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Sampling Frames for the
Rural Residential & Business Demand Surveys



By: S. Brown and K. Richardson

May 1981

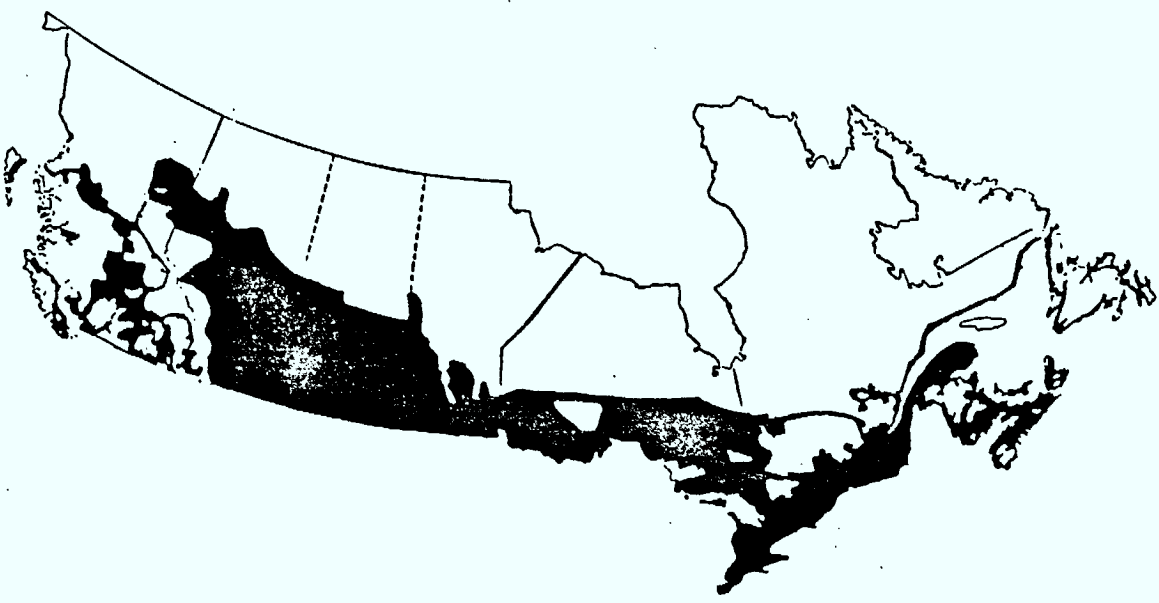
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Rural Residential & Business Demand Surveys

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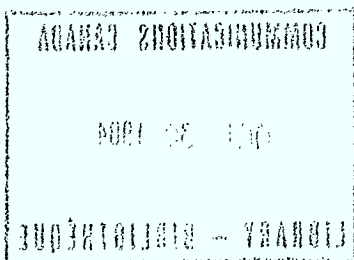


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1. INTRODUCTION

The residential and business surveys which formed part of a study of the demand for communications services in the rural areas of Canada required that special sampling frames be developed from the most complete and up-to-date sources available. Two divisions of Statistics Canada provided data and greatly assisted with the development of the required sampling frames: CANSIM Division were responsible for providing the necessary data for the residential frame using 1976 census data, and the Business Register Division provided source data for the business frame obtained from the Business Register Master File.

The purpose of this report is to record in detail the steps which went into the development of these residential and business sampling frames. A full discussion of the objectives of the survey, design of sampling plans, description of samples drawn, conduct of the field work and analysis of the data gathered are contained in other reports which are completed or in preparation at the present time (see References 1 to 5).

2. THE DEFINITION OF RURAL

Previous studies conducted for the Rural Communications Program (Reference 6) had defined areas of the provinces as rural based partly on the definitions applied by Statistics Canada for census purposes (see Chapter 3) and partly on the services received by the population living there (exchange telephone service for instance). In this way areas are excluded which are to intents and purposes uninhabited, or remote from the continuously populated areas, or are urban centres. Note that this is basically a subjective process which requires great familiarity with the areas involved.

After performing this exercise for all of Canada (Figure 1) the lowest population density (measured over a large area) was found to be 0.8 persons/sq. mile and the largest population cluster included contained 2499 people. These limits could then be applied to census data on a much smaller scale to define the area and count the people therein with far greater precision.

This essentially was the process performed during the development of the residential sampling frame which will be described in detail in Chapter 4, but to help in following this process it is first necessary to understand various population concepts which are applied to census data by Statistics Canada.

FIGURE 1

RURAL CANADA



3. RELEVANT STATISTICS CANADA SPATIAL DELIMITATION CONCEPTS

3.1 General

The following interpretation of Statistics Canada concepts and definitions relate to the spatial distribution of population. These concepts and definitions are important to the development and understanding of demographic research projects carried out by the Rural Communications Program (RCP).

One task of the RCP was to better understand population distribution in Canada and to identify a rural population for studies of the availability of services in rural areas. Census data available from Statistics Canada provides a valuable resource of demographic information which is aggregated into various spatial levels. For example, population statistics are available for the following major spatial units:

- Country
- Region
- Province
- Federal Electoral District
- Sub-Provincial Region
- Census Division (CD) or County
- Census Subdivision (CSD) or Municipality (MUN)
- Census Tract (CT)
- Enumeration Area (EA)

3.2 Enumeration Area (EA)

The lowest level of data coverage is available at the EA level, as shown in the above hierarchy and illustrated in Figure 2 which outlines the EA boundaries for Nova Scotia, New Brunswick and PEI. The EA is considered to be the building block of census data. There were 35,154 EA's for the 1976 census. Each EA can be uniquely identified within a Federal Electoral District (Figure 3) and Province. For example the code number 48004028 refers to enumeration area 028 in the Federal Electoral District of Crowfoot (004) in the province of Alberta (48).

The enumeration area contains a maximum of 375 households or 100 farms. The area of an EA is small where population density is high and large in areas of low population density.

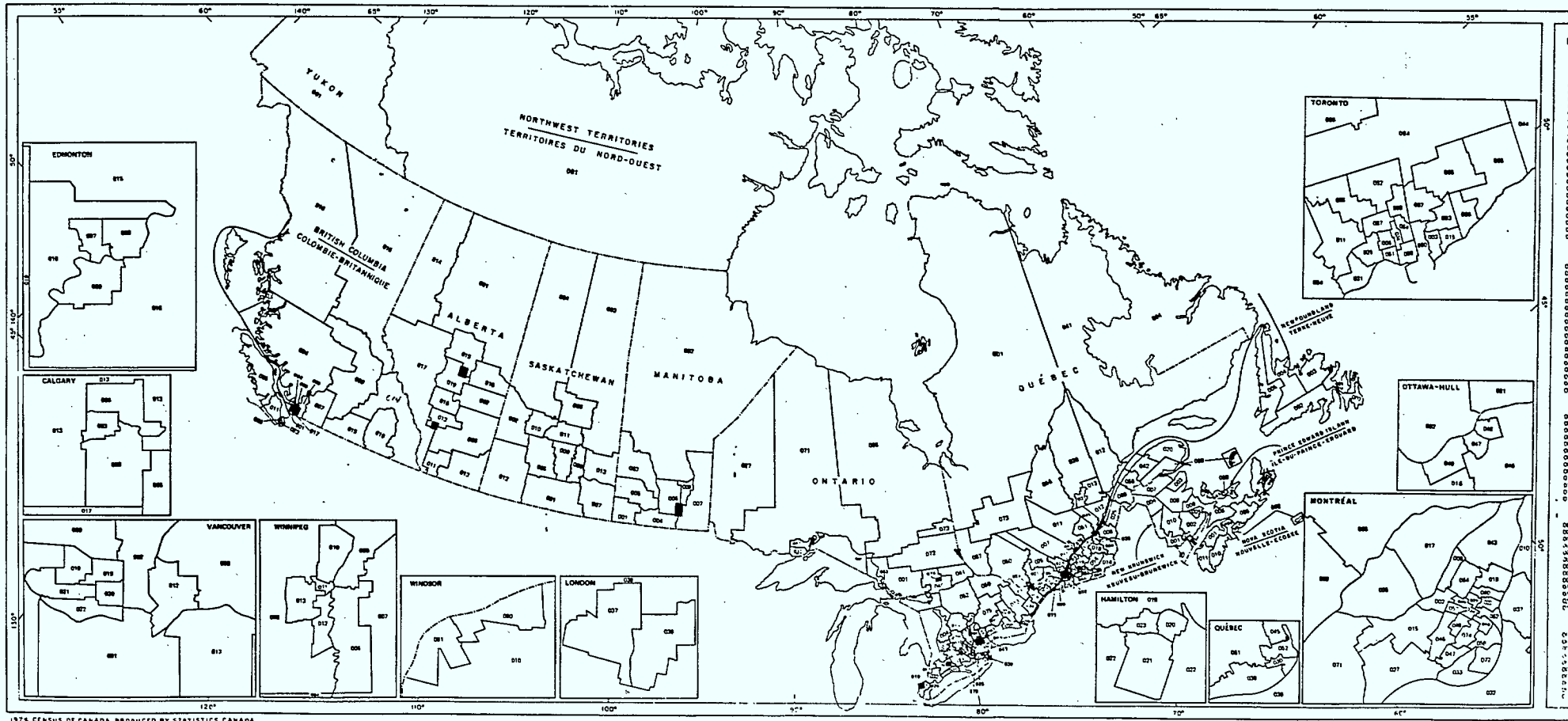
FIGURE 2.

Enumeration Area Boundary Map - 1976
New Brunswick, Nova Scotia, Prince Edward Island.



FIGURE 3

Federal Electoral Districts
(1966 Representation Order)



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INDEX TO ELECTORAL DISTRICTS

INDEX DES CIRCONSCRIPTIONS ÉLECTORALES

59. BRITISH COLUMBIA
COLOMBIE-BRITANNIQUE

- 001. Burnaby-Richmond-Delta
- 002. Burnaby-Seymour
- 003. Capilano
- 004. Coast Chilcotin
- 005. Comox-Alberni
- 006. Esquimalt-Saanich
- 007. Fraser Valley East
- 008. Fraser Valley West
- 009. Kamloops-Cariboo
- 010. Kootenay West
- 011. Nanaimo-Cowichan-The Islands
- 012. New Westminster
- 013. Okanagan Boundary
- 014. Okanagan-Kootenay
- 015. Prince George-Peace River
- 016. Skeena
- 017. Surrey-White Rock
- 018. Vancouver Centre
- 019. Vancouver East
- 020. Vancouver Kingsway
- 021. Vancouver Quadra
- 022. Vancouver South
- 023. Victoria

48. ALBERTA

- 001. Athabasca
- 002. Battle River
- 003. Calgary Centre
- 004. Calgary North
- 005. Calgary South
- 006. Crowfoot
- 007. Edmonton Centre
- 008. Edmonton East
- 009. Edmonton-Strathcona
- 010. Edmonton West
- 011. Lethbridge
- 012. Medicine Hat
- 013. Palliser
- 014. Peace River
- 015. Pembina
- 016. Red Deer
- 017. Rocky Mountain
- 018. Vegreville
- 019. Wetaskiwin

47. SASKATCHEWAN

- 001. Assiniboia
- 002. Battleford-Kinderley
- 003. Mackenzie
- 004. Meadow Lake
- 005. Moose Jaw
- 006. Prince Albert
- 007. Qu'Appelle-Morse Mountain
- 008. Regina East
- 009. Regina-Lake Centre
- 010. Saskatoon-Biggar
- 011. Saskatoon-Humboldt
- 012. Swift Current-Maple Creek
- 013. Yorkton-Melville

46. MANITOBA

- 001. Brandon-Souris
- 002. Churchill
- 003. Dauphin
- 004. Lisgar
- 005. Marquette
- 006. Portage
- 007. Provencher
- 008. St. Boniface
- 009. Selkirk
- 010. Winnipeg North
- 011. Winnipeg North Centre
- 012. Winnipeg South
- 013. Winnipeg South Centre

35. ONTARIO

- 001. Algoma
- 002. Brant
- 003. Broedview
- 004. Bruce-Grey
- 005. Cochrane
- 006. Davenport
- 007. Don Valley
- 008. Eglinton
- 009. Elgin
- 010. Essex-Windsor

- 011. Etobicoke
- 012. Fort William
- 013. Frontenac-Lanox and Addington
- 014. Glangary-Prescott-Russell
- 015. Greenwood
- 016. Grenville-Carleton
- 017. Grey-Simcoe
- 018. Halton
- 019. Hamilton-Wentworth
- 020. Hamilton East
- 021. Hamilton Mountain
- 022. Hamilton-Wentworth
- 023. Hamilton West
- 024. Hastings
- 025. High Park-Humber Valley
- 026. Huron-Middlesex
- 027. Kenora-Rainy River
- 028. Kent-Essex
- 029. Kingston and the Islands
- 030. Kitchener
- 031. Toronto-Lakeshore
- 032. Lambton-Kent
- 033. Lanark-Renfrew-Carleton
- 034. Leeds
- 035. Lincoln
- 036. London East
- 037. London West
- 038. Middlesex-London-Lambton
- 039. Niagara Falls
- 040. Nickel Belt
- 041. Nipissing
- 042. Norfolk-Haldimand
- 043. Northumberland-Durham
- 044. Ontario
- 045. Oshawa-Whitby
- 046. Ottawa-Carleton
- 047. Ottawa Centre
- 048. Ottawa-Vanier
- 049. Ottawa West
- 050. Oxford
- 051. Perkdale
- 052. Parry Sound-Muskoka
- 053. Peel-Dufferin-Simcoe
- 054. Mississauga
- 055. Perth-Wilmot
- 056. Peterborough
- 057. Port Arthur
- 058. Prince Edward-Hastings
- 059. Renfrew North-Nipissing East
- 060. Rosedale
- 061. Sarnia-Lambton
- 062. Saull Ste. Marie
- 063. St. Catharines
- 064. St. Paul's
- 065. Scarborough East
- 066. Scarborough West
- 067. Simcoe North
- 068. Spadina
- 069. Stormont-Dundas
- 070. Sudbury
- 071. Thunder Bay
- 072. Timiskaming
- 073. Timmins
- 074. Trinity
- 075. Victoria-Haliburton
- 076. Waterloo-Cambridge
- 077. Welland
- 078. Wellington
- 079. Wellington-Grey-Dufferin-Waterloo
- 080. Windsor-Weikerville
- 081. Windsor West
- 082. York Centre
- 083. York East
- 084. York North
- 085. York-Scarborough
- 086. York-Simcoe
- 087. York South
- 088. York West

24. QUÉBEC

- 001. Abitibi
- 002. Ahuntsic
- 003. Argenteuil-Daux-Montagnes
- 004. Beauce
- 005. Bas-Saint-Jean-Salaberry
- 006. Bellechasse
- 007. Barthier-Maskinongé
- 008. Bonaventure-Îles-de-la-Madeleine
- 009. Montréal-Bourassa
- 010. Chambly

13. NEW BRUNSWICK
NOUVEAU-BRUNSWICK

- 001. Carleton-Charlotte
- 002. Fundy-Royal
- 003. Gloucester
- 004. Madawaska-Victoria
- 005. Moncton
- 006. Northumberland-Miramichi
- 007. Restigouche
- 008. Saint John-Lancaster
- 009. Westmorland-Kent
- 010. York-Sunbury

12. NOVA SCOTIA
NOUVELLE-ÉCOSSE

- 001. Annapolis Valley
- 002. Cape Breton-East Richmond
- 003. Cape Breton Highlands-Canso
- 004. Cape Breton-The Sydneys
- 005. Central Nova
- 006. Cumberland-Colchester North
- 007. Dartmouth-Halifax East
- 008. Halifax
- 009. Halifax-East Hants
- 010. South Shore
- 011. South Western Nova

11. PRINCE EDWARD ISLAND
ÎLE-DU-PRINCE-ÉDOUARD

- 001. Cardigan
- 002. Egmont
- 003. Hillsborough
- 004. Malpequa

10. NEWFOUNDLAND
TERRE-NEUVE

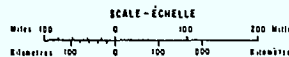
- 001. Bonaville-Trinity-Conception
- 002. Burin-Burgeo
- 003. Gander-Twillingate
- 004. Grand Falls-White Bay-Labrador
- 005. Humber-St. George's-St. Barbe
- 006. St. John's East
- 007. St. John's West

60. YUKON

- 001. Yukon

61. NORTHWEST TERRITORIES
TERRITOIRES DU NORD-OUEST

- 001. Northwest Territories



CANADA

FEDERAL ELECTORAL DISTRICTS
BASED ON 1966 REPRESENTATION ORDER

CIRCONSCRIPTIONS ÉLECTORALES FÉDÉRALES
D'APRÈS L'ORDONNANCE DE REPRÉSENTATION DE 1966

3.3 Urban and Rural Concepts

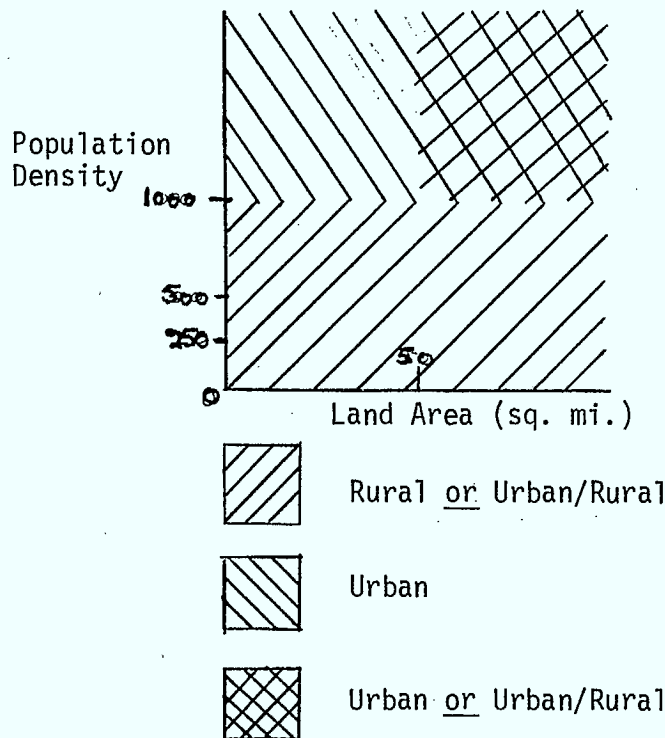
For ready classification of the Canadian population Statistics Canada identifies urban and rural population categories. The definitions on which these categories are based have been progressively modified over the years to reflect shifts in Canadian society. In 1976 the urban definition stated:

"A population concentration is classified 'urban' if its population counts 1,000 persons or more and if the population density is 1,000 persons or more per square mile.

Cities towns and villages having less than 50 square miles in area are classified 'urban' in totality, if they count at least 1,000 population and their global population density is 1,000 persons or more.

For cities, towns and villages having 50 square miles or more in area, if some portions of their territory present rural characteristics, those portions are classified 'rural' even though such cities, towns and villages are considered as 'partly urban and partly rural' ". (Refer to Figure 4)

Figure 4.
Urban Rural Definition for
Cities, Towns and Villages (Stats Can. 1976)



All EA's that are part of a populated area matching this definition are coded urban and all non urban EA's are classified as rural. The definition of a rural area is simply "all territory lying outside 'Urban Areas' ".

3.4 Urban Areas and Urban Area Population Size Groups

Evolving from the urban-rural concept is the development of the concept of urban area population size groups. Statistics Canada categorized each urban area into one of eight size groups. Every urban EA is given an urban area population size code number that identifies it to a particular size group.

TABLE 1

Urban Area Population Size Groups (UAPSG)

<u>Population</u>	<u>Size Code</u>
0 - 999	8
1,000 - 2,499	7
2,500 - 4,999	6
5,000 - 9,999	5
10,000 - 29,999	4
30,000 - 99,999	3
100,000 - 499,999	2
500,000 - and up	1
rural	0

By definition, size code 8 should not be included as an urban category because its population size is less than 1,000. This category is included however, to accommodate minor incongruencies in census tabulations which sometimes occur and are usually the result of insufficient processing time after a census. The size code "0" applies to all rural EA's.

After each five year census, the urban area size group code of some EA's is changed to reflect the changing population. Statistics Canada in Ottawa is informed by its regional offices on a continuous basis of areas that are experiencing rapid population increase or decline and these places will require special attention when the census is taken. The census enumerator also helps by identifying areas that appear to have changed significantly from one census to the next.

There were 951 urban areas identified in the 1976 census. A breakdown of these urban areas by size group and population is listed below.

Table 2
Urban Area Size Group Populations

<u>Size Code</u>	<u>Urban Areas</u>	<u>Population</u>
1 500,00 and up	7	8,515,083
2 100,000 - 499,999	15	3,170,218
3 30,000 - 99,999	36	1,824,322
4 10,000 - 29,999	100	1,642,312
5 5,000 - 9,999	107	730,152
6 2,500 - 4,999	214	763,006
7,8 < 2,500	<u>472</u>	721,875
	951	
0 Rural		5,625,635
		<u>22,992,605</u>

Urban areas will not always conform to single municipalities. If for example two or more cities (two or more separate municipal entities) are located adjacent to each other and separated only by municipal borders, the urban area population for these cities would be calculated by summing the urban populations of each city. Each urban EA within the cities would therefore be coded to the urban area population size group which conforms with the summed urban population of the cities. For example, in 1976 the Kitchener urban area had a population comprising three cities:

Cambridge	72,383
Kitchener	131,870
Waterloo	<u>46,623</u>
	250,876

Each EA in the Kitchener urban area belonged to the UAPSG size code 2. A municipality might also contain more than one urban area, which is the case for the city of Gaspé, Quebec. The three urban areas in Gaspé have a total population of 6,286 and include Gaspé (3124), Petit Cap (1059) and Rivière Renard (2103).

3.5 Census Metropolitan Area (CMA) and Census Agglomeration (CA) Concept

CMA's and CA's are geostatistical areas created by Statistics Canada to identify particular urban areas with specific characteristics. CMA's exist where an urban area has a population of 100,000 or more. CA's include urban areas with populations ranging from 2,000 - 99,999 and consisting of more than one municipality. In 1976 there were 23 CMA's and 88 CA's. (Table 3)

The boundaries of CMA's and CA's always correspond to municipal boundaries. A single CMA can consist of one or more municipalities whereas by definition a CA must contain at least two municipalities. CMA boundaries are drawn based on labour force statistics whereas CA limits are drawn to include the municipalities belonging to the same urban area.

Statistics Canada catalogue 92-806 defines the components of the CMA and CA as follows:

CMA - CA Part: Census metropolitan areas (CMAs) and census agglomerations (CAs) are divided into four parts: largest city, remainder of urbanized core, urban fringe and rural fringe. The parts are always made up of complete enumeration areas, but often comprise only parts of municipalities. Not all four parts will necessarily be found in each CMA or CA.

Urbanized Core: Continuous built-up area including the largest city and, where applicable, the urban part of surrounding municipalities. To be considered as continuous, the built-up area must not have a discontinuity exceeding one mile (1.609 kilometres).

Largest City: Most populated municipality around which a census metropolitan area (CMA) or a census agglomeration (CA) is delineated. It is automatically part of the urbanized core. Usually its name is used as the name of the CMA or CA.

Remainder (of urbanized core): Part of the urbanized core of a census metropolitan area or of a census agglomeration located outside of the largest city. It is always comprised of complete enumeration areas, but not necessarily complete census tracts or complete census subdivisions (municipalities).

Census Metropolitan Areas - 1976

Calgary, Alta. - Alb.	.....
Chicoutimi - Jonquière, Que. - Qué.	.....
Edmonton, Alta. - Alb.	.....
Halifax, N.S. - N. E.	.....
Hamilton, Ont.	.....
Kitchener, Ont.	.....
London, Ont.	.....
Montréal, Que. - Qué.	.....
Oshawa, Ont.	.....
Ottawa - Hull, Ont., Que. - Qué.	.....
Québec, Que. - Qué.	.....
Regina, Sask.	.....
Saint John, N.B. - N.-B.	.....
Saskatoon, Sask.	.....
St. Catharines - Niagara, Ont.	.....
St. John's, Nfld. - T.-N.	.....
Sudbury, Ont.	.....
Thunder Bay, Ont.	.....
Toronto, Ont.	.....
Vancouver, B.C. - C.-B.	.....
Victoria, B.C. - C.-B.	.....
Windsor, Ont.	.....
Winnipeg, Man.	.....

Census Agglomerations - 1976

Arnprior, Ont.	.....	Midland, Ont.	.....
Asbestos, Que. - Qué.	.....	Moncton, N.B. - N.-B.	.....
Baie-Comeau, Que. - Qué.	.....	Moose Jaw, Sask.	.....
Barrie, Ont.	.....	New Glasgow, N.S. - N.-É.	.....
Bathurst, N.B. - N.-B.	.....	Newcastle, N.B. - N.-B.	.....
Bay Roberts, Nfld. - T.-N.	.....	North Battleford, Sask.	.....
Beaupré, Que. - Qué.	.....	North Bay, Ont.	.....
Blairmore, Alta. - Alb.	.....	Pembroke, Ont.	.....
Brantford, Ont.	.....	Petawawa, Ont.	.....
Brockville, Ont.	.....	Peterborough, Ont.	.....
Campbellton, N.B. - N.-B.	.....	Pierreville, Que. - Qué.	.....
Cap-aux-Meules, Que. - Qué.	.....	Port Alberni, B.C. - C.-B.	.....
Caraquet, N.B. - N.-B.	.....	Port Elgin, Ont.	.....
Carbonear, Nfld. - T.-N.	.....	Portneuf, Que. - Qué.	.....
Charlottetown, P.E.I. - Î. P.-É.	.....	Rimouski, Que. - Qué.	.....
Chilliwack, B.C. - C.-B.	.....	Rock Island, Que. - Qué.	.....
Cobourg, Ont.	.....	Rouyn, Que. - Qué.	.....
Courtenay, B.C. - C.-B.	.....	Sarnia, Ont.	.....
Dolbeau, Que. - Qué.	.....	Sault Ste. Marie, Ont.	.....
Donnacona, Que. - Qué.	.....	Shawinigan, Que. - Qué.	.....
Drummondville, Que. - Qué.	.....	Sherbrooke, Que. - Qué.	.....
Duncan, B.C. - C.-B.	.....	Smiths Falls, Ont.	.....
Dunville, Nfld. - T.-N.	.....	Sorel, Que. - Qué.	.....
East Broughton Station, Que. - Qué.	.....	St-Georges, Que. - Qué.	.....
Edmundston, N.B. - N.-B.	.....	St-Hyacinthe, Que. - Qué.	.....
Fergus, Ont.	.....	St-Jean, Que. - Qué.	.....
Flin Flon, Man., Sask.	.....	St-Jérôme, Que. - Qué.	.....
Forestville, Que. - Qué.	.....	Ste-Adèle, Que. - Qué.	.....
Granby, Que. - Qué.	.....	Ste-Anne-des-Monts, Que. - Qué.	.....
Grand Falls, Nfld. - T.-N.	.....	Summerside, P.E.I. - Î. P.-É.	.....
Guelph, Ont.	.....	Sydney, N.S. - N.-É.	.....
Haileybury, Ont.	.....	Sydney Mines, N.S. - N.-É.	.....
Hawkesbury, Ont.	.....	Terrace, B.C. - C.-B.	.....
Hébertville-Station, Que. - Qué.	.....	Thetford Mines, Que. - Qué.	.....
Joliette, Que. - Qué.	.....	Trail, B.C. - C.-B.	.....
Kenora, Ont.	.....	Trenton, Ont.	.....
Kentville, N.S. - N.-É.	.....	Trois-Rivières, Que. - Qué.	.....
Kingston, Ont.	.....	Truro, N.S. - N.-É.	.....
Kingsville, Ont.	.....	Twillingate, Nfld. - T.-N.	.....
La Malbaie, Que. - Qué.	.....	Val-d'Or, Que. - Qué.	.....
Labrador City, Nfld. - T.-N.	.....	Valleyfield (Salaberry-de-), Que. - Qué.	.....
Lachute, Que. - Qué.	.....	Vernon, B.C. - C.-B.	.....
Magog, Que. - Qué.	.....	Victoriaville, Que. - Qué.	.....
Medicine Hat, Alta. - Alb.	.....	Williams Lake, B.C. - C.-B.	.....

Fringe: Part of a census metropolitan area (CMA) or of a census agglomeration (CA) outside the urbanized core. The fringe consists of urban parts and rural parts which may cut across municipalities but never across enumeration areas. The concept of fringe is more restrictive in CAs than in CMAs. In a CA, the fringe is composed of the remaining part of municipalities surrounding the core which meet the established criteria for inclusion in the fringe.

3.6 Census Subdivision (CSD)

"General term applying to municipalities, Indian Reserves, unorganized territories and subdivisions. In Newfoundland, Nova Scotia and British Columbia, the term also describes geostatistical areas that have been created by Statistics Canada in co-operation with the province as an equivalent for municipalities".

Table 4 lists the different types of census subdivision. As this table reveals, some CSD's are municipalities and some are non-municipalities which are administered by Provincial or by Federal government agencies. A CSD contains one or more complete EA's. A single CSD may contain both urban and rural EA's.

CENSUS SUBDIVISION TYPES LIST (Municipalities)

<u>Code</u>	<u>Designation</u>	<u>Abbreviation</u>	<u>Province</u>
<u>Municipalities:</u>			
01	City	C	All
02	Town	T-V	All
03	Village	VL	Most
04	Summer Village	SV	Sask., Alta.
05	Borough	BOR	Ont.
06	Hamlet (Incorporated)	HAM	NWT
07	City - Ville	V-C	Qué.
11	Municipalité sans désignation	MUN	Qué.
	Municipalité de canton (Township)	MUN	Qué.
	Municipalité de paroisse (Parish)	MUN	Qué.
12	County Municipality	blank	Alta.
13	Subdivision (of County Municipality)	blank	N.S.
14	District Municipality	DM	B.C.
15	Rural Municipality	RM	Man., Sask.
16	Township (or United Township) Mun.	TM	Ont.
31	Municipal District	MD	N.S., Alta.
32	Rural District	RD	Nfld.
33	Improvement District	ID	Ont.
34	Improvement District	blank	Alta.
35	Local Improvement District	LID	Nfld. Sask. Yuk.
36	Local Government District	LGD	Man.
51	Local Government Community	LGC	Nfld.
52	Special Area (by No.)	blank	Alta.
53	Saskatchewan Hospital Area	blank	Sask.
	Uranium City and District	blank	Sask.
	University Endowment Area	blank	B.C.

CENSUS SUBDIVISION TYPES LIST (Non-Municipalities)

<u>Code</u>	<u>Designation</u>	<u>Abbreviation</u>	<u>Province</u>
39	"Subdivisions" (of Regional District)	blank	B.C.
61	National Park	blank	Sask.
62	Parish	PAR	Alta. N.B.
	Paroisse	PAR	Qué.
63	Royalty	blank	P.E.I.
	Township or Lot	blank	P.E.I.
81	Unorganized	blank	Most
82	"Subdivision" (of Unorganized)	blank	Nfld.
91	Indian Reserve	blank (IR)	Most
92	Indian Settlement	blank	Qué.
93	Indian (no reserves, no settlements)	blank (IR)	Qué., Ont.

4. RESIDENTIAL SURVEY SAMPLING FRAME

4.1 Scope

The residential survey sampling frame includes 11,785 EA's (1976 census) which were chosen by applying the definition of rural discussed in Chapter 2 to cover the area of Canada identified in Figure 1. These EA's cover 11.7% of Canada's land area and contained just under one quarter of the population in 1976. The actual survey was conducted by drawing a sample of 700 EA's from the total frame and conducting personal interviews with heads of three households in each selected EA (see Reference 4 for further details of sample selection and interview techniques).

The process by which these 11,785 EA's were selected for inclusion in the frame are described in detail in the following sections. This process was based on knowledge gained during the course of previous studies as well as consultations between DOC, Statistics Canada and consultants working on the survey.

4.2 Development

The EA's in the sampling frame were drawn from the 1976 Census Geography Master File (Appendix 1) by CANSIM Division, Statistics Canada, using a selection process which grouped EA's into the following five files: SG1, SG2, SG4, SG5 and SG6. The following table illustrates the characteristics of each file.

Table 5
Sampling Frame Files

File	# EA's	CA	Statistics Canada Rural EA's UAPSG 0	Statistics Canada Urban EA's UAPSG 7,8	CSD Population Size < 2500	CSD Population Size > 2500	EA Population Density > 0.79
SG1	5,925		X		X		X
SG2	812				X		X
SG4	152					X	X
SG5	4,427		X			X	X
SG6	469	X	X	X	X	X	X
	11,785						

A provincial breakdown of 1) population 2) the number of households and 3) land area, for each of the five files of the sampling frame are provided in tables 6, 7 and 8 respectively. Table 9 shows the population breakdown using the Statistics Canada 'urban' and 'rural' categories.

The development of the frame was an iterative process involving many stages. After each stage the results were examined and modifications made as seemed appropriate based on the overall principles for the development of the frame. Therefore the process described below is not the shortest one possible but merely the process which was expedient to follow to arrive at the required result.

The frame was developed in six separate stages:

- Stage 1 a) Exclude EA's in CMA's and CA's
b) Exclude EA's with population density < 1.0 person/sq. mile
c) Exclude EA's in urban area population size groups > 2499 .
- Stage 2 Add EA's with population density 0.8 - 0.99 persons/sq. mile
- Stage 3 Exclude EA's derived from stage 1 and 2 which are in Labrador, North West Territories or the Yukon Territories and certain northern remote sections in Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.
- Stage 4 Revision to parameters:
a) Exclude EA's in CMA's
b) Exclude EA's in CA's with overall population density > 999
c) Exclude EA's in CSD's with overall population density > 999 and population size > 2499
d) Exclude EA's within urban size clusters > 2499
e) Exclude EA's with population density < 0.8 persons/sq. mile
f) Stage 3 applies again.
- Stage 5 Exclude EA's with 0 private occupied households
- Stage 6 Exclude EA's that are on Indian Reserves.

TABLE 6
Residential Survey Sampling Frame
POPULATION

	SG1	SG2	SG4	SG5	SG6	TOTAL POPULATION
NFLD	158,778	43,636	778	32,150	1,961	237,303
PEI	69,227	6,757	-	2,963	1,860	80,807
NS	3,174	17,754	9,942	267,033	39,343	337,246
NB	171,804	30,122	3,189	115,467	4,168	324,750
QUE	858,105	138,025	46,501	206,969	34,986	1,284,586
ONT	393,935	110,290	30,816	685,961	102,301	1,323,303
MAN	146,007	33,577	3,222	88,622	-	271,428
SASK	348,538	50,858	-	16,088	1,345	416,829
ALTA	80,692	54,747	-	300,506	5,477	441,422
B.C.	36,582	45,527	15,543	330,338	52,946	480,936
	2,266,342	531,293	109,991	2,046,097	244,387	<u>5,198,610</u>

TABLE 7

Residential Survey Sampling Frame
HOUSEHOLDS

	SG1	SG2	SG4	SG5	SG6	
NFLD	35,623	9,560	157	7,206	432	52,978
PEI	18,735	1,921	-	680	487	21,823
NS	986	5,590	2,401	77,130	10,374	96,481
SB	46,620	8,478	727	28,747	1,085	85,657
QUE	222,404	39,126	12,508	53,646	9,146	336,830
ONT	117,961	36,760	9,702	198,331	30,142	392,896
MAN	45,456	11,533	830	23,520	-	81,339
SASK	107,394	17,918	-	4,354	304	129,970
ALTA	27,039	17,254	-	82,012	1,794	128,099
BC	11,552	14,651	4,894	103,351	15,633	150,081
	633,770	162,791	31,219	578,977	69,397	1,476,154

TABLE 8
Residential Survey Sampling Frame
LAND AREA (sq. mi.)

	SG1	SG2	SG4	SG5	SG6	TOTAL
NFLD	8,901	-	-	2,238	72	11,211
PEI	2,130	-	-	6	28	2,164
NS	777	-	-	14,823	952	16,552
NB	12,421	-	-	3,608	58	16,087
QUE	40,261	-	-	9,483	618	50,362
ONT	25,478	-	-	27,966	1,516	54,960
MAN	28,119	-	-	9,203	-	37,322
SASK	100,018	-	-	2,914	302	103,234
ALTA	7,759	-	-	71,833	1,448	81,040
B.C.	3,178	-	-	39,191	1,497	43,866
	229,042	NOT GIVEN	NOT GIVEN	181,263	6,491	416,796

TABLE 9

Residential Survey Sampling Frame - Population

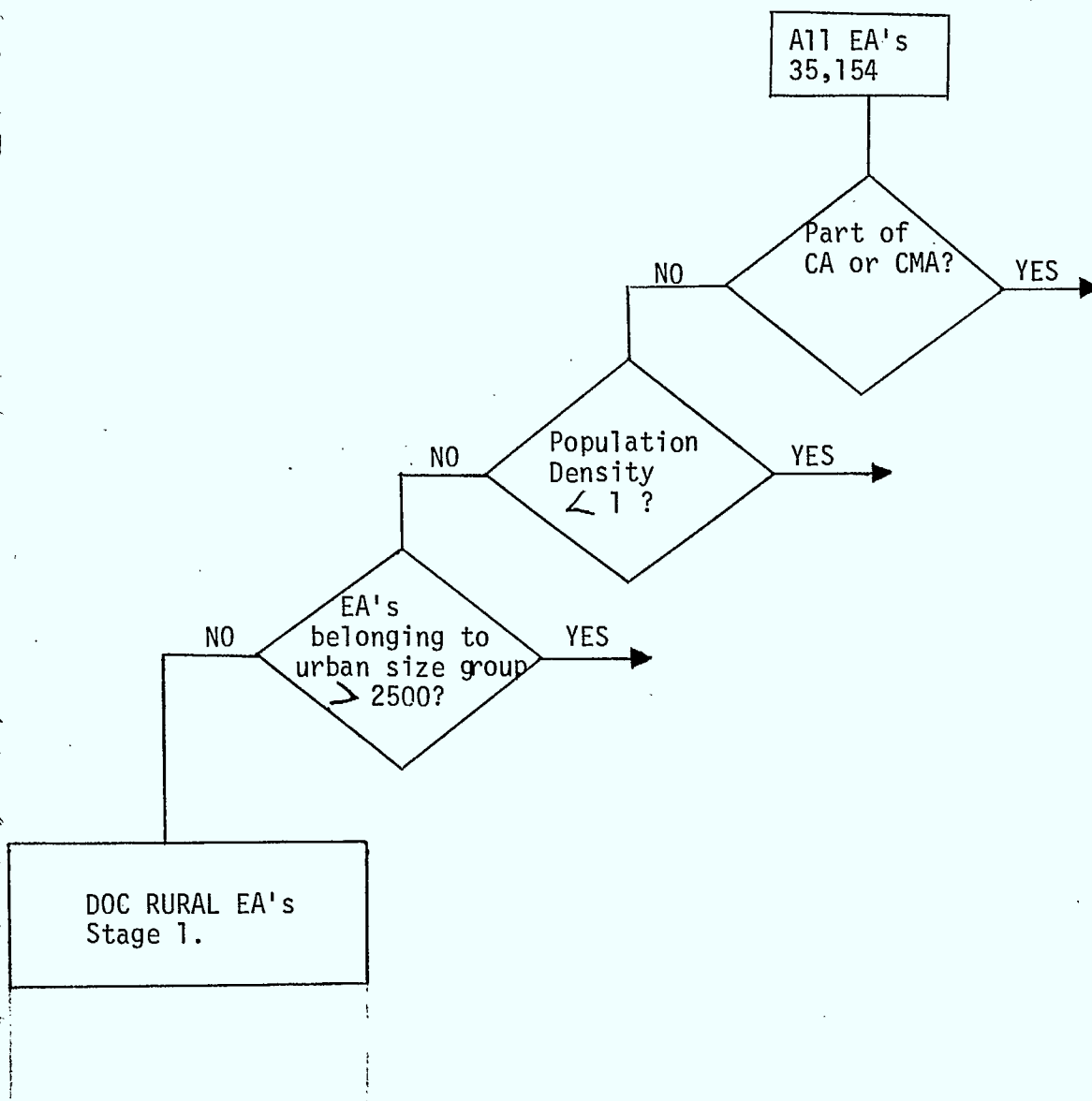
	RURAL (SC)				URBAN (SC)				TOTAL
	SG1	SG5	SG6 (Pt)	TOTAL	SG2	SG4	SG6 (Pt)	TOTAL	
NFLD	158,778	32,150	1,961	192,889	43,636	778	-	44,414	237,303
PEI	69,227	2,963	1,860	74,050	6,757	-	-	6,757	80,807
NS	3,174	267,033	35,353	305,560	17,754	9,942	3,990	31,686	337,246
NB	171,804	115,467	4,168	291,439	30,122	3,189	-	33,311	324,750
QUE	858,105	206,969	34,986	1,100,060	138,025	46,501	-	184,526	1,284,568
ONT	393,935	685,961	95,378	1,175,274	110,290	30,816	6,923	148,029	1,323,303
MAN	146,007	88,622	-	234,629	33,577	3,222	-	36,799	271,428
SASK	348,538	16,088	1,345	265,971	50,858	-	-	50,858	416,829
ALTA	80,692	300,506	2,748	383,946	54,747	-	2,729	57,476	441,422
BC	36,582	330,338	46,025	412,945	45,527	15,543	6,921	67,991	480,936
TOTAL	2,266,842	2,046,097	223,824	4,536,763	531,293	109,991	20,563	661,847	5,198,610

4.3 Explanation of Stages of Development

Stage 1. The decision to exclude EA's with very low population density and EA's in urban areas where the population size is 2500 or greater was based on previous studies (Reference 6). The exclusion from the frame of 23 CMA's and 88 CA's excludes both urban and rural residents (as defined by Statistics Canada - see Section 3.4). The fringe areas of CMA's and CA's were excluded on the basis that the population living there is likely to enjoy the same accessibility to communications services as the urban population. After this stage based on closer examination of the character of CA's it was decided to modify this approach slightly and this was done in Stage 4.

Figure 5

Stage 1



Stage 2. A decision was made to lower the density criteria for EA's to 0.8 persons/sq. mile in order to include low population density areas within the continuously settled part of the country, most particularly in the Prairie Region. There were 97 EA's added to the sampling frame file at this stage which fall into the density category ranging from 0.8 to 1.0 person/sq. mile (Table 10) The list of these 97 EA's is provided in Appendix II.

Table 10

EA's with Population Density Ranging
from 0.8 to 1.0 person/sq. mile

<u>Province</u>	<u>Number of EA's</u>	<u>Population</u>
NFLD	8	1,394
PEI	0	0
NS	2	497
NB	2	338
QUE	4	566
ONT	7	1,048
MAN	3	584
SASK	30	4,445
ALTA*	27	5,579
BC	14	4,799
	<hr/>	<hr/>
	97	19,250

* One EA in Alberta was in the far northern area of the province and was therefore considered a remote EA and excluded in Stage 3. Sampling frame therefore included 96 EA's with a population of 18,881.

Stage 3. This run excluded from the sampling frame EA's in remote areas that were not already deleted, where the population density was greater than 0.79 persons/sq. mile and the urban population size was less than 2500. Many of the remote area EA's were excluded in stage 1 because their population density was less than 0.8 persons/Sq. mile. The remainder were identified manually (Table 11) by locating EA's using Federal Electoral District Maps and matching their location to the rural study area (Figure 1).

Table 11

EA's Excluded from Sampling Frame
(Remote EA's - Density 0.79)

<u>PROVINCE</u>	<u># EA's</u>	<u>POPULATION</u>
NFLD	23	9307
NS	-	-
NB	-	-
QUE	31	11471
ONT	45	19411
MAN	62	25094
SASK	31	13172
ALTA	35	11414
BC	32	3161
NWT-YUK	89	31533
	<u>348</u>	<u>124563</u>

For EA list refer to Appendix III.

Stage 4. The sampling frame at this point was somewhat undersized because of the total exclusion of all parts of CMA's and CA's. This meant the exclusion of almost 1,000,000 population in the CMA/CA fringe rural (SC) and fringe urban areas (SC), population size < 2500. (Refer to Appendix IV and V). A proposal to include these areas had two positive elements: 1) it could be easily implemented, requiring no lengthy review of CMA's and CA's, and, 2) it did increase the size of the sampling frame. A drawback to this plan is that the sampling frame might then be oversized because of the inclusion of areas in close proximity to very large urban centres.

Another proposal made at the time suggested that CA's were in many ways the same as cities, towns and villages of the same size and therefore should be treated the same. A check on the composition of CSD's (cities, towns and villages) revealed that their boundaries did not always correspond to the clustering of population. Quite frequently the boundaries extend far beyond a recognized population cluster to include sparsely settled portions. The question to be answered was how best to treat the low density areas in CA's and CSD's.

A review of these two alternatives resulted in the following decisions:

- 1) The fringe areas of CMA's (as defined by Statistics Canada) would remain excluded from the frame for the same reasons mentioned previously i.e. those people living in close proximity to large urban centres were likely to be well served with communications.
- 2) Because CA's, in every case, had smaller urban core populations the fringe population would be likely less well served and therefore CA's should be included in the frame on the same basis as CSD's.

The population density cut-off of 1,000 persons/sq. mile (a basic principle of the Statistics Canada urban concept) was therefore applied to both CA's and CSD's, i.e. a CA or CSD with a population size over 2499 and with a global population density greater than 999 persons/sq. mile was treated as completely urban and excluded from the sampling frame. Sixteen CA's were identified as having an overall density > 999 persons/sq. mile (Appendix VI).

The introduction of these new parameters resulted in the exclusion of 11 EA's (3831 people) on the fringes of two CSD's (Brandon, Manitoba, population density 1216.1, and Nanaimo, B.C., population density 1182.9) and in the addition of 469 EA's (population 69,397) on the fringes of 71 CA's. The net effect on the population of the sample frame was the addition of 65,566 people. The EA's within CA's created the SG6 file.

Stages 5 and 6. The exclusion of EA's with 0 private households and EA's that define Indian Reserves was required for practical reasons as suggested by the contractor carrying out the survey. Since the survey was to be administered to households there was no point including EA's with populations but no households. EA's without private households might contain prisons, boarding houses, work camps etc. Indian Reserves were excluded because of the difficulty involved in obtaining permission from different authorities to enter onto a reserve to administer a survey.

	<u>EXCLUDED</u>	
	# EA's	Population
Stage 5 - EA's with 0 private households	171	14,474
Stage 6 - Indian Reserves	549	123,424

4.4 Demographic Data

Once the list of EA's for the sampling frame was complete, socio-economic data was obtained for each EA and entered together with the EA geographic data onto the residential sampling frame computer tape. These data were required for verification of the sample used during the survey and for analysis of the survey results. The record layout of this tape is recorded in Appendix VII.

Tables showing aggregate totals of the socio-economic data for the sampling frame are given in Appendix VIII. The tables include data for EA's in SG1, SG2, SG4 and SG5, and exclude SG6 the fringe of CA's.* Due to a rounding process at the EA level the population and household counts do not correspond exactly with the values in tables 6 and 7.

* Due to an error in sampling, the survey did not include a sample drawn from SG6.

5. BUSINESS SURVEY SAMPLING FRAME

5.1 Scope

The sampling frame for the Business Survey is a list of employers that was developed from a comprehensive list maintained by Statistics Canada in the Business Register Master File. This chapter discusses the composition of the sampling frame (section 5.2) and describes the methodology (section 5.3) and procedures that created it (section 5.4) and the Canadian Postal Code System (section 5.5) are also included as each was important in the development of the sampling frame.

5.2 Composition of the Sampling Frame

The rural sampling frame consists of 128,731 employers and accounts for 17 per cent of all employers in Canada. The employers are grouped into 10 SIC Divisions each of which represents a broad categorization of different types of economic activity. Each employer belongs to one of five regions, Atlantic, Quebec, Ontario, Prairie Region and British Columbia, and to one of three size groups, small, large, or unknown. The small size group includes employers with less than 20 employees, the large group is for employers having 20 to 499 employees, and the unknown size group refers to employers whose employment size had not been determined before the survey took place.

Table 12 is a distribution of employers in the sampling frame by SIC Division, region and size group. This table contains unique quantitative data detailing certain economic and regional variations in rural Canada. The following descriptive analysis attempts to review the sampling frame of employers at varying levels.

DEPARTMENT OF COMMUNICATIONS
RURAL BUSINESS SAMPLE FRAME

TABLE 12

DISTRIBUTION OF EMPLOYERS BY S.I.C. DIVISION, REGION AND SIZE GROUP

DATE: NOV 26, '80

S.I.C. DIVISION	* ATLANTIC REGION *			* QUEBEC REGION *			* ONTARIO REGION *			* PRAIRIE REGION *			* B.C. REGION *			TOTAL
	LARGE	SMALL	UNKNOWN	LARGE	SMALL	UNKNOWN	LARGE	SMALL	UNKNOWN	LARGE	SMALL	UNKNOWN	LARGE	SMALL	UNKNOWN	
1.	30	1,881	176	73	7,003	257	79	7,477	562	19	11,155	1,299	24	1,436	173	31,644
2	21	752	133	28	616	68	8	336	73	2	283	36	44	1,095	192	3,687
3	13	2,095	194	1	83	3	0	106	6	3	67	13	2	60	4	2,650
4	13	36	4	14	69	9	12	104	6	27	337	24	5	56	10	726
5	118	666	85	353	1,513	220	138	1,001	202	50	665	109	47	484	99	5,750
6	45	2,449	285	26	2,767	485	30	4,281	919	33	3,813	631	5	1,666	274	17,709
7	18	863	139	51	1,555	272	28	1,135	258	13	1,380	229	9	587	82	6,619
8	77	4,199	744	65	6,176	1,139	74	5,200	1,275	73	5,691	1,351	25	2,017	350	28,456
9	3	298	63	29	846	255	9	648	133	4	866	218	3	431	98	3,904
10	147	3,773	587	225	5,533	738	171	5,569	981	396	5,787	882	98	2,320	379	27,586
TOTAL	485	17,012	2,410	865	26,161	3,446	549	25,857	4,415	620	30,044	4,792	262	10,152	1,661	128,731

SIC DIVISION

- | | |
|---------------------------|------------------------------------|
| 1. Agriculture | 6. Construction |
| 2. Forestry | 7. Transportation & Communications |
| 3. Fishing & Trapping | 8. Trade |
| 4. Mines, Minerals & Oils | 9. Finance & Real Estate |
| 5. Manufacturing | 10. Service |

SIZE GROUP

- | | |
|---------------------------|--------|
| 1. Large (20 + Employees) | 2781 |
| 2. Small (< 20 Employees) | 109226 |
| 3. Unknown | 16724 |

General Observations

- Four of the ten SIC Divisions account for over 80% of the sampling frame

Agriculture	25%
Trade	22%
Service	21%
Construction	<u>14%</u>
	82%

- One in every five employers for each region is in the service industry

Rural employers within Regions -

- Agriculture accounts for the greatest number of employers for Ontario (26%) and the Prairie Region (35%)
- Service is dominant in British Columbia (23%)
- Trade and Agriculture are dominant in Quebec (24.2, 24.1%)
- Trade is dominant in the Atlantic Region (25.2%)

Rural employers within SIC Divisions -

- Agriculture is dominant in the Prairie Region (40%)
- Forestry is dominant in B.C. (36%)
- Fishing and Trapping in the Atlantic (87%)
- Mines Minerals and Oils in Prairie Region (53%)
- Manufacturing in Quebec (36%)

TABLE 13
Percentage of Sampling Frame
Size Groups, Region and SIC

<u>Size Groups</u>	<u>#</u>	<u>%</u>
- small	109,226	84.8
- unknown	16,724	13.0
- large	2,781	2.2
	<u>128,731</u>	<u>100.0%</u>
 <u>Regions</u>		
Prairies	35,456	27.5
Ontario	30,821	23.9
Quebec	30,472	23.7
Atlantic	19,907	15.5
British Columbia	12,075	9.4
	<u>128,731</u>	<u>100.0%</u>
 <u>-SIC</u>		
1. Agriculture	31,644	24.6
2. Forestry	3,687	2.9
3. Fishing & Trapping	2,650	2.1
4. Mines Minerals & Oils	726	0.6
5. Manufacturing	5,750	4.5
6. Construction	17,709	13.8
7. Transportation & Communications	6,619	5.1
8. Trade	28,456	22.1
9. Finance & Real Estate	3,904	3.0
10. Service	27,586	21.4
	<u>128,731</u>	<u>100.0%</u>

5.3 Business Register Master File (BRMF)

The BRMF is a database of employers in Canada maintained by Statistics Canada. The record layout for the BRMF is given in Appendix IX. Every employer with paid employees must register a PD 20 form (PD - Payroll Deductions) with Revenue Canada Taxation (RCT), after which this form is used by the Business Register Division of Statistics Canada to create an entry in the BRMF. Each employer record is also assigned a Standard Industrial Classification Code (SIC) and an employment size code.

TABLE 14

Business Register Master File Size Codes

<u>Code</u>	<u>Number of Employees</u>
00	0
01	1 - 4
02	5 - 9
03	10 - 19
04	20 - 49
05	50 - 99
06	100 - 199
07	200 - 499
08	500 - 999
09	1000 - 1499
10	1500 - 2499
11	2500 - 4999
12	5000 and over
20	1 - 19 (used only when 01, 02, 03 cannot be assigned)
99	Unknown

Table 15 lists the 12 major divisions in the SIC and the number of active reference units within each division contained on the BRMF.

TABLE 15
BRMF Active Reference Units

<u>SIC DIVISION</u>	<u>ACTIVE REFERENCE UNITS</u>
Agriculture	56411
Forestry	8114
Fishing and Trapping	3922
Mines, Quarries etc.	4223
Manufacturing	47446
Construction	106630
Transportation	32394
Merchandising	188766
Finance	53918
Community	243944
Public Administration	7786
Unclassified	9
<hr/>	
TOTAL	753563

The BRMF is the master source list for surveys of employers carried out by Statistics Canada. At indefinite time intervals the BRMF is updated using response from these surveys. In addition, once every year, RCT informs Statistics Canada of employers which they know have become inactive. Additions to the BRMF are received from RCT on a monthly basis. This updating process has obvious drawbacks and as a result the status of more than 10% of the file is questionable at any given time.

In spite of the limitations of the BRMF it is still the most comprehensive list of employers available in Canada (although its use is restricted by confidentiality considerations), and it is particularly appropriate for mail surveys because the mailing address of each employer is known.

The file embraces a very wide spectrum of activities, commercial and non-commercial. However employers in the file would generally conform to the category of business telephone subscribers (see Appendix X) and since the survey of rural businesses was to concentrate on telex and mobile radio services use of the BRMF to create the necessary sampling frame was particularly appropriate and economical.

5.4 Methodology

A methodology was required to identify those employers which operate in the rural areas of Canada (Figure 1). A list of these employers would then form the frame from which a sample would be drawn for inclusion in the survey.

The postal code in the address of 90% of the records in the business register master file was believed to be the best tool available to group employers, either in or out of the sampling frame. A method was adopted which identifies postal codes in the non-rural areas and then, by process of elimination, excludes from the BRMF all employers associated with these postal codes. Further deletions from this new list are then made to exclude employers belonging to certain SIC or size codes which were not of interest from the point of view of the objectives of the survey (Reference 2).

It should be recognized that the address for each employer will not always conform to the actual location of the business operation. In some cases the address might be that of an employee or other member of the business who is assigned to handling the incoming mail for the operation. The address may also be that of the head office. For these reasons there is some possibility that certain employers operating in rural areas will be excluded from the rural sampling frame. Less likely, but still a possibility, is the inclusion of some urban employers in the rural sampling frame.

5.5 The Canadian Postal Code System

The two basic types of postal code in Canada identify 1) a "rural" post office and 2) an "urban" post office. An urban office is usually located in a centre where the population density is high and where the population is large enough (usually greater than 5000) to justify letter carrier service. A rural office is located usually in a town or village and does not provide letter carrier service. The urban P.O. is referred to as a letter carrier office and the rural P.O. is called a non-letter carrier office.

In mid-1980 an up to date list of postal codes was obtained from Canada Post listing 285 urban post offices and 5492 rural offices which were in use at that time (Table 16). It is interesting to note that there is very close correlation between the number of urban post offices (285) and the number of urban centres in Canada with over 5000 population based on the 1976 census (265).

Table 16

POSTAL CODES IN CANADA - 1980

	<u>Rural Codes Assigned</u>	<u>Rural Codes Retired</u>	<u>Rural Codes In Use</u>	<u>Urban Codes In Use</u>
Newfoundland	463	8	455	7
Nova Scotia	341	12	329	15
Prince Edward Isl.	51	0	51	2
New Brunswick	224	7	217	10
Quēbec	1,217	45	1,172	79
Ontario	1,191	69	1,122	103
Manitoba	459	24	435	8
Saskatchewan	714	37	677	10
Alberta	595	34	561	13
British Columbia	452	39	413	36
North West Territories	51	5	46	1
Yukon	16	2	14	1
	<u>5,774</u>	<u>282</u>	<u>5,492</u>	<u>285</u>

The number of post offices changes with time, but the change is usually quite small. For example, during the first ten years that the postal code was in use in Canada (1970 - 1980) a total of 282 rural codes were retired. A rural code is retired in those cases where a rural office becomes a letter carrier office, and therefore receives an urban postal code, or when a rural office is closed down due to insufficient use.

Each postal code contains three letters and three numbers arranged in an order known as "ANA NAN". The "A" refers to a letter of the alphabet and "N" refers to the number system. It is easy to distinguish between an urban and rural code because the rural code always contains a zero in the second and the last position of the code whereas an urban code has no zeros.

5.6 Procedure to Derive the Sampling Frame

Three basic steps were required to transform the Business Register Master File into the desired rural sampling frame. Steps 1 and 3 simply required computer programming procedures and need not be explained in detail, whereas step 2 was a lengthy process and is the main topic of this section.

5.6.1 The Three Steps

- Step 1 A new file listing approximately 200,000 employers associated with non letter carrier postal codes was extracted from the listing of 750,000 employers contained on the Business Register Master File.
- Step 2 Identification of all non letter carrier post offices that are not located in rural Canada (see Section 2). The postal codes of these offices (Appendix XI) were recorded on computer tape and matched against the postal codes of the 200,000 employers on the file created in step 1 to purge out employers located in remote areas, Census Metropolitan Areas, Census Agglomeration and urban locations with populations of 2500 or greater.
- Step 3 The computer was programmed to delete employers which, for various reasons, were not to be included in the survey:
 - a) employers with 500 or more employees
 - b) employers in SIC code 873 (private households)
 - c) SIC Code 900 (defunct businesses)
 - d) SIC Divisions 11 and 12 (public administration, defence, undefined businesses etc.)

5.6.2 Explanation of Step 2

To identify the non-letter carrier post office codes to be excluded from the sampling frame, several sources were required.

References

- a) Canada Post Catalogues - Householder Figures for Non Letter Carrier Offices. Includes the codes for non-letter carrier offices ordered by postal code sequence and containing rural area code maps for 1979.
- b) Canada Post complete list of active and retired postal codes listed by forward sortation area for 1980. This list became important when it was learned that some addresses on the business register included postal codes that are no longer in use, either because the post office was closed down or because it was changed from a non-letter carrier post office to a letter carrier post office.
- c) Statistics Canada Reference Maps - Catalogue 92-811. This catalogue contains boundary maps for Census Metropolitan Areas and Census Agglomerations.
- d) Provincial road maps were used for locating post offices.
- e) Statistics Canada urban area list which lists all urban areas in Canada with 1976 population figures and the municipalities for each urban area.

A list was obtained for all Statistics Canada urban areas with population size > 2499 and not served by a letter carrier office, by matching the Statistics Canada Urban Areas list with reference a) Canada Post Publications. The municipalities located within these urban areas were then checked to determine which were served by a non-letter carrier post office. Some urban areas consist of more than one municipality and are served by more than one rural office. The postal codes were recorded in a list.

The technique for determining the postal codes for places located in remote areas and inside the boundaries of CMA's and CA's is similar in each case. The Canada Post rural area maps from reference a) were used to identify which "Forward Sortation Areas" make up the area in question. In 1980 there were 193 rural Forward Sortation Areas, each of which is assigned a three character code which matches the first three characters of the rural postal codes associated with it.

A first attempt at identifying the non-letter carrier offices to be excluded from the sampling frame identified 816 postal codes in the ten provinces of Canada associated with remote areas, urban centres (population > 2499), Census Metropolitan Areas and Census Agglomerations (Appendix XI - File 1). Another 73 postal codes were identified to these four categories after obtaining a complete listing of active and retired codes for June 1980, (reference b). An additional 56 codes were identified as special cases

- 42 non letter carrier offices changed to letter carrier offices
- 2 offices identified as Military Post Offices
- 4 offices linked to Indian Reserves
- 8 offices excluded for other reasons

The 129 codes identified from reference (b) are recorded in Appendix XI - File 2. The numbers of codes excluded for each province and category is given in Table 17.

In addition to the 945 codes listed in Appendix XI, all non-letter carriers offices in the Yukon and North West Territories were excluded but were not identified on an individual basis.

Long after the completion of the sampling frame it was discovered that only 26 of the 36 non letter carrier offices in the Ottawa-Hull CMA were omitted from the sampling frame. The effect of this error on the sampling frame is considered very small considering that the sample of 5983 employers drawn from the sampling frame for use in the survey includes only 10 employers associated with the ten offices. The ten offices that failed to be excluded from the sampling frame are:

Alcove	JOX 1A0
Cantley	JOX 1C0
Chelsea	JOX 1N0
Farrellton	JOX 1T0
Old Chelsea	JOX 2N0
Perkins	JOX 2R0
Poltimore	JOX 2S0
Ste-Cecile-de-Masham	JOX 2W0
Wakefield	JOX 3G0
Wilson's Corners	JOX 3J0

Survey responses from employers served by these offices were manually excluded from the survey results as they were received.

Table 17
Categories of Postal Codes Deleted from
the Business Sampling Frame

	<u>Remote</u>	<u>Urban Centre (population 2,500)</u>	<u>CMA¹</u>	<u>CA²</u>	<u>Special Cases</u>	<u>TOTAL</u>
Newfoundland	27	27	10	-	-	64
Nova Scotia	-	14	22	3	4	43
Prince Edward Isl.	-	-	-	-	-	0
New Brunswick	-	12	6	1	3	22
Quebec	39	103	66	6	12	226
Ontario	40	70	171	-	21	302
Manitoba	42	9	19	-	1	71
Saskatchewan	29	13	-	-	5	47
Alberta	31	41	19	-	6	97
British Columbia	<u>27</u>	<u>28</u>	<u>14</u>	<u>-</u>	<u>4</u>	<u>73</u>
TOTAL	235	317	327	10	56	945

1. Twenty one of twenty three CMA'S contained non letter carrier post offices.
2. Six CA'S contained non letter carrier post offices.

6.0 References

6. Regional Demographic Studies for the Rural Communications Program - Summary Report and Analysis; K. Richardson and S. Brown.
1. Planning Report: Study of the Demand for Communications Services in Rural Canada - Residential Survey; K. Richardson.
2. Planning Report: Business Segment - Study of the Demand for Communications Services in Rural Canada; K. Richardson.
3. Planning and Operational Aspects of a Mail Survey of Employers in Rural Canada; S. Brown.
4. Field Report - Residential Survey; Canadian Facts (in preparation).
5. Analysis of Survey Data; Demand Research Consultants (in preparation).

APPENDICES

Appendix I	Census Geography Master File
Appendix II	Enumeration areas with density 0.8 to 1.0 persons/sq. mi.
Appendix III	Remote EA's excluded from the Sampling Frame
Appendix IV	Census Metropolitan Areas (1976)
Appendix V	Census Agglomerations
Appendix VI	Census Agglomerations with Population Density greater than 999 persons/sq. mi.
Appendix VII	Record Layout for Residential File
Appendix VIII	Aggregate Summary Report Base Total by Total and Region
Appendix IX	Business Register Master File Truncated Record Layout
Appendix X	Business and Residence Service - Bell Canada General Tariff
Appendix XI	Postal Codes Excluded from the Business Sampling Frame (File 1 and 2).

RECORD LAYOUT - GEOGRAPHIC IDENTIFICATION

<u>Field No.</u>	<u>Mnemonic Name</u>	<u>Position</u>	<u>Size</u>	<u>Description</u>
1	PR	1-2	2	Province (region)
2	FEB66	3-5	3	Federal Electoral District (1966)
3	EA	6-8	3	Enumeration Area
4	CD	9-10	2	Census Division
5	CSD	11-14	4	Census Subdivision
6	SGCCDCSD	15-19	5	Standard Geographic Code for CD/CSD
7	CSDSIZE	20	1	Census Subdivision Population Size Group
8	CSDTYPE	21-22	2	Census Subdivision Type Code
9	CCS	23-26	4	Census Consolidated Subdivision Code
10	CMACA	27-29	3	✓ Census Metropolitan Area/Census Agglomeration Area Code
11	SGCCMACA	30-32	3	✓ Standard Geographic Code for CMA/CA
12	CMACAPT	33	1	✓ CA Part
13	CMACASEL	34	1	CMA/CA Selector
14	CMACASIZ	35	1	CMA/CA Population Size Group
15	CTPCTCOD	36-39	4	Census Tract/Provincial Census Tract Code
16	CTPCTNUM	40-45	6	Census Tract/Provincial Census Tract Number
17	SUBPREG	46-47	2	Subprovincial region
18	URRUR	48-51	4	✓ Urban/Rural area
19	URBSIZE	52	1	✓ Urban Population Size Group
20	POPCNT	53-56	4	Enumeration Area Population Count
21	FED76	57-59	3	Federal electoral district (1976)
22	UTMZONE	60-61	2	Population Centroid - UTM Zone
23	UTMX	62-67	6	Population Centroid - UTM X Co-ordinate
24	UTMY	68-74	7	Population Centroid - UTM Y Co-ordinate
25	LATITUDE	75-78	4	Population Centroid - Lat in Degs/Mins (2, 2)

APPENDIX I

<u>Field No.</u>	<u>Mnemonic Name</u>	<u>Position</u>	<u>Size</u>	<u>Description</u>
26	LONGITUD	79-83	5	Population Centroid - Long in Degs/Mins (3, 2)
27	MAPS	84-92	9	National Topographic Series Map number
28	CSDNAME	93-142	50	Census Subdivision Name
29	CDNAME	143-174	32	Census Division Name
30	CMACANAM	175-200	26	CMA/CA Name
31	LASQM	201-209	9	Land Area in Square Miles (999999.99)
32	LASQK	210-218	9	Land Area in Square Kilometres (999999.99)
33	PRHHL D	219-222	4	Private Household Count
34	BLK2	223-226	4	Blank
35	LAMX	227-238	12	Lambert X coordinate
36	LAMY	239-250	12	Lambert Y coordinate
37	FEDNAME	251-282	32	Federal Electoral District name (1976)

12150061SUB. A - CHETICAMP - MARGAREE
 13060090DUCTUCHE
 24971336COTE NORD DU GOLFE ST-LAURENT
 24840042MALARTIC
 24840034ASITIBI, NON MUNICIPALISE
 ✓ 35560075COCHRANE, UNORGANIZED
 ✓ 35520777SUDEURY, UNORGANIZED
 ✓ 35540228TIMISKAMING, UNORGANIZED
 47140853488. TORCH RIVER
 47140853488. TORCH RIVER
 48120396018. I D
 48120396018. I D
 48040049SPECIAL AREA NO. 2
 48050063VULCAN, COUNTY NO. 2
 48010801001. I D
 48010003FORTY MILE, COUNTY NO. 8
 48010003FORTY MILE, COUNTY NO. 8
 48050063VULCAN, COUNTY NO. 2
 48150360GRANDE PRAIRIE, COUNTY NO. 1
 48150348020. I D
 48150349021. I D
 48150350022. I D
 48150393023. I D
 48120275SMCKY LAKE, COUNTY NO. 13
 48030035026. WILLOW CREEK
 48060090031. FOOTHILLS
 59330220THOMPSON - NICOLA, SUB. C
 59330221THOMPSON - NICOLA, SUB. D
 59030041CENTRAL KOOTENAY, SUB. A
 59030041CENTRAL KOOTENAY, SUB. A
 59010093EAST KOOTENAY, SUB. B
 59390062COLUMBIA - SHUSHAP, SUB. A
 59390063COLUMBIA - SHUSHAP, SUB. B
 59530109FRASER - FCRT GEORGE, SUB. A
 59550187PEACE RIVER - LIARD, SUB. A
 59510007BULKLEY - NECHAKO, SUB. A
 59510007BULKLEY - NECHAKO, SUB. A
 59510009BULKLEY - NECHAKO, SUB. C

13003315	2960075+0003120000000009400305015011	11K/15	00020
03009205	10001+0000010500000009500906008005	21I/07	00031
11041610	3930099+0004357600000009004206097051	12K	00048
02073024	200006+00002276000000008700105084005	32D/01	00047
81073112	920026+0000978400000009400104084090	32C	00047
81005011	3210090+0003590000000008900905056090	42A NE	00053
81040018	500016+0000539500000009204905052090	41I/02	00053
81072123	3970140+0004632500000000300006054090	42A SE	00053
15006254	1600048+0001630000000009800406014077	73H	00074
15006252	1780052+0002116000000008400606014077	73H	00074
34001009	3160067+0003430000000009201905012030	73E	00087
34001107	1310033+0001420000000009200105012030	73L	00087
52006259	1580046+0001800000000008700006004004	72M	00080
12011274	550020+00006300000000087002060035001	82I	00082
34012003	3210104+0003240000000009901506001001	72E	00080
12012021	2370065+0002860000000003201506001008	72E	00080
12012101	2700070+0002867100000009401506001008	72E	00080
12012115	59002+0000060000000008301506005001	82I	00082
12014104	1830057+0002250000000008101605015006	83M	00086
34014165	3010085+0003240000000009201606015059	83M	00086
34014253	3050082+0003600000000009401606015062	84D	00086
34014310	3120100+0003235000000009601606015076	84C	00086
34014324	3590076+0003890000000009401605015095	84F	00086
12015302	380013+0000390000000009700106012022	83I	00087
51017051	640021+0000780000000003200206003018	82J SE	00081
31017053	2730072+0002815000000009600205005001	82J SE	00082
39009004	4090128+0005015200000008101806033010	92H NE	00093
39009302	3960146+0004480000000009900306033034	92P	00093
39010058	310009+0000379400000008101205003054	82F SW	00091
39010154	1640056+0001881300000008701205003054	82F/05	00091
39014055	6800206+0007656700000008801105001033	82F NE	00090
39014207	3120100+0003893700000009001106039013	82N	00091
39014215	3540104+0004017600000008801106059025	82L NE	00091
39015017	1150034+0001434000000008001904053040	93G	00096
39015316	420015+000043000000009700705055040	94A	00097
39016011	5240159+0005711000000009101905051018	93K	00096
39016014	7080211+000370000000008101905051018	93K	00096
39016034	6690181+0007901000000008401906051030	93K	00096

SG5

DENSITY BETWEEN .80 AND 1.00

Remote EA's Excluded from the Sampling Frame

	<u>FED</u>	<u>EA</u>	<u>FED</u>	<u>EA</u>	<u>FED</u>	<u>EA</u>
NFLD.	004	203	004	227	004	307
	004	204	004	252	004	217
	004	205	004	253	004	218
	004	208	004	254	004	219
	004	222	004	303	004	220
	004	223	004	304	004	228
	004	224	004	305	004	229
	004	225	004	306		
QUE.	001	254	041	270	001	267
	001	255	041	273	041	252
	001	256	050	316	041	262
	001	257	050	318	041	271
	001	258	073	161	041	272
	001	266	073	162	073	120
	007	318	001	221	073	121
	012	264	001	223	073	207
	012	266	001	224	073	218
	012	267	001	225	073	222
	012	269				
ONT.	005	216	027	269	027	256
	005	217	027	270	027	258
	005	219	027	271	027	259
	005	220	071	120	005	209
	005	221	071	217	005	223
	005	222	071	219	005	210
	027	127	071	221	005	211
	027	129	071	222	005	212
	027	202	071	224	005	213
	027	217	071	226	027	261
	027	218	071	267	027	263
	027	252	027	220	071	218
	027	257	027	221	071	220
	027	267	027	254	071	223
	027	268	027	255	071	225
MAN.	002	027	002	233	002	284
	002	056	002	237	002	285
	002	215	002	238	002	286
	002	217	002	239	003	304
	002	218	002	256	007	269
	002	219	002	257	007	270
	002	220	002	261	007	274
	002	222	002	270	007	275
	002	225	002	271	002	202
	002	227	002	272	002	236
	002	228	002	273	002	262
	002	230	002	274	002	263
	002	231	002	282	002	264
	002	232	002	283	002	019

	<u>FED</u>	<u>EA</u>		<u>FED</u>	<u>EA</u>		<u>FED</u>	<u>EA</u>
	002	209		002	267		002	280
	002	212		002	268		002	281
	002	234		002	269		002	287
	002	235		002	276		002	288
	002	252		002	277		003	305
	002	253		002	278		009	277
	002	266		002	279			
SASK.	003	261		003	328		003	331
	003	262		003	329		003	332
	003	319		003	330		003	333
	003	320		003	334		004	252
	003	321		003	335		004	254
	003	322		003	336		004	257
	003	323		004	215		004	261
	003	324		004	302		004	305
	003	325		004	303		004	267
	003	326		004	262		004	266
	003	327						
ALTA.	001	178		001	125		001	303
	001	179		001	177		001	311
	001	180		014	354		001	312
	001	182		014	355		001	354
	001	309		017	154		001	355
	001	365		017	155		001	358
	001	366		017	156		001	359
	001	367		001	363		001	360
	001	368		001	364		001	402
	001	369		001	306		014	324
	001	370		001	126		017	221
	001	371		001	226			
BC.	004	203		015	479			
	004	366		015	480			
	004	367		015	481			
	004	368		015	482			
	004	370		015	483			
	004	371		015	486			
	004	374		016	002			
	004	375		016	028			
	004	376		016	029			
	004	378		016	031			
	004	379		016	032			
	004	380		016	088			
	004	383		016	360			
	004	384		016	366			
	004	386		016	365			
	004	387		015	471			
	015	476						

FED EA
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APPENDIX IV

Census Metropolitan Areas (CMA) - 1976

	<u>Stats. Can Urban (UAPSG 7,8)</u>	<u>Stats. Can Rural</u>
St. John's	3,411	21,798
Halifax	2,255	56,008
St. John	2,016	15,942
Chic. Jonq.	1,545	12,179
Quebec	1,858	32,389
Montreal	3,539	74,071
T.O.	3,839	96,948
St. Cath.	1,396	23,035
Kitchener	1,337	12,888
Sudbury	814	16,448
Edmonton	3,190	28,066
Vancouver	2,078	60,148
Ottawa		42,822
Hull		24,832
Oshawa		3,100
Hamilton		46,918
London		23,859
Windsor		29,229
Thunder Bay		7,777
Winnipeg		17,343
Regina		1,598
Victoria		23,115
	<hr/>	<hr/>
	27,278	670,513

APPENDIX V

Census Agglomerations (CA)

	STATS. CAN. URBAN (UAPSG 7,8)	STATS. CAN. RURAL
Arnprior, Ont.....		3,413
Asbestos, Que.....		2,953
Baie-Comeau, Que.....		
Barrie, Ont.....		12,902
Bathurst, N.B.....		135
Bay Roberts, Nfld.....		166
Beaupre, Que.....		829
Blairmore, Alta.....	2,729	2,242
Brantford, Ont.....		7,082
Brockville, Ont.....		5,650
Campbellton, N.B.....		
Cap-Aux-Meules, Que.....		1,979
Caraquet, N.B.....		323
Carbonear, Nfld.....		1,182
Charlottetown, P.E.I.....		
Chilliwack, B.C.....	3,497	15,779
Cobourg, Ont.....		7,236
Courtenay, B.C.....	1,260	4,660
Dolbeau, Que.....		1,696
Donnacona, Que.....		672
Drummondville, Que.....		4,004
Duncan, B.C.....	2,164	10,313
Dunville, Nfld.....		527
East Broughton Station, Que.....		
Edmundston, N.B.....		421
Fergus, Ont.....		3,137
Flin Flon, Man. , Sask.		
Forestville, Que.....		485
Granby, Que.....		3,566
Grand Falls, Nfld.....		86
Guelph, Ont.		2,850
Haileybury, Ont.		
Hawkesbury, Ont.		
Hebertville-Station, Que.		849
Joliette, Que.		3,347
Kenora, Ont.		
Kentville, N.S.		3,525
Kingston, Ont.		12,118
Kingsville, Ont.		5,667
La Malbaie, Que.		
Labrador City, Nfld.		
Lachute, Que.		
Magog, Que.		
Medicine Hat, Alta.		506

	STATS. CAN. URBAN (UAPSG 7,8)	STATS. CAN. RURAL
Midland, Ont.	2,832	5,614
Moncton, N.B.		659
Moose Jaw, Sask.		948
New Glasgow, N.S.		
New-Castle, N.B.		2,630
North Battleford, Sask.		397
North Bay, Ont.		1,254
Pembroke, Ont.		1,574
Petawawa, Ont.		3,457
Peterborough, Ont.	2,240	2,074
Pierreville, Que.		228
Port Alberni, B.C.		5,079
Port Elgin, Ont.		1,678
Portneuf, Que.		523
Rimouski, Que.		
Rock Island, Que.		
Rouyn, Que.		996
Sarnia, Ont.		10,207
Sault Ste. Marie, Ont.		943
Shawinigin, Que.		2,947
Sherbrooke, Que.		10,618
Smiths Falls, Ont.		2,090
Sorel, Que.		524
St-Georges, Que.		
St-Hyacinthe, Que.		
St-Jean, Que.		1,254
St-Jerome, Que.		810
Ste-Adele, Que.		482
Ste-Anne-des-Monts, Que.		640
Summerside, P.E.I.		1,860
Sydney, N.S.	1,094	11,915
Sydney Mines, N.S.	2,896	13,159
Terrace, B.C.		726
Thetford Mines, Que.		1,358
Trail, B.C.		
Trenton, Ont.	1,851	7,749
Trois-Rivieres, Que.		1,865
Truro, N.S.		8,261
Twillingate, Nfld.		
Val-d'Or, Que.		
Valleyfield (Salaberry-de-), Que.		1,757
Vernon, B.C.		3,906
Victoriaville, Que.		
Williams Lake, B.C.		7,004

APPENDIX VI
Census Agglomerations with Population Density greater than
999 persons/square mile

	<u>Population Density (square miles)</u>
Campbellton, N.B.	1,393.0
Charlottetown, P.E.I.	3,880.8
Hawkesbury, Ont.	2,629.3
Joliette, Que.	1,338.5
Kenora, Ont.	1,406.6
Pierreville, Que.	1,140.9
Rouyn, Que.	1,049.1
Sorel, Que.	1,435.2
St - Georges, Que.	1,571.1
St - Hyacinthe, Que.	3,000.1
St - Jean, Que.	1,259.1
Magog, Que.	1,758.8
New Glasgow, N.S.	1,536.8
St - Jerome, Que.	2,324.1
Trail, B.C.	2,006.3
Victoriaville, Que.	2,888.8
Trois - Rivieres, Que.	1,547.6

APPENDIX VII

Record Layout for Demand Survey File

Field	Size	Position	Type	Title
1	2	1 - 2	N	Province
2	2	3 - 4	N	Census Division Code
3	4	5 - 8	N	Census Subdivision Code
4	48	9 - 56	AN	CSD Name
5	1	57	N	CMA/CA Part
6	1	58	N	CMA/CA Selector
7	2	59 - 60	N	CSD type
8	3	61 - 63	N	Federal Electoral District (1966)
9	3	64 - 66	N	Enumeration Area (EA)
10	4	67 - 70	N	1976 EA Population Count
11	4	71 - 74	N	1976 EA Household Count
12	9	75 - 83	N	1976 EA Land Area Square Miles
13	9	84 - 92	N	1976 EA Density
14	3	93 - 95	N	Federal Electoral district (1976)
15	1	96		CMA/CA Size
16	1	97		CSD Size
17	1	98		Urban Area Size
18	5	99 - 103		Standard Geographical Code (CD/CSD)
19	9	104 - 112	AN	National Topographic Maps
20	3	113 - 115		CA Code
21	2	116 - 117		Subprovincial Code (former economic region)
22	1	118	N	Split Code (no. 1, 2, 4, 5, 6 corresponding to SG1, SG2, SG4, SG5 SG6)

Field	Size	Position	Type	Title
41	11	291 - 301	N	Unemployment rate (2 decimal places assumed)
42	11	302 - 312	N	Not in Labour Force
43	9	313 - 321	N	Total population 5-
44	9	322 - 330	N	Migrants from Same Province
45	9	331 - 339	N	Migrants from Different Province
46	9	340 - 348	N	Migrants from Outside Canada
47	9	349 - 357	N	Province of Residence 1971 - not stated
48	9	358 - 366	N	Total Migrants
49	9	367 - 375	N	Non-migrants (movers within same mun.)
50	9	376 - 384	N	Total Movers
51	9	385 - 393	N	Non- Movers
52	9	394 - 402	N	Total Household Heads
53	9	403 - 411	N	Hhld. Head Married-Spouse Present
54	9	412 - 420	N	Hhld. Head Married-Spouse Absent
55	9	421 - 429	N	Total Married
56	9	430 - 438	N	Separated
57	9	439 - 447	N	Widowed
58	9	448 - 456	N	Divorced
59	9	457 - 465	N	Single (never married)
60	9	466 - 474	N	Total dwellings

Field	Size	Position	Type	Title
61	9	474 - 483	N	Owned
62	9	484 - 492	N	Rented
63	9	493 - 501	N	Total Occupied Private Dwellings
64	9	502 - 510	N	Double House
65	9	511 - 519	N	Row House
66	9	520 - 528	N	Attached to Non-Residential Structure
67	9	529 - 537	N	Total Single attached
68	9	538 - 546	N	Single Detached
69	9	547 - 555	N	Apartment
70	9	556 - 564	N	Duplex
71	9	565 - 573	N	Movable
72	9	574 - 582	N	Total Families
73	9	583 - 591	N	2 persons
74	9	592 - 600	N	3 persons
75	9	601 - 609	N	4 persons
76	9	610 - 618	N	5 persons
77	9	619 - 627	N	6 persons
78	9	628 - 636	N	7 persons
79	9	634 - 645	N	8 persons
79a	9	646 - 654	N	9 or more persons
80	9	655 - 663	N	Total families
81	9	664 - 672	N	Families with all children at home aged -6
82	9	673 - 681	N	Families with some children at home aged - 6.

Listing of EA's (785) drawn from the Sampling Frame Tape
(figures on tables rounded to nearest 5)
(Provided by CF on 20 May 1981)

Field #	Description
1	Province
2	Census Division Code
3	Census Subdivision Code
4	CMA/CA Part
5	CMA/CA Selector
6	CSD Type
7	Federal Electoral District (FED)
8	Enumeration Area
LABOUR FORCE ACTIVITY (2 decimal places)	
9	Population 15 years and over
10	Employed
11	Unemployed
12	Total in labour force
13	Not in labour force
MOBILITY STATUS	
14	Total Population 5
15	- Migrants from Same Province
16	- Migrants from Different Province
17	- Migrants from Outside Canada
18	- Province of Residence 1971 - Not States
19	- Total Migrants
20	- Non Migrants (movers within same mun.)
21	- Total Movers
22	- Non-Movers
DENSITY	
23	Population Density (2 decimal places)

AGGREGATE SUMMARY REPORT
BASE TOTAL
BY TOTAL AND REGION

	TOTAL		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		BRITISH COLUMBIA	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
AGE GROUPING OF CHILDREN ✓ BASE: TOTAL FAMILIES	1207620	100.0%	218195	100.0%	291605	100.0%	310795	100.0%	275520	100.0%	111505	100.0%
ALL CHILDREN AT HOME AGED - 6	174735	14.5%	34985	16.0%	43985	15.1%	41680	13.4%	36530	13.3%	17555	15.7%
SOME CHILDREN AT HOME AGED - 6	161335	13.4%	34765	15.9%	39685	13.6%	38545	12.4%	35520	12.9%	12820	11.5%
NO CHILDREN AT HOME AGED - 6	521110	43.2%	91855	42.1%	135220	46.4%	132860	42.7%	117705	42.7%	43470	39.0%
FAMILIES WITH CHILDREN AT HOME	856955	71.0%	161265	73.9%	219060	75.1%	212880	68.5%	189870	68.9%	73880	66.3%
FAMILIES WITH NO CHILDREN AT HOME	350625	29.0%	56835	26.0%	72385	24.8%	98085	31.6%	85645	31.1%	37675	33.8%
<u>MARITAL STATUS</u>												
BASE: TOTAL HOUSEHOLD HEADS	1406665	100.0%	244595	100.0%	327490	100.0%	362830	100.0%	337275	100.0%	134475	100.0%
HEAD MARRIED-SPOUSE PRESENT	1102190	78.4%	191780	78.4%	264495	80.8%	286665	79.0%	256130	75.9%	103120	76.7%
HEAD MARRIED-SPOUSE ABSENT	11745	.8%	1035	.8%	2670	.8%	2910	.8%	2890	.9%	1340	1.0%
TOTAL MARRIED	1113760	79.2%	193615	79.2%	266915	81.5%	289435	79.8%	259265	76.9%	104530	77.7%
SEPARATED	31265	2.2%	5220	2.1%	5310	1.6%	9180	2.5%	6430	1.9%	5125	3.8%
WIDOWED	145710	10.4%	28425	11.6%	30475	9.3%	39225	10.8%	38070	11.3%	9515	7.1%
DIVORCED	21235	1.5%	2895	1.2%	3835	1.2%	5320	1.5%	4865	1.4%	4320	3.2%
SINGLE (NEVER MARRIED)	95230	6.8%	14355	5.9%	20955	6.4%	20025	5.5%	28875	8.6%	11020	8.2%

(CONTINUED)

AGGREGATE SUMMARY REPORT
BASE TOTAL
BY TOTAL AND REGION

	TOTAL		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		BRITISH COLUMBIA	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
<u>MOTHER TONGUE</u>												
BASE:TOTAL	4954395	100.0%	932865	100.0%	1249595	100.0%	1220880	100.0%	1122965	100.0%	428090	100.0%
ENGLISH	3086675	62.3%	751890	80.6%	83725	6.7%	1039110	85.1%	842200	75.0%	369750	86.4%
FRENCH	1466950	29.6%	169285	18.1%	1149465	92.0%	90760	7.4%	50435	4.5%	7005	1.6%
OTHER	346655	7.0%	4225	.5%	5665	.5%	78305	6.4%	214655	19.1%	43805	10.2%
NOT STATED	55355	1.1%	7920	.8%	10670	.9%	13415	1.1%	15865	1.4%	7485	1.7%
<u>NUMBER OF PERSONS</u>												
BASE:TOTAL FAMILIES	1207960	100.0%	218355	100.0%	291590	100.0%	310755	100.0%	275660	100.0%	111600	100.0%
2 PERSONS	395135	32.7%	66180	30.3%	83470	28.6%	108835	35.0%	95400	34.6%	41250	37.0%
3 PERSONS	238660	19.8%	45430	20.8%	59570	20.4%	59455	19.1%	52660	19.1%	21545	19.3%
4 PERSONS	255630	21.2%	44200	20.2%	60005	20.6%	67295	21.7%	58010	21.0%	26120	23.4%
5 PERSONS	155975	12.9%	27200	12.5%	37950	13.0%	40440	13.0%	36675	13.3%	13710	12.3%
6 PERSONS	85630	7.1%	16270	7.4%	23510	8.1%	20480	6.6%	19500	7.1%	5870	5.3%
7 PERSONS	38035	3.1%	8305	3.8%	12320	4.2%	8165	2.6%	7375	2.7%	1870	1.7%
8 PERSONS	19505	1.6%	4780	2.2%	7175	2.5%	3585	1.2%	3240	1.2%	725	.6%
9 OR MORE PERSONS	18985	1.6%	5830	2.7%	7745	2.7%	2590	.8%	2430	.9%	400	.4%
<u>TENURE</u>												
BASE:TOTAL DWELLINGS	1406950	100.0%	244550	100.0%	327640	100.0%	362845	100.0%	337475	100.0%	134440	100.0%
OWNED	1172370	83.3%	217595	89.0%	264970	80.9%	301620	83.1%	292410	83.7%	105775	78.7%
RENTED	234580	16.7%	26955	11.0%	62670	19.2%	61130	16.8%	55025	16.3%	28610	21.3%

AGGREGATE SUMMARY REPORT
BASE TOTAL
BY TOTAL AND REGION

	TOTAL		ATLANTIC		QUEBEC		ONTARIO		PRAIRIES		BRITISH COLUMBIA	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
TYPE OF DWELLING												
BASE:TOTAL OCCUPIED PRIVATE	1406950	100.0%	244550	100.0%	327640	100.0%	362845	100.0%	337475	100.0%	134440	100.0%
DOUBLE HOUSE	29375	2.1%	4630	1.9%	11415	3.5%	8290	2.3%	2700	.8%	2340	1.7%
ROW HOUSE	9645	.7%	1380	.6%	1580	.5%	1515	.4%	2575	.8%	2595	1.9%
ATTACHED TO NON-RES	17525	1.2%	1950	.8%	6855	2.1%	3975	1.1%	3665	1.1%	1080	.8%
TOTAL SINGLE DETACHED	56145	4.0%	7760	3.2%	19660	6.0%	13795	3.8%	9075	2.7%	5855	4.3%
SINGLE DETACHED	1166860	82.9%	208520	85.3%	253900	77.5%	317070	87.4%	288630	85.5%	98740	73.4%
APARTMENT	50560	3.6%	5700	2.3%	17660	5.4%	13810	3.8%	8475	2.5%	4915	3.7%
DUPLEX	34370	2.4%	4145	1.7%	20345	6.2%	5400	1.5%	2720	.8%	1760	1.3%
MOVEABLE	98765	7.0%	18500	7.6%	15930	4.9%	12825	3.5%	28195	8.4%	23315	17.3%
PRIVATE HOUSE COUNT												
BASE:TOTAL	1406794	100.0%	244598	100.0%	327684	100.0%	362754	100.0%	337310	100.0%	134448	100.0%

(CONTINUED)

AGGREGATE SUMMARY REPORT
BASE TOTAL
BY TOTAL AND REGION

	TOTAL		ATLANTIC		QUÉBEC		ONTARIO		PRAIRIES		BRITISH COLUMBIA	
	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT	NUMBER	PERCENT
LABOUR FORCE ACTIVITY												
BASE:TOTAL												
EMPLOYED	1931240	54.6%	279470	43.3%	431550	48.2%	521900	59.1%	530630	66.0%	167690	54.5%
UNEMPLOYED	141085	4.0%	40210	6.2%	45605	5.1%	26705	3.0%	11580	1.4%	16985	5.5%
IN LABOUR FORCE	2072075	58.6%	319500	49.6%	477240	53.3%	548575	62.1%	542105	67.5%	184655	60.1%
NOT IN LABOUR FORCE	1461750	41.4%	324915	50.4%	418170	46.7%	334085	37.8%	261785	32.5%	122795	39.9%
MOBILITY STATUS												
BASE:TOTAL POPULATION 5+												
MIGRANTS WITHIN SAME PROVINCE	889340	19.6%	88945	10.5%	209950	18.2%	287560	25.5%	185660	18.0%	117225	29.9%
MIGRANTS FROM DIFFERENT PROVINCE	160745	3.5%	44220	5.2%	10345	.9%	17910	1.6%	51800	5.0%	36470	9.3%
MIGRANTS OUTSIDE CANADA	53750	1.2%	11145	1.3%	6155	.5%	13630	1.2%	10935	1.1%	11885	3.0%
PROVINCE NOT STATED (1971)	28905	.6%	4125	.5%	5985	.5%	6800	.6%	7770	.8%	4225	1.1%
TOTAL MIGRANTS	1132910	24.9%	148600	17.6%	232405	20.2%	325620	28.9%	256475	24.9%	169810	43.3%
NON-MIGRANTS	641655	14.1%	120860	14.3%	165215	14.3%	139015	12.4%	143425	13.9%	73140	18.7%
TOTAL MOVERS	1774110	39.0%	269375	31.8%	397445	34.5%	464855	41.3%	399670	38.8%	242765	62.0%
NON-MOVERS	2771935	61.0%	576520	68.2%	754070	65.5%	660585	58.7%	631835	61.3%	148925	38.0%

BUSINESS AND RESIDENCE SERVICE**Item****370. GENERAL**

1. The Company classifies a customer's service as business or residence for the application of exchange service rates according to its primary use.

380. BUSINESS SERVICE

1. The business classification applies when the service is used primarily or substantially for a commercial, industrial, professional, institutional, vocational or otherwise occupational purpose or for any purpose other than that of a domestic or family nature.

2. The business classification applies in such circumstances as the following:

(a) When a directory listing indicates other than primarily domestic use.

(b) When the service is advertised or publicized in connection with any non-domestic use; except that residence service of a person authorized by this Tariff to use an existing business service in the same local-service area may be publicized in connection with such business service.

(c) In boarding and rooming houses and other places in which four or more persons are accommodated for payment, and in residence quarters of any club, institution or similar place, where guests, boarders, employees or other persons not members of the customer's household have general access to his service.

3. If any part of the customer's service is used primarily for a non-domestic purpose or is in a location where the business classification would apply, the entire service is classified as business, except as follows:

(a) When his residence service is extended to equipment located on the premises of a telephone-answering business.

(b) A customer to both business and residence service may have either of the following:

1. Connection of his residence service with terminating equipment of his business service.

2. An extension telephone of his residence service at the location of his business service.

4. When the Company is applying the residence classification but finds that the business classification is applicable, it may thenceforth charge the appropriate business rate, upon notifying the customer.

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See page 4 for explanation of symbols / Voir l'explication des symboles à la page 4

Issued/Publication 1979 01 31

By P.E. Skelton, Assistant Vice-President (Rates), Hull, Qué.

SERVICE D'AFFAIRES ET SERVICE DE RÉSIDENCE**Article****370. GÉNÉRALITÉS**

1. La compagnie classe le service d'un abonné, pour l'application des tarifs du service local, en service d'affaires ou service de résidence, selon l'usage principal qui en est fait.

380. SERVICE D'AFFAIRES

1. Le service est classé comme service d'affaires quand il est utilisé principalement ou en grande partie aux fins d'un commerce, d'une industrie, d'une profession, d'une institution, d'une occupation quelconque ou pour toute autre fin que celles qui sont d'une nature domestique ou familiale.

2. Le service est classé comme service d'affaires dans les cas suivants :

(a) Lorsqu'une inscription à l'annuaire indique un usage qui n'est pas principalement domestique.

(b) Lorsque le numéro de téléphone est annoncé ou diffusé relativement à un usage non domestique, sauf que le service de résidence d'une personne autorisée selon le présent Tarif à utiliser un service d'affaires existant dans la même zone de desserte locale peut être diffusé.

(c) Dans les maisons de pension, les maisons de chambres et autres endroits où quatre personnes ou plus paient pour se loger et dans les locaux résidentiels de tout club, institution ou endroit semblable, ou des invités, des pensionnaires, des employés ou d'autres personnes qui ne sont pas membres de la famille de l'abonné, ont généralement accès à son service.

3. Si une partie du service de l'abonné sert principalement à des fins non domestiques ou est située dans un endroit où elle devrait être classée comme service d'affaires, le service entier est classé comme service d'affaires sauf dans les cas suivants :

(a) Quand son service de résidence est relié à de l'équipement situé dans les locaux d'une entreprise de secrétariat téléphonique.

(b) Quand l'abonné dispose à la fois du service d'affaires et du service de résidence. Deux possibilités lui sont alors offertes :

(1) Faire raccorder son service de résidence à l'équipement terminal de son service d'affaires.

(2) Faire installer un téléphone supplémentaire rattaché à son service de résidence à l'endroit où le service d'affaires est placé.

4. Lorsque le service d'un abonné a été classé comme service de résidence, mais que la compagnie s'aperçoit qu'il devrait être classé comme service d'affaires, la compagnie peut immédiatement imposer le tarif d'affaires après en avoir avisé l'abonné.

Effective date/Entrée en vigueur 1979 02 14

Publié par P.E. Skelton, vice-président adjoint (Tarifs), Hull, Qué.

BUSINESS AND RESIDENCE SERVICE

SERVICE D'AFFAIRES ET SERVICE DE RÉSIDENCE

Item

Article

390. RESIDENCE SERVICE

(m) **390. SERVICE DE RÉSIDENCE**

1. The residence classification applies when the service is used primarily for domestic or family purposes and none of the requirements for the business classification exist.

1. Lorsque le service sert principalement à des fins domestiques ou familiales et qu'il ne répond à aucun des critères justifiant de le classer comme service d'affaires, il s'agit d'un service de résidence.

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See page 4 for explanation of symbols / Voir l'explication des symboles à la page 4

APPENDIX XI (FILE I)
Postal Codes Excluded
from the Business Sampling
Frame

	BOP 1R0	GOA 1L0	G0X 3H0	JUL 1XU	N0A 1H0
	B0T 1K0	G0J 1J0	J0B 3E0	J0L 2G0	P0J 1K0
	B0J 2C0	G0C 1K0	J0R 1L0	J0L 2K0	P0L 1N0
A0A 1G0	B0K 1H0	G0T 1C0	G0A 3C0	J0L 2C0	P0A 1K0
A0H 1C0	B0E 2V0	J0L 1C0	G0E 2G0	J0L 2P0	P0K 1E0
A0C 1B0	B0W 2Y0	J0A 1A0	J0N 1S0	J0L 1E0	P0X 1C0
A0H 1E0	B0T 1W0	J0M 1B0	J0M 1S0	J0N 1N0	K0G 1J0
A0E 1E0	B0M 1X0	G0N 1E0	J0Y 2N0	J0L 2S0	N0G 2G0
A0A 1T0	B0N 2T0	G0A 1T0	J0M 1T0	J0X 3K0	K0E 1N0
A0M 1C0	B0P 1X0	J0B 1R0	J0X 3B0	G0A 1H0	P0T 2C0
A0E 1J0	B0J 1B0	G0N 1G0	G0L 4K0	G0A 1K0	P0H 1V0
A0G 1T0	B0J 1G0	G0N 1H0	J0E 2L0	G0A 1N0	N0H 1Y0
A0K 2E0	B0J 1L0	G0B 1E0	J0A 1M0	G0A 2K0	N0K 1N0
A0B 1S0	B0J 1N0	G0B 1G0	J0E 2N0	G0A 2C0	N0N 1M0
A0G 1Y0	B0J 1S0	G0T 1E0	G0G 1J0	G0A 2H0	N0G 2L0
A0B 1W0	B0J 1T0	J0M 1C0	G0G 1K0	G0A 4N0	N0A 1L0
A0E 1W0	B0J 1X0	J0M 1E0	G0G 2T0	G0A 3E0	P0J 1P0
A0P 1E0	B0J 1Z0	G0G 1K0	G0W 1H0	G0A 3N0	N0N 1R0
A0A 2M0	B0J 2N0	G0C 1R0	J0Y 1H0	G0A 3K0	K0K 2T0
A0B 2G0	B0J 2S0	J0M 1G0	J0Y 1N0	G0A 4C0	N0A 1N0
A0G 3A0	B0J 2V0	G0G 1P0	J0Y 2A0	G0A 4P0	N0H 2C0
A0E 2M0	B0J 2Y0	G0W 1T0	J0Y 2B0	G0A 4V0	L0B 1N0
A0H 1W0	B0J 2Z0	J0S 1H0	J0Y 3B0	G0R 1C0	K0E 1T0
A0B 2Y0	B0J 3J0	J0M 1H0	J0Y 2X0	G0R 2K0	N0P 2C0
A0A 3X0	B0J 3K0	J0M 1J0	J0Y 3A0	G0S 1C0	L0N 1S0
A0J 1T0	B0J 3L0	J0K 1G0	J0Y 3C0	G0S 1E0	P0V 2T0
A0K 4S0	B0N 1A0	J0K 1J0	G0W 1C0	G0S 2L0	P0T 2V0
A0G 4M0	B0N 1B0	G0T 1J0	J0Y 2Z0	G0S 2Z0	N0H 2L0
A0A 4G0	B0N 1N0	G0R 1Z0	J0Y 2T0	G0S 3B0	N0M 2V0
A0H 2H0	B0N 2V0	G0B 1L0	J0Y 2V0	G0S 3L0	L0S 1S0
A0R 1A0	B0J 3A0	G0R 1S0	J0Y 2W0	G0A 1G0	P0H 2G0
A0R 1B0	B0J 1R0	J0Y 1X0	J0Y 2Y0	G0A 1J0	L0E 1R0
A0P 1A0	B0K 1S0	J0Y 1Z0	J0W 1V0	G0A 2S0	N0P 2L0
A0P 1C0	B0K 1X0	J0M 1K0	J0M 1V0	G0A 4S0	L0G 1W0
	B0K 2A0	J0L 1J0	J0M 1A0	G0A 4T0	L0C 1K0
A0P 1G0	E0B 1E0	J0X 2H0	J0M 1B0	J0V 1J0	L0R 2C0
A0P 1J0	E0B 1K0	J0S 1J0	J0M 1C0	J0G 1M0	N0G 2V0
A0P 1K0	E0K 1B0	G0W 2C0	J0M 1E0	J0G 1J0	N0E 1Y0
A0P 1L0	E0J 1M0	J0R 1G0	J0M 1G0	J0H 1X0	P0S 1K0
A0P 1M0	E0E 1J0	G0E 1W0	J0M 1H0	J0J 2A0	N0G 2W0
A0P 1N0	E0A 3C0	G0C 2B0	J0M 1J0	K0C 1A0	P0V 1B0
A0P 1P0	E0A 3G0	J0G 1E0	J0M 1K0	L0M 1A0	P0V 1C0
A0K 1V0	E0E 1P0	J0M 1L0	J0M 1L0	K0A 1A0	P0V 1E0
A0K 2P0	E0C 2B0	G0C 2K0	J0M 1M0	L0M 1B0	P0V 1G0
A0K 3K0	E0J 2B0	G0T 1M0	J0M 1N0	P0T 1C0	P0V 1H0
A0K 3L0	E0G 1S0	G0A 2X0	J0M 1P0	L0R 1B0	P0V 1J0
A0K 3P0	E0G 1W0	J0M 1M0	J0M 1R0	N0P 1A0	P0V 1L0
A0K 4E0	E0G 1Z0	J0M 1N0	J0M 1S0	P0R 1B0	P0L 1N0
A0K 4K0	E0G 2W0	G0A 2Y0	J0M 1T0	P0B 1C0	P0V 1T0
A0K 5S0	E0G 3J0	J0M 1P0	G0W 1Z0	L0G 1C0	P0V 1W0
A0K 1N0	E0K 1A0	G0P 1E0	G0W 1C0	K0K 1H0	P0V 1Y0
A0K 1T0	J0H 1A0	J0K 1S0	J0N 1C0	N0N 1C0	P0V 1Z0
A0K 5Y0	J0M 1V0	J0B 2H0	J0N 1T0	N0A 1A0	P0V 2A0
A0K 3J0	G0J 1B0	G0N 1L0	J0N 1E0	K0L 1L0	P0V 2C0
A0K 4W0	J0B 1A0	J0B 2J0	J0N 1G0	P0M 1H0	P0V 2B0
A0A 2J0	G0A 1B0	J0B 2K0	J0N 1J0	P0M 1K0	P0V 2H0
A0A 2T0	G0S 1A0	J0M 1R0	J0N 1M0	N0M 1L0	P0V 2K0
A0A 2Y0	G0M 1A0	J0Y 2M0	J0N 1H0	P0J 1C0	P0V 3A0
A0A 2E0	G0A 1E0	G0Y 2L0	J0N 1P0	P0L 1C0	P0V 2L0
A0A 3H0	J0J 1A0	J0L 1T0	J0N 1R0	N0N 1G0	P0V 2M0
A0A 3K0	J0B 1E0	G0W 2N0	J0P 1A0	L0S 1B0	P0V 2Y0
A0A 3L0	J0M 1A0	J0K 2N0	J0P 1H0	K0J 1P0	P0V 2Z0
A0A 3Y0	J0K 1A0	G0A 3X0	J0P 1K0	N0G 1R0	P0V 1V0
A0A 3Z0	G0N 1A0	G0S 2V0	J0L 1B0	P0P 1C0	P0X 1B0
A0A 1J0	J0B 1H0	J0T 2H0	J0L 1G0	N0M 1S0	P0X 1P0
B0V 1A0	J0V 1A0	G0L 3Y0	J0L 1K0	N0N 1J0	P0T 1P0
B0P 1N0	G0L 1E0	G0A 4G0	J0L 1N0	P0T 1M0	P0T 1Z0
	G0E 1B0	J0S 1X0	J0L 1S0	P0C 1G0	P0T 2L0

POT 3A0	KOA 2A0	LOG 1V0	ROB 1S0	SOJ 2B0	TOH 2Y0	VOM 1P0
POL 1A0	KOA 2E0	LOG 1X0	ROB 0N0	SOM 2L0	TOA 1C0	VOM 1R0
POL 1H0	KOA 2N0	LOH 1A0	ROB 0P0	SOM 3E0	TOL 1J0	VOS 1A0
POL 1J0	KOA 2P0	LOH 1C0	ROB 1Y0	SOJ 2W0	TOG 0A0	VOS 1M0
POL 1S0	KOA 3P0	LOH 1E0	ROB 1H0	SOM 3B0	TOB 0E0	VOR 2L0
POL 1W0	KOA 2S0	LOH 1G0	ROB 2B0	TOL 0C0	TOA 0K0	XOE 0A0
POL 1Y0	KOA 2T0	LOH 1H0	ROB 0A0	TOG 0E0	TOB 0S0	XOE 0B0
POL 2H0	KOA 2W0	LOH 1J0	ROE 0J0	TOA 0L0	TOG 0H0	XOE 0G0
POL 1X0	KOA 2Z0	LOH 1K0	ROE 1E0	TOJ 0J0	TOG 0J0	XOE 0H0
POT 1L0	KOA 3A0	LOH 1L0	ROE 1Z0	TOK 0K0	TOA 1N0	XOG 0A0
LOP 1G0	KOA 3E0	LOH 1M0	ROE 2E0	TOL 0T0	TOG 1L0	XOE 0J0
LOR 1A0	KOA 3N0	LOJ 1A0	ROE 0G0	TOK 0L0	TOG 1P0	XOE 0K0
LOR 1C0	KOA 3G0	LOJ 1B0	ROC 0J0	TOC 1E0	TOA 2N0	XOE 0L0
LOR 1H0	KOA 3H0	LOJ 1C0	ROB 0V0	TOE 0M0	TOG 1Y0	XOE 0M0
LOR 1J0	KOA 3J0	LOJ 1E0	ROB 0Z0	TOJ 0Y0	TOG 2J0	XOE 0N0
LOR 1K0	KOG 1B0	LOJ 1K0	ROE 1K0	TOE 0P0	TOB 1E0	XOE 0P0
LOR 1L0	KOA 1V0	LOJ 1J0	ROG 1Y0	TOL 0Z0	TOB 3N0	XOE 0R0
LOR 1M0	KOA 2G0	LON 1A0	ROE 0A0	TOA 1T0	TOB 0Y0	XOE 0T0
LOR 1T0	KOA 2Y0	LON 1B0	ROE 0K0	TOE 0Y0	TOA 2H0	XOE 0V0
LOR 1V0	LOS 1A0	LON 1E0	ROE 0Y0	TOJ 1P0	VOX 1S0	XOE 0W0
LOR 1W0	LOS 1C0	LON 1C0	ROA 0T0	TOL 1B0	VOB 1G0	XOE 0X0
LOR 1X0	LOS 1E0	LON 1K0	ROA 1E0	TOE 1B0	VOB 1M0	XOE 0Y0
LOR 2B0	LOS 1J0	LON 1P0	ROE 1J0	TOM 1A0	VCA 1H0	XOH CA0
LOR 2G0	LOS 1K0	LOP 1A0	ROA 1G0	TOC 1S0	VOH 1H0	XOE 1E0
LOR 2H0	LOS 1L0	LOP 1C0	ROA 1S0	T9E 2E0	VOR 2E0	XOA 0A0
LOR 2K0	LOS 1M0	LOP 1K0	ROC 1W0	TOJ 2P0	VOJ 2C0	XOC 0A0
LOR 2L0	LOS 1P0	LOP 1L0	ROH 1J0	TOM 1P0	VOK 2B0	XOA 0B0
LOR 1Z0	LOS 1T0	LOP 1M0	ROG 0S0	TOH 2X0	VOR 2S0	XOE 0C0
LOR 1P0	LOS 1V0	LOP 1N0	ROG 2A0	TOK 1W0	VOX 1W0	XOA 0C0
LOR 1R0	LOS 1R0	NOR 1A0	ROG 2W0	TOC 2H0	VOE 2S0	XOC 0E0
NOB 1B0	POM 1B0	NOR 1C0	ROH 0J0	TOM 1T0	VOJ 2N0	XOA 0E0
NOB 1E0	POM 1E0	NOR 1K0	ROE 0H0	TOG 2A0	VOB 2G0	XOE 0E0
NOB 1K0	POM 1L0	NOR 1J0	ROG 0R0	TOE 2C0	VON 3G0	XOC 0C0
NOB 1L0	POM 1M0	NOR 1L0	SOH 0B0	TOA 3A0	VOH 1Z0	XOC 0E0
NOB 1M0	POM 1N0	NOR 1R0	SOA 0L0	TOC 2L0	VOX 1L0	XOA 0G0
NOB 1N0	POM 1P0	NOR 1V0	SOA 0X0	TOE 2G0	VOJ 1B0	XOA 0H0
NOB 1V0	POM 1R0	NOR 1S0	SOK 2A0	TOK 2G0	VOJ 1R0	XOE LJ0
NOB 1Y0	POM 1S0	NOR 1N0	SOA 1S0	TOB 4L0	VOJ 2H0	XOA 0J0
NOB 2B0	POM 1V0	ROJ 1E0	SOL 1S0	TOB 4M0	VOJ 2P0	XOA 0K0
NOB 2N0	POM 1Y0	ROG 1J0	SOM 1V0	TOB 4P0	VOJ 2T0	XOE 0S0
NOB 2V0	POM 2C0	ROJ 1H0	SOE 1A0	TOG 2L0	VOC 2R0	XOA 0L0
NOL 1B0	POM 2E0	ROA 2A0	SOA 2P0	TOE 2L0	VOC 1P0	XOA 0M0
NOL 1E0	POM 2L0	ROL 1Z0	SOE 1E0	TOG 0C0	VOC 1R0	XOA 0N0
NOL 1G0	POM 2M0	ROA 0K0	SOM 0E0	TOA 0S0	VOC 1Z0	XOA 0P0
NOL 1K0	POM 2R0	ROM 2C0	SOL 2V0	TOA 0W0	VOC 2B0	XOA 0X0
NOL 1L0	POM 2Y0	ROG 2X0	SOE 1T0	TOG 0T0	VOC 2S0	XOA 0R0
NOL 1N0	POM 3B0	ROB 0B0	SOP 0C0	TOA 1G0	VOJ 2S0	XOE 1K0
NOL 1S0	POM 3A0	ROB 0E0	SOJ 1J0	TOA 1J0	VOJ 3B0	XOA 0S0
NOL 1V0	POM 3C0	ROB 0J0	SOJ 1L0	TOH 1R0	VOC 2N0	XOC 0G0
NOL 2B0	POM 3E0	ROB 0L0	SOP 0E0	TOG 1B0	VOJ 1A0	XOC 0H0
NOL 2E0	POM 3H0	ROB 0M0	SOP 0G0	TOG 1X0	VOT 1A0	XOA 0V0
NOL 2G0	POM 2T0	ROB 0S0	SOJ 2L0	TOG 2N0	VOC 1E0	XOE 0Z0
NOL 2K0	POT 1K0	ROB 0T0	SOJ 2P0	TOG 2K0	VOC 1L0	XOA 0W0
NOL 2L0	POT 1W0	ROB 1X0	SOJ 2R0	TOG 0K0	VOJ 1X0	XOE 1B0
NOM 1C0	POT 2G0	ROB 1W0	SOP 0H0	TOH 0B0	VOT 1J0	XOE 1C0
NOM 1P0	POT 2K0	ROB 0W0	SOJ 3C0	TOH 4A0	VOT 1K0	XOC 0J0
NOM 1Z0	POT 2M0	ROB 0Y0	SOJ 1W0	TOH 0N0	VOJ 2A0	
NOM 2A0	POT 2Z0	ROB 1A0	SOE 1G0	TOH 0P0	VOV 1E0	
NOM 2P0	LOC 1A0	ROB 1B0	SOM 0G0	TOH 0R0	VOV 1H0	
LOB 1A0	LOG 1H0	ROB 1C0	SOM 0J0	TOH 0S0	VOT 1V0	
LOB 1C0	LOG 1J0	ROB 1E0	SOM 0K0	TOH 0T0	VOW 1A0	
LOB 1G0	LOG 1K0	ROB 1G0	SOM 0M0	TOH 3Y0	VOM 1E0	
KOA 1B0	LOG 1K0	ROB 1L0	SOM 0S0	TOH 1N0	VON 1G0	
KOA 1E0	LOG 1N0	ROB 1M0	SOJ 0T0	TOH 1Z0	VON 2E0	
KOA 1K0	LOG 1P0	ROB 1N0	SOJ 0W0	TOH 2G0	VOX 1A0	
KOA 1N0	LOG 1R0	ROE 1P0	SOM 1C0	TOH 2H0	VOX 1J0	
KOA 1S0	LOG 1S0	ROB 1J0	SOM 1G0	TOH 2P0	VOX 1T0	
KOA 1Z0	LOG 1T0	ROB 1R0	SOM 2H0	TOH 2W0	VOM 1P0	

APPENDIX XI (FILE 2)

	LOP 1R0	
	LOP 1S0	
AOP 1R0	LOR 1V0	
AOP 1S0	LOS 1H0	
AOR 1C0	LOS 1W0	
BOH 1B0	NOB 1R0	
BOH 1C0	NOG 3A0	
BON 1B0	NOL 2R0	
BON 1S0	NOP 2V0	
BON 2W0	NOR 1H0	
BOV 1J0	NOR 1P0	
E0C 2E0	NOR 1E0	
E0G 1G0	POT 3B0	
E0G 2K0	POV 1K0	
E0G 3A0	ROB 0X0	
E0G 3R0	ROB 0R0	
E0J 2C0	ROB 1V0	
GOA 4W0	ROB 2C0	
GOH 1J0	ROB 2E0	
GOJ 1L0	ROE 0W0	
GOJ 3M0	ROE 1H0	
GOS 3M0	ROG 2H0	
GOS 3N0	SOE 1R0	
GOT 1H0	SOG 1W0	
GOW 3A0	SOJ 0HG	
GOW 3C0	SOJ 0X0	
H0A 1A0	SOK 5A0	
H0A 1B0	SOM 2N0	
H0A 1C0	SOM 2X0	
H0A 1E0	T0A 0X0	
H0A 1G0	T0A 1K0	
J0B 1V0	T0A 2S0	
J0B 1Z0	T0A 3R0	
J0B 2G0	TJA 3S0	
J0B 3K0	T0A 3V0	
J0B 3L0	TOB 0N0	
J0E 2R0	TOB 1P0	
J0J 2M0	TOC 1T0	
J0L 1L0	TOC 1V0	
J0L 1Z0	TOE 1R0	
J0V 1A0	TOE 2P0	
J0W 1M0	TOJ 3R0	
J0W 1Z0	TOL 2E0	
J0W 2A0	TOM 2H0	
J0X 2B0	V0A 1S0	
J0X 2E0	V0A 1R0	
J0X 3A0	V0B 2R0	
J0Y 3G0	V0C 1A0	
J0Y 3E0	V0C 2P0	
J0Z 2M0	V0E 3J0	
K0A 1C0	V0E 3G0	
K0A 1Y0	V0J 2L0	
K0A 2C0	V0J 3K0	
K0A 2V0	V0K 2T0	
K0A 2B0	V0L 1E0	
K0A 1J0	V0M 1J0	
K0H 1A0	V0M 1M0	
K0H 1R0	V0R 3K0	
K0K 2R0	V0R 3J0	
K0K 3S0	V0S 1G0	
K0K 3R0	V0S 1H0	
L0E 1M0	V0T 2A0	
L0H 1B0	V0X 2C0	
L0H 1V0		
L0I 1P0		
L0J 1H0		
L0J 1G0		
L0P 1P0		

