Canadian Labour Force Survey

(Sampling Manual)

LIST OF EXAMPLES

LIST OF EXAMPLES - Concluded

Specifications for Special E. A. Tabulation for Sample Redesign

Print Out

- One line for each E.A.
- Sorted - Province x Census Division x Census Sub-division x Electoral District x E.A.
- Spacing and arrangement to be stipulated.

Punch Cards

- To be prepared after examination of Print Out
- One card for each E.A. with some condensation of data.
- Possibly one card for each Census Sub-division to include aggregates and possibly some percentages and averages.

Tape Record for each E.A.

Identification		Tape Digits	
Province	- Nfld. - 0, P.E.I. -1, N.S. -2, etc.	1	1
Electoral District	- Use Census Code	2	2-3
E.A.	- Use Census Code	3	12-14
County or C.D.	- Use Census Code	2	5-6
Census Sub-division	- Use Census Code	3	8-10
E.A. Type	- (to be gang punched later on punch cards)		

- blank - Normal
- 1 - Hotel
- 2 - Group Residence
- 3 - Educational Institution
- 4 - Religious Order
- 5 - Hospital
- 6 -
- 7 - Misc.
- 8 - Military Establishment
- 9 - Indian Reserves

		Tape Digits	
Urban Size	- Rural (Census Code A) - 0	1	18
	1000-2499 (Census Code 7) - 1		
	2500-4999 (Census Code 6) - 2		
	5000-9999 (Census Code 5) - 3		
	10,000-14,999 - 4*		
	15,000-19,999 (Census Code) - 5*		
	20,000-29,999 (Census Code 3) - 6**		
	30,000-99,999 (Census Code 2) - 7		
	100,000 and over (Census Code 1) - 8		
	(Census Code A) - blank		

* Blank on tape (to be gang punched later on punched cards)

** Record 6 for Census Code 3 (other codes 6 to be gang punched later on punch cards)

Households

No. of Households	- count households 001-799, 901-999	3	20-22

Population

Total persons	- same as Census Count	4	27-30
Persons (after exclusions)	- Exclude age 14 and under	4	31-34
	- Exclude "Officers - Armed Services" (CCC 407)		
	- Exclude "Other Ranks " " " (OCC 408)		
Persons living on farms	- Count persons (Yes in Quest. C)	4	35-38

Labour Force - exclude OCC 407 and 408

Persons with job	- Count Yes in Quest. 16	3	47-9
Persons looking last week	- Count Yes in Quest. 17	3	50-2
Persons with job past 12 months	- Count Yes in Quest. 18	3	43-5

Labour Force - Exclude OCC 407 and 408

- Include only Yes in Quest. 16 or Quest.17.

		Tape Digits	
Labour Force (Cont'd)			
Persons - Non Agr. - WSE	- Include IND 030-999 which are WSE in Quest. 23 - Also include Yes in Quest. 17 which are "Never Worked" in Quest. 19.	3	57-9
Persons - Non Agr. - Other	- Include IND 030-999 which are not WSE in Quest. 23	3	63-5
Persons - Agr. - Other	- Include IND 000-029 which are not WSE in Quest. 23	3	66-8
Salary and Wages	- Exclude OCC 407 and 408		
(Non Agr.)	- Include only Yes in Quest. 16 or Quest. 17 which are IND 030-999 which are Male in Quest. 4 " " Age 25-59 in Quest. 5 " " WSE in Quest. 23 " " $100-$11,900 in Quest. 25		
Salaries and Wages	- Accumulate Quest. 25 for the above and round total to nearest $1000	4	73-6
Persons	- Count persons for the above	3	78-80
Industry	- Include only Yes in Quest. 16 or Quest. 17 - Note OCC 407 and 408 are counted separately		
Agriculture	- IND 000-029	3	85-7
Forestry	- IND 030-039	3	88-90
Fishing and Trapping	- IND 040-049	3	91-3
Mining, etc.	- IND 050-099	3	94-6
Manufacturing - Durable	- IND 250-269, 290-359	3	99-101
Manufacturing - Non Durable	- IND 100-249, 270-289, 360-399	3	102-104
Construction	- IND 400-499	3	107-9
Trans., Comm., and Utilities	- IND 500-599	3	110-12
Trade	- IND 600-699	3	113-15
Finance, etc.	- IND 700-799	3	116-18
Service	- IND 800-899	3	119-121

		Tape Digits	
Industry (Cont'd)			
Government - Civil	- IND 900-998 (exclude OCC 407 & 408)	3	124-26
Government - Armed Services	- IND 900-998 (only OCC 407 and 408)	3	127-29
Unspecified	- IND 999 and also include Yes in Quest. 17 who are "Never Worked" in Quest. 19.	3	
		97	

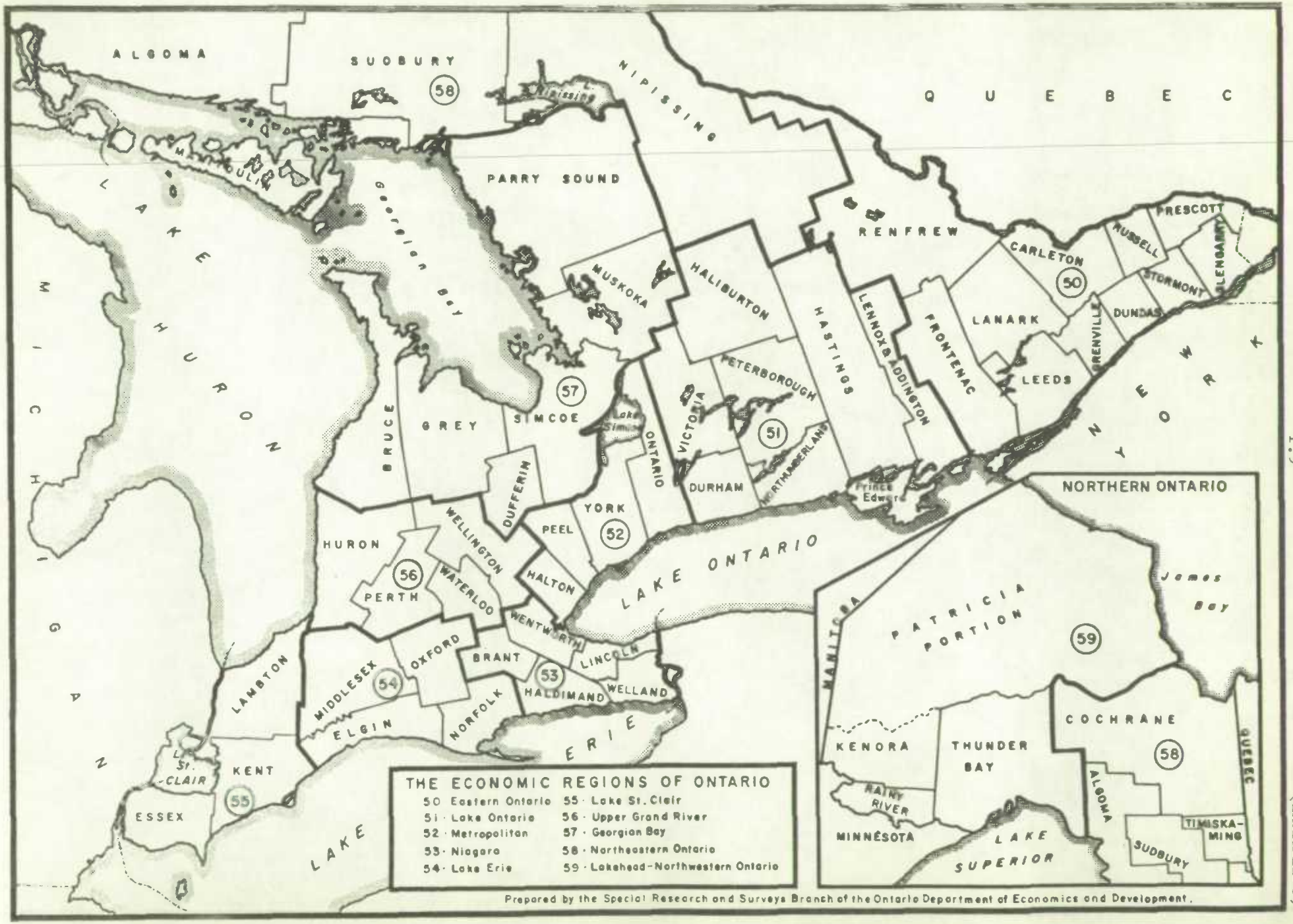
Specifications for Layout of E. A. Cards

		Tape Digits	Cols.
Electoral District		3	1-3
Enumeration Area		3	4-6
County		2	7-8
Municipality		3	9-11
Urban size (punch O for O - leave blank for blank)		1	12
No. of H.H.'s		3	13-15
Population	- Total	4	16-19
	- Spec.	4	20-23
	- Farm	4	24-27
Labour Force	- Total (Job LWK + LKD LWK)	3	28-30
	- Job LWK	3	31-33
	- LKD LWK	3	34-36
Labour Force	- AGR. (Agr.WSE + AGR. Oth.)	3	37-39
	- NAG WSE	3	40-42
	- NAG OTH	3	43-45
Ave W. and S ($\frac{\text{AMNT}}{\text{No. RPT}}$ x 10)		2	46-47
Labour Force	- AGRICU	3	48-50
	- FOREST, FISHING	3	51-53
	- MINING	3	54-56
	- MAN NDR	3	60-62
	- CONSTR	3	63-65

	Tape Digits	Cols.
- TRANSP	3	66-68
- TRADE, FINANCE, SERVICE)	3	69-71
- GOV CIV, UNSPEC)		
Economic Region	2	72-73
N.S.R.U. or S.R.U.	1	74
Primary Sampling Unit		75-76

Notes - Print-out identification of E.A. (11 digits) if there is an overflow in <u>any</u> field.

- Print-out "Total Population" for <u>Census Division</u> and <u>Census Sub-Divisions</u> as control totals


ALGOMA
SUDBURY
58
NIPISSING
QUEBEC
PARRY SOUND
MANITOULIN
LAKE HURON
Georgian Bay
MUSKOKA
HALIBURTON
RENFREW
CARLETON
50
PRESCOTT
RUSSELL
STORMONT
GLENGARRY
DUNDAS
GRENVILLE
LANARK
LEEDS
FRONTENAC
LENNOX & ADDINGTON
HASTINGS
PETERBOROUGH
51
VICTORIA
DURHAM
NORTHUMBERLAND
Prince Edward
BRUCE
GREY
SIMCOE
57
ONTARIO
DUFFERIN
YORK
52
PEEL
HURON
WELLINGTON
56
PERTH
WATERLOO
HALTON
WENTWORTH
LAKE ONTARIO
NORTHERN ONTARIO
James Bay
PATRICIA PORTION
59
MANITOBA
LAMBTON
OXFORD
BRANT
LINCOLN
MIDDLESEX
54
53
HALDIMAND
WELLAND
ELGIN
NORFOLK
LAKE ERIE
L. St. Clair
KENT
55
ESSEX
KENORA
THUNDER BAY
COCHRANE
58
QUEBEC
RAINY RIVER
MINNESOTA
LAKE SUPERIOR
ALGOMA
TIMISKAMING
SUDBURY
THE ECONOMIC REGIONS OF ONTARIO
50 Eastern Ontario
51 Lake Ontario
52 Metropolitan
53 Niagara
54 Lake Erie
55 Lake St. Clair
56 Upper Grand River
57 Georgian Bay
58 Northeastern Ontario
59 Lakehead-Northwestern Ontario
Prepared by the Special Research and Surveys Branch of the Ontario Department of Economics and Development.

1.9 (EXAMPLE 3)

REDESIGN OF LABOUR FORCE SAMPLE - ECONOMIC REGIONS - RURAL PART

CALCULATION OF IMPORTANCE FACTOR - RURAL

ECONOMIC REGION
51

SECT. III-II.

	TOT HHLDS	TOT POP	LF POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	39,614	149,635	48,516	14314	743	1091	5536	4132	3708	3350	15642
ITEMS AS PROPS. LF				0.30	0.02	0.02	0.11	0.09	0.08	0.07	0.32

QUANTITY 1	0.358E 04	0.387E 02	0.302E 03	0.106E 04	0.856E 03	0.242E 03	0.226E 03	0.510E 04
QUANTITY 2	0.259E 04	0.689E 01	0.149E 02	0.461E 03	0.275E 03	0.182E 03	0.154E 03	0.351E 04
QUANTITY 3	0.981E 03	0.318E 02	0.287E 03	0.600E 03	0.581E 03	0.593E 02	0.727E 02	0.160E 04
QUANTITY 4	0.277E 03	0.463E 00	0.612E 01	0.713E 02	0.534E 02	0.444E 01	0.499E 01	0.523E 03

ENUMERATION AREAS - RURAL
(PART)

PROV. 5 DIST. 9 E.A. 30 COUNTY 8 MUNIC. A01

	TOT HHLDS	TOT POP	LF POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	117.	484.	150.	83.	0.	0.	28.	4.	9.	6.	20.
ITEMS AS PROPS. LF				0.55	0.00	0.00	0.19	0.03	0.06	0.04	0.13
EA PROPS./ER PROPS.				1.96	0.00	0.00	1.57	0.29	0.80	0.58	0.41

PROV. 5 DIST. 9 E.A. 31 COUNTY 8 MUNIC. A01

	TOT HHLDS	TOT POP	LF POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	159.	561.	186.	60.	2.	0.	36.	12.	11.	16.	49.
ITEMS AS PROPS. LF				0.32	0.01	0.00	0.19	0.06	0.06	0.09	0.26
EA PROPS./ER PROPS.				1.14	0.74	0.00	1.63	0.70	0.79	1.25	0.80

PROV. 5 DIST. 9 E.A. 32 COUNTY 8 MUNIC. A01

	TOT HHLDS	TOT POP	LF POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	163.	511.	131.	52.	0.	0.	20.	5.	10.	8.	36.
ITEMS AS PROPS. LF				0.40	0.00	0.00	0.15	0.04	0.08	0.06	0.27
EA PROPS./ER PROPS.				1.41	0.00	0.00	1.28	0.42	1.02	0.89	0.84

MUNICIPALITIES - RURAL
(PART)

PROV. 5 DIST. 9 COUNTY 8 MUNIC. A01

	TOT HHLDS	TOT POP	LF POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	439.	1556.	467.	195.	2.	0.	84.	21.	30.	30.	105.
ITEMS AS PROPS. LF				0.42	0.00	0.00	0.18	0.04	0.06	0.06	0.22
MUN. PROPS./ER PROPS.				1.48	0.29	0.00	1.51	0.49	0.86	0.94	0.69

1.10

(EXAMPLE 4)
Rural

REDESIGN OF LABOUR FORCE SAMPLE - ECONOMIC REGIONS - URBAN PART

CALCULATION OF IMPORTANCE FACTOR - URBAN

ECONOMIC REGION
51

SCT 111-112.

	TOT HHLDS	TOT POP	L.F. POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	23,774	80,650	27,485	565	156	470	3768	4548	1809	2341	13828
ITEMS AS PROPS. LF				0.02	0.01	0.02	0.14	0.17	0.07	0.09	0.50
QUANTITY 1				0.727E 02	0.256E 02	0.395E 03	0.320E 04	0.446E 04	0.605E 03	0.103E 04	0.328E 05
QUANTITY 2				0.357E 02	0.400E 01	0.363E 02	0.171E 04	0.261E 04	0.472E 03	0.783E 03	0.266E 05
QUANTITY 3				0.371E 02	0.216E 02	0.359E 03	0.149E 04	0.184E 04	0.134E 03	0.243E 03	0.626E 04
QUANTITY 4				0.694E 00	0.136E 00	0.678E 01	0.193E 03	0.295E 03	0.910E 01	0.213E 02	0.320E 04

ENUMERATION AREAS - URBAN
(PART)

PROV. 5 DIST. 61 E.A. 23 COUNTY 49 MUNIC. A04

	TOT HHLDS	TOT POP	L.F. POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	136.	517.	186.	85.	0.	0.	9.	7.	25.	7.	53.
ITEMS AS PROPS. LF				0.46	0.00	0.00	0.05	0.04	0.13	0.04	0.28
EA PROPS./ER PROPS.				1.62	0.00	0.00	0.41	0.41	1.80	0.55	0.87

PROV. 5 DIST. 61 E.A. 24 COUNTY 49 MUNIC. A04

	TOT HHLDS	TOT POP	L.F. POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	171.	553.	196.	44.	2.	24.	7.	11.	14.	15.	79.
ITEMS AS PROPS. LF				0.22	0.01	0.12	0.04	0.06	0.07	0.08	0.40
EA PROPS./ER PROPS.				0.80	0.70	5.74	0.30	0.61	0.95	1.11	1.23

PROV. 5 DIST. 61 E.A. 25 COUNTY 49 MUNIC. A04

	TOT HHLDS	TOT POP	L.F. POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	158.	520.	171.	82.	0.	0.	12.	1.	13.	16.	47.
ITEMS AS PROPS. LF				0.48	0.00	0.00	0.07	0.01	0.08	0.09	0.27
EA PROPS./ER PROPS.				1.70	0.00	0.00	0.59	0.06	1.02	1.36	0.84

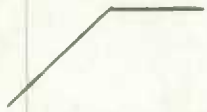
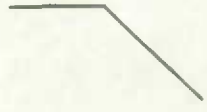
MUNICIPALITIES - URBAN
(PART)

PROV. 5 DIST. 61 COUNTY 49 MUNIC. A04

	TOT HHLDS	TOT POP	L.F. POP	AGRIC	FOR-FISH	MINING	MAN-DUR	MAN-NDUR	CONST	TRANSPORT	SERVICES
TOTALS FOR ITEMS	465.	1590.	553.	211.	2.	24.	28.	19.	52.	38.	179.
ITEMS AS PROPS. LF				0.38	0.00	0.04	0.05	0.03	0.09	0.07	0.32
MUN. PROPS./ER PROPS.				1.35	0.25	2.03	0.43	0.37	1.26	1.00	0.99

(EXAMPLE 4) Urban

STRATA CHARACTERISTICS MASTER PATTERN 3 STRATA - 3 CHARACTERISTICS

1	2	3
A1 	O	B1 
A3 	A2 	B2 
A4 	B4 	B3 

(EXAMPLE 6)

LABOUR FORCE SURVEY REDESIGN

NON-SELF REPRESENTING UNITS

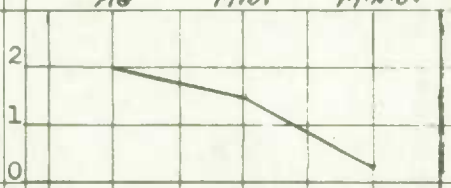
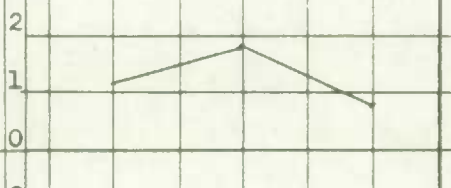
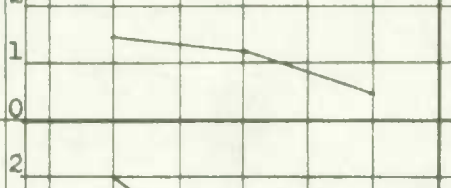
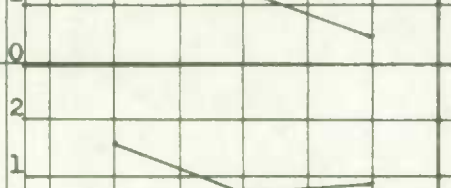
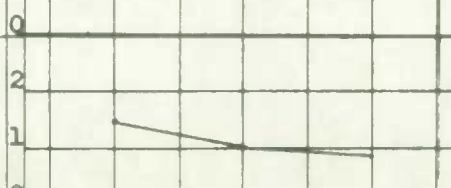
CHARACTERISTIC PATTERN

PAGE NO. ....1.....

E.R. NO. ..51.....

PROVINCE ONTARIO...

TABLE "A"

E.D.	E.A.	CO.	MUNICIPALITY	CHARACTERISTIC (A6 · M.D. · M.N.D.)	STRATUM 1	2	3	4	5
509	30	8	A01			B4			
509	31	8	A01		A3				
509	32	8	A01			B4			
509	6	8	A02				B2		
509	7	8	A02			B4			
509	8	8	A02				B2		
509	9	8	A02				B2		

9604-226: 10-4-64

ECONOMIC REGION 51

PRINTOUT - STRATUM 51020

RURAL PART (PART)

E.D.	E.A.	DIV	MUN	TOT.POP.	L.F.	AGRIC.	F + F	MINING	MFG.DUR	MFG.NON	CONST.	TRANSP.	SERVICES =	HHLDS.
561	011	49	A08	558	206	85			36	12	15	9	49	165
561	012	49	A08	522	158	47			10	13	8	14	66	158
561	013	49	A08	501	154	60			9	12	11	13	49	158
561	014	49	A08	420	146	76			15	9	5	6	35	110
561	005	49	A09	383	131	72			7	9	12	8	23	103
561	006	49	A09	397	136	59			14	10	9	6	38	99
561	007	49	A09	401	121	44			7	19	8	9	34	96
561	008	49	A09	368	132	55			6	24	5	4	38	91
561	009	49	A09	379	119	57			14	10	3	7	28	86
RURAL TOTAL				44,685	14,885	6,770	113	88	944	1,145	1,033	843	3,949	11,824
RURAL LABOUR FORCE (PERCENT)						45	1	1	6	8	7	6	27	

URBAN PART (PART)

E.D.	E.A.	DIV	MUN	TOT.POP.	L.F.	AGRIC.	F + F	MINING	MFG.DUR	MFG.NON	CONST.	TRANSP.	SERVICES =	HHLDS.
561	064	49	A13	1,071	455	2			39	120	22	34	237	372
561	065	49	A13	1,437	538	2			75	136	32	64	229	396
561	066	49	A13	1,328	445	1	4		38	103	17	47	235	374
561	067	49	A13	1,057	372	3	1		32	71	15	24	226	343
561	068	49	A13	1,071	384	1			34	80	21	15	233	349
561	069	49	A13	1,333	520	4	7		48	114	31	37	279	383
561	079	49	A13	326	120	8	1		17	29	11	6	48	89
561	080	49	A13	227	63	5			5	8	8	5	32	43
561	072	49	A17	809	257	6	1		59	57	10	27	87	240
URBAN TOTAL				34,698	11,729	222	85	58	1,161	2,203	820	1,050	6,130	10,291
URBAN LABOUR FORCE (PERCENT)						2	1	0	10	19	7	9	52	
STRATUM TOTAL				79,383	26,614	6,992	198	146	2,105	3,348	1,853	1,893	10,079	22,215
STRATUM LABOUR FORCE (PERCENT)						26	1	1	8	13	7	7	38	

(EXAMPLE 7)

LABOUR FORCE SURVEY REDESIGN

NON-SELF-REPRESENTING UNITS

DISTRIBUTION OF POPULATION OF PARTITIONED TOWNS AND VILLAGES BY CHARACTERISTICS

PAGE NO. .....2.....

E.R. NO. ....51.....

PROVINCE ...ONTARIO

STRATUM NO. 57020....

TABLE "D"
SPLIT TOWNS FORM

TOWN OR VILLAGE	PROP.	E.R. & STR.	DIV.	MUN.	HOUSE-HOLDS	POPULATION		CHARACTERISTICS							
						TOTAL	L.F.	AGRIC.	FOR. & FISH.	MINING	MANUF. DURABLE	MANUF. NON-DUR.	CONST.	TRANSP.	SERVICES
COLUMNS NO.	1-2-3	4-5-6	7-8	9-10-11	13-14-15	16-17-18-19	28-29-30	48-49-50	51-52-53	54-55-56	57-58-59	60-61-62	63-64-65	66-67-68	69-70-71
TWEED V.	1		18	A33	498	1791	604	5	42	2	77	46	35	51	346
	1/2		18	A33	249	0896	302	003	021	001	039	023	017	025	173
	1/2		18	A33	249	0895	302	002	021	001	038	023	018	026	173
	1														
NAPANEE T.	1		25	A12	1352	4500	1548	29	2	5	187	253	102	123	847
	1/2		25	A12	676	2250	774	015	001	002	093	127	051	061	424
	1/2		25	A12	676	2250	774	014	001	003	094	126	051	062	423
	1														
PICTON T.	1		40	A09	1481	4862	1590	22	14	—	96	111	187	102	1058
	1/3		40	A09	493	1621	530	007	004	000	032	037	063	034	353
	1/3		40	A09	494	1621	530	007	005	000	032	037	062	034	353
	1/3		40	A09	494	1620	530	008	005	000	032	037	062	034	352
	1														

1.15

(EXAMPLE 8)

604-225: 24-4-04

LABOUR FORCE SURVEY REDESIGN

NON-SELFREPRESENTING UNITS

DISTRIBUTION OF PERCENTAGES OF L.F.

CHARACTERISTICS BY P.S.U.'s

PAGE NO. ....1.....

E.R. NO. ...51.....

PROVINCE ONTARIO.

STRATUM NO. 51020.

TYPICAL P.S.U.
TABLE "E"

P.S.U.	POPULATION				CHARACTERISTICS								URBAN CENTRES	ROAD DISTANCE
	TOTAL	% RURAL	% URBAN	No. In L.F.	AGRIC.	FOR. & FISH.	MINING	MANUF. DURABLE	MANUF. NON-DUR.	CONST.	TRANSP.	SERVICES		
RURAL PT.	44.685			14.885	6.770	113	88	944	1145	1033	843	3949		
RURAL L.F. (PERCENT)					45	1	1	6	8	7	6	27		
URBAN PT.	34.698			11.729	222	85	58	1161	2203	820	1050	6130		
URBAN L.F. (PERCENT)					2	1	0	10	19	7	9	52		
STRATUM	79.383			26.614	6992	198	146	2105	3348	1853	1893	10079		
STRATUM L.F. (PERCENT)					26	1	1	8	13	7	7	38		
RURAL/URBAN RATIO		56	44											

1.16

(EXAMPLE 9)

604-224: 17-2-64

LABOUR FORCE SURVEY REDESIGN

NON-SELFREPRESENTING UNITS

DISTRIBUTION OF PERCENTAGES OF L.F.

CHARACTERISTICS BY P.S.U.'s

PAGE NO. ....4....

E.R. NO. ....51....

PROVINCE ONTARIO

STRATUM NO. 51020

INDIVIDUAL P.S.U.

TABLE "E"

P.S.U.	POPULATION				CHARACTERISTICS								URBAN CENTRES	ROAD DISTANCE
	TOTAL	% RURAL	% URBAN	No. In L.F.	AGRIC.	FOR. & FISH.	MINING	MANUF. DURABLE	MANUF. NON-DUR.	CONST.	TRANSP.	SERVICES		
51024.														
524-001-18A18	438			165	75	—	—	7	7	11	7	58		
524-004-18A18	473			134	57	—	—	7	12	16	12	30		
551-014-25A09	669			229	52	—	—	30	25	22	21	79		
551-015-25A09	523			203	79	—	—	17	15	12	18	62		
551-016-25A09	515			149	72	—	—	16	13	13	12	23		
551-017-25A09	535			158	51	—	1	19	20	29	8	30		
RURAL TOTAL	3153			1038	386	—	1	96	92	103	78	282		
NAPANEE T.														
25A12	2250			774	14	1	3	94	126	51	62	423	NAPANEE	0
URBAN TOTAL	2250			774	14	1	3	94	126	51	62	423		
P.S.U. TOTAL	5403			1812	400	1	4	190	218	154	140	705		
LABOUR FORCE (PERCENT)					22	0	0	10	12	8	8	39		

9604-224: 17-2-64

(SAMPLE 10)

LABOUR FORCE SURVEY REDESIGN

NON-SELFREPRESENTING UNITS

DISTRIBUTION OF PERCENTAGES OF L.F.

CHARACTERISTICS BY P.S.U.'s

PAGE NO. ....1.....

E.R. NO. ...51.....

PROVINCE ONTARIO

STRATUM NO. 51020

P.S.U. - STRATUM SUMMARY.

TABLE "E"

P.S.U.	POPULATION				CHARACTERISTICS %								URBAN CENTRES	ROAD DISTANCE
	TOTAL	% RURAL	% URBAN	No. In L.F.	AGRIC.	FOR. & FISH.	MINING	MANUF. DURABLE	MANUF. NON-DUR.	CONST.	TRANSP.	SERVICES		
TYPICAL PSU														
51020	74383	56	44	26614	26	1	1	8	13	7	7	38		
51021	5453	56	44	1746	27	2	-	4	9	9	5	43	PICTON BLOOMFIELD	3 9
51022	5253	59	41	1649	26	1	-	5	10	9	4	44	PICTON WELLINGTON	C C
51023	5209	59	41	1697	26	1	-	6	10	9	6	42	PICTON WELLINGTON	C 4
51024	5403	58	42	1812	22	-	-	16	12	8	8	39	NAPANEE	0
51025	5153	56	44	1669	21	1	-	9	15	6	6	42	NAPANEE	12
51026	5006	52	48	1787	23	2	2	11	12	7	8	35	TWEED DESERONTO	C 4
51027	5214	57	43	1709	28	1	4	6	6 (-2)	6	9	39	MADOC TWEED	C C
51028	5552	58	42	2002	31	-	1	4	16	7	8	33	CAMPBELLFORD	C
51029	4988	54	46	1727	30	1	-	8	14	6	6	34	LINDSAY	42
51030	5018	56	44	1650	31	-	-	5	12	7	10	35	CAMPBELLFORD NORWOOD	5 25
51031	5220	51	49	1701	27	-	-	9	12	6	9	37	ORMEE MILLBROCK HASTINGS	42 21 8
51032	5439	58	42	1924	25	1	-	9	14	6	7	38	LINDSAY	34
51033	5262	57	43	1878	26	1	-	11	13	6	7	36	LINDSAY	14
51034	5152	56	44	1772	25	-	-	10	17	6	6	35	LINDSAY	0
51035	5461	58	42	1891	25	-	-	10	15	5	7	38	LINDSAY	0

9604-224: 17-2-64

1.18

(EXAMPLE 11)

E.D.	E.A.	DIV	MUN	TOT.POP.	L.F.	AGRIC.	F + F	MINING	MFG.DUR.	MFG.NON	CONST.	TRANSP.	SERVICES	= HHLDS.
ONTARIO					P. S. U.	5 1 -	2 4							
18--A 18 TYENDINAGA														
524	001	18	A18	438	165	75			7	7	11	7	58	103
524	004	18	A18	473	134	57			7	12	16	12	30	110
25--A 09 RICHMOND														
551	014	25	A09	669	229	52			30	25	22	21	79	181
551	015	25	A09	523	203	79			17	15	12	18	62	136
551	016	25	A09	515	149	72			16	13	13	12	23	133
551	017	25	A09	535	158	51		1	19	20	29	8	30	132
				3,153*	1,038*	386*	*	1*	96*	92*	103*	78*	282*	795*
25--A 12 NAPANEE TOWN 551/48-51														
1/2		25	A12	2,250	774	14	1	3	94	126	51	62	423	676
				2,250*	774*	14*	1*	3*	94*	126*	51*	62*	423*	676*
				5,403**	1,812**	400**	1**	4**	190**	218**	154**	140**	705**	1,471**

(EXAMPLE 12)

DOMINION BUREAU OF STATISTICS
Special Surveys Division

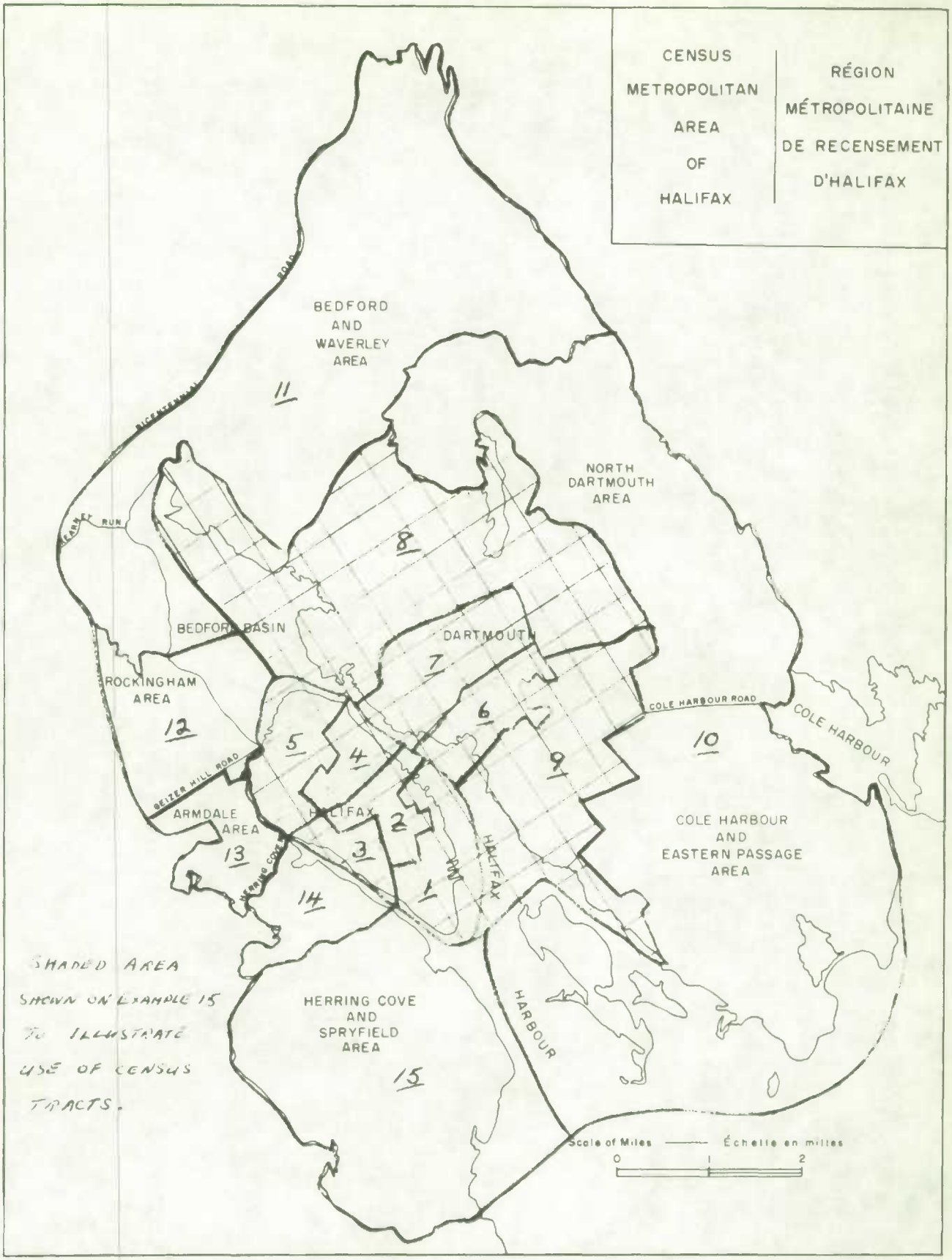
L.F.S. Sample
1961 Census Data

STRATUM SUMMARY

P.S.U. Number	Urban		Rural		Total	
	Population	Households	Population	Households	Population	Households
01	2423	741	3030	823	5453	1564
02	2153	661	3100	818	5253	1479
03	2153	663	3056	796	5209	1459
04	2250	676	3153	795	5403	1471
05	2250	676	2903	748	5153	1424
06	2692	778	2914	775	5606	1553
07	2243	653	2971	774	5214	1427
08	2318	785	3234	879	5552	1614
09	2280	668	2708	685	4988	1353
10	2220	692	2798	722	5018	1414
11	2597	779	2623	722	5220	1501
12	2279	667	3160	824	5439	1491
13	2280	667	2982	849	5262	1516
14	2280	668	2872	722	5152	1390
15	2280	667	3181	892	5461	1559
16						
17						
18						
19						
Total	34,698	10,391	44,685	11,824	79,383	22,215

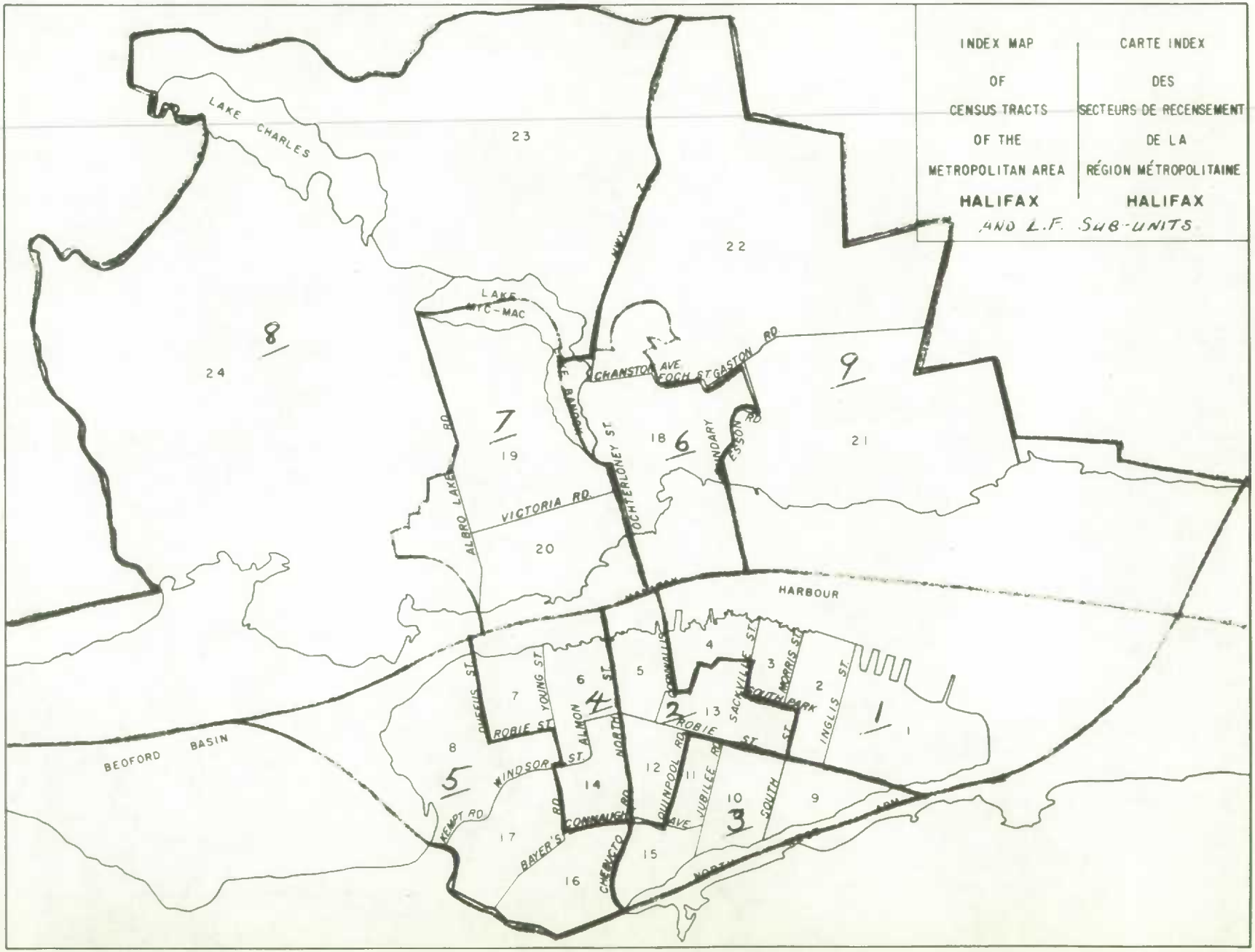
9604–94: 6-9-63

STRATUM 5 1 0 2 0



CENSUS OF CANADA, 1961

RECENSEMENT DU CANADA, 1961

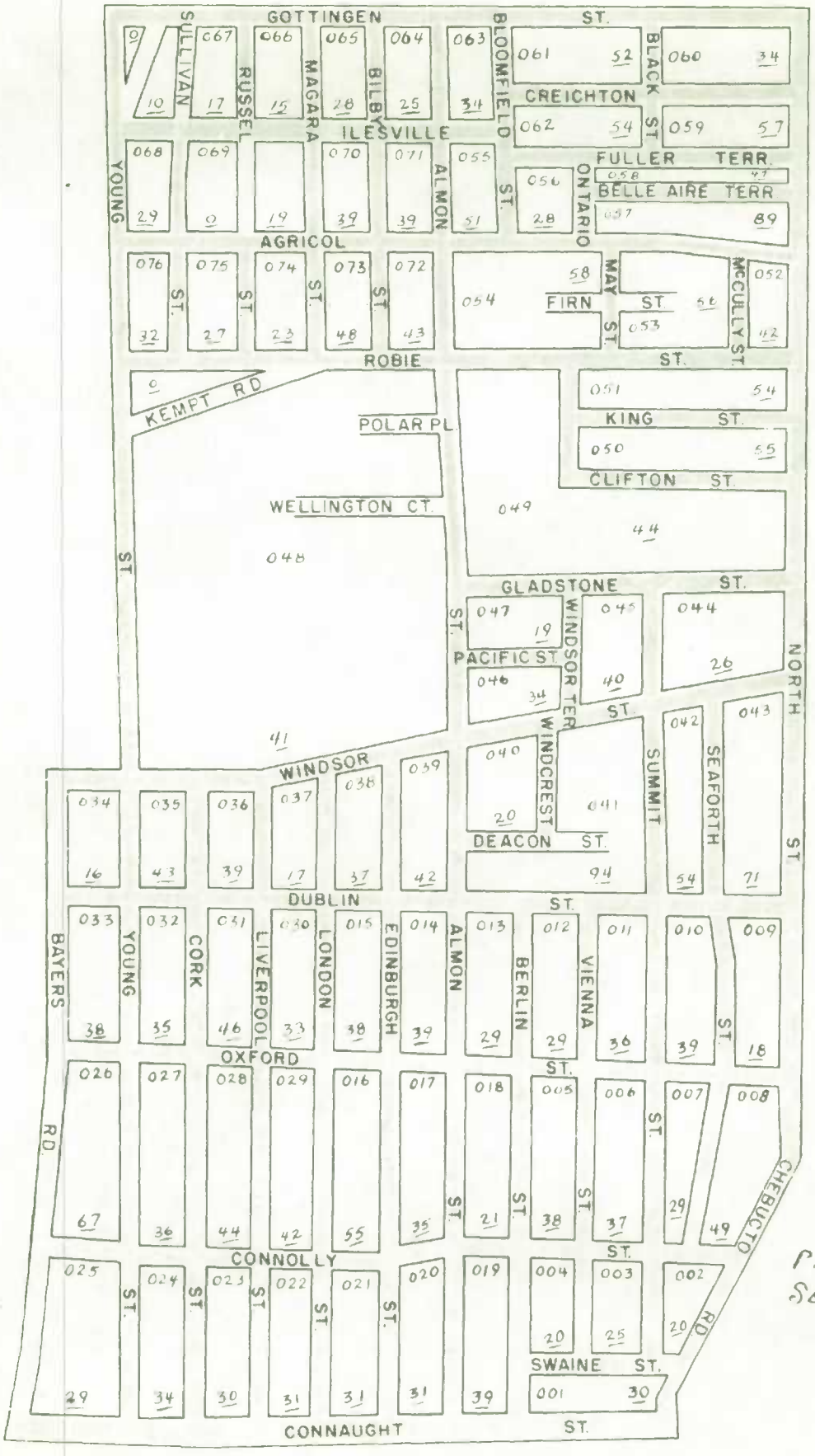


CENSUS OF CANADA, 1961

RECENSEMENT DU CANADA, 1961

1.22 (EXAMPLE 15)

(EXAMPLE 16)



P.S.U. 22104
SEG. 074

(EXAMPLE 17)

Sheet No. 1

Sampling ratio 1/62.5

DENSITY FACTOR - $\frac{10.98666}{2}$ 549

DOMINION BUREAU OF STATISTICS

Special Surveys Division

P.S.U. 22104

Random start 29

SEGMENT RECORD

Municipality HALIFAX

Segment number	Serial number	No. of D.U.	Size (S.R.)	Cumulated size	Selected segments I	II	III	IV	V	Remarks
014	001	30	5	5						
024	002	20	4	9						
034	003	25	5	14						
044	004	20	3	17						
054	005	38	7	24						
064	006	37	7	31	169					R.S. 5
074	007	29	5	36	184					
084	008	44	9	45						
094	009	18	3	48						
104	010	39	8	56						
114	011	36	6	62						
124	012	29	5	67						
015	013	29	6	73						
025	014	39	7	80						
035	015	38	7	87						
045	016	55	10	97	169					R.S. 5
055	017	35	6	103						
065	018	21	4	107						
075	019	39	7	114						
085	020	31	6	120						
095	021	31	5	125						
016	022	31	6	131						
026	023	30	5	136						
036	024	34	7	143						
046	025	29	5	148						
056	026	67	12	160	169					R.S. 6
066	027	36	7	167						
076	028	44	8	175						
086	029	42	7	182						
096	030	33	6	188						
011	031	46	9	197						
021	032	35	6	203						
031	033	38	7	210						

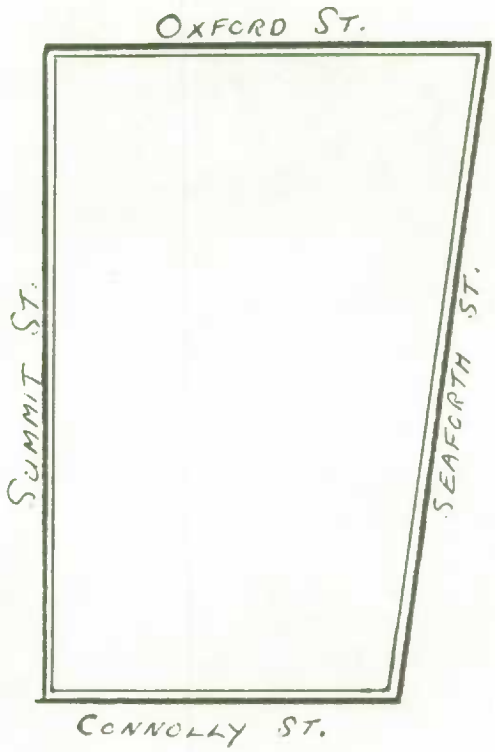
9604-90: 9-7-63

(EXAMPLE 18)

DOMINION BUREAU OF STATISTICS

LF 7

SEGMENT LIST



EXCLUDE - THE CARILLON
6149 SEAFORTH ST.

Location of added listings	Listing No.	Street name	Street No.	Apt. No.	Remarks	Survey in
	0001					
	0002					
	0012					
	0013					
	0014					
	0015					

☐ Continued on next page

Listed by

Location HALIFAX

RANDOM START - 1

PSU 2 2 1 0 4

SEG. 0 7 4

Date

Survey Introduced 184

Sampling Ratio 1/5

9604-98.1: 6-3-64

SEGMENT REPLACEMENT

(S.R.U.)

P.S.U. 2 2 1 0 4

AREA HALIFAX

JURIDICTION HALIFAX

DATE FORWARDED

Current segment				Replacement segment			
Segment number	S.R.	Sur. intr.	Sur. repl.	Segment number	Identification	S.R.	Random start
064	1/7	169	184	074		1/5	1

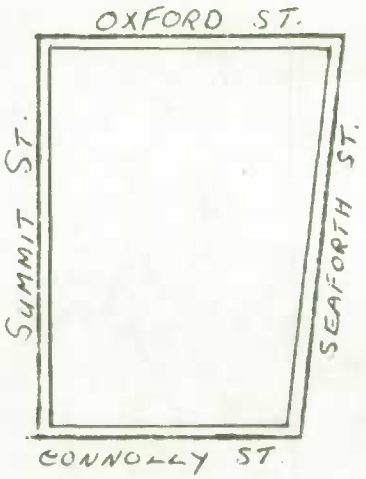
9604-118: 26-1-65

1.26

(EXAMPLE 19)

(EXAMPLE 20)

SEGMENT FILE CARD



EXCLUDE - 6149 SEAFORTH ST.
"THE CARILLON"

PSU 2 2 1 C 4

SEGMENT C 7 4

SERIAL Nº C07

SAMPLING RATIO 1/5

RANDOM START 1

SURVEY INTRODUCED 1 8 4

9604-85: 9-7-63

(EXAMPLE 21)

LF 15

APARTMENT CARD

P.S.U.	SEG.	E.D.	E.A.	C.T.
2 2 1 1 6	C 2 4			

Name of apartment bldg. (print)

THE CARILLON APARTMENTS.

Street address (print)

6149 SEAFORTH ST.

HALIFAX

Comments:

No. of dwelling units	35
No. of floors	5

Use reverse side for sketch of city block if necessary

9604-115: 13-1-65

(EXAMPLE 22)

DOMINION BUREAU OF STATISTICS

FORM LF 14

Special Surveys Division

Sampling ratio 1/62.5

Density Factor 5

Random Start 37

Sheet No. _____

SEGMENT RECORD

(Apartment Block Sample)

Apartment P.S.U. 22116

City HALIFAX

Segment No.	No. of Apartments	Size (S.R.)	Cumulated Size	Selected Segments I	II	III	IV	V	Address	Name of Apartment Block	Location (Regular PSU No.)
013	65	13	13						1055 LUCKNOW ST	PARK PLAZA	22101
023	49	10	23						5300 MORRIS ST	WESTMINSTER	22101
033	310	42	65	171	RS 14				5385 SPRING GARDEN RD.	SPRING GARDEN TERR.	22102
014	63	13	78						1521 LE MARCHANT ST	LE MARCHANT TOWER	22103
024	35	7	85						6149 SEAFORTH ST	THE CARILLON	22104
034	57	11	96						6306 6319 PARK ST.	HALDEN	22104
044	64	13	109	171	AS 4				BLOCK A MUSGRAVE PARK	AQUITANIA TOWERS	22104
054	64	13	122						BLOCK B MUSGRAVE PARK	BONAVENTURE TOWERS	22104
015	80	16	138						3002 OLIVET ST.	AMESBURY	22105
025	80	16	154						3000 OLIVET ST.	BRACHAR	22105
035	80	16	170	171	RS 8				3001 OLIVET ST.	CAMBRIDGE	22105
045	45	9	179						3605 OLIVET ST.	FORT LAWRENCE	22105
055	50	10	189						17 MCFAIRIDGE	FAIRVIEW TOWERS	22112
016	161	32	221						5757 SPRING GARDEN RD.	EMBASSY TOWERS	22102
026	66	13	234	171	RS 4				3025 OLIVET ST.	FORT KNOX	22105
036	66	13	247						3045 OLIVET ST.	FORT GEORGE	22105
046	65	13	260						6201 CHISHOLM AVE.	WESTWOOD TWRS	22105
011	38	8	268						7145 QUINPOOL RD	ARMVIEW TWRS	22103
021	200	40	308	186	RS 19				1333 S PARK ST. (FLOORS 2 TO 11 INCLUSIVE)	PARK VICTORIA	22101
031	200	40	348						1333 S PARK ST. (FLOORS 12 TO 22 INCLUSIVE)	PARK VICTORIA	22101

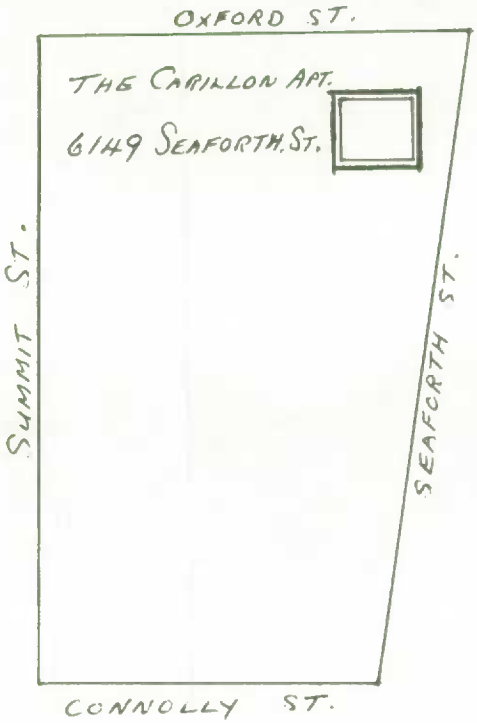
9604-1141 3-11-64

(EXAMPLE 23)

DOMINION BUREAU OF STATISTICS

LF 7

SEGMENT LIST



Location of added listings	Listing No.	Street name	Street No.	Apt. No.	Remarks	Survey in
	0001					
	0002					
	0012					
	0013					
	0014					
	0015					

☐ Continued on next page

Listed by

Location APARTMENT SAMPLE

PSU 2 2 1 1 6

SEG. 0 2 4

Date

Survey Introduced 184

Sampling Ratio 1/7

9604-98.1: 6-3-64

(EXAMPLE 24)
L.F.S. Sample
1961 Census Data

DOMINION BUREAU OF STATISTICS
Special Surveys Division

SEGMENT SELECTION AND ROTATION

Jurisdiction TORONTO P.S.U. 5 1 C 2 4 S.R. $\frac{79.383}{5.403 \times 2 \times 200} = \frac{1}{27}$

Town or village	Seg. No.	E.D. & E.A.	No. of Hhs.	H/D.F.	Cumul. Sum of H/D.F.	Selected segments I S.R. RS	I Surv. Intr.	I Replace by	II S.R.	II Surv. Intr.	II Replace by
(½)											
NAPANEE T.	C13	551-48-51	338	27·0	27·0	27 1/27	180				
	C24		338	27·0	54·0	27 1/27	180				
	51	524 - 1	103	7·0	7·0						
	52	4	110	7·5	14·5						
	53.5	551-14	181	12·3	26·8	8 1/12	180				
	54	15	136	9·3	36·1						
	55	16	133	9·0	45·1						
	56.6	17	132	9·0	54·1	8 1/9	180				

Urban			
No. of Hhs.	S.R.	D.F.	R.N.
(H)	I/R	H/2R	
676	1/27	12·5	—

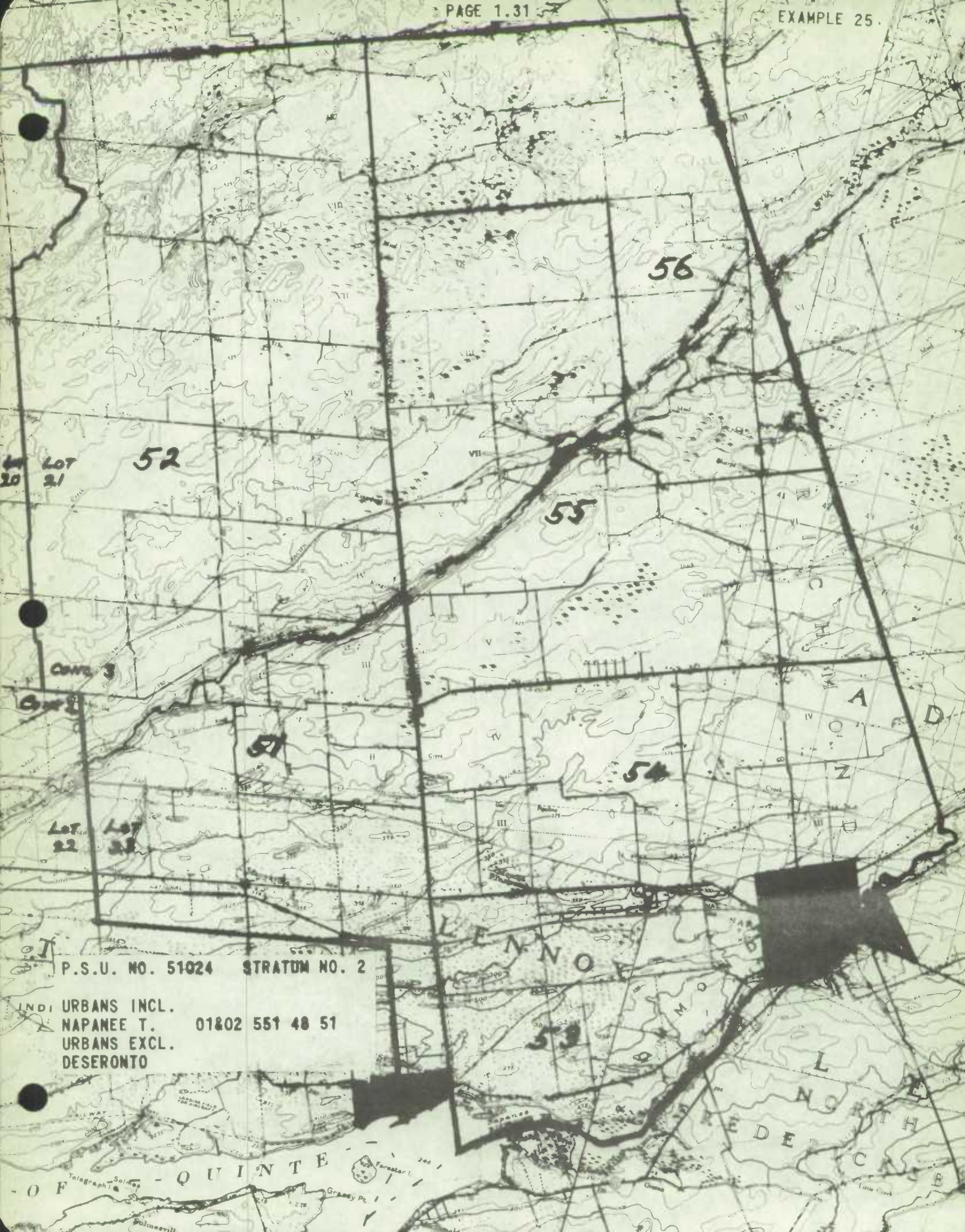
Rural			
No. of Hhs.	S.R.	D.F.	R.N.
(H)	I/R	H/2R	
795	1/27	14·7	19·2

MAX - 198
MIN - 90

P.S.U. 5 1 C 2 4

9604-95: 6-9-63

EXAMPLE 25.


56
52
55
54
51
53
Lot 20
Lot 21
Lot 22
Lot 23
Conc. 3
Conc. 2
P.S.U. NO. 51024 STRATUM NO. 2
INDI URBANS INCL.
NAPANEE T. 01&02 551 48 51
URBANS EXCL.
DESERONTO
LENNOX
ADDINGTON
PRINCE EDWARD
QUINTE
BAY OF

SEGMENT REPLACEMENT

(N.S.R.U.)

P.S.U. 5 1 0 2 4

AREA _____

JURISDICTION TORONTO

DATE FORWARDED _____

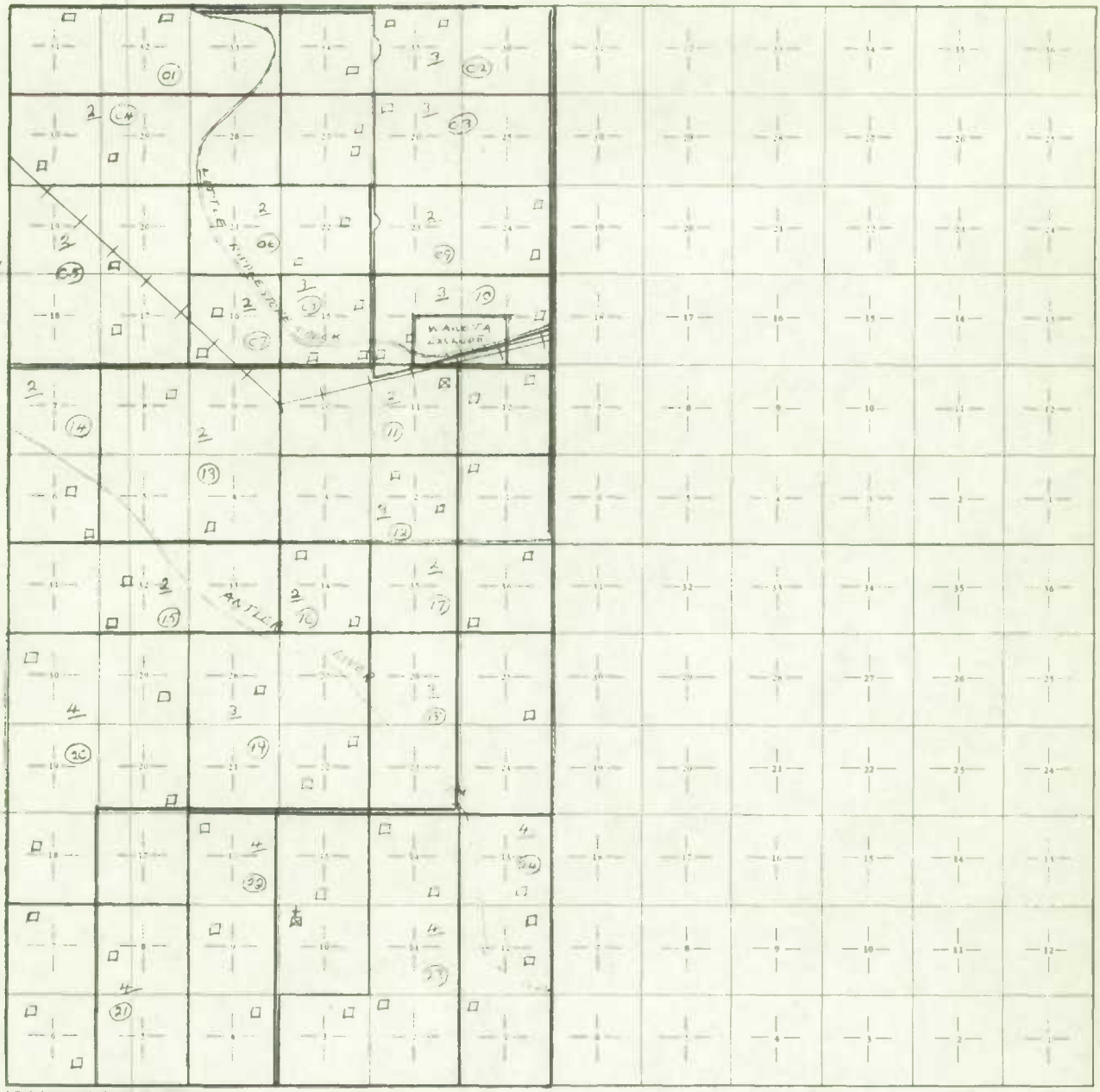
CURRENT SEGMENT				REPLACEMENT SEGMENT				
Segment Number	Sampling Ratio	Survey Introduced	Survey Replaced	Segment Number	Census Area	Field Count Req'd		Sampling Ratio
						Yes	No	
506	1/9	180	228	512	524-01	✓		1/7

9604-53: 25-1-65

1.32

(EXAMPLE 26)

RANGE 1 MERIDIAN W4 RANGE ____ MERIDIAN ____



DOMINION BUREAU OF STATISTICS
Special Surveys Division
Prairie Township Diagram (4)
9004-501 5-6-62

P.N.E. 7xxx6 DIST. 78 S N.R. 16
SEG. 3 26 E.A. 54 SURVEY INT. 183

P.S.U. 51024

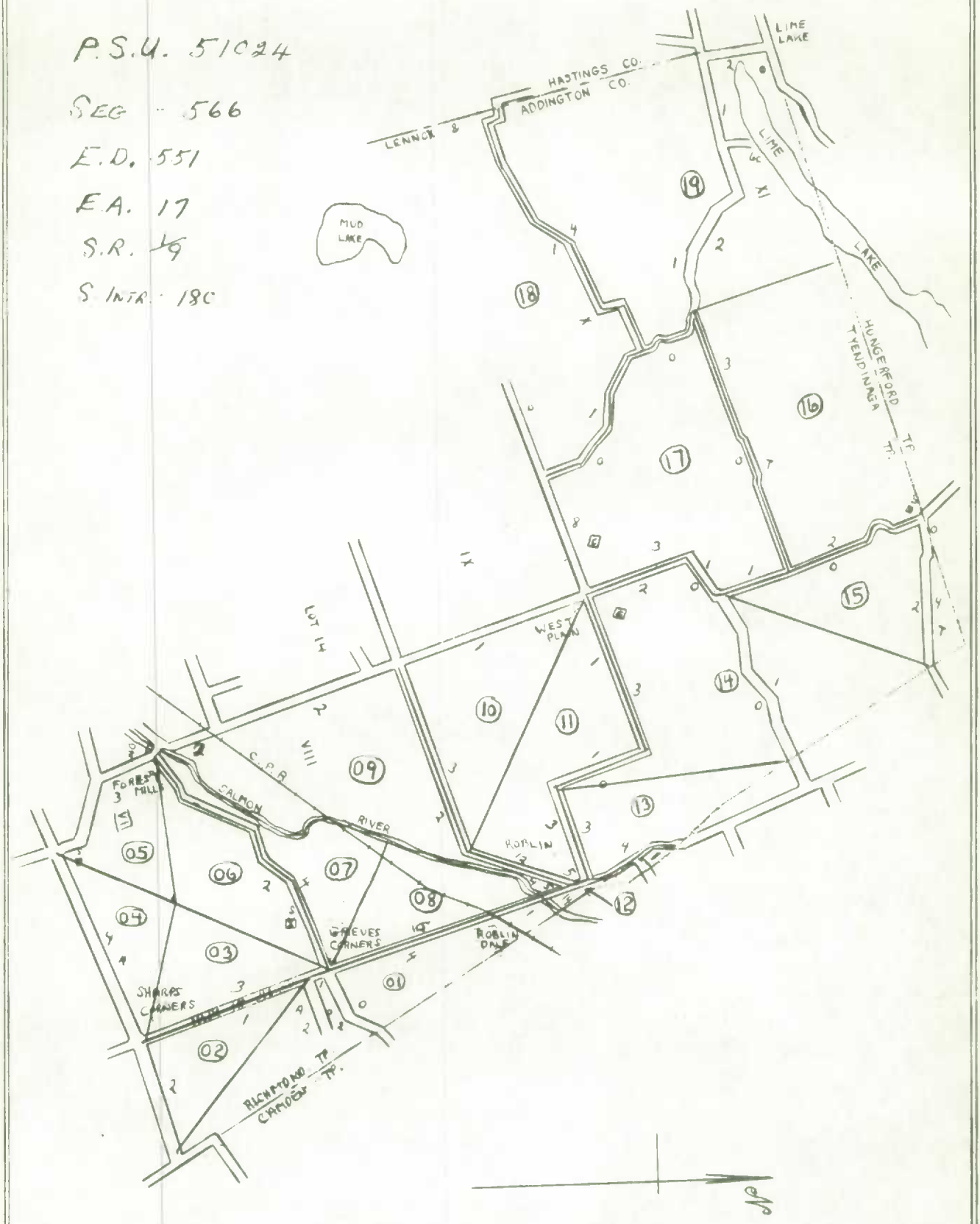
SEG - 566

E.D. 551

E.A. 17

S.R. ~~19~~

S. INTR. - 18C



DOMINION BUREAU OF STATISTICS

Special Survey Division

CLUSTER SELECTION AND ROTATION FORM

PRIMARY SAMPLING UNIT 5 1 0 2 4

SEGMENT NUMBER 5 6 6

MUNICIPALITY

JURISDICTION Toronto

SAMPLING RATIO 1/9

RANDOM START 2

SURVEY IN 1/80

CENSUS AREA 55/117

List of clusters in serial order

CL	H	S	CL	H	S	CL	H	S	CL	H	S
1	10	3	26			51			76		
2	3	1	27			52			77		
3	3	1	28			53			78		
4	4	1	29			54			79		
5	3	1	30			55			80		
6	2	1	31			56			81		
7	4	1	32			57			82		
8	6	2	33			58			83		
9	15	5	34			59			84		
10	4	1	35			60			85		
11	22	7	36			61			86		
12	15	5	37			62			87		
13	7	2	38			63			88		
14	6	2	39			64			89		
15	7	2	40			65			90		
16	6	2	41			66			91		
17	13	4	42			67			92		
18	2	1	43			68			93		
19	10	3	44			69			94		
20			45			70			95		
21	142	45	46			71			96		
22			47			72			97		
23			48			73			98		
24			49			74			99		
25			50			75					

Selected segment

CL	S

Group size calculation

1. Approximate number of groups:

$\frac{142}{3} = 47$

2. Final number of groups: 45
(When applicable only)

$\frac{1}{9 \times - \times -} = 9 (\times 5) = \frac{45}{\text{C.M.}}$

No. of S.R. parts; No. of segments; No. of groups per survey

3. Final group size: 3.155555

Hhs. = $\frac{142}{45} = \frac{3.155555}{1.57777}$

C.M. =

Cluster size	Households	Cluster size	Households	Cluster size	Households
1	2 - 4	9	27-29	17	
2	5 - 7	10		18	
3	8 - 11	11		19	
4	12 - 14	12		20	
5	15 - 17	13		21	
6	18 - 20	14		22	
7	21-23	15		23	
8	24-26	16		24	

Sample clusters by survey

	180	186	192	198	204	210	216	222
08 3/2	11 1/7	11 2/7	11 3/7	11 4/7	11 5/7	11 6/7	11 7/7	08 1/2
09 1/5	17 1/4	17 1/4	17 1/4	17 1/4	09 3/5	09 4/5	09 5/5	09 2/5
02	12 1/5	12 2/5	12 3/5	12 4/5	12 5/5	01 1/3	01 2/3	01 3/3
19 1/3	15 2/2	15 1/2	14 2/2	14 1/2	13 2/2	13 1/2	19 3/3	19 2/3
18	16 1/2	16 2/2	03	04	05	06	07	10

9604-229: 30-4-64

CLUSTER DISTRIBUTION OF URBAN SEGMENTS FORM

STRATUM ..51020.....

TOWN ...NAPANEE.....(½)

9604-228: 6-4-64

Sampling Ratio 1/27

Group Size 2:98148.....

List of Clusters in Serial Order						CLUSTERS * SELECTED FOR PSU 51024															
Cl.	H.	S.	Cl.	H.	S.	*#1						#2									
1	3	1	51	14	5	01	28	46	65	82		02	30	47	66	83					
2	5	2	52	15	5	03	28	46	65	82		02	30	47	66	83					
3	20	7	53	14	5	03	31	46	65	82		04	30	47	66	83					
4	33	11	54	18	6	03	31	46	65	82		04	30	47	66	83					
5	17	6	55	20	7	03	31	46	65	84		04	32	47	66	83					
6	14	2	56	19	6	03	33	46	65	84		04	32	47	66	83					
7	8	3	57	15	5	03	33	46	65	84		04	32	47	66	83					
8	12	4	58	18	6	03	34	48	65	84		04	32	49	66	85					
9	6	2	59	12	4	05	34	48	65	84		04	35	49	66	85					
10	12	4	60	7	2	05	34	48	65	84		04	35	49	66	85					
11	3	1	61	18	6	05	34	48	67	86		04	35	49	66	85					
12	7	2	62	2	1	05	36	48	67	87		04	35	49	66	85					
13	5	2	63	22	7	05	36	48	67	87		04	35	49	66	88					
14	12	4	64	5	2	05	36	48	68	87		06	35	49	66	88					
15	9	3	65	36	12	07	36	50	68	87		06	35	51	69	89					
16	4	1	66	51	16	07	36	52	68	90		08	35	51	69	89					
17	4	1	67	8	3	07	37	52	70			08	38	51	69						
18	9	3	68	8	3	09	37	52	70			08	38	51	69						
19	7	2	69	13	4	09	37	52	70			08	38	51	71						
20	9	3	70	13	4	10	37	52	70			11	38	53	71						
21	3	1	71	13	4	10	39	54	72			12	38	53	71						
22	5	2	72	14	5	10	39	54	72			12	38	53	71						
23	10	3	73	13	4	10	39	54	72			13	40	53	73						
24	16	5	74	19	6	14	39	54	72			13	40	53	73						
25	9	3	75	19	6	14	39	54	72			15	40	55	73						
26	15	5	76	20	7	14	39	54	74			15	40	55	73						
27	18	6	77	14	5	14	39	56	74			15	40	55	75						
28	23	8	78	14	5	16	39	56	74			17	40	55	75						
29	13	4	79	8	3	18	39	56	74			19	40	55	75						
30	16	5	80	16	5	18	41	56	74			19	40	55	75						
31	9	3	81	17	6	18	41	56	74			20	40	55	75						
32	12	4	82	24	8	21	41	56	76			20	40	57	75						
33	6	2	83	26	9	22	41	58	76			20	42	57	77						
34	13	4	84	17	6	22	41	58	76			23	42	57	77						
35	23	8	85	15	5	24	41	58	76			23	42	57	77						
36	15	5	86	2	1	24	41	58	76			23	43	57	77						
37	12	4	87	11	4	24	41	58	76			25	43	59	77						
38	19	6	88	5	2	24	44	58	76			25	43	59	78						
39	28	9	89	6	2	24	44	60	79			25	43	59	78						
40	30	10	90	2	1	26	44	60	79			27	45	59	78						
41	24	8	91			26	44	61	79			27	45	62	78						
42	9	3	92	1292		26	44	61	80			27	45	63	78						
43	12	4	93	4328		26	44	61	80			27	45	63	81						
44	30	10	94			26	44	61	80			27	45	63	81						
45	31	10	95			28	44	61	80			27	45	63	81						
46	29	10	96			28	44	61	80			29	45	63	81						
47	23	8	97			28	44	64	82			29	45	63	81						
48	22	7	98			28	46	64	82			29	45	63	81						
49	21	7	99			28	46	65	82			39	45	66	83						
50	4	1				28	46	65	82			30	47	66	83						

CLUSTER DISTRIBUTION OF URBAN SEGMENTS FORM

STRATUM ...51020.....

TOWN .....NAPANEE.....

Sampling Ratio 1/27

Group Size .2:98148...

9604-228: 6-4-64

List of Clusters in Serial Order						SELECTED FOR SEGMENT 01			CLUSTERS	SELECTED FOR SEGMENT 02		
Cl.	H.	S.	Cl.	H.	S.	01				#2		
1	3	1	51			01	46	84		03	44	82
2			52	15	5	05	46	84		03	44	82
3	20	7	53			05	46	84		03	44	82
4			54	18	6	05	46	84		03	48	82
5	17	6	55			05	50	84		03	48	86
6			56	19	6	05	52	84		03	48	87
7	8	3	57			05	52	90		03	48	87
8			58	18	6	07	52			09	48	87
9	6	2	59			07	52			09	48	87
10	12	4	60	7	2	07	52			10	48	
11			61	18	6	14	54			10	56	
12			62			14	54			10	56	
13			63			14	54			10	56	
14	12	4	64	5	2	14	54			16	56	
15			65	36	12	18	54			21	56	
16	4	1	66			18	54			22	56	
17			67	8	3	18	58			22	60	
18	9	3	68	8	3	24	58			26	60	
19			69			24	58			26	61	
20			70	13	4	24	58			26	61	
21	3	1	71			24	58			26	61	
22	5	2	72	14	5	24	58			26	61	
23			73			28	64			31	61	
24	16	5	74	19	6	28	64			31	61	
25			75			28	65			31	67	
26	15	5	76	20	7	28	65			33	67	
27			77			28	65			33	67	
28	23	8	78			28	65			34	68	
29			79	8	3	28	65			34	68	
30			80	16	5	28	65			34	68	
31	9	3	81			36	65			34	70	
32			82	24	8	36	65			37	70	
33	6	2	83			36	65			37	70	
34	13	4	84	17	6	36	65			37	70	
35			85			36	65			37	72	
36	15	5	86	2	1	39	65			41	72	
37	12	4	87	11	4	39	74			41	72	
38			88			39	74			41	72	
39	28	9	89			39	74			41	72	
40			90	2	1	39	74			41	76	
41	24	8	91			39	74			41	76	
42			92			39	74			41	76	
43			93			39	79			41	76	
44	30	10	94			39	79			44	76	
45			95			46	79			44	76	
46	29	10	96			46	80			44	76	
47			97			46	80			44	82	
48	22	7	98			46	80			44	82	
49			99			46	80			44	82	
50	4	1				46	80			44	82	

DOMINION BUREAU OF STATISTICS

Special Survey Division

CLUSTER SELECTION AND ROTATION FORM

PRIMARY SAMPLING UNIT 5 1 0 2 4

SEGMENT NUMBER 0 1 3

MUNICIPALITY NAPANEE T. (PART)

JURISDICTION TORONTO

SAMPLING RATIO 1/127

RANDOM START 1

SURVEY IN 180

CENSUS AREA 551 / 48-51

List of clusters in serial order

CL	H	S	CL	H	S	CL	H	S	CL	H	S
1			26			51			76		
2			27			52			77		
3			28			53			78		
4			29			54			79		
5			30			55			80		
6			31			56			81		
7			32			57			82		
8			33			58			83		
9			34			59			84		
10			35			60			85		
11			36			61			86		
12			37			62			87		
13			38			63			88		
14			39			64			89		
15			40			65			90		
16			41			66			91		
17			42			67			92		
18			43			68			93		
19			44			69			94		
20			45			70			95		
21			46			71			96		
22			47			72			97		
23			48			73			98		
24			49			74			99		
25			50			75					

Selected segment

CL	S
03	7
09	2
10	4
16	1
22	2
26	5
31	3
33	2
34	4
37	4
41	8
44	10
48	7
56	6
60	2
61	6
67	3
68	3
70	4
72	5
76	7
82	8
86	1
87	4
	108

Group size calculation

1. Approximate number of groups:

$\frac{1288}{3} = 429$

2. Final number of groups:
(When applicable only)

$\frac{1}{27 \times 2 \times 2} = 108 \ (\times 4) = 432$ C.M.

No. of S.R. parts; No. of segments; No. of groups per survey

3. Final group size:

Hhs. = $\frac{1288}{2} = 2 \cdot 98148$

C.M. = $\frac{432}{2} = 1 \cdot 49074$

Cluster size	Households	Cluster size	Households	Cluster size	Households
1	2-4	9	26-28	17	50-52
2	5-7	10	29-31	18	53-55
3	8-10	11	32-34	19	56-58
4	11-13	12	35-37	20	59-61
5	14-16	13	38-40	21	62-64
6	17-19	14	41-43	22	65-67
7	20-22	15	44-46	23	68-70
8	23-25	16	47-49	24	71-73

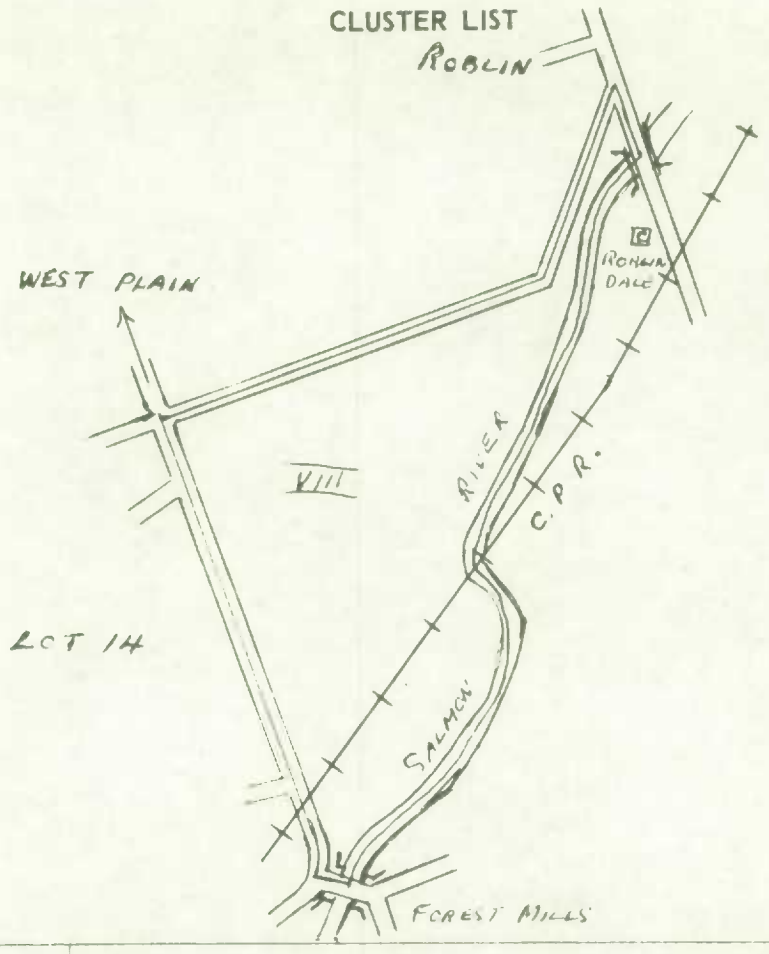
Sample clusters by survey

180	183	189	195	201	207	213	219	225	231	237	243	249	255	261	267	273	279	285
03 2/7	03 4/7	03 5/7	03 6/7	03 1/7	03 2/7	03 1/7	09 1/2	09 1/2	10 4/4	10 3/4	10 2/4	10 1/4	16	22 1/2	22 1/2	26 1/5	26 2/5	26 3/5
60 1/2	60 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	48 1/2	44 1/10	44 2/10	44 3/10	44 4/10	44 5/10	44 6/10	44 7/10	44 8/10	44 9/10	44 10/10
41 2/8	41 2/8	41 3/8	41 4/8	41 5/8	41 6/8	41 7/8	41 8/8	41 1/8	56 1/6	56 2/6	56 3/6	56 4/6	56 5/6	61 1/6	61 2/6	61 3/6	61 4/6	61 5/6
87 1/4	87 2/4	87 3/4	87 4/4	82 1/8	82 2/8	82 3/8	82 4/8	82 5/8	82 6/8	82 7/8	82 8/8	74 1/2	76 2/2	76 1/2	76 2/2	76 3/2	76 4/2	76 5/2
291	297	303	309	315	321	327	333											
26 2/5	26 1/5	31 3/3	31 2/3	31 1/3	33 2/2	33 1/2	86											
37 1/4	37 2/4	37 3/4	37 4/4	34 1/4	34 2/4	34 3/4	34 4/4											
61 1/4	67 1/3	67 2/3	67 1/3	70 4/4	70 3/4	70 2/4	70 1/4											
22 1/5	72 2/5	72 3/5	72 4/5	72 5/5	68 1/3	68 2/3	68 3/3											

9604-2291 30-4-64

DOMINION BUREAU OF STATISTICS LF 6

CLUSTER LIST



Location of added listings	Listing No.	Address or Description	Survey In.

☐ Continued on next page

Listed by

Location

Date

Survey introduced 1970

Sampling Ratio 1/5

RANDOM START - 5

PSU 5 1 0 2 4

SEG. 5 6 6

CL. C 9

9604-97.1: 6-3-64

Segment Replacement Tables

HALIFAX Regional Office Group No. 4...

City	P.S.U.	Segment	169	172	178	184	190	196	202	208	214	220
HALIFAX	22101	064	3/13									
		114	9/11			124 1/8						
	22102	034	7/10			044 1/2						
		094	14/14	104 1/4				114 1/6				
	22103	084	1/6						094 1/3			104 1/8
		174	4/8					184 1/3			194 1/3	
	22104	064	5/7			074 1/5					084 1/9	
		144	16/17		154 1/8							
	22105	024	13/14		034 1/7							044 1/8
		124	1/4				134 1/7					
	22106	024	7/8							034 1/4		
		154	3/4		164 1/3			174 1/7				
	22107	014	10/23									
		094	1/4				104 1/3			114 1/4		
	22108	784	3/12									
	22109	744	4/9						754 1/10			
	22110	714	1/16									
	22111	734	1/2							744 1/4		
	22112	714	2/4			724 1/13						
	22113	734	2/7						744 1/7			

CLUSTER [redacted] Replacement Tables

TORONTO Regional Office Group No. 4..

City	P.S.U.	Segment	180	186	192	198	204	210	216	222	228	234
	51014	016	✓		✓				✓			
	51024	566	✓		✓	✓	✓	✓	✓	✓		
	51049	016	✓							✓	✓	
	51051	556	✓	✓	✓	✓	✓					
	52002	026	✓				✓	✓		✓	✓	
	52012	016	✓						✓			
	53021	016	✓	✓						✓	✓	✓
	53026	586	✓	✓	✓	✓	✓					
	54004	556	✓	✓	✓	✓						
	54015	016	✓		✓		✓	✓	✓			
	54023	566	✓		✓	✓			✓			
	54031	026	✓		✓	✓		✓	✓			✓
	55008	556	✓	✓	✓	✓	✓					
	55027	036	✓		✓	✓		✓	✓	✓	✓	
	55034	546	✓	✓	✓	✓	✓	✓				
	56006	026	✓				✓			✓	✓	✓
	56021	016	✓		✓	✓	✓	✓	✓	✓	✓	
	57001	536	✓	✓	✓	✓	✓	✓	✓		✓	
	57011	016	✓				✓	✓	✓			
	57026	566	✓	✓	✓	✓	✓	✓	✓			
	57052	016	✓		✓	✓	✓		✓		✓	
	57054	016	✓			✓			✓	✓		✓

SAMPLE YIELDS

LF 50

PSU	SEG.	S.R.	Dwellings expected		Actual dwelling					
					1965		1966		1967	
			Design	Field	Rot. 1	Rot. 2	Rot. 1	Rot. 2	Rot. 1	Rot. 2
51024	013	1/27	13	12	9-1	12-1				
	024	1/27	13	12	13-2	9				
	535	1/12	15	17	18-1	18-1				
	566	1/9	15	16	17-2	15-1				
					(51)	(51)				
			56	57	57-6	54-3				
51028	014	1/28	13	12	16	13				
	025	1/28	13	12	12-1	13				
	521	1/6	16	18	20-2	20-3				
	562	1/9	16	17	① 30-17	30-18				
					(58)	(55)				
			58	59	78-20	76-21				

① Summer Cottage Area.

QUOTA SHEET

LF 10

Regional Office	Labour Force Survey
TORONTO	180

Primary Sampling Unit	Segment	Total expected households	Households enumerated	Households not enumerated: Temp. absent	Households not enumerated: No Interview N1-N5	Households not enumerated: No Household V1-V5	For N4 and N5, state the number and reason
51007	013	16	13	-	2	1	
	025	17	15	-	2	-	
	531	16	10	-	2	4	
	552	21	15	-	2	4	
		70	53	-	8	9	
51014	016	12	10	-	1	1	
	021	13	9	-	2	2	
	523	17	15	1	1	-	
	554	13	10	-	1	2	
		55	44	1	5	5	
51024	013	9	7	1	-	1	
	024	13	11	-	-	2	
	535	18	13	1	3	1	
	566	17	12	2	1	2	
		57	43	4	4	6	
51028	014	16	12	2	2	-	
	025	12	10	-	1	1	
	521	20	16	-	2	2	
	562	30	13	-	-	17	
		78	51	2	5	20	
51049	016	5	3	1	-	1	
	021	5	4	-	-	1	
	523	21	18	-	-	3	
	564	80	13	-	-	67	
		111	38	1	-	72	

Processing of Enumeration Returns by R.O.

ENUMERATION CODE.

Non-interviews (households not enumerated)

The enumerator will have recorded the reason for a non-interview on the HRC under Question 12 in the space opposite the survey number.

In the R.O. processing of enumeration returns, the HRC's for non-interviews are to be coded as indicated below under "Analysis of NI's". The HRC's for all N4 and N5 (no interview) households are to be examined by the NI coding clerk to determine whether the household was reported as "no household" for last survey. If so, then the "Non-interview" code to be used will be the same as for last survey - i.e., VI to V4. The code N4 or N5 will only apply to those dwellings which contained a household as established by a previous survey or for those dwellings in the sample for the first time as of the current survey.

These "Non-interview" codes are to be recorded on the R.O. Assignment Control by the control clerk.

The entries on the Quota Sheet for "Households not enumerated" will be obtained from the R.O. Assignment Control and will represent the total number of NI's within each of the three (3) groups - Temp. absent, No Interview and No Household.

Quota Sheet Col.	Analysis of NI's	Reasons for Non-interview	
Temp. absent	TA	- For all Temporarily Absent Households	
No Interview	NI	- No one home	
	N2	- Refusal in current survey or: Refusal in previous survey even if HRC not sent to the field currently	Note that in these cases there is a household as per our definition but no interview
	N3	- Death, illness, etc.	
	N4	- No call made - roads impassable	
	N5	- No enumerator available (sick, resigned, etc.)	
No Household	V1	- Vacant	
	V2	- Vacant seasonal dwelling or summer cottage	Note that in these cases there is no household as per our definition
	V3	- Dwelling under construction	
	V4	- Occupied by persons not to be enumerated	
	V5	- Other types - demolished, converted to business use, trailer moved away, etc.	In these cases listings will be deleted

SAMPLE YIELDS

LF 50

PSU	SEG.	S.R.	Dwellings expected		Actual dwelling					
					1965		1966		1967	
			Design	Field	Rot. 1	Rot. 2	Rot. 1	Rot. 2	Rot. 1	Rot. 2
22104	051	1/8	5		5	5				
		/								
	171	1/6	6		5	5				
		/								
	022	1/13	5		① 9-1	6				
		/								
	033	1/10	5		4	4				
		/								
	045	1/10	6		8	5				
		/								
	056	1/12	6		5	5				
		/								
	064	1/7	5		5					
	074	1/5	6			6				
	103	1/5	6		6	7				
		/								
	142	1/6	6		6	6				
		/								
	154	1/8	6		7-1	6				
		/								
	145	1/3	5		3					
	155	1/5	5			5				
	156	1/5	6		6	6				
		/								
		/			(67)					
		/	67		69-2	66				

① MULTIPLE HOUSEHOLDS COUNTED AS SINGLE.

9604-233: 5-11-65

QUOTA SHEET

LF 10

Regional Office	Labour Force Survey
HALIFAX	180

Primary Sampling Unit	Segment	Total expected households	Households enumerated	Households not enumerated: Temp. absent	Households not enumerated: No Interview N1-N5	Households not enumerated: No Household V1-V5	For N4 and N5, state the number and reason
22104	051	5	5				
	171	5	4		1		
	022	9	6		2	1	
	033	4	3		1		1 HHld REFUSED. NOT
	045	8	8				RE-ASSIGNED.
	056	5	2		3		
	064	5	5				
	103	6	6				
	142	6	6				
	154	7	6			1	
	145	3	2			1	
	156	6	4		2		
		69	57	-	9	3	
22105	022	4	3		1		
	034	6	6				
	033	5	5				
	036	5	4		1		
	041	5	3		2		1 HHld REFUSED NOT-REASSIGNED
	151	5	4		1		
	045	5	5				
	095	8	5		3		1 HHld REFUSED-NOT REASSIGNED
	113	5	5				
	122	5	3		1	1	1 HHld REFUSED NOT REASSIGNED
	124	7	7				
	186	6	6				
		66	56	-	9	1	

DATE November 3, 1964

TO Central Computing Staff

FROM G.B. Gray, Chief, Sampling Research Section GBG

SUBJECT Definition of Paired Areas for Variance Estimates (Quebec)

Paired Area Code	P.S.U./4-8 (and group of segments)
NSRU	
440A 4401	40009 40012 and other 4000 or 4001/4-7
440B 4402	40027 40029 and other 4002, 4003/4-7
440C 4403	41004 41013 and other 4100, 4101/4-7
440D 4404	41029 41031 and other 4102, 4103/4-7
440E 4405	41044 41055 and other 4104, 4105/4-7
440F 4406	41063 41076 and other 4106, 4107/4-7
440G 4407	42008 42011 and other 4200, 4201/4-7
440H 4408	42022 42026 and other 4202, 4203/4-7
440I 4409	42043 42055 and other 4204, 4205/4-7
441& 4410	43002 43009 and other 4300, 4301/4-7
441A 4411	43023 43025 and other 4302, 4303/4-7
441B 4412	43042 43054 and other 4304, 4305/4-7
441C 4413	44002 44006 and other 4400, 4401/4-7

POPULATION MATCHING OF PAIRED AREAS

SURVEY NO. 182. NON-SELF-REPRESENTING.

PAIRED AREA 4401 4409

P.S.U. 42043 42055

SEGMENT	(A) Q.S. EXP. ADJ.	(B) DESIGN EXPECTED	DIFF. (A-B)	INTER-VIEWED	NOT INT.	EXCLUDED	SCHED-ULES		SEGMENT	(A) Q.S. EXP. ADJ.	(B) DESIGN EXPECTED	DIFF. (A-B)	INTER-VIEWED	NOT INT.	EXCLUDED	SCHED-ULES
013	6	8	-2	6	0	1	14		015	8	6	2	7	1	0	25
024	8	8	0	8	0	0	19		026	6	6	0	6	0	0	22
URB	14	16	-2	14	0	1	33		URB.	14	12	2	13	1	0	47
525	10	12	-2	10	0	1	43		521	15	15	0	15	0	2	59
556	10	12	-2	9	1	1	30		552	24	15	9	24	0	0	70
RUR	20	24	-4	19	1	2	73		RUR.	39	30	9	39	0	2	129
TOT	34	40	-6	33	1	3	106		TOT.	53	42	11	52	1	2	176

L.F. PER HHld = $\frac{106}{33}$ = 3.21 L.F. PER HHld = $\frac{176}{52}$ = 3.39

PAIRED AREA TOTALS

4401 = 22,327. 4409 = 36,520

(58,847)

L.F. POP EST. — L.F. SCHEDULES.

URBAN = $\frac{14}{14}$ x 200 x 33 = 6,600 $\frac{14}{13}$ x 200 x 47 = 10,123.

RURAL = $\frac{20}{19}$ x 200 x 73 = 15,368. $\frac{39}{39}$ x 200 x 129 = 25,800

TOTAL = 21,968 (57,891) = 35,923

L.F. POP EST. — 1961 CENSUS POP.

$\frac{1}{2}$ x 82,801 x .654 = 27,076 (54,152) $\frac{1}{2}$ x 82,801 x .654 = 27,076.

L.F. POP EST. — DESIGN DATA.

URBAN 200 x 16 x 2.62 = 8384 200 x 12 x 2.62 = 6,288

RURAL = 200 x 24 x 3.40 = 16,320 200 x 30 x 3.40 = 20,400

TOTAL = = 24,704 (51,392) 26,688

POPULATION MATCHING OF PAIRED AREAS

SURVEY NO. 182 SELF-REPRESENTING.

PAIRED AREA 4466E 4465

P.S.U. 47125-8 Q and S1. 47125-8 Q and S2

	SEGMENT	(A) Q.S. EXP. ADJ.	(B) DESIGN EXPECTED	DIFF. (A-B)	INTER-VIEWED	NOT INT.	EXCLUDED	SCHED-ULES		SEGMENT	(A) Q.S. EXP. ADJ.	(B) DESIGN EXPECTED	DIFF. (A-B)	INTER-VIEWED	NOT INT.	EXCLUDED	SCHED-ULES
47125	013	7	5	2	7	0	0	16		016	3	5	-2	2	1	0	2
	021	7	5	2	6	1	0	13		034	7	5	2	5	2	1	11
	075	5	5	0	5	0	0	12		092	6	5	1	4	2	0	9
	TOT	19	15	4	18	1	0	41		TOT	16	15	1	11	5	1	22
47126	012	5	5	0	5	0	0	11		011	0	5	-5	0	0	0	0
	014	6	5	1	5	1	0	13		013	6	5	1	6	0	2	17
	036	3	5	-2	3	0	0	7		015	5	5	0	3	2	0	14
	TOT	14	15	-1	13	1	0	31		TOT	11	15	-4	9	2	2	31
47127	033	7	5	2	6	1	0	13		066	6	5	1	6	0	0	11
	141	6	5	1	5	1	0	15		084	5	5	0	3	2	1	6
	195	6	5	1	5	1	0	11		102	3	5	-2	2	1	0	6
	TOT	19	15	4	16	3	0	39		TOT	14	15	-1	11	3	1	23
47128	034	6	5	1	6	0	0	13		053	6	5	1	5	1	1	12
	076	6	5	1	4	2	0	12		065	6	5	1	2	4	0	4
	082	6	5	1	4	2	0	8		121	7	5	2	5	2	0	10
	TOT	18	15	3	14	4	0	33		TOT	19	15	4	12	7	1	26

PAIRED AREA TOTALS

4466E = 36,082 (59,915) 4465 = 23,833

L.F. POP. EST. - L.F. SCHEDULES

47125	= 33/29 × 200 × 41 = 9896	33/29 × 200 × 22	= 5311
47126	= 25/22 × 200 × 31 = 7045	25/22 × 200 × 31	= 7045
47127	= 33/27 × 200 × 39 = 9533	33/27 × 200 × 23	= 5622
47128	= 37/26 × 200 × 33 = 9393	37/26 × 200 × 26	= 7400
TOTAL	= 35,867 (61,045)		25,378

L.F. POP EST - DESIGN DATA

47125, 47126, 47127, 47128: 200 × 15 × 2.62 = 7860 (× 4) = 31,440 (62,880)

200 × 15 × 2.62 = 7860 (× 4) = 31,440

TOTAL

Analysis of Reasons for Discrepancies in Population Totals Between Paired Areas.

i) Stratum 42000 (See Example for N.S.R.U.)

Paired Area	Population Estimate	Hhlds. Enumerated	Hhlds. Expected	Diff.	L.F. Schedules per Hhld.
4401	22,327	34	40	- 6	3.21
4409	36,520	53	42	11	3.40

Segment 552 of P.S.U. 42055 yielded more households than expected in every cluster. This is a cottage area which on enumeration yielded actual households. Variation caused by two factors - difference in take of 17 households between the paired areas and number of L.F. Schedules per household.

ii) Stratum 47100 (See Example for S.R.U.)

Paired Area	Population Estimate	Hhlds. Enumerated	Hhlds. Expected	Diff.	L.F. Schedules per Hhld.
446E	36,082	70	60	10	2.36
4465	23,833	60	60	0	2.14

The difference between households enumerated and households expected was no greater than two except in one segment but they cancelled out in 4465 and accumulated in 446E. Part of the variation may also be caused by the balancing method used in P.S.U. 47126 in which one segment containing five households was not enumerated.

Non Self-Representing Units

L.F.S. Redesign

Totals By Province

Province	Economic Regions	Strata	P.S.U.'s	Urban		Rural		Total	
				Population	Hhlds.	Population	Hhlds.	Population	Hhlds.
Canada Total	58	139	1,664	2,193,470	564,789	4,459,400	1,036,941	6,652,860	1,601,730
Newfoundland	5	16	93	*	*	236,940	45,809	236,940	45,809
Prince Edward Island	1	3	24	16,521	3,887	58,838	13,521	75,359	17,408
Nova Scotia	4	15	117	83,134	21,586	291,614	71,851	374,748	93,437
New Brunswick	4	13	104	94,042	22,058	253,996	52,753	348,038	74,811
Quebec	9	25	361	687,818	147,851	1,185,472	223,323	1,873,290	371,174
Ontario	10	21	306	653,484	182,589	1,078,955	276,399	1,732,439	458,988
Manitoba	5	7	106	97,800	27,973	251,805	63,779	349,605	91,752
Saskatchewan	5	12	204	172,671	49,995	441,323	116,688	613,984	166,683
Alberta	7	17	203	219,906	61,347	373,621	93,462	593,527	154,809
British Columbia	8	10	146	168,094	47,503	286,836	79,356	454,930	126,859

* Included with Rural.

CANADA

Province	S.R.U.	P.S.U.	No. of Segments Selected	Expected Take	Total Hhlds.	S.R.
Total: 10	122	652	4,332	19,342	3,070,453	-
Newfoundland	16	30	210	715	44,684	1/62.5
Prince Edward Island	2	2	18	91	5,684	1/62.5
Nova Scotia	6	30	240	1,256	78,487	1/62.5
New Brunswick	7	25	210	898	56,167	1/62.5
Quebec	25	157	1,002	4,294	858,239	1/200
Ontario	41	240	1,398	6,339	1,267,651	1/200
Manitoba	2	37	246	1,163	145,153	1/125
Saskatchewan	4	20	132	627	78,532	1/125
Alberta	5	45	330	1,563	194,332	1/125
British Columbia	14	66	546	2,396	341,524	1/143

Special Areas

Labour Force Sample Redesign

Province	Regional Office	Military Establishments	Hospitals	Other Specials
Newfoundland	St. John's	6	9	3
Prince Edward Island	Halifax	1	-	-
Nova Scotia	Halifax	17	25	6
New Brunswick	Halifax	8	15	8
Quebec	Montreal	20	101	200
Quebec	Ottawa	1	6	10
Ontario	Toronto	30	76	58
Ontario	Ottawa	22	29	27
Ontario	Winnipeg	2	5	1
Manitoba	Winnipeg	13	15	10
Saskatchewan	Winnipeg	2	9	5
Alberta	Edmonton	22	19	17
Saskatchewan	Edmonton	2	9	7
British Columbia	Vancouver	22	24	14

Dominion Bureau of Statistics

Special Surveys Division

Canadian Labour Force Survey

(Sampling Manual)

9604-234

INTRODUCTION

This manual has been prepared in order to provide a detailed description of the procedures used in Labour Force Survey sampling operations. It is mainly intended for use as a reference and a training guide for the Sample Control Unit of Special Surveys Division. The examples chosen and procedures outlined in the manual are representative of the methods that have been followed in order to establish and select the Labour Force Sample. However these procedures have to be adapted to satisfy special cases which are encountered in all phases of the design and minor modifications are constantly being introduced.

The examples and illustrations have been selected to provide a continuity throughout the different stages of sampling by self-representing and non-self-representing p.s.u.'s.

The choice of p.s.u. 51024 for the non-self-representing and p.s.u. 22104 for the self-representing units is purely arbitrary and provides a fairly complete coverage of the various problems that may be encountered.

Some of the examples which were used i.e. computer printouts, segment records and maps etc. were not included in their entirety because of the detailed nature or size of the original material. A more general description of the Labour Force Survey Design is to be found in the D.B.S. publication 71-504 Canadian Labour Force Survey - Methodology.

The manual has been prepared by P.F. Timmons assisted by Mrs. G.K. Giroux and R.A. Jobson of the Sample Control Unit of Special Surveys Division.

Table of Contents

Table of Contents - Concluded

Glossary of Terms Used in the Manual

Balancing Unit - Each primary sampling unit in the self-representing units is defined as a balancing unit. There are two balancing units in each primary sampling unit of the non-self-representing areas, the urban segments of the p.s.u. forming one balancing unit and the rural segments the other.

In the estimating procedure the balancing factor is calculated for each of these units as the ratio of the "number of households expected" to the "number of households enumerated".

Census Division - Five of the provinces are not organized into counties. The census division is a statistical area, equivalent to a county, delineated by the Dominion Bureau of Statistics in co-operation with provincial authorities. These have been established in Newfoundland (10), Manitoba (20), Saskatchewan (18), Alberta (15) and British Columbia (10).

Census Population - Total population as reported in the 1961 Census of Canada.

Census Tract - Statistical units have been established in 23 of the larger cities and census metropolitan areas. They are designed with a view to providing basic census statistics for homogeneous areas with respect to economic status and living conditions. As far as possible, they are established as permanent areas and as such, are of further value in disclosing trends within sections of large urban communities.

Cluster - A cluster is a sub-division of a segment in non-self-representing urban and rural areas. It is an area containing a minimum of three households or multiples of three and having boundaries easily identified in the field.

County - The county is the main political and administrative division within the provinces of Prince Edward Island (3), Nova Scotia (18), New Brunswick (15), Quebec (78) and Ontario (54).

Dwelling Unit - A dwelling unit is a set of living quarters which:

a) is structurally separate - and -

b) has a private entrance outside the building, or from a common hall or stairway inside. The entrance must be one which can be used without passing through anyone else's living quarters.

Economic Region - Each province in Canada is divided into a number of economic regions as defined in the latest revision of "The Department of Defence Production Economic Regions". An economic region is defined as an area of structural homogeneity according to such factors as soil characteristics, production and marketing possibilities and commercial and industrial potential.

Electoral District - The electoral district is defined by Act of the Federal Parliament as an area, the population of which elects one member to the House of Commons. These districts are changed by parliament after each decennial census reflecting the shifts in population in the country. The electoral district is taken as the main administrative unit in the field organization for the census.

Enumeration Area - An enumeration area is the area canvassed by one enumerator during the census. Its delineation respects the boundaries of all larger statistical and political areas, such as counties, municipalities, census tracts etc.

Household - Any person or group of persons occupying a dwelling.

A household may consist of a family group with or without servants, lodgers etc., or it may consist of a group of unrelated persons sharing a dwelling, or even one person living alone. Hotels, motels and institutions may also contain one or more households composed of staff members, employees, permanent residents or persons who have no usual place of residence elsewhere.

Improvement District - An improvement district is an area established by a province with a view to promoting development.

Labour Force Population - All persons who are 14 years of age and over and who reside in Canada, with the exception of: Members of the armed forces, inmates of institutions, residents of the Yukon and Northwest Territories and Indians on reservations.

Metropolitan Area - Cities listed in the census bulletins - (1) "Census Metropolitan Areas - Part I" or (2) "Census Urbanized Areas - Part II" including all the places that are listed as belonging to the particular metropolitan area or urbanized area are designated as "metropolitan areas".

Non-Self-Representing Unit - N.S.R.U.'s are the areas lying outside the self-representing units and include both the rural areas and the urban areas within their boundaries. Special areas are excluded and are treated separately.

Paired Areas - For the purpose of variance estimation so-called paired areas are designated.

In the non-self-representing areas each stratum is a "paired area" and the two selected primary sampling units of each stratum are the two parts of the paired area.

In the self-representing areas paired areas are created in the following way: A group of (generally) two to four sub-units is designated as a paired area, the sample of segments in these sub-units is divided at random into sub-samples and these two sub-samples are called the two parts of the paired area.

Primary Sampling Unit - In the self-representing areas each sub-unit (population approximately 15,000 persons) is designated as a primary sampling unit.

In the non-self-representing areas a primary sampling unit consists of a rural and urban part. The rural part is composed of contiguous enumeration

areas and the urban part may be a village, town, split town, or urbanized enumeration area, within or in proximity to the rural part of the n.s.r.u. They vary in size from province to province and have as few as 2,500 persons in Prince Edward Island and as many as 6,000 persons in Ontario. The criteria for a primary sampling unit is that it should represent the stratum of which it is a part, in both economic characteristics and rural/urban ratio.

Province - The province is the main political division of the country. There are ten provinces: Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

Regional Office - There are eight permanent Dominion Bureau of Statistics Regional Offices in Canada each responsible for a particular area. The regions do not respect, in all instances, provincial boundaries but are established taking into account area, population, and transportation facilities. These offices are located in St. John's, Nfld., Halifax, Montreal, Ottawa, Toronto, Winnipeg, Edmonton and Vancouver.

Regional Officer - The regional officer is the Dominion Bureau of Statistics senior continuing officer in charge of a region.

Sample Take - The actual number of households (in the sample) enumerated in a p.s.u., segment or cluster. This includes those households which would have been interviewed but were temporarily absent, and those which were not interviewed because no one was at home when the enumerator called, interview was refused, there was a death or serious illness in the family, the dwelling was under quarantine, etc.

Sample Yield - See "Sample Take".

Segment - Segments in the self-representing units are areas with well defined boundaries, usually one or more city blocks, having a minimum of 12 house-

holds in the hard core and 6 households in the fringe areas. It is the first stage unit of selection within the p.s.u. the second stage unit is the dwelling. In the apartment sample the apartment building is the segment. In the non-self-representing areas each p.s.u. is divided into rural and urban segments which are the first stage units within the p.s.u., the second stage being the cluster. In the rural areas a segment usually consists of an E.A. while an urban segment consists of a town, part of a town, or an Urbanized Enumeration Area.

Self-Representing Unit - Metropolitan areas and cities whose population exceeds 15,000 persons or whose characteristics are unique and of special interest are defined as self-representing units. The boundaries are the same as those defined by the 1961 Census.

Special Area - Special enumeration areas listed in the back of each census booklet called "Description of Electoral Districts" have been designated by type i.e., hotels, institutions, indian reserves, military establishments, (civilian residents only) and remote areas (enumerated by R.C.M.P.) and form a Special Area Stratum for each province. Indian Reserves are excluded from the Labour Force Sample.

Special Dwelling - Hostels, religious institutions, hospitals, nursing homes, bunkhouses etc. containing 15 or more persons (not special areas) and which have living quarters which satisfy the definition of a dwelling are designated as special dwellings.

Special Population - See "Labour Force Population".

Split Towns - The urban part of a non-self-representing unit must sometimes be sub-divided into several parts and spread over several p.s.u.'s to maintain the correct rural/urban ratio and p.s.u. size. When this occurs the sub-divisions are referred to as "split towns".

Stratum - In the self-representing units the s.r.u. itself is the stratum.

In the non-self-representing units, strata are composed of contiguous rural enumeration areas having similar labour force characteristics and the urban areas (other than self-representing and special areas) which are contained within them. They vary in size from a minimum of approximately 19,000 in Prince Edward Island to a maximum of 126,000 persons in Ontario.

Sub-Units - See "Primary Sampling Unit".

Township - A township is an area smaller than a county or census division which may be incorporated as a municipality or may be defined only by survey. Townships do not occur in all parts of the country.

Urbanized Enumeration Area - Census rural enumeration areas having "urban" labour force characteristics and which have been included with the urban part of non-self-representing units.

List of Abbreviations

A.S.A.	American Statistical Association
C.M.H.C.	Central Mortgage and Housing Corporation
C.T.	Census Tract
D.F.	Density factor
D.U.	Dwelling unit
E.A.	Enumeration Area
E.D.	Electoral District
E.R.	Economic Region
I.D.	Improvement District
L.F.S.	Labour Force Survey
M.A.	Metropolitan Area
Mun.	Municipality
N.S.R.U.	Non-self-representing unit
P.S.U.	Primary sampling unit
R.O.	Regional Office or Regional Officer
R.S.	Random start
S.A.	Special area
S.R.	Sampling ratio
S.R.U.	Self-representing unit.

A. Stratification

(1) Basic Data

The basic data with which the design of the Labour Force Survey is carried out is obtained from the 1961 Census. A tape record of selected 1961 Census data by enumeration areas is prepared through a computer program and a print-out is obtained. The specifications for this special E.A. tabulation are shown in (example 1).

Selected data for each E.A. is then transferred to a punched card which provides a basic deck of cards to form the basic data for redesign. For a layout of the E.A. punched cards (see example 2). This basic deck of cards is sorted into three separate decks, Special Areas, Self-Representing and Non-Self-Representing. The sorting operation is carried out as follows:

(a) Special Areas

A list of special areas is found at the back of each census booklet called "Description of Electoral Districts". The special areas are divided into five groups -

i. Hospitals

ii. Other Institutions

iii. Indian Reserves

iv. Military Establishments

v. Remote areas enumerated by R.C.M.P.

The E.A. punched cards for these special areas are removed from the basic deck and sorted into the above categories. They are then filed for use in preparing the special area sample after they have been checked off the census bulletin "Official Grouping of E.A.'s by Municipality". For a detailed description of the special area sample see (A 7).

(b) Self-Representing Units

A self-representing unit is defined as a city or metropolitan area which is sub-sampled directly and each is represented in the survey by a sub-sample of its own population. As a result it does not represent any other area hence the name "Self-Representing".

The criterion for a self-representing unit is basically that it will provide a reasonable enumerator assignment. A city with a population of about 15,000 is usually the minimum for an s.r.u., however, smaller towns are occasionally made s.r.u.'s because of their unique characteristics, e.g. Isolated communities such as Kitimat B.C. or Elliot Lake, Ontario. An s.r.u. is delineated using city boundaries as of June 1, 1961 and including the whole census metropolitan area or urbanized area if such exists.

A list is prepared of all cities, towns and villages in a province which meet the above criteria. Census Bulletin 1.1 Series is used to obtain the names of these places and the E.A. cards are removed from the basic deck. If a city is listed in the Census Bulletin - 1. "Census Metropolitan Areas - Part 1" or 2. "Census Urbanized Areas - Part II", include all the places that are listed as belonging to the particular metropolitan area or urbanized area and remove the E.A. cards for the whole area.

For example:-

Winnipeg Metropolitan Area includes:

Winnipeg (city proper)	East Kildonan C.
St. Boniface C.	Kildonan N. Mun.
Transcona T.	West Kildonan C.
Tuxedo T.	Old Kildonan Mun.
Brooklands Village	St. James C.
Assiniboia, Mun.	St. Vital Mun.
Charleswood Mun.	St. Paul E. Mun.
Fort Garry Mun.	St. Paul W. Mun.

As the punched cards for the M.A.'s are removed they are checked off against a list of E.A.'s in the "Official Grouping of E.A.'s by Municipality", to insure that all E.A.'s for the M.A. are accounted for, then filed.

(c) Non-Self-Representing Units

The punched cards remaining, after those for special areas and self-representing units as described in the previous two chapters have been removed, are sorted by province, county, municipality and enumeration area.

The E.A. cards for remote and inaccessible areas are then removed and added to the special area sample (see A 7) and the remaining cards form the basic deck for the non-self-representing units.

(2) Choice of Stratification Variables for Non-Self-Representing Units

(a) Each province is divided into Economic Regions (example 3) defined as areas of structural homogeneity according to such factors as soil characteristics, production and marketing possibilities, commercial and industrial potential. The Economic Regions used in the Labour Force Survey design are considered standard by the D.B.S. Central Classification Staff and vary in size from 60,000 to 250,000 in population. Stratification is carried out independently in each Economic Region.

(b) The non-self-representing E.A. punched cards are sorted by Economic Region and municipality for urban and rural municipalities separately.

(c) The punched cards are then sent to the Tabulating Services Division, Computer Centre, for use with programs S.C.T. 111-112 (example 4). The print-out obtained from this program provides:

(i) Identification and tabulation for all characteristics by E.A.

and municipality.

(ii) The percentage of the Labour Force in each of 8 industry groups (P_{ij}) by E.A. and municipality.

(iii) The percentage of the Labour Force in each of 8 industry groups (P_i) for the E.R. by rural and urban parts.

(iv) The percentage of the Labour Force in each of 8 industry groups divided by the same percentage over the whole E.R. $\frac{P_{ij}}{P_i}$ by E.A. and municipality.

(v) An "Importance Factor" for each of the 8 industry groups for the Economic Region by rural and urban parts based on the number of people employed in each group and the variability of this number between E.A.'s.

(d) Using the "Importance Factor" as a guide, three or four rural characteristics are selected for primary use in stratification. The relative size of the importance factor determines the weight of a given characteristic in determining the industry groups to be used for stratification.

$$\text{Importance Factor} = \frac{n\sigma^2}{N}$$

where

n = Total number of persons in the Labour Force in a particular Economic Region having the particular characteristic.

N = Total number of persons in the Labour Force in a particular Economic Region.

σ^2 = Variance of the characteristic between municipalities in a particular Economic Region.

(3) Preparation of Maps for Stratification

(a) A suitable map must be obtained or put together for each Economic

Region. The scale should be large enough to allow for E.A.'s to be outlined on it and their population entered. If a map in a suitable scale is available showing municipalities it should be used if possible.

(b) A plastic overlay is attached to the base map.

(c) Electoral districts, municipalities and enumeration areas are outlined on the plastic overlay using census E.D. maps as a reference.

(d) The population of each E.A. or urban municipality is obtained from the census G-5 tables and entered on the overlay.

(4) Formation of Strata

(a) The approximate stratum size is calculated according to the formula:

$$S = A \times P \times N \times W$$

where

S = Approximate stratum size (population).

A = Approximate enumerator assignment in households.

P = Approximate number of persons per household.

N = Number of p.s.u.'s to be selected per stratum = 2.

W = Inverse of the sampling ratio for the province.

(b) The number of strata to be formed in the Economic Region is determined by dividing the n.s.r.u. population of the E.R. by the approximate stratum size (population).

(c) A characteristic pattern is drawn for each rural E.A. (example 5 and 6). This is done by plotting the $\frac{P_{ij}}{P_i}$ (see 2 c. (iv)) for the "Important Characteristics" (see 2 d).

(d) The patterns are sorted by inspection into a number of groups (usually 3 or 4) depending on the type of area and number of strata

to be formed. A different symbol e.g. different coloured X's, circles, etc. is assigned to the pattern of each group and these symbols are plotted on the plastic overlay of the E.R.

(e) Whenever an exceptionally high $\frac{P_{ij}}{P_i}$ is noted for an E.A. the percentage of this characteristic is shown on the plastic overlay (e.g. Mining 35%). This applies to all characteristics not only the "Important Characteristics".

(f) Strata are then tentatively delineated on the map on which all the necessary data have been placed. It is useful to use another plastic overlay for this purpose and for delineating primary sampling units. The following points must be observed in forming strata:

(i) Each stratum is made up of contiguous areas.

(ii) Each stratum is as homogeneous as possible.

(iii) Each stratum should differ from other strata as much as possible.

(iv) Location of urban areas in the stratum must be considered. In forming p.s.u.'s it is an advantage (reducing travel cost) to have an even distribution of urban throughout the stratum.

(g) Stratum Print-Out:

(i) Punched cards for each enumeration area in the stratum are sorted into two groups - rural and urban - by census division, municipality, electoral district and enumeration area.

(ii) Cards are assembled as above and a print-out is obtained (example 7) from tabulating services showing the following information:

- Identification as noted above by E.A.
- Total population, Labour Force population, number of persons employed in each of 8 industry groups and number of households for each E.A.
- Sub-total for each municipality.
- Sub-total for rural part and urban part.
- Total for the stratum.

(5) Delineation of Primary Sampling Units

(a) The size and number of p.s.u.'s must be decided upon. The number of p.s.u.'s in a stratum averages about 15, however, this varies from a minimum of 10 to a maximum of 19 depending on the population, size and area of the stratum. In strata where the density of population is high a greater population size per p.s.u. can be allowed. Some consideration must be given to the urban portion of the stratum as well. The cities, towns and villages making up the urban part of the stratum must be divided among whatever number of p.s.u.'s are decided upon, this involves splitting and combining some of these urban places and therefore the number of units is important (example 8). Certain enumeration areas originally designated as rural were "Urbanized" because of the labour force characteristics and used as urban parts in the formation of some p.s.u.'s.

(b) A "typical" p.s.u. is calculated for the stratum. This is done by finding the percentage of urban and rural for the stratum and also the percentages of all other characteristics, which is then entered on a "Table E" form, (example 9).

(c) The urban places are then sub-divided and grouped to form a number of urban parts equal to the number of p.s.u.'s to be formed.

The following rules should be followed:

(i) The parts should be approximately equal in size (population).

(ii) The parts should be as similar as possible in labour force characteristics.

(iii) Where two or more urban places are joined together to form one urban part, they must be reasonably close together geographically having in mind that an enumerator will have to travel from one to the other when enumerating.

(iv) Excessive splitting of towns should be avoided.

(d) The rural E.A.'s are then grouped to form rural parts in conjunction with each of the urban parts thus forming tentative p.s.u.'s.

The following rules should be followed:

(i) Start at one end of the stratum and proceed systematically to the other end forming rural parts being careful not to omit any E.A.'s.

(ii) The E.A.'s in each p.s.u. must be contiguous and should form a compact area. The urban part and the rural part of a p.s.u. must be within reasonable travelling distance.

(iii) The size should conform to the typical p.s.u. (5 b).

(iv) The percentage of the labour force in each of the listed industries should conform to that of the typical p.s.u. (example 10).

(e) The Table E. Form is then completed, summarizing the characteristics of each p.s.u. in the stratum (example 11).

(f) If a tentative p.s.u. does not conform in all characteristics with the typical p.s.u. for the stratum, adjustment must be made. This adjustment may be made by interchanging rural E.A.'s between contiguous p.s.u.'s or by interchanging the urban parts of the p.s.u.'s.

(g) When an examination of Table E indicates that the stratification and delineation of p.s.u.'s is acceptable, i.e. within $\pm$ 5% of the corresponding figures for the "typical" p.s.u. in the stratum, p.s.u. print-outs are obtained and a stratum file is set up, (example 12).

(6) Strata Files

A file is prepared for each stratum consisting of a complete description of each p.s.u. and its characteristics and a population summary sheet for the stratum, to be used in the selection of p.s.u.'s. The strata files are the basic record of the sample frame from which the Labour Force Survey sample is selected.

(a) The following punched cards are used to obtain a p.s.u. print-out:

(i) E.A. punched card for each E.A. in the p.s.u. excepting split towns.

(ii) A punched card for each part of a split town showing all characteristics in proportion to the size of the part (example 8).

(iii) A punched card to be used as a heading card for each p.s.u. showing the province and p.s.u. number.

(iv) A punched card for each rural municipality to be used as a heading card showing the county or census district, the municipality code and name.

(v) A punched card for each urban municipality to be used as a heading card showing the county or census district, the municipality code and name and the code for the E.A.'s included.

(vi) Punched cards to signal a sub-total (X-80).

(vii) Punched cards to signal a total (X-78).

(b) The punched cards are hand sorted and placed in the following sequence:

(i) P.S.U. heading card.

(ii) Rural municipality heading card) for each municipality
E.A. cards for the municipality) in rural part

(iii) X - 80 card.

(iv) Urban municipality heading card) for each municipality
E.A. cards or split town card) in urban part

(v) X - 78 card.

This is repeated for each p.s.u. in the stratum.

(c) The print-out is obtained using the same board as for the stratum print-out:

Total Controls Minor - X-80 card (extra spaces - 2 double lines)

Intermediate - X-78 card (eject to new page)

Major - Run-out

(See example 12).

(d) A stratum summary sheet is prepared (example 13) using the totals from the p.s.u. print-out.

(e) The p.s.u. print-outs and stratum summary sheets are then filed by province, economic region and stratum providing the sample frame from which primary sampling units are selected.

(7) Special Areas

(a) A separate stratum designated "Special Areas", has been established in

each province and comprises all enumeration areas defined as special areas by the 1961 Census in addition to all enumeration areas which are considered remote and inaccessible.

Due to the special nature of these enumeration areas the special area stratum is divided into four groups, for sampling and estimation purposes, as follows:

Military Establishments.

Hospitals - General, Mental, T.B. etc.

Remote Areas - Enumerated by R.C.M.P.
and other remote and inaccessible E.A.'s.

Other Special Areas - Jails, homes for the aged, schools, hotels, etc.

Two p.s.u.'s having approximately equal representation of the various types are established in each of these four groups in each province and are sampled independently. These groups are divided into segments from which a sub-sample of households is made in each of the selected segments. The E.A. cards for Indian Reserves are removed, since they are excluded from the labour force sample, and are filed for reference. The remaining punched cards are separated by province into each of the four groups.

(b) A list of all the E.A. cards in each of the four groups is prepared by province showing the following information - E.R., county or division, E.D., E.A., number of households, labour force population and the name of the establishment (except in remote areas) - each E.A. card usually representing a segment. When there is more than one E.A. card for an establishment they are combined to form one or two segments - the larger establishments are split and each part forms a segment in one of the two p.s.u.'s. Conversely the small E.A.'s may be combined with other

geographically adjacent E.A.'s to form segments.

Two p.s.u.'s are then formed by distributing the segments so that approximately the same number of segments, households and labour force population are represented in each of the four corresponding groups in each p.s.u. Bearing in mind these stipulations an attempt is made to give equal representation by type i.e. military establishment, hospital or other institution in each p.s.u.

Due to the unique characteristics of hospitals and other institutions, i.e. inmates who are excluded from the labour force survey and the unusual types of dwellings, the density factor and sampling ratio for the p.s.u. are based on labour force. The calculations for p.s.u.'s which comprise the military establishments and remote areas are based on households.

B. Self-Representing Units

(1) Description of Self-Representing Unit (S.R.U.)

(a) Cities and metropolitan areas whose population exceeds 15,000 persons or whose characteristics are unique and of special interest are defined as self-representing units. The boundaries are the same as those defined by the 1961 Census.

(b) The larger cities are divided usually by census tracts, into sub-units (example 14) which are known as primary sampling units and are sampled independently.

(c) The Labour Force sample in these p.s.u.'s is a two stage sample - the first stage unit is the segment and the second stage unit is the household. These p.s.u.'s can be revised separately as the need arises.

(d) Segments usually consist of city blocks and the sample of segments is selected from a complete list of segments with probability proportional to size (number of dwellings).

(e) The following operations are performed in the selection of the sample for the self-representing units:

(i) Topographical maps are obtained covering the area within the 1961 census boundaries.

(ii) Suitable street maps are obtained or prepared for the above area.

(iii) Dwelling counts are obtained for the above area.

(iv) Sub-units are formed.

(v) Primary sampling unit master maps are prepared.

(vi) Segments are delineated on master maps.

(vii) Segment Record sheets are prepared and segments selected.

(viii) Material for listing is prepared.

(2) Dwelling Counts

In order to select the sample in the s.r.u.'s a complete dwelling count by block is required. This makes possible the formation of segments of known size (number of dwellings) from which a sample of segments can be selected. In self-representing units where there will be an apartment sample, dwelling units in apartment buildings which meet the criterion for the apartment sample are excluded from the count. These dwelling counts are obtained from two main sources, the 1961 Census and field counts obtained from the Regional Offices.

(a) Maps which are suitable for entering dwelling counts and for out-lining and entering the identification for segments must be obtained. The main requirements are:

(i) Recent maps showing all streets and their names.

(ii) Streets should be shown with double lines.

(iii) Suitable scale is 1" to 800'.

(iv) The maps should preferably show only street names, leaving plenty of space for dwelling counts and segment identification.

(b) To obtain the required maps the following steps are taken:

(i) Topographical maps are prepared for each self-representing unit showing the 1961 Census boundaries outlined in yellow.

(ii) Tracings of census tract maps for the larger self-representing units are obtained from the Census Division and sent to Public Works for copies. In most cases these maps cover only the city proper. For maps outside the city proper and for some of the smaller s.r.u.'s not available in Census Division a request is sent to the Regional Offices to obtain these maps. The topographical maps (as mentioned above) are sent to the Regional Offices as a guide in obtaining maps to cover the complete s.r.u.'s

or areas outside of the city proper. Census tract maps that are obtained from the Census Division show the block number within each block which corresponds to the block number on the Census "Block Number List". Using this list, counts are transferred to maps within the city proper. For fringe areas (outside the city proper) maps (on which the areas requiring counts are outlined in red) are sent to the Regional Offices.

In some cases, areas within the city proper require a smaller breakdown of counts. These areas are also outlined in red on maps and sent to the Regional Offices.

(3) Forming Sub-Units (Primary Sampling Units)

(a) All the self-representing units whose population is sufficiently large - more than 40,000 persons - are sub-divided into primary sampling units ranging in size from 15,000 to 30,000 persons.

(b) Within the larger cities the census has established areas called census tracts whose boundaries remain stable over time. Wherever possible census tracts are used in the formation of primary sampling units (example 15).

(c) As segments will subsequently be divided into six rotation groups it is desirable to have six or a multiple of six segments selected from each p.s.u. It has also been found, that for the size of sample employed, a yield of approximately 5 dwellings per segment is the optimum in the built up areas and two dwellings per segment in the fringe or non-built up areas. The size of the p.s.u. should therefore be approximately 5 x 6 x k dwellings in the built up areas and 2 x 6 x k dwellings in the fringe areas where $\frac{1}{k}$ is the sampling ratio for the province, e.g., in Ontario which has a .5% sample, or $\frac{1}{200}$, the approximate size of p.s.u. in the built-up areas is 5 x 6 x 200 = 6,000 dwellings and in the fringe areas 2 x 6 x 200 = 2,400 dwellings.

(d) The number of dwellings in each census tract is entered on a map (1961 Census of Canada Index Map of Census Tracts). P.S.U.'s of the size required (see 3 c) are then formed by joining contiguous Census tracts where possible. Where this is not possible, usually in fringe areas, contiguous p.s.u.'s of the size required are formed respecting municipality boundaries where possible.

(4) Preparation of P.S.U. Master Maps

(a) P.S.U. Master maps are prepared by assembling the census tract maps belonging to each p.s.u. and pasting them onto a cardboard backing. Where census tract maps are not available the best (see 2 a) available maps are used. This often requires the tracing, enlarging or reducing of maps.

(b) Where the original count maps are not suitable for use as master maps the count by block is transferred to the master maps.

(c) The p.s.u. identification number is printed on each sheet.

(d) These p.s.u. master maps are street maps covering the complete areas within p.s.u.'s. The segments are outlined in yellow on these maps and the house count and segment serial number entered within each segment (see 5 a). Using this information the segment record forms are prepared (example 17) from which the sample is selected, (see 5 b).

A copy of the p.s.u. master map is also prepared for the Regional Offices showing only the selected segments which are outlined in yellow. The segment number is entered for each selected segment on these maps, (obtained from the segment record form). When Segment Lists (LF 7) are prepared for selected segments in the s.r.u.'s these maps are referred to in order to outline the boundaries of the selected segments (see 6 b).

(5) Delineation and Selection of Segments

(a) Each primary sampling unit is divided into segments (usually city blocks) whose delineation is in accordance with the following criteria:

(i) If a city block has less than a specified number of households determined by the, "density factor x 3" (see 5 b iii), it is combined with one or more contiguous blocks to form a segment.

(ii) Areas containing no dwellings and apparently no space for residential construction (e.g., parks, industrial plants, etc.) are joined with other contiguous areas to form segments, so that the entire area of the p.s.u. is covered.

(iii) The segments so formed are outlined in yellow and serially numbered in a serpentine fashion. Two numbers are shown in the segment - the number of dwellings which is underlined and the segment serial number, (example 16).

(b) Selection of Segments in Self-Representing Units

(i) Enter the provincial sampling ratio, the p.s.u. number and the name of the municipality on the Segment Record Form (example 17).

(ii) List the segments according to their serial number on the "Segment Record Form", and enter the number of dwellings in the appropriate column (No. of D.U.).

(iii) Determine the "density factor" to be used as follows:

$$d = \frac{N}{R \times 6}$$

where d = density factor.

N = total number of dwellings in the p.s.u.

$\frac{1}{R}$ = sampling ratio of the p.s.u.

6 = number of segments to be selected.

NOTE: If $d > 7.5$ use $\frac{d}{2}$ for the density factor and select 12 segments.

(iv) Determine the "size" of each segment in terms of the density factor by dividing the number of dwellings in each segment by the density factor rounded off to two decimal points. When the sum of the "size" figures for the whole p.s.u. disagrees with the product of the number of selected segments, times the denominator of the provincial sampling ratio (due to rounding off) an adjustment is made in the rounding off of the size figures. The "size" thus calculated should be entered for each segment in the column "Size (S.R.)" on the Segment Record Form. ($\frac{1}{\text{Size}}$ = S.R. of Segment).

(v) The segment sizes are accumulated and entered in the "Cumulated Size" column on the Segment Record Form.

(vi) Assign a rotation group number (1 to 6) to each segment as follows:

- Select a random number from 1 to 6.
- Enter this number at the extreme right in the column "Segment Number" for each segment up to and including the first segment with a number greater than R in the "Cumulated Size" column (where $\frac{1}{R}$ is the provincial sampling ratio).
- Proceed in the same way with the next rotation group number up to 2 R in the "Cumulated Size" column, etc. until each segment has been assigned a rotation group number.

(vii) Assign a segment number to each segment as follows:

- Enter 01, 02, 03 --- etc. in the column "Segment Number" so that the first rotation group number previously entered becomes the third digit of the segment number. Numbers between 01 and 69 are used for the "hard core" or built up areas and numbers between 70 and 99 are used for the "fringe" or non-built up areas.

- When a segment is reached on the list which has a different rotation group number, begin numbering 01, 02, 03 --- etc. again for the series of segments having that rotation group number and so on until all of the segments have been given a unique number.

(viii) Select a number at random from 1 to R and make a systematic selection of segments by applying the sampling ratio $\frac{1}{R}$ to the "Cumulated Size". Enter the number of the survey in which each segment is to be introduced in the column "Selected Segments I".

(ix) Determine the random start to be used in the originally selected segments by subtracting the number, in the column "Cumulated Size" for the segment immediately preceding the selected segment, from m, m + R, m + 2R, etc. for each selected segment, (m = random start used in the systematic selection). Enter the notation in the "Remarks" column opposite the selected segments "R.S. --".

(6) Preparation of Materials for Listing

(a) A set of p.s.u. maps, identical to the master maps but showing only the selected segments, is prepared for each self-representing unit. The selected segments are outlined in yellow and the segment numbers indicated.

(b) Two copies of the Segment List (example 18) are prepared showing the following:

(i) A diagram of the selected segment. This is drawn from the master maps. The streets that form the boundary of the segment are indicated by a single blue line and those within by a double blue line. The segment boundary is outlined by a single yellow line. The names of all streets and any other necessary identification

are added. If within the boundary of the segment there is an apartment sample segment shown on the master map, a note is made on the diagram to exclude it.

(ii) P.S.U. number.

(iii) Segment number.

(iv) Location.

(v) Survey introduced.

(vi) Sampling Ratio.

(vii) Random Start.

(c) Two copies of "Segment Replacement (S.R.U.)" Forms are prepared. One copy goes to the Regional Office and one copy is for Head Office use (example 19).

(d) One copy of the "Segment File Card" (example 20) is prepared for Head Office use.

(7) Apartment Sample

(a) In the larger self-representing units, Calgary, Edmonton, Halifax, Hamilton, London, Montreal, Ottawa, Quebec, Toronto, Vancouver, Victoria, and Winnipeg, a special apartment sample (p.s.u.) has been set up. The purpose of this special sample is to improve the representation of apartment dwellers and to reduce the variance of the sample take due to the rapid construction of high rise apartment buildings. The apartment sample is comprised of apartment buildings having 5 or more floors of apartments and 30 or more units.

(b) In order to set up an apartment sample it is necessary to compile a complete list of all apartment buildings meeting the above mentioned criterion. A number of sources are used in compiling a tentative list:

(i) A list is obtained from C.M.H.C. compiled for their Vacancy Survey.

(ii) Information from Census Visitation Records.

(iii) Assessment lists obtained from municipalities.

All apartment buildings on the tentative list are checked in the field by the Regional Office and a Form L.F. 15 card (example 21) is completed by them. A small diagram showing the location of the apartment building is sketched on the back of this card if it meets the criterion for the Apartment Sample.

(c) When all the L.F. 15 cards for an s.r.u. have been returned from the field, the apartment buildings meeting the apartment sample criterion are listed on a Segment Record (Apartment Block Sample) Form L.F. 14 (example 22).

(i) Each apartment building is considered a segment.

(ii) The apartment buildings are listed in order by census tract and the number of apartment units, address, name of apartment are entered in the appropriate columns.

(iii) A density factor of 5 is used to calculate the size of each segment.

(iv) The method of segment selection described in (5 b. iv to ix) is followed except in (5 b. vii) where all numbers between 01 and 99 are used.

(v) Using the information from the L.F. 15 card (census tract number and location sketch) the Apartment Sample segments are plotted on the s.r.u. master maps by entering the segment number (in red and circled) in the proper location. At the same time the number of the regular p.s.u. in which each apartment segment is located is entered on the L.F. 15 card and later on the Segment Record (Apartment Block Sample) Form L.F. 14 in the appropriate column.

(vi) Two copies of the Segment Record (Apartment Block Sample) Form L.F. 14 (as mentioned above) are prepared. One copy is sent to

the Regional Office and the master copy is retained in Head Office.

(vii) Two copies of the Segment List (L.F. 7) (example 23) are prepared for each selected segment in the Apartment Sample as they are for selected segments in the regular sample. A diagram of the block in which the apartment building is located is shown (not outlined in yellow) on the L.F. 7 and the name and address of the apartment building is entered in red beneath. The location of the apartment block is shown outlined in yellow.

C. Non-Self-Representing Units

The following operations are performed in the selection of the sample for the n.s.r.u.'s:

(i) Selection of primary sampling units.

(ii) Delineation and selection of segments.

(iii) Preparation of materials for counting.

(iv) Clustering of segments.

(v) Preparation of material for listing.

(1) Selection of P.S.U.'s

(a) Two p.s.u.'s are selected (without replacement) from each stratum with probability proportional to size using the method proposed by I.P. Fellegi (Journal of A.S.A. March 1963). The method was programmed for the computer (LFS 090) and provides the following print-out:

(i) the first line shows the selection probability for each p.s.u. to eight decimal places.

(ii) the second line shows the cumulative probabilities.

(iii) the third line shows the conditional probability for each p.s.u., to be used for the second selection.

(iv) the fourth line shows the cumulative conditional probabilities.

(b) The input for this programme is by punched cards prepared as follows: Card no. 1 format. (One such card per stratum) - Heading card for stratum.

Column No.	Data
1	Province
2	Economic Region
3-4	Stratum Number
5-6	Card Number (within stratum = 01)
7-8	Number of p.s.u.'s within stratum

Column No.	Data
9-80	Not Used

Card No. 2 format - data cards.

Column No.	Data
1	Province
2	Economic Region
3-4	Stratum Number
5-6	Card Number (within stratum)
7-8	Number of P.S.U.'s within stratum
9-10	Not Used
11-70	Six data fields * (each 10 characters)
71-80	Not Used

*Data fields are as follows: Each one must have a decimal point and a sign.

e.g. $\pm$ 158 would be punched in columns 11-20 as shown

										$\pm$		1	5	8	.	0			
1	1																		2 0

Card No. 3 format - end card - one such card at end of each group of cards to be processed.

Column No.	
1-8	punched "99999999"
9-80	Not used

(c) (i) A random number is selected between 0.00000001 and 1.00000000 and applied to row 2 (cumulated probabilities) of the print-out obtained in (a) to select the first p.s.u.

*The data fields are used to enter the population of each p.s.u. This and all other necessary data is obtained from the strata files. Another random number is selected from 0.00000001 to 1.00000000 and applied to row 4 (cumulated conditional probabilities) to select a

second p.s.u. from the stratum. If this random start results in the selection of the first selected p.s.u. another random number is selected. The random numbers used and the p.s.u.'s selected are entered on the print-out sheet.

(2) Delineation and Selection of Segments

(a) The urban parts and rural E.A.'s of the selected p.s.u.'s are listed separately on a "Segment Selection and Rotation" form (example 24) showing the municipality, E.D. and E.A. and the number of households in each. This data is taken from the p.s.u. print-out in the strata file (see example 12).

(b) The sampling ratio of the p.s.u. is calculated in the space provided in the upper right hand corner of the form:

$$\text{Sampling Ratio} = \frac{\text{Stratum population}}{\text{P.S.U. population X 2W (Weight for province)}}$$

(Divide the denominator by the numerator in order to obtain a sampling ratio with a numerator of 1.)

(c) Calculate the density factors (d.f.) for the urban and rural parts using the space provided at the bottom of the form:

$$\text{d.f. (urban)} = \frac{H}{nR}$$

where H = total number of households in the urban part:

$\frac{1}{R}$ = P.S.U. sampling ratio

n = 2 = number of segments to be selected:

$$\text{d.f. (rural)} = \frac{H}{nR}$$

where H = total number of households in the rural part:

$\frac{1}{R}$ = P.S.U. sampling ratio

n = 2 = number of segments to be selected.

If d.f. > 20 recalculate using n = 3.

(d) (i) Segments are formed consisting usually of one E.A. in the rural part. The following rules apply:

The number of households in the segment should be within a reasonable range:

Maximum = $\frac{N}{n} \times 3/2$

where N = total households in the rural part.

n = number of E.A.'s.

If an E.A. has more than the maximum number of households it is sub-divided into two segments.

If a segment has fewer households than half the largest segment it is joined with an adjacent E.A. to form a segment.

(ii) An urban segment which has more than half of the total number of households in the urban part of the p.s.u. is sub-divided into two segments.

(e) Number the segments consecutively, starting from 01 in the urban and 51 in the rural. A rotation group number (1 to 6) will be assigned to each segment when it is selected and will form the third digit of the segment number.

(f) Divide the number of households in each segment by the appropriate d.f. (urban or rural) and enter the result in the column H/d.f.

(g) Accumulate the $\frac{H}{d.f.}$ by segment and enter in the column "Cumulated Sum of $\frac{H}{d.f.}$ ".

(h) Select a number at random between 1 and R ($\frac{1}{R}$ = S.R. of P.S.U.) for each of the parts, urban and rural, and select a systematic sample of segments from each by applying the random numbers to the "Cumulated Sum of $\frac{H}{d.f.}$ ".

(i) The sampling ratio for the selected segments will be $\frac{1}{R_1}$ where $R_1 = \frac{H}{d.f.}$

for the segment. This sampling ratio is entered in the column S.R. opposite the selected segment.

(j) The number of random starts to be used in a selected segment is calculated as follows:

(i) The random number that is used to select a segment is subtracted from the figure that appears in the column "Cumulated Sum of H/d.f." opposite the selected segments.

(ii) If this number is smaller than the inverse of the sampling ratio of the smallest segment, the latter number is used as the number of random starts to be used.

This procedure avoids the Bias of Segment Rotation while minimizing the number of segment rotations.

(k) The rotation group numbers for all the selected segments are assigned (see e.) as follows:

(i) A table is set up showing columns numbered 1 to 6 (for the six rotation groups) and a row for each selected p.s.u.

(ii) All the selected segments are entered for each p.s.u. and their expected takes in such a way that the selected segments in each p.s.u. and stratum are distributed as evenly as possible among the six rotation groups and that the total expected take for each rotation group (column totals) are approximately equal for urban segments and for rural segments.

(iii) Each segment then takes on the rotation group number of the column to which it is assigned.

Example

Urban and Rural Segments - Rotation Group Numbers

P.S.U.	1		2		3		4		5		6	
	U	R	U	R	U	R	U	R	U	R	U	R
90008					01-10		03-10			51-6		52-6
90011		51-5		52-5					01-11		02-11	
91008	01-11		03-11			52-14		53-14				
91016					01-12		02-12			51-13		53-13
92003		51-17		55-17					01-8		02-8	
92013	01-9		02-9			51-16		53-16				
93001		51-14		54-14					01-7		02-7	
93006	02-7		03-7			52-13		55-13				
94013	01-10		02-10			51-17		53-17				
94017					01-10		02-10			53-17		55-17
94022		52-20		53-20					01-9		02-9	
94026					01-10		02-10			51-18		52-18
95001					01-5		02-5			51-18		52-18
95003		51-16		53-16					01-6		02-6	
95021						53-17		57-17	01-9		02-9	
95028	01-8		02-8							51-17		53-17
97003		52-17		54-17	01-8		02-8					
97008	01-8		02-8			52-15		53-15				
98002					01-3		02-3			51-3		52-3
98004		52-3		53-3					01-3		02-3	
	53	92	53	92	58	92	58	92	53	92	53	92

Total Hhlds. Urban 328
Average = 54.7

Total Hhlds. Rural 552
Average = 92

(3) Preparation of Materials for Counting

(a) The following sampling materials must be prepared for use in connection with field counting and clustering of selected segments.

(i) 2 P.S.U. maps (Topographical) (example 25).

(ii) 1 topographical map of each selected rural segment.

(iii) 1 "blow-up" enlarged from topographical map for each selected rural segment.

(iv) 1 street map for each selected urban segment.

(v) For segments in the Prairie Provinces a Prairie Township Diagram is used in place of (ii) and (iii) above.

(b) The selected p.s.u.'s are located on Census E.D. maps using the census identification shown on the "Segment Selection and Rotation" form. A list of the topographical maps required is made using the Mines and Technical Surveys Map Index and the maps are ordered from the Mines and Technical Surveys Department. The 1:50,000 scale is used if available, otherwise the largest scale available is used. Two copies of a p.s.u. map are prepared for each p.s.u.

(c) Topographical maps covering the whole p.s.u. are pasted together and mounted on cardboard. The p.s.u. boundaries are outlined in brown and rural segment boundaries are outlined in yellow by consulting Census E.D. maps on which the E.A.'s are outlined. Urban segments are designated by circling the town in orange. The segment number, obtained from the "Segment Selection and Rotation" form must be clearly marked with black ink on each segment. One of these p.s.u. maps is for Head Office use and the other for the Regional Office.

(d) Each selected rural segment is outlined in yellow on a topographical map for the enumerators use in locating the segment. The census E.A. description for the E.A. or E.A.'s comprising the segment are pasted on this map.

(e) The 1:50,000 topographical map of each selected rural segment is enlarged, using the Lucikon, to four times this scale and two copies are traced from the enlargement. One copy is used for counting in the field and eventually is used for the Head Office copy of the clustered segment diagram. The second copy is used for the Regional Office copy of the clustered segment diagram and the third for the enumerator's clustered segment diagram.

(f) Street maps for the selected urban segments can sometimes be obtained from the Mapping Section of the Census, otherwise the Regional Office is requested to obtain them locally. Where no maps are obtainable for small towns a blow-up can be made from a topographical map on the Lucikon and details added in the field.

(g) The following materials are then sent to the field with a request for a count of dwellings in each selected segment:

(i) 1 P.S.U. map (topographical) (example 25).

(ii) 1 segment map (topographical) for each selected rural segment.

(iii) 1 segment diagram (blow-up for each selected rural segment).

(iv) 1 street map (when available) for each selected urban segment.

(v) 1 segment replacement form (example 26).

(vi) list of expected takes per segment.

(h) For segments in the Prairie Province a Prairie Township Diagram is used in place of (g) (ii) and (iii) above (example 27).

(4) Clustering of Segments (Basic Method)

(a) On the maps returned from the field showing the location of all dwellings in the segment, form clusters (outlining them in yellow) according to the following rules:

(i) Clusters should be as small as possible but with a minimum of two dwellings each, (examples 27 and 28).

(ii) Cluster boundaries must be identifiable in the field and

reasonably permanent, e.g., roads, rivers, railroad tracks, etc.

(b) Number the clusters in a serpentine pattern. Circle the cluster numbers to avoid confusion with other numbers appearing on the map.

(c) Enter the number of households in each cluster on the map, underlining each number.

(d) Enter the number of households in each cluster on the list of clusters on the "Cluster Selection and Rotation Form", (example 29).

(e) Calculate the "group size" in the space provided under "Group Size Calculation" on the "Cluster Selection and Rotation Form":

(i) Calculate the approximate number of groups required

$$= \frac{\text{Total Households in Segment}}{3}$$

(ii) Determine the multiple of R (where $\frac{1}{R}$ = segment sampling ratio) which is the closest to the approximate number of groups calculated above.

(iii) Final group size = $\frac{\text{Total No. of Households in Segment}}{\text{C.M. (Closest multiple)}}$

(f) Calculate the cluster size table and enter directly below the group size calculations:

(i) List R multiples of the final group size up to a maximum of the largest number of households in any cluster.

(ii) List the means of successive multiples.

(iii) Use the means to determine the cluster size for any given number of households.

Example

Group Size	Multiple	Mean	No. of H.H.'s	Cluster Size
	0			
		2.216		
4.435	4.435		3-6	1
		6.653		
	8.870		7-11	2
		11.088		
	13.306		12-15	3

Example - Concluded

Group Size	Multiple	Mean	No. of H.H.'s	Cluster Size
		15.524		
	17.741		16-19	4
		19.959		
	22.176		20-24	5
		24.394		

(g) Enter the appropriate cluster size from the table for each cluster on the "List of Clusters" on the "Cluster Selection and Rotation Form".

(h) Draw up a rotation programme for clusters as follows:

(i) In the space under the heading "Sample Clusters by Survey" on the "Cluster Selection and Rotation Form" enter the survey numbers for the months of rotation (i.e., six month intervals) along the first row. The number of columns (i.e. the number of surveys) will be equal to the inverse of the sampling ratio.

(ii) Enter the clusters in order of size (urban clusters are entered in numerical order) along the rows under the survey numbers in a serpentine fashion i.e. left to right, right to left etc. Clusters of size X will have a sampling ratio of 1/X and will be entered X times in succession along a row. The random start to be applied in a given survey and the sampling ratio are shown as follows: 1/X, 2/X, 3/X ---- X/X.

(iii) If the inverse of the cluster sampling ratio is such that the cluster will be carried over to the next row, then the next cluster that is either $\leq$ the number of columns remaining is entered until the row is completed. This is done so that there is no carry over of clusters which would permit the same cluster to be entered twice in the same survey. The clusters that were omitted are then carried down to the next row and entered as above.

(5) Clustering of Segments (Special Cases)

(a) Complete town sub-divided into two segments:

(i) Calculate the approximate number of groups required = X

$$X = \frac{\text{Total households in town}}{3}$$

(ii) Calculate the final number of groups = X^1

X^1 = multiple nR closest to X

where n = number of segments = 2

$\frac{1}{R}$ = segment sampling ratio

(iii) Calculate the final group size:

$$\text{Final group size} = \frac{\text{Total No. of households in the town}}{X^1}$$

(iv) Proceed as in (4 f), (Basic Method) using the final group size calculated above.

(v) Proceed as in (4 a, b, c).

(b) Partitioned town with one or more segments:

(i) Calculate the approximate number of groups required = X

$$X = \frac{\text{Total households in town}}{3}$$

(ii) Calculate the final number of groups = X^1

X^1 = multiple of n.p.R closest to X

where n = number of segments.

p. = No. of parts into which the town is partitioned.

$\frac{1}{R}$ = segment sampling ratio.

(iii) Calculate the final group size:

$$\text{Final group size} = \frac{\text{Total No. of households in the town}}{X^1}$$

(iv) Proceed as in (4 f), (Basic Method) using the final group size calculated above.

(v) Proceed as in (4 a, b, c).

(c) Cluster distribution for Special Cases (a) and (b) above.

(i) Enter the clusters in the "Cluster Distribution of Urban Segments" form under the column "List of Clusters in Serial Order" showing the cluster number, number of households and cluster size, (example 30).

(ii) For a complete town with two segments (Special Case (a)) arrange an even distribution of groups within each segment. For a partitioned town (Special Case (b)) arrange an even distribution of groups within each part and then arrange an even distribution of groups within each segment of the selected part.

An even distribution of groups is obtained by listing the clusters in numerical order in the number of columns necessary (equal to the number of parts or number of segments) listing each cluster in the column having the smallest number of groups until all clusters have been listed. (Each cluster is listed a number of times equal to the size of the cluster). If there are an unequal number of groups in the columns one or more clusters are transferred from one column to another to obtain an equal number of groups in each column.

(iii) The clusters for the selected segment are then listed in the column "Selected Segment" of the Cluster Selection and Rotation Form, (example 31).

(iv) Draw up a rotation programme as in (4 h) in the section of the Cluster Selection and Rotation Form headed "Sample Clusters by Survey".

(6) Preparation of Material for Listing

(a) When the clustering of a segment is complete as described in (4) and

(5), the clustering is checked and the clusters with house counts as shown on the original map from the Regional Offices are transferred to one of the tracings (referred to in (3 e)). The clusters only without the house counts are transferred to the other tracing. These two tracings are forwarded to the R.O. - the one showing the clusters only is the enumerator's copy and the other showing the clusters and house count is the Regional Office copy.

(b) A rotation programme as shown on 9604-229 "Cluster Selection and Rotation Form" is drawn up and two cluster diagrams for each selected cluster listed in the survey introduced column are drawn on Form 9604-97 "Cluster List" (L.F. 6), (example 32). The p.s.u. segment and cluster number are also shown along with the cluster sampling ratio and random start.

(c) A rotation programme, two copies of each Cluster List (L.F. 6) and the segment maps are forwarded to the Regional Offices for listing purposes.

D. Rotation of Sample

(1) Introduction

(a) Purpose of Sample Rotation

There is clearly a limit to the number of times one can interview the same household for a monthly survey such as the L.F.S. It is therefore necessary to replace the selected households in order to retain the cooperation of respondents and to avoid refusals. The systematic replacement of selected households while still maintaining a probability sample in called sample rotation. The system of rotation in the L.F.S. is to replace a 1/6 sub-sample of the selected households each month so that selected household will remain in the survey for only six months. The method of rotation is described in detail in the remainder of this section.

(b) Rotation Group Numbers - Refer to section(B 5 b vi) and section(C 2 k). All segments in self-representing units and non-self-representing units belong to either rotation group 1, 2, 3, 4, 5 or 6. These group numbers specify the months in which the segments belonging to these groups rotate. (See table below).

Group Number	Rotation Months
1	January - July
2	February - August
3	March - September
4	April - October
5	May - November
6	June - December

In constructing the six rotation groups, the sampled segments have been distributed in such a way that each group of segments rotating at the same time provides a representative sub-sample of all the sampled segments within a province. Thus each of the six sub-samples contains approximately 1/6 of urban and rural population.

Each of the segments, once assigned a segment number, is uniquely specified as to the months the sub-sample of households within the segment rotate and the months that these segments, when exhausted can be replaced.

(2) Rotation in Self-Representing Units

(a) Rotation of Households

Each month 1/6 of the sampled households become exhausted (i.e. have been interviewed for 6 consecutive months) and must be replaced. The households that must be replaced are within segments belonging to Group 1 in January or July, Group 2 in February or August, etc.

As the sampled households have been systematically selected from the Segment List L.F. 7, the replacement households are selected by applying the next random start to the list. When all random starts have been used within the segment (i.e. all households are exhausted) the segment is said to be exhausted and must be replaced.

(b) Rotation of Segments

When a segment is exhausted it is replaced by the next segment on the list (Segment Record Form), whose rotation number (i.e. third digit) is the same as the segment being replaced. When this happens to be the last segment in the group then we go back to the first segment in the group with the same rotation number and it is introduced as the new segment.

(3) Rotation in Non-Self-Representing Units

(a) Rotation of Households and Clusters

Sampled households that have become exhausted (interviewed for 6 consecutive months) must be replaced. Each month 1/6 of the sampled households become exhausted. Households in segments belonging to Group 1 are replaced in January or July, Group 2, February or August, etc. Each column in the rotation programme (referred to in section C. 4 h) represents groups of households which have cluster numbers, with sampling ratios and a unique random start in each column.

The group of households in the first column remains in the sample for six consecutive months and is then replaced by the second column which contains a different group of households which in turn is replaced and so on until all households and clusters within a segment are exhausted, the segment is then replaced.

(b) Rotation of Segments

A segment is exhausted when all columns in the rotation programme have been used and it is then replaced by the next available segment on the list (Segment Selection and Rotation Form).

(4) Segment Replacement Tables

The selected segments within every selected p.s.u. in s.r.u.'s and n.s.r.u.'s in the Labour Force Sample are listed on Form 9604-69 according to the group number to which they belong (groups 1 to 6) and the Regional Office jurisdiction, (example 33). This table is set up in order to have control over replacements of exhausted segments and provides a record of all segments which have been, are, or will be, in the sample for any given survey over a period of five years. When preparing Replacement Tables for segments in self-representing units the information is obtained from the Segment Record Form (9604-90) as referred to in section (B. 5 b).

When preparing Replacement Tables for segments in the non-self-representing units the information is obtained from the Segment Selection and Rotation Form (9604-95) referred to in section (C. 2 a).

The example shown on this form for Group 4 for s.r.u.'s in Halifax Regional Office lists the p.s.u.'s, the segment within the p.s.u. and the survey at which these segments are replaced (Survey 169, 172, 178, 184, etc.). For example in p.s.u. 22104, segment 064 will be replaced at Survey 184 by segment 074, sampling ratio 1/5. Segment 074 will be replaced in 2 1/2 years or Survey 214. As segment 074 has a sampling ratio of 1/5, five random starts are to be used. The segment will be introduced at Survey 184 using random start 1, at Survey 190 random start 2 will be used and at Survey 196 random start 3, etc. (Each random start is used for 6 consecutive months). At Survey 214 the Segment is replaced as all random starts have been used and the segment is then considered exhausted. When a segment is replaced a random start of one is used.

(The length of time a segment remains in the sample is determined by dividing the inverse of the sampling ratio by 2, e.g. 5/2 = 2 1/2 years).

(5) Cluster Replacement Tables

Cluster Replacement Tables are also set up for replacing clusters in segments within p.s.u.'s (example 34).

When preparing these tables the information is obtained from the Cluster Selection and Rotation Form (9604-229) referred to in Section (C. 4 h). For example in P.S.U. 51024 the rotation programme shows clusters being replaced at Surveys 192, 198, 204, 210, 216, and 222. Therefore, on the Replacement Tables a check mark (✓) is entered in the columns shown for the above mentioned surveys, indicating that clusters must be drawn for these surveys.

The Replacement Tables enable sampling material to be sent to the Regional Office on a monthly basis, well in advance of their date of introduction into the Labour Force Sample. This lead time enables the Regional Office to perform field work such as counting, listing, hiring enumerators and organizing enumerators' assignments, etc.

(6) Monthly Segment and Cluster Replacements

(a) Segment Replacements

Each month replacements are sent to the Regional Office for segments in the self-representing units six months prior to their date of introduction into the Labour Force Sample; for replacements in non-self-representing units nine months prior to their date of introduction.

For example: In January 1965, all segments in self-representing units that are being introduced in July 1965 (Survey 181) are forwarded to the Regional Office. In January 1965, all segments in non-self-representing units that are introduced in October 1965 (Survey 184) are forwarded to the Regional Office.

Referring to the Segment Replacement Tables for the s.r.u.'s all segments that appear in the column for Survey 181 are drawn and forwarded to the Regional Office.

The method explained in section (B. 6 b, c and d) under "Preparation of Materials for Listing" is followed.

For replacements of segments in n.s.r.u.'s all segments that appear under the column for Survey 184 in the Segment Replacement Tables are drawn and sent to the Regional Office for counting.

The following sampling material is prepared when requesting house counts:

(i) One segment map (topographical) for each selected rural segment.

(ii) One segment diagram (blow-up for each rural segment).

(iii) One segment map (if available) for each selected urban segment.

(iv) One segment replacement form.

For rural segments in the Prairie Provinces a Prairie Township Diagram is used in place of (i) and (ii) mentioned above.

When counts have been received from the Regional Office the segment is then clustered and introduced into the sample as the new segment. The procedure for clustering is outlined in (C. 4) "Clustering of Segments".

(b) Cluster Replacements

Each month cluster replacements are sent to the Regional Office nine months prior to their date of introduction into the Labour Force Sample.

For example: In January 1965 all clusters within segments that are being introduced in October 1965 (Survey 184) are forwarded to the Regional Office.

Referring to the Cluster Replacement Tables, segments within a p.s.u. that have a check mark (✓) require cluster replacements for this survey.

Refer to the rotation programme for segments where clusters must be drawn, compare the survey date that appears on the programme with the survey date on the table and draw only the clusters that appear for the first time in this survey.

Two Cluster Lists L.F. 6 are completed for each selected cluster and forwarded to the Regional Office.

E. Sample Control

(1) Up-dating the Apartment Sample

A list of all apartment buildings which have been completed is received from C.M.H.C. Head Office approximately two months after the end of the reference month. An investigation is now under way to see whether it would be possible for the Regional Offices to work directly with the local C.M.H.C. offices in obtaining this information more promptly to reduce the time lag which is now being encountered.

An "Apartment Card - L.F. 15" is prepared for each apartment building containing 30 or more dwelling units and five or more floors of apartments showing the street address, C.M.H.C. - 515 Dwelling Number and the number of dwelling units. The C.M.H.C. - 515 Dwelling Number has been included so that it can be used as a reference when contacting the C.M.H.C. local office should any question arise concerning any particular apartment building.

The apartment cards are then forwarded to the Regional Office with a letter requesting a field check and the following information -

(a) P.S.U. - (Regular L.F. P.S.U.'s) or C.T.

(b) Name of apartment building.

(c) Number of floors.

(d) A diagram showing the location of the apartment building on the back of the card.

When the apartment building has been checked the above information is marked on the apartment cards and returned to Head Office.

Apartment buildings which meet the criteria for the apartment sample are added to the appropriate Segment Record - L.F. 14 by Head Office and the cumulated size is calculated. If the cumulated size is such that the segment falls into the sample, "Segment Lists - L.F. 7" are prepared (see B 7 c. vii) and sent to the Regional Office along with a letter listing all the new

segments to be added to the Regional Office copy of the Segment Record L.F. 14 (Apartment Block Sample) with the following information -

P.S.U. number

Segment number

Size - S.R.

Cumulated size

Survey introduced (for selected segment only)

Random Start (for selected segment only)

Address

Name of Apartment

Location (No. of the regular p.s.u. in which the apartment is located).

The additional apartment sample segments are plotted on the s.r.u. master maps by entering the segment number (in red and circled) in the proper location. The location of the apartment building is obtained from the sketch drawn on the back of the L.F. 15 card. (See 1 d).

(2) Sample Yields. (Form L.F. 50)

(a) The Sample Yield form is designed so that a comparative check may be made between the theoretical yields based on 1961 Census data, the expected yields based on actual field counts and the actual yield obtained from a selected group of segments for each survey.

The results provide a check on the basic design of the sample and initial field counts and a continuing check on the quality of the sample as segments rotate. This ensures that the correct sample is in fact being enumerated in the field and if errors in coverage occur they can be immediately recognized and corrected.

The sources of the data and method used in compiling the sample yield forms is described in detail for n.s.r.u. and s.r.u. in the following two paragraphs.

(b) Non-Self-Representing Units (Sample Yields - L.F. 50)

Column 1 - Primary Sampling Unit.

The Segment Selection and Rotation Forms for each p.s.u. are arranged in numerical sequence by Regional Office in the Segment Selection and Rotation books. Two p.s.u.'s are allocated to each Sample Yield form (example 35) the first being listed on line number 1 and the second on line number 14, each sheet thereby representing one stratum.

Column 2 - Segment.

When a province is introduced into the survey the selected segments as shown on the Segment Selection and Rotation Forms are listed on the Sample Yield form for each p.s.u. A line is left blank between each segment listed so that new segment numbers can be added when the original segment becomes exhausted and has to be replaced in subsequent surveys.

Column 3 - Sampling Ratio.

The sampling ratio for each segment in the sample is transferred from column 7 of the Segment Selection and Rotation Form and is entered in the third column of the Sample Yield form.

Column 4 - Dwellings Expected - Design.

The number of dwellings as of the 1961 Census is shown for each segment in column 4 of the Segment Selection and Rotation Form. The number of dwellings as of design expected in the sample is obtained by multiplying this figure by the segment sampling ratio. The resultant product is rounded off to the closest whole number and entered on the Sample Yield form on the line for that segment.

Column 5 - Dwellings Expected - Field.

The number of dwellings obtained by a field count is listed on the Cluster Selection and Rotation Form for each selected segment. The total number of dwellings within the E.A. or E.A.'s which comprise a

town or a rural area is shown in the numerator under, (group size calculation - 1. Approximate number of groups). The number of dwellings in the segment is determined by dividing this figure by the, "Number of Parts" and "Number of Segments", which are shown in the denominator of, 2, "Final number of groups". The number of dwellings obtained in the resultant quotient is then multiplied by the segment sampling ratio to find the number of dwellings expected in the sample as of field count. The product so obtained is entered in column 5 on the same line as the corresponding segment.

Columns 6, 7, 8, 9, 10, 11 - Actual Dwelling.

Rotation 1 - signifies the first complete rotation period for the year i.e. January to June inclusive.

Rotation 2 - signifies the second complete rotation period for the year i.e. July to December inclusive.

(i) When a province is being introduced into the survey for the first time the following method is used. The "Total Expected Households" is obtained from the Quota Sheets - L.F. 10 (example 36) and entered in column 6 or 7 of the Sample Yield form depending on whether the sample is introduced during the first or second rotation period. The figure shown in column 7 of the Quota Sheet, (No. Household - V1-V5), (example 37) is then entered in the same block for each segment and separated from the figure obtained from, (Total Expected Households), by a minus (-) sign. The difference between these two figures represents the sample yield (actual dwellings) for each segment.

(ii) When a province is already in the survey the data from the Quota Sheets is taken only for those segments which either rotate or rotate within i.e. those segments which have rotation group numbers corresponding to the rotation month for that particular

survey; group 1 - January and July, group 2 - February and August, etc. In subsequent surveys the data for the segments for the next rotation group number is similarly listed until a complete rotation period (six surveys) has been covered. In this way it is possible to make a complete check of all segments in the sample once every six months.

When a segment rotates the data for the new segment is entered on the line immediately below the segment which it replaces and the regular procedure is continued.

(c) Self-Representing Units (Sample Yields - L.F. 50)

Column 1 - Primary Sampling Unit.

Segment Record books have been completed for each self-representing unit and have been sub-divided by primary sampling units.

Two p.s.u.'s are allocated to each Sample Yield form (example 38) when there are six selected segments. When there are twelve selected segments only one p.s.u. is listed to each form and in a few cases e.g. Apartment Sample, where there are more than twelve selected segments, it may be necessary to use several sheets for a single p.s.u.

Column 2 - Segment.

The selected segments as noted on the Segment Record Form - 9406-90, are entered leaving a blank line between each segment listed.

Column 3 - Sampling Ratio.

The sampling ratio is the inverse of the figure listed in column 4, (Size (S.R.)), of the Segment Record Form.

Column 4 - Dwellings Expected - Design.

The number of dwellings as of the 1961 Census is shown in column 3, (Number of Dwelling Units) of the Segment Record Form. The segment sampling ratio times this figure rounded off to the nearest whole number is entered in the "Dwellings Expected - Design" column.

Column 5 - Dwellings Expected - Field.

This column is left blank for the s.r.u.'s as the data from field counts is not available for all p.s.u.'s.

Columns 6, 7, 8, 9, 10, 11 - Actual Dwelling.

The same method is used as with the n.s.r.u. and data is obtained from Quota Sheets (example 39).

(d) Checks Between Yields Based on Design Data and Field Data

(i) This paragraph applies only to n.s.r.u. as complete field counts are not made for the s.r.u. Wherever possible 1961 Census data is used in the formation of p.s.u.'s and segments for the self-representing units to save time and cost. A field count would have meant a complete block count of all metropolitan areas and cities which are listed as s.r.u.'s and the time and cost involved would have been prohibitive. Apartment buildings which meet the criteria for the apartment sample should be excluded from the block count.

(ii) When there is a variation of 50% or greater, for a segment, between the yields based on census counts and those based on field counts, the basic information for the redesign is checked for possible clerical errors. If no apparent reason is discovered for the discrepancy a memo listing the p.s.u., segment, sampling ratio, counts etc. is sent to the Regional Office requesting a check of listings etc. and physical check of the segment to determine the reason for the variation.

Usually the variation is attributable to normal growth or demolition which has occurred since the 1961 Census.

The remaining cases show a wide variety of reasons, some of the most common being -

Inclusion of cottages in the field count which were assumed to be normal dwellings.

Movement of house trailers, which were actual dwellings.

Dwellings erased by fire.

Errors in field counts.

Errors in segment or cluster boundaries.

Incorrect sampling ratio and clerical errors.

Multiple dwellings counted as a single dwelling in the field count.

(e) Checks Between Yields Based on Design Data and Survey Data

The check between yields as of design and actual yields by survey serve as a continuing check on the sample and permit a review of a selected group of segments every month by rotation group numbers.

Whenever the variation between the expected yield as of design and the actual yield by survey exceeds 50%, a similar check is made as described in the preceding paragraph.

(f) Treatment of Discrepancies

Whenever a discrepancy of 50% or more is noted between yields and a check has been requested from the Regional Office, it is imperative that a reply should be received as quickly as possible and that the information received should be processed immediately.

When this is done it is often possible, where the discrepancy is between design data and field data, to make corrections before the sample is introduced into the survey thereby eliminating one element of possible error.

When the sample is already in the survey prompt remedial action for subsequent surveys may be taken, depending on the nature of the

discrepancy, e.g. errors in boundaries of segments or clusters, incorrect sampling ratio, apartment dwellings excluded, etc.

Information regarding growth, demolition, etc. is also useful as a gauge of the deterioration of the sample over time and will be used for research on sample maintenance.

(3) Discrepancies in *Population Estimates for Paired Areas

(a) Introduction

For the purpose of variance estimation so called "Paired Areas" (example 40) have been defined and tabulated for all p.s.u.'s by the Sampling and Survey Research Staff. (See - Catalogue No. 71-504 - Methodology, Part IX C.).

*Population refers to Labour Force Population - See Glossary.

The Sampling and Survey Research Staff forward a monthly list on request of the Sample Control Unit of Special Surveys Division, showing the paired areas in which the population estimate for the two parts differs by fifty per cent or more. The dividing line of fifty per cent is purely an arbitrary choice which may be subject to change if a closer check for variation between the estimates for the two parts of the paired area is desired.

The above mentioned list received by the Sample Control Unit shows the paired area code and the labour force population estimate for each part of the paired area. This estimate is obtained from a computer print-out of a tabulation made for variance estimates.

Reference is then made to the paired area code lists (example 40) to determine the pertinent p.s.u.'s and segments which comprise each part of the paired areas.

The purpose of the method described in the subsequent chapters is to

examine and compare the components of the various paired areas relative to survey and design data which will enable a reconciliation to be made for the variation in population estimates between the two parts of the paired areas.

(b) Preparation of Population Matching of Paired Areas Form

This form is prepared for listing the design and survey data for the two parts of the paired areas in tabular form, so that a quick visual check may be made, thus facilitating the location of any apparent reason for the variation in population estimates. The form is theoretically divided into four parts as follows - (examples 41 and 42).

(i) Columns 1 to 8 are used to record the data for one part of the paired area.

(ii) Columns 10 to 17 are used to record the data for the second part of the paired area.

(iii) The paired area estimates and theoretical estimates as described in paragraphs c and d are shown below this data.

(iv) The apparent reasons for the discrepancy are recorded below the above estimates.

Sources of Data and Compilation of Form

Column 1 - Segment

This is obtained from the quota sheets with reference to the paired area code for p.s.u. and segment.

Column 2 - Quota Sheet - Expected - Adjusted

This figure is obtained from the quota sheets and is the difference between "Total Expected Households" and "No Household - V1 - V5".

Column 3 - Design Expected

This figure is obtained from the Sample Yield forms - L.F. 50 - described in the previous chapter.

Column 4 - This figure is simply the difference between columns 2 and 3.

Column 5 - Interviewed.

This figure is obtained from the quota sheets "Households Enumerated".

Column 6 - Not Interviewed.

This figure is the sum of "Temporary Absent" and "No Interview - N1 - N5" from the quota sheets.

Column 7 Excluded.

This figure is obtained from the quota sheets "No household - V1 - V5".

Column 8 Schedules.

This is an actual count of the number of L.F. schedules.

NOTE: - Columns 10 to 17 correspond with the above description for the other part of the paired area as designated in the paired area code.

(c) Paired Area Estimates - Survey Data

(i) L.F. Population Estimates from Quota Sheets (Households). An estimate of the L.F. Population for the current survey is made using the following formula -

$$\hat{P}pm = \sum_{m}\sum_{i}\sum_{j} Bpmij.\ Wp.\ Hpmij.\ Lpj$$

This formula is basically the same as that described in (Methodology - Chapter viii.)

Since the value of the rural urban factor (Fpj) is approximately unity it is omitted for estimation purposes as its effect is negligible.

Definition of subscripts:

p - for the province

m - for part of the paired area (m = 1 or 2).

i - for selected p.s.u. in paired area.

j - for type of area - self-representing.

j - for type of area - non-self-representing urban.

- non-self-representing rural.

The following notation will be used:

$\hat{P}pm$ - estimated L.F. population in province - p., paired area part - m.

Bpmij - Balancing factor = $\frac{\text{Expected Hhlds.}}{\text{Interviewed Hhlds.}} = \frac{\text{Column 2}}{\text{Column 3}}$

In s.r.u. all segments in the p.s.u. must be included in this ratio for both parts of the paired areas whether or not they were included as part of the paired area in the designation of the paired area code.

Wp - Provincial weight - $\frac{1}{\text{Provincial Sampling Ratio}}$

Hpmij - Number of households enumerated - Column 2.

Lpj - Conversion factor - Census population to L.F. Population (See following table).

Conversion Factor - 1961 Census Population per Household to 1961 L.F. Population

Province	Urban	Rural	Combined
Nfld.	3.00	3.05	3.00
P.E.I.	2.63	2.76	2.70
N.S.	2.55	2.55	2.55
N.B.	2.49	2.92	2.74
Que.	2.62	3.40	2.75
Ont.	2.44	2.65	2.51
Man.	2.38	2.58	2.45
Sask.	2.30	2.43	2.36
Alta.	2.32	2.51	2.38
B.C.	2.24	2.44	2.31

The estimate obtained by this method should approximate the paired area estimate received from Sampling and Survey Research unless the L.F. population per household differs significantly from that indicated by the conversion factor which was employed. Since this conversion factor is based on provincial estimates it may vary widely in some areas, especially where there are large families, communal type dwellings or other significant factors. Where this possibility occurs it is more accurate to make an estimate using L.F. Schedules as described in the following paragraph.

(ii) L.F. Population Estimate from L.F. Schedules

The estimation procedures as described in this paragraph are essentially the same as in the previous paragraph with the exception that the number of L.F. Schedules replaces Hpmij x Lpj. The figure obtained by this method should be almost the same as that obtained from the labour force estimate, at sub-weight level. There will be a small discrepancy in the n.s.r.u. owing to the exclusion of the rural urban factor but in s.r.u. where the rural urban factor equals one the estimate should be very close to that received from the computer program.

Discrepancies may be incurred when the balancing method used for the computer program contains variations to adjust for p.s.u.'s or segments where households were not interviewed or where returns were either received too late for processing or had been lost.

(d) Paired Area Estimates - Design Data

(i) L.F. Population Estimate from 1961 Census Data

In the n.s.r.u. since there are two selected p.s.u.'s for each stratum, the population of each part of the paired area equals one half of the stratum population. A preliminary population

check may be made by comparing the Census stratum population with the estimated population for the paired areas. Since population figures are not readily available for s.r.u. the following method is suggested only for the n.s.r.u.

Census total population figures for the stratum are available from "Segment Selection and Rotation Forms" and "Stratum Summary Forms". They represent the total population of all ages and for comparative purposes must be adjusted to conform with our concept of L.F. Population. The following table shows the conversion factor used so that a comparison of the paired area estimate might be made with the available census data.

$$\text{Conversion Factor} = \frac{\text{1961 Labour Force Population}}{\text{1961 Census Population}}$$

Province	1961 Census Population	1961 Labour Force Population	Conversion Factor
Newfoundland	457,853	274,230	.599
Prince Edward Island	104,629	67,200	.624
Nova Scotia	737,007	470,030	.638
New Brunswick	597,936	371,870	.622
Quebec	5,259,211	3,440,770	.654
Ontario	6,236,092	4,234,040	.679
Manitoba	921,686	610,270	.662
Saskatchewan	925,181	607,070	.656
Alberta	1,331,944	857,630	.644
British Columbia	1,629,082	1,106,770	.679
Canada	18,200,621	12,039,880	.662

When we apply this factor to one half of the stratum census population an estimate may be obtained for either part of the

paired area. There will be some variation over time due to growth, movement or other normal changes which must be anticipated and taken into consideration. The estimate however may be used as a comparative check against the paired area estimate to determine whether any large discrepancies exist.

(ii) L.F. Population Estimate from Design Data (Households)

An estimate of the L.F. Population based on design data may be made for either n.s.r.u. or s.r.u. in a manner similar to that described in (c i).

The difference in the application of the formula $\hat{P}pm$ in this method is as follows -

Column 3 - Design Expected - Replaces

Column 2 - Number of Households Enumerated in Hpmij.

Bphij is redundant since by design a theoretical response of 100% is assumed and this factor assumes the value of unity.

(e) Reconciliation of Paired Area and Theoretical Estimates

The estimates as described in the preceding two paragraphs are used as a comparative check with the estimates for the two parts of the paired area to locate probable sources of discrepancies.

(i) Estimates from Survey Data

These estimates may be used as a check between the two computer programs i.e. the program for the labour force estimate and the program for the variance estimate. The basic source of data for these two programs which are on different magnetic tapes may contain some variations through the exclusion or inclusion of extraneous material thereby creating a difference in the final estimates. When a significant difference exists between the

estimates from the two programs a print-out may be obtained so that a comparison may be made with the basic data which may reveal a probable source of error.

The balancing method used in the two programs may also differ which leads to another probable source of error. When a special balancing method has been used in the labour force estimate it sometime differs from that used for the variance estimate and a check with the Processing and Analysis Section of Special Surveys will reveal the method that has been used.

(ii) Estimates from Design Data

The estimates described in (d i and ii) may be used to check the L.F. population estimates based on design data against the paired area estimates.

When a comparison is made between the design estimate and the estimate for the parts of the paired area it will usually be noted that one part will show a significant variation while the other does not vary too greatly. The part showing the large variation is then examined in detail for possible sources of discrepancy. Sometimes this may be evident from the data tabulated on the "Population Matching of Paired Areas Forms". For instance, a much greater yield of households or schedules than expected, a very high or low yield of schedules per household, segments where households were not interviewed or variations in the total of the design expected between the two parts etc. A further check is then made of the basic design data such as the stratum files, segment records, original count maps, etc. to determine whether there have been errors in segment or cluster boundaries, errors in sampling ratios or other possible clerical errors.

When all these possible sources have been checked correspondence with the Regional Office will usually reveal growth areas, multiple households or sampling outside of the segment boundaries when the take is greater than the design expected. By this means it is possible to reconcile the paired area estimate with the survey estimate and a letter is prepared and forwarded to the Sampling and Survey Research Section outlining the apparent reasons for the discrepancies. (Example 43).

(4) Systematic Review and Revision of S.R.U.'s

In a continuing sample there is a serious problem of deterioration of the sample frame due to growth, demolition, etc. especially in the s.r.u.'s. This results in variability of the sample yield, difficulty in establishing boundaries, etc. To control and minimize this problem the s.r.u.'s have been sub-divided in the original design into smaller independent units which are called, for convenience, p.s.u.'s.

Each p.s.u. is to be reviewed annually on a rotational basis with regard to:

Changes in streets or street names.

Changes in household counts by segment or block.

High rise apartment buildings.

This review will be carried out by using the most economical means of obtaining the necessary information, such as:

Existing available data from Census, Municipalities etc.

Field observation by Regional Office Staff.

A combination of the above three methods.

A copy of our current master map for the p.s.u. showing the house count will be amended in the Regional Office as a result of the above and returned to Head Office. Tests will be applied to determine the action to be taken.

Little or no change in house count, possibly some changes in street names or slight changes in streets will require only minor adjustments and correction of master maps and no change in the sample.

- Major changes in a relatively small area of the total p.s.u. while most of the area remains unchanged will require a partial revision of the sample in the p.s.u. however retaining the majority of the selected segments unchanged.
- Major changes in a large part of the total area of the p.s.u. will require a complete revision of the whole p.s.u. and re-selection of all segments.

Two essentials are, that all p.s.u.'s are adequately revised on a systematic basis and that the method of partial revision is unbiased.

Details of the method of partial revision are being prepared and when this is available a more detailed and specific description of the revision of s.r.u.'s will be given.

(5) Systematic Review and Revision of N.S.R.U.'s

Growth and other changes occur less rapidly in n.s.r.u.'s than in s.r.u.'s and as a result it should be necessary to revise these areas less frequently. It is, therefore, proposed to use census data which is available every five years to revise the n.s.r.u.'s. Those Economic Regions or Strata whose population has changed radically in the five year period would be revised on the basis of the latest figures.

(6) Special Dwelling Units

(a) Hostels, religious institutions, hospitals, nursing homes, bunkhouses etc. containing 15 or more persons and which have living quarters that satisfy the definition of a dwelling unit are designated as special dwelling units.

When a special dwelling unit is listed on the segment or cluster list

it is given a number of lines and listing numbers equal to the denominator of the segment or cluster sampling ratio, e.g. if the sampling ratio is 1/4 - 4 lines and 4 listing numbers should be allotted to the special dwelling unit.

(b) The special dwelling unit should be listed on the reverse of the segment or cluster list in a number of columns equal to the denominator of the sampling ratio. This listing will use the most convenient listing unit e.g. rooms, suites, bed numbers etc. These listing units should be listed horizontally by type to give a representative sample throughout the life of the segment or cluster. The following example illustrates the numerical and segment listing for a sampling ratio of 1/4 -

Numerical Listing

Listing No.	0016	0017	0018	0019	
Room No.	101	102	103	104	Single rooms
	105	106	107	108	)
	201	202	203	204	) Double rooms
	205	206	207		)

Segment List

Listing No.	Street or Name	Room No.
0016	1184 John Street	101, 105, 201, 205
0017	1184 John Street	102, 106, 202, 206
0018	1184 John Street	103, 107, 203, 207
0019	1184 John Street	104, 108, 204

(c) The enumeration of special dwelling units may be authorized by Head Office at less frequent intervals than monthly enumeration when the occupants and their activities may remain unchanged over a considerable period of time, e.g. nurses residence, religious community, etc.

When the household is interviewed for the first time or on rotation the enumerator will ascertain whether the occupants and their activities will remain unchanged until the next rotation period. When this is the case the original labour force schedules may be copied until the next rotation period. In some cases it may be necessary to enumerate in certain months when there may be significant changes e.g. graduation and rotation of classes in a hospital, summer holidays, etc.