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#### PURPOSE OF MANUAL

This manual contains the basic information necessary to enable fire fighters to prepare themselves for the written portion of the Airport Certification Test. All questions on the written exam will be taken from this self-study package which includes I.F.S.T.A. #206, Aircraft Fire Protection and Rescue Procedures.

In reviewing this material, the student should make notes of any information which requires further explanation or clarification. Prior to the written test, a review of specific items can be requested, to provide clarification.

The information contained herein is intended to prepare the applicant for Airport assignment by providing the basic information needed to operate effectively in routine and emergency situations.

1/87

# C/F/R TRAINING PROGRAM Miami International Airport "No man can do more than is permitted by his knowledge"

Today's modern aircraft are well designed, well maintained, flown by professionally competent crews, depart from and land at airports built with the safety of the traveling public in mind and certified by the F.A.A. for proper operation. The end result is aircraft travel is a most expedient and safe means of travel.

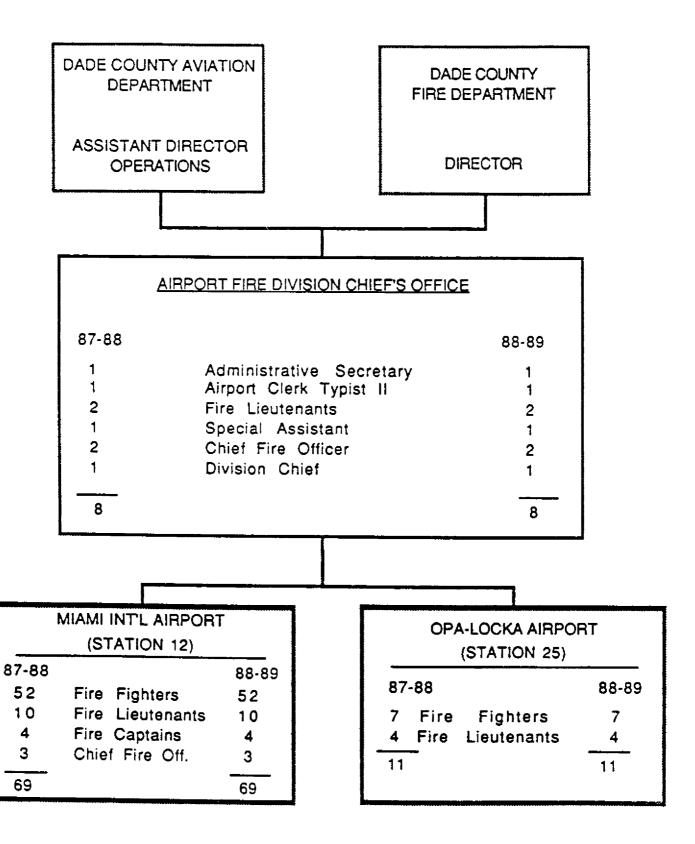
This is indeed a blessing, but does in fact pose a problem for career C/F/R personnel. C/F/R fire fighters have little chance to gain personal expertise through participation in actual aircraft incidents, as may be done by structural fire fighting units.

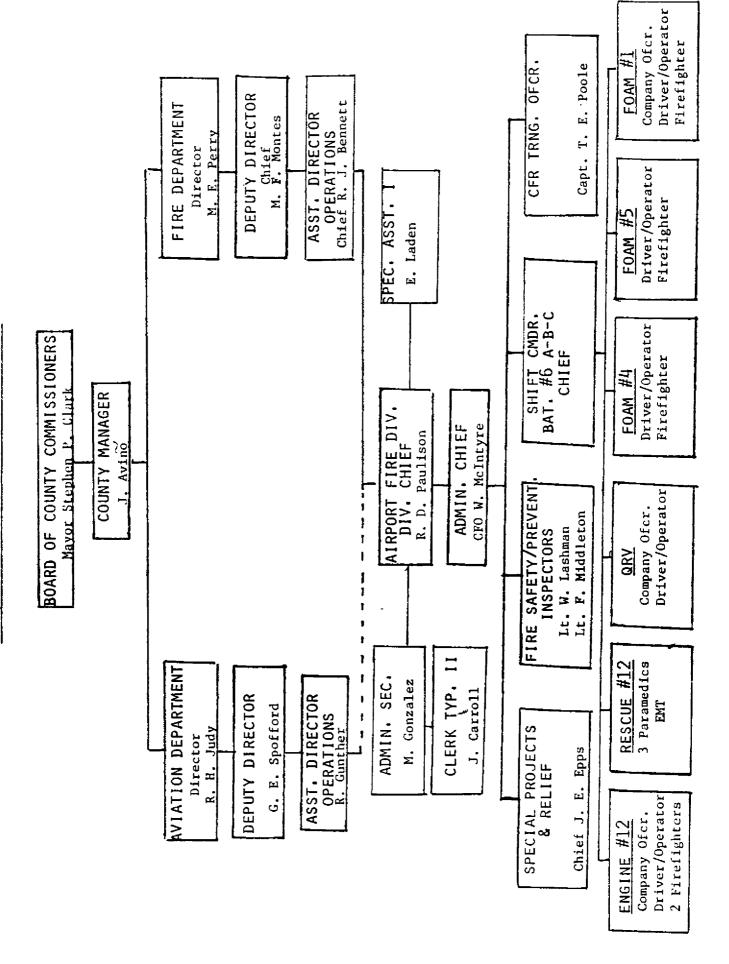
In a major aircraft fire situation, the competence of the force assigned to cope with the fire and rescue assumes monumental importance. The margin between a successful rescue from an aircraft accident, and one that was almost a success, is often a very fine line. The difference between life and death for the passengers can often be measured in seconds.

Rapid response and fire control is absolutely vital. We must, therefore, structure ourselves to a comprehensive training program which is broad in concept and pursued vigorously. It must be as realistic as possible and repeated frequently enough to develop job skills to the point they are habitual in nature.

Our first priorty in a major aircraft fire situation is to "provide a survivable atmosphere until rescue can be affected".

## DIVISION STAFFING CHART





#### METRO DADE AVIATION DEPARTMENT

The Aviation Department operates a six-airport system. Funds to operate Metro's airports come from internal revenues, airport businesses and the airplane passengers using the facilities. Local tax money is not used to operate or finance these aviation facilities, so vital to the economy. C/F/R services for these airports are funded from internal revenues as well.

Miami International Airport, flagship of our six-airport system, is also called; Wilcox Field. It was named after the congressman and airport attorney who organized its early development in 1959. Miami International Airport is a multi-national center for tourism and commerce. The area is comprised of 3,300 acres, with a property value well in excess of \$225,000,000. The worker population is 35,000 excluding transients. Daily landings and take-offs average 1,000. In 1986, 22 million passengers were rendered service.

There are three runways: 9,600, 10,500 and 13,000 feet long. The 13,000 foot runway provides greater capabilities for heavily-loaded cargo aircraft. This also allows aircraft to land deeper from the east, resulting in considerable noise abatement for Miami.

The huge terminal and hotel complex are located west of LeJeune Road at Northwest 20 Street. The new International Satellite Terminal is completed and has a double monorail transit expressway upon which the six computer-scheduled tram cars move passengers from jet-ways at the Satellite to the Federal Inspection Station (Customs, Immigration, Agriculture). Each shuttle can convey 150 people.

The new FAA Air Traffic Control Tower is located in the west portion of the airport, better known as MIAD. The FAA offices and Approach Control are situated on the upper floors. There are 83 airline companies scheduling passengers and over 75 cargo carriers operating at M.I.A.

The northeast quadrangle of the field contains the Eastern Airlines maintenance hangars and offices (see map at end of this section). The Pan American airways operation occupies building and hangar at LeJeune Road which were formerly a part of National Airlines complex. Pan American also maintains a training facility west of Eastern Airlines complex.

The northwest corner of the airport comprises many warehouses and ramps for aircraft maintenance, tie-down, cargo transfer and a private aircraft general aviation center. Warehousing and industrial occupancies are situated in the southwest section.

Adjacent to these are aircraft loading docks, railroad spurs and truck loading ramps. Cargo City (building #2200) a 1,000 foot long building, is now completed and cargo operations are fast-growing enterprises.

The Airport Terminal and supporting facilities are spread over the southeast portion (over 7000 parking spaces available). The jet fuel bulk storage complex is close by; storage capacity is over 18 million gallons. The fuel is piped from Port Everglades. Companies operating fueling facilities in this area are Texaco, Citgo, Delta Airlines,

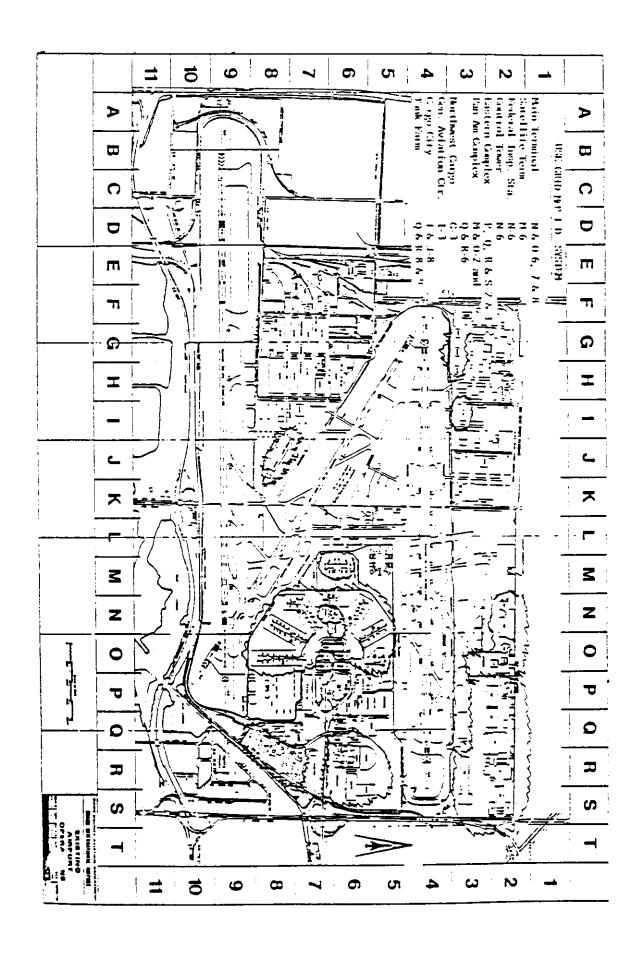
Eastern Airlines, Aircraft and Airport Services, Shell, Florida

Aviation Fueling, Pan American Airlines and Everglades Pipe Line Company.

The Metro Dade Aviation Department (MDAD) has five more airports in the system and Futuramic Site 14. Our airports support 70,000 jobs and inject two billion dollars yearly into the local economy.

Opa-Locka is a general aviation center with six runways with an annual traffic load of 176,500 landings and take-offs. Opa-Locka West supports 100,000 flight operations annually. Tamiami Airport, with 1,280 acres, reflects 300,600 annual flight operations.

Homestead General Aviation estimates a traffic range of 100,000 to 110,000 yearly flight operations. The Dade-Collier Training and Transition site (T&T) logs 20 to 30 thousand training operations per year.



#### OPA-LOCKA AIRPORT

Opa-Locka is a general aviation airport located at Opa-Locka Boulevard (135 Street) between Northwest 37 and 57 Avenue. No scheduled passenger carriers service this field. This facility encompasses two (2) square miles (1,820 acres). There are six active runways: 9-left (8,000-feet), 9-center (3,756-feet), 9-right (3,500-feet), 12 (2,350-feet), 18-right (3,300-feet), 18-left (5,184-feet).

Annual flight operations are currently over 176,000. The Air Traffic Control Tower operates from 0700 to 2300 daily. Flying activities are 50% training and 50% flying.

There are a number of structures located on the airport. The major fixed base operations are Miami Aviation Corporation, Hangar One, Clark Aviation and B & R Flying (see map at end of this section).

Fire protection is provided by the Metro Dade Aviation Department (MDAD) and the Metro Dade Fire Department. Available fire flow is approximately 5,000 G.P.M.

Fire Station #25 is loacated at Ely Road (Northwest 144 Street) and 42 Avenue in MDAD Building #114. From Station #25 a Fire/Rescue vehicle (Foam #25) responds to alarms, rescue calls, structural fires and aircraft incidents on and near the airport.

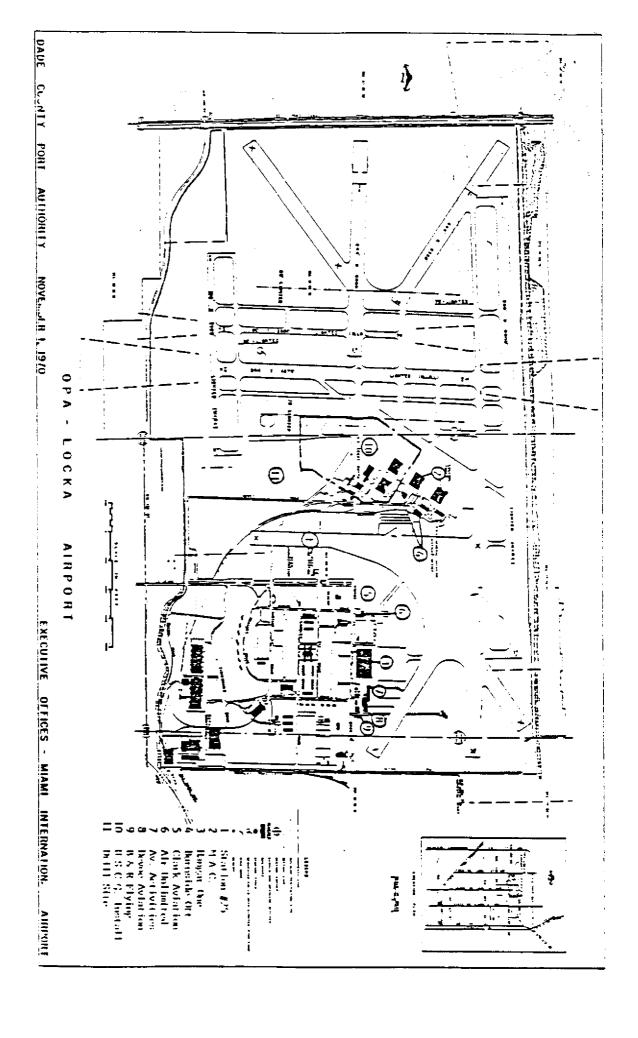
Foam \$25(vehicle 21-112) is a Walters model CBK aircraft crash fire fighting truck, designed to meet the specific needs of airport fire fighting crash rescue functions. The principal fire extinguishing agents are AFFF and Fluroprotein foam.

The water tank has a capacity of 3,000 gallons. Two 250-gallon foam tanks carry a split load of AFFF and Fluoroprotein foam concentrates. The vehicle is equipped with twin high performance diesel engines and duplicate pump systems. The standard discharge devices include one hydraulic turret mounted on the cab roof which has a 1,500-gallon per minute capability. Other features are a Santa Rosa turret (300 gpm), two under-truck nozzles (17 gpm) and two handlines (60 gpm).

Special equipment carried includes a large array of forcible entry and crash rescue tools, a first aid kit and a self contained breathing apparatus for each man.

The table of organization reflects that one airport certified lieutenant, one driver-operator and one fire fighter make up the crew for this unit. Fire fighters at Station #25 are trained to be proficient in C/F/R and structural fire supression functions.

Opa-Locka is also base for one of the busiest United States Coast Guard Air-Sea Rescue Squadrons (see map).

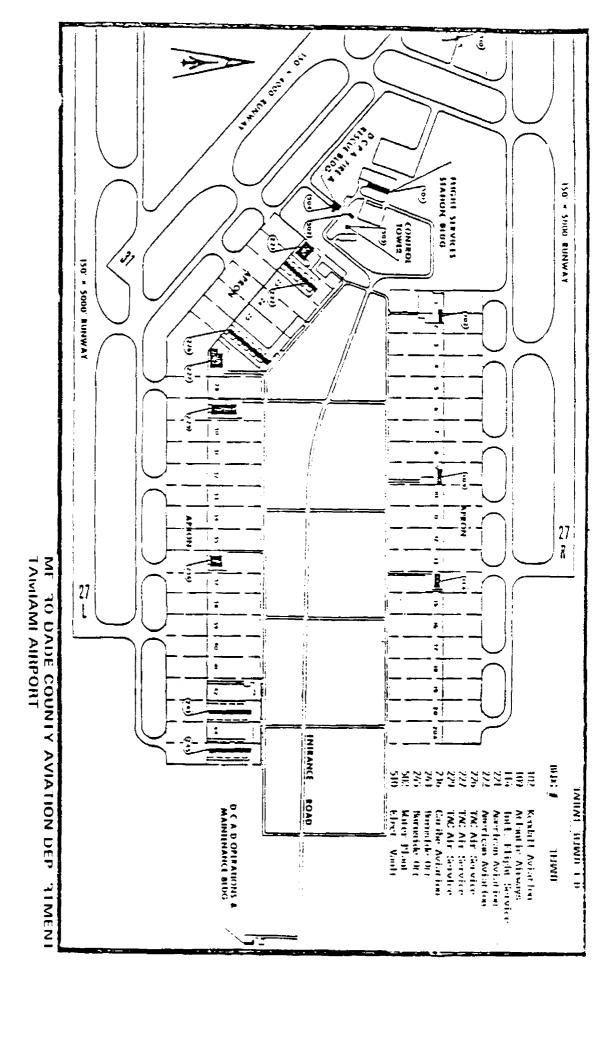


#### TAMMI AIRPORT

Tamiami Airport is a general aviation facility located at 12800 Southwest 137 Avenue. No scheduled passenger carriers serve this field. Flying activity consists of two-thirds training and one-third private aircraft. In fiscal year 84-85, flight operations totalled 300,600. Tamiami encompasses an area of two square miles (1,200 acres). Parallel runway designations are runway 9-left/27-right and runway 9-right/27-left (5,000-feet each) and runway 13/31 (4,500-feet long).

The FAA Control Tower operates between the hours of 0700 and 2300. A remote Federal Aviation Administration Flight Service Center is also located here which serves nearby Caribbean and Bahamian areas.

Fire protection for Tamiami is provided by MDFD Operations Division units. Water for fire fighting purposes is supplied by on-field fire hydrants and three drafting sites. Available fire flow from hydrants is approximately 3,000 gpm. Tamiami is also home base of MDFD Air Rescue I.



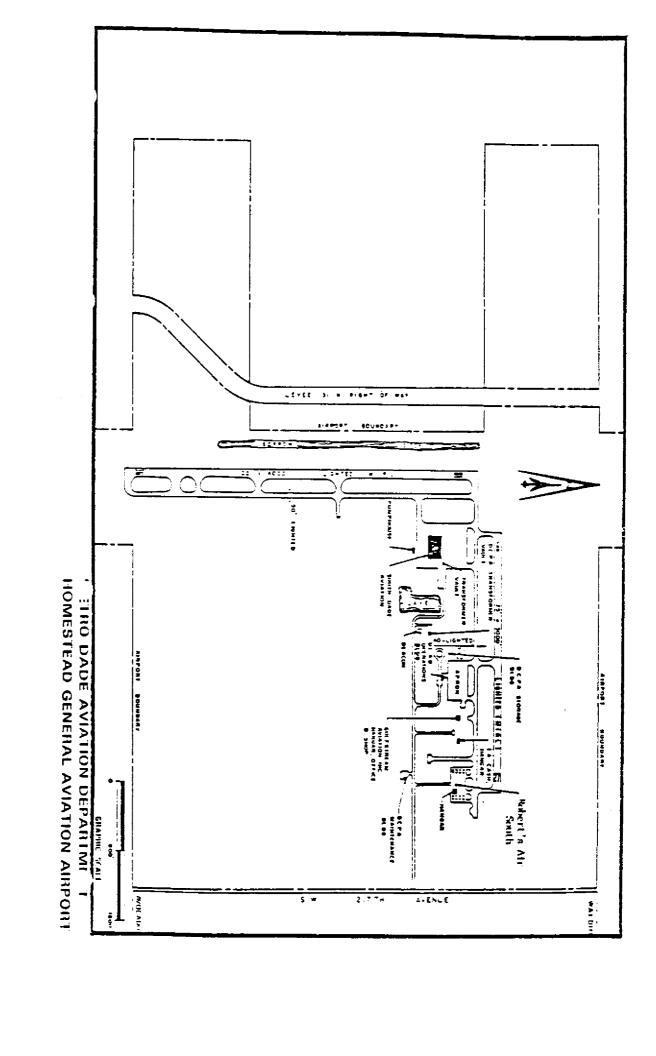
#### HOMESTEAD GENERAL AVIATION AIRPORT

Homestead General serves the agricultural aircraft in Dade County's crop lands and other general aviation activity in South Dade. It is located at 28700 Southwest 217 Avenue. The airport covers one square mile and runway designations are 9/27 (3,000 feet long) and 18/36 (4,000 feet long) with parallel taxiways.

The major structure is an office-hangar, two-story complex occupied by South Dade Aviaiton, Inc., a fixed base operator. Others are hangars occupied by Gulfstream Aviation, I.A. Crop Dusting Service, Roberts Air-South and a Dade County Aviation Depart-ment office and storage building.

Water supply is provided solely by wells on the field. Water flow quantity near South Dade Aviation is boosted by automatic well pumps. There are two drafting sites; one east of South Dade Aviation and one east of the west boundary fence.

Fire protection is limited to a 150 pound dry chemical extinguisher carried on a pick-up truck. Metro fire units would respond when requested. Flight operations number 104,000 per year.



### TRAINING & TRANSITION FACILITY

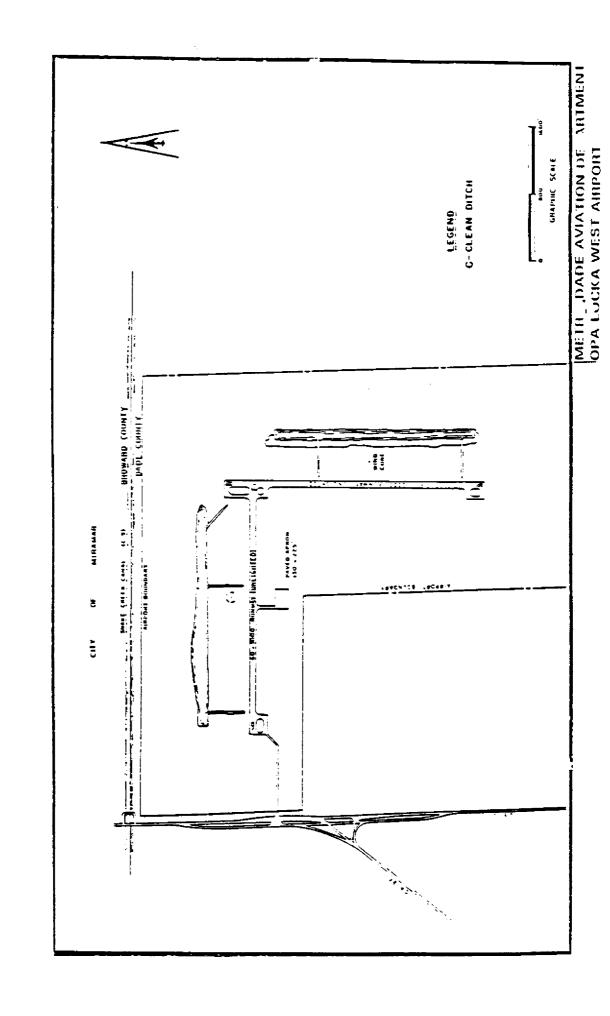
The MDAD Training & Transition Facility (T & T) is located 40 miles west of Miami. The facility can be reached by traveling west on Tamiami Trail (Southwest 8 Street) to Corndance Road, which is 31 miles west of Krome Avenue (Southwest 177 Avenue). The entrance is located on Corndance Road three miles north of Tamiami Trail.

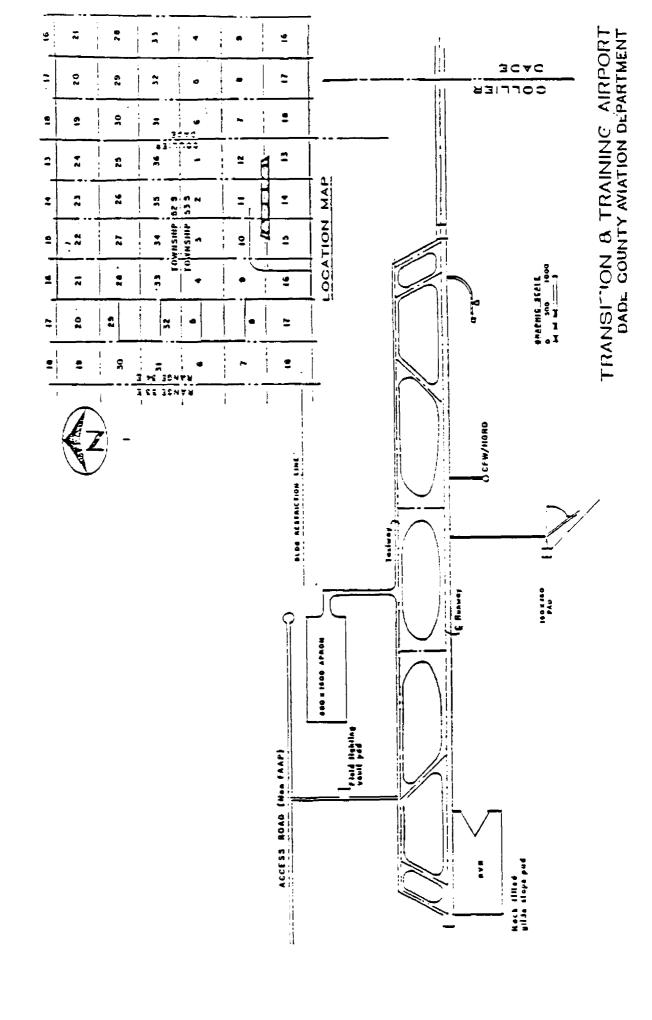
As the name implies, this is a training facility. It relieves MIA of 20 to 30 thousand training operations per year. The operation consists of one 10,300-foot runway and an unmanned control tower No fire department personnel are assigned to T & T.

### OPA-LOCKA WEST

Opa-Locka West Airport, a touch-and-go training facility, is lo-cated at the junction of Krome Avenue extension and Route 27, approximately 1/3-mile south of the Dade-Broward County line. The junction is identified by large light standards on both sides of the highway. The gate is northeast of the intersection.

This airport, with a 4,000-foot runway (9/27) and a 3,000-foot runway (18/36), relieves Opa-Locka of over 100,000 flight operations per year.





#### F.A.A. CERTIFICATION AND INDEXING OF AIRPORTS

In order for any U.S. airport to be certificated to operate, it must meet requirements as set forth under Federal Air Regulations, Part 139.

The requirements for airports vary according to the index classification of each. Index classifications are determined by the length of the longest aircraft serving that particular field and the number of daily scheduled air carrier departures involving that size aircraft. The lowest index is "A", the highest is "E". Miami International Airport is an index "E" airport. Airport fire fighters should be well acquainted with FAR 139, especially those sections related to fire fighting and rescue service, including response time reguirements.

Other airports operated by M.D.A.D. are not classified. This means the F.A.A. has no requirements for C/F/R service at these fields.