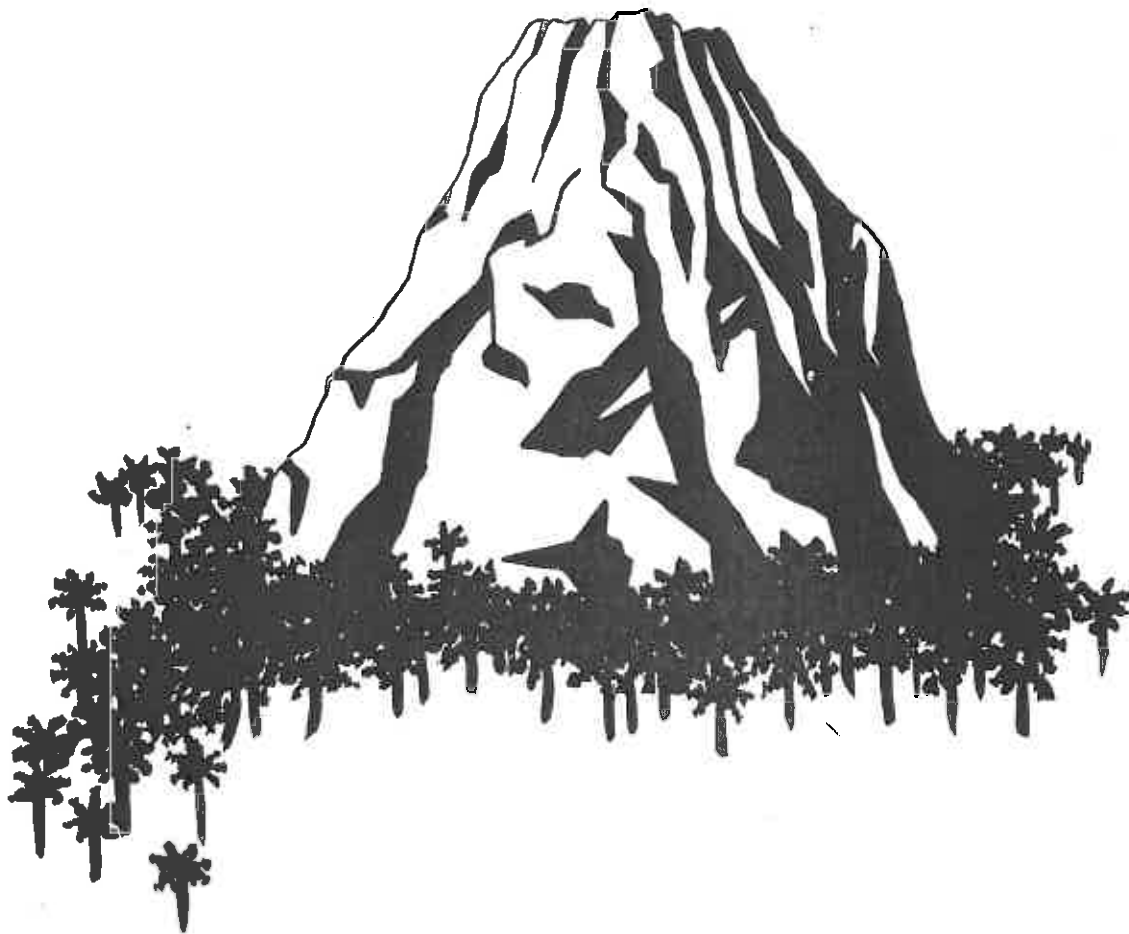


# The Grand Canary Island Story



**Field Engineering  
Corporation**

## THE GRAND CANARY ISLAND STORY

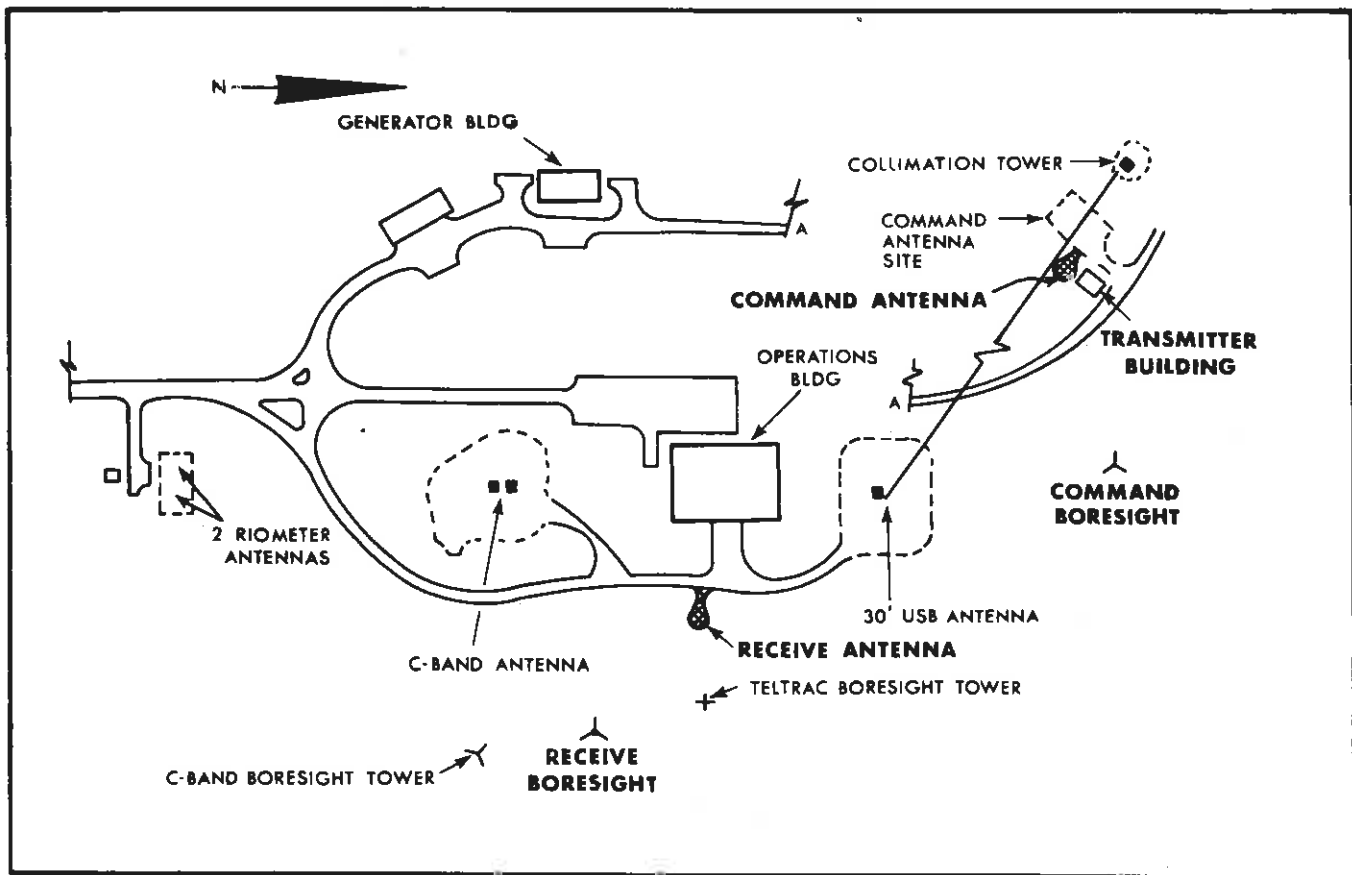
Some useful facts and figures for personnel proceeding  
to the Spaceflight Tracking and Data Networks station at  
Grand Canary Island.

prepared by

BENDIX FIELD ENGINEERING CORPORATION  
A Subsidiary of The Bendix Corporation  
Columbia, Maryland 21045  
Revised May 1973

## TABLE OF CONTENTS

Section	Title	Page
I	The Station	1
II	Background Information on Station Locale	4
III	Living Accommodations and Commodities	6
IV	Community Facilities	10
V	Communications	15
VI	Transportation	16
VII	Currency and Banking	19
VIII	Customs Regulations	19
IX	Clothing/Grooming	20
X	Conduct	20
XI	What To Do Upon Arrival	20
XII	Applicable Reference Material	20



STATION LAYOUT

# THE GRAND CANARY ISLAND STORY

## I. THE STATION

### A. Primary Mission and Brief History of Station

When Christopher Columbus left the Canary Islands on his way to the West Indies in 1492, the crossing took more than a month. Now, a spacecraft launched from Cape Kennedy, Florida, in an equatorial orbit, passes the Canary Islands in less than 22 minutes, just after it has been inserted into orbit. In 1959, when stations were being installed for future manned spacecraft support, the location of the Canary Islands made them a natural choice for a tracking station. In 1961, the NASA Grand Canary Island Manned Spaceflight installation was complete, and the station went into operation to support Project Mercury.

Support in those days, was not too difficult from a ground station viewpoint. There was adequate time to prepare for the one, or at the most two, 6- to 8-minute passes that constituted a mission. There was no support except keeping the equipment operating until the next mission, which occurred 6 months or more later.

With the beginning of the Gemini project in 1963, this type of support began to change. There was more equipment to keep operating, and the missions lasted longer. When the Apollo project started in 1967, it was found that the existing facilities were too small for the large amount of new equipment being added, and the site location was found to be unsatisfactory. The station was moved about 2 kilometers south; and a new site was built, from the ground up.

The workload at the Grand Canary Island Tracking Station (CYI) has continued to increase. Now, as part of the Spaceflight Tracking and Data Networks (STDN), CYI supports the Earth Resources Technology Satellite (ERTS), and the ALSEP packages left on the moon during the Apollo project, plus a variety of other satellites during their launch and early orbit phases.

With the buildup for the coming Skylab project, there are now between 80 and 90 Bendix technicians on the station plus between 90 and 100 Spanish personnel working for Instituto Nacional de Tecnica Aeroespacial (INTA). These personnel operate and maintain tracking, telemetry, command and communication facilities

in support of scheduled spacecraft activities and emergencies. Data from these spacecraft is recorded and transmitted via COMSAT and cable circuits to the United States in real time.

An additional facility at CYI is the Solar Particle Alert Network (SPAN) site. This facility makes daily solar tracks and gathers information by means of a telescope, and a radio telescope which is used to predict solar flares.

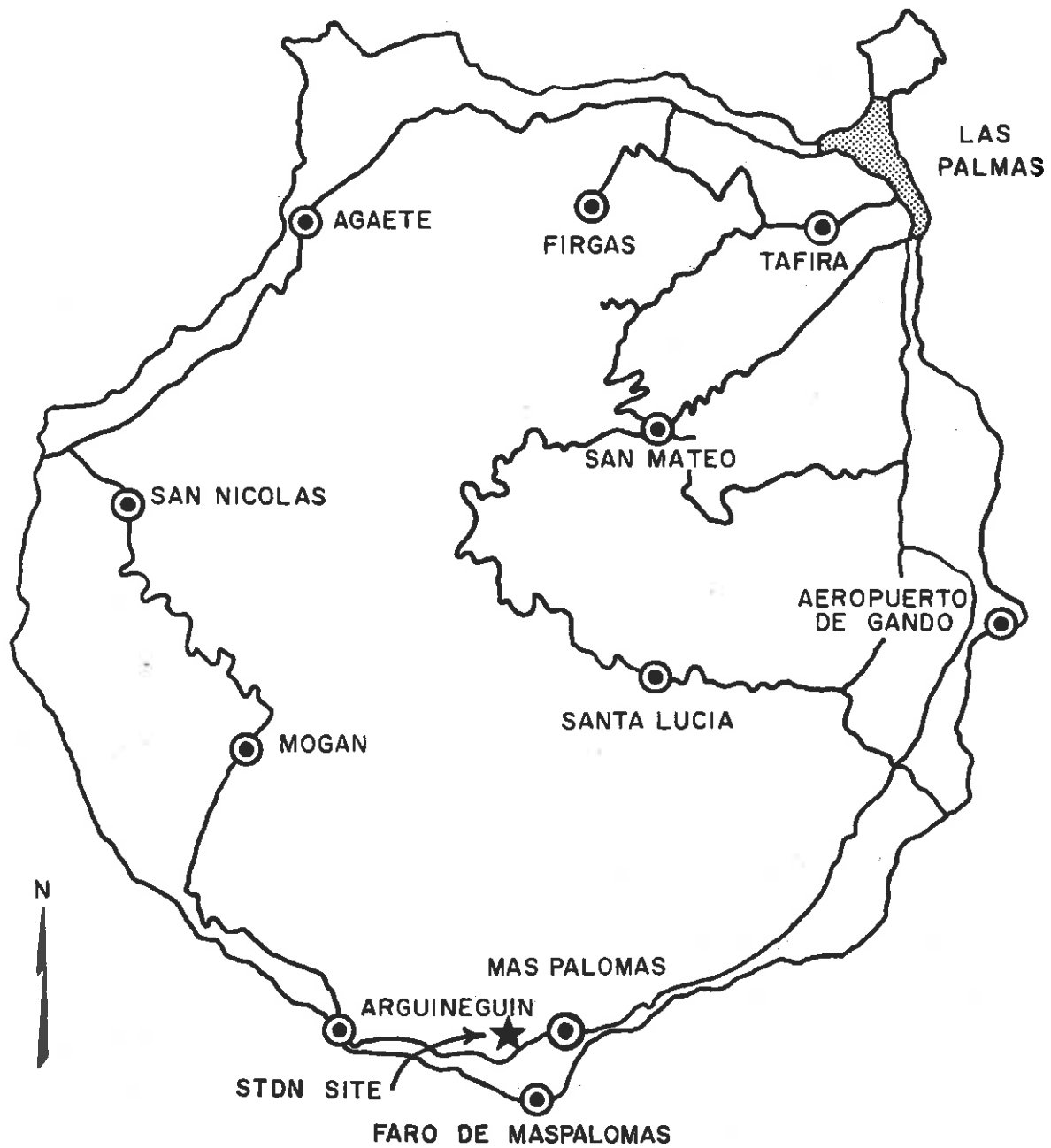
#### B. Brief Description of Site Layout

The site is spread over the top of Montana Blanca (White Mountain) and is surrounded by a 5-foot fence. The operations building contains all the operating areas and equipment with the exception of the SPAN facility which has its own building and the UHF transmitters which are located in a van. The lower floor of the operations building contains offices, the library and the cafeteria. The second floor contains the equipment, operating areas and supply.

The 30-foot unified S-band antenna is located about 200 feet from the north end of the operations building. A warehouse and generator building are located southwest of the operations building, and the SPAN facility is located between the operations building and the gatehouse (the entrance to the site area).

#### C. Major Operational Systems

The major operational systems on the site are the unified S-band (USB), telemetry, computers, communications, test equipment, acquisition aids, UHF command and SPAN. The USB system consists of a 30-foot-dish antenna with receivers and transmitters. There are four receivers and a transmitter with dual uplink capability which operate in the frequency range from 2090 MHz to 2300 MHz. This system is capable of ranging, commanding and receiving wideband downlink signals. The TLM system along with the acquisition aids can receive and decommutate signals in the 220 MHz to 300 MHz frequency band. Most spacecraft telemetry is pulse-code-modulated and there are three MSFTP-2 (manned spaceflight telemetry processor) systems which decommutate PCM and feed the data to the computers. These systems will also display the data. The site computers are made by Univac. There are two 642B computers and two 1218 computers. The 642B computers are used to compress spacecraft data and then send needed data to the United States. They are also used to command the spacecraft. One of the 1218 computers is used to drive the USB antenna and the other one is used for site testing.



LAT 27° 45' N  
 LONG 15° 36' W

SCALE STATUTE MILES



5796001

Grand Canary Island

The communications system handles all incoming and outgoing voice and data communications. There is also a NASCOM switching center at CYI that provides the capability of routing communications for the Johannesburg, South Africa STDN station and the Ascension Island STDN station. The UHF command facility, which works in the 450 MHz range, will be used during the Skylab program.

#### D. Station Management Policies

The station is operated 24 hours a day for a 5- to 7-day week. Most personnel on the station work shifts. Overtime is required often, and it may or may not be paid. For all overtime not paid, compensatory time is given on an hour-off-for-an-hour-worked basis. The ride to work takes from an hour and 15 minutes to 2 hours, each way. Hours of operations, etc., are covered in the "Station Standard Procedures Handbook."

The mailing address for personnel at the station is:

Name  
Bendix, NASA Apartado 48  
Las Palmas de Gran Canaria  
Spain

Phone: 25-53-43

Arriving personnel not met at the airport should contact the site using the above telephone number.

## II. BACKGROUND INFORMATION ON STATION LOCALE

### A. Geographic Description

The Canary Islands are divided into the Spanish Provinces of Las Palmas and Santa Cruz de Tenerife. There are seven islands (Grand Canary, Tenerife, Lanzarote, Fuerteventura, La Gomera, La Palma and Hierro), located off the northwest coast of Africa 823 miles southwest of Spain in the Atlantic Ocean. The coordinates are 15 degrees west longitude and 27 degrees north latitude. This is approximately the same latitude as Cape Kennedy. The islands are volcanic in structure and semiarid in climate.

Grand Canary Island, where the site is located, is mountainous, and the area surrounding the site is dry with very little rainfall.



It is the most metropolitan and populous of the islands. Approximately circular, it has a diameter of 28 to 30 miles and is centered by a mountain peak which rises to a height of 6,000 feet.

Temperatures range from 85 degrees in August to 59 degrees in December. The average humidity is from 68 to 75 percent. Average annual rainfall is 5 to 7 inches. No hurricanes, typhoons, or other severe storms have been experienced there.

Grand Canary Island is divided into two general areas, Las Palmas at the north end, and Maspalomas at the south. Las Palmas, a port city of approximately 500,000 residents, is the main location for the families of Bendix employees. It increases in population by 600,000 people during the tourist season (October through April) and becomes quite cosmopolitan.

There is a very nice beach with a 2-mile-long concrete promenade. In the past 7 years, Maspalomas has sprung from the obscurity of a desert into a conglomerate of hotels, beach homes, restaurants, and other tourist attractions. There are beaches and recreational facilities such as golf, tennis, etc. Because its population fluctuates with the season, it is somewhat impractical for year-round residency. The tracking station is located in the Maspalomas area.

## B. History of Area

The incorporation of the Canary Islands into the Kingdom of Castile began in 1401. Before that time the islands were inhabited by "Guanche" tribes.

No one really knows the origin of the Guanches, but they were big, well-built, blue-eyed people, many of them with dark red or blond hair. There is some speculation that they came from Africa in reed boats.

Whatever their origin, they put up a terrific fight against Castile. They were finally conquered in 1496, by Ferdinand and Isabella (The Catholics), who incorporated the Canaries into the Kingdom of Spain. Columbus stopped in the Canary Islands on his first voyage to the new world.

For many years, the livelihood of the islands depended on farming and fishing. More recently, Spain made them a free port to encourage their growth, but the number of items to be brought onto the islands duty-free continues to decrease year by year.

With the advance of transportation in recent years, the islands became easier to get to, and now they have been discovered by the sun hunting people from northern Europe. In many areas, hotels and bungalows have taken the place of the tomato fields and banana plantations that previously furnished the islands their livelihood. There are more than 500 hotels in the province of Las Palmas. Their capacity surpasses 21,000 beds. There are also many modern apartment buildings.

### C. Present Form of Government

The islands are administered by island governors appointed by the Spanish Government. The Spaniards, the Americans, and the local population get along well together.

### D. Local Industry

Tourists bring the islands their biggest source of income at present. German and Swedish tourists nearly outnumber the local population during the winter tourist season. Bananas and tomatoes are grown on most of the islands and these are the biggest export items. Cigars and cigarettes are also exported. Some of the best cigars in the world are hand-made in the Canary Islands. Fishing is also an island industry and many Russian and Japanese fishing trawlers call the Canary Islands their home port.

## III. LIVING ACCOMMODATIONS AND COMMODITIES

### A. Housing

#### 1. Temporary

The following hotels are most frequently used by STDN personnel:

<u>Hotel</u>	<u>Telephone</u>	<u>Classification</u>	<u>Approximate Daily Rates</u> (with seasonal high/low)	
			<u>Single</u>	<u>Double</u>
Cristina	26-76-00	Luxury	\$ 9.90/ 7.70	\$16.50/14.30
Reina Isabel*	26-01-00	Luxury	13.20/10.00	21.00/15.00
Santa Catalina	24-31-40	Luxury	21.00/13.20	25.00/18.50
Concorde	26-27-50	First	7.70/ 6.60	13.20/ 9.90
Don Juan*	27-00-00	First	14.50/ 8.80	17.60/11.00
Imperial Playa	26-48-54	First	11.00/ 6.60	19.80/12.10

<u>Hotel</u>	<u>Telephone</u>	<u>Classification</u>	<u>Approximate Daily Rates</u> (with seasonal high/low)	
			<u>Single</u>	<u>Double</u>
Palace	26-04-00	First	\$12.00	\$16.50
Sansofe*	26-47-58	First	9.90	14.30
Gran Canaria	26-08-00	Second	7.70/4.50	12.00/ 9.00

\*Recommended by the station.

There are pension-type hotels with rates lower than those listed above.

## 2. Permanent

Furnished apartments and houses may be rented in Las Palmas, Tafira, Santa Brigida and Playa del Hombre. Rental rates range from approximately \$165 to \$500 per month. With some housing, maid service, telephone, and utilities are included in the monthly rate; with others, these services are billed separately. The quality of the furnishings varies with the amount of rent paid. Many of the cheaper apartments are walkups.

## B. Utilities

The electric power in most of Las Palmas, Tafira and Santa Brigida is 120 volts, 50 cycles. In Maspalomas and the newer areas of Las Palmas, electricity is being installed at 220 volts. All American appliances will operate satisfactorily, except for electric clocks and record players, without adapters. Most cookstoves are two-burner, bottled-gas-operated types. Some stoves include a very small oven and some have three burners. Refrigerators are generally small, apartment-size units.

Although most kitchens are more or less fully equipped by Spanish standards, it would be wise to obtain the following appliances in the States: electric frying pan, toaster, coffee percolator, cast iron skillets, and such useful American-type kitchen gadgets as can openers, potato peelers, graters, etc. The cost of electricity is somewhat higher than in the United States.

Most houses have very poor electrical distribution systems. The wiring and fusing are marginal. For this reason, it is advisable to limit the number of electric appliances used at one time.

Blankets, sheets, towels, etc., can be purchased locally. Contrary to popular opinion, blankets are definitely needed in the winter period (November through March). This is especially true if housing is found in the suburbs, such as Tafira or Santa Brigida, where heaters are essential in winter time.

Station personnel live in four major areas, Las Palmas, Playa del Hombre, Tafira and Santa Brigida. The station residents of Las Palmas are spread throughout the city, whereas those people who enjoy the country reside in Tafira, Santa Brigida, and Playa del Hombre. These are small towns, 6 to 10 miles out from Las Palmas. Since some are above 1,000 feet in elevation, they are quite cool in the winter. Anyone who rents a villa in the mountain district can expect to use a heater. Heating is accomplished by means of gas heaters fired by bottled gas.

Although the summers get quite hot, air conditioning is not necessary in homes because of ocean breezes.

It is advisable when renting any house or apartment to make sure that the water storage facilities are adequate and in good condition. This is most important because during certain years water is in short supply.

### C. Food

In general, the food situation presents no particular problem. The water in Las Palmas is boiled by most Americans. Bottled mineral water is plentiful and is recommended for drinking. The quality of meals in hotels and restaurants varies, and prices are comparable to those in the U.S. Among the numerous sources of food supplies are:

- The Cruz Mayor, an American-type supermarket complete with wheeled shopping carts.
- The Guanarteme Market stocked with American and European foods.
- The Mercado Central, a large fresh meat, fish, and fresh vegetable market.
- Numerous small supermarkets with good supplies of European foods.
- Many local grocery stores with frozen food facilities.

Food availability in supermarkets fluctuates periodically. Therefore, personnel should stock up on their favorite delicatessen items when they become available, because they may disappear from the shelves.

The local milk is pasteurized, but it is watery and difficult to obtain during the tourist season. Frozen Dutch and Danish milk is available, but it is more expensive. Many families use powdered or reconstituted milk.

Fresh fruits and vegetables of fair quality can be purchased at reasonable prices during most of the year.

Fresh meats are available, but the quality varies and does not equal U.S. standards. Meat is not dressed and butchered in the same manner as in America. Poultry is lean. A variety of fresh fish is sold. Oven and meat thermometers should be obtained stateside.

A fair selection of imported American and European frozen foods is available at prices higher than in the U.S. A wide variety of both American and European canned goods is sold at much higher prices than encountered in the U.S. Some American and European cleaning supplies, tissues, toiletries, etc., are available.

Wines, cognac, Scotch whiskey, and American whiskey and liquors may be purchased at prices comparable to the U.S. Moreover, a large variety of European beer is available. American cigarettes are available, and some American pipe tobacco and cigars have been seen on occasion.

The station has a cafeteria that provides hot meals at reasonable prices. This kitchen also provides service throughout mission periods.

#### D. Laundry and Dry Cleaning

There are no automatic laundries in the islands. Washing machines are available at prices higher than in the States. Some families have the maid do the laundry, but this can be hard on clothes. Clothes are washed in cold water and rubbed with soap on hard surfaces, and as a result, the life of clothing is shortened.

Drycleaning service is available, but the quality varies, and sometimes the service is slow. This has improved with the establishment of more modern drycleaning plants.

#### E. Household Furnishings and Housewares

Beautiful furniture is available in Spain, but it is expensive. There are many large stores in Las Palmas where household furnishings and houseware may be purchased. It is difficult, if not impossible, to buy used furniture.

#### **F. Cosmetics and Toiletries**

All of the famous American name-brand cosmetics and toiletries are available on Grand Canary Island.

#### **G. Domestic Help**

Good domestic help is hard to find in the Canary Islands. Part-time maid service costs about \$2 an hour. A live-in maid can be hired for board and room and about \$170 a month.

### **IV. COMMUNITY FACILITIES**

#### **A. Religious Services**

There are numerous Roman Catholic churches in Las Palmas since Catholicism is the official religion in Spain.

There are two English-speaking churches which exist on a semiofficial basis. These are the Church of England and the Evangelical Baptist churches. These churches, which hold services each Sunday, are located in Ciudad Jardin on the streets shown below:

- Holy Trinity (Church of England/Episcopalian) - Rafael Ramirez
- Evangelical Baptist Church - Ingeniero Salinas, 17

#### **B. Educational Facilities for Dependents and/or Adults**

Adult educational facilities are few, and anyone who wants to take advantage of them must know the Spanish language. There are several language schools on the island and quite a few Spanish teachers who will teach you in your home.

At present, there is an American-operated school on the island known as the American School of Las Palmas; it operates according to American educational standards and provides instruction in grades 1 through 12. It is located in the hills about 10 miles from Las Palmas. Children of 11 different nationalities attend the school, with the present enrollment being approximately 200 pupils. School bus service is provided from Las Palmas for approximately \$100 a year. Tuition fees at the school are \$900 per year for grades 1 through 7; \$1,000 per year for grades 8 and 9; and \$1,300 per year for high school.

A second school, known as The British School of Grand Canary, is operated by British teachers according to the English school system and provides education for children from ages 4 to 10 years. It is located in Tafira and the school fees are approximately \$420 per year. Tuition fees for all schools are paid by Bendix.

While no one school is recommended by BFEC, it is believed that the American School provides adequate educational facilities for American children. Most children finishing a grade at a stateside school should have no difficulty for the next grade when they enroll at the American School. This is especially true in the lower grades.

There are no American colleges in the Canary Islands, nor are there any English-speaking schools for gifted or retarded children.

The local Spanish schools, both public and private, provide an excellent education. However, if a child cannot speak fluent Spanish, his first year would be most difficult if he were to enroll in such a school. This holds true for all the other numerous national schools, i. e., German, Swedish, etc.

#### C. Health and Sanitation

Health conditions are considered fairly good. The most common ailments experienced by Americans are mild dysentery and common colds. Dysentery cases usually occur shortly after arrival, and once personnel are accustomed to the food and water, reinfection seldom occurs. Tuberculosis is reported to be prevalent among the local population and a few cases of typhoid have shown up. Water should be boiled.

Medical and dental facilities are barely adequate, with some English-speaking doctors practicing. Fees are comparable to those charged in the U. S., especially for dental care. There are ample supplies of drugs and medical supplies for the same or lower prices than in the U. S.

The Queen Victoria Hospital for Seamen, better known as the British Hospital, is frequently used by Americans. At least two English-speaking doctors are in residence there. The Queen Victoria Hospital, which is operated by a British medical committee, is a new hospital, fully equipped with up-to-date medical facilities.

There are also two modern clinics known as the Santa Catalina Clinic and the La Paloma Clinic. A number of American children have been born at the former clinic.

Several other clinics and first-aid stations are located throughout Las Palmas, but they are below par.

It is recommended that smallpox vaccinations and typhus, typhoid, tetanus, and polio shots be obtained before departure from the United States. Diphtheria inoculation is optional.

The facilities on the island have not always been able to handle all the medical problems that have arisen in the past. When recommended by an island doctor, trips to Madrid for medical care or diagnosis can be arranged. If prior approval is obtained from Bendix, the employee's or his dependent's travel expenses will be reimbursed.

#### D. Recreation and Entertainment

Boating, swimming, tennis, and golf make up most of the recreational activities on the island. A fair network of roads exists, by which many interesting scenic spots may be reached. By American standards, the roads would be classified as secondary. Cars without drivers may be rented for approximately \$10 per day, plus gasoline; it is advantageous for personnel to have their own cars.

Television is broadcast on the island, and several American television series are regularly shown with Spanish sound tracks. Do not ship U. S. television sets to Grand Canary, since they are not compatible with Spanish transmission. Unfortunately, the TV receivers which are sold locally are priced higher than those in the States. RCA, Sylvania, and Telefunken receivers are sold and rented on the island. All local radio broadcasts are in Spanish. There are two FM stations which broadcast music, and a good shortwave receiver can get BBC and the Voice of America.

The following club memberships are open to Americans:

- The Nautical Club, which has a new clubhouse and swimming pool.
- The Golf Club, which is situated in the mountains near an extinct volcanic crater, has an 18-hole course and modern clubhouse.
- The Tennis Club, for the more energetic, which is adjacent to the Santa Catalina Hotel.
- The British Club, a social club, which offers associate membership to U. S. personnel.

Many hotels, in both Las Palmas and Maspalomas, have swimming pools that may be enjoyed by nonresidents for a nominal fee.



Social life consists mainly of house parties, nightclubs, dinner dancing at hotels, and club memberships. Each Sunday, typical Canarian folk dances are held at the pueblo Canario, a replica of an early Canary Island village. The music is interesting and the costumes are colorful. Activities in Las Palmas increase during the tourist season which extends from October through April. Band concerts, flower shows, carnivals, and processions can be seen at various times during the year on local national holidays. The Perez Galdos Theatre offers legitimate plays in Spanish, ballet, folk-dancing, and other attractions. Dog racing and jai-alai are featured nightly, and cockfighting and bullfighting are presented on Sundays. From September through April, soccer matches are held at the Estadio Insular in Las Palmas. The local football team is in a division comparable to a U. S. major league and is supported very enthusiastically by the residents.

Several American magazines and English pocketbook editions can be purchased. The European edition of the Herald Tribune is available, but usually arrives a day late. Subscriptions to the Stars and Stripes, an American newspaper published in Europe, are available through the station. Record players, radios, tape-recorders, etc., are available at prices comparable to those stateside. Records are available but they are expensive. There are many movie houses in Las Palmas offering American films with Spanish sound tracks. However, on occasion, an American film is shown in its original English version at the Vegueta theater, P. J. de Sosa, 22. An English-language newspaper, The Sun, is published weekly.

#### E. Shopping Facilities

Las Palmas has many modern shops and bazaars which sell everything from cameras to clothing.

Local ready-made clothing is of inferior quality and tailoring. Custom-tailored clothing, however, is available for both men and women, and it is of good quality. British and Spanish suiting materials can be obtained locally.

Ladies' nylon hose are available, but there have been complaints concerning the quality and price. Lingerie should be purchased in the States. Many wives use the services of a local modista (dressmaker) to obtain dresses at reasonable prices. The stores have a good selection of women's dress and suit materials. Most women would probably prefer to obtain shoes stateside because the Spanish shoes that are available in the islands are wide with no narrowing of the heel, and no half sizes are available. Shorts, slacks, and capris are now seen in public in increasing numbers.

American cosmetics and sanitary products are available, but it is advisable to obtain a supply of these stateside since the prices in the islands are two to three times the stateside price. French perfumes and toiletries are also available.

The style of most children's clothing is somewhat different from American. For example, boys' husky sizes are not available. It is recommended that an adequate supply of all children's clothing be obtained in the states. However, children's clothing is plentiful in the islands, and some American parents outfit their children completely with local clothing. Underwear, socks, shoes, and play clothes should be obtained stateside. Most infants' clothing should also be obtained stateside, as the prices on the islands are much higher.

Swim suits may be purchased on the islands, but they are expensive and preferably should be obtained stateside. Bikinis are now frequently worn by the tourists.

Men's dress and sport shirts are available, but it is recommended that they be purchased in the states, because those obtainable on the islands are expensive and limited in variety. Wash-and-wear clothing, work trousers, and an ample supply of underwear should be obtained stateside. The selection of neckties and socks is very limited. Caps and hats are available and are of good quality and reasonably priced. Shoes should be obtained stateside since Spanish shoes are shaped differently and are not available in half sizes. Custom-made shoes can be purchased at reasonable prices and are satisfactory.

#### F. Emergency Assistance

**WHAT TO DO IN CASE OF DIFFICULTY IN MADRID:** If any difficulties arise in Madrid regarding airline reservations, or anything else, contact the senior Bendix representative at this address:

NASA-JPL (DSIF)	Telephone 2441303
Madrid Office	-04
Cea Bermudez, 43 3 <sup>o</sup> B	-05
MADRID 3	

**WHAT TO DO IN CASE OF DIFFICULTY UPON ARRIVAL AT THE AIRPORT IN LAS PALMAS:**

TWX arrival date as early as possible. The station will obtain hotel reservations which are difficult to get on short notice during the tourist season. Normally, you will be met at the airport. However, in case of difficulty, follow these instructions. At the airport, during weekdays, from 0800 to 1600 dial one of the three station numbers - 25-53-43, 44 or 45. After normal work hours, on weekends, and holidays

take a taxi to one of the listed hotels in Las Palmas, register, await instructions, or contact the station on the next working day.

**CONCLUSION:** It is recommended that you obtain a Spanish phrasebook for tourists. This should prove helpful in your travels through Spain and the Canaries. The Spanish rarely speak English, and your ability to speak a little Spanish will do much to help get service in airports, restaurants, etc. You will find that the Spanish are friendly, honest, and quite responsive to "por favor" ("please") and "muchas gracias" ("thank you very much"). Berlitz publishes a small phrasebook which is excellent; and of course, there are others available in most American bookstores.

Emergency telephone numbers for Las Palmas follow:

Fire Station	24-31-00
First Aid Station	24-51-57
Guardia Civil	21-57-56
Police	21-71-04
The CYI STDN Station	25-53-43

The address and telephone number of the American Consule are:

Address: P<sup>o</sup> Chil 1015 (Edificio Campos)  
Teléfono: 24-12-58

In case of a personal emergency in the U.S., it is also possible to telephone Bendix Field Engineering headquarters, at Columbia, Maryland, Area Code 301, 730-3700 or 3712. The STDN office can then relay your message directly by SCAMA telephone line to the Canary station.

## V. COMMUNICATIONS

### A. Telephone

Many of the houses and apartments on the Grand Canary Island do not have telephones, but there are public telephones in most bars and restaurants and several telephone centers around the city where long distance calls can be made.

### B. Telegraphs

Telegraphs are handled by the main post office in Las Palmas. This is located at General Franco calle, No. 9, in Las Palmas.

The telephone number is 21-66-65.

### C. Postal Service

The main post office is located in Las Palmas at General Franco calle, No. 9, but there are several other smaller post offices around the city, and, of course, there are post offices in all the small towns around the island. Stamps can be bought in the post office or in most tobacco stores and magazine stands. Mail boxes are assigned to personnel at the site, and stamps can be bought at the site.

An air mail letter to the United States requires 15 pesetas, about 28 cents in stamps.

### D. Radio

There are local AM and FM stations on the islands. All broadcasts are in Spanish. With a good shortwave system you can get BBC and the Voice of America.

### E. TV

One channel. All broadcasts are in Spanish. Receivers built to receive American TV will not work in Spain without a modification. American TV receivers should not be brought to the island for this reason.

### F. Newspapers

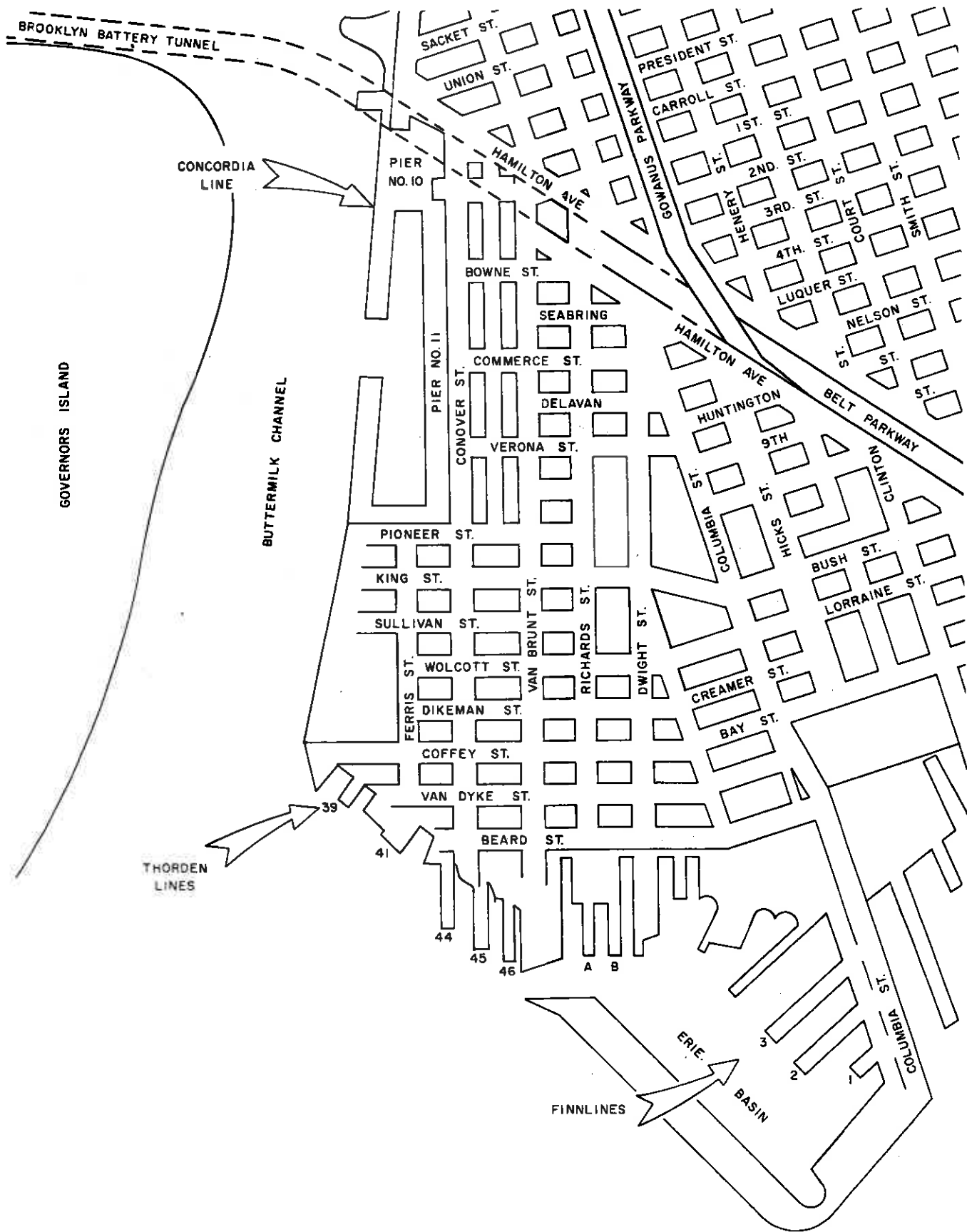
Several American magazines and the European edition of the Herald Tribune can be purchased, but is almost always a day late. Subscriptions to the Stars and Stripes, an American newspaper published in Europe, are available through the station. British newspapers are also available.

## VI. TRANSPORTATION

Public bus service in Las Palmas is frequent and costs 5 cents in American money. Approximately 25 or 30 German buses have been purchased by the local bus company and have been in service from 7 to 10 years.

Taxis are numerous and reasonable. However, during the tourist season, they seem to be few and far between. A typical fare for a reasonable trip is about 35 or 40 cents. Some cabs are metered, others are not. A cab can be hired for the entire day for approximately \$35 and up. Private car hire is available at about \$10 per day plus gasoline, without driver, and about \$30 per day with driver.

Transportation is provided to and from the station in Peugeot station wagons. The distance from Las Palmas to the station at Maspalomas is about 45 miles, and the trip



Concordia Line Location

takes from an hour and 15 minutes to an hour and 45 minutes one way. A long-term construction project has been started on the road between the site and Las Palmas. This causes severe traffic jams.

There is daily air service to and from Madrid via Iberia Air Lines and Sabena Air Lines and direct flights to New York weekly via Iberia Air Lines. Connections are made in Madrid with flights to the United States and European cities. KLM flights leave twice a week to Amsterdam, Liberia, and Ghana, and British United Airways offers several flights to and from London and to points on the west coast of Africa. Royal Air Maroc schedules flights between the Canaries and Casablanca.

The Concordia Line, a Norwegian company, offers the only direct steamship service between New York/Baltimore and Las Palmas. This is principally a freight line, but accommodations are available for 12 passengers. Several dependents have chosen this method of travel and have enjoyed it. The trip takes 8 or 9 days. Sailings are sometimes delayed because freight holds priority on this line.

Inter-island transportation is provided by aircraft (approximately 20 times daily).

Personnel may ship their own cars to the islands or may purchase one of the European models that are available at prices normally provided tourists in Europe. If you ship your car from the States with valid U. S. tags, no further registration is required to operate the car, providing current registration and an international drivers license are maintained. However, it is recommended that one obtain a local matriculation through INTA. New autos purchased and registered in the islands are subject to a 20 percent purchase tax, based on the purchase price of the vehicle.

An intergovernmental agreement with the Spanish Space Agency (INTA) has exempted American station personnel from paying this tax. All paperwork requirements are completed at the station. Car insurance can be bought without problem at rates slightly lower than those in the United States.

Filling stations are readily available along all the hard roads and gas is about \$.40 per gallon.

Satisfactory services can be found for the types of cars sold on the island, but it might be difficult to keep an American-made car running.

Roads are narrow and the traffic is heavy.

## VII. CURRENCY AND BANKING

The dollar has been devalued another 10 percent in early 1973 and the rate of exchange is between 57 and 59 pesetas to the U.S. dollar. Personnel may exchange dollars for pesetas in any bank or hotel. Banks give much better rates than the hotels. In addition, one of the Spanish secretaries on the site can exchange money.

Some banking suggestions are:

- Have your paychecks sent to you at the station. Open a peseta account in Las Palmas and cash peseta checks as needed. However, U.S. dollar checks take about 4 weeks to clear before your peseta account is credited.
- Have your checks deposited in an American bank before leaving. Bendix will send your checks directly to the bank. Personal dollar checks may be cashed locally, but one may encounter some difficulty occasionally.

If you do not care to open a peseta account, your Bendix check can be cashed locally without difficulty.

Personnel are not required to pay Spanish income taxes.

## VIII. CUSTOMS REGULATIONS

American station personnel can bring in their personal possessions (household and personal effects) duty-free for a period of 9 months after they arrive on station. After that, they are liable to pay duty on incoming belongings.

Personal effects should be shipped air freight.

If household effects arrive before the employee, they will be stored until the employee arrives. Household goods can be sent air freight or surface. Shipping can be arranged by any good shipping agent in the United States.

To bring in or buy fire arms, a special permit is needed. This should be coordinated through the site manager.

Pets must have certification of good health and of inoculation against rabies. Both certifications must be legalized by a Spanish Consulate.

## IX. CLOTHING/GROOMING

You will not need winter clothing on the Canary Islands, but you should bring summer and fall clothing. Usually the temperature never gets below 60°F, but there are mornings and days during the winter when a jacket or sweater feels good.

Dress is casual in the Canary Islands and on the site. Bring plenty of sport shirts and washable trousers. There are a few formal functions every year which people dress for and many people wear a coat and tie when they go out to dinner.

## X. CONDUCT

Spanish people are friendly and courteous. They will help you try to speak their language and assist in any other way they can. Any sincere attempt to know and get along with them will be reciprocated. Remember that you represent your country and act accordingly.

## XI. WHAT TO DO UPON ARRIVAL

Normally, new employees are met at the airport and helped to get to their hotels, but in case you are not met, you should call the site number 25-53-43 and you will be directed as to what to do. Arrangements will be made to pick you up at your hotel and bring you to the station on the day you are to report to work.

## XII. APPLICABLE REFERENCE MATERIAL

You should buy a copy of the Canary Island Sun as soon as possible after you arrive on the island. This small, weekly, English-language newspaper has a map of Las Palmas and gives much useful information about the city and the locale.

You can obtain information in the United States by writing to the following addresses:

Consulate of Spain  
5525 Wilshire Boulevard  
Los Angeles, California 90036

Spanish Tourist Office  
485 Madison Avenue  
New York, New York 10022

Spanish National Tourist Office  
453 Post Street  
San Francisco, California 94102

The Spanish National Tourist Office supplies maps, pamphlets and information circulars free of charge.