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GEOGRAPHIC INTELLIGENCE REPORT

CUBA

PART XI: TRANSPORTATION



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March 1960

CENTRAL INTELLIGENCE AGENCY

OFFICE OF RESEARCH AND REPORTS

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CONTENTS

	<u>Page</u>
I. Roads	1
A. General	1
B. Overall Network	2
1. Expansion of Network	2
2. Road Quality and Characteristics	4
3. Road Classification Systems Used on Maps	5
C. Major Routes	6
1. The Central Highway	6
2. The Circuito Norte and the Circuito Sur	7
D. Secondary or Lesser Roads	8
1. Secondary Roads	8
2. Feeder Roads	9
3. Tracks and Trails	9
II. Railroads	11
A. General	11
B. Railroads Rendering Public Service	11
C. Sugar-Mill Roads	13

Maps

	<u>Following page</u>
Ferrocarriles Consolidados de Cuba (Map 1)	21
Ferrocarriles Occidentales de Cuba; Ferrocarril Cubano de Hershey (Map 2)	21
Esso Mapa de las Carreteras de la República de Cuba	In Pocket
Roads and Railroads of Cuba (Multiple-sheet Map 28822)	Accompanying Report

CUBA

PART XI: TRANSPORTATION*

I. Roads

A. General

Cuba, with an area of 114,500 square kilometers and nowhere wider than 150 kilometers from coast to coast, has almost 15,000 kilometers of roads, 10,000 kilometers of which are reported to be all-weather roads. This presents a vastly different picture from that of even 10 years ago. In 1957 there were 167,293 passenger automobiles, 2,794 taxis, 54,202 trucks, and 5,317 buses in Cuba. Today the number is probably higher. Because Cuba is turning more and more to truck transport for the movement of goods to and from rural areas, the road system is vital to national economic growth.

In general the roads of Cuba are not seriously vulnerable to disruption of traffic, since most routes pass through flat-to-rolling country where alternate routes could be established fairly quickly. Damage to major bridges would cause the greatest difficulty, and the new Havana Harbor Tunnel (opened in May 1958) could easily be put out of commission for an extended period. Serious delays could also be caused at road cuts in the mountains along the road from Cienfuegos through Trinidad to Sancti Spiritus. Examination, sheet by sheet, of the 1:50,000 series will reveal other, scattered locations vulnerable to [REDACTED]. 25X1C

* See Roads and Railroads of Cuba (Map 28822), which shows all transportation lines in Cuba except dirt roads and trails; and Mapa Esso Republica de Cuba, which shows the major road networks at smaller scale.

B. Overall Network

The network of roads in Cuba can be compared to a backbone having many lateral ribs. The Central Highway, stretching from the city of Pinar del Río in the west to Santiago de Cuba in the east, constitutes the main channel for most traffic of the island. The majority of the important "secondary routes" branch off it toward the north or south coast. In addition, two supplementary routes more or less parallel the Central Highway at some distance -- the Circuito Norte, west of Havana, and the Circuito Sur, east of Havana. Interconnecting these major roads is a complex network of farm-to-market routes ranging from new, fairly well maintained roads to badly deteriorated roads suitable only for high-wheeled carts. In addition, innumerable cart tracks and trails crisscross all agricultural areas throughout the island and extend a considerable distance into the hills and mountains.

1. Expansion of Network

The road network in Cuba has been greatly expanded within the past decade. Although the Cuban government has not customarily made reliable and systematic reports on the status of roads, the following figures are generally accepted as being accurate as of about 1953:

<u>All-weather roads</u>	<u>Kilometers</u>	<u>Miles</u>
Central Highway	1,444	711
Secondary paved roads	3,588	2,232
Paved farm-to-market roads	1,012	626
Other	2,437	1,514
Total	<u>8,181</u>	<u>5,083</u>
<u>Dry-weather roads</u>	5,163	3,208
Total, all roads	<u>13,344</u>	<u>8,291</u>

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In 1953-54, the government inaugurated an ambitious road-building program, which called for approximately 4,000 kilometers (2,485 miles) of new arterial and transverse roads and 15,000 kilometers (9,300 miles) of farm-to-market roads. As of early 1957 the Ministry of Public Works announced that 1,689 kilometers (1,050 miles) of new, all-weather roads had been constructed and 459 kilometers (285 miles) reconstructed. In addition, 96 bridges more than 10 meters in length had been built. The Comisión Ejecutiva Nacional de los Patronatos Locales Urbanos y Campesinos (CENPLUC, organized in 1953) reported the construction of a total of 13,480 kilometers (8,390 miles) of farm-to-market roads, distributed as follows:

<u>Province</u>	<u>Kilometers</u>
Pinar del Río	1,410
La Habana	788
Matanzas	943
Las Villas	3,745
Camagüey	2,482
Oriente	4,112
Total	<u>13,480</u>

These figures include roads completed and under construction and urban streets as well as rural roads.

These extensive and organized efforts to improve the country's road network developed as a result of the recommendations of the Economic and Technical Mission organized by the International Bank of Reconstruction and Development in 1950. How many of the 46 specific projects recommended by the Bank in 1951 have been completed is not known. Inspection of recent maps, however, indicates that about three-fourths were at least started. The situation regarding road-building programs under the Castro

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government is not known in detail, but in all probability work on the numerous projects instituted during the last few years of the Batista regime has at least been slowed down, if not abandoned altogether.

2. Road Quality and Characteristics

The shape of the island of Cuba, coupled with the pattern of international trade that developed as a result of specialization in sugar and tobacco production for export, has favored the movement of goods between the growing areas and numerous, small ports scattered along the coast. This wide dispersal of shipping points necessitated a large number of roads and a resultant dissipation of the resources available for road construction and maintenance. Consequently, few roads initially were well built; most of the highways have only a telford base with a bituminous macadam paving. The Central Highway is the only one outside of the city of Havana that is known to have a concrete base. Road maintenance has always been a serious problem in Cuba. In addition to rapid deterioration because of poor-quality construction in the first place, disregard of the early stages of disrepair has led to damage so serious that many roads had to be practically rebuilt by the time action was finally taken. In addition, the climatic regime of a wet and dry season also has a pronounced effect on Cuban road conditions. The rainy season renders some roads useless because foundations are poor and sections may be badly washed out. Often damage during the rainy season is so serious that traffic even in the dry season (November through May) can move only with great difficulty. Therefore, road classifications on maps -- such as all-weather, paved, etc. -- may be seriously misleading because the original condition of a road may have changed radically.

A significant recent innovation has been the adoption of road signs and highway markers. They are gradually being installed, along with a route numbering system by province and kilometer markings indicating distances from the Central Highway. International traffic symbols have been adopted.

3. Road Classification Systems Used on Maps

Road classifications on the available maps of Cuba vary in terminology and are not completely interchangeable. The users of the new Cuban series at the scale of 1:50,000 (or the bilingual AMS reproduction of it) should be warned that in some places road symbols indicate not the actual condition of the roads but what the Cubans hoped the condition would be by the time the maps were published.

Currently, road classifications are being revised in the field by the Inter-American Geodetic Survey. Data from this field check will eventually be used by the AMS in a new issue of the 1:50,000 series, on which standard US military road symbols will appear. (A few sheets have already been published, but the final completion date cannot be estimated because current conditions in Cuba may delay the field work.) A comparison of the US military road classification with the categories appearing on the Cuban-issued series and Mapa Esso Republica de Cuba is given in the following table (see p. 6).

It should be noted that in Cuba the term camino vecinal may be applied to both all-weather and dry-weather roads; in other words, the classification applies to improved, feeder roads, the surface and usability of which varies greatly from place to place. The bilingual

legend of the current AMS version of the 1:50,000 series erroneously limits the term to dry-weather roads.

<u>Military Classification</u>	<u>Cuban 1:50,000</u>	<u>Esso</u>
All weather, hard surface 2 or more lanes wide	Carretera pavimentada mayores de dos vias Carretera pavimentada, dos vias o menos	Carretero Central
All weather, loose or light surface, 2 or more lanes wide	Camino vecinal	Carretera 1 ^a Clase
All weather, hard surface, 1 lane wide	(no equivalent)	Carretera 1 ^a Clase
All weather, loose or light surface, 1 lane wide	Camino vecinal	Carretera 2 ^a Clase
Fair or dry weather, loose surface	Camino real	Carretera 3 ^a Clase
Cart track	Camino general	Otras (do not use without inquiry)
Footpath, trail	Trillos o senderos	(not used)

C. Major Routes

There are 3 major roads in Cuba: the Carretera Central (Central Highway), the Circuito Norte (Northern Circuit), and the Circuito Sur (Southern Circuit).

1. The Central Highway

The Central Highway is the main artery connecting the capital city of Havana with the rest of the country. It extends from the city of Pinar del Río in the west to Santiago de Cuba in the east -- covering a distance of 1,144 kilometers (711 miles). Built in the 1930's, it has borne the bulk of Cuba's traffic but has had only minimum maintenance. According to some estimates, the Central Highway carries as much as

70 percent of the total traffic of the country. Nearly all of the country's freight other than sugar is carried over the highway by truck, and two-thirds of all interurban passengers is transported over it by public bus lines.

The Central Highway is the only road in Cuba that has a concrete base; on top of this is a bituminous surface. The road, as originally built, was 20-1/2 feet wide and had banked curves, concrete culverts, steel bridges, and post-and-cable guards at danger points. Distances between towns and from Havana are indicated on stone pillars set in concrete bases 1 kilometer apart.

The route follows very closely the center line of the island from west to east lying south of the Sierra del Rosario in Pinar del Río Province and then turning northeast to Havana and the coast. East of Havana the highway goes through Matanzas and then continues to bisect the island, passing through the provincial capitals of Santa Clara and Camagüey and continuing to Holguín in Oriente Province. At that point it turns sharply southwestward to Bayamo, then east again skirting the Sierra Maestra en route to the terminus at Santiago de Cuba. The highway generally follows the main street of a small village, but a larger town is commonly bypassed, an alternate route leading through the business section.

2. The Circuito Norte and the Circuito Sur

The Circuito Norte and the Circuito Sur are major loops which more or less parallel the Central Highway but traverse the parts of the country nearer the coasts. These two routes are still in the process

of construction and east of Havana only segments have been completed. Details of surface, width, structures, etc. are not available. West of Havana the Circuito Norte branches off the Central Highway at Guanajay, continues through the towns north of the Sierra del Rosario (Quebra Hacha, Cabañas, Bahía Honda, Consolación del Norte, Viñales), and then turns south and connects again with the Central Highway at the city of Pinar del Río. East of Havana, the Circuito Norte is only partially completed between the capital and Morón (Camagüey Province); additional segments have been completed near Esmeralda and Mayarí.

The Circuito Sur runs south from Havana to San Antonio de las Vegas and then turns east, passing north of the Zapata Peninsula and south of the Trinidad Mountains before rejoining the Central Highway at Sancti Spiritus.

D. Secondary or Lesser Roads

1. Secondary Roads

The secondary roads of Cuba are extremely important all-weather, connecting links between the coasts and the major highways and between settled and isolated areas. These roads are shown in red on the Cuban 1:50,000 map series. Until the AMS series showing the reclassification of roads is available, map symbols indicating road conditions such as paving should be interpreted with caution. For example, one "paved" road that is obviously suspect goes from San Juan de Dios (on Route 1-43, Sheet 3584 I) northwest toward the coast, passing through no settlements, crossing a fence en route, and ending at a trail about 1 kilometer inland from a mangrove fringed coastline. In general, the roads are well

depicted, however, and some of the roads in the lower categories are actually of better quality than the map symbol indicates.

2. Feeder Roads

Feeder roads include caminos vecinales (farm-to-market roads), which are unpaved but improved roads (some all-weather), and caminos reales (old Spanish royal roads), which are dry-weather roads. These two categories of roads serve vast areas of rural Cuba. They form the local road nets that connect isolated farms, villages, and towns with sugar centrales, railroads, ports, and other points of exchange. The network of these feeder roads is shown on Map 28822.

3. Tracks and Trails

This category includes routes of two types -- camino general (cart track) and trillo o sendero (trail or foot path) -- which together form a fine network over most of Cuba. They wind along streams and coastlines, through hills and mountain areas, and across agricultural lands. Although little can be said about their condition or permanence -- especially in areas where an unused route might be overgrown by vegetation in a short time -- it is safe to assume that the choice available in any given area would permit passage in some way. Only in the high mountains and the Zapata Swamp and on the far western tip of the island are there areas where the trails are separated by fairly wide distances.

E. Major Access Routes From The Coast

Access from the coast inland into the six provinces of Cuba varies considerably from province to province owing to various contributing factors -- the character of the shoreline and agricultural hinterland, density of population, terrain, etc. Coastal towns from which roads

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 lead inland toward the Central Highway are listed below:

Pinar del Río

South Coast
 La Fe
 Cortés
 Playa de Galafre
 Punta de Cartas
 La Coloma and
 Las Cañas (6 km. W)
 Majana

North Coast
 Los Arroyos
 Dimas
 Santa Lucía
 Puerto Esperanza
 Río Blanco
 Playa el Morillo
 Bahía Honda)
 Cabañas) on bays
 Mariel)

Havana

South Coast
 Guanímar
 Playa de Cajío
 Surgidero de Batabanó
 Playa de Rosario
 Playa Caimito

North Coast
 Playa Baracoa
 Santa Fe
 Havana
 Tarara
 Guanabo
 Boca de Jaruco
 Santa Cruz del Norte

Matanzas

North Coast
 Matanzas
 Cárdenas
 Coastal road between
 Matanzas and Veradero

Las Villas

South Coast
 Cienfuegos
 Playa Rancho Luna
 Casilda (for Trinidad)
 Tunas de Zaza

North Coast
 Between Coralillo and
 Sierra Morena (2 Paved
 roads 1 km. apart)
 Playa la Planchita
 La Isabela
 Caibarién

Camagüey

South Coast
 Júcaro
 Santa Cruz del Sur

North Coast
 Playa Guanay
 Nuevitas (on bay)
 Playa Santa Lucía

Oriente

South and West Coast
 Manzanillo
 Salvador
 Campechuela
 Cieba Hueca
 San Ramón
 Santiago de Cuba
 Siboney
 Caimanera (on bay)
 Boquerón

North Coast
 Puerto Padre (Cayo Juan Claro)
 Gibara
 Playa Bani
 Banes (3 kms. inland)
 Antilla
 Preston
 Legua de Pájaros (Nicaro)
 Cayo Mambí
 Moa
 Baracoa

II. Railroads

A. General

Cuba has approximately 14,164 kilometers (8,800 miles) of railroads, about one-fourth of which are common-carrier lines and three-fourths private sugar-mill lines. Even on the common-carrier lines, much of the business is associated with sugar cane or cane products, a situation that reflects the long-standing interdependence of the sugar industry and the railroads. In a sense, it can be said that the railroads "had their day" in the early decades of the 1900's, before motorized transport began to dominate general freight and passenger service. Thus far, however, the trucking companies have been restricted by law from hauling more than a small fraction of the sugar cane or sugar products.

All railroads are privately owned except for Ferrocarriles Occidentales de Cuba, which was organized in 1954 following the purchase of the former British Ferrocarriles Unidos de la Habana by the Cuban government. It is now owned jointly by the government and industrial users, with an estimated 82 percent of the stock held by American investors.

B. Railroads Rendering Public Service

As of 1956, there were 21 railroad companies that could be considered common carriers. Five of these had at least 150 kilometers (93 miles) of track each, and together they accounted for over 80 percent of the total railroad service in Cuba (see Maps 1 and 2). These five companies were:

FFCC de Cuba R. Co.)	Merged as the FFCC
FFCC del Norte de Cuba)	Consolidados de Cuba, but
Guantanamo and Western RR.)	operating individually.
FFCC Occidentales de Cuba		
F.C. Cubano de Hershey.		

The three companies operating under the Ferrocarriles Consolidados de Cuba have a combined trackage of 1,900 kilometers (1,180 miles) and serve eastern Las Villas Province and the provinces of Camagüey and Oriente. The Ferrocarriles Occidentales de Cuba serves Las Villas Province west of the city of Santa Clara and the provinces of Matanzas, Havana, and Pinar del Río. In addition, it operates the sea train and car ferry that runs from Havana to New Orleans and West Palm Beach. Both of these rail systems have switched largely to diesel locomotives. F.C. Cubano de Hershey lines extend from Havana to Matanzas via Guanabacoa, Guanabo, Central Hershey, and Jibacoa. Of the total trackage of 176 kilometers (110 miles), 161 (100) are electrified. Practically all trackage of the major companies is standard gauge (1.435 meters or 4'8-1/2"). Bridges are almost entirely of good, iron construction. There are no tunnels along the lines, and no automatic warning signals at crossings. All of the railroads use hand-operated switches except in the yards at Havana and Camagüey.

The remaining companies listed in 1956 had a total of 630 kilometers (390 miles) of common-carrier lines, and were as follows:

FC de Resulta	FC de Central Portugaleta
FC del Central Nazabal	FC del Damaji S.A.
FC de Yaguajay S.A.	FC de Puerto Padre
FC de Toledo a San Pedro	FC de Guantánamo
FC de Constancia Sugar Co.	FC de Tunas S.A.
FC Central de Matanzas	FC de Gibara y Holguín
FC Central Covadonga	FC Caibarién a Morón (service reported suspended in 1957)
FC de Perseverancia S.A.	

All of these private companies provide common-carrier service in addition to industrial services.

C. Sugar-Mill Railroads

As of 1956, there were 146 sugar-mill railroads in Cuba, most of which are probably still in operation except as they have been disrupted by the current government's intervention. The majority of these lines were in Las Villas Province (49) and Oriente Province (35), followed in order by Matanzas (23), Camagüey (20), Havana (10), and Pinar del Río (9). Of the 10,000 kilometers (6,000 miles) of sugar-mill trackage, approximately 10 percent is used for both common-carrier and private industrial purposes. Well over half of the total trackage is standard gauge; of the remainder about one-third is 36-inch gauge and two-thirds is 30-inch gauge.

The role of the sugar-mill railroads is of peculiar importance in the transportation picture of Cuba because they perform a very large percentage of all transport required -- not only in hauling cane from the fields to the mills, as is commonly assumed, but also in carrying processed sugar, molasses, and alcohol from the mills to the markets or ports. In addition they haul supplies, fuel, machinery, and often all the commodity needs for the cane workers living in the vicinities of the mills. Many of the company lines perform every type of freight function normally expected of a common-carrier line.

These lines form an intricate rail network in every cane-growing section of Cuba, having numerous branches that fan out to the gruas (collection stations) scattered at appropriate distances throughout the fields. The Cuban 1:50,000 sheets show the track alignment as of 1956.

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It should be noted, however, that some of the narrow-gauge lines are movable and may not now be located precisely as mapped.

Table 1 lists the sugar company railroads by company and mill, with gauge categorized as standard (or wider) and narrow. The table also lists by number the 1:50,000 sheet that gives the location of the sugar mill that each of the lines serves.

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S-E-C-R-E-T

Table I. Sugar-Company Railroads in Cuba

Company	Mill	Gauge	Sheet Number 1:50,000
PINAR DEL RÍO			
Central Andorra S.A.	Andorra	S, N*	3684 III
Central Bahía Honda, S.A.	Bahía Honda	S	3584 I
Central El Pilar, S.A.	El Pilar	S	3684 IV
Central La Francia, S.A.	La Francia	S	3583 I
The Cuban American Sugar Mills Co.	Merceditas	N	3684 IV
Azucarera Carmen-Rita S.A.	Niagara	N	3484 II
Cía. Azucarera Bramales, S.A.	Orozco	S	3584 I
Central San Cristóbal, S.A.	San Cristóbal	S	3584 II
Cía. Azucarera Marjel, S.A.	San Ramón	N	3684 IV
HABANA			
Nueva Cía. Azucarera Gómez Mena, S.A.	Amistad	S	3684 III & 3684 IV
	Gómez Mena	S	3884 III
	Mercedita		3784 II
Cía. Azucarera Gómez Mena, S.A.	San Antonio	S	3884 IV
Cía. Azucarera Central Toledo, S.A.	Fajardo	S	3784 III
	Toledo	S	3785 III
Hershey Corp.	Carmen	S	
	Hershey	S	3885 III (M)**
Cía. Azucarera Habana, S.A.	Habana	N	3685 II
Central Josefita, S.A.	Josefita	S	3884 II
Cía. Azucarera Guiro Marrero, S.A.	Occidente	S	3784 III
Central San José Portugalete, S.A.	Portugalete	S, N	3784 I
Cía. Azucarera de Güines, S.A.	Providencia	S, N	3784 II
Rosario Sugar Co.	Rosario	S	3884 IV

* "S" indicates wide or standard gauge; "N" indicates narrow gauge (mostly 30" and 36").

** (M) indicates that sheet is not yet available but, when published, should show mill since the location has been verified from other maps.

Company	Mill	Gauge	Sheet Number
			1:50,000
MATANZAS			
Cia. Azucarera Atlántica del Golfo.	Alava	S	4084 III
	Feliz***		
	Conchita	S, N	3884 II
	Mercedes	S	4083 IV
	Santa Gertrudis***		
Cia. Azucarera Aurora, S.A.	Araujo	S, N	4083 IV
Cia. Azucarera Guamacaro, S.A.	Carolina	S	3984 IV
Ingenio Dolores, S.A.	Dolores	S	3984 III
Hires Sugar Co.	Dos Rosas	N	3985 III
Cia. Azucarera Central Cuba	Cuba	S	3984 III
	Santo Domingo	S	3984 IV
	Socorro (ruinas)	S	3983 IV
	San Vicente***	S	
Cia. Azucarera Central Elena, S.A.	Elena		3885 II
Cia. de Ingenios Azucareros de Matanzas	Espana	S	3984 II
Cia. Azucarera y Ganadera Guipuzcoa	Guipuzcoa	N	4084 IV
Cia. Propietaria Central Jaguey Grande	Jaguey Grande (Australia)	S	3983 I & 3983 II
Cia. Azucarera Canimar	Limones	N	3984 IV
Cia. Agricola Indarra, S.A.	Porfuerza	S	4083 IV
Cia. Azucarera Progreso, S.A.	Progreso	S	3984 I
Josefina C. Fernandez Blanco	Puerto	S	3885 III (M)
Manuel Areces	Marguesita***	S	
Hershey Corp.	Jesús María***	S	
Ingenio San Ignacio, S.A.	San Ignacio	S	3983 I
Cia. Azucarera Coliseo, S.A.	Santa Amalia	S	3984 IV
Central Santa Rita, S.A.	Santa Rita de Baro	S, N	3984 II
Central Soledad, S.A.	Soledad	N	3984 II
Central Tinguaro, S.A.	Tinguaro	S	4084 III
Cia. Agricola e Industrial, La Julia, S.A.	Triunfo	S	3984 IV
Cia. Azucarera Reserva, S.A.	Zorrilla	S	4084 II
F.C. Central Unión	Antiguo Central Unión	N	3984 II

*** 1:50,000 sheet not available at time of research; location of mill not verified from other sources.

Company	Mill	Gauge	Sheet Number
			1:50,000
LAS VILLAS			
Escambray Sugar Co.	Agabama*** Escambray	S	
Cia. Azucarera Central Adela	Adela	N	4383 III
Azucarera Amazonas, S.A.	Amazonas	N	4381 III
Central Andrejta, Cia. Azucarera, S.A.	Andrejta	N	4182 IV
Central Manuelita, Cia. Azucarera, S.A.	Manuelita Ferrer***	N S, N	4082 I
Central Caracas, S.A.	Caracas	S, N	4183 III
Cia. Azucarera Central Carmita, S.A.	Carmita	S	4283 III & 4283 IV
Rancho Veloz Sugar Co.	Constancia (Abreus) Cieneguita***	N N	4082 I
Azucarera Encrucijada, S.A.	Constancia (Encrucijada)	S, N	4283 IV
Cia. Azucarera Corazón de Jesús, S.A.	Corazón de Jesús	S	4184 II
Cia. Azucarera Jocuma, S.A.	Covadonga	S	4082 IV
Central San Agustin, S.A.	Dos Hermanas*** San Agustín	S N	4283 II
Azucarera Camajuani, S.A.	Fe María Luisa***	S N	4283 II
Central Fidencia, S.A.	Fidencia	S	4283 II
Central Hormiguero, S.A.	Hormiguero	N	4182 IV
The New Tuinucu Sugar Co. Inc.	La Vega Tuinucu	S S	4382 III 4382 III & 4381 IV
Cia. Azucarera Central Macagua, S.A.	Macagua (Not on P.8) San Antonio	N	4283 IV
Cia. Azucarera María Antonia, S.A.	María Antonio	S, N	4183 I
North American Sugar Co.	Narcisca	S, N	4383 II

Company	Mill	Gauge	Sheet Number
			1:50,000
LAS VILLAS (cont.)			
Ingenio Natividad, S.A.	Natividad	N	4380 IV
Central Nazabal, S.A.	Nazabal	N	4284 III
Central Nela, S.A.	Nela	N	4382 I
Central Perseverancia, S.A.	(María Victoria) Same Perseverancia	S	4083 III
Parque, S.A.	Parque Alto	N	4083 II
Central Pastora, S.A.	Pastora	N	4182 I
Azucarera Luzarraga, S.A.	Portugalete	N	4182 IV
Operadora de Ingenios, García Villar, S.A.	Purio	N	4284 III
Cia. Azucarera Central Ramona, S.A.	Ramona	N	4184 IV
Cia. Azucarera Caibarién, S.A.	Reforma	S, N	4383 IV
Nueva Compania Azucarera Gómez Mena, S.A.	Resolución	N	4184 III
Cia. Azucarera Central Resulta	Resulta	N	4184 II
Corporación Industrial del Trópico, S.A.	San Agustín (Remedios)	N	4183 III
Cia. Azucarera de Cienfuegos, S.A.	San Francisco	S, N	4183 II
Cia. Industrial y Agrícola de Quemados de Güines	San Isidro	N	4184 III
Cia. Arrendataria San José, S.A.	San José	N	4282 I
Azucarera Veguitas, S.A.	San Pablo	N	4283 II
Central Santa Catalina, S.A.	Santa Catalina	S	4183 II
Azucarera Santa Isabel, S.A.	Santa Isabel	S	4282 II
Central Santa Lutgarda, S.A.	Santa Lutgarda	S	4283 IV
Central Santa María, S.A.	Santa María	S	4183 II
Cia. Azucarera Santa Rosa, S.A.	Santa Rosa	S	4183 II
Cia. General de Ingenios, S.A.	Santa Teresa	N	4184 II
Cia. Azucarera Soledad, S.A.	Soledad	N	4182 III
Cia. Comercial Trinsuco, S.A.	Trinidad	N	4281 III
Ulacia, S.A.	Ulacia	S	4184 II
Azucarera Central Unidad, S.A.	Unidad	S	4184 II
Cia. Operadora Central Vitoria, S.A.	Vitoria	N	4383 II
Cia. Agrícola Defensa, S.A.	Washington	S	4183 IV
Azucarera Zaza, Zalueta Hnos., S.A.	Zaza	N	4283 I

Company	Mill	Gauge	Sheet Number
			1:50,000
CAMAGÜEY			
Cia. Azucarera Vertientes-Camagüey de Cuba	Camagüey (dismantled)	S	4580 IV
	Agramonte	S	4580 I
	Pilar	S	4481 II
	Estrella	S	4580 IV
	Vertientes		4579 I
Adelaida, Cia. Azucarera, S.A.	Adelaida	S	4482 IV
Cia. Azucarera Central Patria, S.A.	Patria	S	4482 II
Cia. Azucarera Buena Vista, S.A.	Punta Alegre	S	4483 III
Cia. Azucarera Holguín, S.A.	Cupey (demolished)	S	4878 II
Cia. Azucarera Ingenio Algodones, S.A.	Algodones	S	4481 IV
	Ciego de Avila***		
	Santo Tomás***		
Baragua Industrial Corp. of New York	Baragua	S	4481 II
Cia. Azucarera Céspedes	Céspedes	S	(4580 I) & 4580 IV
Central Cunagua, S.A.	Cunagua	S	4582 III
	Jaromú	S	4681 III
	Velasco (no mill)		4581 IV
Cia. Azucarera Elia, S.A.	Elia	S	4778 IV
Florida Industrial Corp. of New York	Florida	S	4580 I
Macareno Industrial Corp. of New York	Macareño	S	4678 III
The Francisco Sugar Co.	Francisco	S	4678 I & 4678 II
Cia. Cubana	Jatibonico	S	4381 I
Cia. Azucarera Atlántica del Golfo.	Lugareno	S	4780 IV
	Jaguayal***	S	
	Morón	S	4482 II
	Stewart	S	4481 III
Azucarera Sibanicu, S.A.	Nejasa	S	4679 II (M)
Central Santa Marta, S.A.	Santa Marta	S	4578 II
Central Senado, S.A.	Senado	S	4680 I
Central Siboney-Camagüey, S.A.	Siboney	S	4679 I
Central Violeta Sugar Co.	Violeta	S	4581 IV

Company	Mill	Gauge	Sheet Number
ORIENTE			
Cia. Azucarera Marinello, S.A.	Algodonal	S	(5076 I) & 5076 II
Cia. Central Altagracia, S.A.	Alto Cedro	S	(5077 IV) & 4976 I
	Altagracia***	S	
	Palma	S	5076 IV
	Santa Ana	S	5076 IV
Miranda Sugar Estates	Miranda	S	5077 III
Cia. Azucarera America, S.A.	América	S	4976 I
Antilla Sugar Estates	Bagueños	S	4978 II
	Tacajó	S	5078 IV
Belona Sugar Co.	Baltony	S	5176 IV
Cia. Azucarera Borjita, S.A.	Borjita	S, N	5076 IV
United Fruit Sugar Co.	Boston	S	5078 I
	Preston	S	5078 II
Cia. Azucarera Holguín, S.A.	Cacocum	S	4978 III
Central Cape Cruz, S.A.	Cabo Cruz	N	4775 IV
Central Niquero, S.A.	Niquero	N	4676 II
Cia. Azucarera Tánamo de Cuba, S.A.	Tánamo	N	5178 III
Cuban American Sugar Mills Co.	Chaparra	N	(4979 IV) & 4979 III
	Delicias		4879 I
Industrial Guacanayabo, S.A.	Dos Amigos	N	4776 IV
Central Ermita, S.A.	Ermita	S	5176 IV
Cia. Cubana	Jobabo	S	4778 IV
Cia. Azucarera Oriental Cubana, S.A.	Esperanza	S, N	5176 I (M)
Cia. de Industrias Agrícolas, S.A.	Estrada Palma	S	4876 IV & 4876 III
Cia. Azucarera Vicaría	Isabel	N	4776 III
Quantánamo Sugar Co.	Isabel	S	5176 I (M)
	Los Caños	S, N	5176 II
Cia. Azucarera Central Mabay, S.A.	Mabay	S	4877 III
Cia. Azucarera Maceo, S.A.	Maceo	S	4978 III

Company	Mill	Gauge	Sheet Number
			1:50,000
ORIENTE (cont.)			
Manatí Sugar Co.	Manatí	S, N	4879 IV
Cuban Canadian Sugar Co.	Río Cauto	S	4877 IV
Central Romelie, S.A.	Romelie	S	5176 I (M)
Central Salvador, S.A.	Salvador	N	4776 I
Cia. Azucarera Yeteras	San Antonio	N	5176 I (M)
Cia. Azucarera Filelidad, S.A.	San Germán	S	4977 I
Azucarera Oriental San Ramón	San Ramón	N	4776 IV
Central Santa Cecilia, S.A.	Santa Cecilia	N	5176 II
Santa Lucía Co., S.A.	Santa Lucía	N	5079 III
Cia. Azucarera Santa Regina, S.A.	Santa Regina (Ofelia) (Teresa)	N	4776 IV
Cia. Agrícola Yara, S.A.	Sofía	S	4876 IV
Guantanamo Sugar Co.	Soledad	S, N	5176 I (M)
Central Unión, S.A.	Unión	S	5076 IV

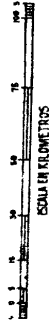
CONFIDENTIAL




MAP 1

FERROCARRILES CONSOLIDADOS DE CUBA

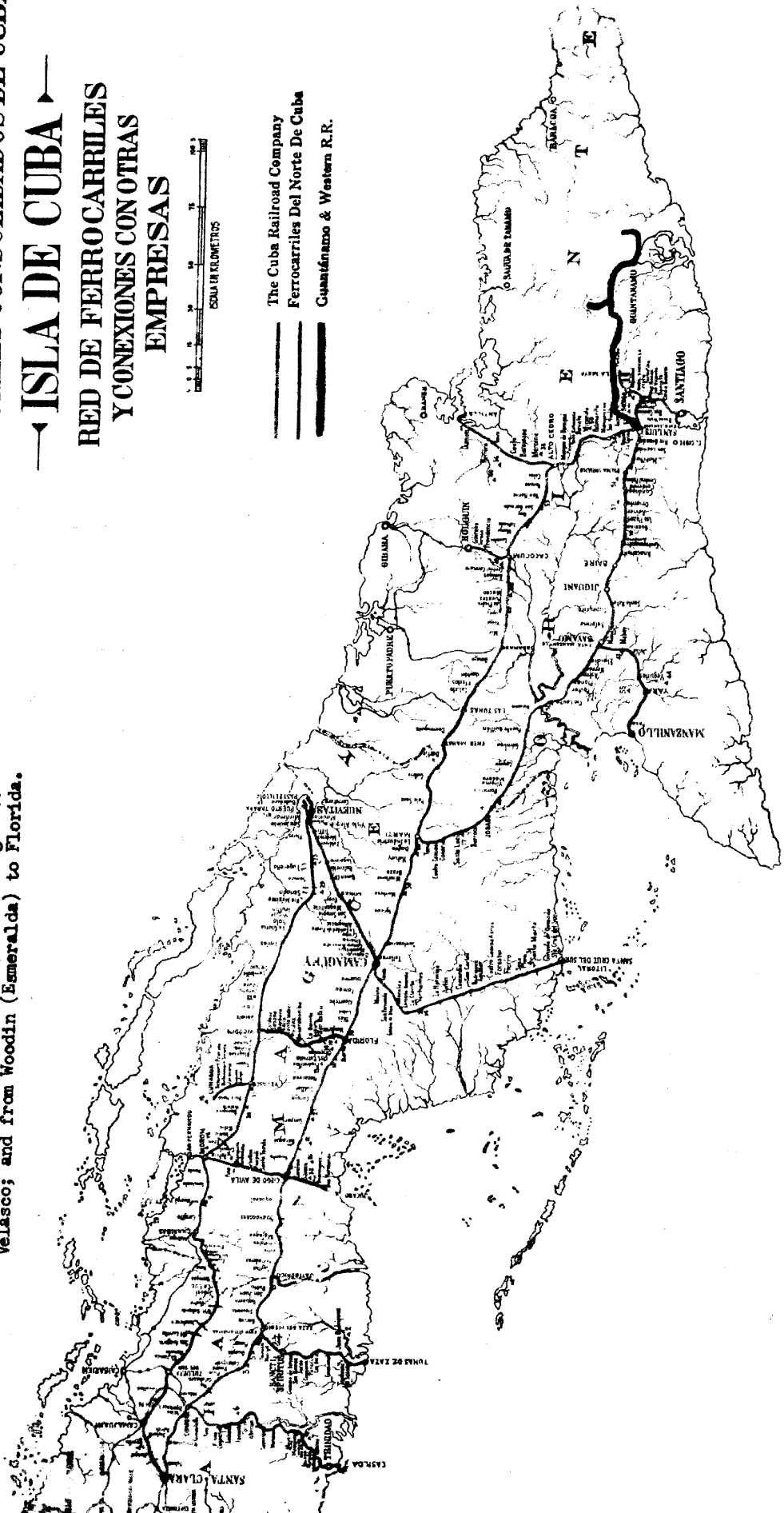
ISLA DE CUBA

RED DE FERROCARRILES Y CONEXIONES CON OTRAS EMPRESAS



 The Cuba Railroad Company
 Ferrocarriles Del Norte De Cuba
 Cuanstánado & Western R.R.

The Ferrocarriles del Norte de Cuba run from Santa Clara to Nuevitás, with spurs from San Fernando through Morón to Dos Hermanas; from Cimagua to Velasco; and from Woodin (Esmeralda) to Florida.

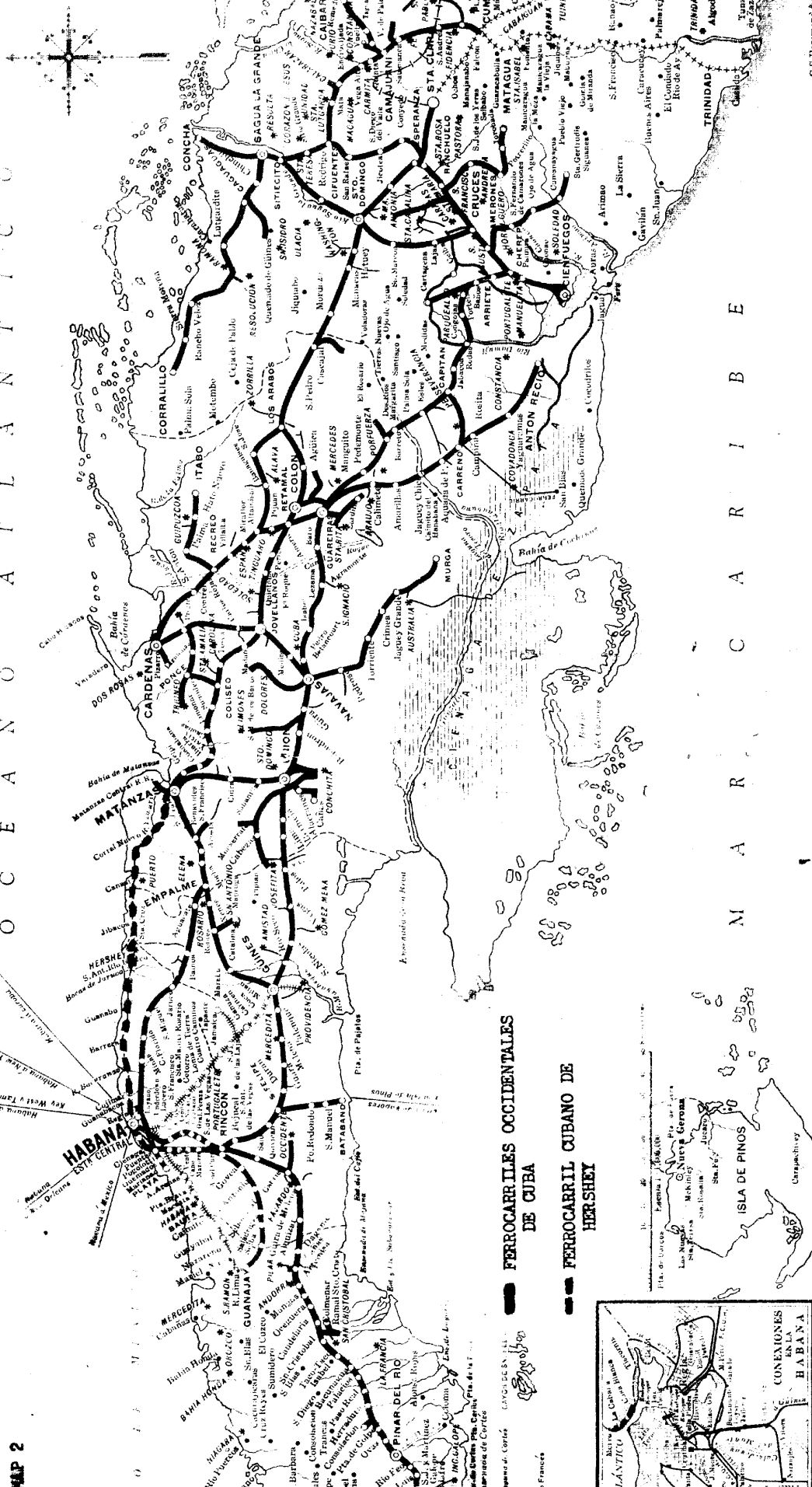


CAMACREY ENGINEERING CO.
1948

C.S. Hammond & Co. N.Y.

O C C É A N O A T L A N T I C O

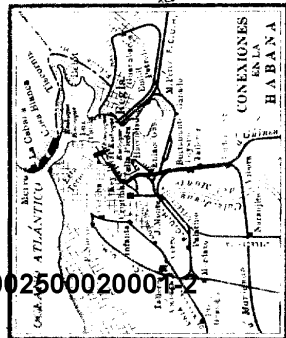
M A R I C A R R I B E



MAP 2

FERROCARRILES OCCIDENTALES DE CUBA

FERROCARRIL CUBANO DE HERSHEY

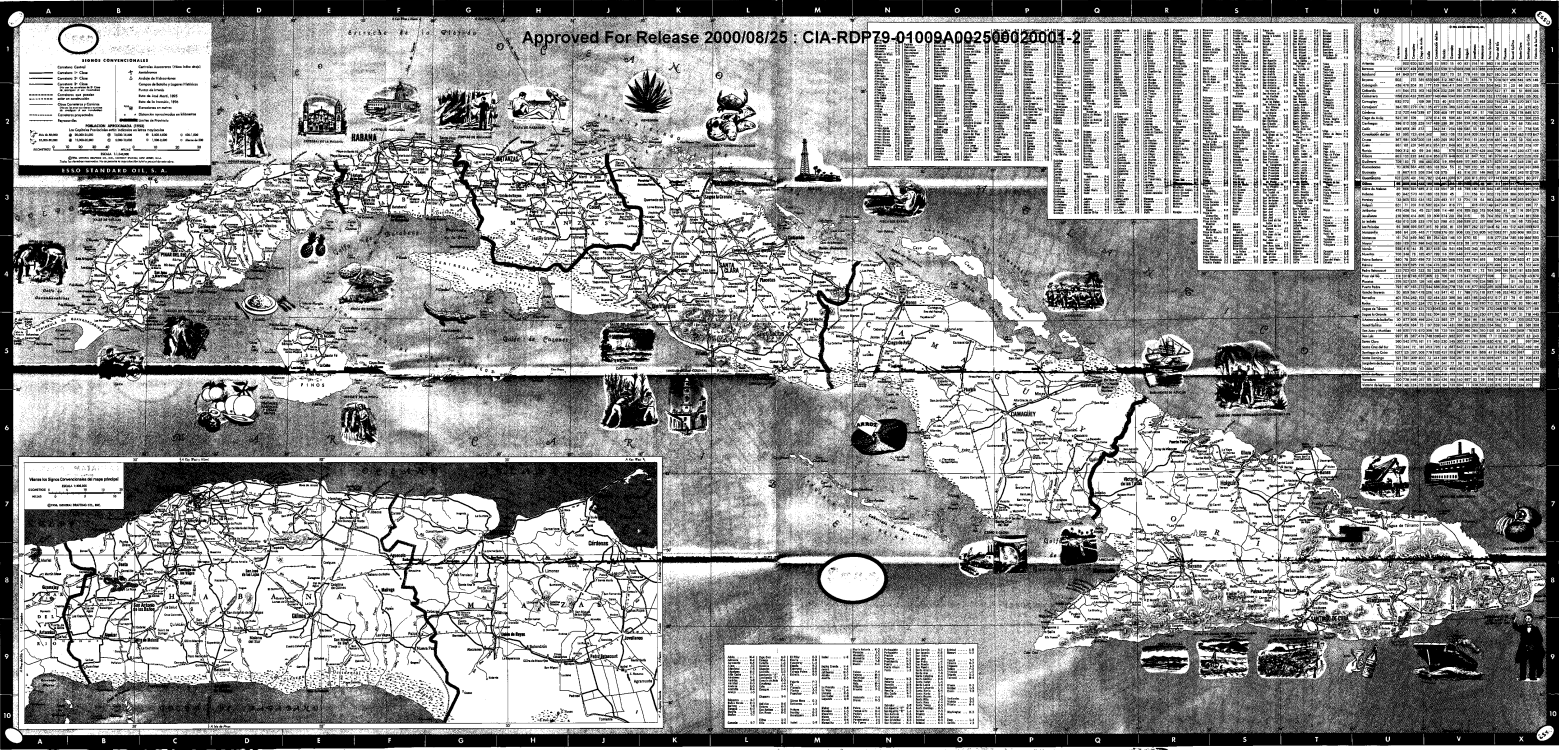


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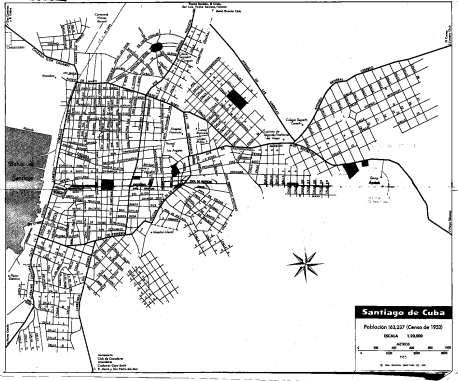
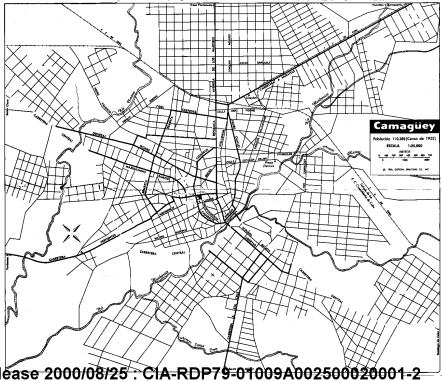
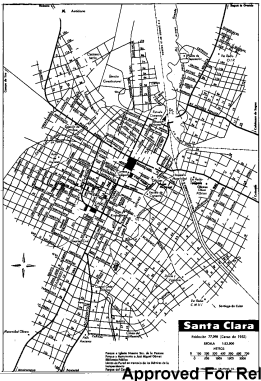
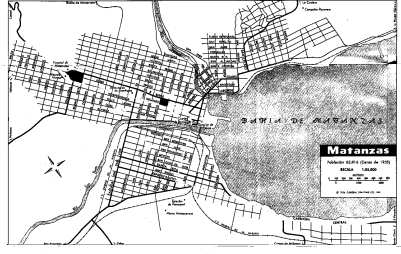
S-E-C-R-E-T
NOT RELEASABLE TO FOREIGN NATIONALS
NO DISSEMINATION ABROAD
LIMITED

LIMITED
NO DISSEMINATION ABROAD
NOT RELEASABLE TO FOREIGN NATIONALS
S-E-C-R-E-T

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¿Piensa Usted viajar en automóvil?
Se presenta aquí un estudio sobre la posibilidad de viajar en automóvil por Cuba y el extranjero. Se trata de un estudio que ha sido realizado por el Ministerio de Transportes y Comunicaciones. Este estudio es el resultado de una investigación realizada por el Ministerio de Transportes y Comunicaciones. Este estudio es el resultado de una investigación realizada por el Ministerio de Transportes y Comunicaciones.



Escala 1:100,000
 METROS
 PIES
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