



Donald W. Bennett

Bennett Sworn In As FRA's New Chief of Safety

Donald W. Bennett, Federal Railroad Administration chief counsel since October 1972, has been sworn in as the agency's associate administrator for safety.

Bennett served as chairman of the FRA's railroad safety board, which acts on railroad requests for waivers on regulations, and as a member of the safety committee, advising the administrator on safety regulatory matters.

He has also been active in the fields of federal administrative law, federal court litigation. (See BENNETT, p. 2)

FRA Establishes New Office

Bolton Heads Minority Business Center

Kenneth E. Bolton has been named the first executive director of the Federal Railroad Administration's Minority Business Resource Center.

The center was established to provide minority firms with

Cost Cutting Campaign

OST Tightens Restrictions On GSA Shopping Plate Use

With costs for stationery, office supplies and various other categories of merchandise running between \$7,000 and \$9,000 a month, the office of administrative services has issued instructions sharply curtailing purchases at the GSA retail store.

OST Notice N-4230.1 applies to personnel in the office of the secretary, Washington headquarters, secretarial representatives, regional audit staffs, and the materials transportation bureau (including field locations).

Under the new procedure, shopping plate use is restricted to the purchase of day-to-day office supplies. Type, quantity, and price (if known) of items to be bought must be itemized on a prescribed form and approved by a designated person in the office of use.

The OST notice contains two lists, one itemizing supplies which require written justification for purchase, the other lists items that may not be purchased at all.

After purchase, the cash register receipt is returned to the approving official who will as-

sure that the register tape and the approved shopping list are consistent. Corrective action will be taken if they are not.

Typical items requiring written justification are: any books, atlases, dictionaries, etc.; electric pencil sharpeners; week-at-a-glance calendars; drinking cups; hand soaps; whisk brooms; desk trays; fingerprint kit; spray paints; hand towels; any type of briefcase; any type of batteries; carafes; chair pads; picture frames; facial tissues; coat hangers; and drafting type items.

On the prohibited list are: any type of furniture, equipment or office machines; heaters; rental office furniture, equipment or office machines; large dictionaries; any type of electrical supplies, i.e., extension cords, light bulbs, insulation tapes, etc.; any type of tools; any type of first aid kits; and wall clocks.

Also: desk lamps; air fresheners; padlocks; fans; any type of patent medicines, i.e., aspirins, etc.; desk pad sets; staple guns; and IBM electric typewriter elements.



Mrs. Loretta Shogren accepts congratulations from RADM Robert A. Duin, U.S. Coast Guard Comptroller (left) and CAPT Alban Landry, Deputy Comptroller, for her rescue of a 7-year-old boy from drowning. Mrs. Shogren is a staff accountant with the Coast Guard.

Coast Guard Staff Accountant Saves 7 Year-Old from Drowning

Mrs. Loretta Shogren, a staff accountant at Coast Guard headquarters, is not all that fond of cutting the grass, preferring to leave that chore to her 15-year-old son.

But because she was doing so, 7-year-old Bradley Allen Kosutic is alive.

Mrs. Shogren was mowing the front lawn of her home near Bon Air Park, Arlington, after work, when 7-year-old Cindy Nomina burst on the scene screaming that a boy had fallen into Four Mile Run.

Quick to grasp the urgency of the situation, Mrs. Shogren shouted to her son Peter to call an ambulance and then ran to the stream. When she got there Brad was floating face down in a deep pool in the normally shallow stream.

Without hesitation, Mrs. Shogren raced down the embankment and charged into the water, which instantly grew alarmingly deep.

Gesundheit

Sick Leave Has Two-way Payoff

"Sick leave is money in the bank," says Hobart L. Douglass, chief of the OST personnel policy division.

The average government worker could not afford to buy sickness and accident insurance that would pay his or her full salary for a year-and-a-half at, say, age 50, he said.

But that is exactly what sick leave can offer if it is used in real emergencies, and not for a casual day off. The legitimate use of sick leave—earned at the rate of 13 days a year—is wise and is encouraged.

If an employee is fortunate, and can save sick leave and

"It was deep, it was over my head there," she said, noting that she is 5 feet 8 inches tall.

Not a good swimmer, by her own account, she managed to tow the limp 42-pound boy to the shore but was too exhausted to lift him completely out of the water.

Instead, she put him on some stones and attempted to administer mouth-to-mouth resuscitation. Prevented from doing so because Brad's teeth were clenched together, Mrs. Shogren pumped on his back, hoping to restore breathing.

"Water did come out of his mouth," she said. "By the time the rescue squad got there he was just starting to move, but he was not conscious."

The rescue units, summoned by Mrs. Shogren's son administered oxygen and took him to Arlington Hospital.

The following day he was back at home with no ill effects. "Eating chocolate chip cookies," reported a local paper.

permit it to accumulate, his benefits mount as follows:

10 yrs.—130 days or 1,040 hrs.
15 yrs.—195 days or 1,500 hrs.
20 yrs.—260 days or 2,080 hrs.
25 yrs.—325 days or 2,600 hrs.
30 yrs.—390 days or 3,120 hrs.

But that is only part of the story, Mr. Douglass said. He pointed out that accumulated sick leave at time of retirement gives employees additional credits and adds to the annuity.

Using the table above, he said, an employee retiring with 30 years of "healthy" service will earn a full 3 percent more annuity than an employee not able to save sick leave.



Kenneth E. Bolton (left), with Secretary of Transportation William T. Coleman, Jr., and Berkely G. Burrell, president of the National Business League after Bolton was sworn in as the first executive director of the Federal Railroad Administration's Minority Business Resources Center.



The energy conservation team at the Transportation Systems Center, Cambridge, Mass., that shaved TSC's electrical usage by 45.9 percent last year. The saving translates into 397,000 gallons of oil. Regional administrator of the Federal Energy Administration (left) presents FEA's excellence award to Lawrence E. DiVenuti, facilities chief; Dr. Arthur S. Priver, energy coordinator; and TSC deputy director, Robert K. Whitford.

General Sawyer To Direct Rail Corridor Rebuild

Maj. Gen. Kenneth T. Sawyer (USA, Ret.) has been appointed director of the recently organized Northeast Corridor Project Office in the Federal Railroad Administration.

In his new post he will direct the \$1.75 billion federal intercity rail passenger service improvement program along the Boston to Washington route.

The five-year project is designed to upgrade track, rebuild bridges, modernize and extend electrification and restore railroad stations in the corridor.

Prior to his FRA appointment, Sawyer, who retired from the Army in 1974, was a senior project manager for the Ralph M. Parsons Company, an international engineering and construction firm, in Pasadena, Calif.

While in the Army Sawyer had served as district engineer for Alaska; commander of port construction in Qui Nhon, South Viet Nam; administrator for \$1.5 billion federal civil works, real estate and military construction programs in five Pacific Northwest states; and logistics responsibility for a major Army Command.

A native of Menominee, Mich., the 56-year-old Sawyer received his B.S. from West Point in 1943, and his M.S. in civil engineering from the State University of Iowa in 1948. He is a 1956 graduate of the Command and General Staff College, and of the U.S. Army War College in 1960.

Sawyer's military awards include: Distinguished Service Medal, Silver Star, Bronze Star, Air Medal, Purple Heart, and the Korean Medal of Merit.

He is married to the former Helen Lokke. They reside with their two children in Arlington, Va.

Free Booklet Lets You Know Before You Go

Shifting from full employment to retired status requires planning. The transition is a bit more complicated than clearing out your desk, or turning in your tools.

A free booklet, *Your Guide to Federal Retirement*, is full of useful advice and valuable tips to ease the switch from active employment to retirement life.

For a copy write: Pre-Retirement Planning Office, NARFE Headquarters, 1533 New Hampshire Ave., N.W., Washington, D.C. 20036.



Assistant Secretary of Transportation William S. Heffelfinger congratulates RADM Robert A. Duin on the Coast Guard's capture of number one place in DOT in the 1976 U.S. Savings Bond drive. Coast Guard program coordinator LT John K. Miner looks on. With 86 percent participation, the USCG edged Transportation Systems Center, which scored 78.4 percent. Overall, DOT had 80.84 percent participation.

DOT Ends 1976 Bond Campaign By Topping Last Year's Score

The Department of Transportation ended the 1976 Saving Bond campaign with the highest rate of participation so far for DOT, departmental bond drive coordinator Bradford R. Stanerson said.

While this year's margin is not great, 80.84 percent, compared to 80.78 percent in 1975, it is a considerable leap from 74 percent tallied in 1974.

Leading the parade this year, as it has in years past, the Coast Guard, with 86 percent participation edged out the Transportation Systems Center which had 82.4 percent.

The Federal Aviation Administration scored 78.7 percent; St. Lawrence Seaway Development Corp., 76 percent; National Highway Traffic Safety Administration, 75 percent; Materials Transportation Bureau, 75 percent; Federal Highway Administration, 72.8 percent; Federal Railroad Administration, 64.1 percent; Office of the Secretary, 63.3 percent; and Urban Mass Transportation Administration, 47.4 percent.

There were 6,386 new bond purchasers this year, and 4,163 persons increased their bonds.



Gregory G. Gorak (left) receives a plaque honoring him as the nation's number one flight instructor for 1975 from Federal Aviation Administrator John L. McLucas. In addition to the plaque, Gorak received \$1,000 from the Aircraft Owners and Pilots Association and additional prizes from aviation industry sponsors. Gorak, whose credentials include an airline transport pilot certificate, instrument and ground instructor ratings in addition to his flight instructor's license, was selected from a group of 11 regional winners.

Before You Hit the Vacation Trail Check Out Your Trailer, NHTSA Warns

With the vacation season at hand the National Highway Traffic Safety Administration urged owners of recreational travel-trailers to make immediate inspection of trailer weight and load distribution.

In a special advisory NHTSA warned that serious accidents can occur due to failure of travel-trailer suspension systems.

Failures can occur, the advisory notes, because of: overloading; potentially poor road performance of trailing and towing vehicles when overloaded; and the load in the trailer not being properly distributed.

NHTSA took the action because some travel trailer manufacturers — even those with models susceptible to overload — have failed to alert owners to the overload danger.

Several makers, however, including Blazon Mobile Homes, Coachman and Shasta, have begun instructional programs so that owners can recognize the overloading danger.

The advisory cautions that many travel-trailer owner's manuals, particularly those pertaining to trailers several years old, do not provide adequate

instruction to owners with respect to load distribution, tongue-weight, and the need for regular weight checks.

Thus, for their own protection, owners must learn how to safely load their own recreational vehicles. The advisory indicated that many owners incorrectly load their travel-trailers and place either too much or too little tongue-load on the rear axle of the towing vehicle.

NHTSA surveys indicate that 59 per cent of trailers surveyed carried tire pressures below the recommended maximum, while at the same time, 34 per cent were loaded beyond the rated capacity of the trailer suspension system.

Large single-axle trailers — those measuring 15 feet or more in length — are especially susceptible to overload, NHTSA said, because some manufacturers build several sizes of trailers on the same running gear.

The NHTSA urged owners who have suspension problems to write to: National Highway Traffic Safety Administration, Office of Consumer Services, 400 Seventh St., S.W., Washington, D.C. 20590. Or call on the agency's toll-free auto safety hotline: 800-424-0123.

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tion, and has specialized expertise in many legal facets of railroad operations.

"Mr. Bennett has the perfect mix of experience to handle well this extremely important position," FRA Administrator Asaph H. Hall said. "He has the railroad background and has also, as FRA chief counsel, developed many of the safety regulations he must now enforce."

Bennett received his BS degree in business administration and his JD from Ohio State University. He served from

1951 to 1953 in the U.S. Marine Corps.

Bennett, a native of Columbus, Ohio, has been admitted to practice before many federal and state courts, including the Supreme Court of the United States. He is a member of the American Bar, the Ohio State Bar, and the Federal Bar Association.

Bennett is married to the former Joan E. Riedel, also of Columbus. They and their three children live in McLean, Va.

Action at Sea

Guarding U.S. Sea Resources

Commercial fishing off the Atlantic shore is not to be confused with deep-sea sport fishing. Commercial fishing is hard, dangerous work demanding the best in ships and seamen.

All ways and always.

When illegal fishing methods and machines are added to the hazards of the sea, the livelihood of the 70,000 men who fish these waters from Maine to North Carolina is in danger.

But there is an even more ominous threat—reckless fishing practices by sophisticated foreign fleets threaten to turn the abundant east coast fishing grounds into an undersea wasteland.

Making sure this doesn't happen is a major mission of the U.S. Coast Guard, working in conjunction with the 18-nation International Commission for Northwest Atlantic Fisheries (ICNAF). Fished according to the rules laid down by the ICNAF, the area can provide a steady yield of seafood without depleting species.

Together, the Coast Guard and the ICNAF enforce a 1966 law which establishes a nine-mile contiguous fishing zone (CFZ) beyond the long-established three-mile territorial limit. Foreign vessels are thus prohibited from fishing within 12 miles of the U.S. coast.

Temptation Strong

But some of them do. In 1975 two Polish vessels were seized by the Coast Guard off the east coast—one off New York, the other off Massachusetts. The ships were released after the owners paid a total of \$745,000 in penalties.

In the Atlantic during 1975 the Coast Guard made some 600 boardings of foreign fishing vessels and seized 10 of them for violating U.S. fishing laws.

Coast Guard Atlantic Area Headquarters in New York is the operational command for the east coast fisheries mission, and from there units receive their patrol orders.

The regions usually covered are the 12-mile limit; George's Bank, an 18,000 square mile area off the New England coast; Brown's Bank, an area of 2,000 square miles reaching north to Nova Scotia; and a 200-mile-long "banana shaped" section 60 miles offshore from the eastern tip of Long Island, N. Y., to the Virginia Capes.

Capt. Charles F. Juechter, Atlantic Area operations officer said, "These locations are popular fishing sites because favorable currents and the irregular contour of the ocean floor

makes them ideal fish habitats."

The 12-mile limit is likely to be breached at certain times of the year when the fish are running close to the shore. "Some violations are intentional, others are not," Captain Juechter said.

During these periods Coast Guard surveillance concentrates on close-shore fishing activity. At night, when the odds favor a fishing vessel from being caught, cutters will frequently run "dark" and maintain radio silence to detect violators. These tactics pay off—in 1974 and 1975, a total of five trawlers were seized fishing inside the Atlantic CFZ.

Civilians can play a part in protecting the fishing resources off the Atlantic coast. Anyone sighting a foreign vessel fishing inside the CFZ should contact the Coast Guard as soon as possible. The Treasury Department will pay a \$5,000 reward for information leading to the arrest and conviction of violators.

At Sea

Cdr. Roger P. Hartgen is the commanding officer of the cutter *Duane* (home port, Portland, Me.), which patrols the Atlantic fishing grounds. He said, "On the average two-week patrol we will board anywhere from five to 15 foreign ships, depending on weather conditions and the concentration of vessels."

The *Duane's* skipper added that in his experience he has found the masters of foreign trawlers "basically honest and trying to do their jobs."

Boarding fishing vessels in the North Atlantic, especially during winter, takes skilled seamanship and teamwork. The cutter's small boat, which is used to ferry the boarding party, must be lowered and retrieved with precise timing to avoid injury.

Once on board, the inspection team, usually consisting of three men, examines the catch in the cargo spaces, looks over the contents of the last haulback on deck, gauges the size of the net's mesh, and leaves through the fishing logs.

When violations of international fishing agreements are found they are reported to the flag nation of the vessel through diplomatic channels for action. In cases where U.S. law has been violated there have been several instances where the master of the foreign vessel has been relieved of his command.

American lobster and certain crab species are among the resources of the continental shelf protected by law. Foreign vessels taking these protected species are liable to seizure. Penalties can lead to loss of



The 205-foot medium endurance cutter TAMAROA knifes through heavy seas on fishery patrol off the Atlantic coast. TAMAROA has a maximum range of 15,000 miles and has a crew of seven officers and 65 seamen. Her home port is Governors Island, N. Y.

Launching a boat, even in calm seas, demands a high state of training as demonstrated by this boarding party from the cutter VIGOROUS.



The VIGOROUS' surf boat crashing through high seas enroute to boarding a foreign trawler for inspection. Alongside the USSR ship A. TAMMSAARE, Coastguardsmen from the VIGOROUS clamber up boarding ladders. Aboard, they will inspect type of fish caught and fishing gear, among other things.

ship, loss of cargo, and fine and imprisonment for the master.

The temptation is strong. The cutter *Vigorous* (home port, New London, Conn.) seized three trawlers last year off Nantucket Island for failing to return lobster to the sea that had been caught up in their nets. The result: a total of \$485,000 in penalties for the owners to get their ships back, and one master was fined \$5,000.

The Coast Guard also investigates "gear conflicts." These are usually complaints by American lobstermen that a foreign vessel has damaged or caused the loss of their traps by dragging its nets through the fixed gear.

(See ACTION, p. 4)



The TAMMSAARE, seized as a consequence of the search, enters Boston harbor, trailed by the VIGOROUS. In 1975 the Coast Guard made some 600 boardings of foreign vessels and seized 10 of them for fishing violations.

Report from the Underground

DOT Program Seeks to Cut Tunneling Costs

Russell K. McFarland has been with the Department of Transportation in the Office of Systems Engineering, Office of the Secretary since late 1972. Prior to coming to DOT, he worked for 10 years in engineering systems analysis with the Bell Telephone Laboratories in New Jersey and a subsidiary, Bellcom, Inc. in Washington, D.C. Mr. McFarland is a native of California and attended the University of California at Berkeley where he obtained his B.S. and M.S. in civil engineering.

Mr. McFarland, what is the DOT tunneling program?

The DOT tunneling program, started in 1973 by the Office of the Secretary, seeks to reduce the high cost of underground construction. This program brings together the specialized tunneling skills developed over the years by the Federal Highway Administration, the Urban Mass Transportation Administration, and the Federal Railroad Administration to solve problems common to all.

For example, because of its experience in soil and rock mechanics, the FHWA has chief responsibility for subsurface site investigations, a problem that will have direct payoff to UMTA and FRA, as well as FHWA.

What makes this program different from other DOT R&D projects?

First, this cooperation between administrations is unique in DOT, where traditionally each administration has separately defined and conducted its own R&D on the basis of specific needs. Second, program goals and objectives have been established to show performance and accomplishment as a cooperative program. By this I mean we have near- and long-term payoffs.

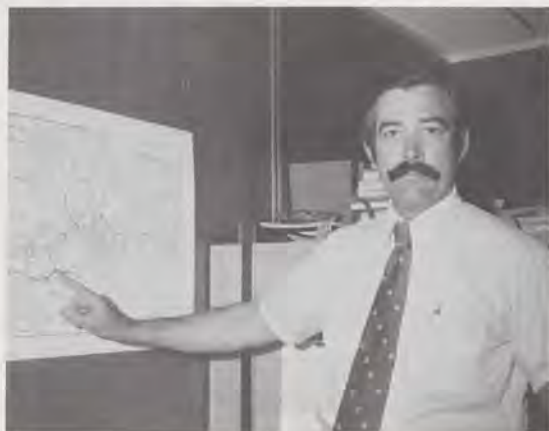
By concentrating the efforts of each administration in specific technical areas, we are able to achieve early results by one administration, and provide justification for long-term R&D in another.

What are the tunneling program goals and objectives?

Four goals were established in 1973:

- Reduce construction costs by 30 percent
- Increase construction rates by 100-200 percent
- Educate planners to understand advantages offered by the proper use of transportation tunnels
- Assure transportation tunnels will be used wherever their use provides an optimum solution to a transportation problem.

We have attempted to use R&D funds as would a private firm. That is, to invest the



money in specific items based on possible payoff through cost reduction in future construction.

For example, we have placed high priority on reducing the cost of tunnel liners. Currently, the Washington Metropolitan Area Transit Authority is using steel liners in Metro construction which cost more than \$1,200 per foot of tunnel.

Precast tunnel liners can be constructed for something between \$400 and \$600 per foot. Hence, if the precast concrete liner can be successfully used in place of steel, we can save at least \$600 per foot of tunnel.

The tunneling program has been going for three years now, what has been the results?

We have learned a great deal about the underground construction industry, and we can identify cost-effect change in construction that can be related directly to our R&D. Through the end of FY 1976, the coordinated program has consumed approximately \$11 million of R&D funds. But, we can point to a return in excess of \$20 million through reduction of construction costs. We anticipate that by the early 1980s we will get an overall program payoff of more than 10 to 1.

Urban underground construction has become extremely expensive. Why are you conducting this program if very little future underground transportation construction is anticipated?

The growing cost of real estate in the central business districts of our major cities has created a situation where even though underground construction is very expensive, in many cases it is still cheaper to go underground.

In addition, we believe that underground construction costs can be reduced greatly without affecting the utility or esthetics of the end product.

Currently, there are 24 underground urban mass trans-

portation systems under construction outside the U.S., and they are being built at costs considerably less than what we see in Washington, D.C.

If public transportation is to be improved in central cities, regardless of mode, the underground can become a very attractive option economically.

Do you cooperate with other U.S. or foreign agencies in this effort?

In 1970 a Federal Inter-agency Committee on Excavation Technology was established to provide coordination between Federal agencies actively involved in R&D in excavation. Currently, representatives from 21 Federal agencies meet monthly, with the primary objective of avoiding duplication of effort.

In 1970, representatives from 15 countries met in Washington under the auspices of the Organization for Economic Cooperation and Development to discuss underground construction needs. As a result of the conference, through the National Academy of Sciences, we have communication with the International Tunneling Association, which is composed of 22 member countries.

Does the program make use of universities for tunneling R&D?

When the tunneling program started in 1973, the University of Illinois was the only school in the U.S. with a broad capability in underground construction. Since then, we have been able to encourage other schools to develop capabilities in this technology, primarily through the DOT Office of University Research.

For example, DOT now has research contracts related to construction and tunneling with the University of Illinois, University of Minnesota, Colorado School of Mines, University of California, Stanford University, California State University, Purdue, and a contract pending with the Massachusetts Institute of Technology.

What are some major tunnels now under construction outside the U.S.?

The largest project underway in the world is the Seikan tunnel between the main island of Honshu and the northern island of Hokkaido in Japan. This two-track train tunnel will be 55 km (33 miles) long, portal to portal, and 250 meters (820 feet) below sea level at its deepest. It is scheduled to be finished in the early 1980s.

In Switzerland, a two-lane highway tunnel is being constructed under the Alps that will be approximately 16 km (10 miles) long. The Gotthard, as it is called, has been under construction for seven years, and completion is expected within five years.

What major tunneling programs are underway in the U.S.?

The underground construction here in Washington is by far the largest and costliest in the U.S. The Washington Metro, when finished, will have 47 route miles underground out of a total of 100 miles.

Currently, the second bore of the Eisenhower Highway Tunnel is being constructed near Denver, Colo. This two-lane tunnel will be approximately 9,000 feet long.

What future tunneling do you expect in the U.S.?

If we cannot reduce underground construction costs effectively, I would expect to see at most an additional 150 route miles of transit tunnel construction in the U.S. by the end of the 1980s.

If construction cost can be reduced, projections indicate that we can expect to see more than 400 route miles of transit tunnel and an undetermined increase in urban highway tunnel construction.

Has there been any space-age spin-off that has affected underground construction?

In the early 1970s considerable effort was made to utilize lasers, electron beams, high pressure water cannons, and even concrete artillery shells to reduce the cost of tunneling. None of these have been shown to be economically feasible.

ACTION—

from page three

Cdr. Paul A. Welling, commander of the *Vigorous* explains, "We attempt to rendezvous with the lobster boat and obtain facts such as identification of the vessel having allegedly gone through the fixed gear, where the gear was located, and were any photographs taken."

The cutter will then board vessels in the area that seem likely to have gone through the lobster pots. The master will

During the same period the mechanical tunnel boring machine, a U.S. development, has progressively been improved on a step-by-step basis. In fact, I can think of only one innovation which can be related to aerospace technology.

This is the use of very small high-pressure water jets in conjunction with mechanical rock cutters for use on a tunnel boring machine. This development was demonstrated in 1974 by DOT and a major U.S. tunnel boring machine manufacturer.

What major problems do you face in implementing new practices and technology in underground construction so that cost reductions can be achieved?

I believe the most severe problem is that we have an attitude in the underground construction industry that "change and the risks associated with change, belong to someone else."

This position is brought about by the financial liability that is part of the professional engineering business. Design engineers are told that to avoid liability their recommendations and designs must be prudent. The courts have defined prudent design as one that emulates the current state-of-the-art. The result is that we in DOT say that much less expensive underground transportation systems can be built if changes in technology and procedure can be implemented.

Where do you see the tunneling program in the coming year?

I would hope to see continuing cooperation between the administrations involved. In fact, with our increasingly restricted manpower, I would like to see a growth in this effort to make use of expertise and skills between administrations in the general area of transportation R&D.

With our future emphasis on urban transportation, and the fact that in any type of urban transportation system better than 75 percent of the capital cost is fixed structure, I believe there is immense opportunity and challenge to improve our capabilities and greatly reduce the costs of these systems.

be questioned and the ship's logs will be checked to determine if the vessel's course ran through the "conflict" area.

Add up the number of annual surface patrols, the flight hours, the boardings, the seizures, the investigations and the paperwork, it becomes evident that enforcement of U.S. fishing rights has become a primary Coast Guard task, along with search and rescue, marine safety, and oil pollution prevention.