Primer on Postal Code and Census Geography
Census 2006 Toronto Example

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Abbreviations

FSA   Forward Sortation Area, first three characters of the postal code

PC   Postal Code with six characters, also known as Local Delivery Unit (LDU)

PCCF   Postal Code Conversion File, list of postal codes with links to census geography

CT   Census Tract

DA   Dissemination Area, successor to Enumeration Area, started census 2001

EA   Enumeration Area, precursor to Dissemination Area, last used in census 1996

CMA   Census Metropolitan Area, urban core and suburbs linked by commuting

CSD   Census Subdivision (local municipality or equivalent)

CD   Census Division (regional municipality or equivalent)

Total Spatial Units in the Toronto Census Metropolitan Area

	FSA (2006)	PC (2011)	CT (2006)	DA (2006)
City of Toronto	96	55,810	531	3,577
Suburbs (905 Region)	83	58,286	472	3,435
Toronto CMA	179	114,096	1,003	7,012

Notes: FSA counts are approximated based on FSA centroid points falling within each target area polygon. Counts for FSA, CT and DA are all those present in the boundary file including ones with no data released.

Average Population Size, Toronto CMA, 2006

FSA   29,026 people (N = 176)
PC   not available, presumably smaller than DA
CT   5,122 people (N = 998)
DA   731 people (N = 6,986)

1. Forward Sortation Areas (FSA)

Forward Sortation Areas (FSAs) are administrative areas defined by Canada Post for the sorting and delivery of mail. Postal codes are six characters in length with the first three characters representing the FSA. The standard Census Profile Series is reported by FSA geography for census years 1996 to 2011 and is publically available from Statistics Canada.

FSAs frequently:
- overlap all types of census geography (CTs, DAs, CSDs, etc.),
- have highly irregular boundary lines, and
- can be fragmented. (For example M1E in the east and south Scarborough consists of two spatially separate areas (polygons) but one FSA.)

These issues can pose various problems for FSA spatial analysis and cartography.

In the Toronto CMA, there are approximately 179 mappable FSAs where the FSA centroid falls within the CMA boundary. Several overlap the CMA boundary (i.e., a mix of areas beginning with the letter L and letter M).

The "905 region" outside the City of Toronto and within the Toronto CMA has approximately 83 FSAs.

In the City of Toronto, there are 96 mappable FSAs. All FSAs beginning with the letter M can be generally thought of as belonging to the City of Toronto. However, even with the M FSAs there is overlap with the City of Toronto boundary.

- There are five M FSAs that extend outside the City of Toronto boundary a short distance, they are: M1W, M9L, M9V, M9W, M9C.

- There are nine L FSAs that extend into the City of Toronto a short distance from adjacent municipalities. They are: L4W, L4T, L6T, L4L, L4K, L4J, L3T, L3S, L1V.

- Note there are six additional FSAs for business mail that are not mappable (not part of the FSA boundary file): M5K, M5L, M5W, M5X, M7A, M7Y.

The boundary mismatch between FSAs and the Toronto CSD/CMA is in effect a very minor issue for population counts as shown in the following table. There is a 99% match between the official census population counts and the FSA estimates derived from the centroid method of boundary assignment. This suggests that the overlapping sections affect businesses more than the residential population.

Total Population Comparison, CSD/CMA Totals Versus FSA Estimates, 2006

	City of Toronto CSD	Suburbs (CMA - CSD)	Toronto CMA
Census Population (100%)	2,503,281	2,609,868	5,113,149
FSA Population Estimate	2,503,255	2,605,272	5,108,527
Difference	-26	-4,596	-4,622

Note: FSA estimates are the sum of 96 FSAs for the City of Toronto, 83 for the suburbs and 179 for the CMA.

2. Postal Codes (PC)

Postal Codes (PC) are administrative areas defined by Canada Post for the sorting and delivery of mail. Postal codes are six characters in length with the first three characters representing the FSA.

PCs have geographic coordinates that allow them to be mapped as point objects, each representing groups of homes/businesses or large individual buildings (e.g., high-rise apartments). They are a useful for the geocoding of locations of people where they live, businesses and the occurrences of events.

Postal Code Conversion File (PCCF). The standard Census Profile Series is not reported by PC. However, Statistics Canada publishes a Postal Code Conversion File (PCCF) with each census that includes census geographic identifiers (CT, DA, CSD, etc.) for every postal code in Canada.

- The latest version is the 2014 PCCF for 2011 Census geography.
- For Census 2006 geography, the last version released was a 2011 PCCF. Access to the PCCF is restricted to university faculty, staff and students through their Data Library service. Non-academic users may purchase the PCCF from Statistics Canada for a fee.

In the 2011 PCCF (2006 Census boundaries), there were 55,810 postal code points in the City of Toronto representing homes and businesses. In the Toronto CMA, there were 114,096 postal codes. The "905 region" outside the City of Toronto and within the Toronto CMA has 58,286 postal codes. Postal codes points fit well with Census geography with links provided by Statistics Canada in the PCCF while the larger FSAs do not fit well.

New postal codes are created annually by Canada Post as population and businesses become more numerous and appear in previously unoccupied areas. Postal code point locations may drift over time as population and business density changes.

DMTI Platinum Postal Code Suite (PPCS). There are also third-party PC products such as the DMTI Platinum Postal Code Suite (PPCS) that licenses and enhances the Statistics Canada PCCF with additional information. For example, the PPCS contains variables indicating the number of houses, apartments and business served by each PC (but no population counts). The PPCS also contains the six character postal code boundaries (referred to as Local Delivery Units) in addition to the basic point representation. Access is also restricted to the university community.

3. Census Tracts (CT)

The census defines Census tracts (CTs) as small, relatively stable geographic areas that usually have a population of 2,500 to 8,000.

Census tracts are located in census metropolitan areas and in census agglomerations with an urban core population of 50,000 or more in the previous census. A committee of local specialists (for example, planners, health and social workers, and educators) initially delineates census tracts in conjunction with Statistics Canada. Once a census metropolitan area (CMA) or census agglomeration (CA) has been subdivided into census tracts, the census tracts are maintained even if the urban core population subsequently declines below 50,000.

Census tracts are the most stable small area geography in the Census. As the population grows, more CTs are created at the suburban fringe while existing CTs can become subdivided into two or

more CTs with revised identifiers. Historical comparisons of CTs can be often be made back to Census 1971 and in certain situations back to Census 1961. Data adjustments for CT boundary changes (subdivisions) often need to be made for a proper analysis of change. However, some census variables cannot be compared over time due to changes in their definition and content.

A few CTs do not have any data released to protect confidentiality and data quality. If the population is too small or the census responses are incomplete or unreliable then Statistics Canada will suppress the release of the data.

In the Toronto CMA in Census 2006, there were 1,003 CTs including those with no data released. In the City of Toronto, there were 531 CTs. The "905 region" outside the City has 472 CTs.

4.   Dissemination Areas (DA)

The census defines dissemination areas (DA) as small, relatively stable geographic units composed of one or more adjacent dissemination blocks. It is the smallest standard geographic area for which all census data are disseminated. DAs cover all the territory of Canada.

Dissemination areas are not comparable over time. Up to Census 1996, Enumeration Areas (EA) were used. For 2001, they were completely redrawn covering slightly larger areas with new boundaries and identifiers.

As with CTs, some DAs do not have any data released if the population is too small or the survey responses are deemed unreliable.

In the Toronto CMA in Census 2006, there were 7,012 DAs including those with no data released. In the City of Toronto, there were 3,577 DAs. The "905 region" outside the City has 3,435 DAs.

Each CT in the census consists of one or more nested DAs with no overlap. In other words, the sum of DA populations will equal the corresponding CT total population.

Unlike CTs that only exist in large urban areas (CMAs and some CAs), DAs cover all of Canada.

Large apartment buildings can be a single DA or include adjacent housing as well.

5.   Census Geography Hierarchy

The follow diagram by Statistics Canada shows that DAs are nested within CTs, which are nested within CMAs/CAs.

DAs respect municipal CSD and CD boundaries while CTs may or may not. In practice, CTs often do – but not always.

PCs are nested within FSAs. FSAs are only nested within provincial boundaries.

Boundary Files, Reference Guide, 2006 Census

Appendix B: Hierarchy of standard geographic units for dissemination, 2006 Census

1. Census agricultural regions in Saskatchewan are composed of census consolidated subdivisions.
2. Economic regions are composed of complete census divisions except for one CD in Ontario.
3. One CMA and three CAs cross provincial boundaries.
4. Five UAs cross provincial boundaries.
5. Designated places respect CSD boundaries, but do not cover the total area of CSDs.
6. For the 2006 Census, a best fit linkage is created between the 2001 CSDs and 2006 DBs to facilitate historical data retrieval.

Administrative area

Statistical area

- - - - Linkage using point-in-polygon process

- · - · - Best fit linkage