



Helping Youth

The Alaskan Region's Summer Youth Opportunity Program is discussed by Civil Rights Assistant Mrs. Thomas A. Morrison (left) and Mrs. Jewell Mason, project director for Anchorage's Community Action Agency. Mrs. Mason is helping the agency recruit disadvantaged youths for the program.

Alaska Summer Program Meets Long Range Goals

ANCHORAGE—The Summer Youth Opportunity Program is being extended within the 49th state to include the entire transportation industry. The expansion is all part of a national program underway in the DOT to sponsor innovative employment training programs that meet long range goals of disadvantaged youth.

"Alaska is contributing to the success of the program by enlisting the cooperation of firms doing business with the government and others with whom we are involved," said William Bradshaw, the region's Civil Rights Officer. "We contacted airport sponsors, contractors, tenants at airports and the airlines to urge them to hire disadvantaged youngsters."

In a letter to the air transportation community Alaskan Region Director Lyle K. Brown asked that everything possible be done to offer employment as well as educational, recreational and cultural opportunities to disadvantaged young people this summer and "to continue this as a year-around pro-

gram in the future," he added.

The region's summer hire program is being monitored by Mrs. Thomas A. Morrison, Civil Rights Assistant for the region. Assisting her in identifying likely candidates is Desmond Edwards, Equal Employment Opportunity Recruiter assigned to Personnel and Training. Edwards sees possible future benefits to the agency in having these young people obtain aviation skills which might enable them to secure employment with the FAA later on.

"A key to the success of this program is our voluntary reporting system," Judy Morrison explains. "This calls for all participants to furnish us with reports in mid-July and mid-September on the number of youths employed and how well they are doing their work."

Reaction to the region's efforts to find work for these young people has been excellent.

"Practically everyone we've contacted has promised to help," said Mrs. Morrison. "If they find the vacancies, we'll find the young people to fill them."



Countdown at NAFEC

As the seconds tick away, something rather unusual is about to happen to this dummy positioned in an airliner at NAFEC. For details on what it is—details that may be crucial to air safety—please turn to Page 7.

Center Modernization in Full Swing

By Theodore Maher

WASHINGTON—The agency's \$100 million plus en route control center expansion and improvement program is getting into high gear this summer with construction underway on new automation wings at six centers. In June, ground was broken for the three-story wings at the Washington and Chicago Centers. In July, work began at the Los Angeles, Cleveland and Albuquerque Centers. Construction is scheduled to begin at the New York Center early this month.

At the Atlanta Center, work on the automation wing is well underway and moving toward an October 1970 completion date.

Bids Called For

Bids for construction of the new wings at Oakland, Memphis and Seattle centers have already been called for and work is expected to start this month or next. Contracts for construction of eight additional automation wings at centers at Kansas City, Fort Worth, Denver, Boston, Salt Lake City, Indianapolis, Houston and Jacksonville are scheduled to be awarded by the end of this year. Ground should be broken at the two remaining centers—Minneapolis/St. Paul and Miami—some-time next year.

The additions are one phase of a program aimed at providing a more pleasant, more efficient, healthier working environment for agency controllers.

The basic plan for the modernization and expansion calls for addition of a three-story wing at each center. Space in the new wing will house new computer equipment and associated electrical and mechanical equipment. Included will be space for a medical clinic, classroom facilities for continuing on-site training, offices and storage.

The new automation equipment will help reduce controllers' workload by automatically handling incoming flight information messages, performing necessary calculations and distributing flight data strips, as needed, to controllers.

Completion Schedules

The current schedule for the completion of the new automation wings is as follows: Atlanta, Oct., 1970; Los Angeles, May, 1971; Albuquerque, Chicago and Washington, June, 1971; Cleveland, Oakland and Memphis, July, 1971; Fort Worth, New York and Seattle, Aug., 1971; Denver, Sept., 1971; Boston, Indianapolis, Kansas City and Salt Lake City, Oct., 1971; Jacksonville, Dec., 1971; Houston, Feb., 1972; Minneapolis/St. Paul, March, 1972; and Miami, May, 1972.

The second phase of the program to expand and modernize the nation's 20 en route control centers also got underway this summer. A prototype or "pilot" project was pushed through at the Cleveland Center where the control room is being completely revamped.

Controller comfort and well-being is a prime consideration in the overall program. Noise is being cut to a minimum by means

(Continued on Page 7)

'People ... The First Priority' Says Personnel's New Chief

WASHINGTON—Tough governmental problems lend themselves to solution if you straighten out the priorities—and the first priority is people, says the agency's new Director of Personnel George T. Reeves, Jr. "Proper attention to human resources pays big dividends," says Reeves, who comes to FAA from his post as the Civil Service Commission's director of the Division of Executive Manpower Planning and Development.

"The recognition is growing that employees and how they are managed have more to do with the success or failure of an agency's mission than the amounts of money that are poured into programs.

"Benefits in terms of increased productivity, better morale and greater understanding and support

him an overview of inter-agency relationships and the problems common to all agencies.

"I hope that combination of experience has equipped me to assist FAA in dealing with problems peculiar to FAA as well as those common to all government agencies," he said.

Other Confrontations

All government agencies are experiencing confrontations with employees to some degree, Reeves commented. He feels that too often this is caused by management being inattentive to employee problems and losing sight of the individual's need for personal fulfillment.

"Employees today are no longer willing to go along with traditional ways of doing things," he said. "New ways must be found to mesh organizational goals with the personal goals of employees."

Reeves said he feels "immensely challenged" by his new FAA position.

"I see no lethargy in FAA," he commented. "The agency may have many problems—but it's a dynamic agency and one that's making real sincere strides toward solving its problems in an environment that is positive and innovative."

He termed the success of FAA's mission as being "crucial to our society."

Reeves, 47, was born in Falls Church, Va. He was educated at Virginia Polytechnic Institute and Indiana University, and holds a Master of Business Administration from the latter school.

Began as GS-5

His 22-year public service career began in January of 1948 when he went to work for the Department of Agriculture as a GS-5 economist.

He has held a number of key positions with the Civil Service Commission before becoming director of its Division of Executive Manpower Resources in December of 1966. In May 1969, Reeves became director of CSC's Division of Executive Manpower Planning and Development.

His responsibilities in that position included identifying executive talent, executive career development, executive manpower planning and research.

Earlier, as one of the Internal Revenue Service's key executives, he headed a staff of about 120 headquarters employees and 75 field employees in carrying out that agency's employee development programs.

Reeves' position was formerly held by Earl J. Anderson, who has been named Deputy Associate Administrator for Manpower.



George T. Reeves, Jr.

of organizational goals can be reaped through proper manpower management," he pointed out.

Reeves said he considers it his first responsibility to learn about the agency's mission and the problems confronting its members.

To Meet Managers

One of the first things on his "must do" list, he said, is getting out to the field and meeting FAA regional directors and members of their staffs.

"I won't be going out to discuss any particular program," he emphasized, "I just want to meet our field employees, find out firsthand what their problems are and get their ideas on how our personnel programs can be improved."

Reeves said his experience as director of the Internal Revenue Service's Training Division, a position he held for four years, convinced him that "the success or failure of governmental programs is usually determined in the field.

"In IRS, I worked closely with line managers and came to understand the kinds of problems operating agencies face," he said.

Reeves feels his Civil Service Commission background has given

This is another in a series of articles on outstanding Airway Facilities Sectors which were recently recognized as Regional Sectors of the Year.

High employee productivity, an outstanding record of facility performance, an excellent safety record and a general "can do" attitude concerning the agency's electronics maintenance tasks has won for the Memphis Center AF Sector national recognition.

Facilities within the sector's jurisdiction have shown a consistently high record of availability and reliability.

The sector is known for its fine technical assistance program and for its contributions toward improving agency maintenance programs. A sector team participated in evaluation of a modification to remote microwave link (RC-201). Errors found were corrected and the final report with recommendations was submitted in March of 1969. Working with Washington Headquarters' engineers, sector personnel performed various line level tests resulting in improved operations and major changes to the handbook on maintenance of air-bound communications.

Typical of the sector's attitude toward efficient use of resources was a project for overhauling circulating water pumps and other air conditioning equipment at the center. An estimated savings of \$400 a year is being realized from this program.

The program also contributed toward reliable operation; during the past year, there were no breakdowns of air conditioning and heating equipment at the facility. The sector's problem-solving initiative was further demonstrated by tests carried out to control building temperature and eliminate drafts. Installation of air exhausts at floor level in the operating room resulted in significant improvement in comfort within the center. This problem is expected to be permanently eliminated upon completion of presently planned construction.

The sector has a well-organized safety program with no time lost during the past year as a result of accidents. One technician has been designated safety coordinator. He makes periodic safety inspections and instills safety consciousness in the work force.



Sector Chief John R. Johnson confers with Secretary Mary A. Ingram (left) and Administrative Specialist Louise H. Vance on a sector report.

Excellence at Memphis

Sector members' off-duty activities contribute to a favorable FAA image. Two employees coach Little League baseball teams, two are Boy Scout officials and ten are active in church activities. Three sector employees have been active in the Credit Union.

With the exception of four lengthy illnesses, use of sick leave by sector employees was less than a third of the regional average.

Sector employees are active in pursuing career development activity. During 1969, five employees earned a total of 135 quarter hours of credit for

college-level engineering study. Another employee earned 80 credit hours by taking an Army correspondence course in engineering technology.

"We are proud of this highly-organized, professional team which has amply demonstrated its initiative and resourcefulness," said W. B. Rucker, chief of the Southern Region's Airway Facilities Division.

ROSTER OF MEMPHIS CENTER SECTOR 28540

Sector Chief: John R. Johnson.

Unit Chiefs: Kenneth W. Wilson, Radar; Casper Brown, Center Building; Charles T. McCormick, Communications.

Systems Engineers: William P. Anderson, Billy H. Brown, William R. Edwards, Wilson G. Pope, and Virgil L. Shelby. **Assistant Systems Engineers:** Ray A. Bendall, Daniel E. Bushnell, James R. Newman, Buck W. Robinson, and William R. Thomas.

Electronics Technicians: Travis M. Atkins, John B. Barbour, Jr., Charles B. Benefield, Francis H. Chamberlin, Robert D. Church, Wilburn C. Clackler, Robert D. Dearen, Milton A. Eady, William G. Finch, William L. Fisher, Jr., Harold W. Franck, John A. Galbraith, Owens C. Geiger, Jr., Harvey E. Gideon, Harold L. Goforth, Russell E. Hillen, Edward E. Hippchen, James E. King, Leo D. Kjellin, George J. Lonquist, Haskell H. Luke, George H. Lumsden, Jay P. Martindell, Ray S. Massey, Charles R. Mateer, Lifus L. Moring, Jimmie F. Morris, Patrick J. McIntyre, Jr., Billy McLaughlin, Raymond J. McMichael, James T. Patterson, Allen K. Perry, Sigfrido Portalatin, Edward D. Powell, Raymond W. Rider, William F. Rodgers, Jr., Ralph D. Sexton, Marvin E. Smith, Albert T. Stevens, Robert W. Vaughan, Jimmie R. Watson and Dale P. Whitfield.

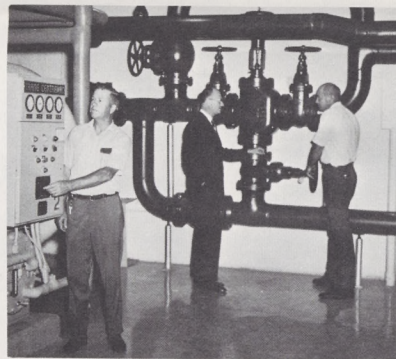
Fixed Industrial Equipment Mechanics: Ralph E. Campbell, Howard H. Hanson, Melvin J. Nickell, James D. Robinson and Clyde Scott.

General Facilities Equipment Mechanics: William P. Burnett, Jr. and Lee J. Visconti.

General Supply Specialist: Sanford D. McDaniel; **Administrative Specialist:** Louise H. Vance; **Secretary:** Mary A. Ingram and **Summer Aide:** Nefitete Hamer.



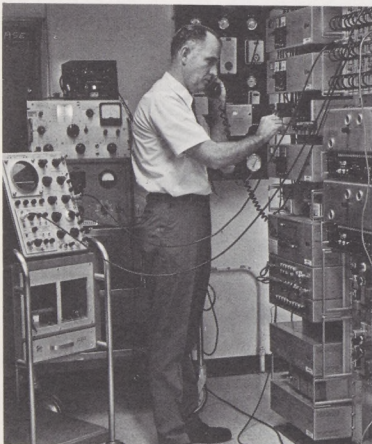
On-the-job training session on automation is presented by Instructor Ray McMichael (right) for new electronics technicians (from left): Melton Eady, Dale Whitfield, Haskell Luke, Marvin Smith and Ralph Sexton.



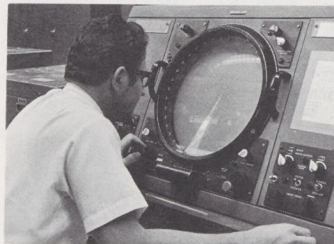
Fixed industrial equipment mechanic Howard H. Hanson (left) keeps a close eye on functioning of equipment at Memphis Center. Sector Chief John R. Johnson (center) discusses the system with William P. Burnett, Jr., general facilities and equipment mechanic.



Recording equipment at the Memphis Center is checked over by Charles McCormick (left), communications unit leader, Russ Hillen (center), electronics technician and Bill Edwards, systems engineer.

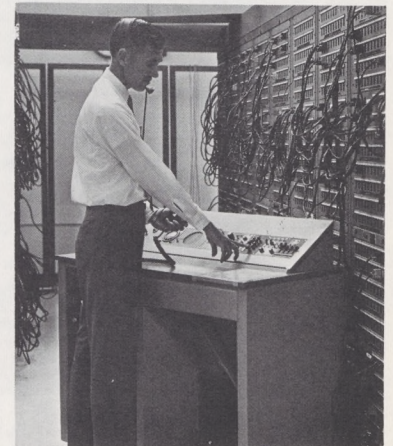


A receiver associated with Memphis radar is checked by John Barbour, electronics technician.



Calibrations on radarscope are given close scrutiny by Sigfrido Portalatin, electronics technician.

Flight data equipment is checked by Bill McLaughlin, electronics technician.



Troubleshooting transmitter equipment is electronics technician Lifus Moring.

Flight Safety Problem Solved by Mechanic

LOS ANGELES — Impressive ceremonies were held recently in The Flying Tiger Line hangar in Los Angeles to honor Joe C. Kanke, a mechanic selected as the Western Region's "Mechanic of the Year" in the air carrier category. Kanke was selected for solving a hazardous safety problem involving wheel and brake fires.

Experts who had been investigating the problem had concentrated on the wheel bearings, greases, brakes and the like. However, Kanke, on his own initiative, looked into other possibilities. He found that wheels were being cleaned with a solvent and that

the heat shield in the inboard half of the wheel was a solvent trap.

Laminated sections of the heat shield would soak up solvent during cleaning and then would emit vapors for a considerable period, possibly several days, before completely evaporating. During operation, mainly braking application, enough heat buildup was generated to ignite solvent vapors. A serious and potentially hazardous problem was solved through Kanke's efforts.

Arvin O. Basnight, Director, Western Region, presented the FAA's plaque before an audience that included Kanke's family and top airline officials.



Top Mechanic

"Mechanic of the Year" Award plaque is presented to Flying Tiger Line mechanic Joe Kanke by Western Region Director Arvin O. Basnight (left) during recent ceremonies at Los Angeles International Airport. Kanke was cited for contributions to aviation safety.

Vast Network Is Linked By Communication Hub

By Don Byers

KANSAS CITY, Mo.—A new FAA high-speed telecommunications message switching center to expedite the flow of international aeronautical information is now operating at Kansas City, Mo.

Some 86 communications channels directly interconnect the Kansas City facility with three FAA domestic networks and with more than 100 specific locations outside of these networks. Almost 50 of the locations are on foreign soil under 17 national flags in the Caribbean, South America, Europe and North Atlantic.

Fully automated, with dual computer systems for increased reliability, the center speeds message transmission and improves accuracy by eliminating intermediate relay points. A message from Lima, Peru, destined for Lisbon, Portugal, for example, now goes directly from Lima to Kansas City to Lisbon. Before the new center went into operation, the same message would have been relayed by three intermediate stations.

Messages are stored magnetically at the center for delivery to users in accordance with established priority levels. Urgent messages are retransmitted almost instantaneously.

The new facility is the key element in the North Atlantic and Caribbean Aeronautical Fixed Telecommunication Network (AFTN),

a worldwide telecommunications system operated by member states of the International Civil Aviation Organization (ICAO). The system handles international aeronautical operational, meteorological and flight data messages and consolidates at Kansas City all the AFTN switching functions formerly performed by centers at Miami, New York, San Juan and Balboa.

This consolidation was made possible by extending local and long-haul circuits from the four previous switching centers to Kansas City. Circuits from Miami and New York are carried by landline while those from Balboa and San Juan are carried first by submarine cable to the Florida cablehead and then by landline to Kansas City.

Landing Site Gains Noted

WASHINGTON—The number of aircraft landing facilities in the United States and its territories passed the 11,000 mark for the first time last year.

FAA records show 11,050 airports, heliports and seaplane bases as of Dec. 31, 1969, despite abandonment of 422 landing facilities last year. This represents a net increase of 580 over the 10,470 reported at the end of 1968.

Included in the 1969 year-end total are 711 heliports and 430 seaplane bases. The 34 landing



Controllers Honored

Joe Zaremba, (left) FAA advisor to the U. S. Army in Vietnam, presents a commendation plaque to Lt. Col. A. C. Galla, Commander of Camp Holloway Army Airfield, Vietnam. The award cites the officers and men of the Holloway control tower for "maintaining incomparable standards under adverse and difficult conditions." Zaremba is one of four FAA Pacific Region electronics advisors to the Army and Air Force in Vietnam and Thailand providing support for 55 U. S. military facilities using FAA electronics systems.

Agency Proposes New Alcohol Rule

By Alex F. Garvis

WASHINGTON — A rule that would prohibit any person from acting as crew member of a civil aircraft within eight hours after consuming alcoholic beverages has been proposed by the FAA.

"The proposed eight-hour alcohol rule has been devised to discourage pilots from drinking alcoholic beverages prior to flight," said DOT Secretary John A. Volpe. "Although this problem appears to be limited in scope, involving relatively few pilots, we believe rule-making action is necessary to achieve further reductions."

The proposal would be added to the existing rule in Part 91 of the Federal Aviation Regulations, which provides that "no person may act as a crewmember of a civil aircraft while under the influence of intoxicating liquor." All airlines have for years supplemented this prohibition with their own company rules banning consumption of alcoholic beverages by pilots for a longer period prior to flight.

Administrator Shaffer said studies made by the agency during the past few years indicate that there is a reasonable possibility that the use of alcohol has contributed to a number of aircraft accidents. Measurable blood alcohol was found in a number of autopsies performed on pilots in command who were fatally injured.

Because of these and similar statistics, the agency has been engaged for a number of years in an extensive educational campaign concerning the adverse effects that the consumption of alcoholic beverages has on airman performance.



Certified 'Repairmen'

Equal Employment Opportunity has come to two Chicago Area girls who were recently certified by FAA as Repairmen-Instruments. Betty Gwinn (left), supervisor/inspector and Andrea Aguilar, calibrator, received credentials to perform work for Aeronetics, Inc., a Chicago avionics repair facility. Making the presentation were Avionics Unit Chief Eugene Possneried (far left) and GADO Chief Laurel G. Smalley. The girls are final authority in the release of complex airborne instruments.

Agency Honors Topeka

By Robert Beasley

TOPEKA—The FAA's Airport Beautification Award recently went to the community of Topeka, Kan., for intensive efforts to upgrade the appearance and improve the environment of Philip Billard Municipal Airport.

Commenting on the award, Secretary of Transportation John A. Volpe said: "The airport management and the citizens of Topeka have set a fine example for other American communities by showing how an airport can be improved through cooperation and resourcefulness. By their efforts, they have created a healthful, productive and esthetically and culturally pleasing surrounding."

William C. Knoepfle, chief of the Central Region Airports Division, made the presentation in ceremonies at a Chamber of Commerce luncheon.

The award consists of an engraved certificate signed by Administrator John H. Shaffer. The Administrator noted that the improvements at the Topeka airport not only have enhanced its beauty, but also added to the safety and efficiency of operations and to passenger comfort and convenience.

Improvements at Philip Billard included general landscaping, a new covered entrance to the Terminal Building, renovation of the municipally-owned hangar and T-hangers and removing old buildings.



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Lonnie Parrish
Systems Command Center Chief

Central Flow Control controllers work in an area surrounded by maps. They are (from left), Mike Ollis, Operations Officer; Mac Champagne, Acting Deputy Chief of Systems Command Center; Joe Regan, Operations Officer; and ARTCC flow controllers, Glen Genrich, Kansas City; Arnold Becker, New York; Chet Zents, Denver; Norbert Rossillon, Oakland; Norm Rexing, Indianapolis; and Charles Spelman, Los Angeles.



Controlling the Flow of Traffic . . .

BATTLING THE BOTTLENECKS

National flow control is now a reality.

The new ATC Systems Command Center, already functioning in temporary quarters in Washington, provides an overall view of the current national air traffic situation and helps controllers unplug system bottlenecks before they happen by coordinating flow patterns and distributing air traffic between enroute traffic control centers.

The new facility is made up of the Central Flow Control and ATS Command Post, the Central Altitude Reservation Facility (CARF) and Airport Reservation Office (ARO).

These interrelated functions are housed in a large sixth floor headquarters room crowded with wall-size maps and operating consoles. New quarters are in final planning stages.

Flow control specialists from centers throughout the system are detailed to work in the command center for six-week periods. These men contribute operational expertise while they are introduced to a total ATC system concept on a first-hand basis.

They return to the field with a thorough understanding of the intricacies of the national system and the need for coordination and cooperation throughout the system.

"Their 'word of mouth' publicity is all important to us and their current operational experience is invaluable," said Mac Champagne, Systems Command Center Deputy Chief.

Systems Command Center Chief Lonnie Parrish explained that the overall mission of the new facility is to keep track of ATC system capacity and demand and to initiate actions necessary to balance the two. Each day, the system capacity is measured by checking such things as staffing at ATC facilities and the operational status of all control systems.

Parrish, who recently transferred from the Indianapolis Center where he was facility chief, went on the say that another dominant factor in determining system capacity is weather. A staff meteorologist

gives center controllers a comprehensive weather picture, updated hourly.

Another factor in the equation is supplied by CARF, the office responsible for determining what airspace will be required by the military.

When the command center staff has "digested" this diverse information it has a good idea of how much traffic the system can handle. Based on this assessment of system status, flow control strategy is developed and implemented. The primary objective is to balance capacity with demand.

When available airspace reaches the saturation point, flow control is initiated by centers whose airspace is becoming crowded. Before restrictions are implemented, however, Central Flow Control is brought into the picture.

The central facility is in a position to tell flow control specialists in the centers what the overall effects of local restrictions will be. Adjoining centers are contacted and often a conference call is set up to analyze the problem from a system viewpoint and to develop reasonable alternatives. In this way the congestion—or expected congestion—can be distributed among several ARTCC areas.

For instance, if the transcontinental airways through Denver are showing signs of congestion, the pressure is relieved by rerouting traffic through Indianapolis, Kansas City and Albuquerque or Salt Lake City. Rerouting is done through direct contact with air carrier dispatchers who are extremely cooperative, Parrish said.

One of the ways that traffic volume and possible congestion can be accurately forecast is through the Airport Reservation Office, another of the Command Center functions. All pilots flying under instrument flight rules to or from one of the nation's five high density airports, O'Hare, Kennedy, La Guardia, Newark and Washington National from 6 a.m. until midnight must reserve a landing or departure slot through this office.

By checking with ARO, Central Flow Controllers get an hour-by-hour picture of expected traffic. This information can be used as a basis for predicting possible delays at these busy terminals.

Today 500 to 600 phone calls a day are answered by the ARO staff. As the ARO concept expands, many of the bookkeeping functions will be automated.

When delays are predicted to build up to at least one hour at the three New York airports, a new concept, Advanced Flow Control, is implemented. For this, a computer, located in Kansas City, Mo., is used. The computer "notifies" the New York Center when delays in excess of one hour are expected. By using the computer readout, controllers assign precise departure times for New York bound traffic

Personnel assigned permanently to ATC Systems Command Center include: Lonnie D. Parrish, Chief; Malcolm A. Champagne, Deputy Chief, and Norma E. Tarr, secretary.

Flow Control Operations Officers are: Maurice D. Davis, James D. Lang, Michael J. Ollis and Joseph F. Regan.

The weathermen are: John Blasic, Fred Bear and Henry Wise.

Central Altitude Reservation Facility and Airport Reservation Office personnel are: Addison D. Scott, Chief; Roy E. Nelson, Deputy Chief; Linda S. Dick, secretary; James E. Albrecht, Harold F. Alley, Albert M. Angelastri, John P. Biddle, Charles J. Buzon, Samuel R. Causby, Arthur S. Conward, William P. D. Daniels, Guy J. Darone, Joseph N. Deets, Roy L. Faber, Harry T. Flanagan, Donald L. Gaddy, Olaf A. Gjormand, Arthur L. Gordon, Stonewall J. Harrington, Richard H. Jameson.

Others assigned to CARF/ARO include: Raymond D. Kellogg, Raymond D. Kelly, Larey D. Ketchner,



Interchangeable CARF and Airport Reservations Office controllers check the status of arrival and departure reservations at the nation's five high density airports. They are (from left) Charles Stephenson, Donald Gaddy (supervisor), Billy Tidwell and Thomas Mullen.

until it is able to flow with minimum delay to its terminal airport.

Currently, advanced flow control procedures are initiated by the New York Center and not by the Command Center, but SCC controllers help coordinate this action. When overall automation capability of the new center is fully developed, a broader scope of responsibility will be assumed.

Plans for the new quarters have been approved by the Administrator. A working scale model of the facility was built by the Visuals Branch of Headquarters Operations. The five by three and one half foot model will be used to decide final equipment configuration, taking into consideration operational requirements and human factors engineering.

Ralph R. Klein, Nick R. Lanza, Michael D. Leahy, Alden H. Lerner, Gerald N. Linton, Victor E. Mahler, Horace E. Moore, Thomas D. Mullen, Joseph F. O'Connell, Bruce T. Slater, Fred S. Springer, Charles E. Stephenson, Billy J. Tidwell and Muriel R. Wood.

Flow controllers from ARTC centers across the country who have served with Central Flow Control for six-week periods include: Miami—Ted Hawkins, Primio Tiberi and Clarence H. Kouche; Jacksonville—Charles E. Matthews and Alvan E. Hancock; Chicago—Michael S. Ciancanelli, Harold R. Neely and Cast Talz; New York—Leo L. Donovan, Ed Bauman and Arnold Becker; Kansas City—Stewart Morris and Glenn E. Genrich.

Others are: Cleveland—Daniel J. Schillaci and Robert W. Leibee; Denver—Donald Benson and Chester C. Zents; Washington—Samuel E. Rosenzweig; Los Angeles—Charles F. Spelman; Indianapolis—Norman J. REXING; Oakland—Norbert F. Rossillon; Albuquerque—Victor L. Staley; and Fort Worth—Roger C. Dycus.



Pointing out airspace reserved for military exercises is Roy Nelson, assistant chief of the Central Altitude Reservation Facility. Controllers Billy Tidwell and Harold Alley (seated) look on.



Weather Bureau meteorologist Fred Bear checks his forecast before passing it along to the Systems Command Center staff.



Looking over scale model of new ATC Systems Command Center are (from left), Stanley Ratomsky, ATS, planning officer; Roy Nelson, ATS, assistant chief of CARF; and James Moyer, Headquarters model maker.

New Device 'Hears' Aircraft Flaws

OKLAHOMA CITY—An aircraft inspection device no larger than a pencil-type flashlight has been invented by Everett L. Samples, of the Aircraft Service Base at the Aeronautical Center.

With the device, inspectors can easily make nondestructive eval-

uation of aircraft metal parts and structure, tracing a failed area according to sounds emitted.

Using his off-duty time weekends and evenings over a six months period, Samples combined scrap parts from his junk box with portable transistor radio parts to

come up with a workable "Audio-Probe" which detects cracks through normal paint or dirt conditions. It separates metals by composition or heat treatment, and can determine heat damage by comparison methods. The highly portable, battery-operated device can be made for about \$250, it is reported, and six units have been made for evaluation by inspectors on actual aircraft inspections at the Center.

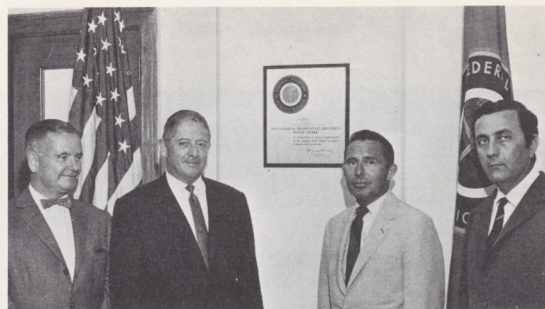
Analyzed Procedures

Associated with nondestructive testing the past 15 years, Samples noticed that personnel conducting inspections usually had to remove paint from a plane's area or part suspected of fatigue or cracks. Then the area had to be dismantled for a closer inspection or, if kept intact, it had to be given specialized nondestructive testing by specialists using comparatively heavier and more expensive equipment than Samples thought usually necessary. Through the years industry has stressed development only of very sensitive devices costing more than \$1,000 each and requiring taking visual readings from a meter face or dial. Development of simple-to-operate, portable, low-cost equipment had not been achieved.

29 Years' Experience

Samples, unit supervisor for the Nondestructive Testing Laboratory in the Quality Control Branch, has experience in the aircraft industry dating back 29 years, including stints as aircraft mechanic, inspector and commercial pilot.

Six prototype units of the "Audio-Probe" are being tested.



Honored in Beirut

Taking pride in their office's capture of the 1969 Regional Flight Standards Field Office Award for the European Region are these employees of the Beirut, Lebanon, Flight Inspection field office (from left): Argyle L. Smith, Air Carrier Operations Inspector; Charles E. Sharp, FAA Representative; Earl D. Borden, Air Carrier Maintenance Inspector and Joe Nawbar, Administrative Assistant.



Invents Audio-Probe

Until Aeronautical Center employee Everett L. Samples invented his pencil flashlight sized "Audio-Probe" to detect flaws in metal parts, aircraft inspectors relied solely on the expensive instruments such as those in background in bench application. The new battery-operated probe gives an audible tone by which an inspector can outline a defective area's location quickly—such as in the light aircraft wheel above.

Palm; Ivy; African Violets Thrive at FAA Headquarters

By Carol Lencki

WASHINGTON—In the office of Federal Air Surgeon Peter V. Siegel you'll see an avocado tree, a date palm, several varieties of ivy, a pineapple plant and a gardenia—all growing luxuriantly.

These delicate plants are tenderly cared for by Frances MacSwain, a records analyst in the Office of Aviation Medicine. Mrs. MacSwain doesn't go by the book when it comes to plants.

"According to the book I bought recently on the care of African violets, my plants should be withering away," she said. "They aren't!"

A little over a year ago, a friend gave her a healthy African violet leaf or, botanically speaking, a

"start." Today, she has more than 100 individual clumps of African violets, ranging from pure white to vivid purple. "All are in beautiful bloom in spite of the fact that I do nothing in particular to keep them that way," she said.

At home, when not looking after her violets and other plants, Mrs. MacSwain enjoys doing needlepoint, making hook rugs and sewing. She takes a great deal of pride in her agency job in the Accident Investigation Branch.

She has been with the FAA since 1962, when she accepted a position with the Aeromedical Certification Division at the Aeronautical Center. She came to Headquarters in June 1966, when the functions of that division were transferred here.



A Green Thumb

Ardent plant collector Frances MacSwain, of the Federal Air Surgeon's Office at Headquarters, waters her gardenia. Mrs. MacSwain's other plants include (from left): a date palm, a mixture of ivy, a pineapple plant and more ivy. Standing tall behind the pineapple is an avocado tree.

Work at Airports Surveyed

WASHINGTON—An FAA survey of 20 of the nation's busiest airports indicates that construction projects are scheduled at most of these locations, with many already underway. The construction is part of an ongoing program to have the nation's airports meet the needs of larger carrier aircraft, increased traffic and passenger loads.

Administrator John H. Shaffer explained that construction projects and maintenance programs—such as runway repair and marking—are being planned to take advantage of the usually favorable weather during the summer and fall months.

Here are examples of construction work underway at airports:

• **Los Angeles International**—Construction of new runway 24R has been completed with the exception of high speed turnoffs. Completion of this work will require closing parallel runway 24L to all but Boeing 747 operations and emergency use. Although the new runway 24R will be open at this time, it will not be at full capacity because high speed turnoffs haven't been completed. As a result, a drop of ten per cent in total operations at the airport is expected.

• **Boston Logan**—Extensive construction work is in progress. It includes pavement overlays on principal runways 15R/33L and 4R/22L and taxiway C, which extends east-west across the field. Other projects include shoulder stabilization on both sides of runway 9/27 for the full length and a new concrete apron at the international terminal and central ramp in front of the control tower. The work, which began in May, is scheduled for completion in November.

• **Dallas Love Field**—A major taxiway and terminal ramp reconstruction program is underway. Work on the first of four phases—the removal and replacement of concrete on the north perimeter of the ramp and taxiways leading to runway 13L has begun. Similar construction on three remaining sections of the ramp and connecting taxiways is part of a \$2 million project scheduled for completion in May 1971.

• **Philadelphia**—A major terminal expansion project is under construction, scheduled for completion in about three years. Other airport construction, which includes construction of a new runway, has no impact on aircraft movement, since the work is outside the present operation area.

• **San Francisco**—A major project involving reconstruction of 3,000 feet of the east end of runway 28L and the repair of two taxiways and two intersections is expected to have a major impact on traffic movements. Another project now underway is the installation of centerline/taxiway lighting. A third project involves extension of taxiway G and lighting taxiway B—the peripheral taxiway around the ramp area.

Other airports where construction work may affect aircraft capacity this summer are: Seattle-Tacoma, Denver Stapleton, New Orleans Moisant, St. Louis Lambert, Chicago O'Hare, Detroit Metropolitan, Minneapolis-St. Paul, Cleveland-Hopkins and Pittsburgh.



Dedicate GADO

Western Region and San Francisco Area FAAers took part in the recent dedication of the new San Jose, Calif., GADO. Participating were (from left): Carl Olson, Area Executive Assistant; William Krieger, Chief, Flight Standards Division; James Nielsen, Executive Officer; George Schwab, Chief, Sacramento GADO; John Zentner, Chief, Oakland GADO; Hal Morrill, Chief, San Jose GADO; Hervey Aldridge, San Francisco Area Manager; and J. L. Winder, Chief, Western Region General Aviation Branch.

New GADO Is Opened

SAN JOSE, Calif.—The Western Region has a new General Aviation District Office.

The new San Jose GADO—officially designated as GADO No. 18—will serve an area from San Francisco southward to San Luis Obispo. Counties to be served by the new GADO are San Francisco, San Mateo, Santa Clara, Santa Cruz, San Benito, Monterey and San Luis Obispo.



Like other GADOs, its prime mission is to assure a high level of aviation safety to both the general public and the aviation community.

The new facility is staffed by 11 employees headed by Supervising

Inspector Hal W. Morrill. Others on the staff are Principal Operations Inspectors Ronald F. Bernstein and Charles F. Panos, Principal Maintenance Inspector Ted A. Bollinger, Operations Inspectors Thomas H. Cook, Gerald J. Widmayer and Jack Hocker. The GADO's two Aviation Clerks are Masako Shimada and Linda Davis. Rita C. Kerwin is the clerk-stenographer.

San Francisco Area Manager Hervey Aldridge presided at the recent dedication of the GADO. The regional representative at the event was James Nielsen, executive officer.

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: The Associate Administrator for Manpower, Direct Line, FAA, 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: What are FAA's plans for hiring additional air traffic control specialists (station option) in fiscal 1971 and 1972? And why were additional station positions not budgeted in FY-70?

Answer: Actually, there are some 200 more positions authorized for flight service stations in fiscal 1970 than in fiscal 1967. All manpower authorizations must be based on demonstrated needs which are subject to continuing review. Until a final determination is made as to the role of FSSs in the National Airspace System, FSS manpower requirements cannot be definitely stated. An FSS improvement plan has been developed and is currently being reviewed. If approved by the Department and the Bureau of the Budget, the manpower requirements should be reflected in the fiscal 1972 budget.

Question: If an employee submits an original suggestion for evaluation by memorandum and then another employee copies the suggestion and submits it on FAA Form 2333, FAA Employee Suggestion, can the suggestion from the originator be rejected and an award given to the employee who copied the suggestion?

Answer: Although the use of FAA Form 2333 is recommended, suggestions may be submitted in memorandum or letter form. When an official suggestion form is not used, it is essential that the employee's idea be identified as a suggestion and be logged into the suggestion system (see paragraph 66 of Handbook 3450.7A). Failure to use FAA Form 2333 is not a basis for rejecting a suggestion. When two identical suggestions are received and the idea is adopted, the earlier suggestion is entitled to an award, regardless of the form of submission. An employee in the situation you describe should discuss the matter personally with his immediate supervisor and with the Recognition and Awards Coordinator who handles suggestions for his unit.

Question: I have read in both *Intercom* and *FAA Horizons* that the electronics relief technician positions would be upgraded to GS-12 grade this year. Can you tell me what the qualifications will be and when implementation will take place?

Answer: Sorry, but *Direct Line* cannot pinpoint the articles you mention. Of course, there is a "Quick Fix" item in which a relief technician is classified at the grade of the highest non-supervisory level relieved, but only when certain other criteria are met. For a complete rundown on the *AF Occupational Study*, see the Special *Intercom* of Mar. 18, 1970.

Question: During a permanent change of station move, I was authorized 6½ days of travel by personally owned vehicle. Is it required to drive every calendar day without interruption, or may weekends be used in non-travel status without being charged to

annual leave?

Answer: Travel should be scheduled so that to the maximum extent practicable, employees will perform official travel during normal duty hours. However, in accordance with Comptroller General decisions, travel once started should not be interrupted by reason of non-workdays (weekends) within the travel period. Therefore, once travel begins, an employee is expected to achieve a reasonable daily mileage of 348 miles a day, except that 448 miles a day are required when most of the travel is over superhighways (see paragraph 457, *Travel Handbook*, 1500.13). If travel is not performed on non-workdays, annual leave must be charged for any excess travel time performed on workdays.

Question: Does the authorization of annual leave en route, in conjunction with travel between duty stations affect whether or not you are required to drive on weekends?

Answer: No, the same principle as outlined in answer to the previous question applies. If the non-workdays (weekends) are within a period of travel, an employee is expected to travel on such days.

Modernization

(Continued from Page 1)

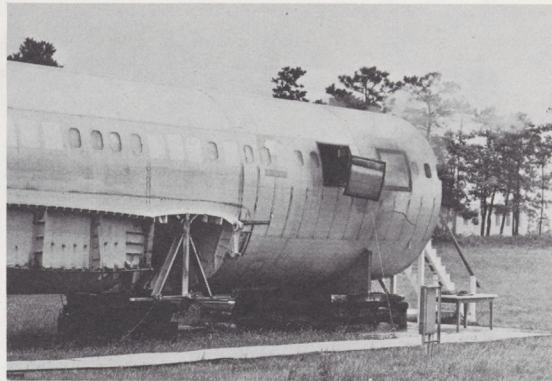
of a sound control plan, including installation of acoustical ceilings and walls. Floors will be carpeted to cut noise and provide more comfortable working conditions.

Brighter, more eye-appealing surroundings are in the plan. New lighting is being installed. Consoles and other controller work areas are being repainted in "relaxing" colors. Improved, redesigned air conditioning is also being installed.

The main thrust of the second phase effort is to provide the best possible environment for the men and machines of the en route air traffic control system. Highly sophisticated electrical and mechanical systems will be installed. Also, the personnel environment will be enhanced in the control room and other operational and maintenance areas.

In most cases the complete phase-two modernization will be done after the new wing is finished. Besides the refurbished control room, controllers, technicians and others working at the centers can look forward to new, modern cafeterias seating 150 persons, new and larger locker rooms and rest rooms as well as convenient conference rooms and "ready" rooms designed for comfort.

At Houston, where the center will conform to the overall design of the Intercontinental Airport, work on both phases of the modernization program will be done simultaneously. At Chicago the overall design also has been somewhat modified, and a new, modern cafeteria is scheduled to start serving food this week.



Passenger's Exit

The patient dummy on Page 1 was merely waiting for an emergency exit to be popped out explosively from the fuselage of the Convair 880 at NAFEC. It took less than a second to cut the two-by-three foot exit in the test. Any size opening could be selected in planning the exit.

Explosions for Air Safety Undergoing NAFEC Tests

By Frank McHugh

ATLANTIC CITY—An explosive has been used in tests at NAFEC to cut openings in an airplane fuselage, creating instant emergency exits so passengers could evacuate a transport plane more quickly after a crash landing.

To cut the metal fuselage, a liquid explosive is pumped into a hollow tube placed on the inside wall of an airplane cabin to match the size of the desired exit. The cutting operation takes less than a second.

The size of the emergency exits are about three feet by two feet, but the entire side of an airliner could be cut out in less than a second, according to Project Manager Joseph J. Jaglowski. Passengers

would then be able to immediately step out of the plane at their seats, rather than having to file out through emergency exits.

The new type exits would not replace conventional ones, Cannon said, but would be used in addition to them.

The explosive used in the tests consists of two inert liquids which become explosive only after being mixed together. The mixture must be set off by a detonator.

Cannon said that the project, under study at the center for the past two years, is aimed at determining the feasibility of cutting the exits using an engineering model. Testing will establish the reliability and characteristics of the exit system, he said.

Air-Minded 'Big Chief' Addresses FAA 'Braves'

OKLAHOMA CITY—Air-minded Indian Chief Wa-she-ga-da-nan, after being inducted into the Otoe Tribe, addressed members of the Airways Engineering Society, a professional technical and engineering society composed entirely of FAA personnel, at their recent national convention.

Donning his feathered headdress, Administrator John H. Shaffer, alias Wa-she-ga-da-nan—man who serves his country well—was inducted into the Otoe chieftain ranks by Chief Lujape.

In his keynote speech, Administrator Shaffer talked about "Change and Challenge Ahead," stressing the need for instant communication between top management and the man in the field. He called attention to the gradual rise in standing of the electronics technician and pointed out that more benefits would be forthcoming in the years ahead.

During the three-day session, members of the Airways Engineering Society discussed the problems of hardware under the new funding permitted by the Airport and Airways Act, communication problems between management levels and the best methods for exchanging information.

FAA Headquarters representatives sitting in on a number of panels included Bertrand M. Harding, Associate Administrator for Manpower; John A. Weber, Direc-

tor, Research and Development; Charles W. Carmody, Director, Facilities Installation Service; and Mervyn M. Martin, Director, Systems Maintenance Service. Southwest Region Director Henry Newman also participated.

This year's convention was the tenth since the AES was first organized in Oklahoma City in May 1960.

Dallas TRACAB Gets Recognition For Fine Service

DALLAS—Among regional winners of the recent Air Traffic Facility of the Year Awards was the Dallas TRACAB. Several readers have asked about this unofficial acronym. In this case it designates the Dallas Love Field Tower Radar Cab.

The 34 controllers at this facility were honored for breaking all air traffic records at Love Field while working a good portion of the time under adverse conditions. Despite the complexity of the traffic using the field and the record operations, the controllers did not make an operational error in 1969.

TRACABs are in operation at New York, San Francisco and Dallas. These control towers, using BRITE-1 equipment, have limited approach and departure control jurisdiction. Each operates in conjunction with another approach control facility, such as the Common IFR Room in New York, the Bay Area TRACON in San Francisco and, at Love Field, the Southwest Regional Airport TRACON.

Dallas TRACAB controllers who contributed to the award winning record are:

Supervisory Air Traffic Control Specialists: Finis Lambert, William B. Thoman, George M. Burd, Charles H. Crowe, Arthur Mitchell and William J. Shelton.

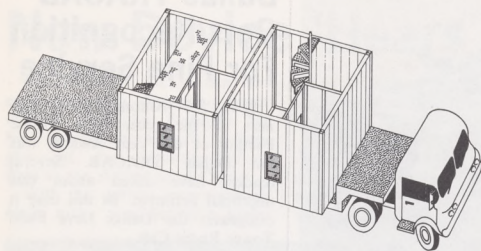
Air Traffic Control Specialists are William K. Baker, Robert A. Barnett, William H. Barnett, O. Blankenship, Hoke Branham, Angus O. Brown, Jackie Denham, Maurice Dixon, Billy L. Durham, David L. Duvall, James Gallagher, Louis C. Gaudin, Jerry L. George, John W. Hays and Robert S. Hubbert.

Also William P. Johnson, Harold Lightfoot, Joy D. Martin, Carroll McCoy, Erben T. Pace, Lowell Peterson, Lester L. Reece, Jack Reid, Stanley Roberson, Gene Skipworth, Benny Stinson, Daniel Williams, John S. Winn and clerk stenographer Carmel Pirtle.



'Chief' Shaffer

A spin-off of Administrator John H. Shaffer's recent visit to Oklahoma City to address members of the Airways Engineering Society was his induction into the Otoe Indian Tribe. He's now Chief Wa-she-ga-da-nan—"man who serves his country well."



TOWERS THAT TRAVEL

Ever-see a tower travel?

You'll be able to next spring when three new FAA towers will be hauled to their sites on large flatbed trucks. The "travelling towers"—actually factory-fabricated modules that make up the tower structures—will be brought to the tower sites in segments.

The new towers will go up at airports serving Owensboro, Ky., Columbus, Ohio (Don Scott Field) and Parkersburg, W. Va.

The "turnkey" contract for the first of this new breed of towers was recently awarded by the agency to the Air-a-Plane Corp. of Norfolk, Va., which has produced mobile towers for the FAA and the military. Total contract cost of the three towers, including site work, but not including installation of electronic equipment, will be \$652,800, a considerable reduction when compared to the cost of similar projects built in the conventional manner.

Turnkey Facility

The term "turnkey" applies to an inclusive type of contract under which virtually all phases of construction are carried out by the contractor to the point that, theoretically, the facility could be activated by "turning a key."

A time span of 270 days has been specified in the contract as the maximum period for constructing the three towers concurrently. This is less than half the time required for similar projects constructed conventionally. The 270 days includes all phases of work from pouring foundations, installation of environmental equipment and erection of the tower. Electronic and operational equipment will be pre-packaged and installed by the Aeronautical Center.

Components for the new towers, consisting of large, modular sections which will be "stacked" on one another to form the tower structure, will be fabricated at the contractor's Norfolk plant.

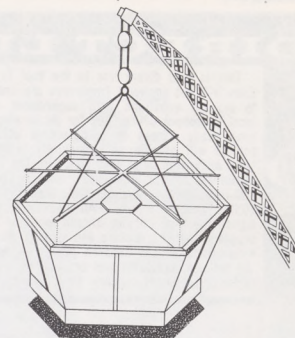
Each of the new towers will be 54 feet high measured to the floor of the tower cab. Each shaft will be constructed of four eight-foot sections plus one that is ten feet high. A ten-foot-high by 24-foot-square "top



Model of "factory-made" air traffic control tower is inspected by (from left) Charles W. Carmody, acting Director, Facility Installation Service; James McManus, project manager, Facility Environmental Branch and James Clericuzio, acting Assistant Chief, Environmental Engineering Division, FIS.

layer" will contain a facility chief's office and a ready room, each of which will have 145 square feet of floor space. The top section will also contain a mechanical equipment room and space for Telco installations. Each tower will be served by a 1,200-pound capacity elevator in addition to a stairway.

The towers will be topped with a hexagonal, 240-square-foot tower cab designed to accommodate standardized console arrangements.



Once tower foundations have been poured, assembly of the structure becomes a relatively simple, speedy operation. A large crane will be used to hoist each modular unit into place. As each section is set in place, unit by unit, like building blocks, workmen will anchor it securely to the section below with bolts, welds and other construction methods.

Top Section Wider

After shaft sections have been assembled, the larger, wider ten-foot-high portion of the building which constitutes the administrative office module will be positioned on top and anchored. This key section of the tower will be brought to the site in two segments, each weighing about 20,000 pounds. Each half will be hoisted separately to the top of the supporting structure and then the two halves will be bolted together.

Finally, the tower cab, which also will be brought to the site in halves, will be assembled into a single unit on the ground and hoisted to the top of the tower shaft.

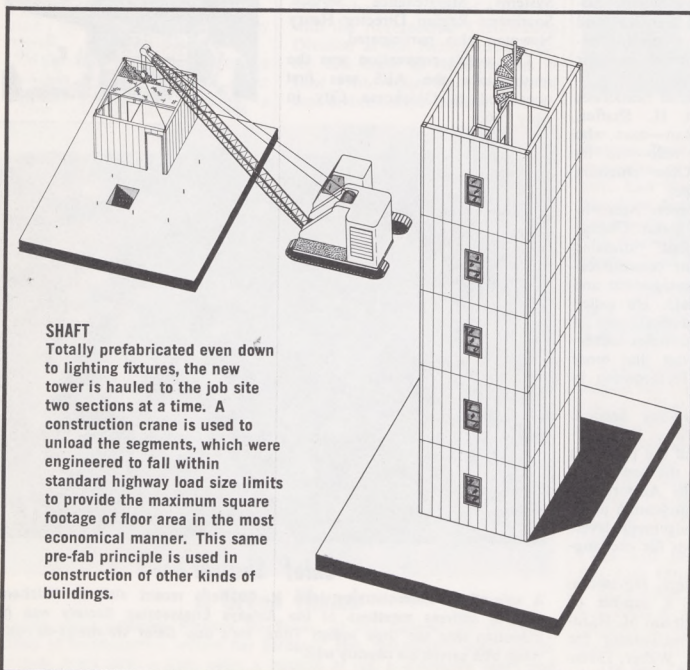
Structural strength is not sacrificed through use of the prefab process, engineers point out. The tower structures are designed to withstand winds up to 150 miles per hour and severe earthquake jolts.

Cost benefits are realized through the towers' standardized design, pre-engineering and reduced labor costs associated with the pre-fab process.

Engineering aspects of the project are being coordinated by James McManus, project manager, Facility Environmental Branch, in the recently-organized Facility Installation Service.

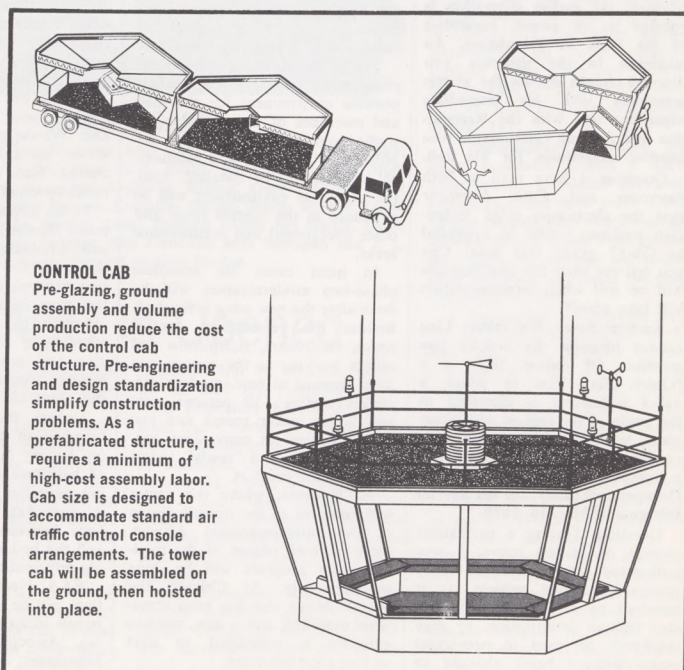
Others working with McManus on the project include the acting chief of the Facility Environmental Branch, George Viau; James Cancro of the FIS Enroute AT Facilities Branch; and William Keepers of System Requirements Branch, Air Traffic Service.

Participating in early planning phases were Jack E. Clark of Systems Research and Development Service and Charles Murray of Facility Installation Service.



SHAFT

Totally prefabricated even down to lighting fixtures, the new tower is hauled to the job site two sections at a time. A construction crane is used to unload the segments, which were engineered to fall within standard highway load size limits to provide the maximum square footage of floor area in the most economical manner. This same pre-fab principle is used in construction of other kinds of buildings.



CONTROL CAB

Pre-glazing, ground assembly and volume production reduce the cost of the control cab structure. Pre-engineering and design standardization simplify construction problems. As a prefabricated structure, it requires a minimum of high-cost assembly labor. Cab size is designed to accommodate standard air traffic control console arrangements. The tower cab will be assembled on the ground, then hoisted into place.