FAA HORIZONS

Read: 'Declaration of Interdependence' Page 2

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Rolling Radar

To make way for a runway and taxiway being built at the Seattle-Tacoma Airport, this 103-foot FAA radar tower was put on 64 wheels and moved to its new location on the field. The $1½ million tower, which provides radar ground coverage, was moved 1,000 feet for $45,000—considerably less than it would cost to disassemble and then rebuild it. *—Photo by The Seattle Times*

Airways Engineers' Work Praised

LAS VEGAS—"I am concerned first and foremost about the safety of the airways, and the welfare of the people we depend upon to assure that safety," Administrator John H. Shaffer told FAA employees gathered for the annual convention of the Airways Engineering Society here. In his speech prepared for delivery July 17, Shaffer told the engineers he has seen first-hand what makes the airways system tick: "It's people—the controllers in the towers, the engineers in the field, the technicians on the scene and behind the scenes, wherever and whenever they're needed."

He told them that the agency is recommending expenditures of $12 billion over the next 10 years in order to operate, maintain and expand the airways system.

"That means, he said, "more than $3 million daily, from now through 1980."

Equipment Availability High

Noting how equipment malfunctions or facility outages degrade the system, the Administrator told the engineers that present availability of equipment figures are high—ranging from a low of 93.9 per cent for glide slopes to a high of 99.9 per cent for air-to-ground communications in terminal areas. Citing numerous other services with 97 per cent and above reliability, he attributed this to the preventive and emergency maintenance competence of FAA people, rather than to the quality or vintage of the equipment.

Automation in the system will be a stimulant to employment and lead those involved to higher-paying, more responsible jobs. FAA systems maintenance technicians and engineers will perform an increasingly vital role in aviation's future, the Administrator said.

He predicted a need for 10,000 more engineers and technicians by 1979. FAA training programs will be a primary source.

New channels of revenue could lead to an aggressive start toward restoring balance to civil aviation operations, Shaffer said, with a user tax becoming more profitable to air transportation than the "abuse tax" now being paid in delays and through disrupted schedules.

He said increased budgets are being sought urgently in order to meet the challenge of burgeoning air transportation. More liberal application of funds would significantly relieve forces which work against the best interests of aviation safety and would be possible with passage of the administration-backed airport-airways bill, which "gets to the heart of the system's requirements for people and facilities."

The forces working against safety cited by the Administrator include:

(1) Pressure on the system from inadequate facilities and outdated equipment

(2) Propensity for human error in a system not making full use of automation capabilities

(3) Congestion, which robs airports and airways of efficiency.

"The proposed legislation before the Congress is designed to generate new revenues, pump new resources into airways facilities and

(Continued on Page 7)

Pilot-in-Command

As they cross the Arctic Circle while touring the Alaskan Region in "Nan Five," FAA Administrator John H. Shaffer is informed by the DC-3's pilot Donald J. Hood (in co-pilot seat) that he is now a member of the "Kingdom of Hrimthursar," an honor bestowed on arctic wilderness travellers.

Administrator Inspects 7 Facilities in the 49th State

ANCHORAGE—Nobody can expect to see all of Alaska in four days, but Administrator John H. Shaffer tried—and almost succeeded.

On his first visit to the 49th state since his appointment, Shaffer visited FAA families and facilities in Anchorage, Nome, Barrow, Fairbanks, Bethel, McGrath and King Salmon.

Shaffer addressed more than 600 employees of the Regional Office and the Anchorage Area at a meeting in Anchorage's Municipal Auditorium. "I feel that I have just been welcomed home," he told them. "Alaska is a big, warm and friendly place."

He also toured the new Anchorage ARTC Center on the Elmendorf AFB. At every place he visited, he told FAA employees:

"You are in a business that is the key to the successful development of Alaska. The 'Great West' was developed by transportation—the railroad. Air transportation developed Alaska, and I am proud of the work that all of you are doing to improve it." He also expressed his delight "in being associated with an organization that has so many hard workers who are dedicated and highly motivated doing the job of serving aviation."

Next on the trip was Nome, for a visit to the King Island village and the gold fields. Carl Melton, Area Manager at Nome, introduced Shaffer to employees and their wives at a dinner in the North Star Hotel.

The following day, Shaffer felt the aircraft "bump" as it crossed the Arctic Circle on its way to Barrow, the northernmost flight service station in the agency, although some suspected that pilot Don Hood had applied back pressure to the control column as Nan Five, the Region's DC-3, crossed at that precise moment.

Later, at a dinner in Fairbanks, Don Hood commemorated the occasion of this crossing of the Arctic Circle by presenting a certificate to Shaffer, making him a member of the "Kingdom of Hrimthursar," an

(Continued on Page 7)

Mechanic Runners-Up Get FAA Recognition

NEW YORK—Runners-up in the Aviation Mechanic Safety Award program in the Eastern Region are getting their own brand of recognition as leading mechanics.

John Mears, of Flight Standards, dreamed up the idea of designing a special shoulder patch and decal to honor those who extended effort, entered and were nominated, yet were bested by fellow-competitors for awards.

"It seemed to me," said Mears, "that the mechanics who don't win deserve some formal recognition, too. That's what gave me the idea of producing the shoulder patch and the decal. By wearing the patch on their work clothes and displaying the decal on their automobiles, they'll let everyone know they are expert mechanics dedicated to aviation safety."

Pretty Patricia McKeegan, a secretary in Mears' division, came up with the idea for an appropriate illustration to symbolize that the bearer is an expert mechanic. She described the design, of a man holding up a plane, to Michael Bellezza, Chief of Visual Presentations, who turned it into a finished product for quantity reproduction. For colors, Bellezza selected red and blue for the decals; orange, blue and white for the embroidered shoulder patches.

The shoulder patches are meant only for those aviation mechanics who are actually nominated for the annual Aviation Mechanic Safety Award.

The decals, on the other hand, have been made available on a limited basis to field offices throughout the region for distribution as "facility chiefs and inspectors see fit."

Mears says that the decals won't be given out at random, but that rules for awarding them are pretty liberal so that the aviation mechanic and his key role in the industry will become more fully appreciated by the public.

ATCs, Pilot Make Save

ISLIP, N.Y.—Visibility was only half-a-mile, the pilot was not instrument-rated and the plane—lost in the vicinity of Binghamton, N. Y.—had less than an hour's fuel remaining. The pilot was trying to find Oneonta Airport when control of the flight was transferred to the New York Center.

At their sector scope, which pictures the mid-state area, the team of Manuel Karbel, Theodore Paolotti and John Seddon, who later were awarded Eastern Region's "We Point with Pride" plaque for the flight assist, immediately began directing the pilot to the alternate airport.

At this point, a Mohawk Airlines plane in the vicinity radioed the center and offered to help the errant Cessna.

While the Center stood-by, visual contact was made between the two planes, and when the Mohawk plane radioed, "Follow me," the Cessna answered, "You bet I will."

However, the skies were murky and visual contact was lost between the planes. Once again the Center trio took over flight control. They helped the two planes establish contact again and at the same time asked the airport to flash its runway lights.

Through this teamwork the plane was led to a safe and timely landing, with one gas tank completely empty and the other with only one eighth of capacity remaining.

While still "docked" at Washington National Airport, FAA Tower Crew Chief George Perry takes his seat in the 727 cockpit behind National Airlines Captain Carl Lindgren, Jr., of Miami.

One Man's FAM Trip . . .

DECLARATION OF INTERDEPENDENCE

EDITOR'S NOTE. Although controllers have been encouraged to take familiarization (FAM) flights with the airlines for many years, additional emphasis was recently placed on this program—known as SF-160, for the Standard Form used to arrange "jump seat" transportation with carriers. The Facility Operations Manual spells out the purpose of such trips as follows: "It is desirable for ATC specialists to become acquainted with inflight problems affecting ATC and communications by observing the operations from the jump seat of aircraft." George Perry, a Crew Chief at Washington National Tower, gives *Horizons* readers a firsthand account of one of these trips.

By George Perry
Crew Chief, Washington National Tower

Checking the weather in the airline operations office before boarding the plane, Perry discusses the report with William Galanis, operations supervisor.

Saying goodbye to Perry as he sets off on a FAM flight is Washington National Tower Chief Howard A. Cocklin (left).

Coordination and cooperation between controllers and pilots is vital in getting planes up and down safely. Controllers have their problems and so do pilots. Both can do a better job if they are able to see the picture from the other fellow's point of view. That's why FAM trips—riding as observer with one of the carriers—are important.

I just returned from a FAM to Providence. It was an easy hop; the weather was VFR-plus. Visibility was virtually unlimited. Everything worked just right. It was a textbook demonstration of how the system is meant to work.

And I learned something.

FAM trips give me a better understanding of what my job is all about.

No Delays on Departure

I flew with National, on a Boeing 727 up from the south. We left on time—no delays. I felt a sense of pride in the way our FAA people handled us. They did a good, professional job.

They kept calling out traffic to us, making certain we knew where other planes in the area were. This is important. The flight crew is particularly busy on climbout and also from final fix to touchdown, and it takes much less time to spot other planes when the crew knows where to look.

Flying as an observer, I was sitting behind and slightly above the pilot, giving me an excellent view both inside and outside the cockpit.

We were promptly cleared to our assigned altitude of 17,000 feet. We arrived at New York in no time at all, and I liked the way the controllers there treated us also. First, we slowed to 250 knots because of speed restrictions. After that, approach control gave us only one turn and we headed for the airport.

New System Impressive

As we continued on final, they told us to slow down. There was another plane on the approach in front of us doing only 160 knots ground speed. I realized that the radar controllers knew exactly how fast each of us was going, because our speed was being automatically displayed on alphanumeric tags appearing on their radar screens. This was my first practical experience with the new automated system. I was impressed.

It was a "book approach." Again I felt a sense of pride at the way my colleagues handled their jobs. The airline captain, Carl Lindgren, Jr., of Miami, said something good about the controllers also and this made me feel fine.

The whole trip was like that—just perfect. At Providence, approach control cleared us from 26 miles out and 13,000 feet. At that altitude the visibility was really good, and we had the airport in sight all the way.

While on final approach, I realized that throughout the trip I'd been aware of what was going on in the plane and what the people on the ground were thinking and doing. The whole complex interrelationship between controllers and the pilots became much clearer, and getting this clear understanding is what a FAM trip is all about. We're all part of the same system and must work together.

I take as many FAM trips as I can fit into my schedule—up to the four a year we are allowed. On each trip, I learn something new—something about the flight crew's jobs, about how crewmembers think and what and how they respond to the job we are doing on the ground.

Rotation Promotes Understanding

FAM trips also give me a better appreciation of the jobs other controllers do. The practice of rotating jobs within the facility also helps.

For instance, I spend part of my time working approach control and part of the time in the tower cab. In the IFR room we rotate from one job to another. In this way each gets a better understanding of the other's duties and responsibilities.

Obviously we can't rotate with flight crews. By flying with them, however, we can get to know them and learn how to be of greater service. We also encourage flight crews to visit FAA facilities. By observing us at work, they gain a better understanding and appreciation of our problems.

Cooperation, in every sense of the word, is the name of the game. This is the only way we can make this vastly complicated system work. The controllers "call the shots," so to speak. But we don't "fly" that airplane out there in the night; all we have is a blip on a radar screen. Our job is to do everything possible to insure a safe flight. That takes cooperation on the ground and in the air, and FAM trips help make that spirit of cooperation possible.

Rigger Training

The latest of 67 FAA inspectors to complete parachute rigger training under John E. Nash (in dark shirt), technician at the Forest Service Aerial Fire Depot near Missoula, Mont., is C. R. Taylor, principal maintenance inspector from the Helena GADO. Here Nash checks Taylor's packing skill, then inspects fit of harness.

Parachute Technician Cited for Maintenance

MISSOULA, Mont. — A parachute expert who trained 67 FAA inspectors in parachute rigging, packed more than 5,300 chutes himself and conducted special rigger schools for FAA inspectors the past six years has been given a citation by the agency.

John E. Nash, technician at the Forest Service Aerial Fire Depot, was notified by Robert O. Ziegler, FAA Area Manager at Helena of his selection. Lee C. Mills, of the Helena office, made the presentation.

The citation, part of FAA's Aviation Mechanic Safety Award Program, noted Nash's contributions to aviation safety. The program's aim is to recognize persons such as Nash, who have made significant contributions through safe maintenance practices.

Nash's citation called attention to his expert ability in parachute maintenance, alteration, design, repair and use. The agency also noted that Nash "continually strives to assist the industry and the FAA with new developments and practices."

A veteran of 27 years of Federal service, Nash first worked as a smokejumper for the Forest Service in 1942, making 16 jumps. In World War II he was a parachute rigger for the Navy. His total of 5,300 personally packed chutes does not include those chutes packed during instruction and training programs.

Each year Nash's unit packs more than 500 emergency parachutes for pilots and passengers. Another 2,500 parachutes are packed each year at the Aerial Fire Depot for use by smokejumpers and approximately 1,000 parachutes are packed for aerial cargo use.

In 1954, the FAA designated Nash the inspector for the oral and practical examination for parachute rigger certificates for Forest Service employees. Nash has issued more than 200 certificates in the past 15 years.

For six years, Nash has conducted special 10-day parachute rigger schools for FAA inspectors. This training is designed to qualify FAA inspectors to evaluate other parachute riggers.

Navigation Check System Developed By Pair at NAFEC

ATLANTIC CITY—Graphs and curves which enable engineers to determine coverage characteristics and accuracy of long-distance ground-based navigation systems for airplanes and ships have been developed by two NAFEC engineers.

The curves are contained in an article in the May issue of *IEEE Transactions on Aerospace and Electronic Systems*. The article was written by Nathaniel Braverman, project advisor at NAFEC, and Ronald Braff, former Center engineer now employed in private industry.

The article discusses placement of stations, characteristics of transmitters, receivers and radio waves and their coverage and accuracy. Information in the article can be used for systems designs and proposals, evaluation of equipment, planning experiments and flight tests of systems.

Test Pilots Fly Home

Welcomed home after completing 16 months active duty are Air Guard Lt. Cols. Bernard J. Hughes (left), and Robert H. Grace. NAFEC Director Jack G. Webb greets the pair, who are Center test pilots in civilian life.

SST's Calhoun Is Transferred

VANDENBERG AFB, Calif.—Col. John D. Calhoun, Assistant to the Director, Office of Supersonic Transport, has been reassigned as Deputy Director for Range Operations at the Air Force's Western Test Range here.

On loan from the Air Force since 1966, Col. Calhoun worked with the Director, Maj. Gen. J. C. Maxwell, in forming long-range plans and policies leading to development and construction of two prototypes of the U. S. Supersonic Transport. His previous assignments represent a combination of scientific and teaching experience. He was assigned to the Air Force Systems Command and the Nuclear Propulsion Office of the Atomic Energy Commission. He also was Associate Professor of Mechanical Engineering at the Air Force Institute of Technology and also Associate Professor of Aeronautics at the Air Force Academy.

A senior pilot, he flew B-24 and B-29 bombers during World War II.

Tops in Safety

For having the best overall regional occupational safety record the first quarter of 1969, N. W. Lepeard (center), Acting Fort Worth Area Manager, receives the Southwest Region Safety Award from Director Henry L. Newman. Looking on is Vance M. Bridges, occupational safety engineer.

Network Who's Who

Part of the staff managing the new Aeronautical Fixed Telecommunications Network (AFTN) switching center at Kansas City and their former duty stations are (front row, from left): Erma M. Sittler, Central Region Communications Control Center; Dee H. Henderson, International FSS; LaMoyne Johnson Jenkins, Fort Worth Telecommunications; Dorothy M. Webb, Jacksonville Center. (Back row): William J. Plummer and Arnold J. Evans, Miami Center; Virgil N. Hudkins, Air Traffic Division representative who escorted visitors on a center tour; Ronald D. Harris, Detroit FSS; and George Blair.

Landing Places Are on Increase

WASHINGTON — The latest count of landing facilities in the United States and its territories shows 10,470 airports, heliports and seaplane bases on record with the FAA as of December 31, 1968.

Despite abandonment of 310 landing facilities, there was a net increase of 344 more in 1968 than the 10,126 reported in 1967.

Included in the 1968 year-end total are 555 heliports and 411 seaplane bases. The 28 landing facilities outside of the United States include 19 in Puerto Rico, four in the Virgin Islands and five in the South Pacific Island territories of the nation. Reported abandoned during 1968 were 271 airports, 24 heliports and 15 seaplane bases.

Texas continued to lead all other states with 938 landing facilities, followed by California with 699, Alaska, 667 and Illinois, 483.

31 Report to New Message Center

KANSAS CITY — Thirty-one agency employees from various parts of the country have reported for duty at the new Aeronautical Fixed Telecommunications Network (AFTN) switching center here.

The AFTN, a worldwide telecommunication network due to be commissioned in late October, will replace four separate switching hubs at New York, Miami, San Juan and Balboa. These hubs now switch or relay agency messages transmitted within an area extending from Canada and Portugal on the north to the eastern seaboard, the Caribbean and Lima, Peru, on the south.

Messages transmitted on the network will include flight plans, traffic control, aircraft arrival and departure notices, flight cancellations and delay information, certain meteorological data, administrative traffic reservations and systems service communications.

Although messages will travel farther geographically — for instance, a message from New York to San Juan will be routed through Kansas City — they will travel faster and more surely.

The AFTN switch is one of three communication facilities to be installed in the new consolidated center. At the same location will be the Weather Message Switching Center (WMSC) and the Service B Interchange System (BDIS).

The weather facility, which will be the most complex operation at the center, will use computers valued at more than $5 million to relay domestic operational weather information as well as synoptic and international weather.

The BDIS facility already housed at the center is one of 10 in the U. S. BDIS is used primarily for flight safety messages. On these circuits, teletypewriter speed is stepped up from 100 to about 1,000 words-per-minute and transmitted cross country. Incoming messages are slowed down to 100 words-per-minute for local distribution.

Although the Service A system, ADIS, is currently located in the same building, this will be decommissioned when the center becomes fully operational in 1971.

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Federal Highway Administrator
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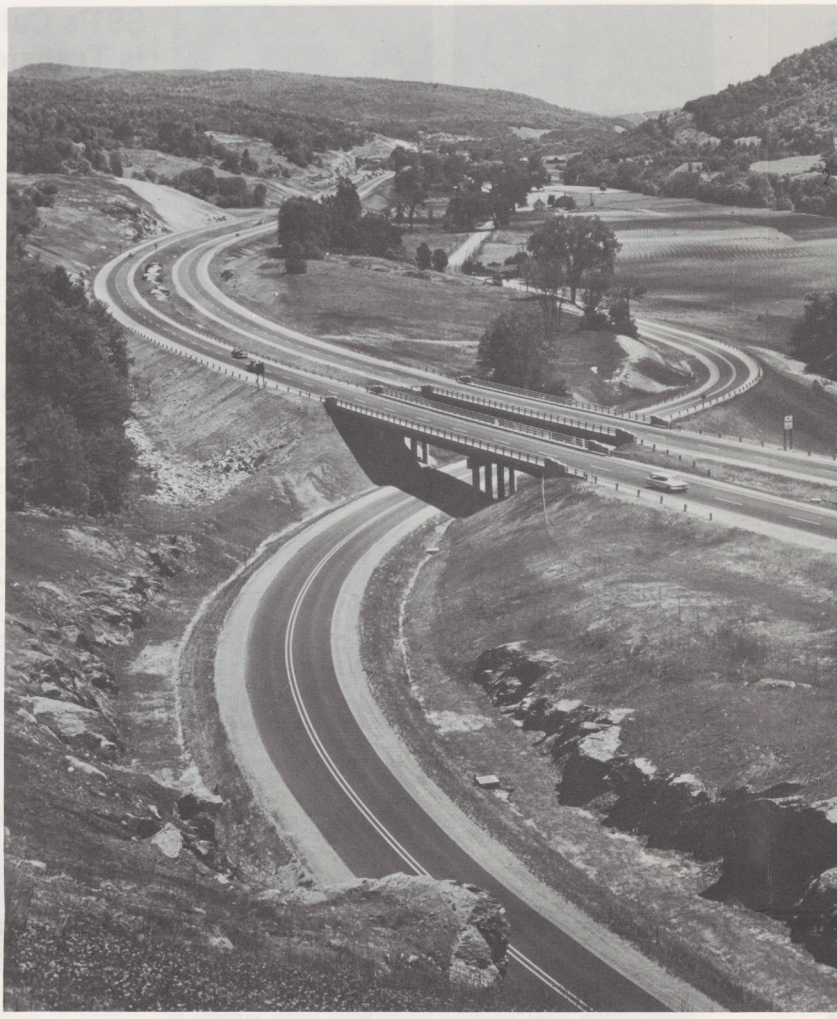


New Directions for the Nation's Highways

EDITOR'S NOTE: The following is another in a series of articles intended to acquaint FAA personnel with the other administrations of the DOT.

Today's ever-extending cement and asphalt ribbons of dual- and triple-lane arteries, exits and access ways lacing the country are making it easier and quicker to commute to work daily, wander on weekends or vagabond on vacation.

Last year alone, 106 million Americans-on-wheels racked up a staggering one trillion, 16 billion vehicle miles on their odometers.

That's two million round-trips to the moon!

Meeting the growing demands on our beltways and byways, turnpikes and toll roads is the Federal Highway Administration, established within the Department of Transportation in 1967. The FHWA functions through three operating components: the Bureau of Public Roads, the National Highway Safety Bureau and the Bureau of Motor Carrier Safety, all under the leadership of Administrator Francis C. Turner.

Bureau of Public Roads

The Bureau of Public Roads had its genesis in 1893 as the Office of Road Inquiry in the Department of Agriculture, "to make inquiries in regard to the system of road management throughout the United States, to make investigations in regard to the best methods of road-making, and to . . . disseminate information on this subject."

The Bureau now is a far cry from the agency that began 76 years ago with an appropriation of $10,000 for a year's operation under the aegis of a lone "Special Agent and Engineer for Road Inquiry." It is now disbursing about $5 billion in Federal funds to help furnish the United States with the world's finest network of highways. In addition to its primary function of administering the Federal-State cooperative highway improvement effort, the Bureau with its more than 4,000 employees is carrying out a program with widespread ramifications.

Taxes From Highway Users

Using funds collected from special taxes on highway users, the Bureau, whose director is Ralph R. Bartelsmeyer, furnishes financial aid to states for improving more than 900,000 miles of highways on the Federal-aid highway system. The Federal share of the cost of constructing the 42,500 miles of the Interstate Highway System is 90 per cent, while the share for improving other roads is 50 per cent.

In addition, the Bureau supervises highway improvements in national forests, parks and other Federal areas in cooperation with the Departments of Agriculture, Defense and Interior, and aids the Department of State by providing assistance to foreign governments on various phases of highway engineering and administration.

Since 1916, when Congress adopted the Federal-Aid Road Act establishing the present pattern of Federal assistance to help states build the highways they needed, the Federal-aid highway program has undergone many changes in scope. However, it was in 1956 that landmark legislation was adopted which was to prove a boon to the nation's highway transportation system. That was the year Congress increased the size of the Federal-aid program, provided for the accelerated construction of the Interstate Highway System and created the Highway Trust Fund as a repository for highway-related revenues paid by the highway user and earmarked solely for highway purposes.

Another landmark year was 1968, when the Federal-Aid Highway Act took steps to:

- Make better use of existing highway facilities;
- Provide larger relocation payments to persons and businesses displaced by highways;
- Increase the Interstate System from 41,000 to 42,500 miles;
- Authorize additional appropriation of funds for the interstate system and for the other Federal-aid system highways; and . . .
- Take action to assure equal job opportunities in highway construction for all purposes.

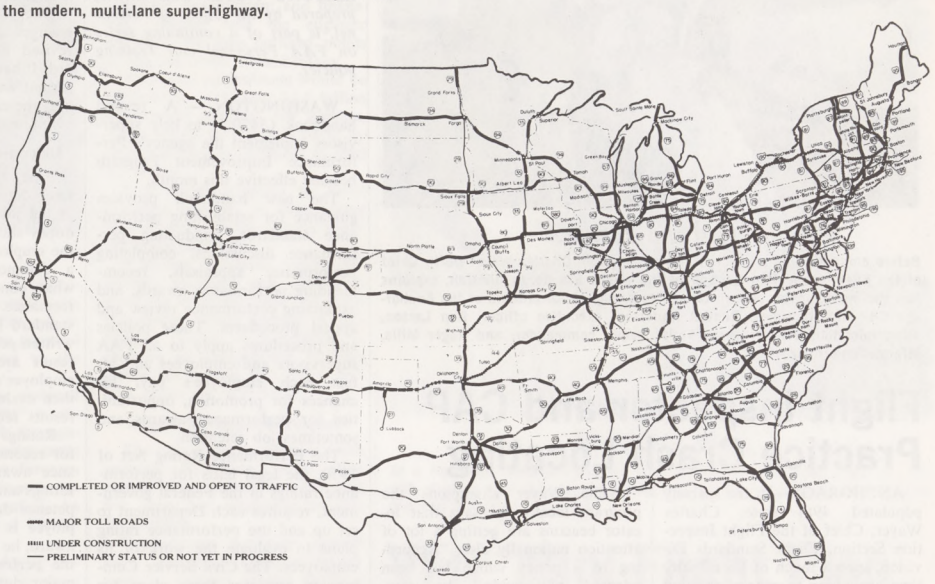
Reimburse Those Dislocated

Relocation payments have been liberalized. Up to $5,000 may be paid over the fair market value for homes in the path of a highway. Tenants are eligible to receive up to $1,500 to lease or rent a comparable house or apartment. Businesses and farms affected may receive actual moving expenses, or an amount equal to average annual net earnings up to $5,000.

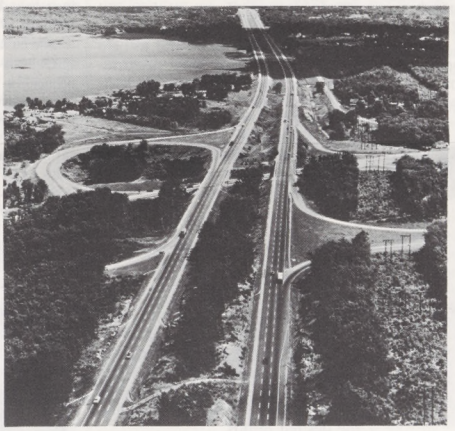
The Bureau of Public Roads also is concerned with preserving and even enhancing the environment traversed by highways. In urban areas, design concept teams made up of experts in different disciplines are given the task of locating and designing highways that will do no violence to neighborhoods.

A program involving the use of urban freeways to serve social and economic needs as well as the transportation needs of a community is stressed. Known as the joint development concept, it aims at making multiple use of highway right-of-way. It is designed to

An excellent example of aesthetically constructed highways in a rural setting is this view of Interstate 89 in the Winooski River Valley near Waterbury, Vt. The older U.S. 2 route winds below an overpass for the modern, multi-lane super-highway.



Network of Interstate and Defense highways making up the national system as of this past spring shows a total of 27,975 out of a proposed 42,500 miles of highway open to traffic.



Multi-lane highways are planned now to add to the landscape's overall attractiveness, such as this section of Interstate 95 in Attleboro, Mass. The highway's embankment was planned as a dike for the large reservoir in left background of photo, combining area benefit with beauty for the motorist.

Penetration of the Brooklyn-Queens Connecting Highway required no extra land in addition to the freeway right-of-way for this over-the-highway promenade in Brooklyn. Freeway right-of-way itself is only 50 feet wider than the old street over which the entire modern structure is set.

use property over, under and adjacent to a freeway for replacement housing, recreation centers, parks, public buildings and commercial development.

Of grave concern to the Bureau of Public Roads is the nation's appalling highway death and injury toll. Improved highway design and construction are delivering a telling blow against traffic accidents. Because of these improvements, the interstate system, which is almost twice as safe as older roads, is expected to save 8,300 lives a year when completed.

Another assault on traffic accidents is waged through the Bureau's safety spot improvement program, aimed at eliminating highway hazards that contribute to mishaps. The Bureau has encouraged the states to give this program high priority.

Bureaus Promote Safety

Also making concentrated efforts to improve highway safety are the National Highway Safety Bureau and the Bureau of Motor Carrier Safety.

The National Highway Safety Bureau (NHSB) is an outgrowth of two laws passed by Congress in September 1966: the National Traffic and Motor Vehicle Safety Act and the Highway Safety Act. The NHSB is charged with carrying out the most comprehensive highway and traffic safety program in history. Under the National Traffic and Motor Vehicle Safety Act, it has developed—and the Secretary of Transportation has issued—the first Federal safety standards for motor vehicles in our history. The first such standards were issued in January 1967, and went into effect January 1, 1968, on all vehicles manufactured after that date for sale or use in the United States. Additional standards have been and are being issued and developed for future model vehicles.

In addition, the Bureau is charged with responsibility for conducting a program relating to automobile defects and recall campaigns. Auto manufacturers must notify owners of safety-related defects discovered in their vehicles and inform the Department of such defects, what safety hazards are involved, and what steps are being taken to recall the vehicles and remedy the defects.

Under the Highway Safety Act, the Bureau has developed 16 Federal standards to form the basis for developing, improving and expanding state and local highway safety programs. The Bureau is cooperating with the states and local communities in improving their programs and moving into conformity with Federal standards dealing with areas such as periodic motor vehicle inspection and registration programs, driver licensing and training, motorcycle safety, traffic records, courts, codes and laws, alcohol in relation to highway safety and emergency medical services for highway crash victims.

The law provides matching Federal grants to assist the States and local communities in bringing their programs into conformity, with the stipulation that at least 40 per cent of all Federal funds provided to the states be spent by local political subdivisions. States are required to have broad highway safety programs approved by the Secretary of Transportation by the end of calendar year 1969. These programs will show how each state is moving into conformity with the Federal standards.

Safer Motor Carrier Operation

The Bureau of Motor Carrier Safety—the third element in the Federal Highway Administration—has jurisdiction over the safe performance of all motor carriers engaged in interstate or foreign commerce, including those specifically exempt from economic regulation.

Besides its headquarters staff, the Bureau has some 100 men in the field who check on driver qualifications and their hours of service on the road, analyze accident reports and make carrier and vehicle inspections. Their responsibility also includes jurisdiction over the movement of hazardous cargoes—such as explosives, toxic or caustic chemicals and nuclear materials—over the highways.

This Bureau, whose Director is George A. Meyer, deals with some 18,000 certificated motor carriers and about 130,000 private carriers and haulers of exempt commodities who perform services subject to Department of Transportation safety jurisdiction. This involves a total of more than 2,250,000 vehicles.

The road ahead is a long one. The FHWA aims to make it safe and pleasant traveling.

Find and Rescue

Before embarking on a practice search mission, Charles Wayer (left), Chief of the Flight Inspection Section of the Flight Standards Division, explains how the crash locator beacon transmits its signals to officers of the Anchorage CAP (left to right): Russell Anderson, executive officer; Ron Larson, communications officer; Gene Weiler, group commander; and Roger Mills, information officer.

Flight Inspector and CAP Practice Crash Locating

ANCHORAGE—In the sparsely populated 49th state, Charles Wayer, Chief of the Flight Inspection Section, Flight Standards Division, spends much of his off-duty time explaining to general aviation pilots why all aircraft should be equipped with crash locator beacons.

The Polaris squadron of the CAP, based at Merrill Field here, is particularly interested in the program. Squadron members are enthusiastic about the agency's policy of encouraging pilots to have beacons installed on all aircraft. They frequently are called upon to fly search missions for pilots lost in the mountainous, heavily-forested areas surrounding Alaska's largest city.

Since last winter, Wayer and the CAP pilots have been practicing with various models of crash beacons—some as small as a pack of king-sized cigarettes—and direction finding (DF) equipped agency planes tracking down the "crashed planes."

"We have three of our flight check aircraft equipped with directional finders," Wayer said, "and we'll have a fourth ready soon."

During tests a crash was simulated by placing the beacon in a remote location unknown to the agency flight check pilots. Using DF equipment which "homes" on the beacon, the planes flew unerringly to the "crash site" from ranges up to 100 miles.

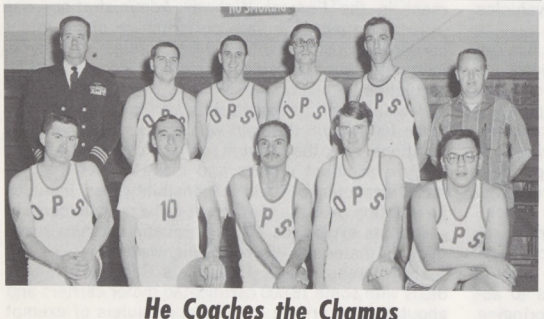
CAP pilots found they could home on a beacon by using the signal "build and fade" method, but according to CAP Major Gene Weiler, "This method is not nearly as accurate as having DF equipment on the search aircraft."

While Wayer champions the program locally, he says that locator beacons are getting a lot of attention nationally also. "According to a policy which has been adopted nationwide," he says, "Flight inspection pilots now monitor the civil distress frequency 121.5 Mhz and the military frequency 243 Mhz during all enroute flying when not occupied in carrying out their primary duties."

In Alaska, with its half-a-million square miles of rugged country, crash locators should be considered standard equipment on all aircraft as a safety precaution.

Librarian

Learning American library practices at the FAA Pacific Region library is Chaenori Halim, who returns an armful of books to the shelf. Head librarian at Djarkarta, Indonesia, she is one of 12 librarians from the Pacific and Asia participating in a six-month library refresher course sponsored by the Institute for Technical Interchange of the East-West Center of Honolulu.



He Coaches the Champs

Shown with the all-Navy basketball team he mastermined to its second consecutive base championship is FAA Crew Chief Raleigh Beach (standing right), of the Quonset Point, R.I., Radar Air Traffic Control Center. The only civilian coach in the 14-team league, Beach led his team to 31 victories in the last 35 games.

Handbook Helps Appraisal-Makers

EDITOR'S NOTE: This article, prepared by the Office of Personnel, is part of a continuing series on FAA Personnel and Training policies.

WASHINGTON — A revised handbook (3430.3) to help supervisors implement the agency's Performance Improvement Program became effective this month.

The new handbook provides guidance for establishing performance standards, conducting performance discussions, completing performance appraisals, recommending performance awards, and explaining performance review and appeal procedures. These policies and procedures apply to all FAA supervisors and employees and affect each employee's pay, his chances for promotion, opportunities for performance awards and sometimes job retention.

The Performance Rating Act of 1950, the legal basis for performance ratings in the Federal government, requires each Department to set up and use performance rating plans to evaluate the work of its employees. The Civil Service Commission approves these plans for compliance with the Act and other laws.

In complying with the provisions of law, FAA's Performance Improvement Program calls for a joint effort between the employee and his supervisor to increase understanding between them and to help employees improve their performance. Performance improvement is successful when both recognize each other's responsibilities, the responsibilities of their co-workers and how all of these responsibilities are related to the accomplishment of the agency's mission.

Discuss Job Requirements

Therefore, in the performance process, discussion between the supervisor and the employee centers on the *job and requirements for effective performance rather than the person and any deficiencies he may have.* The employee participates and contributes to the greatest extent possible in setting his own and group objectives and achieving the desired results.

Together, the employee and supervisor identify roadblocks to effective performance, ways to overcome them and methods of doing a better job. The program is based on the idea that a person can improve regardless of how well he's performing and, at the same time, gain greater job satisfaction. The Performance Improvement Program is the basis for the new handbook and may be described as the hub around which all ratings revolve.

Significant changes in the new handbook include:

- Consolidation of seven directives on performance evaluation.
- Explanation to supervisor and employee of the inter-relationship between a particular rating, such as "Satisfactory," and "Acceptable Level of Competence" (at which an employee's performance must be rated in order to receive a within-grade increase).
- Clarification of criteria and procedures for assigning a particular rating.
- Deletion of the requirements for a separate reviewing official for ratings and awards. If delegated the authority, one person may approve both.
- Revision of the Employee Appraisal Record on which all of the ratings are recorded.

One of the most important changes in the handbook is the revised Employee Appraisal Record. It has been revised in concept, format and content. Part II measures the employee's performance in his present job.

Determine Job's Important Tasks

First, the employee and supervisor determine what is important in the job and how the important duties should be performed. Once the employee and supervisor reach a common understanding as to what constitutes satisfactory performance, a written performance standard is drawn up. From these written performance standards, key result areas are developed. The employee's actual performance is then evaluated on the basis of the results required in each key area.

Ratings in Part II are the basis for recommendations for performance awards, annual performance ratings and acceptable level of competence determinations. If the employee is being considered for an award, he must substantially exceed the performance required for his major duties and perform his remaining duties satisfactorily. For an Outstanding rating, the key result areas in Part II should be marked "far exceeding" in all aspects of the job. For a within-grade increase, Part II ratings should be marked "meets requirements" or above in all key result areas.

Overall performance is rated annually in the first section of Part III by checking one of three adjective descriptions: Satisfactory, Unsatisfactory, or Outstanding. This rating relates directly to job retention and possible performance awards. A second rating is also required for within-grade pay increases.

In the second section of Part III the supervisor must determine if the employee's performance during the rating period was at such a level as to deserve a within-grade pay raise. If he so determines, he checks "working at an acceptable level of competence." If performance has not been up to that level, he then defers the within-grade increase and must advise the employee in writing of the improvement necessary.

Ratings Aim: Improve Performance

A satisfactory rating in the first section does not necessarily entitle an employee to an acceptable level of competence pay raise.

The rating scale—formerly Part II, Career Potential on the old form—now Part IV—has been replaced by blocks reflecting four different levels of performance. This part is to be used for promotion evaluation purposes. The skills, knowledge and abilities on which an employee is rated for promotion are demonstrated through performance in his present position. Many of them will be closely related to particular key result areas taken from the employee's performance standards.

For example, if one of the key result areas of his present position is "Management Presentations," related skills for promotion potential would be "oral and written communication." If "Coordination and liaison with others" is a key result area, a related skill would be "working with others." The supervisor then checks off one of four levels of performance on the Employee Appraisal Record for promotion purposes.

Over the years, the performance improvement process has been recognized as an extremely useful tool for increasing an employee's effectiveness on the job. At the same time, it has increased employees' over-all value to the agency and FAA's service to the public.

Top Instructor

The Jack Feeney, Jr., Memorial Award trophy is presented to Ken Hoffman (center), of the Hoffman Flight School, by Jack Feeney, Sr. (right), Assistant Chief, Salt Lake City Flight Standards Branch. Joining in the ceremony is Robert Lewis, Supervising Inspector, Broomfield, Colo., GADO. Hoffman was judged Flight Instructor of the Year in Colorado.

Feeney Trophy Awarded

BROOMFIELD, Colo. — First winner of the Jack Feeney, Jr., Memorial Trophy is Ken Hoffman of Hoffman Flight School.

Feeney, who died in an aircraft accident last year, was the junior member of the only FAA father-and-son inspection team. He had joined his father in the Flight Standards Division of the GADO here as an operations inspector in 1967.

Jack Feeney Sr., Assistant Chief, Salt Lake City Flight Standards Branch, presented the award to Hoffman at a recent ceremony held in conjunction with the annual Flight Instructor Refresher Clinic in Denver.

Bob Lewis, GADO Supervising Inspector, was instrumental in establishing the award, which will be given annually to the Colorado flight instructor who, in the judges' opinion, has done the most for flight instruction and general aviation.

The annual winner will receive a trophy and will have his name inscribed on a plaque which will be displayed permanently at the GADO.

DIRECT LINE

This is your direct line to the top! Your questions will get answers! Employees are encouraged to discuss questions with supervisors or their local personnel office, but for those who do not have ready access to a personnel office, this column will provide an opportunity to get questions answered. Send your letter to Acting PT-1, Federal Aviation Administration, 800 Independence Avenue, S.W., Washington, D. C., 20590. Ground Rules: • All questions must be signed. • This column should not be used to supplant formal grievance and appeals procedures. • Questions should concern personnel and training policies, programs and procedures, not operational or technical matters. What's your question?

Question: Why doesn't the FAA recognize the certification requirements in determining the grade of an electronics technician (ET) position? The present method is very inequitable. At one facility an ET may be required to be certified on one major system, say a VOR, and three sub-systems—such as RTR, RCAG, and ATCT; his grade is GS-11. At another facility an ET is required to be certified on five major systems: ASR, PAR, SECRA, RML and RBDE. The knowledge and training requirements are in no way comparable yet they are both the same grade. Also, should not the classification of a facility (Level II, III, etc.) be a consideration as it is with air traffic?

Answer: By the time you read this, a fact-finding team will be collecting data on the type of work situation you describe. (See *Intercom*, July 8, 1969). Upon completion of the fact-finding portion of the AF Occupational Study, the group will make recommendations for the consideration of appropriate agency managers.

I have four questions:

Question: Is there an Order defining "Standby Duty," "Telephone Availability" and "Call Back?" If so, what is the Order number?

Answer: These definitions are contained in Order 3550.8, "Standby and Telephone Availbility Policy," dated January 14, 1969, and in Order 6030.31, "Restoration of Operation Facilities," dated January 13, 1969.

Question: How many miles can an employee assigned to "Call Back" travel and leave a phone number where he can be reached?

Answer: Order 6030.31, "Restoration of Operational Facilities," establishes a time limitation rather than a mileage limit for "Scheduled Telephone Availability" activities. Briefly, the "Distance" criteria are: You should be able to reach the facility within two hours or in normal commuting time from your home to the facility plus one hour. If you cannot leave a phone number, you can call the control point collect at one-hour intervals. This time limitation assumes normal weather and traffic conditions.

Question: Since an employee on "Call Back" is not on duty, why should he be obligated to see that someone else is available if he himself is, or becomes, unavailable?

Answer: His position as an electronics technician with FAA is predicated upon certain responsibilities. He is expected to carry out these responsibilities to the best of his ability. The obligation you speak of is to himself, his supervisors and to aviation safety. The integrity of a portion of the National Airspace System depends upon his conduct as a mature individual and how well he discharges his responsibilities.

Question: Assume a technician assigned to "Telephone Availability" has personal commitments when he receives a trouble call. Is he obligated to forget the personal commitment and respond to the call?

Answer: An employee assigned to "Telephone Availability" is obligated to remain available throughout the period of the assignment; however, if for some unforeseen reason or emergency situation he cannot respond when called, he must advise the caller of his inability to respond.

Question: Is it proper for all employees in a facility to work a "quick-turn-around" watch schedule so that they are required to work a different shift each workday?

Answer: The law provides that employees should be scheduled to work the same hours of the day each day of the basic workweek. Exceptions may be authorized when the agency would be seriously handicapped in carrying out its functions, or when costs would be substantially increased.

Notice:

The March 3, 1969 Direct Line quoted agency policy in Handbook 7230.1 as follows: "A controller shall not work more than six consecutive days without a day off, except in emergency." It was further stated that all air traffic control specialists (station, tower, and center) were subject to this policy. Effective June 16, 1969 this policy applies only to those personnel who work control-type positions. Handbook 7230.1, paragraph 212.1 will be clarified to reflect this change.

Engineers

(Continued from Page 1)

inject new energy into airport planning, development and financing," Shaffer told the engineer audience. He then outlined points of the bill under consideration:

• Federal commitment would be obtained for a 10-year $2.5 billion grant-in-aid program for airports, which would be matched 50-50 by state and local government to total $5 billion.

• A grant program to assist planning agencies in determining airport needs related to total transportation planning.

• Money available yearly for airways facilities and equipment would be increased three-fold, from the current yearly average of $93 million. Yearly appropriation to improve air navigational facilities would not be less than $250 million, under the new bill.

Airport Development Needed

The nation invests more in trash removal—$2 billion a year—while airport development for the past five years has amounted to only $1.5 million.

Expenditures for new aircraft have "completely outpaced investment in aviation ground facilities in recent years," Shaffer said. Airline purchases of 690 jets last year cost $2.69 billion, and production of pleasure, utility and business aircraft marks an additional investment in air travel of $425 million.

"By contrast," Shaffer said, "some of our major airports are nearly 50 years old . . . designed for the DC-3 era, not the jet age." The tripling of air traffic forecast by 1980 is predicated on enlarging significantly the nation's air transportation capacity. An alternative is to artificially suppress air traffic through quota systems or other regulatory measures.

"Regardless of this modification, a period of replacing major equipment must be faced by about 1975," the Administrator warned.

An orderly replacement program is planned, he said, including the replacement of all vacuum tubes and some of the solid-state equipment soon to be obsoleted by micro-miniaturization.

Meritorious

Cited for his "outstanding and meritorious service" while serving as Acting Associate Administrator for Plans from July 1968 to March 1969, Ronald W. Pulling (left), Deputy Associate Administrator for Plans, was awarded the FAA's Meritorious Service Award by Deputy Administrator D. D. Thomas in Washington.

Mini-Flight Plans

At a Honolulu flight school, Joe Hao, Honolulu FSS Chief, stops to chat with student pilot Sally Hurley about the new mini-flight plan instituted by the FSS this year.

VFR 'Mini-Flight Plan' Big Hit with Students

HONOLULU—The mini-flight plan—an abbreviated version of the VFR flight plan—is gaining popularity among Honolulu student pilots.

The new plan, instituted by the Honolulu FSS, basically encourages student pilots to file a flight plan before every training flight.

Joe Hao, Honolulu FSS chief and one of the architects of the plan, likened the mini-flight plan to the currently popular high hemline fashion—"just long enough to cover the vital areas and short enough to make it popular.

"In return for filing minimum flight information with us," he said, "we give the student maximum preflight information."

The new flight plan, according to Hao, takes only 10 seconds to file. Prior to taking off, the student or his instructor calls the FSS and give the following information—aircraft ID, proposed departure and names of pilot and flight time, estimated flight time, practice area block number and school.

For identification purpose the Island of Oahu is divided into seven commonly used practice areas and each area has its number designation. The FSS keeps a running tabulation of aerial activities within each training block and advises students who call in accordingly.

Time and Money Saved

The mini-flight plan has saved many student pilots time as well as money since its inception. Prior to the new plan, student pilots would frequently fly to a practice area only to find it crowded with other aerial activities. In seeking less congested areas, valuable training time would be lost, explained Hao.

The plan is also based on the assurance that complete flight plan information on all their training flights would be made available to the FSS when needed.

"In the event of an overdue flight, we call the flight school for pertinent data, such as: fuel and number of persons aboard and thus the student pilot is assured the same search and rescue protection as if he had filed the regular VFR flight plan," said the FSS chief.

"We are happy with the way flight schools are backing the new plan. It's an excellent way to develop a lifelong flying habit of filing before flying," beamed Hao.

Administrator

(Continued from Page 1)

honor bestowed on voyagers who have travelled the arctic wilderness areas. Other mementos, including an Eskimo ceremonial face mask, were presented to Shaffer.

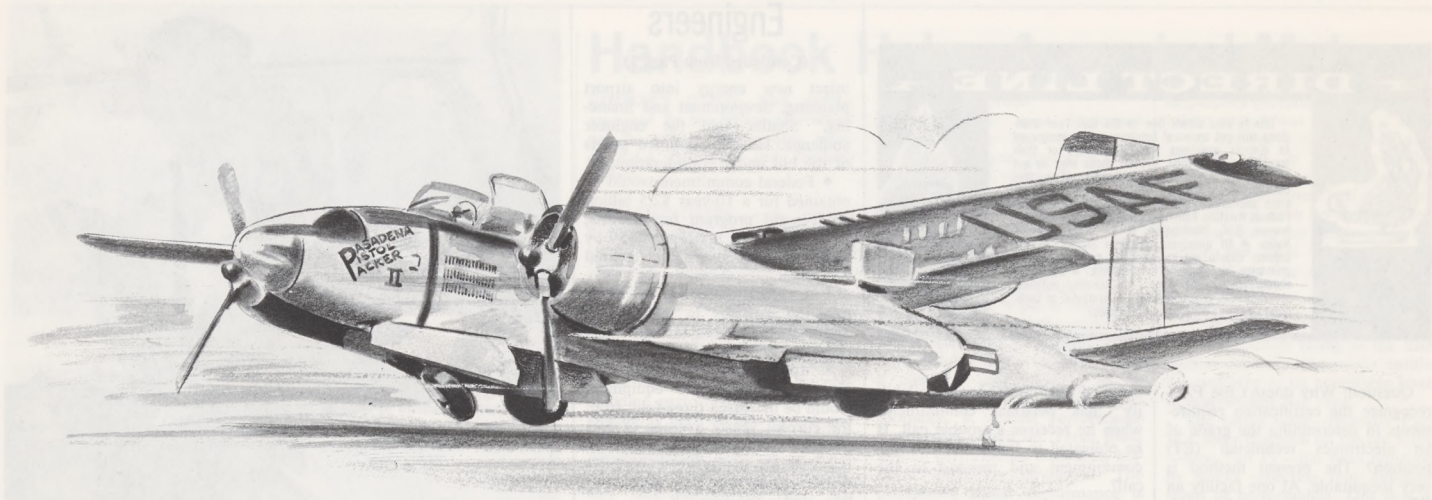
Prudhoe Bay, the site of one of Alaska's new oil finds on the North Slope, was also included on Shafer's itinerary. Here he saw the frenetic efforts of oilmen probing for "black gold" in a boomtown atmosphere totally dependent on air transportation.

FAA families at McGrath, Bethel and King Salmon were not to be outdone in showing hospitality to the visitors.

Four days was not enough time for Shaffer to see all of the 49th state on his first visit. "But I'll be back," he told Regional Director Lyle Brown, "and often."

Pilot Golfer

Air Carrier Inspector Oscar Berge (center), displays the championship trophy he won in the DEN-AIR, Inc. FAA Golf Tournament in the Denver Area. Presenting the award is Ray Sanderson (right), DEN-AIR chairman along with activities chairman Ken Hardinson (left). Berge turned in a net 138 for 36 holes.



Wheels-Up for a 'Weekend Warrior' . . .

UMBRELLA OF FIREPOWER

By Bob Huber

EDITOR'S NOTE: A flight instructor in World War II, Guy L. Brown settled down to civilian life with his wife and three childen in Pasadena, Calif., to work as an investigator for the local police department. He flew two days out of each month, along with other reserve status civilians in his old outfit, the 452nd Bomb Wing.

But a curt telegram came Brown's way in July 1950, plucked him from peaceful Pasadena and into intensive combat flying in Korea—along with the other pilots, gunners, mechanics and supply clerks who had until then been "weekend warriors."

Brown logged plenty of flying in Korea and won the DFC. He then returned to his civilian job in Pasadena, but this time he couldn't long stay away from the yoke and gauges. So in 1957 he joined a CAA (forerunner of FAA) Flight Inspection Team, checking radar and navaids throughout the Western Region until 1960.

For the next five years, Brown worked overseas for FAA out of Frankfurt, Germany. As a Flight Inspection Group pilot there, he made flight checks of air navigation facilities throughout the NATO countries. Since 1965, Brown has been back in the Western Region, and currently is engaged in administrative flying for Director Arvin O. Basnight and his staff. An example of his skillful piloting can be seen in the following account of a Korean war experience.

The Douglas B-26 Invader aircraft had accomplished its mission, knocking out enemy vehicles and supply installations along the main road 200 miles behind the Korean lines.

Returning to home base now, pilot Guy L. Brown appreciated the steady hum of the all-purpose medium bomber's twin 2,000 h.p. Pratt and Whitney radials. Both pilot and plane were retreads from World War II; they had done their day's job and now it was back to base until the next mission.

But the return flight was interrupted suddenly by a curt distress call from another plane from his squadron out on the same mission, but covering another stretch of the road.

"MAYDAY. MAYDAY." The radio call said. The report then gave the plane's position and said that the crew was jumping by parachute approximately 80 miles behind the lines outside Sonchon.

Altering his course, Brown soon reached the tree-covered mountain and spotted two parachutes among the foliage. One of the three-man crew must have gone down with the spinning plane. (He later learned it was the gunner). Brown knew the downed airmen were now at the mercy of advancing enemy ground forces. In fact, their landing had been sighted and North Korean soldiers were moving in toward the area.

Brown flew several passes with the B-26 against gun positions along the upper ridge, just above the downed airmen. Heavy ground fire was directed back at Brown's Invader on each pass. Brown kept a close watch on his fuel consumption and remaining ammunition while the B-26's fire power kept advancing ground forces from the downed pair.

Although six wing guns were available, Brown used them only sparingly. His ammunition was dwindling.

Brown varied firepower intensity on each pass, in order to confuse the advancing forces. When his ammunition supply finally gave out, he continued making low passes in an attempt to scare off these attacking forces. The downed airmen's white parachutes lay limply on the dark hillside, a stark target for an enemy gun emplacement at the top of the rugged slope.

Another plane, a P-51 Mustang, joined up to keep protective cover over the airmen until helicopters could arrive. But help from it was short-lived. On a low straffing pass the pilot was wounded by a burst of enemy gunfire from the ridge emplacement above the chutists. Brown was left circling above his mates, out of ammunition, with ground forces undoubtedly wise that he now was making sham runs.

When things looked bleakest, two rescue helicopters lumbered into view and picked up the downed airmen. The air cover pilot attempted to stay with the helicopters on their flight back to base. Due to the difference in speed, the faster B-26 was forced to make many circles; Brown's fuel supply was giving out.

Approaching Seoul, Brown attempted to lower the gear for landing. He then learned that the enemy's fire had hit his hydraulic system—the B-26's gear would extend only partially. By sighting from the cockpit and noting the gear handle's reaction, he knew the gear would not retract, nor could it be extended. Brown prepared for an emergency landing.

The injured pilot of the P-51 who had preceded the B-26 back to the Seoul base did make a landing—but was unable to clear the runway. His Mustang was still on the active strip, directly in Brown's path. Being low on fuel and with a damaged gear, Brown had to use the same runway. Following emergency procedures, he touched down on the runway's left edge, completing his landing slide just 150 feet short of the P-51 while the ground personnel were still removing the injured pilot.

Due to skillful piloting, neither Brown nor his crewmen were injured in their wheels-up landing. He later was awarded the Distinguished Flying Cross for his Korean service.

The "Pasadena Pistol Packer's" crew says "cheese" beside their bomb-run veteran B-26 aircraft. Pilot Guy Brown (right), now an FAAer, earned a Distinguished Flying Cross for service in Korea.

White "blotch" is actually one of two parachutists downed on the Korean hillside near Sonchon, 80 miles behind enemy lines. B-26 aircraft from which photo was taken was keeping enemy soldiers away until rescue could be made.

Standing beside an FAA Queenaire at the Los Angeles International Airport is Guy Brown, as he looks today.