

Section 4: Hypercommunications: Implications of the South Miami-Dade County Infrastructures For Agriculture

By

Dr. Dean G. "Gordy" Fairchild

EXECUTIVE SUMMARY

Few business decisions are more complicated than those involving modern telecommunications. The choices an agribusiness makes regarding services such as local telephone, long-distance, Internet, and data networking are more important than ever to the bottom line. An agribusiness uses many telecommunications including a local telephone carrier, long-distance carrier, private data networking provider, Internet access provider, web hosting company, e-mail solutions provider, web site hosting company, paging company, and mobile telephone company. Vendor bills may also collect a variety of telecommunications taxes and regulatory surcharges ranging from universal service to the Florida gross receipts surcharge that can make up 28% of the monthly charge for some services.

In addition to such monthly or quarterly bills, there are capital costs involved with buying or leasing the correct hardware and software needed to communicate reliably. Equipment inventories may consist of personal computers, telephone sets, PBXs (telephone systems), routers, modems, fax machines, network servers, and services ranging from programming to network troubleshooting. As small agribusinesses find new technologies are becoming more affordable, the details can be overwhelming.

However, many of these decisions depend on factors outside a business' control. Some such factors include the local telecommunications infrastructure, regulatory boundaries such as LATAs, local calling areas, and bandwidth fees. This summary covers the communications infrastructure (along with explanations of the services that require high-speed infrastructures) for southern Miami-Dade County, (an area roughly bounded by SW 88th St. on the north and the Everglades on the west).

The word hypercommunications has been coined [Stone, 1997] to characterize the communications network of the future because the telephone, Internet, and data networks of today will be replaced by a high-speed converged network able to carry all kinds of traffic. For example, some businesses replace the confusion and expense of having separate local telephone companies, data and Internet networks, dial-up modems, wireless telephones, pagers, fax machines, and long-distance carriers with a single vendor's computer-based converged network.

One way to keep agricultural land in production in south Miami-Dade is to increase return per acre (or square foot of nursery space). Intelligent use of hypercommunication services and technologies can raise return, but access to inexpensive new technologies such as DSL and MDS will be important. By serving new customers through Internet, e-mail, and enhanced telephone strategies, an agribusiness can make new sales, expand to new markets, serve existing customers better all the while increasing employee efficiency, and cutting

selling and purchasing costs. As if those benefits are not enough, the monthly cost of all communications services can be cut by up to 40 percent.

Therefore, the profitability and survival of many South Miami-Dade agribusinesses can be helped by access to high-speed voice and data networks. However, the availability of such networks depends on local infrastructures. Infrastructures are plural since several kinds of wireline and wireless communications infrastructures provide high-speed access. This report concentrates on which locations in South Miami-Dade now (or soon will) have access to high-speed infrastructures.

There is a second purpose, to relate the local communications infrastructure to real-world requirements of the farms and nurseries in Southern and Western Miami-Dade County. Infrastructures are important because of business benefits that result from the services and technologies they bring to area agribusinesses. Due to the fast-changing nature of high technology, many agribusiness managers and owners have a hard time understanding the blizzard of new services and technologies that accompany voice, data, and Internet communications.

Homestead-area producers need to understand several hypercommunication strategies that will help them raise profits by expanding communications and lower costs by exploiting new technologies and services. While large agribusinesses have an early advantage in grabbing hold of the new kind of communication services and technologies, firms with as few as five employees can benefit too.

However, not every strategy is available to every agribusiness. Many choices that are available in downtown Miami are not offered in sparsely settled parts of south Miami-Dade. In some cases, services are not offered to one area because carriers are interested in more densely populated parts of the state that offer greater profitability. In other cases, services are not available because of insufficient infrastructure at a particular location. For this reason, the S. Miami-Dade infrastructure is covered first.

The telecommunications infrastructure of south Miami-Dade and its relationship to agriculture can be shown in the following two figures. Figure 1 shows a satellite view of the area south of SW 88th (Kendall Dr.), west of the Atlantic Ocean, east of the Everglades, and north of the southernmost end of the Turkey Point cooling ponds. Farms dot the area south and west of Homestead, as well as north of the city up to Tamiami airport. [Microsoft Terraserver website, <http://terraserver.microsoft.com>]

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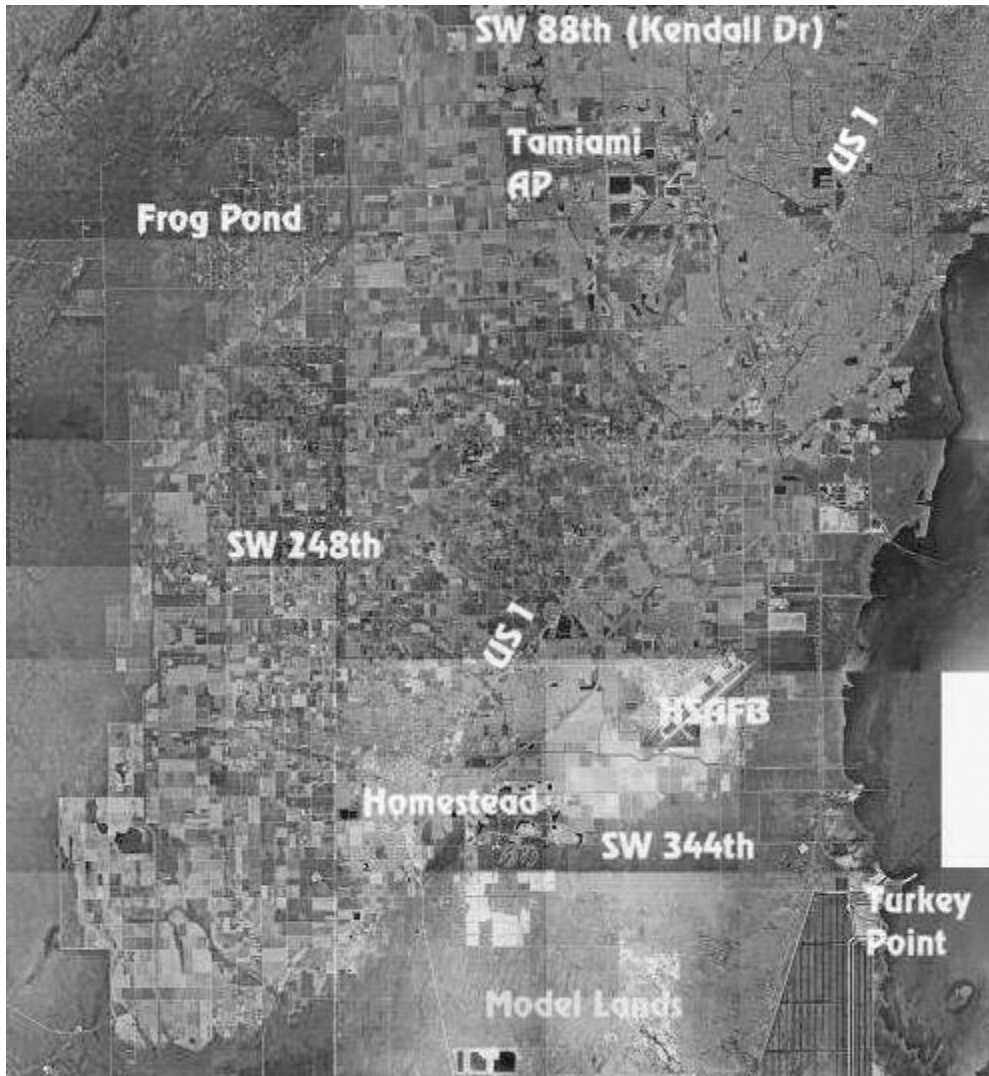


Figure 1: Satellite View of Project Area.

With \$408.8 million in receipts, Miami-Dade County ranks 18th of 3,070 U.S. counties in the value of all crops sold. [USDA, NASS, FASS, "1997 Census of Agriculture County Profile."] The importance of Miami-Dade producers to Florida (and U.S.) agriculture is most obvious on several measures. In 1997, Miami-Dade ranked second nationally among all counties in nursery and greenhouse production, 39th in market value of all agricultural products, 13th in market value of vegetables, 87th in fruit and nuts, and 30th in aquaculture. [USDA, NASS, *1997 Census of Agriculture*, Ranking of States and Counties, Tables 23, 33, 34, and 35]. In addition to nursery operations, Homestead-area producers are known for bush and pole beans, cabbage, sweet corn, eggplant, okra, pickles, sweet potatoes, squash, strawberries, tomatoes, cherry tomatoes, and plum tomatoes.

South Miami-Dade's tropical climate allows specialty crops that can be grown almost nowhere else in the United States such as limes, avocados, papayas, other tropical fruits, and dozens of specialty crops. However, it is also Florida's most populous county (with as many as 2.2 million inhabitants) so there is enormous pressure on agricultural land from urbanization. In addition, the county's location near the fragile Everglades means that there is little room for agricultural expansion. Thus, the future of agriculture depends on preserving and strengthening existing operations. The purpose of this report is to consider the role hypercommunications infrastructure can play in keeping south Miami-Dade agriculture operations productive and profitable.

Infrastructures in the project area can be summarized in the following figures. Figure 2 shows BellSouth's wireline infrastructure. The triangles in Figure 2 show the location of BellSouth's telephone central offices (also called wire centers or switches) which are important to wireline voice, data, and Internet infrastructure. The area shown is bounded on the north by SW 88th and on the south by SW 328th which includes all wire centers serving the project area. Each central office contains switches that are equipped to support particular communications services. The distance from each triangle to a particular business (ring includes all businesses within a 3-mile radius of each triangle) determines the maximum availability of many distance-sensitive products such as DSL (Digital Subscriber Line)¹⁷, HDSL T-1 circuits, and other methods of inexpensive high-speed network access. Table 1 contains specific street addresses of each BellSouth DSL "substation", and includes the latest neighborhood DSL deployments (March 2002).

¹⁷ DSL comes in several forms and can be used for Internet and data network access and for enhanced telephony (HDSL T-1s).

build-outs. [It should be emphasized that the map in Figure 3 does not show all fiber routes to Miami-Dade County, as no comprehensive map of all fiber routes is available. Many carriers, including BellSouth, Intermedia, MCI (Worldcom), Adelphia, Sprint, AT&T, Williams (wholesale) and others are classified as “facilities-based”, and have their own fiber nets.]

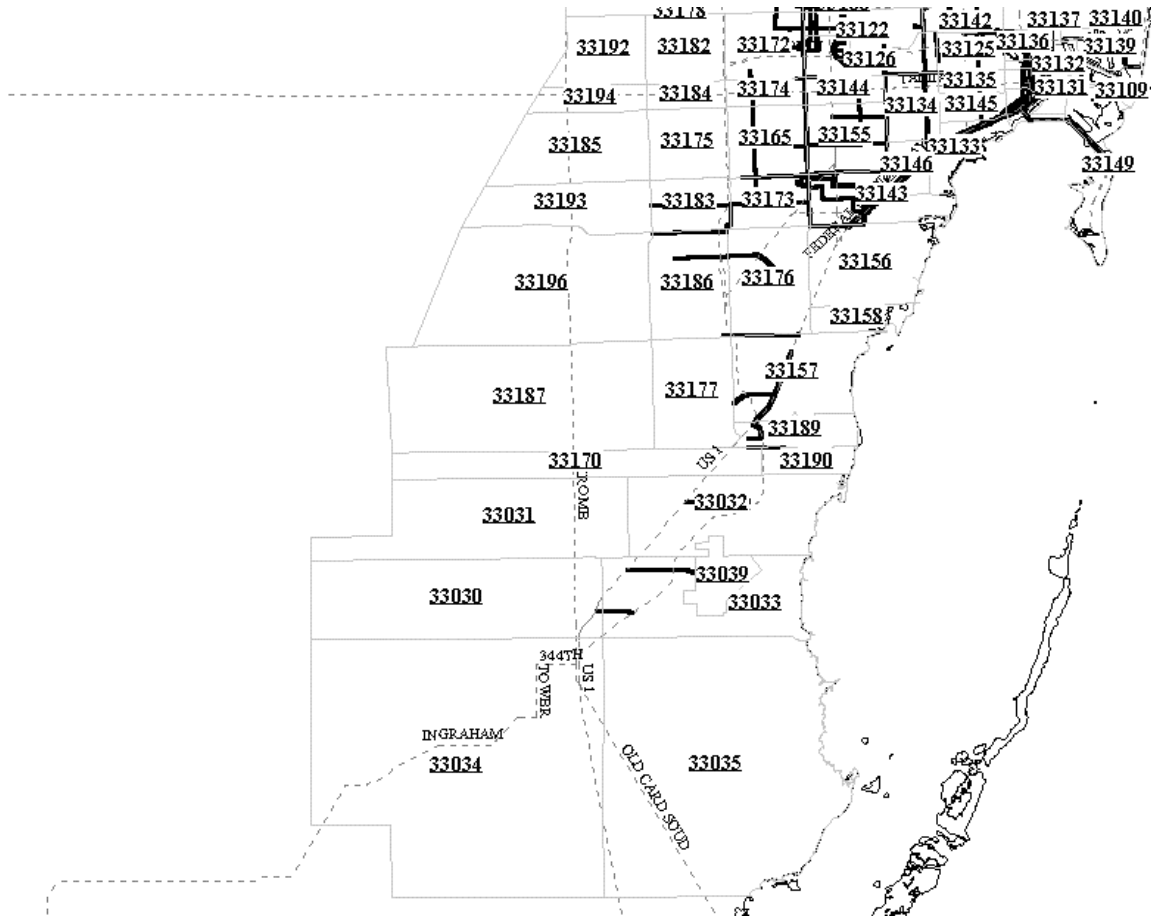


Figure 3: South Miami-Dade Common Carrier Fiber Optic Mileage, 1997 data.

In addition to wireline infrastructures, many wireless infrastructures are capable of providing services. Figure 4 shows several of these. [FCC, WSB, 2000] Figure 4 may not show the location of every tower in the area because it may miss certain unlicensed 2.4 GHz and 5.8 GHz unlicensed carriers and certain military, aviation, and other public sites. Figure 4 shows several types of wireless towers and antennas from FCC license data as of summer 2000. Squares denote microwave towers that are capable of offering high-speed fixed wireless access for businesses in the Homestead area. In spite of the large number of towers shown, many are owned by government, large businesses such as FPL, or are otherwise not available to individual. The eight-pointed markers represent mobile paging (wireless messaging) facilities.

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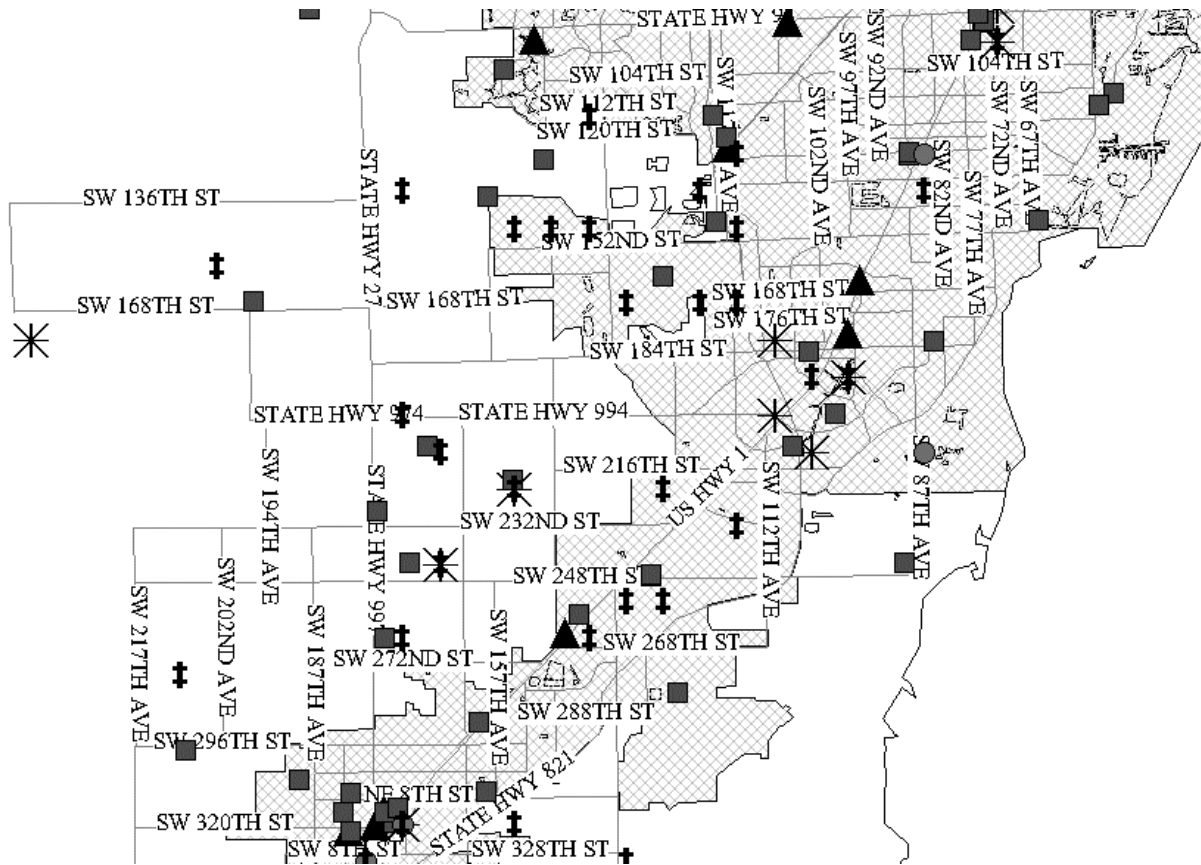


Figure 4: Various Wireless Towers in Project Area.

In Figure 4, circles show the location of mobile cellular towers. Triangles give the location of wireline switches as shown in Figure 2. Finally, the two-cross marks show the locations of general purpose wireless towers. Since many towers are shared among carriers, there appears to be an ample number of facilities capable of offering fixed and mobile voice and data services. At present, few carriers other than mobile cellular and PCS carriers are actively serving the project area.

The telecommunication infrastructures of South Miami-Dade are superior to those over many other parts of Florida, partly due to the proximity to Miami. However, a significant number of farms and residents do not have access to such inexpensive services as DSL, fixed wireless, and 2G-3G mobile wireless data.

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Table 1. Specific Street Addresses of Each BellSouth DSL “Substation” – Latest Neighborhood DSL Deployments.^a

CO NAME	Approximate Remote Terminal Address	Deployment	MSA	MSA_Name
HOMESTEAD	51 NW 5TH AV	03/08/00	MIAMFL	Miami FL
HOMESTEAD	198 NW 7 AV	05/24/00	MIAMFL	Miami FL
HOMESTEAD	R 897 SW 10TH ST	10/27/99	MIAMFL	Miami FL
HOMESTEAD	250 E PALM DR	10/13/00	MIAMFL	Miami FL
HOMESTEAD	950 N KROME AV	11/10/99	MIAMFL	Miami FL
HOMESTEAD	18699 SW 296 ST	02/09/00	MIAMFL	Miami FL
HOMESTEAD	24805 SW 182 AV	11/28/99	MIAMFL	Miami FL
HOMESTEAD	19400 SW 376TH ST	11/02/99	MIAMFL	Miami FL
HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
HOMESTEAD	RLA F 14100 SW 288 ST	04/08/00	MIAMFL	Miami FL
HOMESTEAD	24795 SW 197TH AV	04/05/00	MIAMFL	Miami FL
HOMESTEAD	RLA 18704 SW 344TH ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	RLA 24802 SW 162ND AV	11/08/99	MIAMFL	Miami FL
HOMESTEAD	RTA 27998 SW 162ND AV	11/14/99	MIAMFL	Miami FL
HOMESTEAD	345 E PALM DR	06/01/00	MIAMFL	Miami FL
HOMESTEAD	21602 SW 194TH AV	06/20/00	MIAMFL	Miami FL
HOMESTEAD	23200 SW 187TH AV	03/27/00	MIAMFL	Miami FL
HOMESTEAD	24750 SW 212TH AV	11/16/99	MIAMFL	Miami FL
HOMESTEAD	19700 SW 256TH ST	01/15/00	MIAMFL	Miami FL
HOMESTEAD	26625 SW 197 AV	01/11/00	MIAMFL	Miami FL
HOMESTEAD	19701 SW 280TH ST	02/23/00	MIAMFL	Miami FL
HOMESTEAD	SW 217 AV & SW 256 ST	05/24/00	MIAMFL	Miami FL
HOMESTEAD	20400 SW 296 ST	08/31/00	MIAMFL	Miami FL
HOMESTEAD	31200 SW 193RD AV	01/12/00	MIAMFL	Miami FL
HOMESTEAD	15390 SW 272 ST	11/13/99	MIAMFL	Miami FL
HOMESTEAD	19700 SW 320TH ST	11/08/99	MIAMFL	Miami FL
HOMESTEAD	27790 SW 167TH AV	02/22/00	MIAMFL	Miami FL
HOMESTEAD	15353 SW 232ND ST	07/05/00	MIAMFL	Miami FL
HOMESTEAD	15252 SW 264TH ST	01/05/00	MIAMFL	Miami FL
HOMESTEAD	1601 NW 1ST AV	08/19/00	MIAMFL	Miami FL
HOMESTEAD	18700 SW 358 ST	01/11/99	MIAMFL	Miami FL
HOMESTEAD	F 23198 SW 167 AV	11/03/99	MIAMFL	Miami FL
HOMESTEAD	26395 SW 167TH AV	02/16/00	MIAMFL	Miami FL
HOMESTEAD	20202 SW 344 ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	1502 E MOWRY DR	07/18/00	MIAMFL	Miami FL
HOMESTEAD	37698 SW 192ND AV	11/06/99	MIAMFL	Miami FL
HOMESTEAD	30700 SW 157TH AV	06/22/00	MIAMFL	Miami FL
HOMESTEAD	29630 SW 142ND CT	01/10/01	MIAMFL	Miami FL
HOMESTEAD-NARANJA	13000 SW 248TH ST	10/08/01	MIAMFL	Miami FL
HOMESTEAD-NARANJA	13200 SW 232 ST	11/30/01	MIAMFL	Miami FL
HOMESTEAD-NARANJA	24755 SW 122 AV	05/16/01	MIAMFL	Miami FL

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HOMESTEAD	950 N KROME AV	11/10/99	MIAMFL	Miami FL
HOMESTEAD	18699 SW 296 ST	02/09/00	MIAMFL	Miami FL
HOMESTEAD	24805 SW 182 AV	11/28/99	MIAMFL	Miami FL
HOMESTEAD	19400 SW 376TH ST	11/02/99	MIAMFL	Miami FL
HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
HOMESTEAD	RLA F 14100 SW 288 ST	04/08/00	MIAMFL	Miami FL
HOMESTEAD	24795 SW 197TH AV	04/05/00	MIAMFL	Miami FL
HOMESTEAD	RLA 18704 SW 344TH ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	RLA 24802 SW 162ND AV	11/08/99	MIAMFL	Miami FL
HOMESTEAD	RTA 27998 SW 162ND AV	11/14/99	MIAMFL	Miami FL
HOMESTEAD-NARANJA	22640 SW 124 AV	05/11/01	MIAMFL	Miami FL
LARGO SOUND	LAKE SURPRISE REPEATER HUT	08/29/01	MIAMFL	Miami FL
LARGO SOUND	104100 U S HIGHWAY 1	07/17/01	MIAMFL	Miami FL
LARGO SOUND	100100 U S HIGHWAY 1	09/12/01	MIAMFL	Miami FL
LARGO SOUND	131 OCEAN BAY DR	07/06/01	MIAMFL	Miami FL
LARGO SOUND	R 99500 U S HIGHWAY 1	09/26/01	MIAMFL	Miami FL
LARGO SOUND	104700 U S HIGHWAY 1	07/17/01	MIAMFL	Miami FL
LARGO SOUND	105810.1.4 OVERSEAS HWY	08/27/01	MIAMFL	Miami FL
MIAMI-RED ROAD	5000 UNIVERSITY DR	01/05/00	MIAMFL	Miami FL
MIAMI-RED ROAD	F 60 EDGEWATER DR	08/25/00	MIAMFL	Miami FL
MIAMI-RED ROAD	7551.1 LOS PINOS BLVD	01/08/00	MIAMFL	Miami FL
MIAMI-RED ROAD	100.1 COCOPUM RD	12/25/99	MIAMFL	Miami FL
MIAMI-RED ROAD	5801 AUGUSTO ST	03/14/00	MIAMFL	Miami FL
MIAMI-RED ROAD	9025 OLD CUTLER RD	01/31/01	MIAMFL	Miami FL
MIAMI-RED ROAD	MR C DADELAND	06/23/00	MIAMFL	Miami FL
MIAMI-RED ROAD	7410 SW 72ND ST	07/22/00	MIAMFL	Miami FL
MIAMI-RED ROAD	S 6437 SW 40TH ST	07/11/00	MIAMFL	Miami FL
MIAMI-RED ROAD	5690 1/2 SW 88TH ST	12/25/99	MIAMFL	Miami FL
MIAMI-RED ROAD	R 11621 SW 57TH AV	04/03/00	MIAMFL	Miami FL
MIAMI-RED ROAD	12751 SW 57TH AV	06/30/00	MIAMFL	Miami FL
MIAMI-RED ROAD	R 10500 SNAPPER CREEK RD	04/10/00	MIAMFL	Miami FL
MIAMI-RED ROAD	R 6400 SW 112TH ST	12/24/99	MIAMFL	Miami FL
MIAMI-RED ROAD	R 9801 S DIXIE HWY	02/05/00	MIAMFL	Miami FL
MIAMI-RED ROAD	8058 SW 102ND ST	12/09/99	MIAMFL	Miami FL
MIAMI-RED ROAD	R 7291 SW 102ND ST	04/10/00	MIAMFL	Miami FL
MIAMI-RED ROAD	R 9201 S DIXIE HWY	02/05/00	MIAMFL	Miami FL
MIAMI-RED ROAD	R 6250 SW 120TH ST	04/17/00	MIAMFL	Miami FL
MIAMI-RED ROAD	F 7801 SW 110TH ST	05/20/00	MIAMFL	Miami FL
MIAMI-RED ROAD	R 8245 S DIXIE HWY	05/21/00	MIAMFL	Miami FL

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HOMESTEAD	250 E PALM DR	10/13/00	MIAMFL	Miami FL
HOMESTEAD	950 N KROME AV	11/10/99	MIAMFL	Miami FL
HOMESTEAD	18699 SW 296 ST	02/09/00	MIAMFL	Miami FL
HOMESTEAD	24805 SW 182 AV	11/28/99	MIAMFL	Miami FL
HOMESTEAD	19400 SW 376TH ST	11/02/99	MIAMFL	Miami FL
HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
HOMESTEAD	RLA F 14100 SW 288 ST	04/08/00	MIAMFL	Miami FL
HOMESTEAD	24795 SW 197TH AV	04/05/00	MIAMFL	Miami FL
HOMESTEAD	RLA 18704 SW 344TH ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	RLA 24802 SW 162ND AV	11/08/99	MIAMFL	Miami FL
HOMESTEAD	RTA 27998 SW 162ND AV	11/14/99	MIAMFL	Miami FL
MIAMI-RED ROAD	1050 SUNSET DR	12/28/99	MIAMFL	Miami FL
MIAMI-RED ROAD	F 5208 SW 76TH ST	02/24/00	MIAMFL	Miami FL
MIAMI-RED ROAD	F 6700 SW 112TH ST	12/14/99	MIAMFL	Miami FL
MIAMI-RED ROAD	R 6125 SW 31ST ST	04/08/00	MIAMFL	Miami FL
MIAMI-RED ROAD	R 8603 S DIXIE HWY	04/08/00	MIAMFL	Miami FL
MIAMI-RED ROAD	7280 SW 48TH ST	05/20/00	MIAMFL	Miami FL
MIAMI-RED ROAD	F 3575 LUJEUNE RD	06/08/00	MIAMFL	Miami FL
MIAMI-RED ROAD	3925 SW 70TH AV	04/09/00	MIAMFL	Miami FL
MIAMI-RED ROAD	7026 SW 80TH ST	06/23/00	MIAMFL	Miami FL
MIAMI-RED ROAD	8350-1.1 S DIXIE HWY	03/04/00	MIAMFL	Miami FL
MIAMI-RED ROAD	TSI 5701 SUNSET DR RM B124	02/24/00	MIAMFL	Miami FL
MIAMI-RED ROAD	7400 SW 62ND AV	03/28/00	MIAMFL	Miami FL
MIAMI-RED ROAD	S 6280 SW 72ND ST	07/25/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	8940 SW 88TH ST	12/07/99	MIAMFL	Miami FL
MIAMI-SILVER OAKS	5680 SW 87TH AV	12/12/99	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9500.2.4 SW 77TH AV	06/28/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9059 SW 87TH CT	02/13/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9729 SW 108TH TER	07/22/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9101 SW 74TH ST	12/11/99	MIAMFL	Miami FL
MIAMI-SILVER OAKS	8811 SW 123RD CT	10/07/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	8250 SW 117TH AV	04/08/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	R 8585 SW 72ND ST	03/01/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9200 SW 72ND ST	03/09/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	11340 SW 64TH ST	05/01/01	MIAMFL	Miami FL
MIAMI-SILVER OAKS	10291 SW 56TH ST	02/03/01	MIAMFL	Miami FL
MIAMI-SILVER OAKS	10401 SW 117TH AV	10/26/99	MIAMFL	Miami FL
MIAMI-SILVER OAKS	5601 SW 89TH AV	04/01/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	12200 SW 112TH ST	11/04/00	MIAMFL	Miami FL
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HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
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MIAMI-SILVER OAKS	11225 SW 55TH ST	07/11/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	8695 SW 123RD AV	03/29/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9415 SW 72ND ST	04/22/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	8605 SW 79TH AV	06/13/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9200 SW 82ND AV	06/22/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	7821 SW 56TH ST	06/23/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	8701 SW 74TH ST	03/18/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	11355 SW 84TH ST	03/20/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	7875 SW 104TH ST	11/28/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	6800 SW 87TH AV BLDG PBX	07/18/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	10095 SW 88TH ST	05/13/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	9701 SW 56TH ST	06/20/00	MIAMFL	Miami FL
MIAMI-SILVER OAKS	MR 10200.2 SW 72ND ST	07/03/00	MIAMFL	Miami FL
MIAMI-WEST DADE	SW 59TH ST & SW 139TH AV	03/08/00	MIAMFL	Miami FL
MIAMI-WEST DADE	SW 139TH CT & SW 64TH ST	04/15/00	MIAMFL	Miami FL
MIAMI-WEST DADE	SW 64 LN AND SW 129TH CT	12/25/99	MIAMFL	Miami FL
MIAMI-WEST DADE	SW 133 AV CALUSA CLUB DR	05/24/00	MIAMFL	Miami FL
MIAMI-WEST DADE	10301 SW 137TH CT	06/20/01	MIAMFL	Miami FL
MIAMI-WEST DADE	8000 SW 159TH PL	05/27/00	MIAMFL	Miami FL
MIAMI-WEST DADE	6000 SW 152ND AV	02/15/01	MIAMFL	Miami FL
MIAMI-WEST DADE	8910 SW 142ND AV	01/12/01	MIAMFL	Miami FL
MIAMI-WEST DADE	10900.1.4 SW 147TH AV	06/13/00	MIAMFL	Miami FL
MIAMI-WEST DADE	R 10201 HAMMOCKS BLVD	07/11/00	MIAMFL	Miami FL
MIAMI-WEST DADE	11001 SW 157TH AV	05/24/00	MIAMFL	Miami FL
MIAMI-WEST DADE	14903 SW 80TH ST	09/29/99	MIAMFL	Miami FL
MIAMI-WEST DADE	RLA 7680 SW 157TH PL	04/16/00	MIAMFL	Miami FL
MIAMI-WEST DADE	7220 SW 158TH PATH	06/25/00	MIAMFL	Miami FL
MIAMI-WEST DADE	13500 SW 88TH ST	04/13/01	MIAMFL	Miami FL
MIAMI-WEST DADE	RLA 10502 SW 157 AV	12/22/99	MIAMFL	Miami FL

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HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
HOMESTEAD	RLA F 14100 SW 288 ST	04/08/00	MIAMFL	Miami FL
HOMESTEAD	24795 SW 197TH AV	04/05/00	MIAMFL	Miami FL
HOMESTEAD	RLA 18704 SW 344TH ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	RLA 24802 SW 162ND AV	11/08/99	MIAMFL	Miami FL
HOMESTEAD	RTA 27998 SW 162ND AV	11/14/99	MIAMFL	Miami FL
MIAMI-WEST DADE	RLA 10902 HAMMOCKS	07/08/00	MIAMFL	Miami FL
MIAMI-WEST DADE	RT R 14351 SW 96TH ST	10/05/99	MIAMFL	Miami FL
MIAMI-WEST DADE	RLA 13260 SW 112 ST	08/12/00	MIAMFL	Miami FL
MIAMI-WEST DADE	R 11450 SW 147TH AV	07/08/00	MIAMFL	Miami FL
MIAMI-WEST DADE	RLA 15720 SW 88 ST	10/07/00	MIAMFL	Miami FL
MIAMI-WEST DADE	9400 SW 167TH AV	11/21/99	MIAMFL	Miami FL
MIAMI-WEST DADE	8400 SW 162ND AV	06/23/00	MIAMFL	Miami FL
MIAMI-WEST DADE	8735 SW 152ND AV	09/15/99	MIAMFL	Miami FL
MIAMI-WEST DADE	13700 KENDALE LAKES BLVD	01/08/01	MIAMFL	Miami FL
MIAMI-WEST DADE	13031 SW 68TH ST	02/21/00	MIAMFL	Miami FL
MIAMI-WEST DADE	14100 SW 96TH ST	06/18/00	MIAMFL	Miami FL
PERRINE	10710 SW 211TH ST	01/05/00	MIAMFL	Miami FL
PERRINE	MR 8888 SW 136TH ST	11/24/99	MIAMFL	Miami FL
PERRINE	21699 SW 98TH CT	07/21/00	MIAMFL	Miami FL
PERRINE	15101.1 SW 122ND AV	10/13/00	MIAMFL	Miami FL
PERRINE	19121 SW 197TH AV	12/08/01	MIAMFL	Miami FL
PERRINE	14551 COUNTRY WALK DR	11/11/00	MIAMFL	Miami FL
PERRINE	14195 SW 160TH ST	01/17/00	MIAMFL	Miami FL
PERRINE	13975 SW 140TH ST	08/11/00	MIAMFL	Miami FL
PERRINE	12298 SW 184TH ST	06/20/00	MIAMFL	Miami FL
PERRINE	LOT 6 17800 SW 200TH ST	09/16/00	MIAMFL	Miami FL
PERRINE	12800.2.4 SW 122ND AV	07/01/00	MIAMFL	Miami FL
PERRINE	13340 SW 114TH PL	06/30/00	MIAMFL	Miami FL
PERRINE	12301 SW 200TH ST	07/11/00	MIAMFL	Miami FL
PERRINE	21121 SW 85TH AV	06/21/01	MIAMFL	Miami FL
PERRINE	20820 SW 117TH AV	05/04/00	MIAMFL	Miami FL
PERRINE	6855 SW 152ND ST	10/12/99	MIAMFL	Miami FL
PERRINE	12001 SW 117TH AV	10/14/00	MIAMFL	Miami FL
PERRINE	17202.2.4 SW 137TH AV	05/15/00	MIAMFL	Miami FL

**SECTION 4
TELECOMMUNICATIONS IN
MIAMI-DADE**

Table 1. Specific Street Addresses of Each BellSouth DSL “Substation” – Latest Neighborhood DSL Deployments.^a

CO NAME	Approximate Remote Terminal Address	Deployment	MSA	MSA_Name
HOMESTEAD	51 NW 5TH AV	03/08/00	MIAMFL	Miami FL
HOMESTEAD	198 NW 7 AV	05/24/00	MIAMFL	Miami FL
HOMESTEAD	R 897 SW 10TH ST	10/27/99	MIAMFL	Miami FL
HOMESTEAD	250 E PALM DR	10/13/00	MIAMFL	Miami FL
HOMESTEAD	950 N KROME AV	11/10/99	MIAMFL	Miami FL
HOMESTEAD	18699 SW 296 ST	02/09/00	MIAMFL	Miami FL
HOMESTEAD	24805 SW 182 AV	11/28/99	MIAMFL	Miami FL
HOMESTEAD	19400 SW 376TH ST	11/02/99	MIAMFL	Miami FL
HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
HOMESTEAD	RLA F 14100 SW 288 ST	04/08/00	MIAMFL	Miami FL
HOMESTEAD	24795 SW 197TH AV	04/05/00	MIAMFL	Miami FL
HOMESTEAD	RLA 18704 SW 344TH ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	RLA 24802 SW 162ND AV	11/08/99	MIAMFL	Miami FL
HOMESTEAD	RTA 27998 SW 162ND AV	11/14/99	MIAMFL	Miami FL
PERRINE	16201 SW 117TH AV	10/21/00	MIAMFL	Miami FL
PERRINE	13430 SW 181TH ST	10/07/00	MIAMFL	Miami FL
PERRINE	O 14735 SW 60TH AV	08/04/00	MIAMFL	Miami FL
PERRINE	8690.1 SW 134TH ST	08/19/00	MIAMFL	Miami FL
PERRINE	14928 SW 132ND AV	01/29/00	MIAMFL	Miami FL
PERRINE	10321 SW 211TH ST	08/25/00	MIAMFL	Miami FL
PERRINE	14400 OLD CUTLER ROAD	11/27/99	MIAMFL	Miami FL
PERRINE	S 17530 SW 89TH CT	07/15/00	MIAMFL	Miami FL
PERRINE	10531 SW 160TH ST	08/04/00	MIAMFL	Miami FL
PERRINE	9235 SW 136TH ST CIR	07/26/00	MIAMFL	Miami FL
PERRINE	8764 SW 215TH TER	09/05/99	MIAMFL	Miami FL
PERRINE	14700 SW 126TH PL	08/08/99	MIAMFL	Miami FL
PERRINE	12201 SW 144TH ST	12/25/99	MIAMFL	Miami FL
PERRINE	14161.2.4 SW 180TH ST	04/06/00	MIAMFL	Miami FL
PERRINE	12800 SW 137TH AV	02/19/00	MIAMFL	Miami FL
PERRINE	13555 SW 105TH AV	03/26/00	MIAMFL	Miami FL
PERRINE	S 11990 SW 94TH AV	07/01/00	MIAMFL	Miami FL
PERRINE	S 10690 SW 146TH ST	04/01/00	MIAMFL	Miami FL
PERRINE	S 11921 S DIXIE HWY	12/11/99	MIAMFL	Miami FL
PERRINE	11394.1.4 SW 189TH ST	11/14/00	MIAMFL	Miami FL
PERRINE	10031.1.4 CARIBBEAN BLVD	07/20/00	MIAMFL	Miami FL
PERRINE	F 13888 SW 155TH TER	02/15/00	MIAMFL	Miami FL
PERRINE	11290 SW 224TH ST	02/21/00	MIAMFL	Miami FL
PERRINE	8267 SW 128TH ST	02/22/00	MIAMFL	Miami FL
PERRINE	18798.1.4 SW 112TH AV	08/26/00	MIAMFL	Miami FL
PERRINE	S 14780 MONROE ST	07/26/00	MIAMFL	Miami FL
PERRINE	11295 SW 214TH ST	08/03/00	MIAMFL	Miami FL
PERRINE	14329.1 SW 180TH ST	07/12/00	MIAMFL	Miami FL
PERRINE	11458 SW 200TH ST	06/20/00	MIAMFL	Miami FL

**SECTION 4
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Table 1. Specific Street Addresses of Each BellSouth DSL “Substation” – Latest Neighborhood DSL Deployments.^a

CO NAME	Approximate Remote Terminal Address	Deployment	MSA	MSA_Name
HOMESTEAD	51 NW 5TH AV	03/08/00	MIAMFL	Miami FL
HOMESTEAD	198 NW 7 AV	05/24/00	MIAMFL	Miami FL
HOMESTEAD	R 897 SW 10TH ST	10/27/99	MIAMFL	Miami FL
HOMESTEAD	250 E PALM DR	10/13/00	MIAMFL	Miami FL
HOMESTEAD	950 N KROME AV	11/10/99	MIAMFL	Miami FL
HOMESTEAD	18699 SW 296 ST	02/09/00	MIAMFL	Miami FL
HOMESTEAD	24805 SW 182 AV	11/28/99	MIAMFL	Miami FL
HOMESTEAD	19400 SW 376TH ST	11/02/99	MIAMFL	Miami FL
HOMESTEAD	24991 SW 187 AV	01/15/00	MIAMFL	Miami FL
HOMESTEAD	RLA 800 SE 12TH AV	02/12/00	MIAMFL	Miami FL
HOMESTEAD	RLA F 14100 SW 288 ST	04/08/00	MIAMFL	Miami FL
HOMESTEAD	24795 SW 197TH AV	04/05/00	MIAMFL	Miami FL
HOMESTEAD	RLA 18704 SW 344TH ST	01/03/00	MIAMFL	Miami FL
HOMESTEAD	RLA 24802 SW 162ND AV	11/08/99	MIAMFL	Miami FL
HOMESTEAD	RTA 27998 SW 162ND AV	11/14/99	MIAMFL	Miami FL
PERRINE	13301 SW 124TH ST	07/14/00	MIAMFL	Miami FL
PERRINE	7760 SW 136TH ST	12/12/99	MIAMFL	Miami FL
PERRINE	7351 SW 128TH ST	04/17/00	MIAMFL	Miami FL
PERRINE	19650.1 SW 117TH AV	04/08/00	MIAMFL	Miami FL
PERRINE	19400 BELVIEW DR	10/11/99	MIAMFL	Miami FL
PERRINE	17995.3.4 SW 149TH AV	01/13/01	MIAMFL	Miami FL
PERRINE	S 7621 SW 174TH ST	06/13/00	MIAMFL	Miami FL
PERRINE	13346 SW 128TH ST	11/04/00	MIAMFL	Miami FL
PERRINE	11621.1.4 SW 178TH TER	07/20/00	MIAMFL	Miami FL
PERRINE	14298.1.4 SW 84TH AV	07/11/00	MIAMFL	Miami FL
PERRINE	17101 SW 117TH AV	07/20/00	MIAMFL	Miami FL
PERRINE	19410.1.4 WHISPERING PINES RD	01/02/01	MIAMFL	Miami FL

^a Updated March 2002 from BellSouth website.