fee schedule, the official trip generation rates for calculating the external trips, and the cost of constructing one lane of roadway for 1 mile and 1/2 mile. The ordinance is reviewed annually by the Board of Commissioners to analyze the effects of inflation on the actual costs of roadway construction and to insure that the fee charged will not exceed the pro rata share for the reasonably anticipated costs.

**LEGAL ISSUES**

Palm Beach County was very careful about designing an ordinance that would be legally defensible. Its legal counsel advised that the following criteria be incorporated in the ordinance to withstand judicial scrutiny: (1) The growth rate of the area must be such that the roads will have to improve in the near future, if the existing level of service is to be maintained; (2) There must be a rational relationship between the traffic impact of the new user on the roads and the necessity to improve the roads because of the impact; (3) A reasonable and definable area of impact must be established and fees earmarked for use within the area; (4) The cost of providing the road improvements must be determined; (5) The money available to provide the needed road improvements must be taken into account; (6) The new users may be required to pay the cost of road improvements only to the extent that their presence necessitates such improvements; (7) The fee cannot exceed the pro rata share of the anticipated costs; (8) The new and old users must share equally in maintaining the original roads.

Despite the effort to design the ordinance in a fair and equitable manner, the ordinance has been challenged twice by the Home Builders Association. The first time, the ordinance was upheld. Tne second case is still pending. As a result the county is collecting the funds and holding them in escrow, with the promise to repay the developers, if the ordinance is struck down.

**POLITICAL ISSUES**

Property owners, in general, do not like additional costs imposed on their proposed projects. County planning department officials reported that many individual property owners whose proposed projects are within existing zoning regulations are surprised and frequently irate to learn of the impact fee.

The ordinance applies only to developments within unincorporated areas of the county or within incorporated municipalities that have adopted the fair share ordinance. Several municipalities within the county have postponed adoption of the ordinance until the legal challenge is resolved. Others have not adopted the ordinance for fear that developers will not accept both the county impact fee and the municipality's existing road improvement requirements. To overcome this

concern, the county has agreed to reduce the impact fee by the cost of road improvements required of the developer by the municipality.

TIMING — Proposals for the ordinance were under consideration as early as 1978. The ordinance was adopted in 1981. Because of legal challenges, the county has yet to use the impact fee funds for any road improvements.

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REFERENCES

Report on the Proposed Palm Beach County Fair Share Contribution for Road Improvements Ordinance, September 8, 1978.

TECHNIQUE TRAFFIC IMPACT FEES

EXPERIENCE San Diego, California (1980 pop. 875,504): Two developers in North City West, a new community in suburban San Diego, have paid the City of San Diego $3.5 million for realignment and construction of a new bridge that will improve access to I-5 in the vicinity of their projects.

Baldwin Company and Pardee Development Corporation are in the process of developing 600 commercial acres and 15,000 residential units in the relatively undeveloped area of North City West. The $3.5 million assessment is based on a formula adopted under the Facilities Benefits Assessment (FBA) Program described below. Funds from FBA are used for offsite community improvements such as transportation, parks, water, and sewer systems. FBAs are collected in addition to the conventional subdivision requirements for on-site improvements.

The FBA Program provides San Diego with a technique for charging developers a one-time fee for expanding the city's infrastructure to accommodate new growth. The FBA places a fee on all new developers in twelve area communities, small assessment districts with estimated populations of 20,000 to 40,000 which are referred to as "areas of benefit." The communities were identified as the geographic regions in which new construction is likely to occur over the next 10 years. The developers in these areas of benefit pay a predetermined fee for each unit they plan to build when they apply for building permits. The fee varies according to the number of units per lot, the type of unit, and the cost of providing the infrastructure deemed necessary to support the development.

The fee schedule is based on a long-range financial plan for each of the twelve communities, relating service needs and cost. This Infrastructure Development Forecast is completed and updated annually by the city engineering department with the cooperation of the developer. It includes two components: the Development Schedule forecasts the number and type of units to be constructed for each of the next 10 years; and the Capital Schedule estimates the cost of providing services to these

developments in a timely manner. These cost estimates are allocated by a formula relating the number of people who will be associated with the new land use, the level of public services needed by the new population, and the capital expenditures necessary to provide an adequate level of service. With this information, the city can estimate the amount of money that will be needed over the next 10 to 20 years to have the infrastructure in place as the new growth occurs.

Each area of benefit has its funds deposited in a separate account managed by the city manager. Because the funds of the various districts cannot be combined, developers are assured that the fees will be spent on improvements listed in the Capital Schedule. Each year, the city reviews the development schedules to see if construction is taking place as predicted. If no growth has occurred, no money will have been collected, and the Capital Schedule will be postponed.

RESULTS

The City of San Diego collected $3.5 million in assessments from two developers for a transportation improvement needed to support that new development. When all development has occurred in North City West, approximately $25,000,000 will have been collected for transportation- and recreation-related improvements in the area.

LEGAL ISSUES

The home-rule city council passed the Procedural Ordinance for Financing Public Facilities in Planned Urbanizing Areas (Ordinance No. 0-15318) in 1983. The FBA programs for the two areas of benefit have been challenged in court by a few developers on two grounds: that the FBA is a tax, not an assessment, and therefore in violation of Proposition 13, the state initiative restricting property tax rates; and that the FBA is inequitable, unfairly requiring new developers to pay for improvements needed by older developments. The city argued that the FBA program has been carefully designed to relate the cost of the fee to the benefits of improvements provided to the new development, so that FBAs are assessments for special benefits received, not general taxes. The city also designed the ordinance to be as equitable as possible by applying FBAs only to residential, commercial, and industrial areas that were undeveloped

at the time the ordinance was adopted, and by designing the fee formula to ensure that all new developments pay their pro rata shares of the infrastructure cost. The city is currently using the FBA schedule as the basis for individual agreements between developers and the city as a condition of map approval for new subdivisions in the areas of benefit. The development agreement, authorized by the state, requires the city to provide the improvements listed in the Capital Schedule in a timely fashion.

POLITICAL ISSUES

The FBA program is the result of several developers' concern that Proposition 13 would severely limit the city's ability to provide the infrastructure needed to support new projects. Recognizing that they would have to assume greater financial responsibility for these costs, they became concerned about fair sharing. Consequently, the developers worked closely with the engineering department on the preparation of the development and capital schedules and the calculation of the FBA. The city estimates that the FBA program has the support of 80% to 90% of the developers in the two areas of benefit for which the program has been developed (North City West and North University City). A few developers have challenged the program in court, however.

TIMING

The ordinance was approved in 1982 after two years of preparation. It takes at least a year to prepare and approve the development and capital schedules.

There is an inherent lag factor in the FBA program, since the funds are not collected until the building permit is issued. Consequently, infrastructure improvements often will not be completed until after the development has been finished. The lag may be even longer if completion rates are lower than were assumed in the development schedule. This possibility is one reason the development and capital schedules are reviewed annually. In addition, the fees are adjusted annually for inflation in order to maintain the purchasing power of the funds.

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TECHNIQUE TRAFFIC IMPACT FEES

EXPERIENCE San Francisco, California (1980 pop. 678,974): The San Francisco County Board of Supervisors in 1981 enacted the Transit Development Fee Ordinance which authorizes the city to collect a one-time fee of $5 per square foot from owners or developers of new downtown office space. The fee must be paid as a condition of obtaining a certificate of occupancy. The proceeds from this fee are used to pay for the capital and operating costs of additional peak-period public transit services.

The rationale for the fee has been that downtown development brings additional people into the city whose demand for service creates additional costs for the transit system. For example, the additional peak-period traffic may require San Francisco's Municipal Railway System (MUNI) to acquire new buses, to install new lines, and to hire more personnel to operate and maintain the system. Therefore, it is argued, the new development should pay for the incremental costs of expanding MUNI's capacity to carry passengers generated by new offices.

The fee is set annually by the Board of Supervisors and is computed at a level so that the proceeds will be sufficient to pay for all capital and operating costs incurred in providing the additional peak-hour services. The fee is expressed in terms of a sum per gross square foot using the following general formula: annual peak-period MUNI person-trips per gross square foot multiplied by the current cost per additional peak-period MUNI person-trip. By ordinance, the fee cannot exceed $5.00 per square foot. The proceeds from the fee are held in trust by the city treasurer and distributed according to San Francisco's budgetary process.

The Finance Bureau of the Public Utilities Commission administers the program. It is informed of planned construction or conversion work by the city's Bureau of Building Inspection when a developer files for a building permit. After the developer is notified of the development fee, the Bureau of Finance and the developer agree on the amount of square footage that is subject to the fee. Sometimes this agreement requires detailed

review of the architectural plans to ensure that common space is allocated fairly.

**RESULTS** Fees are being collected from developers and placed in escrow until current litigation (see below) is settled. The Bureau of Finance estimated that the 58 projects which have received permits since May 1981 will produce $37 million in fees for MUNI if the legality of the fee is upheld by the courts.

Developers will benefit as well. In the highly dense and desirable downtown San Francisco, mobility is essential to the success of any new office development. Expansion of MUNI, financed by development fees, will improve access to the downtown area, where the City Planning Department for several years has been denying developers permission to construct new parking spaces.

**LEGAL ISSUES** The San Francisco County Board of Supervisors approved the ordinance in May 1981. MUNI successfully argued that office development creates more congestion at peak-periods than any other type of development. The ordinance defines the boundaries of the downtown district and requires that the $5 per square foot fee be assessed on "all accessible office space plus ancillary space," such as elevators, lobbies and other "common space." Hotels and restaurants are exempt from the fee. In buildings where hotels and restaurants are mixed with office space, the fee is based on the square footage of the office space plus a proportionate share of the common space that can be assigned to the offices' use.

Litigation has been filed challenging the legality of the Transit Development Fee. The case will be heard in State Superior Court in late 1983.

**POLITICAL ISSUES** The May 1981 ordinance was approved amid political controversy. Opponents of the ordinance objected on the grounds that the fee was a mechanism to control growth and therefore was not in the city's economic interest. Some developers whose projects already were under construction protested that their projects would be taxed unfairly in a retroactive manner.

**TIMING** The political controversy surrounding the fee proposal delayed approval of the ordinance

establishing the $5.00 maximum per square foot development fee in downtown San Francisco. The legal issues are not expected to be settled until 1984 or 1985.

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REFERENCES

A Guide to Innovative Financing Mechanisms for Mass Transportation, Rice Center, December 1982.

TECHNIQUE **LEASING AIR RIGHTS**

EXPERIENCE Boston, Massachusetts (1980 pop. 562,994): A developer has a 99-year lease for the air rights over a portion of the Massachusetts Turnpike, which he is using to construct a mixed-use project.

The project, Copley Place, will include two hotels, an office/retail area, and 900 parking spaces. Its 9.5 acres will be constructed over a railroad right-of-way as well as over the turnpike, in a prime area of downtown Boston.

The Turnpike Authority negotiated with the Urban Investment and Development Company to develop the site. Both parties hired real estate appraisers to determine the value of the air rights. The value agreed upon was slightly less than the basic land costs of other sites in the area, but land and reconstruction costs considered together were roughly equivalent to nearby site values. (The developer financed the reconstruction and relocation of infrastructure, including water, electrical and telephone lines, rail right-of-way, and turnpike ramps.)

RESULTS The 99-year lease for the turnpike air rights will return $1.2 million per year to the Massachusetts Turnpike Authority's general fund in the first ten years, as well as placing the $550 million property on the city's tax rolls.

LEGAL ISSUES The Massachusetts Turnpike Authority, as a small quasi-public agency, was able to negotiate with the developer as a sole source bidder for development of the site. While it is independent of the Federal Highway Administration and the Massachusetts Department of Public Works and their more stringent requirements, the authority's enabling legislation does prevent it from selling development rights, or from entering into a lease for more than 99 years. The lease had to be approved by the Board of Governors of the Turnpike Authority and by the Governor of the Commonwealth of Massachusetts.

Urban Investment insisted that the Turnpike Authority delete the usual clauses which allow the authority to interrupt or revoke the lease at any time. This minimizes the risk to the developer's investment.

LEGAL ISSUES CONT.

The developer is required to fulfill debt financing obligations before making lease payments. There are no profit-sharing arrangements or inflation adjustments in the conditions of the lease.

POLITICAL

A gubernatorial election in the midst of negotiations caused a delay while new officials were brought into the process.

Over 80 community meetings were held to gain both required official approval and unofficial community approval of the project. An active community group formed a committee to oversee the design of the buildings in the project.

TIMING

The appraisal, evaluation, and negotiation process between the two parties, involving real estate, engineering, and legal consultants, took a year and a half. Because other financial mechanisms were also utilized, the entire development process took four years.

Copley Place is scheduled for completion in 1984.

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REFERENCES

"A Guide to Alternative Financing Mechanisms for Urban Highways: Draft Technical Report," Rice Center, October 1983.

TECHNIQUE LEASING AIR RIGHTS

EXPERIENCE Miami, Florida (1980 pop. 346,931): In 1982, the Office of Transportation Administration (OTA) for Metropolitan Dade County (MDC) received a one acre parcel of unimproved land from a developer to be used for the Dadeland South rapid transit station. In exchange, the developer was given exclusive leasing rights to the site's airspace.

Under the 99-year lease agreement, the developer was required to construct a 1000-car garage for transit patrons which OTA will operate and maintain. The air rights will enable the developer to build 600,000 square feet of office space, 50,000 square feet of retail space, and a 300-room hotel. At the end of the lease period, all improvements will become the property of OTA.

RESULTS The lease requires the developer to pay 4% of unadjusted gross income for each year of the lease. (OTA chose to base the lease payments on a flat percentage of unadjusted gross income instead of net income to avoid opportunities for the developer to manipulate his expenses for the purpose of significantly reducing his net profits and, thus, lease payments.) Beginning in 1986, OTA expects to receive annual lease payments of at least $2 million and as much as $3 million a year in 1982 dollars.

Convenient access to the rail system will increase the value of the office, retail, and hotel development to potential renters or visitors.

LEGAL ISSUES OTA and MDC contend that its Rapid Transit Zoning District Ordinance strengthened its position to negotiate with the developer. The ordinance provides three significant powers: zoning, eminent domain, and the authority to prevent construction worth more than $10,000 on land under acquisition.

POLITICAL ISSUES OTA did not solicit bids for this lease because of its prior experience with the Dadeland North Station. It was difficult to obtain the interest of several developers because of the size and cost of the project involved. The high interest rates at the time of solicitation discouraged developers from submitting proposals which would involve borrowing large amounts of money. In addition,

developers were reluctant to risk the chance of losing proposals which would be costly to prepare. (OTA estimates that preparation of a proposal would cost a developer $300,000 or more.) OTA also contends that those developers who did invest the money to prepare such an expensive proposal and who lost the bid would be more likely to litigate OTA's decision to award the lease to another developer. Such litigation may seriously delay a project.

TIMING — OTA's only major cost was the time required by legal counsel to draft the contract. While the "deal" was negotiated within a two-week period, the lawyers of both parties needed two months to complete an acceptable contract. With the "boiler plate" language in place, OTA hopes future contracts will take less time to complete.

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REFERENCE — A Guide to Innovative Financing Mechanisms for Mass Transportation, Rice Center, December 1982.

TECHNIQUE **LEASING AIR RIGHTS**

EXPERIENCE Sparks, Nevada (a suburb of Reno; combined 1980 pop. 141,536): A Sparks casino expanded its facility and entered into an air rights lease with the state for property under and adjacent to a new highway viaduct.

The owner of the Nugget Casino approached the right-of-way division of the Nevada State Highway Department, which hired an independent appraiser to determine the value of the property. The contract negotiations were complicated by the fact that there were not yet any state laws to regulate the procedure. The Federal Highway Administration, which funds 90% of the construction costs of Interstate highways, had to approve the lease. FHWA agreed initially only to allow the leasing of air space under Interstate Route 80 for parking, which was regarded as an appropriate and easily managed use of the property. Eventually, the lease was amended to incorporate vacant ground within the highway right-of-way, which was used to expand the casino facility.

RESULTS The lease returns approximately $87,000 each year to the highway department's general fund and places the project's 152,000 square feet of commercial development on the Sparks tax rolls.

LEGAL ISSUES Following the execution of the Nugget Casino lease, the state legislature passed a requirement that, following Highway Department receipt of a proposal to lease property, notice must be published and 60 days allowed for interested developers to submit alternative proposals. The Highway Department felt this was a beneficial requirement since it expands the range of potential lessors while opening the process to public scrutiny, thus eliminating criticism and defusing potential allegations that might arise as a result of sole-source bidding.

POLITICAL ISSUES Because there were no state laws regulating the lease of air rights at the time, the Nugget Casino negotiations were particularly extensive.

TIMING The I-80 viaduct was built in 1967-68. The lease was entered into in 1968 for 50 years, and is

adjusted every five years in accordance with the evaluation of an independent appraiser hired by the state.

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RELATED EXPERIENCE

California: The California Department of Transportation (Caltrans) has an aggressive air rights leasing policy. Caltrans actively markets sites it feels have potential to generate revenues, based on location, existing zoning, and adjacent development. Caltrans makes site availability known through mailings to developers, through advertising in local and national publications, and through the personal contact of staff members with the development community.

Because it has engaged in many leases over a long period of time, Caltrans has been able to develop standard forms and follow similar procedures for each lease. The staff members who handle air rights leasing have developed expertise in the negotiation and development processes, and approach problems with the aggressive problem-solving attitude of developers rather than expecting guidance through policy manuals.

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REFERENCES

"A Guide to Alternative Financing Mechanisms for Urban Highways: Draft Technical Report," Rice Center, October 1983.

TECHNIQUE **LEASING FACILITIES**

**EXPERIENCE** Santa Cruz, California (1980 pop. 41,483): The Santa Cruz Metropolitan Transit District (SCMTD) is leasing office and retail space in its new downtown Intermodal Transfer Facility to offset operations and maintenance costs.

The Metro Center is located next to an outdoor shopping mall (the Pacific Garden Mall) and the local Greyhound Bus terminal. It includes pedestrian, bicycle, and bus facilities. Because of the facility's intermodal nature, it was possible to finance it with California state funds rather than federal funds. The total cost of the facility (land acquisition and construction) was approximately $3.5 million.

The Metro Center will offer 2,215 square feet of restaurant and retail space to three tenants in the ground floor lobby, 1,777 square feet of office space to three tenants on the second floor, and six 100-square foot concession booths in a separate landscaped island area. The island is surrounded by parking for 16 transit buses, with an estimated daily ridership of 20,000.

**RESULTS** As the deadline for lease proposals is October 31, 1983, no final cost or revenue figures are yet available. Total projected expenses for buildings and grounds maintenance, management, utilities, and security are $177,000 yearly. Total projected revenues are $68,382 yearly ($16,872 from office space, $29,910 from lobby retail space, and $21,600 from island booth space). This produces a total projected deficit of $108,618 per year. Rent will be based on a fixed or flexible rate and/or a percentage of gross income.

The transfer facility is not expected to increase ridership, but to move bus parking off the street and loiterers out of the area. Both the Pacific Garden Mall and the new businesses are expected to benefit from the new central bus terminal.

**LEGAL ISSUES** The Santa Cruz City Council passed a draft law to allow SCMTD to purchase the land after it demonstrated a public need for the terminal. SCMTD and the individual businesses will execute lease agreements for the space.

POLITICAL ISSUES

On the whole, there was public and official support of the project, although there were some complaints about the design of the center and about the decrease in area parking space it would cause. To date, nearly 50 possible tenants have contacted SCMTD about leasing sales space.

TIMING

Planning for the Metro Center began in 1979. Tenants are to be selected in November 1983 and the facility is expected to open in January 1984.

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REFERENCES

SCMTD memo: "Report and Time Table on Concession Space Lease Development," July 7, 1983.

SCMTD packet: Metro Center Leasing.

TECHNIQUE **LOCAL MATCH DONATION**

EXPERIENCE Grand Rapids, Michigan (1980 pop. 181,843): A donation of the local match for a downtown bus system was made in return for the lengthening of one of the system's routes.

The Grand Rapids Area Transit Authority (GRATA) wanted to create a bus system downtown to complement the main bus route passing through the central business district. Several activity centers have been added or expanded in the downtown area in the past few years, such as the Gerald R. Ford museum, an art museum, and a performing arts center; thus, a system to connect them was needed. However, GRATA receives no general local funding; its services are supported by federal and state funding and by contracts with the city and various social service and educational organizations. A wealthy individual who supports the downtown zoo and who had recently pledged $1,000,000 for its improvement was approached for a donation. The individual agreed to donate the $100,000 local match for the five buses, if the system were expanded to include a stop at the zoo.

LEGAL ISSUES Although GRATA has the legal power to accept contributions, the bus purchase money was donated to the City of Grand Rapids. GRATA signed an agreement with the city to accept the money.

POLITICAL ISSUES GRATA was made aware of the potential donor only because of an informal discussion between the general manager of GRATA and the director of Grand Rapids Leisure Time Activities (whose jurisdiction includes the zoo).

Objections to the downtown bus system were raised by wheelchair advocates. However, as no state capital funds were involved, there was no legal requirement that the buses have lifts. The cost of ramped buses would have been prohibitive; only one potential bus supplier offered them, and he withdrew his offer before bidding began.

TIMING The donor was approached in late 1981. The system began operations in July 1983.

RESULTS The new shuttle services will cost $239,000 yearly. Some service on a park-and-ride shuttle

and on a main bus route has been replaced by the CBD shuttle for a savings of $94,800 yearly. This results in a net additional expenditure of $144,200 yearly. $45,000 of that will be met by the farebox, $60,000 by advertising revenues (the "old-fashioned trolley" appearance of the buses and the density of downtown population during the day are expected to be attractive to advertisers), $4,000 by charter revenue, and $35,200 by Michigan state operating assistance funds. A net increase in ridership is projected at 350,000 to 420,000 annually, due to the convenience and low cost (no fare from park-and-ride lots, 10¢ within the CBD, and a half-fare of 25¢ to the zoo). Also, the increased transit service within the downtown area is expected to spur further development.

**CONTACT**

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**REFERENCES**

CBD Shuttles Service Plan, November 8, 1982.

CBD Shuttles Services Operational Plan, June 1983.

TECHNIQUE **PRIVATE DONATION OF LAND**

EXPERIENCE Newport Beach, California (1980 pop. 63,475): An $800,000 transit center will be built on the grounds of a shopping center, whose developer donated the land and contributed $300,000 toward the operation of a shuttle service.

A high proportion of Newport Beach's residents are elderly people who make extensive use of the area's mass transit, provided by the Irvine Transit District and the Orange County Transportation District (OCTD). The large number of tourists in this area increases traffic and makes an efficient mass transit system even more necessary. To this end, the California Coastal Commission, an influential state authority created to protect the coastal area from mass development, wished to have a transfer point at the Newport Center Shopping Mall. This mall, surrounded by office complexes, is situated in an affluent area.

The Coastal Commission approached the mall's developers, the Irvine Company, about dedicating a 2.5 acre parcel of land for the transfer and layover facility, and contributing $300,000 toward a shuttle service.

The design costs for the facility will total $78,500, while construction will cost $784,000. 80% of the $862,500 total cost, or $690,500, will be funded by UMTA if the grant application is approved. The 20% local match, $172,000, will come from state funds.

The facility will be constructed, owned, operated, and maintained by the Orange County Transportation District.

RESULTS OCTD will receive 2.5 acres of land valued at $1.6 million ($15 per square foot) in a 1980 cost estimate.

No great increase in ridership is expected, since the transit system is already active. However, service is expected to become more efficient because of the transfer point.

LEGAL ISSUES No legal problems were encountered.

POLITICAL ISSUES — The California Coastal Commission has the authority to approve all development in this area. Therefore, developers tend to meet the commission's requests without significant challenge.

TIMING — The grant request was made to UMTA in August 1983, and approval is expected in October 1983. Construction on the transfer facility is due to begin in August 1984, so that it will be operational in July 1985.

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TECHNIQUE **MERCHANT SUBSIDY OF SERVICE**

EXPERIENCE Cedar Rapids, Iowa (1980 pop. 110,243): Cedar Rapids Bus Service markets bus passes through area merchants, who discount them for customers. The retailers receive the coupons from the transit company and pass them on to customers with a purchase. When the bus drivers turn in the collected discount passes, marked with the store name, the merchant is billed. The coupons discount either one-half or one full bus fare.

RESULTS In the last fiscal year, $21,350 was collected from participating merchants, about 70% of that from the sole surviving large downtown department store, Armstrong's. Over 150 businesses are approached yearly, but only about 30 actively participate. Businesses in suburban shopping malls, which are increasing at the expense of downtown stores, seem less inclined to market the Ride-and-Shop program. The number of passes marketed each year has not appreciably increased, but Cedar Rapids Bus System plans to continue the service.

The merchant subsidy amounts to about 3.1% of total annual revenue, which is approximately $670,000. Total annual operating costs are $2.2 million a year, the bulk of which are covered by state and federal funding.

LEGAL ISSUES The Cedar Rapids Bus Company is operated by the City of Cedar Rapids.

POLITICAL ISSUES The program's major supporter is the transit-conscious management of Armstrong's, the last large department store in downtown.

TIMING The program was begun in 1965.

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TECHNIQUE **MERCHANT SUBSIDY OF SERVICE**

EXPERIENCE Champaign, Illinois (1980 pop. 58,133): Half the projected fare box revenues of one bus are subsidized by a local grocery chain. The vintage 1960 bus is painted to resemble a generic grocery product and runs a different route each day.

The managing director of the Champaign - Urbana Mass Transit District (CUMTD) initiated the project, approaching a local grocery store owner who responded enthusiastically. Based on a ridership projection of 3400 passengers per month, the store pays a flat fee of $850 per month (one-half the projected fare box revenues with a regular fare of 50¢). The subsidy is applied equally to operation and maintenance of the bus, which are the responsibility of CUMTD. Riders pay only a 25¢ fare.

RESULTS CUMTD receives $850 per month, plus increased awareness of the bus system. There are no figures as to whether ridership has increased due to this service. The grocery store, Eisner's, has a highly visible advertisement which is seen throughout the city at a cost comparable to 3 1/2 illuminated billboards ($240 per month illuminated, $190 per month unlighted). Financially disadvantaged transit users benefit from the half-price fare as the bus runs on various routes.

LEGAL ISSUES No special authorization was required. A mutual agreement between the two parties was formalized in a contract.

POLITICAL ISSUES The grocery store owner was enthusiastic from the start. Public interest has been high.

TIMING The arrangement was proposed and implemented within a month.

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TECHNIQUE **MERCHANT SUBSIDY OF HOLIDAY SERVICE**

EXPERIENCE Springfield, Massachusetts (1980 pop. 152,319): Merchants sponsor free bus service on the four Sundays before Christmas.

The program was tested in the 1981 Christmas Season by the Pioneer Valley Transit Authority (PVTA), whose administrators wanted to promote the bus system. Sunday service is not regularly offered, but for four weeks before Christmas the buses ran on Sundays, and on the fourth Sunday service was free to riders. In 1982, the program was repeated, but merchants in four shopping areas contributed $1500, based on the revenue of the program in 1981. Passengers rode for free on all four Sundays due to the subsidy. PVTA plans to offer this service again in 1983, with greater promotion.

RESULTS There are no official ridership figures for the 1981 Sunday service. Transit management feels that the ridership in 1982 of 14,114 was an increase over 1981. Year-round ridership has increased in 1983, possibly as a result of the Christmas promotional program.

LEGAL ISSUES No special authorization was required.

POLITICAL ISSUES No political problems were encountered.

TIMING The promotional period will be lengthened in 1983 in order to increase the impact of the program.

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TECHNIQUE **PRIVATE INITIATIVE**

EXPERIENCE Houston, Texas (1980 pop. 1,594,086): A development company has contributed almost 10% of the cost of constructing a portion of highway fronting its mixed-use development in order to speed completion of the project.

Beltway 8 is a highway which will circle the outer portions of Houston when it is completed, although only a few sections are now constructed. Friendswood Development Company wanted to ensure that a 1.4 mile portion fronting the southern boundary of its Green's Crossing project was completed. This roadway, for which state funds had not been appropriated, would connect the Friendswood commercial and residential development to an interstate highway.

Therefore in 1981, Friendswood Development offered to donate right-of-way, to design the interchange, and to contribute toward construction costs. The State Department of Highways and Public Transportation (SDHPT) quickly accepted, and agreed to speed completion.

The Friendswood Development Company's participation was as follows:

| Component | Total | FDC | %FDC |
|---|---|---|---|
| Additional right-of-way | $ 5,508,000 | $277,000 | 5% |
| Utility adjustments (est.) | 757,000 | - | - |
| Design | 360,000 | 360,000 | 100% |
| Construction | 4,875,000 | 313,000 | 6.4% |
| TOTAL | $11,500,000 | $950,000 | 8.3% |

RESULTS The State Department of Highways and Public Transportation received $950,000 in private sector aid to build a section of highway which will facilitate access to Houston's Intercontinental Airport. The Friendswood Development Company is receiving speedy completion of a convenient access route to its 600 acre mixed-use project.

LEGAL ISSUES No legal problems were reported.

POLITICAL ISSUES No political problems were encountered.

TIMING

Friendswood Development purchased the Green's Crossing acreage in February 1980. In early 1981, SDHPT accepted the developer's offer of a private contribution. SDHPT changed the right-of-way specifications twice, extending the design process and delaying the project for about a year. Bids were accepted in March 1983 and a construction company chosen in April. This portion of Beltway 8 is expected to open to traffic in late 1984.

CONTACT

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Operations Manager, Commercial Projects
Friendswood Development Company
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Houston, Texas 77001

REFERENCES

"Planning and Financing Urban Mobility in Texas: Technical Report Draft," Rice Center, September 1983.

TECHNIQUE PRIVATE INITIATIVE

EXPERIENCE Pittsburgh, Pennsylvania (1980 pop. 423,938): A private non-profit economic development organization provided the impetus and some of the funds for the renovation of a deteriorated downtown street.

The Allegheny Conference on Community Development saw a need for improvements to major downtown streets. A study for which it raised private funds indicated that Grant Street, a downtown street connecting state highways, would be the best road with which to begin. Twenty-three major buildings front Grant Street, including U.S. Steel, Rockwell, and Gulf Oil office buildings, and various city, county, and federal buildings.

After commissioning a report estimating design and engineering costs for the renovation of Grant Street, the Allegheny Conference joined with representatives of the area's buildings to work with the Mayor of Pittsburgh and the city's Planning Department and Department of Public Works. The city accepted the plan to widen and improve sidewalks, plant trees, replace cobblestone with brick paving, bury overhead wires, and eliminate streetcars.

Grant Street, as an urban road connecting state highways, is eligible for 75% federal funding through FHWA's Federal Urban Highway program. The renovations will cost $13 to $14 million; the city will finance the 25% local match by issuing six-year capital improvement general obligation bonds. Improvements which go beyond city standards will be financed by the Allegheny Conference, which plans to raise $500,000. Maintenance of the extra amenities for three years will be financed by another $250,000 raised by that organization.

RESULTS The federal grant has been approved, and construction is due to begin in the spring of 1984. The Allegheny Conference has not yet decided on what basis (square footage, linear front footage, assessed value, etc.) contributions will be solicited from Grant Street property owners.

The city is receiving over $14 million of design, engineering, construction, and maintenance work for

about one-quarter of the cost (the local match and regular city street maintenance). The Allegheny Conference, whose board members include many prominent Pittsburgh business leaders, hopes that this project will provide the impetus for city government to renovate other downtown streets using the high standards developed for Grant Street.

LEGAL ISSUES

The Allegheny Conference is a private, non-profit organization which is soliciting contributions, not making assessments. The money they collect is then given to the city for the improvements.

POLITICAL ISSUES

Grant Street property owners and the Mayor of Pittsburgh were very enthusiastic about the idea from the start. The Department of Public Works was skeptical, but persuasion from the Mayor's office, combined with a change in the department's administration, overcame that.

The Allegheny Conference, formed in 1943, had the advantage of a long history of cooperation with and trust from the community. This, plus the assumption by the Conference that the public sector is responsible for making decisions and that the private sector can only persuade and not force, ensured the success of the Grant Street project.

TIMING

Members of the Allegheny Conference had been discussing renovating downtown streets for several years. About eighteen months elapsed between the first study of the area and the final report to the mayor. Construction is due to begin in November 1983 and will last two to three years. The starting date was delayed until the new subway system which crosses Grant Street was completed, as it will replace the old streetcars which will be removed.

CONTACT

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TECHNIQUE **PRIVATE INITIATIVE**

EXPERIENCE The Woodlands, Texas (pop. 16,500): The Woodlands Development Corporation (WDC) has been active financially and politically in expediting highway improvements to increase access to The Woodlands, a new town development about 25 miles north of Houston. WDC has participated directly in three projects on I-45, the major access route to downtown Houston.

The so-called "northeast connector" project will provide a much needed final piece of a currently incomplete interchange between I-45 and Woodlands Parkway and thus relieve a major congestion point. The entire project, for which construction has not yet begun, will cost $930,000, of which about 68% is for right-of-way acquisition. WDC has contributed $164,000 in cash to the State Department of Highways and Public Transportation for the project, representing nearly 18% of its total cost.

At the same interchange, a right turn from Woodlands Parkway onto the southbound freeway frontage road is currently controlled by a stop sign. A merge lane is planned to allow free flow for this turning movement. Although not finalized, WDC has offered to provide the construction materials for this project in exchange for design and labor to be provided by SDHPT. This arrangement will facilitate completion of the project. The total cost of the project will be about $75,000. WDC's offer, if accepted, will amount to between $15,000 and $20,000.

WDC also has agreed to commit $2.2 million dollars to a series of interchange improvements along the portion of I-45 adjacent to The Woodlands. This portion of I-45 is projected to continue to be the most congested in Montgomery County, and by the year 1990, it is estimated that, without capacity improvements, congestion in the area will reach a severe level similar to that currently experienced in parts of central Houston. WDC hopes to raise the priority of these freeway improvements through its contribution.

RESULTS SDHPT has been offered a total of almost $2.4 million from the private sector to complete projects already planned. The Woodlands Devel-

opment Corporation will receive speedy completon of access routes vital to the growth of the development.

The $2.2 million contribution is being matched by Montgomery County, and WDC is applying to the Federal Highway Administration for a 90% reimbursement of the $4.4 million. If this application is accepted, it is possible that WDC could leverage other improvements needed on I-45; private funds and federal reimbursements would finance the construction, with state monies used only for front-end investment.

LEGAL ISSUES — State legislation may be needed to direct any federal funds directly to I-45 rather than into the state's general highway fund.

POLITICAL ISSUES — No political problems were reported.

TIMING — The improvement plan for I-45 grew out of a 1982 mobility plan for the area which WDC underwrote.

CONTACT — Randall Wood
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REFERENCES — "Planning and Financing Urban Mobility in Texas: Technical Report Draft," Rice Center, September 1983.

(The following case study is abstracted from pages 35 through 37 and pages AC-1 through AC-21 of The Use of Private Funds for Highway Improvements: Draft Final Report, prepared by Kimley - Horn and Associates, Inc., for the U.S. Department of Transportation, Federal Highway Administration, May 1983.)

TECHNIQUE **METROPOLITAN DISTRICTS**

EXPERIENCE Arapahoe County, Colorado (1980 pop. 293,621): The first major, privately funded highway project in the Denver region, the Yosemite Street overpass, was financed by a coalition of metropolitan districts which are composed almost entirely of commercial property.

Metro districts are quasi-public entities that may issue bonds for capital improvements supported by property tax levies. This funding is considered to be from the private sector, because these metro districts consist almost entirely of commercial property. The coalition of districts, the Joint Southeast Public Improvement Association (JSPIA), presently includes four metropolitan districts on 2,213 acres and will soon expand to include eight metro districts and 2,663 acres. JSPIA will ultimately include over 50 million square feet of office, research, and commercial development.

The Yosemite Street overpass will serve the Greenwood Plaza South development, and its provision was made a condition of the development's zoning approval. Neither state nor county funds were sufficient to fund this project, so the developer formed the Greenwood South metro district and, in cooperation with the Greenwood district, agreed in 1981 to construct the overpass.

In 1982, the formation of JSPIA, a coalition of four Greenwood area districts, was announced, and a list of five highway construction projects (the Yosemite overpass and four interchanges) was adopted. Each district shares the total costs of the projects according to the proportion of the district's assessed valuation to the total assessed valuation of all the member districts. This proportion is adjusted annually.

JSPIA constructed the Yosemite Street overpass at an estimated cost of $4.5 million, and is con-

tributing another $17.6 million toward the four area interchanges.

RESULTS

The Colorado Department of Highways obtained completion of projects that had long remained dormant, at a cost of only $2.9 million to the department. Completion of the overpass is estimated to divert 12,000 vehicles per day from an overloaded interchange.

The developers involved obtained approval to continue medium-to-high density development and helped to relieve a major traffic bottleneck. JSPIA also wished to establish credibility with the state and to lay the groundwork for future jointly-funded projects in the corridor which benefit both developers and the general public.

Because the metro districts can use property taxes to fund bond issues, front-end costs required by the private sector to implement infrastructure improvements are reduced, and low-interest long-term payments are provided for.

LEGAL ISSUES

Metropolitan districts are authorized under Colorado's Special District Act, Title 32, adopted as a general statute in 1981. They provide various infrastructure services.

In order to form a special district, petitioners must first submit a service plan to the board of county commissioners. After the plan is approved and a petition presented to the district court, the court holds a public hearing and an election. Consolidation of districts is also processed through the court.

Metro districts have many of the same powers as municipalities, such as issuing bonds, setting rates, and acquiring property; they also have special powers of eminent domain, providing public transportation, levying and collecting ad valorem taxes, issuing negotiable coupon bonds, and issuing tax-exempt revenue bonds.

While the funds used for improvements are from tax receipts, the taxes are levied by the private sector on the private sector.

POLITICAL ISSUES

The public-private nature of this project resulted in some coordination and design review problems

that had to be resolved after the contract already had been let.

TIMING — In January 1981, the Greenwood Plaza South rezoning plan was submitted, and in June it was approved. The formation of JSPIA was announced in April 1982. Two months later the construction contract was awarded and the final design approved by the Federal Highway Administration. Construction of the overpass and one interchange is virtually complete; the other projects will be completed within the next five years.

CONTACT — Phil Sieber, Planning Director
Arapahoe County
5334 South Prince Street
Littleton, Colorado 80166
(303) 795-4450

REFERENCES — The Use of Private Funds for Highway Improvements: Draft Final Report, prepared by Kimley-Horn and Associates, Inc., for the U.S. Department of Transportation, Federal Highway Administration, May 1983.

# II. Cost Reduction Measures

TECHNIQUE **NEGOTIATED LAND LEASE**

EXPERIENCE Detroit, Michigan (1980 pop. 1,203,339): Northland Mall management leased land for a new bus loading facility to the Southeastern Michigan Transportation Authority (SEMTA) at $1 per year when the mall expanded into the original loading area. The mall management also provided the local match for the facility and paid for the construction of the turnaround area.

A bus loading area was designed into the Northland Mall when it was built in the 1950s. In 1981, plans for the mall's expansion were developed which eliminated the loading area. After negotiations with SEMTA officials, however, the mall management decided to relocate the area and build a large lighted shelter with kiosks and phones. The parking lot was redesigned, and the facility and a turnaround roadway were added to the plans.

RESULTS SEMTA received a large transfer shelter and loading area for the price of $30 (a 30-year lease at $1 per year). The loading facility cost $129,000, 20% of which was paid by Northland Mall. An UMTA grant funded the rest. The land for the facility is leased to SEMTA for 30 years at $1 per year. There are no figures for the land's market value. The turnaround roadway and fence, which cost approximately $100,000, were provided entirely by Northland Mall.

Northland Mall provided improved facilities for its patrons who use transit, whom the mall management decided were a significant percentage (from 20% to 30%) of total shoppers. Northland Mall attracts some 35,000 to 40,000 shoppers per day, and employs approximately 5,000 persons full-time.

Between 8,000 and 12,000 people per day use the transfer facility.

LEGAL ISSUES The Northland Mall received a waiver from the city for a few required parking spaces which were lost due to the expansion.

POLITICAL ISSUES Northland Mall management originally wanted to eliminate the loading area from the mall and have it relocated some distance away. Negotiations with SEMTA personnel persuaded mall officials to

incorporate the transfer facility into their expansion plans.

TIMING — The mall expansion was planned and implemented in 1981 and 1982.

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TECHNIQUE **NEGOTIATED LAND LEASE**

EXPERIENCE Phoenix, Arizona (1980 pop. 764,911): Construction is beginning on a transfer facility located on land leased by a shopping center association to Phoenix Transit at $1 per year for 20 years. Plans for similar arrangements for two other centers are under way.

A park-and-ride lot had been located in the shopping center complex since 1975 on land leased at no cost to the transit agency by the association. However, as the center became more successful and as transit needs in the area grew, traffic and parking became a problem. Discussions began in 1980 about moving the location, and a transit advocate on the shopping center association's staff suggested donating land and building a shelter for the transfer facility. However, the association became reluctant to give up ownership when the recession occurred, so a lease agreement was worked out instead.

Construction of the $250,000 facility will be financed by UMTA (80%) and by Local Transportation Assistance Funds drawn from the Arizona State Lottery (20%). Operating and maintenance costs will be shared by Phoenix Transit and the retail association.

LEGAL ISSUES The Phoenix City Council had to authorize Phoenix Transit to sign the lease.

POLITICAL ISSUES Phoenix Transit had to negotiate terms with both the shopping center management and individual store owners.

TIMING Planning for the facility began in 1980; construction should be completed in 1984.

RESULTS Phoenix Transit avoided the costs associated with condemning and purchasing land, and reduced its maintenance costs as well.

Transit needs in the area are predicted to continue to grow, so the new sheltered transfer facility will be convenient for shoppers and thus beneficial to the retail center. Also, traffic congestion will be lessened somewhat in the shopping center parking lot.

CONTACT

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TECHNIQUE NEGOTIATED LAND LEASE

EXPERIENCE Tacoma, Washington (1980 pop. 158,501): Pierce Transit is expanding its service by adding four transfer centers. The centers will be located on private land leased to Pierce at $1 per year for 20 to 30 years.

Pierce Transit hired a consulting firm to suggest areas for the transfer centers, requiring that each be within at least 25 minutes of another transfer point. After choosing four areas, the transit agency held public hearings on possible sites, finally deciding on land belonging to a community college, a school district, and a large shopping mall for three of the facilities. While negotiations on leasing the chosen sites were conducted, Pierce set up temporary centers for less than $2000 each (basically painted areas in parking lots). By late 1984, Pierce expects to have constructed two and possibly three facilities with raised platforms and shelters. Funding comes from an UMTA grant (80% of cost) and from transit funds derived from a 3/10¢ state sales tax (20% of cost).

RESULTS Pierce Transit benefits from not having to condemn and buy the needed land. The 3.3 acre parcel on a corner of the Tacoma Community College parking lot is in an area of $3 to $5 per square foot land values, which might give it a comparable value of $430,000 to $720,000. The two acre parcel belonging to the Franklin Pierce School District might be valued at $130,000 to $170,000 ($1.50 to $2 per square foot). The one acre parcel on the Tacoma Mall parking lot might be valued at $175,000 or more (over $5 per square foot).

The non-transit investors also benefit. The Tacoma Community College hopes to reverse a trend of falling enrollment by promoting the convenience of the transit center. The Franklin Pierce School District is leasing underutilized land which commercial developers had been eyeing but which the district preferred not to sell outright. Allied Stores used its commitment to a transfer facility as a bargaining chip with the city council during negotiations to reduce the parking requirements at the mall. Allied Stores also hopes to capture a portion of those workers going home by bus who

could shop at Tacoma Mall for a while before transferring to a final bus home.

Riders are responding favorably to the increased number of transfer points, according to informal surveys taken by Pierce.

LEGAL ISSUES

Pierce Transit is designated as a municipal corporation and a public utility, and as such has the right to contract with private property owners.

Allied Stores of Tacoma Mall, one of the largest malls on the West Coast, had to apply to a city commission, hold public hearings, and gain final approval from city council for reduced parking requirements (from 5.5 spaces per 1000 square feet to 5 spaces per 1000 square feet). This held up completion of lease arrangements with Pierce.

POLITICAL ISSUES

The public hearings were fairly well attended, and three of the four communities were very receptive. Pierce Transit has still not found a property owner willing to lease in the fourth area; however, a sewer construction program in the neighborhood could support a proposed new shopping center, whose developers might be more cooperative. Otherwise, Pierce may decide to condemn property.

TIMING

Pierce began planning in 1980. The first lease, which took three months to negotiate, was recently signed. A second lease, which has taken two and one half years to negotiate due to parking space regulations, is almost signed. Pierce expects to have two and possibly three centers constructed in 1984.

CONTACT

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Tacoma, Washington 98405
(206) 593-6260

TECHNIQUE **CONTRACTED TAXI SERVICE**

EXPERIENCE Charlotte, North Carolina (1980 pop. 314,447): The City of Charlotte contracted with the local operator of the Yellow Cab Company in 1981 to provide services to the disabled. In November 1983, the city plans to replace this contract service with a city-operated service.

The Rehabilitation Act of 1973 provided the impetus for transportation services for the disabled. Prior to 1981, special transportation services in Charlotte were provided by rehabilitation centers to their patients and by a private carrier. The city's 1981 contract with Yellow Cab required them to operate and maintain two city-owned cars five days a week from 7:00 a.m. to 6:00 p.m., at a cost of $15 per vehicle-hour. By 1983, over 800 people had registered for the service, but only about one-third of those actually were served, for a total of 12,403 rides in the last fiscal year.

Charlotte's Department of Transportation, in cooperation with the Department of Human Services and Support, will be taking over the service shortly, adding four cars to the fleet and using the original two as back-ups. The city expects to improve efficiency by regaining direct control.

RESULTS Demand far exceeded the services Yellow Cab supplied. Of 800 people registered for the taxi program, only about 260 actually were served. Under city control, the Charlotte Department of Transportation projects that 260 more people will be served. The Charlotte DOT also believes that both short-term costs ($15 per vehicle-hour under Yellow Cab) and long-range costs will decrease by an unspecified amount.

LEGAL ISSUES Section 504 of the Rehabilitation Act of 1973 required that municipalities receiving federal funds award 2 1/2% to 3% of those toward para-transit, and that those municipalities not discriminate on account of disabilities. Under the Carter Administration, cities were given an extra period of time to switch to expensive lift-equipped buses, during which time the city was to provide interim services. Under the Reagan Administration, the decision as to how to provide paratransit has been made a local option.

POLITICAL ISSUES

A year-long controversy with the local transportation union had to be settled before contracted services could begin.

The large profit margin and the insufficient service provided by the taxi company eventually prompted the city to provide the special transportation services itself.

TIMING

The bidding process for the contracted service took four months. Yellow Cab began operating the special transportation in July 1981. City service will replace it in November 1983.

CONTACT

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TECHNIQUE

# CONTRACTED TAXI SERVICE

EXPERIENCE

Kankakee, Illinois; Aroma Park, Illinois; and Bradley, Illinois (combined pop. 41,823): Contracted taxi service is provided for the region's elderly and handicapped in the Greater Kankakee area, funded by fares, the City of Kankakee, and the Federal Highway Administration.

A 1979 transit study of the greater Kankakee area suggested, among other options, the implementation of a taxi-ride program for the elderly and handicapped. In 1980, Kankakee began its taxi service. Two private cab companies operate a total of thirteen vehicles twenty-four hours a day, seven days a week. The city sells $1.50 coupons to the elderly and handicapped for 50¢; one coupon per trip may be used. The Federal Highway Administration reimbursed one-half of the operating deficit under Section 18 until June 1982, when Kankakee was reclassified as an urban area. The city plans to apply for Section 5 funding through a newly-organized metropolitan planning organization. Currently, the program is being funded with city monies.

RESULTS

In the first year of operation, over 20,000 trips were taken, for a total fare revenue of about $11,000. Expenditures totaled approximately $35,000, so the Federal Highway Administration granted some $12,000 to match Kankakee's share of the deficit. The figures for the following fiscal year are very similar. By late 1983, there were over 1500 persons registered for the program.

LEGAL ISSUES

The City of Kankakee contracts with the two taxi companies. The service is coordinated through the city's Planning Office.

POLITICAL ISSUES

A complaint by the Community Action Program, a minority-based organization, held up funds for eight months. The Illinois Department of Transportation recently arranged to have the complaint withdrawn.

TIMING

The Transit Development Program was adopted by Kankakee County in June 1979. In June 1980, Kankakee began its taxi program, serving Kankakee and Aroma Park. In September 1983, the Village of Bradley was added to the system. Federal funds (Section 18) were suspended in June 1982.

CONTACT

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Kankakee, Illinois 60901
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REFERENCES

Taxi/Van Program, brochure.

Taxi/Van Program, factsheet, July 1983.

Kankakee Area Transit Development Program, prepared by H.W. Lochner, Inc. for the Kankakee County Regional Planning Commission, June 1979.

City of Kankakee, Illinois Transportation Program: Report on Examination of Financial Statements, Topping, Gianotti, and Payne, CPAs; June 1980, June 1981, June 1982.

TECHNIQUE **CONTRACTED TAXI SERVICE**

EXPERIENCE Ann Arbor, Michigan (service area pop. 208,782): The Ann Arbor Transportation Authority (AATA) subcontracts with a local taxi company to operate a late-night, shared-ride taxi service called Night Ride.

AATA was unable to find any examples of contracted taxi service being used for general transit purposes (rather than special purposes such as transportation of the elderly or handicapped), and so developed its own service criteria. The features AATA chose included costs which were determinable in advance, fixed fares, and service that was simple to administer. A contract for the service was awarded after a bid process.

Three vehicles are operated from 11:00 p.m. to 1:00 a.m., two vehicles from 1:00 a.m. to 2:00 a.m., and one vehicle from 2:00 a.m. to 6:00 a.m. The vehicles are dedicated to the service by the cab company, which provides the vehicles, drivers, fuel, maintenance, and dispatch. AATA pays a fixed subsidy of $7.50 per vehicle hour, and each passenger sharing the cab pays a fixed fare of $1.50 per ride. Reservations for the service are made on the day service is needed.

UMTA funded the first year of service under a demonstration grant. The AATA Board of Directors recently elected to continue Night Ride with local revenue sources.

RESULTS There were no specific figures reported for the prohibitive cost of a comparable late night bus service. Comparable taxicab prices are $1.00 per flag drop and $1.10 per mile.

Between April 1982 and March 1983, 14,587 passenger trips were taken on Night Ride, for an average of 3.3 passengers per vehicle hour. The subsidy amounted to $26,184 (at $6.00 per vehicle hour), or an average $1.80 per passenger. Between April 1983 and August 1983, the average of passengers per vehicle hour remained at 3.3. The subsidy increased to $7.50 per vehicle hour in March 1983, for a total cost of $13,755 or $2.30 per passenger.

Ridership is higher when the University of Michigan is in session, on Fridays and Saturdays, and just

before midnight and just after 2:00 a.m. Surveys showed that more passengers were diverted from automobiles than from taxis and walking combined. Since the main attraction of Night Ride is its provision of personal safety when traveling late at night, it may be that some drivers are now more willing to use public transit during the day if they can return safely at night.

LEGAL ISSUES — The municipal taxicab ordinance prohibited shared rides and required that fares be based on the taximeter. However, there was a provision exempting mass transportation service from these regulations, and the AATA convinced the municipal board which oversees taxi operations that this clause applied to Night Ride.

POLITICAL ISSUES — No political problems were reported. AATA has decided to continue the service.

TIMING — During 1981, citizen groups approached AATA requesting service during late night hours. After two Ann Arbor taxi companies failed to agree on a joint service proposal, AATA advertised for bids in February 1982. Operations began in March 1982.

CONTACT

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3700 Carpenter Road
Ypsilanti, Michigan 48197
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REFERENCES

Ann Arbor Transportation Authority Invitation for Bids: Late Night Shared Ride Demand - Responsive Transit Service, February 1982.

Late-Night, Shared-Ride Taxi Service in Ann Arbor, Michigan, prepared by G. Christopher White for the Policy and Planning Committee of the American Public Transit Association, October 1983.

TECHNIQUE **CONTRACTED TRANSIT SERVICE**

EXPERIENCE Yolo County, California (1980 pop. 113,374): In 1981, Yolo County decided to break away from the Sacramento Regional Transit District and provide local service through a private operator, saving $400,000 a year.

Yolo County is located within the legislative boundaries of the Sacramento Regional Transit District (SRTD), but had chosen to contract with SRTD rather than join it. High costs were partially offset by the transit district subsidizing 20% of Yolo County's costs, since routes into downtown Sacramento (in east Yolo County) carried riders from other Sacramento area counties. When SRTD ended these discounts, Woodland and Davis, two cities in Yolo County, researched the cost savings of switching to a private operator and found that Yolo County could save $300,000 to $400,000 of the $1.4 million annual payment to the transit district. An added incentive to switch to private local service was the probability of SRTD cutting routes in Yolo County as increasing wages sent operating costs spiraling higher.

Yolo County signed a five-year contract with Commuter Bus Lines to provide service. Rates, which are renegotiated annually based on a cost-of-living index, now are $20.13 per hour, 67.9¢ per mile (re-calculated every 3 months based on the price of diesel fuel), and between $17 and $40 per day for each bus, depending on its type. The fleet has eleven buses for six routes plus three back-up buses. Ridership is approximately 50,000 per month.

RESULTS Ridership was initially down, but this seems to have been a trend across the nation at that time. Wet weather and start-up problems seem to have contributed to the drop as well. While fares have remained high due to the transfer agreement with SRTD (the base fare is 60¢ and increases to 75¢ when traveling eastbound to Sacramento or during peak hours), costs are down by some $400,000. Service has improved, although there have been a few minor problems with old equipment. Ridership is down 7 1/2% from last year due to a 20% increase in fares. Revenue is up 7% over last year.

LEGAL ISSUES

Yolo County signed a three-party agreement with the cities of Woodland and Davis to authorize Yolo County to contract with a private operator. An annual transfer agreement with SRTD allows riders to use the passes of either line on both systems, but required Yolo County to adopt SRTD's fare structure. Revenue is shared through a formula originally arrived at by surveys but now by formal models.

A major problem involves public funds: while Yolo County still receives California Transit Development Act funding (derived from a 1/4¢ sales tax), SRTD, as the official regional transit system, is the recipient of all UMTA funds for the area.

POLITICAL ISSUES

The idea was received favorably at public hearings sponsored by the Board of Supervisors. A public opinion poll taken in May 1983 showed that over 90% of those surveyed found the service to be at least fair. SRTD also favored the split at the time, as attention and funds were turned toward light rail projects; new management, however, may try to re-establish a relationship with Yolo County.

The non-union makeup of Commuter Bus Lines has provoked fewer union rumblings than were expected.

TIMING

The service was implemented between July 1981 and January 1982. The contractor had less than two months to prepare the service, creating some start-up problems. (A post-experience suggestion from the planner is that four to six months of preparation would be ideal.)

CONTACT

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RELATED EXPERIENCE

Sonoma County, California (1980 pop. 299,827): City governments in this predominantly rural county had been contracting with the Golden Gate Transit District for local service, but in July 1983 the county withdrew and accepted bids from private operators. Operations costs have decreased from $87 per vehicle-hour to $40 or less per vehicle-hour. However, Golden Gate, as the regional

carrier for the area, still has claim to federal funds for public transit, and this has become a local issue.

CONTACT

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TECHNIQUE **CONTRACTING FOR FACILITIES**

EXPERIENCE St. Louis, Missouri (1980 pop. 453,085): A private advertising agency provided bus shelters at no cost to the St. Louis bus system.

The Bi-State Development Agency wished to have bus shelters but did not consider them a high enough priority to apply for federal grant money. Therefore, a request for proposals was written and bids were taken for private provision. The accepted contractor provided 121 shelters, costing $5,000 to $7,000 each, and installed and maintains them, all at no cost to Bi-State. In addition, Bi-State is to receive 12% of the advertising revenue, which had been estimated at some $50,000 annual income.

RESULTS Bi-State received 121 installed and maintained shelters worth over $600,000 for free. However, advertising revenues may be lower than projected as advertising sales on the St. Louis shelters have been fairly slow so far. (As with any new industry, bus shelter advertising initially requires aggressive marketing for it to gain widespread acceptance.)

LEGAL ISSUES A city permit was required to build the shelters.

POLITICAL ISSUES There was some opposition by local store owners regarding the sites of individual shelters.

TIMING The request for proposals was written in early 1982. All shelters had been erected by mid-1983.

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# III. Measures to Shift Costs to the Private Sector

TECHNIQUE **NEGOTIATED INVESTMENT**

EXPERIENCE Bellevue, Washington (1980 pop. 73,903): In an agreement with the Seattle Metro System, the City of Bellevue has added zoning ordinances which promote downtown development and transit improvements in return for Metro increasing its service to Bellevue.

Bellevue lies just outside Seattle, and is served by the Seattle Metro System. In 1976, the city's land use planners began coordinating their efforts with Metro's transit planners. Until this time, Metro had provided regional service to Bellevue as a suburb of Seattle, and Bellevue now wished to receive local service that connected its central business district to other parts of the town. However, it was not feasible for Metro to expand its Bellevue routes while the downtown area remained underdeveloped. An agreement worked out in 1980 provided for Bellevue to encourage office development and to discourage auto use in favor of transit use. This was done by passing "Draft IV" of the Bellevue CBD Proposed Land Use Code Amendments, which can be used to lessen parking requirements or allow higher employment densities, if a developer adds pedestrian amenities or transit improvements. For its part, Seattle Metro agreed to establish two special routes to downtown Bellevue, to support Park-and-Ride lots for downtown, and to modify the Seattle-Bellevue and regional routes to better serve downtown Bellevue.

RESULTS Bellevue and Metro both benefited from this innovative agreement. Metro expanded its service, and is using its contract with Bellevue as a model for agreements with other areas, such as the University of Washington locale.

Bellevue has managed to add three new major office buildings to the central business district, although the economic downturn has stalled growth. Development densities are higher and parking areas smaller in the new developments.

The contract being negotiated between Seattle Metro and the City of Bellevue for 1984 provides for greater marketing on Bellevue's part and more service on the part of Metro.

LEGAL ISSUES

Bellevue passed the necessary zoning ordinances to encourage development and transit improvements in 1980. For example, office parking space was given a ceiling of three spaces per 1000 square feet, and could be reduced further with the provision of transit services or pedestrian amenities such as sidewalks and open space.

POLITICAL ISSUES

While Bellevue was included in the Seattle Metro system, Bellevue planners had to realize that Seattle Metro could not feasibly provide service from outlying Bellevue to the downtown area until development warranted it. The cooperation of Bellevue's land use planners with Seattle Metro's transit planners proved fruitful. Only a few officials resisted the movement away from suburban characteristics towards greater office development.

TIMING

Discussions between the city and Metro began in 1976. An agreement was signed in 1980. A new contract is being negotiated for 1984.

CONTACT

Jerry Dow, Manager of Transit Development
METRO
821 Second Avenue
Seattle, Washington 98104
(206) 447-6627

REFERENCES

Suburbs - The Transit Challenge of the Eighties: The Metro/Bellevue Transit Service Incentive Agreement, prepared for the American Public Transit Association by Jerry Dow, Municipality of Metropolitan Seattle, 1981.

TECHNIQUE **NEGOTIATED INVESTMENT**

EXPERIENCE Portland, Oregon (1980 pop. 366,383): A private developer is being required to work with TRI-MET in its construction of a transfer center in return for a conditional use permit.

The developer had planned a shopping center along the edge of a proposed light rail line which exceeded the permitted building size for its zoning category. At the request of TRI-MET, the County Planning Commission required that the developer participate in the construction of a transfer center and a park-and-ride lot. In return, the developer would receive a conditional use permit for the shopping center.

The developer has agreed to provide the local match for the 80% UMTA grant through a dedication of land. The cost of the land acquisition is approximately $2.1 million, and the cost of the engineering work is $840,000. The developer, who owns the needed land, can make the donation in one of two ways: by accepting an appraised value of the parcel at 20% less than its market value, so that TRI-MET pays only 80%, or the amount of the UMTA grant; or by mapping out the amount of land corresponding to 20% and deeding that to TRI-MET, selling the remainder to TRI-MET for the amount of the grant.

RESULTS TRI-MET will receive land and engineering work for its proposed transfer center and parking lot along the light rail right-of-way at no cost. The value of this local match is approximately $588,000.

LEGAL ISSUES The Planning Commission has the authority to award a conditional use permit to a "separate and unique" case which generally is acceptable but fails to meet a particular specification for a zoning category.

POLITICAL ISSUES TRI-MET requested that the Planning Commission require a dedication of land and other specific aids to construction. However, the commission required only unspecified cooperation and participation. This opened the door for certain disagreements over site plans and the disposition of prime access-road footage between TRI-MET and the developer. If agreement proves impossible, the two

parties will have to return to the County Commission to clarify its requirements as to the developer's participation.

TIMING — Negotiations about the donation have lasted over a year and are continuing.

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(The following case study was abstracted from pages 34 through 35 and pages NB-1 through NB-19 of The Use of Private Funds for Highway Improvements: Draft Final Report, prepared by Kimley-Horn and Associates for the U.S. Department of Transportation, Federal Highway Administration, May 1983.)

TECHNIQUE **TRAFFIC IMPACT REQUIREMENTS**

EXPERIENCE Newport Beach, California (pop. 62,556): Fourteen intersection improvements were required of four developers whose developments would have significant impact on the traffic at those sites, causing traffic volumes to exceed 90% of the intersections' capacities.

These improvements, which had to be committed before building permits were issued and completed before the buildings could be occupied, were required under Newport Beach's Traffic Phasing Ordinance. This ordinance requires that any development which will cause or make worse an unsatisfactory traffic situation must put into effect trip reduction techniques (such as carpooling, vanpooling, special transit service) or construct roadway improvements.

Four developers, led by the Irvine Company, joined to implement together the highway improvements they needed to complete their projects. Calling themselves the Highway Action Team (HAT), they hired an attorney, a traffic engineer, and a civil engineer for the project. Each developer was assigned responsibility for contracting for the engineering and construction services for one or more intersections, generally based upon the amount of traffic generated by the development as well as the proximity of the development to the intersection. The chief civil engineer allocated the costs among developers according to the developers' estimates of which projects added traffic to each intersection, not according to the city's requirements of each developer.

RESULTS The improvements required under the Traffic Phasing Ordinance were not included in the city's transportation plan, which focuses on link improvements. They had not been in the city's construction program, and probably would not have been constructed without the use of private funds. No city finds were expended.

The four developers spent $1,775,419 on the improvements, including construction and right-of-way acquisition. This amounted to about 0.5% of the total development cost. In addition, some developers made other substantial street improvements as a requirement for rezoning and site plan approvals. The impact of these costs was significant because the monies had to be expended prior to receiving income from the developments.

LEGAL ISSUES

The Traffic Phasing Ordinance requires that a city-chosen, developer-paid consultant perform a traffic analysis for any commercial or industrial development of greater than 10,000 square feet of floor area and for any residential development of more than ten dwelling units. If the development will generate one percent or more of the traffic on any leg of a key intersection during the 2.5 hour peak period, an Intersection Capacity Utilization analysis is required. If this analysis determines that projected traffic volumes would exceed 90 percent of the intersections' capacities, the developers must implement such improvements as will lower it to less than 90 per cent or to less than the projected volume without the development, whichever is greater.

POLITICAL ISSUES

The Traffic Phasing Ordinance had its origins in early 1978 in response to an initiative petition circulating among citizens in Newport Beach. The petition was originated in an effort to control growth and ensure that any growth would be accomodated by the street system. Enough signatures were obtained to qualify for a referendum, but the newly-elected city council adopted the ordinance in 1979, before a referendum was held.

The major concerns expressed by developers about the ordinance are its lack of fairness and predictability and the lack of cooperation from the city, which sets standards and leaves developers to administer them.

TIMING

The four developers had impact requirements set for them between April 1979 and October 1980. In October, the developers agreed to implement the improvements jointly, and construction began in December. The last intersection was completed in October 1982.

CONTRACT

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Newport Beach, California 92663-3884
(714) 640-2181

REFERENCES

The Use of Private Funds for Highway Improvements: Draft Final Report, prepared by Kimley-Horn and Associates, Inc., for the U.S. Department of Transportation, Federal Highway Administration, May 1983.

(The following case study is abstracted from pages 37 through 39 and pages PB-1 through PB-21 of The Use of Private Funds for Highway Improvements: Draft Final Report, prepared by Kimley-Horn and Associates, Inc., for the U.S. Department of Transportation, Federal Highway Administration, May 1983.)

TECHNIQUE **TRAFFIC IMPACT REQUIREMENTS**

EXPERIENCE Palm Beach County, Florida (pop. 576,863): A 1981 county ordinance established traffic performance standards which require that traffic on major thoroughfares serving a development project not exceed reasonable and safe levels of service. The Glades Road widening was one of the first major improvements to be constructed through an agreement formed on the basis of the ordinance. The agreement was negotiated as a condition for the rezoning of four development sites.

The Traffic Performance Standards Ordinance builds on a 1979 Fair Share Ordinance which required certain minimum impact fees. (See "Traffic Impact Fees: Palm Beach County, Florida" in this report.) The traffic standards ordinance requires constructed improvements rather than fees, and usually requires greater investment (but provides greater control) by the developer.

An analysis of Glades Road, a major east-west arterial in southern Palm Beach County which provides access to land west of the Florida Turnpike, showed that it already was extremely congested during peak periods, with traffic backing up to considerable distances from the turnpike underpass. It was estimated that 9,000 daily trips would be added if four developers who had applied for rezoning in the area were permitted to build. (The four developments will include a total of 3,185 residential dwelling units and 199,000 square feet of commercial space on 734 acres.) While the developers had made their original applications separately, the county engineering staff encouraged them to submit a joint proposal for widening Glades Road. The developers therefore negotiated a joint funding agreement to finance $1.55 million of the $1.6 million project.

RESULTS Florida, like many states, was in the position of using almost all available highway funding for

maintenance and was performing very little new construction outside the Interstate program. The improvements made to Glades Road, which widened it from two to four lanes, improved an underpass and two bridges, and extended a parallel arterial road, are not expected to handle adequately all approved development traffic; however, use of this technique has at least provided a temporary solution to a major traffic problem in the county. And while the county engineering staff feels that the developers should have been asked to construct more than they were, the county did receive $1.55 million towards the $1.6 million project, rather than the $865,900 in impact fees that the Fair Share Ordinance would have required.

LEGAL ISSUES

A 1974 Traffic Impact Fee Ordinance which was prepared but never adopted was used informally by county staff to determine the level of expenditure to be required of developers for roadway improvements. The 1979 Fair Share Ordinance (Ordinance 79-7) was based upon the concept of paying a fair share for the amount of roadway capacity required by a particular development.

The 1981 Traffic Performance Standards Ordinance (Ordinance 81-6) requires roadway improvements, density reduction, or construction phasing of developments which will have significant impacts on major thoroughfares. It applies to any rezoning involving classification to industrial, commercial, or high density residential uses. A project is categorized by the amount of impact it will have on major thoroughfares. Different levels of analysis are required for each category in a traffic impact statement submitted by the developer.

After the Board of County Commissioners approved the plan, designs were submitted to the Palm Beach County engineering office and the Florida Department of Transportation district engineering office. While the state reviewers approved the designs fairly quickly, they did have to be convinced that the innovative underpass design was feasible. No public hearings or bidding procedures were required. An environmental impact assessment was not needed, although permits were still required from the State Department of Environmental Regulation.

POLITICAL ISSUES

The County staff was not convinced that the developers' proposal would satisfy the performance standards and therefore did not recommend approval of the rezonings. The Board of Commissioners, however, did feel that the widening of Glades Road would mitigate the impact of the developments as well as relieve an existing problem, and therefore approved the rezonings.

The developers objected to the requirement of road improvements on the developer who "tips the scale", as later developers can then benefit from the earlier improvements without paying for them. An attempt was made to use impact fees to reimburse developers making improvements in excess of their fair share fees, but the county attorney did not approve of such an arrangement on legal grounds.

TIMING

Negotiations between the four developers and county staff about the plan took two weeks. The improvements were implemented in 20 months. The funding agreement and rezoning were approved by the County Commission in March 1981. In April 1981, the preliminary design was submitted to the state, and the construction contract was awarded in September. Construction began in December, 1981, and in November 1982 the project was opened to traffic.

CONTACT

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REFERENCES

The Use of Private Funds for Highway Improvements: Draft Final Report, prepared by Kimley-Horn and Associates, Inc., for the U.S. Department of Transportation, Federal Highway Administration, May 1983.

TECHNIQUE

# TRIP REDUCTION ORDINANCES

EXPERIENCE

Sacramento County, California (1980 pop. 783,381): Sacramento County recently adopted two trip reduction ordinances which require both developers and employers to take actions which encourage employees to rideshare. The main impetus for the ordinances was the air quality in Sacramento County, which violates federal standards for a few days every year.

The public sector in the county, to a large degree, already practices ridesharing. From 30% to 60% of the employees at the state capitol, at two military bases, and at county and city offices rideshare, use bicycles, or ride a bus to work. However, the private sector has lagged behind. The adopted ordinances were designed to encourage developers to build facilities for, and employers to promote the practice of ridesharing or bicycling to work. The Planning Department worked on the ordinances under an EPA Section 175 grant.

The first ordinance requires developers of new or expanding projects to provide passenger loading areas, preferential parking spaces for carpool and vanpool vehicles, shower and locker facilities for pedestrian and bicycle commuters, and transit waiting shelters. The numbers required differ according to building use, size, and number of expected employees, but are approximately as follows: for every 200 regular parking spaces, a passenger loading area which accommodates one vehicle; preferential parking spaces which number 15% of regular spaces; one shower and eight lockers for every eight employees; and a number of transit shelters to be determined by the local transit agency. Projects which will employ 1000 or more are required to submit a comprehensive Trip Reduction Facilities Plan as well, which might include a park-and-ride lot or a rail station in addition to the base requirements. Smaller projects also may be asked to submit such a plan.

The second ordinance requires employers of 100 or more persons to demonstrate annually the provision of an on-site transportation coordinator, preferential parking system management, information on commuting alternatives, and carpool-matching questionnaires.

Earlier zoning code changes reduced the number of required parking spaces if carpool spaces, bicycle parking, or shower and locker facilities were required. Therefore the new ordinances add no new incentives of reduced parking requirements.

The ordinances will be enforced by the Zoning Enforcement Section, for an added caseload of up to 200 complaints per year (6000-8000 are now processed annually). The costs to the county of implementation and enforcement of the new codes are estimated at not over $10,000 per year, which will be largely recoverable through permit fees. The approximately $7,000 start-up costs may be covered by an EPA grant for which Sacramento County has applied.

**RESULTS** As only one ordinance currently is in effect the impact on the county is not known. While the goal is a 30% reduction in total trips, Sacramento County planners do not expect to reach this target. However, the ordinance has possibilities for increasing developer and employer awareness of solutions to the region's traffic and pollution problems which might eventually make the 30% goal feasible.

**LEGAL ISSUES** After public hearings and approval by the city's Policy Planning and Project Planning Commissions, the ordinances were adopted by the County Board of Supervisors.

**POLITICAL ISSUES** The zoning changes originally were modeled after ordinances recently passed in South Placer County and in the City of Sacramento which placed the burden of trip reduction on the developer alone. However, the Project Planning Commission insisted on dividing responsibility between the developer and the employer.

Earlier zoning ordinances had set a ceiling on the amount of required parking that could be traded for ridesharing facilities. Planners discussed raising this ceiling, 2% for each of three categories, or a possible total of 6%, to 5% per category, or a total of 15%, but this was discarded due to the Project Planning Commission's concern that the ridesharing measures might not be as effective as hoped, creating a parking shortage.

TIMING

The Air Quality Implementation Plan was adopted by the County Board in January 1982. The Planning Department worked on the proposed trip reduction ordinances for about a year and a half and presented them to the Board in September 1983. The development ordinance was adopted in September 1983, to go into effect in October; the employer ordinance was adopted in October 1983, to go into effect in January 1984.

The regulations will be phased in over a five-year period from January 1984 through December 1988. In the first year, the twenty or so firms which are opening or moving will be affected. In the second year, those firms of 500 or more employees who are renewing business licenses will also be affected. In 1986 and 1987, firms of 100 or more will be added, and in the final phase, those institutions with fewer than 100 employees but which are required to have licenses will have to comply as well.

CONTACT

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REFERENCES

Staff Report of the Planning Department to the Board of Supervisors on the Draft Trip Reduction Ordinances, September 1, 1983.

TECHNIQUE **SERVICES FOR THE ELDERLY AND HANDICAPPED**

EXPERIENCE Highland, Indiana (1980 pop. 25,935): Two private, non-profit organizations serving elderly and handicapped persons wished to purchase new buses. They applied for federal aid through the local metropolitan planning organization (MPO) which then purchased the buses and leased them to the two agencies.

The Lake County Economic Opportunity Council and the Trade Winds Rehabilitation Center had originally planned to purchase, through the Section 16(b)(2) program, the buses they needed to replace their deteriorating vehicles. However, federal assistance could be more quickly applied for and received through Section 5 and Section 9A funding. The largest organization in the region, an MPO, was asked to make the application for funds, under the belief that this would make grant approval more likely. The Northwestern Indiana Regional Planning Commission (NIRPC) agreed to purchase the buses and lease them to the two agencies.

UMTA approved the purchase of eighteen buses at $20,000 to $22,000 each. The two agencies arranged to have NIRPC buy eight buses (four for each agency) at a total cost of about $175,000, and provided the local match, about $35,000. NIRPC leases the buses to the organizations for $1 per year per bus.

RESULTS The two agencies replaced the older buses and improved the quality of their service to elderly and handicapped persons at one-fifth their actual cost. The regional planning commission facilitated improved transportation service in its area at little cost to itself.

The Lake County EOC and the Trade Winds Rehabilitation Center plan to purchase ten more buses as authorized in the original grant and have, in fact, applied to purchase twenty more. Grant approval is expected in October 1983.

LEGAL ISSUES NIRPC was created with the legal authority to purchase and operate buses. Public hearings had to be held between applying for the grant and inviting bids. The lease agreement between NIRPC and the two agencies require the agencies to maintain the

buses; the contract was based on similar agreements used by Rochester, Minnesota and by the Regional Transit Authority in northeastern Illinois.

POLITICAL ISSUES — While three transit agencies in the area could have applied for the funds as well, the application was made through NIRPC under the belief that its larger jurisdiction could aid in receiving approval of the grant.

TIMING — The two organizations approached NIRPC in September 1980. The grant was filed in May 1981 and approved in February 1982. The lease agreements were signed in October 1982. The federal funds were received in January 1983, and in May 1983 the buses were delivered.

CONTACT

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Northwestern Indiana Regional Planning Commission
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Highland, Indiana 46322
(312) 731-2646

TECHNIQUE **PUBLIC BUS SERVICE**

EXPERIENCE Las Vegas, Nevada (1980 pop. 164,674): Las Vegas Transit Service (LVTS) has provided bus service to Las Vegas at a profit since the late 1960s. It has recently replaced old equipment by leasing buses from Las Vegas, which arranges to purchase them under a federal grant program.

LVTS began servicing Las Vegas in the late 1940s, but by the late 1960s, only five buses of a fleet of 30 were running. When First Grayline Corporation bought a tour bus line in the area, LVTS was included in the deal.

Grayline turned LVTS into a profitable system by raising fares so that they were the highest in the country at that time. The main route, an approximately seven mile corridor connecting downtown Las Vegas and the Strip, is ridden by some two million people a year, most of them tourists who pay higher cash fare prices. Those ticket prices were raised from 50¢ to 70¢ in 1976, and became 90¢ in October 1983. Six to ten buses are used on this route.

Profits from the corridor linking downtown and the Strip subsidize the ten residential routes. Las Vegas residents can buy ticket books for the transit system which lower the fares to 60¢ for adults and 35¢ for children and the elderly. Total ridership for the suburban routes is over two million passengers per year, 1.7 million of whom are commuters and 500,000 of whom are elderly.

LVTS is able to run at a profit mainly due to two factors. One is the profitability of the tourist route which connects the hotel and recreation centers of downtown and the Las Vegas Strip. The other is the sharing of management and facilities (but not drivers or mechanics) by LVTS and Grayline Tours. LVTS has realized an after-tax profit of between $75,000 and $200,000 for the last three years.

In 1980, the Regional Transportation Commission applied for federal funds for Las Vegas to buy new buses. The commission, which represents Clark County, Las Vegas, North Las Vegas, Henderson, and Boulder City, is designated as the area's transit funding recipient although its main function is

streets and highways. The purchase of 17 buses was approved at a cost of approximately $100,000 each. LVTS provided $100,000 and the members of the Regional Transportation Commission supplied $330,000, the remainder of the local match. LVTS leases the buses at no cost.

RESULTS — By providing about 3/4 of the local match, the cities and county of the Regional Transportation Commission prevented LVTS from raising its fares. The area receives transit service at a low cost to the local governments, which are also free of the responsibility of operations and maintenance. LVTS benefits from receiving the use of the buses at about one-sixteenth their total cost.

LEGAL ISSUES — Federal funding of the buses was applied for by the Regional Transportation Commission as the area's designated transit funds recipient. However, the commission was prohibited at that time from entering into purchase-service or lease agreements, so the city of Las Vegas received title to the buses and signed a purchase-service agreement with LVTS. Since then, legislation has been passed which allows the commission to enter into such contracts.

POLITICAL ISSUES — The Regional Transportation Commission chose to help finance the vechicle purchase rather than have bus fares go up.

TIMING — LVTS requested the buses from the commission in early 1980. The first five arrived in September 1981.

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Las Vegas Transit Service
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Las Vegas, Nevada 89102
(702) 384-1234

TECHNIQUE **EMPLOYEE BUS SERVICE**

EXPERIENCE El Segundo, California (1980 pop. 13,752): Hughes Aircraft Company provides contracted bus service to its El Segundo plant employees at a low cost.

The El Segundo area is a center of employment whose population grows to over 100,000 during working hours; the Hughes Aircraft Company employs about 30,000 of this total. The Southern California Transit District began providing a commuter service to the area in 1978, but by 1983 ridership in the Bus Employee Express Program had dwindled to 175 per day from a high of 600 passengers per day during the 1979 energy crisis. The ridership decline was attributed to an end to UMTA funding which resulted in doubled fares and poorly maintained equipment.

The Hughes Company experimented with bus service in March 1982, with Grayline Tours serving four corridors and Culver City Municipal Bus Lines serving two routes. In November, Hughes began permanent service using a single operator, Aztec Bus Lines. Routing has remained fairly flexible as Hughes management responds to employee input about scheduling and fares. Routes have been increased from six to ten, although revenue service hours have remained fairly constant at about 33 per day. Fares were decreased in June 1983 from 90¢ to 75¢.

Hughes will pay Aztec approximately $500,000 for the first year of service, and will incur estimated overhead costs of $100,000 yearly. In addition, initial costs for bus areas, shelters, and schedules will be about $600,000, with another $30,000 going toward promotional efforts.

There are several motivations for Hughes' provision of bus service to its employees. One is the increasing traffic problem in the El Segundo area, which can lead to late and/or irritable employees. Another is the lack of parking space in some areas of the plant; one division had 10,000 employees but has only 6,000 spaces. The cost of providing extra spaces was estimated by a Hughes study as being $35 per month per space, based on the price of real estate in the Los Angeles area. An added incentive was a California tax law, incorporated into the

state tax forms in 1982, which allow tax deductions to companies that provide transit services.

The cost to Hughes of each passenger's ride is $1.30 after its tax credits, and the fare is currently 75¢, leaving a difference of 55¢. (This $1.30 per day may be compared to the $1.15 per day estimated cost of a parking space.) The bus system has a capacity of 1,500 persons per day, and the target ridership figure is 80% of that, or 1,200 per day. Current ridership is approximately 600 per day, or about 40%. As route schedules are fine-tuned and the service is promoted, that figure is expected to rise.

RESULTS

Scarce resources have forced many transportation authorities to "show results" by maximizing facilities use (i.e., passengers per mile, passengers per hour). Transit operators in the El Segundo area, perhaps feeling this pressure, have opted not to provide even subsidized transit service to the employment center, since the buses would not be filled. Privately operated Aztec Bus Lines can run the service profitably in part because it can fill unused bus-hours with charters.

Unlike the vanpool program also sponsored by Hughes, the bus system will not be able to cover its own costs. However, Hughes will benefit through employee satisfaction and through lessening of parking needs and of area traffic. The transit system is also replacing flextime to some extent as a traffic mitigator.

LEGAL ISSUES

California Bill S.P. 321 provides for investment in transit programs to be used as a deduction, or for 20% of the investment to be used as a tax credit. Tax laws also give individuals who use organized ride-sharing programs a $7 per month tax deduction.

Although Hughes contracted with a private bus company, it invited bids from both public and private transportation operators. If a public bus system had been chosen, it would have operated not as a charter service for Hughes but as a public service subsidized by Hughes, in order to comply with UMTA guidelines.

TIMING

Hughes conducted its experimental bus service for a week in March 1982. In November 1982, permanent service was begun.

CONTACT Bruce Roberts, Commuter Bus Project Manager
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(213) 616-1077.

REFERENCES Hughes Commuter Bus Service Promotional Packet.

TECHNIQUE **PRIVATE TOLL BRIDGE**

EXPERIENCE Detroit, Michigan and Windsor, Ontario (1980/1981 combined pop. 1,395,422): The Ambassador Bridge is a privately-owned toll bridge connecting Detroit, Michigan and Windsor, Ontario. The City of Detroit, to which ownership of half of the bridge will revert in 1990 per terms of the original charter, has already arranged to lease the bridge to the private company for $1 per year until 2010, with an option to renew until 2100. The City of Windsor is negotiating a similar deal for the Canadian half.

The steel-suspension bridge spanning the Detroit River was opened in 1929 by the Detroit International Bridge Company under the management of financier Joseph A. Bower. The original tolls were 50¢ per car and 1¢ per 100 pounds of truck. Central Cartage, a Michigan trucking firm that bought the bridge in 1979 for over $30 million, currently charges $1 per car and 1.25¢ per 100 pounds of truck. The tolls are collected by a tolltaker at the entrance. Commuters may buy books of 40 toll coupons for $30, lowering the charge to 75¢. The only other crossing in the area is the privately operated Detroit-Windsor Tunnel, which charges identical tolls.

RESULTS Detroit and Windsor each receive approximately $800,000 per year in property taxes from the bridge, as well as the benefit of a well-maintained facility which costs them nothing.

Central Cartage earns revenues of about $10 million per year, out of which its costs include $4 million per year in interest payments on debt obligations and $2.5 million (1982) to $3.5 million (1983) in capital improvements.

The bridge is better maintained and charges lower tolls than many publicly-owned bridges and tunnels. The owners attribute this to the private sector's ability to concentrate on managing a project more efficiently than the public sector, which has a myriad of departments and the civil service system with which to contend.

LEGAL ISSUES The Ambassador Bridge is under the jurisdiction of the U.S. Department of Transportation and the

Canadian Transport Commission. When the bridge was sold in 1979, there were no problems with the U.S. government, but the Canadian government resisted the sale. In direct opposition to the provisions of the original charter, the Canadian Foreign Investment Review Agency attempted to keep the Canadian half of the bridge from being sold. While nothing could be done legally, Central Cartage continues to have political difficulties with the Canadian authorities.

POLITICAL ISSUES — Central Cartage is still experiencing political problems with the Canadian government.

TIMING — The Ambassador Bridge was built in 1929 by Detroit financier Joseph A. Bower, who shortened the construction schedule by eight months by offering his builder half the day's tolls for each day he finished ahead of schedule. Various firms began bidding for the bridge's owner, the Detroit International Bridge Company, in 1977, and Central Cartage bought it in 1979.

CONTACT

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Warren, Michigan 48090
(313) 939-7000

REFERENCES

"Seeking the Shelter of a Detroit Bridge," Business Week, November 7, 1977.

"Bridges: Back to Private Enterprise?" Jeanne McDermott, Technology, January/February 1982.

"Investment of the Future: Own Your Own Toll Bridge," Entrepreneur, June 1982.

TECHNIQUE HIGH-SPEED RAIL SERVICE

EXPERIENCE Los Angeles, California and San Diego, California (1980 combined pop. 3,842,267): A high-speed electric train based on Japanese technology and partially financed by Japanese investors will link San Diego and Los Angeles by 1988.

Amtrak officials investigating foreign rolling stock manufacturers in 1981 became interested in Japanese "bullet trains." The then-president and vice-president of Amtrak, Alan Boyd and Lawrence Gilson, decided that Amtrak was in no position to finance such a high-speed rail project in the United States -- the capital costs were too high. The two men formed American High Speed Rail Corporation and chose the Los Angeles-San Diego corridor for the initial rail trial. The 120-mile trip will take one hour to complete, and will cost (in 1983 dollars) an average of $27 one-way (vs. Amtrak, which costs $16.50 for a two-and-a-half hour ride, and assorted airlines, which cost $25 to $45 for a half-hour flight time).

Forty million trips per day are made in the Los Angeles-San Diego corridor. Conservative market estimates, which take into account only the area within a five-mile radius of the proposed station stops, project 875,000 trips per day on the high-speed train. The three main stops will be in downtown San Diego, downtown Los Angeles, and the Los Angeles International Airport. Certain trains will stop at some or all of the six secondary stations between the two cities.

American High Speed Rail Corporation has plans for adding an on-board flight check-in for passengers to the airport. There are also plans to investigate the possibilities of high-speed rail in the Tampa-Orlando, Florida area, the Chicago, Illinois region, the Northeast Corridor, and Texas.

Japanese technology was chosen for its proven 19 year record, necessary to attract private investors. Two Japanese corporations provided the original $5 million venture capital. Construction costs will amount to $3.1 billion: $2.5 billion in capital costs, $594 million in inflation costs, and $465 million in interest costs. $200 million of that will come from revenue received from partial

operation of the system in 1987. The remaining $2.9 billion will be raised in Japan (25%) and the United States (75%).

The sources for the $2.9 billion financed construction cost are as follows: $1.25 billion in tax exempt revenue bonds to be issued by the California Passenger Rail Financing Commission; $500 million in equity, a portion of which is likely to be public stock; $445 million in commercial bank debt; $364 million in supplier credits; and $350 million in income debentures.

RESULTS — Careful market and financial planning has attracted both Japanese and U.S. investors to this project. Passengers will receive service that is more direct, convenient, and inexpensive than flying, but of comparable comfort; and that is faster and more luxurious than Amtrak. California will receive the economic benefits of development. Amtrak may receive stock in the project in return for relinquishing its federal monopoly on rail service in the corridor.

LEGAL ISSUES — A four-member state commission authorized to issue up to $1.25 billion worth of tax exempt revenue bonds was created in 1982 by state law. AB 3647-1553 established the California Passenger Rail Financing Commission, responsible for reviewing and authorizing long-term industrial revenue bonds. The bonds' interest rate would be set by the legislature to encourage private investment; the bonds would not be backed by public funds, however.

Since the bonds are revenue bonds which will not be issued until 1987 when the rail system is in partial operation, the commission will issue short-term construction bonds backed by commercial banks. This third-party commercial paper will be paid off as the long-term bonds are issued.

POLITICAL ISSUES — The project received support from the administrations of Governor Ronald Reagan and Governor Jerry Brown; Governor Brown signed the rail financing bill in 1982. Amtrak officials and Japanese business groups also endorsed it.

TIMING — The American High Speed Rail Corporation was formed in December 1981. Governor Brown signed the bond legislation in September 1982. Construction is

scheduled to begin in 1984-85 and to be fully completed in 1988, with partial operation commencing in 1987.

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REFERENCES

California Assembly Bill No. 3647, Chapter 1553, of 1982.

Summary Reports Packet, American High Speed Rail Corporation.

The California High Speed Train, American High Speed Rail Corporation brochure.

# IV. Debt Financing Techniques

TECHNIQUE **TOLL FINANCING**

EXPERIENCE Fairfax County, Virginia (1980 pop. 596,901): The Dulles Toll Road is a 13-mile facility scheduled for completion in 1984. Bonds financing the toll road are backed by the full faith and credit of the Commonwealth of Virginia, because it is expected that toll revenues will cover all operating, maintenance, and debt service costs of the facility. The facility can be self-supporting because Fairfax County has pledged to contribute funds during the start-up period when toll revenues will be insufficient to cover costs. Also, construction costs of the facility have been substantially reduced, because the facility is being built on land owned by the federal government parallel to the existing Dulles Airport Access Road and thus very little right-of-way must be acquired.

RESULTS Fairfax County's commitment is for $5 million in front-end costs, but private donations of right-of-way may reduce that by one half. In addition, Fairfax County contributed $1.5 million to design and engineering costs.

The projected minimum toll is 25¢, and the projected maximum fare, for a full length trip, is 70¢ to 85¢. Capital costs are expected to be recouped by 2004.

LEGAL ISSUES Fairfax County made a commitment to the State Department of Highways and Transportation to put up $5 million in front-end costs. The full faith and credit of the Commonwealth of Virginia is offered under Section 9(C) of Article X of the Constitution of Virginia which allows such a pledge if the project is deemed to be self-supporting.

POLITICAL ISSUES An attitude survey done as part of the initial feasibility study found that building the toll facility was favored by as many residents as were opposed to it. Fairfax County perceived the project as essential to its continued economic growth.

TIMING The initial financial feasibility study for the Dulles Toll Road was completed in 1979. An update of that study was done in November 1982 to assess the impact of a substantial increase in interest rates, at which point higher toll rates and the

support offered by Fairfax County resulted in a financially feasible project. Bonds were issued in late 1982. Complex negotiations with the Federal Aviation Administration about use of its land were drawn out over 9 to 12 months.

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**REFERENCE**

Dulles Toll Road Study prepared by JHK and Associates for the Virginia Department of Highways and Transportation, January 1979. Update, 1982.

TECHNIQUE TOLL FINANCING

EXPERIENCE State of Pennsylvania: A Toll Roads Task Force appointed by Governor Thornburgh to evaluate the feasibility of building needed highways through toll financing will submit its final report to the governor and the general assembly in December 1983. The consultants to the task force have recommended a $3.7 billion toll program to improve and extend existing turnpikes.

While Pennsylvania favors the federal policy of free roads for interstate commerce, state funds have been insufficient to both maintain the state's 1500-mile Interstate System and complete an extensive expressway system.

The State Transportation Advisory Committee began investigating the feasibility of toll financing in 1979. The committee found that toll revenues, at even modest toll rates, are more than sufficient to cover toll road operating and highway maintenance expenses. Further, modest tolls levied on existing major highways would cover the annual amortized cost of major rehabilitation expenditures. For new construction, bonds could be issued backed by toll revenues alone, or by tolls as well as other dedicated income and/or a state pledge of faith and credit.

The Transportation Advisory Committee found that although revenue collection costs are higher with toll financing than with fuel taxes or license fees, toll financing is justified when conventional resources are not available in a timely manner. Their recommendations favored toll financing for new highway construction.

RESULTS The Governor's Task Force is preparing the formal recommendation of a $3.7 billion program to improve and extend existing turnpikes. $1.7 billion would be spent between 1984 and 1990, and the other $2 billion between 1990 and 1994. The projects most likely to be implemented first include the widening from four to six lanes of 17 miles of existing highway in Philadelphia ($75 million), the construction of two new Interstate interchanges ($100 million), the completion of a highway in west Pennsylvania ($150 million), and roadway extensions

in the Pittsburgh area ($150 million). Current revenues are financing design work for the first two projects.

LEGAL ISSUES — Current federal legislation would allow financing the construction of turnpike extensions through tolls. However, changes in federal legislation would be required to enable tolling of roads previously constructed with federal participation.

POLITICAL ISSUES — The Governor's Task Force is working with members of the Pennsylvania General Assembly on legislation to implement toll road financing of various turnpikes and expressways.

TIMING — The State Transportation Advisory Committee began investigating the feasibility of toll financing in 1979. In July 1981 Governor Thornburgh appointed an eleven person, bipartisan panel comprised of officials from various levels of government and representatives of labor and private industry. Consultants working with the Task Force presented their recommendations in June 1983, and in October the group met with a congressional delegation in preparation for presenting the final report to the governor and the general assembly in December.

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REFERENCES

Pennsylvania Toll Roads Feasibility Study: Summary Report, prepared by Vollmer Associates for the Governor's Toll Roads Task Force, June 1983.

Prospects for Toll Financing in Pennsylvania, prepared by Thomas D. Larson, Secretary of Transportation, Harvey Haack, Deputy Secretary of Transportation Planning, and Kant Rao, The Pennsylvania State University, for the Pennsylvania Department of Transportation, December 1982.

RELATED EXPERIENCE — State of Wisconsin: In 1982, the Wisconsin Department of Transportation arranged for a study of the feasibility of converting Wisconsin's 531-mile rural Interstate System to toll roads. The study found that the use of tolls would be financially feasible, but that as much as 17% of

the current Interstate traffic would switch to tax-supported highways, possibly increasing the maintenance costs of those routes. The consultants also reported that between 32% and 38% of the toll revenue would be generated from out-of-state motorists, but that the impact on tourism would be negligible. Average annual revenue to the state would range from $26 million to $79 million per year, depending on the toll system used and whether any federal funds would have to be repaid.

A separate, less detailed study of the urban Interstate System in Milwaukee County found that tolling would have adverse impacts on adjacent homes, businesses, and recreational facilities, and on traffic patterns.

The enactment of the 1982 Surface Transportation Assistance Act substantially increased the amount of funding available for Interstate highway repair. Because of this, and because the conversion of Interstates to toll roads would require Congressional action, contacted officials of the Wisconsin Department of Transportation say the department probably will not suggest consideration of any toll road initiative in the foreseeable future.

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REFERENCES

Wisconsin Department of Transportation in-house study on financing Interstate highway repair.

Feasibility of Converting Wisconsin's Interstate to a Toll Road: Summary Report, prepared by Wilbur Smith and Associates, Inc., in association with Howard, Needles, Tammen and Bergendoff, for the Wisconsin Department of Transportation, August 1983.

TECHNIQUE **TOLL FINANCING**

EXPERIENCE Tampa, Florida (1980 pop. 271,523): The South Crosstown Expressway, a 17.5 mile toll facility, was made feasible by contributions from the state government which reduced the total cost of the project. Bonds were issued on behalf of the Tampa-Hillsborough County Expressway Authority, a local toll road authority enabled by the State of Florida. The bonds are secured by full faith and credit of the State of Florida, by the toll revenues, and by 80% of the state gas tax allocated to Hillsborough County. The Florida State Department of Transportation (DOT) pledged to complete the project if bond proceeds were inadequate. The state DOT operates the facility and pays for all annual operating and maintenance costs with the understanding that these will be repaid after the bonds have been retired. The Tampa-Hillsborough County Expressway Authority has a lease-purchase agreement with Florida whereby "rent" on the facility equals the toll and gas tax receipts collected by DOT, and whereby DOT assumes ownership after all debt has been retired.

RESULTS Toll revenues for fiscal year 1981-1982 were $3.3 million. Operating expenses were $1.1 million for the same period. From 1976 to the present, $40.3 million in public contributions have been used to operate the toll road. The balance of public contributions must be repaid from toll revenues, once the bonded indebtedness is fully retired.

LEGAL ISSUES All agreements were authorized by the State Legislature. The State of Florida created the Tampa-Hillsborough County Expressway Authority and enabled it to construct and operate toll facilities. The lease-purchase agreement is between the Division of Bond Finance and the Tampa-Hillsborough County Expressway Authority. The full faith and credit of the state is pledged pursuant to Section 9(c) of Article XII of the Florida Constitution.

POLITICAL ISSUES Agreements for public contribution to toll roads are often used in Florida and are a well accepted means of providing urban highway facilities.

TIMING The state contributes to operating and maintenance costs throughout the life of the bond. Use of gas

tax revenues is necessary during the early years of operation until toll revenues are high enough to support the facility. The expressway was opened in two sections, in 1976 and in 1981.

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REFERENCES

Preliminary Official Statement for $54,000,000 bond issue for "1971 Project" of Tampa-Hillsborough County Expressway Authority, April 24, 1972.

TECHNIQUE

# GRANT ANTICIPATION NOTES

EXPERIENCE

Philadelphia, Pennsylvania (1980 pop. 1,688,210): The Southeastern Pennsylvania Transportation Authority (SEPTA) has issued two sets of notes backed by capital and operating grants, aborted a third, and is preparing a fourth.

Three of the four planned issues were backed by federal and state operating grants and matured in 12 months. The first was issued in October 1981 for $30 million and had a 9.75% interest rate. It was backed with a municipal bond insurance policy and received a AAA rating from Standard and Poor's. The $50 million issue planned for October 1982 was aborted in the middle of preparation. About $100,000 had been spent on preparing the proposal and advertising for bids when SEPTA was informed that the grant would be arriving shortly. A $46 million issue is planned for October 1983. It will be backed by two Letters of Credit and will carry a MIG 1 rating.

In 1982, $25.6 million worth of notes were issued to finance the purchase of a portion of CONRAIL. The federal government had arranged for 100% funding of CONRAIL's commuter routes, so SEPTA issued nine-month notes secured by the 100% UMTA grant. It was backed by bond insurance and a Letter of Credit.

RESULTS

Investing the note revenues from the operations issue of 1981 netted approximately $1,000,000 profit due to the advantageous interest market. The capital issue of 1982, which matured in nine rather than 12 months, netted $400,000. The aborted issue of 1982 cost $100,000 in preparation fees. The issue currently being planned will be backed by Letters of Credit, which are more expensive than bond insurance, so SEPTA probably will neither gain nor lose on it.

LEGAL ISSUES

SEPTA's enabling legislation requires competitive bidding by underwriters when debt is issued. The third set of notes, backed by UMTA capital funds, was an exception, since it was used to purchase a transportation property, and so was not considered an issuance of debt. The purchase of CONRAIL assets was made possible by the Northeast Rail Services Act of 1981, which legislated CONRAIL out

of the commuter business and provided funds to cover the sale.

POLITICAL ISSUES

The early arrival of SEPTA's grant money in 1982 could have posed even more serious problems than it did. Underwriters "pre-sell" notes even before their bid is selected by receiving collateral from committed buyers. Therefore, all buyers are taking the risk that their particular underwriter will not be the one to receive the contract. If SEPTA had accepted bids and then received the grant, the members of the financial community who had prepared for the bidding and then been rejected en masse would have been very displeased.

TIMING

The operations note issue of October 1981 took five months to conceive and implement. The capital issue of October 1982 took two weeks to conceive and implement. SEPTA began planning in September 1983 for an October 1983 issuance.

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TECHNIQUE

# GRANT ANTICIPATION NOTES

EXPERIENCE

State of Utah: Utah issued $40 million in Federal Highway Reimbursement Anticipation Notes in 1983. The purpose of the notes was to supply front-end cash to begin construction of highway improvements which had been federally approved through the Advanced Construction Interstate Program. The Federal Highway Administration will reimburse the state for 94.17% of the funds advanced during construction.

Utah pledged all of its projected federal grant revenues (even those grant funds to be received for projects not funded by the notes) to secure its note, and then utilized $25 million in general obligation bonds to fund all remaining projects.

RESULTS

The excellent credit rating of federally backed grant anticipation notes provides states with the opportunity to experience very low interest rates for short term debt instruments without pledging the states's full faith and credit. Utah doubly insured this by backing the notes with all federal reimbursements the state expected to receive, producing a coverage ratio of from 2.5 to 17 over the life of the note. Moody's therefore rated the note MIG 1, the highest possible short term rating. The note's interest rating is 6 1/8%, the lowest in the country.

LEGAL ISSUES

The Federal Highway Administration provided to the bond broker a letter stating that FHWA had approved the projects in question and that the funds for the project had been appropriated. Special state legislation for the note issue also was required.

POLITICAL ISSUES

No political problems were reported.

TIMING

Utah's issue took ten months to organize. Financial details took 40 days. Passage of the special legislation took nine months. The notes were issued in April 1983 and mature in five groups between October 1983 and October 1985. The general obligation bonds were issued in May 1983 and mature in eight groups between November 1986 and May 1990.

RELATED EXPERIENCE

State of Alabama: Alabama issued $64 million, 30 month Federal Reimbursement Anticipation Notes in July 1981, to mature in October 1983. They received an interest rating of 6 1/2%. Alabama pledged all of its federal reimbursement revenues, in addition to its state gasoline sales tax, to secure the notes.

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REFERENCES

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$25,000,000, State of Utah General Obligation Highway Bonds, Series 1983, Boettcher and Company, April 29, 1983.

TECHNIQUE **REVENUE ANTICIPATION NOTES**

EXPERIENCE Orange County, California (1980 pop. 1,931,570): The Orange County Transportation District (OCTD) issues revenue anticipation notes to cover the shortfall caused by the time lag of up to a year in receiving UMTA Section 5 operating assistance funds. Three series of notes have been issued: $13.3 million and $14.6 million in 1982, and $16 million in 1983. OCTD, being non-profit and tax-exempt, may borrow at tax-exempt rates. These funds are combined with city and special district funds so that any excess working capital may be invested at taxable rates. The spread of 3% to 4% can yield a profit of several hundred thousand dollars. The notes have all been given the highest short-term loan rating possible, MIG 1.

Financial savings of several thousand dollars have also been realized by an in-house cash management analysis system which the manager of financial planning and analysis wrote using a Visicalc software package on an HP-86. The prospectus and final statement are also done in-house.

Very similar methods were used to issue a $6 million grant anticipation note in 1983 which was tied into a state capital grant for acquiring railroad right-of-way.

RESULTS This method of arbitrage, combined with the amount of preparation done in-house rather than contracted to an investment banker, has resulted in an unspecified return in the hundred thousands range per issue.

LEGAL ISSUES Both the Internal Revenue Service and the Orange County Board must approve the note issue. The notes are secured by OCTD funds for a higher rating but are timed to receipt of the Section 5 grants.

POLITICAL ISSUES No serious political problems were encountered.

TIMING The cash flow analysis program has cut the time needed to set up a note proposal from a few weeks to a few days. Grant anticipation notes may be issued for up to 13 months.

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TECHNIQUE **SAFE HARBOR LEASING**

EXPERIENCE Philadelphia, Pennsylvania (1980 pop. 1,688,210): The Southeastern Pennsylvania Transportation Authority (SEPTA) used safe harbor leasing to finance light rail vehicles in 1981 and 1983 and buses in 1983. SEPTA plans to utilize safe harbor leasing again in December 1983.

The 1981 safe harbor lease was arranged by an outside financial advisor. Because the applicable regulations were still in the preliminary stage, it was very difficult to find an investor. The 1983 lease was also arranged by an outside financial advisor who set up package deals whereby seven investors each bought a portion of the tax benefits. It was much easier to find investors this time as the relevant laws had been passed. In each case, SEPTA's lease payments to the investors exactly offset the investors' payments to SEPTA.

RESULTS In December 1981, SEPTA sold tax benefits on 68 light rail vehicles with a tax base of $7.367 million (20% of the total costs). Depreciated over 27 years, this provided a yield of 19.4% or $1.43 million. In March 1983, SEPTA sold tax benefits on 73 light rail vehicles with a tax base of $7.942 million. Depreciated over 25.75 years, this provided a yield of 18.925% or $1.5 million dollars. The benefits on 150 buses with a tax base of $4.269 million depreciated over 13.5 years yielded 10.49% or $448,000.

An accelerated depreciation schedule allows returns of up to twice the original investment for the private company. SEPTA receives private sector financing as well as a contribution from the investor who is required to supply a percentage of the original purchase price. SEPTA has found the technique useful and is planning a third issue in December 1983.

LEGAL ISSUES The Economic Recovery Act of 1981 and the Tax Equity and Fiscal Responsibility Act of 1982 provided legal authority.

POLITICAL ISSUES SEPTA, a state authority serving a five-county region, joined with four other transit agencies in the area to apply for the 80% UMTA funding to guarantee that the grant request would be approved.

TIMING The first issue, in December 1981, took two months to carry out. The second issue, in March 1983, took five months.

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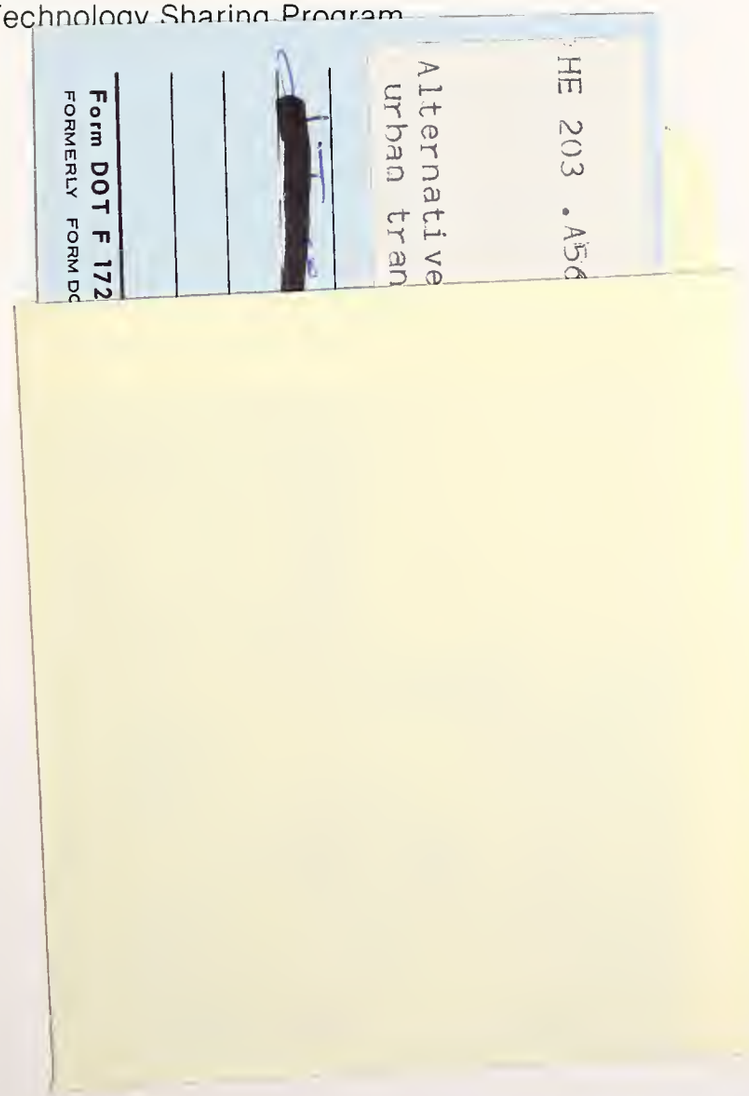

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