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Comparative study of expenditure on highways in Louisiana

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Comparative study of expenditure on highways in Louisiana

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by

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INTRODUCTION

The highway network in Louisiana is a vital transportation resource. More than 99% of all intercity passenger travel takes place on the state's highways and approximately 39%, or 30 million tons in 1990, of the freight moved in Louisiana is transported by truck (DOTD, 1995, p. 21). An additional 21 million tons of interstate freight was trucked through Louisiana in 1990 (*Ibid.*). In addition, road transportation plays an integral role in the collection and distribution of freight for other modes of transportation.

A query was raised in Louisiana's House of Representatives Committee on Transportation, Highways and Public Works in February 1996, regarding the level of expenditure on highways in Louisiana in comparison to other states in the region. Does Louisiana spend comparatively less on its highways than other states? What is the history of expenditure on roads in Louisiana in comparison with other states? The task of addressing these questions was assigned to the Louisiana Transportation Research Center at Louisiana State University in Baton Rouge, Louisiana. This report documents the findings of that investigation.

OBJECTIVE

The objective of the investigation is to accumulate factual information on highway expenditure in Louisiana and other states and make a comparison among them to identify whether funding in Louisiana is significantly different from that in other states.

Reliance has been placed on official data sources to make the comparison. Because states differ in area, population, topography and income levels, comparisons are not made in absolute terms such as total expenditure in the state but in relative terms such as annual expenditure per capita or annual expenditure per lane-mile of highway in each state. When comparing historical trends, however, we have reverted to the absolute measure of total expenditure because the comparison is on spending within the same state. However, to allow year-to-year comparisons to be made in comparable units, we have adjusted the current values for inflation. We have adjusted for inflation by using a composite measure of past highway construction prices recorded over the period 1960-1994 by the Federal Highway Administration (FHWA, 1995, table PT-1). The price index derived from this source behaves similarly to the Consumer Price Index but has some important differences from it. A copy of FHWA's composite price index together with its comparison to the Consumer Price Index, is included in APPENDIX A.

Comparisons are made among southern states, to the nation as a whole and among groups of states. One particular grouping of states that we have used is those states on the southern reaches of the country versus those bordering on Canada. This grouping has been used to try and identify if there are significant differences between the north and south in their highway spending patterns and these extreme groups have been used to accentuate the difference in locality.

BACKGROUND

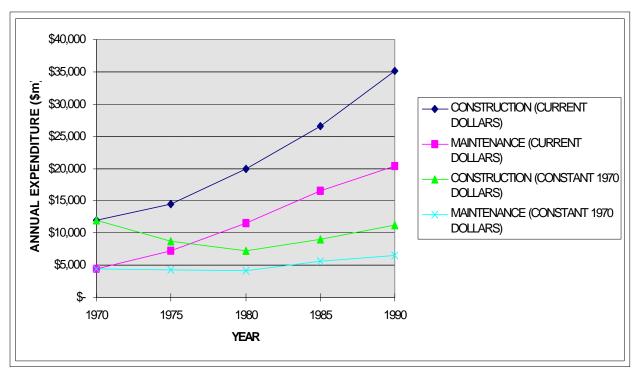
Establishment of the Highway Trust Fund in 1956 introduced dedicated funding to highway construction in the country. It heralded increased and sustained investment in highways for several decades. The Highway Trust Fund was the major enabling force in building the Interstate System. However, by 1970, over 90% of the Interstate system had been constructed, opposition to construction of freeways in urban areas had increased and the federal government began to become involved in transit.

The Urban Mass Transportation Administration was established by Congress in 1964 to stimulate and promote transit in U.S. cities. In 1970, Congress committed \$3.1 billion over 5 years to transit (Black, 1995, p. 46). Initially, funding for transit came from general funds but attempts were persistently made in Congress to allow transit funding to be drawn from the Highway Trust Fund. While highway interests initially resisted these efforts, the Federal-Aid Act of 1973 finally permitted Highway Trust Fund money to be used to fund transit projects (Black, 1995, pp. 45-47). With time, transit gained further concessions in the use of fuel-tax proceeds to the point where some of the fuel tax revenues (2 cents of the 18.4 cents per gallon federal tax in 1993) is currently paid into a dedicated Mass Transit Account (APTA, 1995, p. 142). Transit funding has, however, not made large inroads to highway funding from federal sources and, proportionally, transit is using less as time progresses. For every federal dollar spent on transit in 1980, \$1.91 was spent on highways, while in 1994 every dollar spent on transit was matched by \$4.36 spent on highways (APTA, 1995, p.79). This translates into a decreasing investment in transit from federal sources when inflation is taken into account.

At the national level, highway travel doubled between 1970 and 1993, fuel consumption increased by only 50% during the same period (USDOT, 1995, p. 29) and expenditure on the construction and maintenance of highways remained virtually constant in real terms (USDOT, 1995, p. 40). Expenditure on highway construction and maintenance by the nation is shown in figure 1. Administrative, financing and law enforcement costs are not included in the values.

Construction includes engineering and right-of-way costs. The diagram shows expenditure in current dollars and in constant 1970 dollars; the conversion was made using the FHWA construction price index (USDOT, 1995, table PT-1).

Figure 1 shows that while expenditure on construction and maintenance increased in the period 1970 to 1990 in budgetted amounts, no increase in funding took place in real terms. A decrease in funding in real terms occurred in the 1970's while a slow but sustained growth has been in place since the early 1980's. Data from the first four years of the 1990's (not shown) indicate that this modest growth in highway expenditure in real terms is continuing.



(Source: FHWA, "Highway Statistics", 1985-1991, and estimation from USDOT, "Our Nation's Highways, Selected Facts and Figures", 1995, p. 40)

FIGURE 1

NATIONAL EXPENDITURE ON HIGHWAYS, 1970-1990

Within states, the national trend is repeated with the difference that different growth trends exist among states. Figure 2 shows total expenditure on highways by all units of government among some southern states during the last decade. The reported values have been adjusted for inflation using FHWA's construction price index.

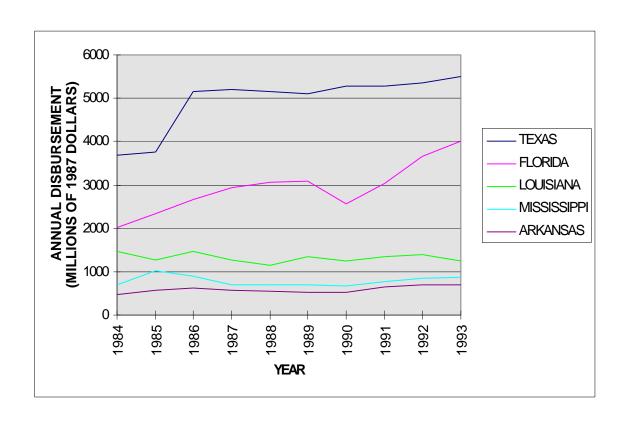


FIGURE 2

TOTAL EXPENDITURE ON HIGHWAYS, ALL UNITS OF GOVERNMENT, 1984-1993

Overall, Texas and Florida show an increase in funding in real terms while the funding levels for Louisiana, Mississippi and Arkansas remain fairly constant. However, Texas and Florida experienced population growth of 19% and 33% respectively between the census of 1980 and 1990 while Louisiana, Mississippi and Arkansas all experienced population growths below 3% during the same period (U.S. Census).

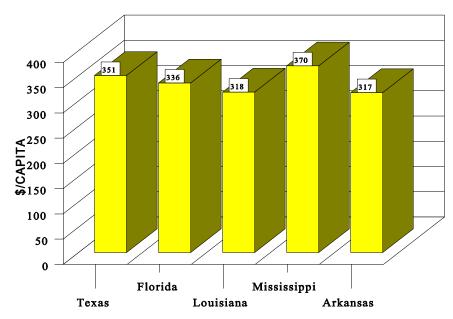
The data in figure 2 suggests that trends in expenditure are reasonably uniform. The relative absence of erratic values means that expenditure in a specific year is likely to be reasonably representative of the expenditure levels of that state. This premise underlies the comparisons made in the following section where expenditures in 1993 are used to compare expenditure among states.

COMPARISON AMONG STATES

In comparing expenditure on highways in 1993 among states, we consider total disbursement on capital items, maintenance and associated expenses by all units of government (federal, state and local). Capital items include construction, engineering and right-of-way costs. Associated expenses are the cost of administration, law enforcement, interest and bond retirement associated with highways. Total disbursement data has been extracted from statistics published by the Federal Highway Administration (FHWA, 1995, table HF-2) which shows expenditure for each state broken down by agency administering the road and expenditure category (i.e. capital expenditure, maintenance, administration etc.). A copy of FHWA's table HF-2 is attached as APPENDIX B.

The year 1993 was chosen for the analysis because it is the most recent year for which all the required statistics are available. Population figures from the 1990 census were used; estimates for 1994 are available but 1990 values were considered fundamentally more accurate than subsequent estimates. In addition, since the population figures were only used in a comparative manner, the 1990 values were considered adequate for the purposes of this study.

Lane-miles of public road and vehicle-miles-travelled in each state in 1993 were extracted from



similar records published by FHWA (FHWA, 1994, tables HM-60 and VM-2 respectively).

Annual expenditure per capita

The annual expenditure on highways per capita population was derived by dividing the expenditure in 1993 by the census population of 1990. The resulting values for the five southern states featured in the earlier diagrams, are shown in figure 3. Values of expenditure per capita for all states are shown in Figure C.1 in APPENDIX C.

The national average expenditure on highways is \$403/capita. The state with the highest value is Alaska with an expenditure of \$1,013/capita while Michigan has the lowest value at \$226/capita. Analyzing the national data reveals that the 95% confidence interval (i.e. the interval in which 95% of the values are expected to fall) is \$364-\$441/capita. All states included in figure 3, with the exception of Mississippi, have values which are below the lower limit of the confidence interval, suggesting that these states have lower expenditure per capita than the majority of states in the nation.

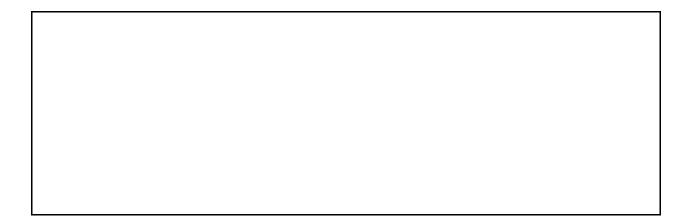


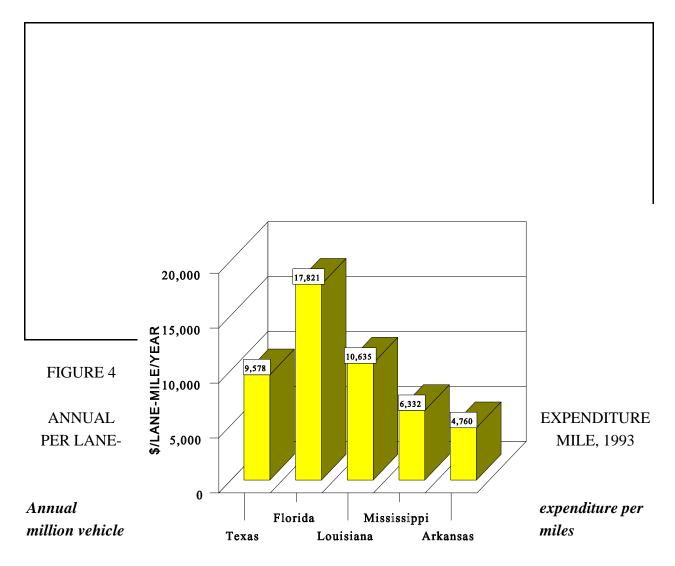
FIGURE 3

ANNUAL EXPENDITURE PER CAPITA, 1993

Annual expenditure per lane-mile of highway

If annual expenditure is considered in relation to the extent of the highway network, a measure of expenditure per unit of the facility is obtained. We have used lane-miles of public road in each state in 1994 as published by the FHWA (FHWA, 1994, table HM-60). It is appropriate to use all public roads since the expenditure quoted in this study is expenditure on all public roads in the state.

The annual expenditure on roads per lane-mile in each of the selected southern states in 1993 is shown in figure 4. Values for all states are included in Figure D.1 in APPENDIX D. The highest value occurring is for the District of Columbia at \$110,225/mile and the lowest is for North Dakota at \$1,732/mile. The average for the nation is \$14,961/lane-mile. The 95% confidence interval (i.e. the range of values that may be expected to encompass 95% of the cases) is \$10,058-\$19,865/mile. Louisiana is close to the bottom limit of this interval (at \$10,635/lane-mile/year), suggesting that Louisiana's investment per lane-mile in highways is close to being signficantly lower than the rest of the nation. Florida has a value close to the mean but Texas, Mississippi and Arkansas are significantly lower than the rest of the nation. Generally, densely populated states (such as D.C., Hawaii, the New England states and New York/New Jersey) have high values while sparsely populated states such as the Dakotas, Montana and Wyoming have low values. Texas, with its large area, requires a high mileage of highways hence its relatively low value on this statistic.



To capture the investment in highways in relation to their degree of use, we have calculated expenditure per million vehicle miles travelled on public roads in each state during 1993. As in the previous sections, we have considered all roads in a state and we have considered funding from all units of government. The values for the five southern states reviewed above, are shown in figure 5.

The average value for all states is \$42,158 per million vehicle miles travelled in 1993. The maximum value is \$134,352 per million vehicle miles in Alaska and the minimum is \$21,374 for South Carolina. Values for all states are shown in Figure E.1 in APPENDIX E.

The 95% confidence interval is \$36,947-\$47,369 per million vehicle miles. Values for the states in figure 5 are all below the lower limit of the 95% confidence interval suggesting that these states are significantly lower on this statistic than the average state in the nation.

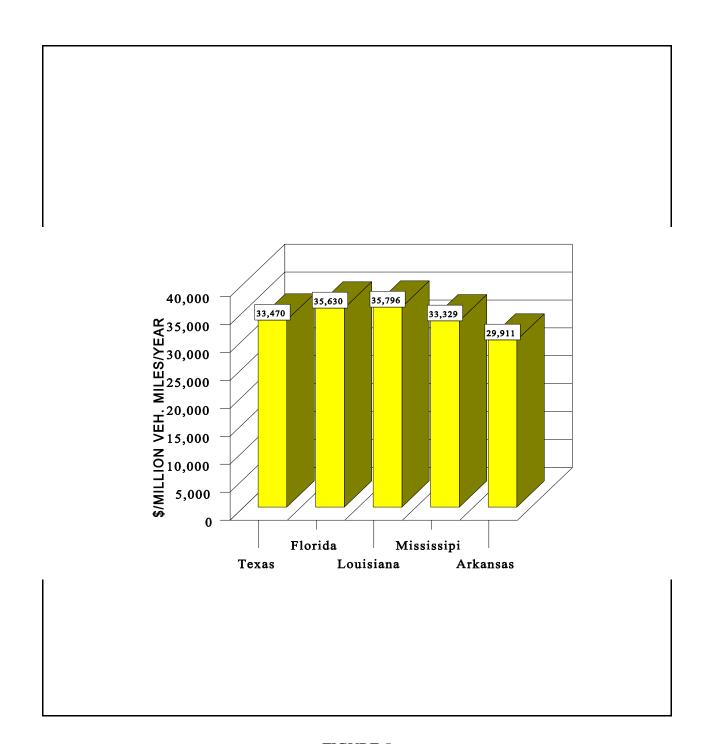


FIGURE 5
ANNUAL EXPENDITURE PER MILLION VEHICLE MILES, 1993

Summary of relative measures of annual expenditure

The expenditure in five southern states on highways in 1993 produced the results summarized in table 1. Generally, Louisiana does not seem to have significantly different expenditure patterns to the other five southern states included in the table. On per capita expenditure, Louisiana is among the lowest and well below the national average (\$403/capita). However, in terms of expenditure per lane-mile, Louisiana is considerably higher than Mississippi and Arkansas and on a par with Texas. Only Florida exceeds Louisiana on this measure. On this measure, Louisiana appears to be significantly lower than the national average (\$14,961/mile) but it may be high in relation to other southern states because of the high moisture and poor foundation conditions that exist in the state. Portions of Florida are also marshy and this may account for the high value in that state.

EXPENDITURE	EXPENDITURE IN 1993 IN:						
ITEM	Texas	Florida	Louisiana	Mississippi	Arkansas		
\$/capita/year	351	336	318	370	317		
\$/lane-mile/year	9,578	17,821	10,635	6,332	4,760		
\$/million-vehicle-miles/year	33,470	35,630	35,796	33,329	29,911		

TABLE 1

SUMMARY RESULTS OF RELATIVE MEASURES

In terms of expenditure per vehicle-mile-travelled, Louisiana has the highest value among the five southern states but the difference among them is not large. In comparison with the national average (\$42,158/million vehicle miles), values for the five southern states quoted in table 1 are low.

To test whether a regional difference exists between states in the south and those in the north as regards the measures above, a statistical analysis involving states on the southern and northern extremes of the continental United States, was conducted. Relative measures of expenditure were identified for all states bordering on the southern extreme of the country and these were compared with values of the same measures for states bordering Canada. The results are shown in table 2.

EXPENDITURE ITEM	SOUTHERN	NORTHERN	STATISTICALLY	
	BORDER STATES	BORDER STATES	DIFFERENT?	
\$/capita/year	339	424	yes	
\$/lane-mile/year	11,197	8,659	no	
\$/million-vehicle-miles/year	32,260	43,809	yes	

TABLE 2

COMPARISON OF SOUTHERN AND NORTHERN BORDER STATES

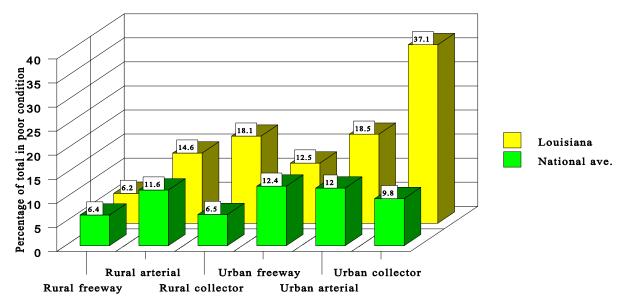
The analysis shows that on two of the three relative measures of expenditure on highways in 1993, southern states spent less than northern states. That is, southern states spent significantly less per capita and per million-vehicle-miles than northern states but not a significantly different amount per lane-mile. This conclusion is drawn on the basis of a statistical test in which the result has a probability of less than 1% of being wrong.

Why is the expenditure on roads different between the north and the south as regards \$/capita and \$/million-vehicle-miles and not different on \$/lane-mile? The answer is at least partly the result of the conditions in the different regions. Northern states have to contend with snow, frost-heave and generally higher moisture contents in their pavement structures during the thaw period than southern states. In addition, construction and rehabilitation activity is limited to certain periods of the year and wages are generally higher in the more densely-populated northeastern states than elsewhere. The fact that these higher costs are not reflected in expenditure per lane-mile among the northern states is explained by considering the data in APPENDIX E in greater detail. The data shows that the sparsely populated northern plain states of Idaho, Montana and North Dakota have a considerably higher number of lane-miles per capita than most other states but their expenditure per lane-mile is low. These states are primarily responsible for the relatively low average¹ expenditure per lane-mile among the northern border states as a whole. They apparently achieve their low expenditure per lane-mile as a result of the conditions in the region and the operating policies they adopt. The region is relatively arid resulting in lower moisture contents in the pavement structure. When moisture content is increased due to seasonal thawing, reduced axle weight limits are imposed on public roads for the duration of the thaw. Snow removal is

Note, a simple arithmetic average of expenditure per lane-mile among the northern border states was taken; the values were not weighted, for example, by population in the state.

less aggressively pursued than in more densely populated areas and high winds that generally accompany snowfall in the plain states results in less accumulation of snow along the entire length of roads.

Dry southern states such as New Mexico also show generally lower expenditure per lane-mile but the tendency is not as pronounced as in the northern plain states. Other sparsely-populated but 'wetter' states such as Alabama, Mississippi and Lousiana have relatively higher construction and



maintenance costs per lane-mile and this may be due to poorer subgrade, less ubiquitous good base material and higher moisture content in the pavement structure.

CONDITION OF LOUSIANA'S ROADS

An overall estimate of the condition of Louisiana's public roads in comparison to that of the rest of the nation can be obtained by reviewing statistics of pavement condition as reported in the FHWA publication "Highway Statistics 1994" (USDOT, 1995, table HM-63). The table is reproduced in its entirety in APPENDIX F but is summarized below in figure 6.

FIGURE 6

ROAD CONDITIONS IN 1994

In the table, pavement condition is described in terms of the International Roughness Index (IRI) or the Present Serviceability Rating (PSR). IRI values smaller than 60 indicate good pavement conditions while those larger than 170 reflect a pavement in poor condition. PSR values in excess of 3.9 indicate a good pavement and those equal to or below 2.0, a poor pavement.

In figure 6, the proportion of road mileage which is poor (i.e. with IRI > 170 or PSR # 2.0) is shown for different road classes in Louisiana and in the country as a whole. The chart shows clearly that the proportion of Louisiana's freeways which are in poor condition are similar to the national average for both urban and rural freeways. However, as the order of the road decreases (i.e. from freeway to collector), so the proportion of Louisiana's roads that are in poor condition increases relative to that of the national average. Louisiana's collector roads are in much worse condition than the national average.

RECENT INVESTIGATIONS IN LOUISIANA

Two major planning efforts have been conducted in Louisiana in recent years which have a direct bearing on this investigation. These are the investigation conducted by the Select Council on Revenues and Expenditures in Louisiana's Future (SECURE, 1994 and 1995) and the Statewide Intermodal Transportation Plan developed under the auspices of Louisiana's Department of Transportation and Development (DOTD, 1995). Both studies investigated the financial aspects of transportation in the state and some of the findings that have a bearing on the subject of this investigation are reported below.

SECURE study

The SECURE study, initiated in 1994, "...was charged with developing a plan for the state's financial future, reviewing the state's tax laws and structures, analyzing the state's cash flow management policies and practices, reviewing the organization, operation and productivity of states government - and making recommendations for change" (SECURE, 1994, p. 9). The study was conducted jointly by the accounting firm KPMG and officials of the state's Legislative Audit section under the direction of a committee of state legislators, business leaders and prominent public officials. The study produced a phase 1 report in April, 1994 (*Ibid.*) and a final report in April, 1995 (SECURE, 1995a). The study also produced a large number of internal reports. Currently, efforts are being made to implement the recommendations that emerged from the study.

In terms of highways, SECURE found that Louisiana spends more per capita on its highways than its peers in the South (*Ibid.*, p. 88). While this is not apparent from figure 2 in this report, consulting the detail in APPENDIX B shows that, in 1993, Louisiana had higher expenditure per capita than the other southern states of Alabama, Arkansas, Georgia, South Carolina and Tennessee. However, it's value was lower than that in the southern states of Florida, Kentucky, Mississippi and Texas. Thus, it would seem as though Louisiana spends more per capita on highways than some of its neighbors but less than some of it's other neighbors.

The SECURE study concluded that Louisiana places too much emphasis on road construction and too little on road maintenance (*Ibid.*, p. 88). They suggest that the emphasis on road construction has left the state with over 3,300 miles of poor quality roads and a "high percentage of deficient bridges" (*Ibid.*). They note that Louisiana has approximately twice the national rate for poor roads (*Ibid.*, p. 89). They point out that the situation with poor roads is likely to deteriorate in Louisiana since roads are deteriorating faster than they are being repaired with the result that a maintenance backlog of 250 miles of substandard road is being added to the state's inventory of poor quality roads each year (*Ibid.* p. 88, SECURE, 1995a, p. IE 1.3).

Investigating SECURE's postulate that Lousiana spends too much on construction and not enough on maintenance, the FHWA records on expenditure by state on capital items (i.e. construction, engineering and right-of-way) and maintenance, were consulted (FHWA, 1995, table HF-2). Table HF-2 is reproduced in APPENDIX B and it shows that the ratio of maintenance expenditure to capital outlay in Louisiana is 0.35 while that for the nation is 0.58 - statistics that seem to support SECURE's view.

Lousiana's Statewide Intermodal Transportation Plan

With the help of a federal grant, the Louisiana Department of Transportation and Development initiated a study in January 1993 to develop a Statewide Intermodal Transportation Plan for Louisiana. The study team consisted of professionals from Louisiana's DOTD, the Department of Economic Development, six universities in the state and consultants. Advisory councils consisting of representatives from industry provided input and guidance to the study. A proposed Statewide Intermodal Transportation Plan was produced in October, 1995. The plan allows for three alternative levels of funding; a small increase, a moderate increase and an ambitious increase from current levels of funding. The alternative funding levels translate into increases in DOTD's budget of approximately \$32m, \$92m and \$164m respectively per year. The plan currently awaits approval and adoption by the DOTD and ratification by state legislature.

In developing the Intermodal Transportation Plan for Louisiana, a review was conducted of the financial resources and constraints of the state. This provides a detailed account of current revenues and expenditure of the DOTD. A copy of the section of the final report dealing with this subject is included in its entirety in APPENDIX G. The study identified revenues, expenditure and possible additional revenue sources to fund the expanded transportation program included in the Intermodal Transportation Plan.

CONCLUSIONS

This study was conducted to identify whether Louisiana was spending less than other states on it's highways. In making the comparison, we first observed the trend in highway expenditure nationwide over the last several decades and then compared Louisiana's expenditure on highways during the last 10 years with that of the states of Texas, Florida, Mississippi and Arkansas. Nationwide, highway expenditure decreased in the 1970's in real terms and has grown slowly, in real terms, since 1980 to the point where current funding is only slightly higher than it was in 1970. Louisiana has experienced a fairly constant expenditure (in real terms) during the last decade. The same has occurred in Mississippi and Arkansas and while expenditure has increased in Texas and Florida these states have also experienced population growths of 19% and 33% respectively between 1980 and 1990. During the same period, Louisiana's population grew by less than ½%. As regards expenditure patterns over the years, Louisiana appears to display similar trends to its neighbors and to the rest of the nation as a whole.

We also looked at relative expenditure in Louisiana and other states in term of expenditure per capita, expenditure per lane-mile of public road and expenditure per million vehicle miles travelled in 1993. In terms of these measures, Louisiana appears to be similar to several of its neighbors. However, southern states as a whole appear to spend less on highways than the national average and appear to spend significantly less on highways than northern states. The reason for this is not clear although it may be related to income levels (this was not investigated) or the priority accorded highways amidst other government responsibilities.

It would seem as though Louisiana spends too much on construction and too little on maintenance of it's roads. The ratio of maintenance expenditure to capital expenditure (i.e. construction, engineering and right-of-way costs) in Louisiana is 0.35 compared to 0.58

nationally. The northern border states (i.e. those bordering onto Canada) have a value of 0.71 for the same ratio, indicating a considerably higher proportion of maintenance expenditure in those states. While it is not clear whether states assign overlay, rehabilitation and reconstruction costs to capital or maintenance categories consistently among themselves, the difference between the northern and southern states is so large as to suggest that unless there is a gross difference in reporting practice, considerable difference exists between these states.

What does seem incontrovertible is that Louisiana's roads, with the exception of its freeways, are in worse condition than the average in the nation. It would also seem true that pavement conditions in Louisiana are likely to deteriorate even further in coming years as current maintenance programs fail to keep pace with the miles of pavement deteriorating into a poor condition in the state. SECURE has called for greater emphasis on maintenance of state highways in Louisiana and current efforts to implement their recommendations may bring about the proposed change.

Louisiana's financial condition is predicted to worsen in the short term (SECURE, 1995, p. 4) and, therefore, competition for the state's available financial resources will increase. Louisiana's Intermodal Transportation Plan has several suggestions on how additional revenue can be generated or how existing funds can be reassigned to reflect intermodal objectives of the state (DOTD, 1995, see APPENDIX G). Review of these recent planning efforts such as SECURE and Louisiana's Intermodal Transportation Plan, suggest that there are candidate strategies to address some of the problems currently facing Louisiana. It is important that planning lead to implementation so that the benefits of the planning exercises are not lost and opportunities they represent are realized as soon as possible.

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APPENDIX A: FEDERAL HIGHWAY ADMINISTRATION HIGHWAY CONSTRUCTION PRICE INDEX

PRICE TRENDS FOR FEDERAL-AID HIGHWAY CONSTRUCTION¹

TABLE PT-1 1987 BASE YEAR = 100 SEPTEMBER 1995

YEAR	EXCAVATION	RESURFACING	STRUCTURES	COMPOSITE
1960	16.1	27.0	21.7	23.0
1965	19.4	27.4	24.8	25.0
1970	27.2	34.0	38.2	34.8
1971	27.6	36.8	40.0	36.8
1972	29.7	39.5	40.7	38.6
1973	33.0	42.9	45.4	42.5
1974	41.2	60.0	61.7	57.9
1975	42.5	61.0	60.6	58.1
1976	42.5	60.3	57.2	56.3
1977	47.8	64.3	59.7	59.8
1978	63.5	73.3	70.7	70.7
1979	66.8	89.0	88.6	85.5
1980	75.5	102.2	100.0	97.2
1981	72.6	101.4	94.9	94.2
1982	65.6	95.3	90.0	88.5
1983	71.8	94.4	86.7	87.6
1984	78.4	102.7	88.2	92.6
1985	92.4	109.6	98.1	102.0
1986	94.0	107.0	98.0	101.1
1987	100.0	100.0	100.0	100.0
1988	112.2	99.8	111.0	106.6
1989	99.0	99.4	118.4	107.7
1990	98.1	102.3	117.8	108.5
1991	95.5	106.5	112.5	107.5
1992	90.8	106.9	108.4	105.1
1993	103.2	113.5	105.3	108.3
1994	113.2	122.3	109.0	115.1

¹ Detailed information is available from the Federal Highway Administration in its quarterly publication "Price Trends for Federal-aid Highway Construction", prepared by the Federal-aid and Design Division, Office of Engineering.



FIGURE A.1

FHWA PRICE INDEX AND CONSUMER PRICE INDEX

(Source: "National Transportation Statistics", 1993, p.40 and FHWA, "Highway Statistics 1994", table PT-1)

APPENDIX B: TOTAL DISBURSEMENT FOR HIGHWAYS IN 1993

COMPILED FROM REPORTS OF FEDERAL,

STATE AND LOCAL AUTHORITIES

(THOUSANDS OF DOLLARS)

(SEPTEMBER 1995

STATE AND LOCAL A	UTHORITIES					(THOUSANDS	OF DOLLARS)						"SEPTEMBER 1995
		CAPITAL	OUTLAY			MAINTENANCE	AND SERVICES		ADMIN-	HIGHWAY			
									ISTRATION	LAW			
	STATE	LOCALLY	FEDERAL		STATE	LOCALLY	FEDERAL		AND	ENFO RC EMENT	INTEREST	BOND	TOTAL
STATE	ADMINISTERED	ADMINISTERED	ROADSAND	TOTAL ²	ADMINISTERED	ADMINISTERED	ROADSAND	TOTAL	MISC EL-	AND		RETIREMENT ⁶	DISBURSEMENTS
	HIGHWAYS	ROADS	UNCLASSIFIED		HIGHWAYS	ROADS	UNCLASSIFIED		LANEOUS	SAFETY			
Alabama	470,233	43,318	371	513,922	157,868	318,333	13	476,214	93,280	57,675	12,585	32,069	1,185,745
Alaska	242,000	23,877	9,280	275,157	130,000	38,122	390	168,512	41,585	42,791	13,152	15,949	557,146
Arizona	454,634	197,842	17,573	670,049	74,471	110,915	8,828	194,214	83,725	86,178	190,450	227,193	1,451,809
Arkansas	345,648	59,950	3,144	408,742	111,443	80,331	295	192,069	73,723	69,956	1,264	454	746,208
California	2,090,728	1,417,476	26,053	3,534,257	612,198	1,359,140	2,293	1,973,631	1,088,172	1,064,751	347,601	371,871	8,380,283
Colorado	341,276	172,179	6,894	520,349	154,997	231,043	967	387,007	78,580	101,641	37,741	78,488	1,203,806
Connecticut	588,065	48,974	0	637,039	72,364	99,207	12	171,583	82,694	45,632	169,933	102,759	1,209,640
Delaware	205,535	3,151	28.641	237.327	59,733	8,669	0	68,402	76,364	34.046	40,401	11,177	467,717
Dist. of Col.	0	108,194	3,832	112,026	0	27,954	121	28,075	13,751	9,150	13,419	122,068	298,489
Horida	1,675,637	642,870	2,101	2,320,608	311,412	382,882	206	694,500	376,608	309,105	270,876	374,748	4,346,445
Georgia	737,696	241,903	967	980,566	224,490	228,292	14	452,796	113,785	165,584	52,862	123,363	1,888,956
Hawaii	300,561	34,287	11	334,859	19,813	51,530		71,343	44,404	15,527	17,711	22,472	506,316
Idaho	124,933	39,162	9,607	173,702	58,673	92,772	1,093	152,538	45,830	14,860	988	1,425	389,343
Illinois	1,300,146	530,750	3,917	1,834,813	325,017	700,020	466	1,025,503	268,977	121,158	133,237	140,114	3,523,802
Indiana	530,516	195,973	63	726,552	209,589	221,999	485	432,073	204,496	52,204	48,718	21,544	1,485,587
lowa	412,640	209,994	8	622.642	110.692	314,599	100	425,391	59.053	74.598	24,167	66,268	1,272,119
Kansas	379,849	114,750	0	494,599	104,387	155,000	503	259,890	190,654	211,104	58,423	22,751	1,272,119
			997				39						
Kentucky	482,610	156,252		639,859	154,157	105,304		259,500	77,445	82,456	87,549	46,482	1,193,291
Louisiana	598,835	98,261	617	697,713	121,414	122,463	189	244,066	111,097	96,382	117,235	73,351	1,339,844
Maine	136,177	14,902	1,037	152,116	116,580	107,985	114	224,679	23,777	41,756	12,486	30,611	485,425
Maryland	471,633	162,783	22,687	657,103	158,492	181,346	3	339,841	135,312	184,455	69,288	92,966	1,478,965
Massachusetts	1,062,785	188,695	0	1,251,480	152,507	242,655	182	395,344	180,214	185,502	128,741	525,521	2,666,802
Michigan	555,849	405,651	262	961,762	145,051	487,888	359	633,298	227,294	208,111	42,455	30,432	2,103,352
Minnesota	520,364	722,258	173	1,242,795	161,489	420,095	1,388	582,972	142,956	189,387	50,895	182,994	2,391,999
Mississip p i	317,850	146,687	31,915	496,452	57,397	197,292	369	255,058	42,868	73,050	30,747	53,313	951,488
Missouri	497,980	152,103	2,077	652,160	218,493	264,288	8	482,789	162,770	120,112	10,199	47,385	1,475,415
Montana	190,349	20,859	9,043	220,251	53,339	51,899	2,567	107,805	48,206	33,848	12,715	12,208	435,033
Nebraska	264,521	136,176	3,803	404,500	55,918	120,990	286	177,194	53,012	45,279	14,727	55,797	750,509
Nevada	187,941	9,855	1,133	198,929	60,342	14,581	1,149	76,072	31,279	33,168	16,515	62,038	418,001
New Hampshire	167,893	36,675	0	204,568	84,585	67,660	101	152,346	39,895	51,403	21,322	14,695	484,229
New Jersey	953,446	125,974	2	1,079,422	328,351	341,336	0	669,687	264,273	255,295	270,139	379,686	2,918,502
New Mexico	312,089	31,850	8,817	352,756	59,565	38,512	5,278	103,355	53,489	46,506	2,538	1,938	560,582
New York	1,974,911	1,329,191	34	3,304,136	641,591	1,860,196	87	2,501,874	661,389	283,680	436,941	681,469	7,869,489
North Carolina	817,921	98,365	19,771	936,057	407,864	97,808	446	506,118	140,127	239,091	28,224	45,966	1,895,583
North Dakota	95,501	60,776	1,052	157,329	35,210	52,786	1,413	89,409	20,163	14,305	6,531	16,290	304,027
Ohio	741,026	416,087	630	1,157,743	440,968	518,189	22	959,179	324,791	155,072	51,017	97,398	2,745,200
Oklahoma	252,354	150,219	379	402,952	112,237	137,686	21	249,944	199,032	37,159	54,857	6,092	950,036
Oregon	317,144	175,204	11,596	503,944	160,585	177,950	8,301	346,836	71,237	82,295	9,130	36,178	1,049,620
Pennsylvania	1,285,148	117,304	1,047	1,403,499	802,039	741,116	81	1,543,236	178,549	410,073	171,766	262,187	3,969,310
Rhode Island	221,563	6,342	0	227,905	41,771	21,637	6	63,414	9,509	23,121	15,178	24,149	363,276
South Carolina	396,059	40,530	28	436,617	136,028	48,290	38	184,356	69,909	103,405	849	944	796,080
South Dakota	186,888	48,279	897	236,064	38,619	72,186	2,434	113,239	30,536	47,229	742	2,150	429,960
Tennessee	547,498	111,451	38,623	697,572	185,130	222,045	67	407,242	88,015	65,123	6,011	17,484	1,281,447
Texas	1,978,812	475,026	2,370	2,456,208	674,529	963,416	46	1,637,991	518,284	730,527	366,268	260,090	5,969,368
Utah	212,994	77,500	7,821	298,315	66,850	76,000	1,090	143,940	44,956	30,756	0	0	517,967
Vermont	95,091	37,561	0	132,652	29,539	54,553	14	84,106	17,868	26,978	2,400	9,447	273,451
Virginia	625,765	230,805	11,956	868,526	509,428	297,101	29	806,558	168,021	210,804	79,203	94,140	2,227,252
Washington	676,259	335,415	10,011	1,021,685	193,348	292,780	2,226	488,354	271,025	193,031	77,499	112,571	2,164,165
West Virginia	467,439	13,011	6	480,456	165,529	36,841	39	202,409	53,385	77,441	26,004	46,030	885,725
Wisconsin	563,034	425,916	0	988,950	123,971	454,506	1,331	579,808	149,048	276,939	79,863	134,929	2,209,537
Wyoming	140,931	30,281	11,831	183,043	52,084	34,395	1,704	88,183	29,449	26,677	79,003	935	328,348
Undistributed	140,931	30,281	25,116	25,116	0	34,393	20,887	20,887	345,977	20,077	0	933	391,980
			-			Ů	•			Ü	-		
Total	28,516,757	10,672,894	338,193	39,527,844	9,482,147	13,344,583	68,100	22,894,830	7,920,838	7,156,376	3,733,623	5,192,579	86,426,090

Disbursements are classified by system on which expended, rather than by expending agencies, e.g., capital outlay on local rural roads includes expenditures from Federal, State and local funds. Data includes estimates. See Tables FA-5A, SF-21, and LGF-21 for details on

highway disbursements by each level of government.

- 2. See Tables FA-5A, SF-4C and LG F-2 for right-of-way costs.
- 3. Excludes short-term notes and refunding bond issues.

TABLE HF-2

TOTAL DISBURSEMENT FOR HIGHWAYS, ALL UNITS OF GOVERNMENT, 1993

APPENDIX C:	TOTAL DISBURS	SEMENT FOR HIC	GHWAYS PER CAI	PITA, 1993

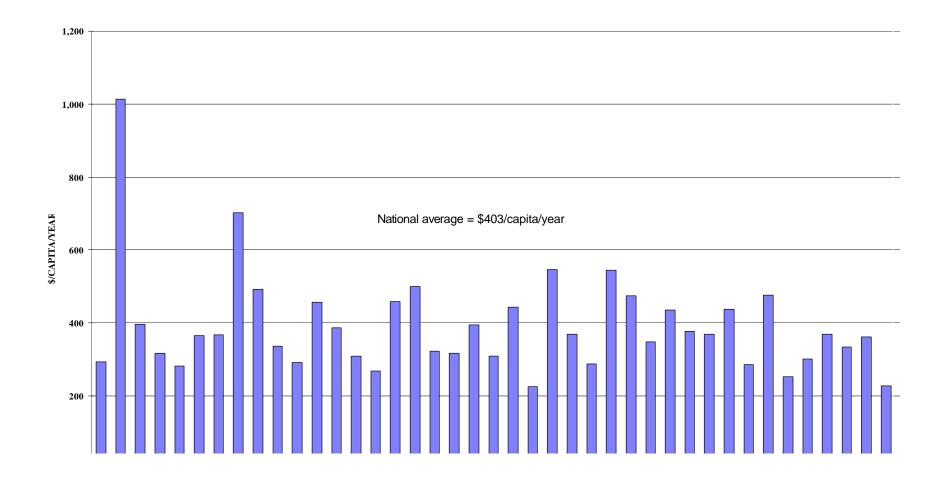


FIGURE C.1

TOTAL DISBURSEMENT FOR HIGHWAYS PER CAPITA IN 1993, ALL UNITS OF GOVERNMENT

(Source: 1990 U.S. Census and Highway Statistics, USDOT, 1994, table HF-2)
APPENDIX D: TOTAL DISBURSEMENT FOR HIGHWAYS PER MILE, 1993

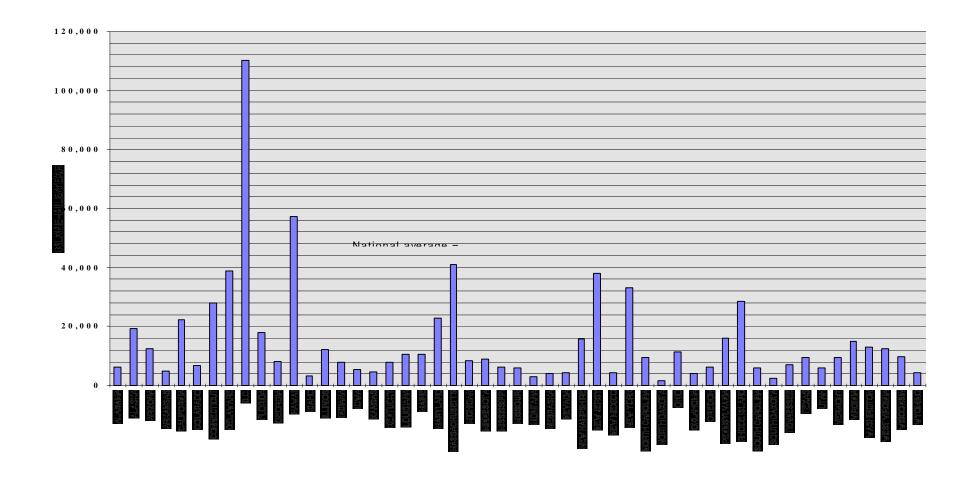
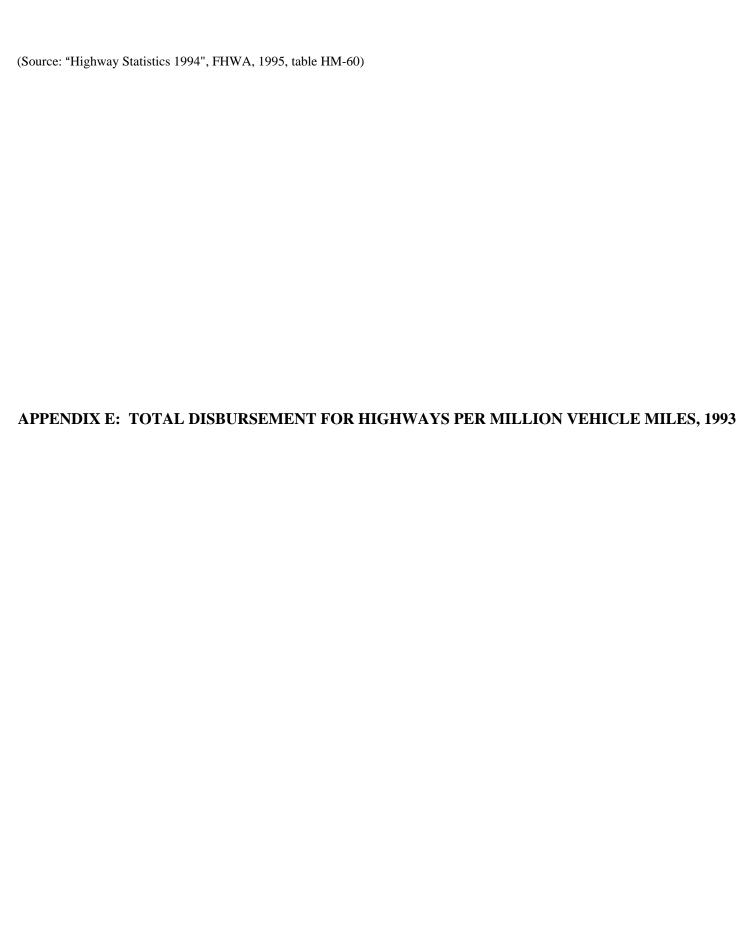


FIGURE D.1

TOTAL DISBURSEMENT FOR HIGHWAYS PER LANE-MILE IN 1993, ALL UNITS OF GOVERNMENT



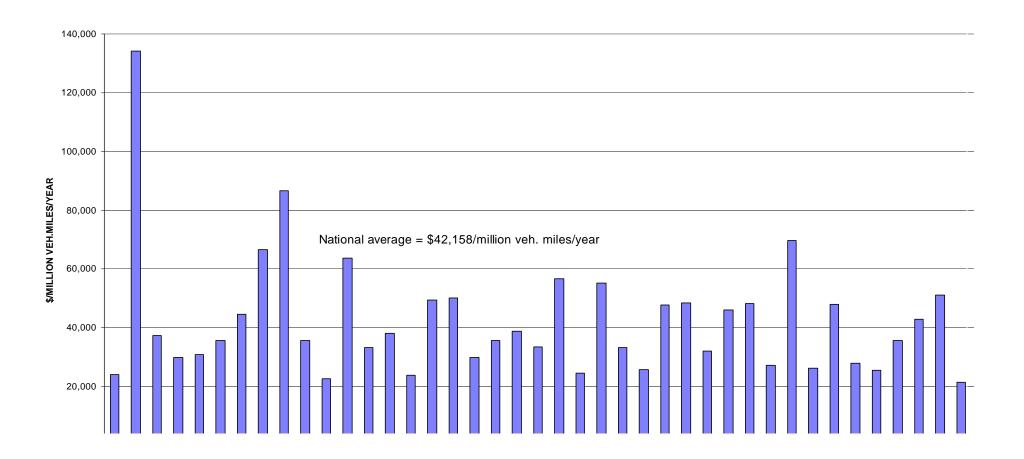


FIGURE E.1
TOTAL DISBURSEMENT FOR HIGHWAYS PER MILLION VEHICLE MILES TRAVELLED IN 1993, ALL UNITS OF GOVT.
(Source: "Highway Statistics 1994", FHWA, 1995, table VM-2)

APPENDIX F: PAVEMENT CONDITION, 1994

PAVEMENT CONDITION - RURAL - 1994 ¹ MILEAGE BY FUNCTIONAL SYSTEM

MILEAGE AS OF DECEMBER 31, 1994 COMPILED FROM REPORTS OF STATE AUTHORITIES TABLE HM-63 SHEET 1 OF 4 OCTOBER 1995

	UNITS	IN IN	TERSTA						UNITS	OTHER PE	INCIDAL	ARTERIAL				TOBER 1555
STATE					1 2 4 2 4	2520	. 20						2024	2520		
STATE	PSR (P)	NOT	<= 2.5	2.6-3.0	3.1-3.4	3.5-3.9	> 3.9	TOT41	PSR (P)	NOT	<= 2.0	2.1-2.5	2.6-3.4	3.5-3.9	> 3.9	
	OR IRI (I)	REPORTED 2	>170	120-170	95-119	60-94	< 60	TOTAL	OK IKI (I)	REPORTED 2	>220	171-220	95-170	60-94	< 60	TOTAL
			POOR	MEDIOCRE	FAIR	GOOD	VERY GOOD				POOR	MEDIOCRE	FAIR	GOOD	VERY GOOD	REPORTED
Alabama		-	4	6	7	63	521	601		-	35	125	402	934	566	2.062
Alaska	1 1	_	187	393	263	190	l .	1,033	1 1		23	153	101	50	l	327
		_	7	48	96	516	324	991	1 ;	_	67	174	286	555	75	1,157
Arizona	!!!							991	1 1					555		
Arkansas		8	126	180	36	48	5	395	Р	4	1	63	541	730	839	2,174
California		147	79	252	216	581	80	1,208		950	123	867	821	1,003	61	2,875
Colorado	1 1	_	139	198	173	239	19	768	1	I -	183	721	612	670	13	2,199
Connecticut	l i l	3	13	29	13	43	10	98	l i	2	30	62	75	94		261
	' '	3	13	29	13	43	-	90	1 !	1 -					· ·	
Delaware	-	-	-	-	-	-	-	-		-	43	61	62	43	-	209
Dist. of Columbia	-	-	-	-	-	•	-	-	-	-	-	-	-	-	-	-
Florida	1 1	-	11	404	232	252	54	953	1 1	-	247	1,194	868	949	103	3,361
Georgia	P		l i	4	62	224	516	807	P			11	165	459	2,139	2,774
	'	_		-	02	224	310	007	Þ		I -	'''	20	433	2,139	
Hawaii 3	-	-	-	-	-	-	-	-	Р	92	-	-		10	1	31
Idaho		-	25	182	151	166	8	532		-	462	1,065	122	34	-	1,683
Illinois	1 1	-	50 15	503	470	394	4	1,421	1 1	5	402	936	984	408	1 1	2,731
Indiana	l i l	3	15	187	217	359	44	822	l i	300	159	461	377	369	50	1,416
	1 : 1		3			261			1 :	258	305	1,366	500	803		
Iowa		16		139	192	261	26	621		258					174	3,148
Kansas		-	32	190	119	293	64	698		-	121	594	727	1,448	277	3,167
Kentucky	1 1	-	28	164	52	244	48	536	1 1	-	57	548	573	738	38	1,954
Louisiana	i	47	35	73	103	133	217	561	l i	_	186	177	607	133	111	1,214
Maine	1	54	00	3	16	145	93	258		118	27	94	155	300	76	652
		54					93		!	110	21				70	
Maryland		-	16	28	71	112	-	227		-	26	100	230	192	-	548
Massachusetts		-	1	19	66	76	-	162		154	15	48	66	35	1	165
Michigan	1 1	125	31	138	151	219	76	615	1	200	98	523	463	1,052	409	2.545
Minnesota	l i l	120	260	304	76	41	, ,	681	l i		1.142	1,246	735	447	1	3,571
		_						001						447		
Mississippi		-	44	142	160	201	11	558		-	117	534	584	536	3	1,774
Missouri		-	6	157	259	353	35	810		35	104	1,049	1,121	691	39	3,004
Montana	1 1	1	96	361	307	361	l 11	1,136	1 1	-	253	950	813	590	16	2,622
Nebraska ³	l i		71	162	127	76	1	437	l i	_	294	999	633	797	22	2,745
		^7	/				205			04	234		411	398		
Nevada	!!!	67	-	27	21	160	205	413	!	81		177		398	324	1,311
New Hampshire		-	-	-	4	147	25	176		-	14	56	129	254	-	453
New Jersey	1 1	6	8	45	47	8	-	108	P	-	-	56 84	161	142	151	538
New Mexico	l i l	-	58	251	218	330	36	893	l i		319	450	320	616	110	1.815
New York	<u> </u>	2		95	169	465	38	795	- i -	99	320	374	404	770	44	1,912
	l ! !	2	28	95		400	30	795	1 !	99	320	3/4	404	770		1,912
North Carolina		1	82	233	147	168	2	632		77	260	683	599	590	6	2,138
North Dakota		-	33	162	194	141	-	530	l I	-	600	1.389	495	390	56	2,930
Ohio	1 1	_	_	15	85	523	206	829	1	I -	26	146	254	1,513	267	2,206
Oklahoma ³	 	_	18	79	170	363	85	715	l i	_	913	806	274	249	28	2,270
		_	I 10	66		040			1 :	i -		740		435		2,270
Oregon	!	-	I		266	248	1 1	581	1 !		101	740	908	435	706	2,890
Pennsylvania		-	123	276	317	337	27	1,080		1	229	953	775	652	3	2,612
Rhode Island	1 1	-	1	13	6	1	-	21	1 1	-	23	20	18	2		63
South Carolina	l i	_	4	73	153	296	142	668	l i	1	32	333	289	772	19	1,445
		_		339					1 :	i '			580			
South Dakota	!	-	41		180	60	9	629	1 !	· -	315	1,144		358	145	2,542
Tennessee		-	7	89	176	403	64	739		-	68	373	346	877	84	1,748
Texas		141	175	1,137	747	3	-	2,062	1	1,186	735	3,070	1,318	57		5,180
Utah	 	- ' ' -		19	85	306	361	771	l i		2	58	111	568	269	1,008
		_	1	8	27	158		280	1 ;	I -	32	112		72		317
Vermont	!	-					86		1 !	I -			86		15	
Virginia		-	71	74	271	287	5	708		57	41	468	666	270	1 1	1,446
Washington		-	17	194	209	81	-	501	1 1	I -	218	1,263	540	118	1 1	2,140
West Virginia	 	_	14	226	84	124	11	459	P	_	4	29	270	446	274	1,023
		_	1 14	103		169	37	490	1 5	i -	183	760	875	1,213	353	3,386
Wisconsin	!	-	9 74		172	109	3/	490	1 !	I .*	183	762	8/5		353	3,386
Wyoming		-	74	566	154	33	-	827		4	278	939	297	115		1,629
									1							
Total 4		621	2,045	8,356	7,537	10,401	3,497	31,836	l -	3,624	9,234	28,550	22,769	24,947	7,871	93,371
	1	321	6.4	26.2	23.7	32.7	11.0	100.0	I	5,524	9.9	30.6	24.4	26.7	8.4	100.0
Percent/System 4	-	-	0.4	20.2	23.7	32./	11.0	100.0		_	9.9	30.6	24.4	20./	1 6.4	100.0

TABLE HM-63

PAVEMENT CONDITION, 1994

TABLE HM-63 SHEET 2 OF 4 OCTOBER 1995

MILEAGE AS OF DECEMBER 31, 1994 COMPILED FROM REPORTS OF STATE AUTHORITIES

UNITS MINOR ARTERIAL UNITS MAJOR COLLECTOR STATE PSR (P NOT 26-34 35-3 <= 2.0 35-30 171-220 60-94 171-220 95-170 UN-TOTAL >220 95-170 < 60 TOTAL OR IRÌ (Í) REPORTED OR IRÌ (Í MEDIOCRE FAIR GOOD VERY GOOD REPORTED POOR MEDIOCRE FAIR GOOD ERY GOOD PAVED Alabama 331 1.153 1,366 815 3.665 1.179 1.410 3,494 2.480 2.984 203 11.750 385 Alaska 634 79 148 13 287 114 30 600 136 1,267 137 P 1,491 195 436 359 128 183 428 972 366 Arizona 1,255 1,106 4.546 Þ Arkansas 138 1,094 898 860 2 990 411 735 6,493 1,374 2,565 852 12,430 California 540 2,431 1,784 1,929 224 72 6,908 ,520 668 3,197 1,997 443 13,000 Colorado 15 1,227 799 1,560 3,673 Ρ 128 1,269 2,982 1,036 572 5,987 89 246 140 22 408 76 124 861 1,143 Connecticut 75 23 42 Р 33 145 169 55 148 26 104 550 Delaware 13 Dist. of Columbia Þ 198 1,089 629 850 19 19 940 704 903 4.671 Florida 2.785 2.105 238 1.235 4.088 5.561 Ρ 2.119 4.549 6.636 329 13,633 Georgia 30 130 114 75 25 25 374 168 22 347 Hawaii 3 485 739 682 1,404 573 721 ldaho 1,201 2,020 305 265 5,372 P Illinois 1,617 1,014 38 4,812 1,338 4,883 2,110 4,546 533 14,131 288 378 594 788 196 2,244 Ρ 539 1,273 3,653 2,259 2,859 17 10,600 Indiana 353 650 1,535 502 766 152 100 12,420 14,311 lowa 1,274 895 1.427 231 4.300 2.454 4.153 2.21 1.386 11,643 22.848 Kansas 473 P 68 648 639 240 1.595 254 489 2.577 Kentucky 3,171 525 7.016 1,278 Louisiana 228 626 164 292 1,621 907 1,894 1,256 1,711 7,046 31 270 1.480 509 Maine 152 276 320 1.055 270 379 591 33 449 189 418 353 1.852 Marvland 64 279 92 184 185 756 3,992 49 Massachusetts 59 273 56 572 265 252 1 786 121 377 Þ 2,004 395 1,594 Michigan 1,033 562 1,501 3.868 2,826 1,527 5,091 17,034 Minnesota 2,298 1,847 2,081 259 6 485 D 368 3 343 8,727 1,849 1,499 15,786 Mississipp 584 237 816 978 3,920 2,280 3,08 1,910 12,126 Missouri 55 1,398 1,064 652 3,351 Р 583 2,831 7,363 3,555 3,687 18,019 48 449 265 1,148 631 931 Montana 1,472 756 2.942 1,430 895 834 2,425 7,064 849 782 56 Þ 1,166 2,058 5,056 1,259 937 4,182 657 1,614 Nebraska 11.482 14 287 155 487 59 1.966 P New Hampshire 81 168 220 14 491 42 267 896 1,205 48 74 26 527 P 213 1,578 New Jersey 216 319 152 264 387 562 New Mexico 550 361 408 30 1.061 1.024 284 126 138 1876 1 325 3 958 New York 285 1,209 1,304 1,216 4,014 1,576 ,583 ,129 ,755 6.043 23 1,702 82 North Carolina 182 538 1,309 514 403 2,787 Ρ 1,039 1,901 999 2,982 8,623 P North Dakota 505 1,192 443 373 2,513 1,020 3,119 1,356 1,097 4,461 11,135 65 116 394 1,696 546 2.817 Р 97 1.392 5.140 3.208 1.962 25 11,824 Ohio Oklahoma 632 901 209 377 2 842 524 944 1 470 5,343 716 21 302 .47515 28 487 Þ 432 2 225 1,093 2 702 2 770 1,147 9 372 Oregon Pennsylvania 25 28 1,861 2,904 301 5.091 Р 201 508 3,518 3,595 215 8,037 Rhode Island 25 16 11 80 69 41 177 2,211 320 1,886 South Carolina 8 8 1 113 1,123 1,679 780 1,642 3.663 707 115 1,581 1,747 8,132 281 3.343 2.125 527 4,512 5.045 12,468 South Dakota 564 292 351 Tennessee 151 1,219 992 1,038 43 3,443 Р 426 678 852 806 2,604 5,366 Texas 788 1,301 5,462 1,861 98 8,722 D 621 1,432 4,845 2,495 26,148 35,541 445 760 239 1,542 1,630 364 3,215 Vermont 56 327 160 145 46 734 Ρ 440 614 724 55 90 64 1.987 108 2,222 523 1,308 1,214 281 2.911 1,169 767 2,426 3,163 9,747 Virginia 524 P 315 Washington 1,220 196 1 946 126 649 2.578 2,503 2,189 8,360 West Virginia 79 374 1,534 Þ 1,932 1,916 7,929 596 640 1,895 5,039 1,772 13,549 Wisconsin 283 114 Wyoming 2.474 Total 4 3,232 17,326 43,011 31,534 33,192 9,876 134,939 27,888 48,791 144,326 69,532 94,529 46,045 431,111 12.8 31.9 23.4 24.6 7.3 100.0 33.5 16.1 21.9 10.7 100.0 Percent/System

TABLE HM-63 (CONTINUED)

PAVEMENT CONDITION, 1994

PAVEMENT CONDITION - URBAN - 1994 1 MILEAGE BY FUNCTIONAL SYSTEM

MILEAGE AS OF DECEMBER 31, 1994

TABLE HM-63 SHEET 3 OF 4 OCTOBER 1995

STATE OR 10 SPORT 170 STATE OR 10 SPORT 170 STATE OR 10 SPORT STATE AVERAGE SPORT AVER	COMPILED FROM																								TOBER 1995
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California 1 200 9 312 211 218 315 647 1 352 240 248 248 44 1,843 1 3,104 314 1,644 646 641 339 2,105		1 ;	4					1		P		6						P	33	31					
Colorado		l i	205					35		<u> </u>	352	91	362					i		514					
Consection 1		l i		6				3		l i i								i	1				88		
Date Content		1	-	47				-		1	4					-		1	8.2					-	
Florida 1	Delaware	1	-	12	12	6	11	-	41	1 1	-	7	1	2	1	-	11	1	-	37	4.5	32	22	-	136
Coording P	Dist. of Columbia	- 1	-	8	3	1		-	12	1	5	13	1	-	-	-	1.4	ı	54	2.5	3	1	-		29
Hamesin	Florida	1	-	13	238			31	519	1	-	1.4	176	92	108	14	404	1	-	379	929		798	49	
Marie	Georgia		-	-		32		346		P	-	-	-	19		122		P	-	3				1,026	
Mincols 1		P	14	1		5		5		P	14	-	1	8	10	1	20	P	80	-	_			9	
Indiana 1 3 37 56 115 67 33 310 1 21 28 40 16 18 10 112 P		1	-	1				-		1	-	-	-	-	-	-	-	I	-					-	
Invalid		' '						-		! !	-					-		1	59						
Name		!						33		!	21	28	40	16	18	10	112	P	-	268					
Kentucky I			14	12							-	-		-	-			P	-	8					
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Nebraska	Missouri	1	1	15	105	139	103	5	367	1	34	29	117	73	29	-	248	P	-	557	29	117	213	190	1,106
New days	Montana	1	1	1		2.5	13	4		1	-	-	-	-	-	-		1						-	
New Hampshire I	Nebraska ³	1	-	20		_	2	-		1	-	8	7	-	_	-		P				99			
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New York		P	-	1				128		Р.	-	-	40	46	102	130	318	Р.	8						
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Ohio I - 15 54 136 434 104 743 I - 18 63 81 180 28 370 I - 271 592 480 598 48 1.989 Okiahom s' I - 30 54 30 84 10 214 I - 40 30 9 26 21 136 I - 249 237 101 151 28 68 Pennsylvania I 3 53 182 168 101 2 506 I - 76 222 105 84 - 487 I 4 750 992 341 186 1 - 249 237 101 186 1 - 249 2270 10 3 - 249 1 - 26 12 11 1 6 16 33 65 21 <t< td=""><td></td><td>1 :</td><td></td><td>76</td><td></td><td></td><td></td><td>'.</td><td></td><td>1 : 1</td><td>32</td><td>50</td><td>/ 0</td><td>40</td><td>50</td><td>2</td><td>220</td><td>-</td><td>21</td><td></td><td></td><td></td><td></td><td>529</td><td></td></t<>		1 :		76				'.		1 : 1	32	50	/ 0	40	50	2	220	-	21					529	
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Tennessee I - 28 88 77 116 14 323 I - 9 34 30 39 2 114 I - 154 345 322 442 32 1.295 Texas I - 58 445 409 114 5 - 973 P - 99 61 25 124 118 777 1.105 P - 171 165 159 510 38 3.457 4.674 Utah I - 20 49 64 36 169 I - 1 4 3 12 20 I - 11 47 59 176 270 Vermont I - 3 3 31 6 40 I - 1 4 3 12 20 I - 11 47 59 176 270 Vermont I - 27 137 146 88 - 398 I 43 177 54 94 26 - 191 I 18 203 367 382 88 1 1.042 Washington I - 30 137 73 22 - 262 I 6 44 160 72 35 I 191 I 18 203 367 382 88 1 1.042 Washington I - 10 34 26 20 - 90 I 6 - 4 4 P - 2 2 2 6 3 78 30 18 729 136 1.070 Wisconsin I - 14 45 67 15 7 148 I - 22 71 39 32 13 177 I - 450 446 225 195 28 1.344 Wyoming I - 15 48 13 11 - 87 I 3 3 I - 3 3 I 2 8 59 60 27 199 I 76 Total - 416 1,562 3.598 3.024 3.341 1,185 12,710 - 725 1,032 2,314 1,769 1,812 1,343 8,270 - 5,887 10,278 10,553 9,474 9,349 7,549 47,203	South Carolina	1	1	6		33	65	21	141		-	-	9	11	42	8	70	1	4	6.5	171	156	267		
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Utah 1 - 20 49 64 36 198 1 - 3 6 9 1 - 11 47 59 116 37 270 Vermont 1 - - - 3 31 6 40 1 - 1 4 3 12 - 20 1 - 37 30 21 7 2 97 18 98 1 4 3 12 - 20 1 - 38 88 1 43 17 54 94 26 - 191 1 118 203 367 382 89 1 1,042 W ashington 1 - 10 34 26 20 - 90 1 6 - 4 - - 4 P - 2 2 263 83 71 201 W est Virginia	Tennessee	1	-				116	1.4		1	-							1	-						
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Virginia I - 27 137 146 88 - 398 I 43 17 54 94 26 - 191 I 118 203 367 382 88 1 1,042 W ashington I - 30 137 73 22 - 262 I 6 44 160 72 35 1 312 P - 7 30 168 729 138 1,070 W est Virginia I - 10 34 26 20 - 90 I 6 - 4 - - 4 P - 2 2 63 63 71 201 W isconsin I - 14 45 67 15 7 148 I - 22 71 39 32 13 1177 I - 450 446 225 7185 <t< td=""><td></td><td>1 !</td><td>-</td><td>-</td><td>20</td><td></td><td></td><td>36</td><td></td><td> </td><td> -</td><td>-</td><td></td><td>-</td><td></td><td>6</td><td></td><td>!</td><td>-</td><td></td><td></td><td></td><td>116</td><td></td><td></td></t<>		1 !	-	-	20			36			-	-		-		6		!	-				116		
Washington I - 30 137 73 22 - 262 I 6 44 160 72 35 1 312 P - 7 30 168 729 136 1,070 Westvirginia I - 10 34 26 20 - 90 I 6 - 4 - - - 4 P - 2 2 2 63 871 201 Wisconsin I - 14 45 67 15 7 148 I - 22 71 39 32 13 177 I - 450 446 225 195 28 1,344 Wyoming I - 15 48 13 11 - 87 I - - 3 - - 3 I 28 59 60 27 29 1 <td< td=""><td></td><td>! !</td><td>-</td><td></td><td></td><td></td><td></td><td>6</td><td></td><td>!!!</td><td></td><td>. 1</td><td></td><td></td><td></td><td>-</td><td></td><td>!</td><td></td><td></td><td></td><td></td><td>. 7</td><td></td><td></td></td<>		! !	-					6		!!!		. 1				-		!					. 7		
West Virginia I - 10 34 26 20 - 90 I 6 - 4 4 P - 2 2 2 63 68 71 201 Wisconsin I - 14 45 67 15 7 148 I - 22 71 39 32 13 177 I - 450 446 225 195 28 1,344 Wyoming I - 15 48 13 11 - 87 I - 3 - 3 I 28 59 60 27 29 1 776 Total - 416 1,562 3,598 3,024 3,341 1,185 12,710 - 725 1,032 2,314 1,769 1,812 1,343 8,270 - 5,887 10,278 10,553 9,474 9,349 7,549 47,203		1 :									43							l l	118	203					
Wisconsin I - 14 45 67 15 7 148 I - 22 71 39 32 13 177 I - 450 446 225 195 28 1,344 Wyoming I - 15 48 13 11 - 87 I - 5 - 3 - 3 I 28 59 60 27 29 1 176 Total - 416 1,562 3,598 3,024 3,341 1,185 12,710 - 725 1,032 2,314 1,769 1,812 1,343 8,270 - 5,887 10,278 10,553 9,474 9,349 7,549 47,203		- :	· ·					-		-	6	44		12	35	- 1		P P	-	/					
Wyoming I - 15 48 13 11 - 87 I - 3 - 3 I 28 59 60 27 29 1 176 Total - 416 1,562 3,598 3,024 3,341 1,185 12,710 - 725 1,032 2,314 1,769 1,812 1,343 8,270 - 5,887 10,278 10,553 9,474 9,349 7,549 47,203		1 :						7		1 ; !	ь	22		30	32	12		,							
Total - 416 1,562 3,598 3,024 3,341 1,185 12,710 - 725 1,032 2,314 1,769 1,812 1,343 8,270 - 5,887 10,278 10,553 9,474 9,349 7,549 47,203		1 :	1 :					Ι ΄.		1 ; !			l ''.		32	13.			28						
	, om my	 ' -	 	15	40	13	 	<u> </u>	07	<u> </u>	_	-		,	· ·	1	-	-	20	39	80	/	29	- '	176
	Total		416	1.562	3,598	3.024	3.341	1.185	12.710	-	725	1.032	2.314	1.769	1.812	1.343	8,270	-	5.887	10.278	10.553	9.474	9.349	7.549	47.203
										. !								-							

TABLE HM-63 (CONTINUED)

PAVEMENT CONDITION

M ILEA G E A S O F D EC EM BER 31, 1994

COMPILED FROM RE	PILED FROM REPORTS OF STATE AUTHORITIES									O C TO BER 1995						
	UNITS			NOR ARTER					UNITS C O LLEC TO R							-
STA TE	PSR (P)	<= 2.0	2.1-2.5	2.6-3.4	3.5-3.9	> 3.9	UNPAVED	TO TA L	PSR (P)	<= 2.0	2.1-2.5	2.6-3.4	3.5-3.9	> 3.9	UNPAVED	TO TA L
		POOR	M EDIO C RE	FA IR	GOOD	VERY GOOD				POOR	MEDIOCRE	FA IR	GOOD	V ERY G O O D		
Alabama	P	14	152	577	718	511	0	1,972	P	104	173	764	608	500	. 1	2,150
A la ska	P	12	11	108	42	31	0	204	P	40	21	83	17	6	47	214
A rizo n a	P	6	39	297	292	620	0	1,254	P	75	113	339	453	772	33	1,785
A rka n sa s	P	19	77	352	229	278	7	962	P	27	94	288	207	264	2	882
C a lifo rn ia	P	1,056	1,514	3,772	1,564	1,995	46	9,947	P	1,517	2,004	3,927	1,384	1,015	95	9,942
C o lo ra d o	P	115	399	738	135	13	6	1,406	P	103	441	627	95	2	32	1,300
Connecticut	P	18	107	329	274	679	0	1,407	P	72	98	226	259	648	0	1,303
Delaware	P	6	49	49	31	24	0	159	P	5	89	50	14	60	0	218
Dist. of Columbia	P	20	50	76	16	15	0	177	P	36	25	70	12	14	0	157
Flo rid a	P	77	338	1,016	691	734	0	2,856	P	626	966	2,775	1,096	684	0	6,147
Georgia	P	25	61	694	1,013	1,091	1	2,885	P	25	81	671	828	479	25	2,109
Hawaii ³	P	12	8	56	27	24	0	127	P	33	63	129	71	42	0	338
ld a h o	P	34	96	252	51	39	2	474	P	46	109	284	33	26	10	508
Illin o is	P	275	691	1,272	471	995	37	3,741	P	628	686	1,123	291	946	20	3,694
In d ia n a	P	213	400	741	575	473	12	2,414	P	273	347	584	509	437	42	2,192
lo w a	P	6	15	920	391	0	13	1,345	P	0	28	792	55	0	51	926
Kansas	P	338	298	118	237	66	3	1,060	P	273	310	49	245	34	45	956
Kentucky	P	112	129	556	319	74	0	1,190	P	187	195	465	276	30	1	1,154
Lo u isia n a	Р	304	217	418	170	500	0	1,609	Р	490	74	368	116	272	0	1,320
Maine	P	21	25	122	34	73	0	275	P	57	40	227	81	81	1	487
Mary land	P	66	69	319	279	461	0	1,194	P	61	41	351	318	525	0	1,296
M a ssa c h u se tts	P	230	767	1,390	609	96	0	3,092	P	135	653	1,450	204	65	0	2,507
Michigan	P	291 317	405	837	404	1,415	50	3,402	P	296	333	709	199	1,005	51	2,593
Minnesota	P		417	740 190	377 214	81	12	1,944	P	595	375	470 257	128 211	40	16	1,624
M ississip p i	P	34 157	69	190 594	214	166 383	0	673	P	62 144	115 379		165	316 253	12 59	973 1,606
M isso u ri	P		294	55	298	51	2	1,728 222	P	32	24	606 131	28	253 66	59	
Montana Nebraska ³	P	22 41	72 95	150	50	185	12	533	P	32	111	142	34	83	7	286 409
Nevada	P	2	38	172	118	62	0	392	P	21	92	343	10	0	17	483
New Hampshire	P	55	111	217	32	14	0	429	P	58	96	93	13	18	2	280
New Jersey	F D	232	255	978	285	1,340	0	3,090	P	155	592	413	122	653	0	1,935
New Mexico	F D	27	20	249	203	23	4	323	P	48	28	369	122	2	9	458
New York	P	11	465	2,141	1,325	1,053	0	4,995	P	2	949	960	1,407	632	0	3,950
North Carolina	P	311	267	694	349	678	0	2,299	P	183	168	568	290	454	2	1,665
North Dakota	P	11	45	131	0	55	20	262	P	18	31	117	2 9 0	35	16	217
O h io	P	233	418	1.810	868	238	0	3.567	P	221	574	1.986	293	397	0	3.471
O klahoma 3	P	0	7 7	1,612	64	178	55	1,916	P	0	0,1	888	0	0.07	79	967
O regon	P	122	115	407	215	188	4	1,051	P	183	121	472	280	215	6	1,277
Pennsylvania	P	7	96	1.678	1,373	135	0	3.289	P	9	162	2.368	1.101	93	1	3.734
Rhode Island	P	51	22	130	30	45	0	278	P	138	75	188	49	51	Ö	501
South Carolina	P	103	123	373	213	185	0	997	P	35	104	622	357	346	0	1,464
South Dakota	P.	8	54	30	165	22	5	284	P	1	32	0 0 0	142	3	21	199
Te n n e sse e	P	96	190	662	437	696	0	2,081	P	99	228	616	279	402	0	1,624
Te xa s	P.	519	980	2.381	883	2,277	3	7.043	P.	729	1.852	3.350	1.024	751	19	7,725
Utah	P	17	73	275	56	91	1	513	P	0	29	282	61	107	2	481
Vermont	P	34	43	66	3	3	2	151	P	94	36	65	2	3	11	211
V irg in ia	P	34	113	272	1,049	499	0	1,967	P	70	170	553	573	576	0	1,942
Washington	P	60	221	1,022	428	385	3	2,119	P	75	256	947	413	339	4	2,034
West Virginia	Р	36	58	130	57	133	1	415	Р	92	94	174	39	45	0	444
W isc o n sin	P	108	211	1,216	453	0	0	1,988	Р	195	209	858	223	0	6	1,491
Wvomina	P	0	9	86	39	13	4	151	Р	16	73	271	51	15	43	469
								1								
To ta I	-	5,918	10,798	33,470	17,974	19,386	306	87,852	-	8,416	13,959	34,460	14,668	13,802	793	86,098
Percent/System	I -	6.7	12.3	38.1	20.5	22.1	0.3	100.0	-	9.8	16.2	40.0	17.0	16.0	0.9	100.0

¹ As summarized from the Highway Performance Monitoring System (HPMS) universe data for the Principal Arterials and as expanded from the HPMS standard sample data for other systems. Pavement condition is stratified using the "Present Serviceability Rating" (PSR), a primarily subjective rating system, or the International Roughness Index (IRI), an objective rating system. PSR is a standard measure of pavement condition adopted from the "AASHO ROAD TESTS" conducted in the late 1950's and early 1960's. Reference: Highway Research Board Special Report 61E, 1962. The PSR values range from 0.1 to 5.0. 5.0 denotes new pavements in excellent condition while 0.1 denotes pavements in extremely poor condition. Various stages of pavement deterioration are represented by values between these limits. Data are reported as the IRI in inchesper mile. Reference: World Bank Technical Paper Number 46, 1986

Lower IRI represents smoother riding roadways. See the "Roadway Extent, Characteristics and Performance" text at the front of the mileage tables.

TABLE HM-63 (CONTINUED)

PAVEMENT CONDITION, 1994

² Some States did not report for all required mileage. Includes unpaved mileage not represented in the remaining columns: rural Minor Arterial - 639 miles in Alaska, 34 miles in in Montana, 56 miles in Oregon; rural Other Principal Arterial - 68 miles in Mississippi; urban Other Principal Arterial - 2 miles in Georgia, 121 miles in Mississippi, 1 mile in North Dakota.

 $^{^{3}}$ 1993 data used (1994 base data not available). For Nebraska, the 1993 base data were factored to 1994 levels by FHWA.

4 Totals only reflect those States reporting usable or partially usable data

APPENDIX	G: FINANCIAL RESOU	RCES AND CONSTR	AINTS
(AN EXTRACT FROM LOUI	SIANA DOTD'S "STATI PLAN", OCTOBER, 19		L TRANSPORTATION

FINANCIAL RESOURCES AND CONSTRAINTS

Prior to developing an intermodal transportation plan for Louisiana, it was essential to determine the extent to which current and projected financial resources could be directed toward implementing new or improved programs, facilities, and services. To accomplish this, it was necessary to review recent federal and state transportation funding and expenditures in Louisiana. It was also necessary to identify non-traditional funding sources and strategies for consideration in financing new or improved programs, facilities, and services.

TRANSPORTATION REVENUES

Federal funding of transportation facilities and services has traditionally relied on user-related taxes and some general tax revenues. Funding for highways has been appropriated from the Federal Highway Trust Fund. Similarly, funding for airports and air traffic control has been appropriated from the Federal Aviation and Airways Trust Fund. Funding assistance for public transportation, Amtrak, light-density freight railroads, navigable waterways, and the Strategic Petroleum Reserve Distribution Systems has been appropriated from the Federal General Fund.

Table 23 provides a summary of major federal transportation funding for Louisiana for fiscal years 1992 (i.e., the beginning of ISTEA) through 1996. Federal appropriations for the maintenance and improvement of navigable waterways are not included in this table since these monies are not administered by the state but rather by the U.S. Army Corps of Engineers. Likewise, federal appropriations for Amtrak and the Strategic Petroleum Reserve Distribution Systems are also excluded. The statistics of Table 23 are also shown in Figure 22, with some of the subcategories presented only in sum totals. Figure 22 gives a clearer view of how the funding has changed by program area by year.

FUNDING CATEGORY	FY 92	FY 93	FY 94	FY 95	FY 96	REMARKS
AVIATION APPORTIONMENTS	3.4	3.2	2.9	2.2	2.1	For improvements at general aviation airports. Federal share = 90%.
AVIATION ENTITLEMENTS	8.9	8.9	7.2	5.4	5.0	For improvements at commercial airports. Minimum of \$500,000 per airport. Federal share = 90% (except New Orleans International - federal share = 75%).
AVIATION DISCRETIONARY	31.6	23.7	27.5	21.9	15.0	For improvements at any public airport. Must be applied for through the Federal Aviation Administration. Federal share = 90%.
INTERSTATE HIGHWAY SYSTEM	10.2	17.7	14.9	0.0	0.0	Exclusively for completing I-49 & I-310. Federal share = 90%.
INTERSTATE HIGHWAY MAINTENANCE (IM)	40.7	40.2	45.4	44.3	43.5	Cannot be used for new construction or additional lanes. Federal share = 90%.
NATIONAL HIGHWAY SYSTEM (NHS)	45.4	45.0	50.6	49.3	47.3	For use on NHS routes. Federal share = 80%.
SURFACE TRANSPORTATION PROGRAM (STP)						For use on any federal-aid road including Interstate and NHS. May transfer to transit. Federal share = 80%.
Safety a) RR X-ings b) Highway Safety	2.7 2.4	2.8 2.5	3.3 3.0	2.8 2.5		Railroad crossing improvements (RRS/RRP) and hazard elimination (HES) on highways.
2. Enhancements	5.1	5.4	6.4	5.4	5.1	Landscaping, scenic easements, ped./bicycle facilities, etc.
3. Urban Attributable a) >200 K Population b) <200 K Population	12.1 7.9	14.7 10.0	13.5 9.3	13.5 9.2	10.1 8.9	
4. <5 K Population	10.6	8.8	10.0	9.7	10.6	Must be used on federal-aid roads (state or non-state) in rural areas (i.e., <5 K population)
5. Flexible	34.1	33.5	35.8	40.4	31.5	Can be used on any federal-aid road, state or non-state.
BRIDGE REHABILITATION/ REPLACEMENT (BR)						Federal share = 80%.
1. On-System	25.8	26.0	30.7	34.3	33.1	For state and non-state bridges on federal-aid system.
2. Off-System	6.0	6.0	7.1	7.9	7.6	For bridges off federal-aid system.
3. Optional	7.9	8.0	9.4	10.5	10.2	For bridges on any public road.

FUNDING CATEGORY	FY 92	FY 93	FY 94	FY 95	FY 96	REMARKS
CONGESTION MITIGATION & AIR QUALITY (CMAQ)	4.0	4.0	4.5	4.4	4.2	For use only in non-attainment areas; must improve air quality. Federal share = 80%.
TRANSPORTATION PLANNING & RESEARCH (SPR)	4.1	4.1	4.7	4.5	4.2	Funds for planning, research, and technology transfer programs at DOTD. Federal share = 80%.
URBAN PLANNING (PL)	1.5	1.5	1.7	1.7	1.8	Funds for planning in metro. areas. Federal share = 80%.
DEMONSTRATION	11.3	14.6	13.3	25.4	13.6	Funds for specific projects authorized by the U.S. Congress. Federal share = 80%.
ADDITIONAL OBLIGATION AUTHORITY	14.2	17.1	18.1	11.9	15.0	Spending authority not used by other states and redistributed to Louisiana.
PUBLIC TRANSPORTATION DISCRETIONARY FUNDS (SECTION 3)	1.8	2.0	10.7	22.3	17.5	Must be applied for through Federal Transit Administration. Federal share = 80%.
URBAN TRANSIT ASSISTANCE PROGRAM (SECTION 9)	17.2	14.7	21.1	21.3	17.8	Capital and operating assistance for metropolitan areas. Capital - federal share = 80%. Operating - federal share = 50%.
ELDERLY AND HANDICAPPED TRANSIT (SECTION 16)	0.9	0.8	1.0	1.0	0.9	Capital assistance for elderly and handicapped transportation. Federal share = 80%.
RURAL TRANSIT ASSISTANCE PROGRAM (SECTION 18)	2.4	2.1	2.9	3.0	2.5	Capital, operating, and training/ technical assistance for rural areas (including small urban). Capital - federal share = 80%. Operating - federal share = 50%. Train- ing/Tech. Assist federal share = 100%.
MASS TRANSIT PLANNING ASSISTANCE (SECTION 8)	0.5	0.4	0.5	0.5	0.4	Funds for transit planning in metropolitan areas. Federal share = 80%.
MASS TRANSIT PLANNING ASSISTANCE (SECTION 26)	0.1	0.1	0.1	0.1	0.1	Funds for statewide public transportation planning. Federal share = 80%.
LOCAL RAIL FREIGHT ASSISTANCE PROGRAM	0.0	0.2	0.3	0.3	0.3	Discretionary grants for light-density freight railroad rehab. Must be applied for through Federal Railroad Administration. Federal share = 70%.

State funding of transportation facilities and services has traditionally been provided through the State General Fund. However, in 1989, the state constitution was amended to create a dedicated Transportation Trust Fund (effective January 1, 1990) from fuel tax revenues and certain vehicle registration fees. At the same time, a special fund was created from an increase in the fuel tax to finance the Transportation Infrastructure Model for Economic Development. In addition, the Department of Transportation and Development generates some revenues through tolls, permits, fees, etc. Although most transportation facilities are now financed from the Transportation Trust Fund, some specific projects are funded through the sale of general obligation bonds under the Capital Outlay Program. These bonds are redeemed with revenues from the State General Fund.

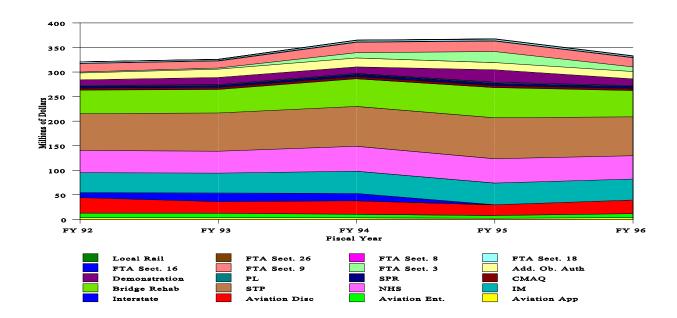
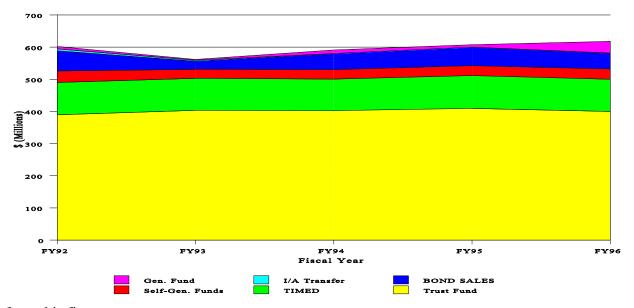


Table 24 provides a summary of major state transportation revenues for fiscal years 1992 through 1995 along with estimates for 1996. State transportation funds are available for highways, public transportation, airports, ports, flood control, and certain state police functions related to traffic control.

Figure 23 shows the major categories of state funding over the five years and shows the effects also of the budgeting change in FY96. The preponderance of state trust fund monies is very clear



from this figure.

					EST.	
FUNDING SOURCES	FY 92	FY 93	FY 94	FY 95	FY 96	REMARKS
TRANSPORTATION TRUST FUND	389.2	403.1	402.3	409.5	399.9	Revenues exclusively for transportation, flood control, and certain state police functions.
1. Gasoline	300.8	313.2	308.6	306.6	307.3	Tax = 16 cents per gallon.
2. Other Fuels	59.0	62.1	63.4	73.2	64.4	Primarily diesel fuel. $Tax = 16$ cents per gallon.
3. Aviation Fuels	5.3	5.0	5.0	5.0	5.0	Sales tax of 4% on aviation fuel.
4. Registration Fees	20.0	22.8	25.3	24.7	23.2	Registration fees for private passenger automobiles only. Registration fees for other motor vehicles and for trailers are deposited in the General Fund.
5. Interest Earnings	4.1	4.5	6.0	12.0	6.7	Interest earnings from the investment of monies accumulated in the Transportation Trust Fund.
TRANSPORTATION INFRA- STRUCTURE MODEL for ECONOMIC DEVELOPMENT (TIMED)	100.5	99.8	98.0	101.5	100.0	Revenues for specified projects included in the TIMED legislation
1. Gasoline	75.6	78.7	77.5	76.8	77.2	Tax = 4 cents per gallon.
2. Other Fuels	14.8	15.5	15.9	18.3	16.1	Primarily diesel fuel. $Tax = 4$ cents per gallon.
3. Interest Earnings	10.1	5.6	4.6	6.4	6.7	Interest earnings from the investment of monies accumulated in the TIMED program account.
SELF-GENERATED FUNDS	35.8	27.8	29.4	31	31.6	
1. Restricted						Funds generated by Cresent City Connection,
a) Sunshine Bridge	0.6	0.7	0.7	0.7	0.8	Sunshine Bridge, and Sabine River Authority;
b) Cresent City Conn.	9.0	9.8	9.2	10.1	10.3	dedicated for use in debt service and operation of
c) Sabine River Auth.	3.8	3.4	3.8	3.8	3.8	these facilities.
2. Unrestricted	21.8	13.4	15.2	15.8	16.1	Revenues from permits, fees, and fines collected by the Weight and Standards Section, from ferry tolls, and from miscellaneous sources.
3. Damage Reimbursement	0.6	0.5	0.5	0.6	0.6	Collections from insurance for damage to state bridges and roads.
BOND SALES	63.2	25.5	49.6	57.2	48.9	Funds generated through the sale of general obligation bonds and redeemed with revenues from the State General Fund
INTERAGENCY TRANSFER	5.6	2.6	0.5	0.5	1.2	Transfers from other state agencies for facilities and services provided by DOTD.
STATE GENERAL FUND	7.4	2.5	11.2	7.5	See Note	

NOTE: The large increase in the State General Fund appropriation in FY 96 is due to a budget accounting change with regard to the funding for ment.

TRANSPORTATION EXPENDITURES

Table 25 provides a summary of annual state transportation expenditures for fiscal years 1992 through 1995 along with estimates for 1996. The various categories of expenditures have been simplified to some extent; however, the table is still complex due to the mixture of federal, state, and local funds. While some federal assistance is provided directly to local governments, most is administered by the Department of Transportation and Development (DOTD). In the latter case, some local matching funds are passed through DOTD and are therefore reflected in the Department's operating expenditures.

Table 25
Annual State Transportation Expenditures (millions of dollars)

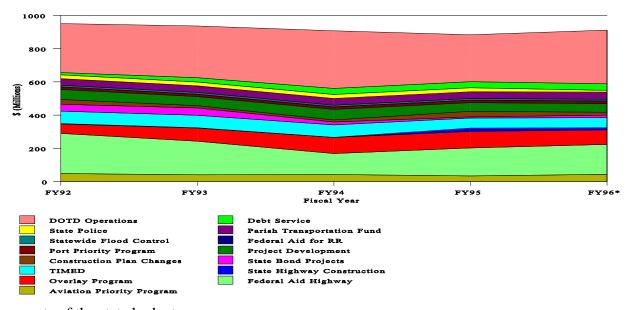
FUNDING CATEGORY	FY 92	FY 93	FY 94	FY 95	FY 96	REMARKS
AVIATION PRIORITY PROGRAM Federal State	43.9 4.1	35.8 4.1	37.6 4.1	29.5 4.1	39.1 4.1	Improvements at public airports
FEDERAL-AID HIGHWAY CONSTRUCTION PROGRAM						Excludes federal funds used in overlay program, plan changes, project development, and as noted in operating budget. (includes interstate & IM, state highways on
State Government Federal State Local Government Federal	185.5 41.1	119.5 28.0	83.5 15.6 21.9	110.8 26.7	114.0 28.5	NHS, STP safety, <5 K pop. & flexible, and BR for state bridges) (includes non-state roads on NHS, STP enhancements & urban, BR for non-state bridges, CMAQ, and PL)
Local OVERLAY PROGRAM Federal State	3.0 0.0 57.0	4.8 26.1 53.0	5.5 46.1 51.0	6.1 30.3 69.0	7.4 30.0 57.5	Pavement rehabilitation on state highways.
STATE FUNDED HIGHWAY CONSTRUCTION	1.8	2.2	0.0	19.8	13.0	Projects using state transportation funds only. Includes repair of major damage to bridges and roads (reimbursable damages).
TRANSPORTATION INFRA- STRUCTURE MODEL for ECONOMIC DEVELOPMENT (TIMED) Highways Other	32.2 42.4	20.3 54.3	42.7 31.9	55.3 6.1	50.6 9.4	Funds for specified projects included in TIMED legislation and financed through a separate fuel tax of four cents per gallon.
STATE BONDS PROJECTS	42.0	45.3	17.6	6.9	15.2	Projects financed through general obligation bonds and redeemed with revenues from the State General Fund.
CONSTRUCTION PLAN CHANGES Federal State	24.1 4.5	11.0 2.4	10.7 2.3	17.8 15.2	14.4 3.6	Engineering changes to projects already under construction.

FUNDING CATEGORY	FY 92	FY 93	FY 94	FY 95	FY 96	REMARKS
PROJECT DEVELOPMENT						
1. Consultants (Engr.) Federal State	23.5 5.1	15.3 10.9	29.5 6.5	18.5 7.5	20.2 5.1	Engineering consultant services primarily for design work.
2. Right-of-Way Federal State	20.4 4.8	16.0 3.6	16.2 3.6	15.3 3.0	15.1 3.0	Right-of-way for transportation improvement projects
3. Utility Relocation Federal State	5.2 1.2	7.0 1.5	5.9 1.3	6.6 1.3	6.4 1.6	Utility relocation for transportation improvement projects.
PORT PRIORITY PROGRAM	15.0	15.0	15.0	15.0	15.0	Improvements at ports; requires 25% match from local sources.
FEDERAL-AID FOR FREIGHT RAILROADS Federal State	0.0 0.0	0.2 0.0	0.3 0.0	0.3 0.0	0.3 0.0	Rehabilitation of light-density freight railroads. Requires private match.
STATEWIDE FLOOD CONTROL PRIORITY PROGRAM	10.0	10.0	10.0	10.0	10.0	Capital improvements to reduce/ prevent flooding; requires 30% match from local sources.
PARISH TRANSPORTATION FUND Highways Transit	34.0 6.0	34.0 6.0	34.0 6.0	34.0 6.0	36.5 7.0	State funds distributed to parish governments for transportation improvements.
DIRECT FEDERAL ASSISTANCE TO LOCAL PUB- LIC TRANSIT (Federal Funds Only)	19.5	17.1	32.3	44.1	28.3	Federal assistance provided directly to local government agencies for public transit
STATE POLICE	22.6	22.9	24.0	24.5	10.8	Traffic control and traffic law enforcement.
DEBT SERVICE Trust Fund TIMED Program	0.0 13.2	3.7 22.8	3.7 32.7	3.7 32.7	3.7 35.3	Redemption of bonds previously issued to finance transportation projects. Required to redeem with transportation revenues.
DOTD OPERATIONS 1. Personnel Services Federal State	19.2 142.2	26.1 140.3	24.7 142.3	23.5 148.4	25.0 147.6	Salaries and benefits. DOTD staff time administering local federal-aid projects is paid for with federal and local matching funds.
Operating Services Federal State	0.0 20.7	0.0 20.3	0.0 32.5	0.0 35.8	0.0 44.2	Maintenance and minor repairs to buildings, utilities, repair & service of equipment, insurance, rentals, etc.
3. Supplies Federal State	0.3 21.9	0.3 24.0	0.3 24.7	0.3 27.0.	0.3 28.1	Materials for repairs to trans. infrastructure (asphalt, guardrail, traffic signals, sign materials, etc.), office supplies, vehicle supplies, etc.
Acquisitions & Major Repairs Federal State	0.0 7.1	0.0 6.0	0.0 8.7	0.0 9.5	0.0 9.1	Major land & building improvements, vehicles, highway maintenance equipment, shop, lab, & engineering equipment, furniture, computers, copiers, etc.
5. Travel Federal State	0.0 1.9	0.0 2.0	0.0 2.1	0.0 2.1	0.0 2.2	In-state and out-of-state travel.
6. Professional Services Federal State	0.9 0.7	0.7 1.0	0.5 1.1	0.6 2.0	0.5 4.0	Consultant services (accounting, auditing, management, legal, planning, research, etc.).

FUNDING CATEGORY	FY 92	FY 93	FY 94	FY 95	FY 96	REMARKS
7. Special Contracts a) Research/Planning Federal State b) Public Transit Assistance to	5.0 1.2	6.3 1.6	3.8	1.8 0.8	8.4 1.7	University contracts for research and planning studies. Federal assistance to local transit agencies. Local government match for federal funds passed through DOTD.
Local Governments Federal Local c) Contract Maint. (State Funds Only)	2.7 0.3 10.0	3.0 0.2 10.0	2.8 0.1 10.0	3.7 0.8 8.2	5.5 0.6 8.1	Contracts for maintenance of state highways. Interagency transfers and miscellaneous.
d) Other Federal State 8. Risk Management (State Funds Only)	0.0 0.1 60.9 See Note	0.0 1.1 67.1 See Note	0.0 0.6 91.7 See Note	0.0 0.8 16.4 See Note	0.0 1.1 36.2	For the payment of premiums for coverage of tort claims against the state (i.e. DOTD) from traffic accidents.
TOTAL FOR OPERATIONS	295.1	310.0	346.9	281.7	322.6	

NOTE: Prior to FY 96, the State General Fund appropriation for risk management was included in the budget for the Division of Administration

Figure 24 shows the major categories of the expenditures listed in Table 25 and helps show the trends in expenditures over the period. Federal and state funds have been combined in the figure, as have all the subcategories of expenditures. Nevertheless, the pattern is clear and shows little change in the overall level of funding over the period, with most changes resulting from



rearrangements of the state budget.

For planning purposes, it was necessary to project the funding available for the preservation and improvement of transportation facilities and services on a statewide basis for the 25-year period beginning in fiscal year 1997 and extending through fiscal year 2021. Total federal funding for transportation is not likely to increase and may in fact decrease over this period. Further, federal funding for local government transportation facilities and services must be excluded from the

total since the state has little control other than administrative oversight.

With regard to state transportation monies, funding for flood control and state police must be excluded since it is not transportation related. Funding provided to local governments must also be excluded as well as funding for DOTD operations and debt service. What remains is the funding available for preserving and improving transportation facilities and services on a statewide basis.

Table 26 provides an estimate of federal and state funds available for preservation and improvement of transportation facilities and services on a statewide basis. Regarding public transportation, the only intercity passenger rail service in Louisiana is provided by Amtrak. The funding for this service is provided to Amtrak through direct federal appropriation; the state has no control over the funding or the services offered. Intercity bus services in the state are provided exclusively by private carriers. No federal or state funding is earmarked for implementing intercity public transportation plans. Funding for maintaining and improving navigable waterways and the Strategic Petroleum Reserve Distribution System are excluded from Table 26 since these monies are not administered by the state.

FUNDING CATEGORY	ANNUAL	REMARKS
FUNDING CATEGORI	FUNDING	REMARKS
FEDERAL AVIATION		For improvements at general aviation airports.
APPORTIONMENTS	2.2	
Federal State	3.2 0.2	
	0.2	
FEDERAL AVIATION ENTITLEMENTS		For improvements at commercial service airports. Minimum of \$500,000 per airport.
ENTITLEMENTS Federal	8.3	
State	0.4	
FEDERAL AVIATION	-	For improvements at any public airport. Must be applied for through
DISCRETIONARY		the Federal Aviation Administration.
Federal	27.6	
State	1.5	
STATE FUNDED AVIATION	2.0	Total state funding committed to aviation is \$4.1 million annually.
IMPROVEMENTS		Matching federal funds is top priority. Any remaining funds are
		available for state funded improvements.
INTERSTATE HIGHWAY		Cannot be used for new construction or additional lanes.
MAINTENANCE Federal	42.7	
State	42.7	
NATIONAL HIGHWAY	4.7	English NIIC modes Continued to 500/ to Confess
NATIONAL HIGHWAY SYSTEM		For use on NHS routes. Can transfer up to 50% to Surface Transportation Program, 100% with approval from the Federal Highway
Federal	47.6	Administration.
State	11.9	
SURFACE		For use on any federal-aid road including Interstate and NHS. May
TRANSPORTATION		transfer to public transportation.
PROGRAM		
1. Safety		
a) Rail-Highway Crossings		For improvement of railroad-highway at-grade crossings (RRS/RRP).
Federal State	2.9 0.7	
b) Highway Safety		For spot highway safety improvements (HES).
Federal	2.5	
State	0.6	
2. <5 K Population		For preservation and improvement of federal-aid roads in rural areas
Federal		(i.e., <5k population.
State	2.5	
3. Flexible		Can be used for preservation and improvement of any federal-aid road.
Federal	37.3	1 1
State	9.3	

FUNDING CATEGORY	ANNUAL FUNDING	REMARKS	
BRIDGE REHABILITATION/ REPLACEMENT 1. On-System Federal State	29.2 7.3	For rehabilitation/replacement of bridges on federal-aid system (typically bridges on state highways, therefore state match is shown).	
2. Off-System Federal Local	6.8 1.7	For rehabilitation/replacement of bridges off federal-aid system (typically bridges on non-state highways, therefore local match is shown).	
3. Optional Federal State Local	9.0 1.2 1.1		
DEMONSTRATION Federal State	0.0 0.0	Funds for specific projects authorized by the U.S. Congress. No further projects of this type are expected to be approved in the future.	
ADDITIONAL OBLIGATION AUTHORITY Federal State	15.0 3.8	Spending authority not used by other states and redistributed to Louisiana.	
STATE FUNDED IMPROVE- MENTS (CONSTRUCTION & OVERLAYS)		Funds remaining after matching federal funds are available for state funded improvements. Will increase by \$3.7 million in FY 2013 due to bond retirement.	
TRANSPORTATION INFRA- STRUCTURE MODEL for ECONOMIC DEVELOPMENT	60.0	Funds for specified projects included in TIMED legislation and financed through a separate fuel tax of four cents per gallon. Tax expires in FY 2005.	
STATE BONDS	15.2	Projects financed through general obligation bonds and redeemed with revenues from the State General Fund. Projects are funded through the Capital Outlay Budget.	
INTERCITY PUBLIC TRANSPORTATION Federal State	0.0 0.0	No federal or state funds are presently designated for intercity passenger rail or intercity bus service.	
PORT PRIORITY PROGRAM Federal State	0.0 15.0	For improvements at public ports. No federal funding is provided for these facilities.	
FREIGHT RAILROAD ASSISTANCE Federal State	0.3 0.0	For rehabilitation of light-density freight railroads. No state funding is provided for freight rail infrastructure or service.	

Note: Assumes permanent reduction in State Police funding to \$10.8\$ million annually.

A review of Table 26 indicates that the available funding is divided into numerous categories each of which has various restrictions. The majority of funds for aviation improvements must be applied for through the Federal Aviation Administration. This limits the state's ability to direct funds to specific aviation projects. Considering the funding required to implement the current Highway Program which the state has committed to, the resources required to preserve the existing highway system, and the need for expansion of the highway system in metropolitan, small urban, and rural areas, it was determined through discussions within DOTD that no monies from any of the highway categories shown in Table 26 could be dedicated for investment through this planning effort. Rather, the state will continue to allocate the available highway monies through the Highway Needs and Priorities Process.

No federal or state funds are presently designated for intercity public transportation. State funding for improvements to public port facilities is limited to \$15 million annually. No federal funding is presently provided for ports. Freight railroad assistance is limited to only \$0.3 million annually; this small federal program is likely to be eliminated in the near future. The severe limitations on existing transportation revenues did not preclude the identification of improvements for inclusion in the plan which could be financed through the Capital Outlay Budget (i.e., state bonds) or other non-transportation revenue sources such as the State General Fund.

CURRENT PRIORITIZATION SYSTEMS

Several prioritization systems are presently used for allocating monies from existing transportation revenue sources. Each is briefly described below:

Avaition Program Needs and Project Priority Process: The primary objective of this priority system is to prioritize facility improvement type projects. Planning projects, navigational aid projects, and engineering design are not included in the priority process. Differences in the criteria for assessing these types of projects and the relatively small amount of state funding required make them impractical to include in the same process with facility improvement projects.

Potential projects for inclusion in the priority system are initiated by the local community the airport serves and by the DOTD Aviation Section. The need for the project may be identified in the Louisiana Airport System Plan , airport master plans, or result from a change in conditions or facilities at the airport.

Highway Needs and Priorities Process: This process was established by the Department of Transportation and Development in response to Act 334 passed by the State Legislature in 1974. The purpose of the priority system is to identify and prioritize highway improvement projects through an annual survey and analysis of the state maintained system.

Act 334 requires DOTD to develop the Highway Program based on a consideration of various

factors including, but not limited to, alignment of existing roads, the width and/or elevation of the existing roadway and the shoulder surfaces, the width of the rights-of-way, the cost of construction, the type and volume of traffic, the condition of structures and drainage, the accident rate, and the geographical distribution of the roadways to be constructed or reconstructed.

Port Construction and Development Priority Process: This process was created in 1989 by Act 452 of the State Legislature. The purpose of the priority system is to disburse funds to projects that have the highest potential for success as determined by objective standards such as technical and financial feasibility and overall impacts.

Any port authority may submit an application for funding to DOTD. The application must include a discussion of how the proposed project complies with the port's master plan, or why it does not. If the port does not have a master plan, then a layout of the existing facilities must be submitted along with an explanation of why the port does not have a master plan.

Federal Transit Fund Allocation Process: As stated, no federal or state funds are presently designated for intercity public transportation. However, DOTD does administer some of the federal funding for local public transit systems.

The Federal Transit Administration allocates Section 5311 (formerly Section 18) Nonurbanized Area Formula Grant monies to each state based upon the percentage of the population domiciled in rural areas. Federal funding is available for a maximum of 50 percent of net operating costs; the balance must be met by fares and other local matching funds. Each of Louisiana's recipient rural transit operators must reapply annually for funding. Federal operating assistance is based upon each provider's ridership and transit mileage for the previous 12 months,

The Federal Transit Administration allocates Section 5310 (formerly Section 16) Elderly and Persons with Disabilities Program Grant monies to each state based upon the percentage of the population classified as elderly or disabled. Federal funding is available for 70 percent of capitol costs for wheelchair equipped vehicles; the balance must be met with local matching funds. Applications submitted to DOTD each year are processed through a review committee. The applications are reviewed and scored using a point system; those with the highest scores are funded.

Rail Program Needs and Project Selection Process: This process was established by the Federal Railroad Adminstration as part of the Rail Revitalization Act of 1973. Benefit-cost analysis is the method used for ranking projects. Projects must have a benefit-cost ratio of 1:1 to qualify for funding. Projects must have been included in the latest Louisiana State Rail Plan. Projects not included must be submitted separately as an addendum to the most recent plan.

Any "light-density" railroad is eligible for funding. Factors such as shipper support, value of job creation, projected car loading increases, financial stability of the applicant, present salvage value, and projected salvage value are considered in the analysis. Null alternatives such as continued operation without upgrade or abandonment of the line and value of lost employment are factored into the analysis as well. Final project selection is made by the Federal Railroad Administration based upon state recommended priorities.

TRANSPORTATION INFRASTRUCTURE MODEL FOR ECONOMIC DEVELOPMENT

The Transportation Infrastructure Model for Economic Development (TIMED) is a statewide plan containing a series of specific transportation projects including four-laning nearly 500 miles of state highways, three high-cost bridges, improvements to the Port of New Orleans, and improvements to New Orleans International Airport. The TIMED plan is financed through a dedicated tax of four cents per gallon levied on all gasoline, motor fuels, and special fuels. The tax was enacted in 1989 with an effective date of January 1, 1990 and is scheduled to expire December 31, 2004.

The total cost of the projects included in the TIMED plan was initially estimated at \$1,361 million. Revised estimates indicate that \$2,065 million (1996 dollars) will be needed to complete the projects (see Table 27). Further complicating matters, \$263.9 million in bonds were issued for the TIMED plan in 1990. Shortly thereafter, \$160 million was transferred to the Transportation Trust Fund as an interfund loan. It seems unlikely that the loan will be repaid. Accounting for this and for construction cost inflation, analyses by DOTD indicate that the dedicated four cents per gallon tax will have to be extended through 2021 to complete the TIMED projects.

PROJECT	ORIGINAL ESTIMATE	REVISED ESTIMATE
US 171 - Lake Charles to Shreveport	170	295
US 165 - I-10 to Alexandria to Monroe to Bastrop to Arkansas Line	248	420
US 90 - Morgan City to Houma	210	211
US 167 - Alexandria to Ruston to Arkansas Line	182	300
LA 3241 - I-12 to Bush (Bogalusa)	50	48
Jefferson Parish West Bank Expressway - Avenue D to Ames Boulevard	30	33
New Orleans Tchoupitoulas Street Corridor	35	55
Earhart Boulevard - Orleans Parish Line to Loyola Avenue	10	20
West Napoleon (Jefferson Parish)	25	53
LA 15 - Natchez, Mississippi to Monroe	52	47
US 61 - Bains to Mississippi Line	32	23
New Mississippi River Bridge at St. Francisville	50	150
Huey P. Long Bridge (widen to six lanes)	60	160
New Florida Avenue Bridge over Industrial Canal	32	75
Port of New Orleans	100	100
New Orleans International Airport	75	75
TOTAL	1361	2065

NON-TRADITIONAL FUNDING STRATEGIES

Interest in non-traditional funding strategies has increased in recent years due to the shortfall in resources to meet transportation system preservation needs and demands for system expansion. Some of the most promising strategies include toll financing, revolving loan funds, privatization (including public-private partnerships), and devolution of responsibility and taxing authority. Each of these is discussed below.

Toll Financing

In the past, Louisiana has relied very little on toll financing for transportation infrastructure. Presently, the Mississippi River Sunshine Bridge, the Greater New Orleans Mississippi River Bridge No. 2, ferries, and the Pontchartrain Causeway are the only toll facilities in the state. In recent years, other states have been moving toward greater use of tolls as a mechanism for financing highway infrastructure improvements.

Under ISTEA, the eligibility of toll projects for federal-aid funding has expanded to include: 1) construction of new toll facilities except highways on the Interstate system; 2) resurfacing restoration, rehabilitation or reconstruction of existing toll facilities; and 3) conversion of currently free facilities to toll facilities through reconstruction or replacement.

Revolving Loan Funds

Revolving loan funds have been used for many years, mainly as a mechanism for fostering economic development. With this type of fund, the state provides loans to qualifying entities which are then repaid through the revenues generated as a result of the investment. The repaid monies are then loaned to other qualifying entities. Revolving loan funds offer an excellent means for a state to leverage its resources for projects that generate a positive rate of return. This type of fund offers promise for railroad, port, airport, or other intermodal projects.

Privatization

The objective of privatization is to provide better service to the public at a lower cost to state and/or local government. Privatization can include the private development and operation of public-use infrastructure, contracting with private entities to provide public services, and the sale of government-owned facilities to private entities. Privatization virtually always requires enabling legislation.

Public-private partnerships are often referred to as privatization. Some examples of public-private partnership arrangements are provided below:

Build-Own-Operate - A private entity finances and builds a facility, and then owns, operates, and collects revenues on the facility on a permanent basis.

Build-Operate-Transfer - A private entity finances and builds a facility, and then owns, operates, and collects revenues on the facility on a temporary basis. Once the investment has been recouped along with a reasonable rate of return, the facility is transferred to the sponsoring government free of charge.

Build-Transfer-Operate - A private entity finances and builds a facility, but transfers ownership to the government immediately after construction is completed. The government then repays the private entity through a "lease-purchase" arrangement or allows the private entity to operate and collect revenues on the facility on a temporary basis until the investment is recouped along with a reasonable rate of return.

Buy-Improve-Operate - A private entity buys an existing facility from the government, improves it, and then operates and collects revenues on the facility on a permanent basis.

Lease-Improve-Operate - A private entity leases an existing facility from the government, improves it, and then operates and collects revenues on the facility for the duration of the lease.

Devolution of Responsibility and Taxing Authority

The concept of devolving responsibility for maintenance, operation, and improvement of transportation facilities and services from state government to local government generated considerable discussion in the Regional Planning Officials Advisory Council. The general consensus is that the State Highway System is too large containing many routes which do not serve intercity, interregional, or interstate freight or passenger transportation needs. Reducing the size of the State Highway System will require a commensurate increase in the Parish Transportation Fund from existing transportation revenues.

A detailed evaluation has not been made; however, as an example, the State Highway System could be reduced from approximately 16,650 miles to 10,000 miles with a corresponding increase in the Parish Transportation Fund from slightly less than two cents per gallon to a full five cents per gallon. The state's share of the fuel tax would be reduced from just over 14 cents per gallon to 11 cents per gallon.

The primary advantages of downsizing the State Highway System are that state labor and equipment could be concentrated on the primary highway system and that local governments would have greater control over transportation decision making. However, there is concern that state maintenance personnel and supply budgets, which are presently underfunded by approximately 35 percent, would be further reduced under this strategy.

In conjunction with the devolution of responsibility for transportation facilities and services, local governments would be provided with constitutional authority to levy a gasoline tax of up to five cents per gallon (by referendum) to further fund maintenance and improvement of local transportation systems. The taxing authority would not extend to diesel fuel since heavy trucks seldom use local roads and in some cases are prohibited. The primary advantages of this strategy are that local governments would be further empowered in transportation decision making and that the pressure on the state to resolve local transportation problems would be reduced.

Tax Credits for Private Contributions

The federal and state tax codes allow contributions to federal, state, or local governments to be deducted as charitable contributions. Furthur, the state also provides tax credits for certain donations, investments, etc. In addition, the state provides a donation schedule whereby individuals can donate all or a portion of their income tax refunds to selected causes.

Accounting for the federal tax deduction, Louisiana could establish a tax credit and donation schedule for both individuals and businesses to leverage private funds dedicated to implementing the transportation improvements contained in the Statewide Intermodal Transportation Plan.

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