

Thursday, March 15, 2012

REPORT: Hawaii Drivers Lose \$1,527 Annually Because of Unsafe Roads, Poor Pavement and Inadequate Capacity



REPORT BY TRIP - Transportation is more than just driving on Hawaii's roads and bridges or using public transit. It's about receiving packages in a timely manner, easily grabbing groceries on the way home, or safely traveling to recreational and tourist destinations.

Transportation provides the connections that keep businesses up and running. It not only moves people, it makes the movement of goods and services possible and provides the state's residents with a high quality of life. The quality of Hawaii's extensive system of roads, highways and bridges has a significant impact on the level of safety and mobility of the state's residents, visitors and businesses.

As the backbone that supports the Aloha State's economy, Hawaii's transportation system affects each resident every day. It provides for travel to work and school, visits to family and friends, and trips to tourist and recreational attractions.

Transportation connects Hawaii businesses with customers and the world. It provides the goods and services people need each day and plays a role in every product manufactured in the state and every customer served by one of the state's businesses.

With a current unemployment rate of 6.5 percent and with the state's population continuing to grow, Hawaii must improve its system of roads, highways, bridges and public transit to foster economic growth and keep businesses in the state. In addition to economic growth, transportation improvements are needed to ensure safe, reliable mobility and a high quality of life for all Hawaiians.

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act – A Legacy for Users (SAFETEA-LU), the current long-range federal surface transportation program, was originally set to expire on Sept. 30, 2009. Following a series of short term extensions, the program now expires March 31, 2012. The level of funding and the provisions of a future federal surface transportation program will have a significant impact on future highway and bridge conditions and safety as well as the level of transit service in Hawaii, which, in turn, will affect the state's ability to keep its residents safe, improve their quality of

life and enhance economic development opportunities.

An inadequate transportation system costs Hawaii residents a total of approximately \$1.1 billion every year in the form of traffic crashes, additional vehicle operating costs (VOC) and congestion-related delays.

- TRIP has calculated the total statewide cost to Hawaii's residents of driving on roads that are deteriorated, congested and lack some desirable safety features and the average cost per motorist in the Honolulu metro area. The following chart shows the cost breakdowns statewide and for the Honolulu area.

- **TRIP estimates that Honolulu roadways that lack some desirable safety features, have inadequate capacity to meet travel demands or have poor pavement conditions cost the region's average motorist \$1,527 annually in the form of traffic crashes, additional vehicle operating costs and the cost of lost time and wasted fuel due to traffic congestion.**

	VOC	Congestion	Safety	TOTAL
Honolulu per driver	\$701	\$620	\$206	\$1,527
STATEWIDE	\$485 million	\$350 million	\$255 million	\$1.090 billion

Population and economic growth in the Aloha State have resulted in increased demands on the state's major roads and highways.

- Hawaii's population reached approximately 1.37 million in 2010, an increase of 24 percent since 1990. The state's population is expected to grow to 1.47 million by 2030.

- Vehicle travel in Hawaii increased 24 percent from 1990 to 2010. Vehicle miles of travel (VMT) jumped from 8.1 billion in 1990 to 10 billion VMT in 2010.

- By 2025, vehicle travel in Hawaii is projected to increase by another 25 percent.

- From 1990 to 2010, Hawaii's gross domestic product, a measure of the state's economic output, increased by 25 percent, when adjusted for inflation.

Nearly two-thirds of Hawaii's major roads are deteriorated. Without additional funding, conditions could worsen in the future. This report contains a list of the 25 sections of roadway in the state that are the most deteriorated and in need of repair or replacement.

- According to the Hawaii Department of Transportation (HDOT), 61 percent of lane miles on major roadways are in poor or mediocre condition. A total of 47 percent of lane miles of major roadways were

rated in poor condition and an additional 14 percent were rated in mediocre condition. Seventeen percent of lane miles of major roadways were in fair condition and an additional 22 percent were rated in good condition. These include roads that are maintained by the Hawaii Department of Transportation as well as individual counties.

- Roads rated in poor condition may show signs of deterioration, including rutting, cracks and potholes. In some cases, poor roads can be resurfaced, but often are too deteriorated and must be reconstructed.

- Roads in need of repair cost each Hawaii motorist an average of \$549 annually in extra vehicle operating costs – \$485 million statewide. Costs include accelerated vehicle depreciation, additional repair costs and increased fuel consumption and tire wear.

In Honolulu, 62 percent of major roads are in poor condition, the third highest share among cities with a population of 500,000 or more.

Driving on roads in need of repair costs each Honolulu motorist an average of \$701 each year in the form of accelerated vehicle depreciation, additional repair costs and increased fuel consumption and tire wear. Honolulu's extra vehicle operating cost is the fourth highest in the nation among cities with a population of 500,000 or greater.

- The functional life of Hawaii's roads is greatly affected by the state's ability to perform timely maintenance and upgrades to ensure that structures last as long as possible. It is critical that roads are fixed before they require major repairs because reconstructing roads costs approximately four times more than resurfacing them.

- HDOT has identified the 25 sections of roadway throughout the state that are the most deteriorated and in need of repair or replacement. The list includes sections of roadway that are at least two miles in length and carry at least 2,500 average daily traffic (ADT). The top ten are listed below, with the full list included in the body of the report.

Rank	Route	Location	Length (MI)	ADT
1	Hawaii Belt Road, M.P. 19.00 to Lualaba/hoohoe (Route 19)	Hawaii	5.00	7,236
2	Interstate H-1, Kolihi to Paowaiwa (Route H-1)	Oahu	2.10	236,200
3	Kaunahala Highway, Paipala to Kailua (Route 83)	Oahu	6.02	13,689
4	Akoni Pule Highway, Maunali to Pele's Valley (Route 270)	Hawaii	4.85	2,581
5	Maunaloa Highway, Napoosipo to Keolu/Keolu (Route 11)	Hawaii	5.62	9,911
6	Hawaii Belt Road, Honolulu to M.P. 19.00 (Route 19)	Hawaii	5.75	7,236
7	Kaunahala Highway, Kailua to Polynesian Cultural Center (Route 83)	Oahu	6.85	12,579
8	Kaunahala Highway, Paipala to Cranching Lane (Route 83)	Oahu	5.80	9,963
9	Farrington Highway, Dillingham Airfield to Poole (Route 930)	Oahu	3.35	6,745
10	Hawaii Belt Road, Hilo to Paipala (Route 19)	Hawaii	4.54	16,254

Nearly half of Hawaii's bridges show significant deterioration or do not meet current design standards. This includes all bridges that are more than 20 feet in length.

- Thirteen percent of Hawaii's bridges (more than 20 feet in length) were rated structurally deficient in 2011. A bridge is structurally deficient if there is significant deterioration of the bridge deck, superstructure or substructure or if the bridge was designed to carry light loads. Structurally deficient bridges may be closed in some situations, but more often are posted for lower weight limits, which restricts or redirects larger vehicles, including commercial trucks, school buses and emergency services vehicles.

- Thirty-two percent of Hawaii's bridges (more than 20 feet in length) were rated functionally obsolete in 2011. Bridges that are functionally obsolete no longer meet current highway design standards, often because of narrow lanes, inadequate clearances or poor alignment.

- HDOT projects that the current cost to replace or rehabilitate all structurally deficient bridges in the state totals \$500 million.

- HDOT has identified the 25 structurally deficient bridges that are most in need of repair or replacement. The top ten bridges are listed below with the full list included in the body of the report.

Improving safety features on Hawaii's roads and highways would likely result in a decrease in traffic fatalities in the state. Roadway design may have been a contributing factor in approximately one-third of all fatal and serious traffic crashes.

- Between 2006 and 2010, 628 people were killed in traffic crashes in Hawaii, an average of 126 fatalities per year.

- Hawaii's traffic fatality rate was 1.13 per 100 million vehicle miles of travel in 2010, slightly higher than the national average of 1.11.

- The cost of serious traffic crashes in Hawaii in 2010, in which roadway design may have been a contributing factor, was approximately \$255 million. The cost of serious crashes includes lost productivity, lost earnings, medical costs and emergency services.

- In the Honolulu area, where there were 60 traffic fatalities in 2010, traffic crashes in which roadway design may have been a contributing factor cost the average driver approximately \$206 per year.

- Several factors are associated with vehicle crashes that result in fatalities, including driver behavior, vehicle characteristics and roadway design. It is estimated that roadway design may be a contributing factor in approximately one-third of fatal traffic crashes.

- Where appropriate, highway improvements can reduce traffic fatalities and accidents while improving traffic flow to help relieve congestion. Such improvements include removing or shielding obstacles; adding or improving medians; adding rumble strips, wider lanes, wider and paved shoulders; upgrading roads from two lanes to four lanes; and better road markings and traffic signals.

- The Federal Highway Administration has found that every \$100 million spent on needed highway safety improvements will result in 145 fewer traffic fatalities over a 10-year period.

Commerce and commuting in Hawaii are constrained by growing traffic congestion, which will increase in the future unless additional highway and transit capacity is provided.

- In 2008, 45 percent of the state's urban highways carried a level of traffic likely to result in significant delays during peak travel hours. The statewide cost of lost time and wasted fuel due to congestion is \$350 million annually.

- The average rush hour trip in the Honolulu metropolitan area takes approximately eighteen percent longer to complete than during non-rush hour. Congestion related delays cost the average peak-hour driver in Honolulu \$620 each year in lost time and wasted fuel.

The efficiency of Hawaii's transportation system, particularly its highways, is critical to the health of the state's economy. Businesses are increasingly reliant on an efficient and reliable transportation system to move products and services. Expenditures on highway repairs create a significant number of jobs.

- The Federal Highway Administration estimates that each dollar spent on road, highway and bridge improvements results in an average benefit of \$5.20 in the form of reduced vehicle maintenance costs, reduced delays, reduced fuel consumption, improved safety, reduced road and bridge maintenance costs, and reduced emissions as a result of improved traffic flow.

- Every year, \$22 billion in goods are shipped from sites in Hawaii and another \$32.4 billion in goods are shipped to sites in Hawaii. Forty-seven percent of the goods shipped annually from sites in Hawaii are carried by trucks and another five percent are carried by parcel, U.S. Postal Service or courier services, which use trucks for part of their deliveries.

- A 2007 analysis by the Federal Highway Administration found that every \$1 billion invested in highway construction would support approximately 27,800 jobs, including approximately 9,500 in the construction sector, approximately 4,300 jobs in industries supporting the construction sector, and approximately 14,000 other jobs induced in non-construction related sectors of the economy.

Two 2010 reports, one by the Treasury Department with the Council of Economic Advisers and the other by a bipartisan group of transportation experts, found that the U.S. is falling far behind internationally in providing a modern transportation system and will need to adopt a more ambitious and focused transportation program to maintain the nation's standard of living. The reports call for increased investment to relieve traffic congestion, improve freight and intermodal access, improve road and bridge conditions, improve traffic safety, and reduce emissions.

The reports found that now is an optimal time to invest in infrastructure because of reduced costs due to the economic downturn and that providing adequate resources to modernize the nation's transportation system will require increased use of innovative funding tools including vehicle-miles-traveled fees, public-private partnerships and capital budgeting.

- The report, "An Economic Analysis of Infrastructure Investment" (The Treasury report), was prepared by the U.S. Department of the Treasury with the Council of Economic Advisers.

- The report, "Well Within Reach: America's New Transportation Agenda" (The Miller report), was prepared by a group of the nation's top transportation policy experts chaired by former U.S. Secretaries of Transportation, Samuel Skinner and Norman Mineta. The group was assembled by the Miller Center at the University

of Virginia to develop solutions for the funding and planning challenges that confront the nation's transportation system.

- The Miller report found that the U.S. faces an annual funding shortfall to maintain conditions and traffic congestion levels on its transportation system from between \$134 and \$194 billion and from between \$189 and \$262 billion to improve conditions and reduce traffic congestion.

- The Treasury report found that U.S. infrastructure spending as a percentage of gross domestic product (GDP) has fallen by 50 percent and now accounts for two percent of the nation's GDP. In contrast, China spends about nine percent of its GDP on infrastructure and Europe about five percent.

- The Treasury report found that now is an optimal time to invest in transportation infrastructure because well-designed projects can provide significant, long-term economic benefits, significant needs exist and construction and other costs associated with infrastructure projects are especially low because of high unemployment and a high level of underutilized resources.

Key recommendations of the reports include:

- Adopt an integrated approach to transportation planning that includes freight and goods movement and stresses intermodal connectivity (Miller).

- Prioritize projects that provide the greatest returns in terms of future U.S. competitiveness, economic growth and employment (Miller).

- Increase emphasis on urban congestion relief, including adding additional roadway and transit capacity, making the existing system work more efficiently and adopting regional policies that may reduce some travel demand (Miller).

- Improve the delivery of transportation projects by reforming the project planning, permitting and review process to speed actual implementation (Miller).

Funding:

- Establish a National Infrastructure Bank (NIB) that would create conditions for greater private sector co-investment in infrastructure. The NIB would also perform rigorous analysis to identify projects with the greatest possible societal and economic benefits (Treasury).

- Save the public money by investing adequately in transportation to reduce delays, vehicle maintenance costs, traffic crashes and vehicle emissions (Miller).

All data used in the report is the latest available. Sources of information for this report include the Hawaii Department of Transportation (HDOT), the Federal Highway Administration (FHWA), the Federal Transit Administration (FTA), the Treasury Department, the Council of Economic Advisers, the U.S. Census, The Bureau of Transportation Statistics (BTS), the National Highway Traffic Safety Administration (NHTSA), and the Texas Transportation Institute (TTI).