

DOT News

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President Carter Urges Nation To Obey the 55 mph Speed Limit

At a White House meeting with Transportation Secretary Brock Adams, President Carter urged Americans to comply with the 55 miles per hour speed limit to save lives and reduce fuel consumption.

With Secretary Adams at the meeting was retired Air Force Lt. Gen. Benjamin O. Davis, Jr., who is DOT's national spokesman for the 55 m.p.h. education program, and National Highway Traffic Safety Administrator Joan Claybrook.

The President expressed concern that highway speeds are creeping up, accompanied by significantly higher death rates.

President Carter noted that since the lower speed limit was adopted in 1974 there have been approximately 9,000 fewer highway deaths each year.

Using 1973 as a bench mark, when 55,759 persons died in

traffic accidents, the National Highway Traffic Safety Administration (NHTSA) reported a drop of 17 per cent in fatalities in 1974. In numbers killed, this amounts to 46,629. According to NHTSA figures, 45,515 died in 1975, and in 1976, there were 46,150 road deaths.

Also of concern to the President was the increased consumption of gasoline as a result of driving at higher speeds.

"If we all drove within the speed limit we could save more than eight million gallons of gasoline a day," President Carter said. "That's nearly a third of the reduction in total gasoline consumption I asked for in my energy program."

The President urged Davis to convey his personal commitment to the national speed limit to



The national speed limit is the focus of attention as President Carter urged the nation to slow down to save lives and gasoline. From left: Benjamin O. Davis, Jr., Lt. Gen. USAF (Ret.), DOT's national spokesman for the 55 m.p.h. program, Joan Claybrook, National Highway Traffic Safety administrator, the President and Transportation Secretary Brock Adams.

the nation's governors, and said he plans to ask for greater support from those governors whose states are not complying with the law.

Following the White House meeting, Secretary Adams said he is confident that the vast majority of Americans are willing to obey the speed law, but

that it is the minority of unapprehended offenders that creates the psychological atmosphere for violations.

Adding that Extra Dimension

Secretary Adams and Joan Mondale Encourage Greater Design/Art Use in Transportation

Secretary of Transportation Brock Adams was joined by Joan Mondale, wife of Vice President Walter F. Mondale, and Nancy Hanks, chairman of the National Endowment for the Arts at a ceremony in the plaza at DOT headquarters to announce a new policy to encourage greater use of design and the arts in transportation.

Mrs. Mondale and Miss Hanks arrived at DOT on Washington's new Metrorail subway system, which is acknowledged as an outstanding example of the use of design to improve transportation facilities.

Secretary Adams said the department would soon begin reviewing environmental impact statements for transportation projects to insure that aptness of design is considered at an early stage of the planning process.

Noting that attractive design and efficiency can easily co-exist, Secretary Adams cited as examples Washington's Dulles International Airport, the Metrorail system and Portland (Ore.) International Airport.

In her remarks at the gathering, Miss Hanks said "I just cannot help noticing, too, that we spend many billions of dollars on transportation every year, on airports, vehicles, roads . . . just a small amount

of that money spent to ensure good design can give us a huge return on our investment."

Mrs. Mondale said "This is the very first program to implement the President's goal of greater awareness and sensitivity to the place of the arts in all areas of the government."

The new policy is based on recommendations of a special DOT task force headed by Charles Ansbacher, White House Fellow to the department. Mr. Ansbacher has since returned to his former position

as conductor of the Colorado Springs Symphony.

Major elements of the new policy include:

- Establishment of an annual awards program to recognize examples of excellent design.
- Encouragement of research, development and demonstration programs aimed at increasing interest in transportation design.
- Endorsement of a uniform set of easily identifiable transportation symbols.



Joan Mondale, wife of the Vice President, and Transportation Secretary Brock Adams at a recent ceremony in the departmental plaza, announce a new policy which would place greater importance on design and the arts in transportation.

'Smart Box' Gauges Impact Speeds

Determining the exact speeds at which automobile accidents occur has always been an inexact thing, an educated guess—tire marks, driver or witness statements, vehicle and property damage, etc. have been the usual guidelines.

Stanley H. Backaitis, a mechanical and automotive engineer in the National Highway Traffic Safety Administration (NHTSA), has taken the first steps toward changing all this.

He is developing a device—or instrument—about the size of a small camera, that records impact speeds precisely. Moreover, it does this without the aid of electrical or electronic devices and can probably be manufactured to sell as low as \$4 to \$6 per unit.

He calls it "NHTSA's little smart box" and that is as good a name as any.

Its construction is extremely simple and straightforward. The heart of the system is a ball enclosed in a glass tube. The ball is held at one end of the tube by a spring.

When the vehicle is accelerated and decelerated slowly, such as for driving and braking, the ball remains motionless, held by the spring through a small mass. When the vehicle decelerates abruptly, as in a crash, the small mass moves rapidly away, freeing the ball for forward travel. As the ball moves, it displaces the air from the forward part of the tube to its rear.

Following the ball is a small quantity of much smaller balls which wedge the larger ball in place in the tube at the precise instant that forward motion stops.

A scale on the side of the housing, calibrated in miles per hour, and related to ball travel, permits the readout of the crash velocity.

Backaitis sees wide application of the rugged, 7-oz. device for crash data collection. Such collection is not possible and economical with today's instruments. He forecasts its application in motor and aircraft fleets, transportation of goods, design of transportation equipment, cargo container construction, and even by the insurance industry.



Stanley Backaitis and the 'smart box' he is developing which will enable accident investigators to determine accurate impact speed data.

Will There Be Private Cars in 2000 A.D.?

R&D Director Looks Into the Automotive Future

Why is DOT concerned with what will happen to transportation 25 years from now?

By the year 2000, America's population and GNP will both increase considerably. Like it or not, this means that our transportation system will expand. A great deal of money will be spent on transportation. How productive and efficient those investments are 10 to 20 years from now will depend a lot on the research and development we do today. We think about the future so we can shape our R&D programs to give us the biggest payoff.

Will the automobile be relied on as heavily in the year 2000 as it is today?

The trend from the past 25 years indicates that cars will continue to be used by most Americans. Many people don't think that this trend is desirable, although most people want to have their own car. One of our conclusions is that the dominant mode of transportation in the year 2000 will be the automobile, but this doesn't mean that other modes aren't impor-

tant. Many people—the old, handicapped, children under 16—can't drive cars by themselves. It's not a question of the car versus some other form of transportation, but the appropriate use of the whole spectrum of transportation. The trick is matching the transportation mode to the needs of the people. A DOT employee might use the Metro, a bus, a bicycle, an elevator, and two feet to get to work each morning; we're trying to identify the whole system that will provide the right mix.

What's the major problem with private cars in urban areas?

The basic problem is that no matter how sophisticated an automobile is, it takes up a relatively large amount of space per passenger carried. It is therefore better to avoid the use of cars in high-density areas. Buses and other forms of paratransit carry more people for the amount of roadway they take up.

Does suburban living, which many more Americans are



now choosing, require the automobile?

Yes, unquestionably. The suburbs are by design low-density areas and therefore cars are the most efficient way to get around. Of course, the young, the old, and the handicapped suburbanites need some form of paratransit to take them to work, school, or shopping. There is an increasing demographic shift in America from the high-density cities of the Northeast to more expansive urban areas in the West and Southwest—the so-called Sunbelt. As more people live in suburban areas, more cars will be used; likewise, more people who can't use cars will have to be provided for.

What about the use of the automobile for so-called middle distance trips 100 to 300 miles which are too short to fly cheaply but too long to drive quickly?

These middle distance trips are a good opportunity for improvement in service and clearly an example of the type of trip which cannot be best travelled by car, but I don't know yet

Jerry Ward is the Director of DOT's Office of Research and Development Policy. Last March he headed a group which published *Toward 2000: Opportunities in Transportation Evolution*, a study which contained a chapter on the future of the automobile, which is the topic of this Q&A session. Mr. Ward received degrees from the California Institute of Technology in physics and from UCLA in business economics before he came to DOT in 1972.

what can be found in the way of a solution. We have some ideas, but they need more work.

How will cars themselves change?

Cars have already started to become smaller, more energy-efficient, less polluting, and safer. With the increase in the use of electronics in cars of the future—both in the car and in its production—it is possible that cars will become cheaper too.

With all the improvements, is it likely that cars of the future will be faster than today's cars and still be safe?

Yes, technically cars will be able to go faster in the future without excessive risk because of better traffic flow systems and perhaps electronic guidance. However, the faster a car goes the more fuel it will use and the bigger an engine it will require, so there's a trade-off. Energy consumption is the key to speed. With gasoline in uncertain supply, it may be wise to keep automobile speed down for a long while.

Are electric cars the answer to this energy problem?

The problem with this power source is that with present technology, battery efficiency is lousy. An EPA study notes that it presently requires up to 500 pounds of batteries to provide the mechanical energy equivalent to one gallon of gasoline. Thus any car with battery propulsion is somewhat limited in its range without an "energy fill-up." My own guess is that there will be engines that run on some sort of liquid fuel for a long time, but with special applications of cars powered by other sources.

Is it just science fiction, or is there a real possibility of self-driving cars in the not-so-distant future?

The Jet Propulsion Laboratory in Pasadena recently was asked to find out what technology would be needed to create a car that would drive itself as well as we drive it now. They concluded that if technical progress in electronics and sensors we have seen in the past decade continues, then such a development may become practical. The real advantage of such a car is that driver proficiency would no longer be a consideration; not only would the various groups of people who can't drive cars be accommodated, but the problem of drunk drivers would be reduced. It's hard for some people to imagine such a system in the future, but then 25 years ago people couldn't imagine space travel and high speed computers either. I don't reject the possibility of self-driven cars by, say, 1990 although it's still too early to bet on it.

Dangerous Engine Cooling Fans Trigger NHTSA Auto Recall

As a reader service, DOT News will publish notices as they occur of DOT-initiated automotive recall programs and investigations of alleged vehicle defects.

The National Highway Traffic Safety Administration (NHTSA) has taken the following actions:

- Published a warning that some Ford, Mercury and Lincoln passenger cars and Ford light trucks made between 1970-1977 have possible dangerous defects in the engine cooling fan. Ford has advised NHTSA it intends to recall certain 1972 Lincolns, Torinos and Montegos equipped with air conditioning and 302, 351 and 400 CID engines. (Case: C7-24).
- Is investigating electrical fires in the center console in 1969-72 Toyota Corona Mark

II's with automatic transmission. NHTSA has received 22 reports of fires and estimates that 100,000 vehicles may be affected. (Case: C7-23).

- Announced that Volkswagen is expected later this summer to notify owners of 1970-74 Porsche 914s to bring their cars in for correction of a fuel system hazard. NHTSA has 17 complaints from Porsche 914 owners about fuel-fed engine compartment fires. (Case: C7-11).
- Is checking into charges that Chrysler's 1975-77 Dart, Valiant, Aspen and Volare cars are subject to stalling under dangerous circumstances. NHTSA has 114 owner complaints reporting the stalling problem. Two accidents have been attributed to this cause. (Case: C7-22).

Roving Eye Reports



Climbing the Walls at DOT

No, the DOT headquarters building is not being dismantled, marble panel by marble panel. Quite the contrary.

The two men who have been gliding up and down the outside walls of the Nassif building, on the street and inner courtyard sides, are removing certain of the 75-pound Italian marble panels which make up the building's exterior as a safety precaution.

"A precaution against a highly unlikely event," says facilities management chief Paul Long, who has overall responsibility for the operation of the building, which the government leases from Nassif Associates. The unlikely event he refers to is the separation of a stone panel from the building facade.

Even if one did fall it probably wouldn't strike street level because of the "skirt" which projects some three feet around the inner and outer perimeter



of the building at the second floor level.

The exterior of the building does not carry any of the weight of the structure—it is merely decorative, the frosting on the reinforced concrete skeleton which is the real building.

Technically, such construction is called "curtain wall" and each panel is mounted independently. Thus, there is no cumulative load, with the weight of panels higher up in the column being borne by those further down. The panels are linked, however, by metal dowels which aid in their vertical alignment.

The panels being removed have warped, due to a number of causes, including being mounted too closely, drastic temperature changes, and the normal stresses imposed on a building as it settles into its permanent configuration.

New marble has been ordered from the original quarry in Italy, the better to match the coloration of the building. In the meantime, plywood panels have been fitted to fill the gaps, a precaution which excludes birds from setting up housekeeping—and preventing the building from sounding like a piccolo when the wind blows.

How to Save Gas, Reduce Pollution and Ride in Comfort too!

The Department of Transportation's longest-running vanpool, which has rolled along steadily for 10 years and is currently using its fourth vehicle, starts every work day when Robert Zean pulls away from his Vienna, Va. home in a 12-passenger van.

Maneuvering the van in and out of Vienna side streets and along Route 123, Zean picks up most of the vanpool before he reaches the house of co-worker James Nogle, who owns the van. Nogle then takes over the driving and stops for the last two vanpoolers.

On a typical morning, eight or nine of the 12-member vanpool ride in with Nogle as normally several persons are either on leave or traveling.

A rider pays \$1.75 for each round trip. Over the years the vanpool has found the daily payment to be an easier system than a weekly or monthly charge.

Zean, who is a division chief in the Federal Highway Administration's office of management systems, starts the trip because he lives 14 miles from DOT Headquarters, the furthest away of any vanpooler.

By the time the van reaches Tysons Corner it has already covered 12 or 13 miles in the process of picking up passengers at their front doors. The vanpool travels a total of about 30 miles before Nogle parks the van in the Nassif Building's garage, about one hour and 15 minutes after it starts out.

Most members of this vanpool do travel more miles than they would driving alone to DOT, but the 60-mile round trip compares to about 450 total miles if each person used a car. The vanpool still runs even if that day Nogle, for some reason, is not commuting to his job in FHWA's office of program review and investigations. Either Zean or Andrew Wancik would do the driving.

At least seven other vanpools are currently operating in DOT, says Steve Baluch, vanpool coordinator and member of a DOT task force created to encourage vanpooling among the department's employees.

It is estimated that a typical vanpool carrying 10 persons removes six cars from commuter traffic and saves about 3,750 gallons of gasoline a year. (A van gets between 9 and 15 miles per gallon.) Depending on the distance traveled, a vanpooler also can save from \$130 to \$750 a year.



by Howard Coan

Howard C. Hanna, FHWA, leaves his home, headed for the van where James Nogle waits for him. Hanna is next-to-last vanpooler to be picked up in the morning. Right: Andrew Wancik reads the "local paper" with Jim Carney sneaking a peek. Below: Hanna, Earl Newton (center) and Chet Phillips, polish up their bridge game.



Members of the Employees Recreation Association, which is assisting DOT in the vanpooling effort, can buy vans through the United Buying Service. With participating dealers selling vans at a fixed price above dealer cost, a 12-passenger van will cost about \$8,000 and a 15-passenger van \$8,500, including title fee and taxes.

DOT also is checking on possible fleet purchasing arrangements, which may reduce the

price even more, says Baluch, a highway engineer in FHWA's urban planning division. He previously has coordinated FHWA ride-sharing programs that permit states to acquire vans.

Baluch received nearly 400 replies to the vanpooling survey published May 31 in Southwest Seventh. About 100 of these people said they would be interested in owning and driving a van.

Departure from DOT headquarters building garage is a precision operation requiring a minimum of time and lost motion. Below: DOT vanpooling task force: Don Morin; Perry Kent; Steve Baluch, all of FHWA; and Jim Andrews, OST. Missing from the photo is Jim Bautz, UMTA.

The survey noted that vanpooling was primarily for long-distance commuters and not intended to compete with Metro bus service. Those persons who attended follow-up meetings in the three DOT buildings on van ownership and vanpool formation live outside the Beltway in areas without convenient public transportation.

Some of these employees live as much as 60 miles from DOT in such towns as Annapolis, Columbia and Frederick, Md. and as far south as Fredericksburg, Va.

"We're hoping to start a few vanpools by October," Baluch says. "It takes 60 to 90 days for delivery of a van."

Baluch tells potential vanpoolers that he prefers one-person ownership, even though a non-profit vanpool corporation is a possible alternative.

"It's a lot simpler for one person," comments Baluch, who commutes by bus, carpool and, occasionally, bicycle from Adelphi, Md., but would be willing to buy a van if he could form a vanpool in his home area. "Joint ownership is more complicated. Everything is still decided by the group but it is clear that one person is the driver, owner and takes care of the van."

If a vanpool is formed, the Transportation Federal Credit Union will finance the van purchase for qualified applicants. Credit is available at 9 $\frac{3}{4}$ percent with four years to repay and no money down. Under those terms, the monthly payment on an \$8,000 van would be \$201.94.

A 25 percent down payment reduces the interest rate to 9 percent with 3 years to repay the loan.

Vans also can be leased for three years with monthly costs ranging from \$205 to \$230, depending on the van and the contract terms.

The DOT task force recommends certain options on a van, including a minimum V-8, 350 horsepower engine, automatic transmission, air conditioning with a rear auxiliary unit, rear door with an interior handle, heavy-duty battery, 30-gallon fuel tank, AM-FM radio and tinted glass.

Taking fixed and operating costs into consideration, the task force developed an estimated monthly charge for vanpoolers in Maryland and Virginia. For example, a 12-passenger vanpool traveling 80 miles daily round trip would cost each rider \$40.50 a month. Fourteen riders would pay \$30.50 for a 60-mile round trip.

Vans must be operated on a non-profit basis to avoid regulation as a common carrier.

(See VANPOOL, p. 4)



William M. Cox

Second in a series of articles introducing new members of the Department of Transportation's Executive Staff



Joan Claybrook



Chester Davenport

Who's Who on the Adams Team at DOT

William M. Cox, who was sworn in as Federal Highway Administrator on April 7, 1977, is a former top executive of an over-the-road common carrier operating approximately 700 truck-trailers.

He has also been special assistant to Kentucky Governor Julian M. Carroll, and has served as president of the Kentucky Motor Transport Association and as vice-chairman of the Kentucky Public Service Commission.

Looking to the not-too-distant future, Cox is sure the energy crisis will cause a major change in his agency's mission.

"Within the next five to ten years," he said, "this agency will change from one whose primary concern is new construction to one emphasizing research and development and adding refinements to the Interstate highway system. But there will always be a need for some new highway segments."

He said that until the federal government establishes its national energy policy it will be impractical to define a new re-

lationship between the Federal Highway Administration and the state highway departments.

Cox, who is 35, is a native of Madisonville, Ky. He received a B.A. in political science and history from the University of Kentucky in 1965.

Joan Claybrook became National Highway Traffic Safety Administrator on April 8, 1977.

Prior to her appointment she had been director since January 1973 of Congress Watch, a citizen group interested in enactment of public interest legislation.

Claybrook brings a substantial amount of experience in motor vehicle safety to her new job. From September 1966 to early 1970 she was special assistant to Dr. William Haddon, director of the National Highway Safety Bureau, and later, to Haddon's successor, Dr. Robert Brenner.

The Safety Bureau became NHTSA in January 1971.

After leaving the federal government in 1970, Claybrook worked for Ralph Nader's Pub-

lic Interest Research Group. During this time she directed Nader's Congress Project, which profiled 484 members of Congress.

Claybrook's federal career began in October 1959 when she became a research analyst in the Social Security Administration. In November 1965 she accepted a Fellowship in Congressional Operations with the American Political Science Association.

Born in Baltimore, Claybrook received a B.A. in history from Goucher College, Baltimore, in 1959. She received her law degree from the Georgetown Law Center, Washington, D.C.

Chester Davenport is the new Assistant Secretary of Transportation for Policy, Plans and International Affairs.

After the 1976 election, he was in charge of the Carter transition team dealing with housing, urban affairs and transportation. His new job provides him with the opportunity to put his recommendations into effect.

DOT Magazine, Annual Report Win Honors for O'Hara and Latta

Two Department of Transportation publications have received awards from the foremost organization of government writers and information officers.

Edward O'Hara, editor of Transportation USA, DOT's quarterly magazine published by OST's Office of Public Affairs, won second place for periodicals with a professional staff of one to three persons, and an honorable mention was given in the annual reports category to Harry Latta, an employee of the same office, who edited DOT's ninth annual report.

The National Association of Government Communicators handed out prizes in 16 different categories ranging from hardcover books to folders and news releases at its annual Blue Pencil awards luncheon.

The contest judges commented that Transportation USA had high-quality writing and content. Its imaginative and eye-pleasing design also impressed the judges.

O'Hara's contest entry was the fall 1976 issue which included articles on such varied topics as vanpooling, the St. Lawrence Seaway and the Coast Guard's scientific efforts to identify oil polluters.

He was assisted in production and editing by Barbara Danahy.

Copies of Transportation USA and the annual report are available to DOT employees in Room 9430, Nassif Building.

Vanpool—from page 3

Last year a new Maryland law created a special registration procedure for company vanpools, but it is still not clear how the provision applies to individuals who own vans used in vanpools.

In Maryland the owner also

must pay an annual \$60 registration fee, have the van inspected yearly and be insured to five times the state's minimum level of coverage.

In the past, insurance for company vanpools presented a problem because there was no

way to determine the amount of risk for vanpools. A new rating structure developed by the insurance industry now puts jointly-owned vans in the lowest-rated commercial auto classification, along with small delivery vehicles.

An individually-owned van is considered another vehicle on the family insurance policy. But since the vanpool driver is taking on greater risk by carrying more passengers, the liability coverage should be increased.

DOT recommends a \$250,000 limit for injury to one person and \$500,000 for multiple in-

juries, with higher limits if they are available. The extra insurance costs between \$300 and \$700 but all of that is recovered by sharing vanpool expenses.

Bauch says he hopes at least 10 more vanpools will be operating by next summer. These long-distance commuters will find it a cheaper and more fuel-efficient way to go.



DOT's oldest rolling vanpool pauses in a typical tourist pose enroute home while a member takes a photo of the Capitol. In business for 10 years, the vanpool is as old as the DOT.

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