THE AREA MASTER FILE
USER GUIDE

**Produced by
Geography Division
Statistics Canada
January 1988**

**Text also available in French
Également disponible en français**

The **GEO** cover is made of recycled paper

INTRODUCTION - The Area Master File User Guide

This User Guide is intended to provide background and knowledge into the Area Master File (AMF) through discussion of AMF creation, maintenance, quality, and potential uses. Technical specifications in the form of field descriptions, record layouts (in EBCDIC and ASCII) and record interrelationships, are provided to assist the user in the proper manipulation of the Area Master File.

The "Definitions Of Terms Referred To In The AMF" and the "Data Item Regulations and Clarifications" sections annexed to this guide serve to define or explain terminology and concepts which are used in the documentation, but which may be unfamiliar to the user.

THE AREA MASTER FILE - What Is It?

An Area Master File (AMF) is a digital data file stored in computer readable format, which defines the complete street network and other physical and cultural features within a specific geographic area, usually a census subdivision (CSD). An AMF references every street, address range, block-face and centroid coordinate, and itemizes other features (such as rivers, railroad tracks, and municipal boundaries), which are the basic elements found on a user reference map (See Figure 1A).

Every AMF feature is defined in terms of one or more of the following groups of information. The first group provides a unique identification which takes the form of census subdivision code*, feature name (eg. John St., Lake Ontario) and feature classification (eg. street, lake, island). The second group defines the cartographic representation of each feature in the form of a series of nodes or points delineating the shape and location of the feature as a single line image. Finally, the street (civic) address range for each portion of the addressable feature (each block-face) is defined (See Figure 1B).

* NOTE: This is a code developed for the Area Master File, and it is unrelated to the Standard Geographical Classification (SGC) code. (The same is true for the Metropolitan Area Code and the Municipality Code throughout this document.)

How Is The AMF Created?

When creating an AMF, collaboration with local expertise is fundamental in ensuring that accurate and up-to-date data are obtained. The documents required for AMF creation include an accurate current street map made of a stable material and of a scale large enough to permit a fairly accurate depiction of feature shapes as well as an address range map, either separate or combined with the street map.

FIGURE 1A   INPUT BASE MAP
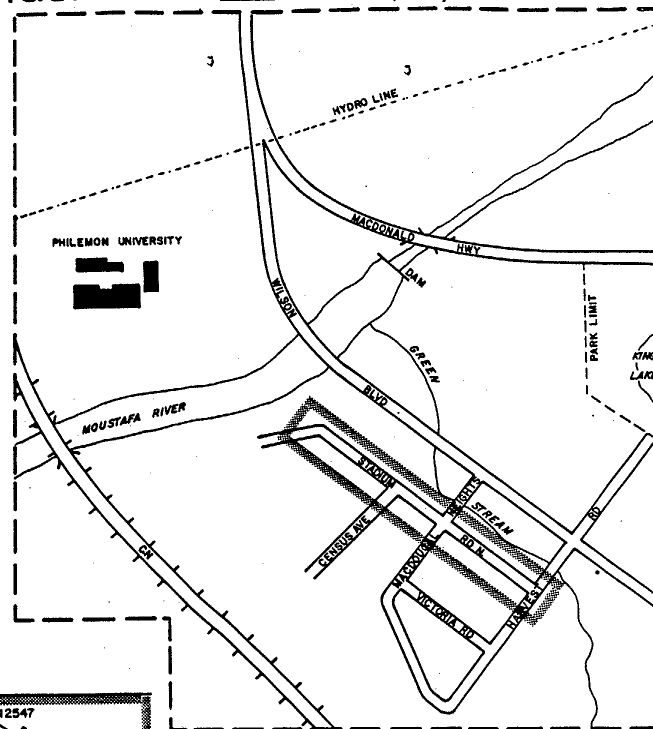
FIGURE 1B
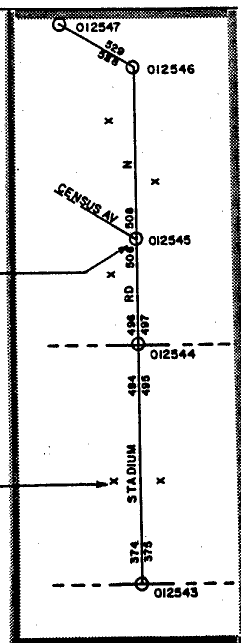## CONTENT OF
AN AMF FEATURE

FEATURE IDENTIFICATION

CSD Code:	35442310
Classification:	Street
Name:	Stadium
Type:	Rd
Direction:	N

NODE ATTRIBUTES

Node Number.   012545
Node UTM Coordinate:
   E-552124   N-4804067
Intersecting
   Feature: CENSUS AV

BLOCK-FACE ATTRIBUTES

Centroid UTM Coordinate:
   E-552112   N-4804041
(Key to Census Data)

Address Range: 375-495

The process of AMF creation commences with the preparation stage, where the features to be defined in the AMF are identified. The supplied maps are then divided into working sections, and control points for each section are located.

The second stage involves the identification and digitizing of points depicting features such as feature intersections, and points where features begin, end and curve sharply. These points are called nodes, and each one is assigned a serial number. The digitizing involves measuring node positions relative to control points for which Universal Transverse Mercator (UTM) coordinates* are known.

The third stage of AMF creation involves the entering of attribute information such as feature names, types, directions and addresses, using special coding forms.

Following this, all the data are processed to create a preliminary file. A number of automated (topological verification) and manual (map overlaying) error-handling and correction procedures are then performed to ensure accuracy, consistency and completeness of the file.

The final packaging of the data includes centroid calculations (see Data Item Regulations and Clarifications) for each block-face through computer processing.

The completion of all of these stages results in the Area Master File.

* NOTE: All coordinate values in the Area Master File are
        Universal Transverse Mercator (UTM) projection values.

How Is The AMF Maintained?

Maintenance (updating) of the Area Master File begins with the analysis of the source document (usually in the form of a map, computer file or written document) which is obtained from a variety of sources ranging from municipal planning departments to federal agencies such as Canada Post. The format of the source document can range from a registered plan to an update file.

After analysis, the updates are identified and compiled onto white-print copies of node plots.

In the second stage, the digitizing or "manual roming" (calculation) process is performed to obtain new coordinates. The third part involves the coding of all transactions using pre-established rules to ensure that the system performs the necessary actions such as deletions, additions, and changes.

The new data set is processed through a variety of quality assurance programs (similar to the creation procedure). These ensure that each update follows AMF specifications, and that completeness and precision of updates are verified, thus producing a new updated Area Master File.

The Quality Of The AMF

The quality of the Area Master File can be discussed with regard to precision and up-to-dateness. The output level of precision is influenced by a number of factors, such as the quality of the source base map and the processes involved in creating and/or updating the AMF. In general, the AMF precision average is ±10 metres from ground value.
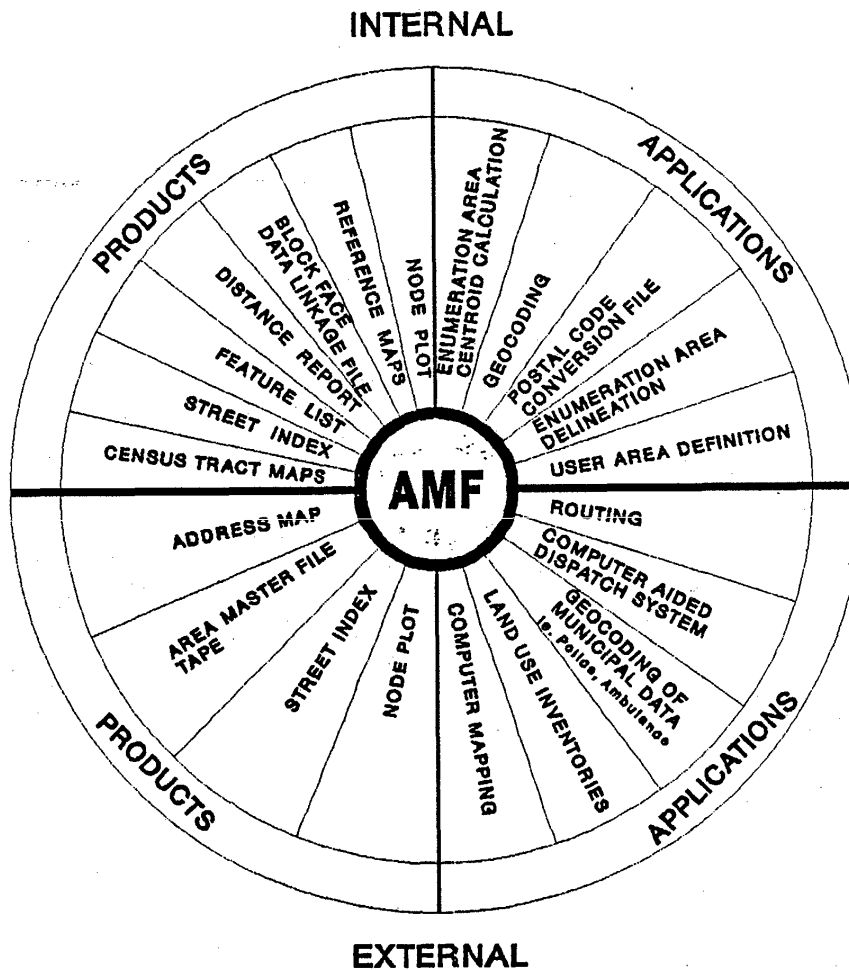
Area Master Files are updated on a cyclical basis. Some AMFs, however, are updated at greater frequencies, as influenced by project requirements, input availability, and growth factors of each municipality. As well, the up-to-dateness of an AMF reflects the up-to-dateness of the source data.

How Can The AMF Be Used?

The diagram below and the text which follows provide an overview of the various applications for which the Area Master File can be used, and the various products it can produce, for internal programs and external users.

FIGURE 2

AREA MASTER FILE
APPLICATIONS & PRODUCTS
INTERNAL

PRODUCTS

APPLICATIONS

REFERENCE MAPS
BLOCK FACE DATA LINKAGE FILE
DISTANCE REPORT
FEATURE LIST
STREET INDEX
CENSUS TRACT MAPS
NODE PLOT
ENUMERATION AREA CENTROID CALCULATION
GEOCODING
POSTAL CODE CONVERSION FILE
ENUMERATION AREA DELINEATION
USER AREA DEFINITION

AMF

ADDRESS MAP
AREA MASTER FILE TAPE
STREET INDEX
NODE PLOT
COMPUTER MAPPING
LAND USE INVENTORIES
GEOCODING OF MUNICIPAL DATA (e. Police, Ambulance)
COMPUTER AIDED DISPATCH SYSTEM
ROUTING

PRODUCTS

APPLICATIONS

EXTERNAL

The following is a brief description of some AMF products and applications:

Address Maps: These are single-line maps showing civic address ranges plotted for each block-face.

Block-Face Data Linkage File: This is a file relating households for each block-face to the Standard Geographical Classification (SGC) structure.

Census Tract Maps: These maps contain EA boundaries, block numbers, street names, address ranges and identified physical features, and are the basis for creating individual EA maps to be used by census representatives at census collection.

Computer Aided Dispatch System (CAD):
     The CAD System serves two functions:
     1) Used as an address validation system
     2) Used to geocode data to block-face centroids
        for data retrieval.

Distance Report: This report contains the distances (in metres) between certain points on a street or other feature (ie. river, railroad tracks, etc.) covered by the AMF. It may be used to calculate: the distance between any two intersections; the distance between any two nodes; the total distance from the beginning to the end of a feature.

Enumeration Area Centroid Calculation: This system uses AMF block-face centroids to generate population centroids at the enumeration area (EA) level.

Enumeration Area Delineation: A system which uses maps and AMF coordinates to delineate enumeration area (EA) limits.

Feature List: This is a specially formatted print (listing) which provides a description of each feature within an AMF.

Geocoding: This process enables users to retrieve census data for virtually any geographic area of interest.

Land Use Inventories: This involves the geocoding of land use information into inventory form.

Postal Code Conversion File (PCCF): In this file, the postal code is linked to the block-face centroids of a street in large urban areas, and to the population centroid of the EA in smaller urban municipalities and rural areas. The PCCF contains over 650,000 postal codes which are linked to 1986 Census geography.

Reference Maps: These maps identify geographic areas for which Statistics Canada produces data.

Routing: This is an application in which the AMF is used to determine the optimum travel route for a service (eg. school bus, delivery van).

Street Index: This links address ranges to census EA, CT, CSD and FED levels of the census geographic hierarchy. It contains street data (including street name, type, direction, odd & even address ranges) and geographic data.

AMF Street Network/Node Maps: These maps show the street pattern in detail (including street names), as well as all nodes and corresponding node numbers. Other features such as rivers, railroad tracks, and municipal boundaries are also indentified.

Coverage Of The AMF

The basic guidelines concerning Area Master File coverage were developed in 1969, when the AMF was first created. The long-term objective directed that AMF's would be created for all municipalities forming part of a census metropolitan area (CMA), or a census agglomeration (CA) which is part of the Census Tract Program. In the early 1970's, AMF creation focussed upon the 14 existing CMAs. Today's coverage has extended beyond this level, based on resource availability and demand.

Resources at Statistics Canada are made available to maintain those AMFs already in existence. Municipalities interested in having an AMF created via a joint venture should contact the Geography Division at Statistics Canada (see page 41).

For more information on AMF coverage, refer to the following publication available from the Geography Division:

Area Master File Coverage report # GNB-001.

WHAT IS THE FORMAT OF THE AMF?

Media Format

The Area Master File is available on 9-track magnetic tape at 1600 or 6250 bpi, on diskette (5¼"), and on cartridge Tape 80. It is available in EBCDIC or ASCII coding for tape and cartridge, and only in ASCII coding for diskette.

EBCDIC - record length is 95 bytes
          block size is 15960 (can be adjusted)

ASCII - record length is 110 bytes
          block size is 5500

The file is available in Standard label or No label for tapes.

File Format

The sequence of records for each AMF is as follows:

The File Heading record is the first record. It will be followed by one or more Municipality records. The third group of records is made of the Feature records (Header and Detail records) which are numerically sequenced according to feature code and sequence number (ascending).

eg. Feature Record

		Feature Code	Sequence #	Name
Header	==>	100	000	HUBBARD STREET
Detail	==>	100	005	----------------
		100	010	----------------
		100	015	----------------
		100	020	----------------
Header	==>	200	000	JACKPINE ROAD
Detail	==>	200	005	---------------
		200	010	--------------
		200	015	--------------

NOTE: Usually the feature code is in correspondence with the alphabetical order of the feature name. However, this order may be interrupted during the update phase and not resequenced prior to release of the AMF.

AMF FILE DESCRIPTION

There are three types of records in the Area Master File and each one serves a different purpose.

1. **File Heading Record**
   - each AMF has a record to identify the file and its contents. This first record identifies the designated area and the UTM zone in which it is located.

2. **Municipality Record**
   - there is one record for each municipality within a single AMF, which identifies the municipality's name.

3. **Feature Records**
   For each feature, at least two records exist:
   1) the header record which identifies the feature
   2) the detail record(s) serving to define the geographical point(s) which make up the feature

   The following are the three categories of features which are usually found in the Area Master File:

   a) **STREET & NON-STREET** features (have more than one detail record);
      NON-STREET features are all other line features coded in the AMF which do not have street characteristics. These include for example bridges, lakes, rivers, railways, and municipal boundaries.

   b) **POINT** features (made up of one header and one detail);
      This is a category of special feature types which indicates on an AMF either: buildings such as schools, hospitals, monuments, etc., or developed areas such as golf courses, parks, zoos, etc.,

which are of some importance as geographic locations
on the AMF.

   c) ALIAS features (made up of one header and one
   detail);
   These features are used to identify a feature by
   another common name.

A: Record Interrelationship

The record interrelationships in EBCDIC and ASCII for the
Area Master File are presented in the following Record Interrela-
tionship charts. The table below is an explanation of how the
AMF records are differentiated from one another, thus making them
unique. The shaded fields on the record interrelationship charts
correspond to these explanations, permitting visual differen-
tiation.

RECORD NAME	KEY FOR RECORD DIFFERENTIATION
File Heading Record	Field 2 = spaces
Municipality Record	Field 2 = numeric code Field 3 = spaces
Header Record	Field 3 = numeric code Field 4 = '000'
Detail Record	Field 3 = numeric code Field 4 = numeric code > 0
Street & Non-Street	Field 5 = all Feature Types except 'P'and 'D'
Point	Field 5 = 'P' Field 6 = 'P'
Alias	Field 5 = 'D' Field 6 = 'A'

RECORD INTERRELATIONSHIP–EBCDIC

| Byte	1 FILE HEADING RECORD	2 MUNICIPALITY RECORD	3 HEADER RECORD FOR ALL FEATURE TYPES	4 DETAIL RECORD STREET AND NON-STREET FEATURES	5 DETAIL RECORD POINT FEATURES	6 DETAIL RECORD ALIAS FEATURES
0	METROPOLITAN AREA CODE	METROPOLITAN AREA CODE	METROPOLITAN AREA CODE	METROPOLITAN AREA CODE	METROPOLITAN AREA CODE	METROPOLITAN AREA CODE
5	'P'	MUNICIPALITY CODE	MUNICIPALITY CODE	MUNICIPALITY CODE	MUNICIPALITY CODE	MUNICIPALITY CODE
10	FILLER	'B'	FEATURE CODE	FEATURE CODE	FEATURE CODE	FEATURE CODE
15	SEQUENCE # '000'	SEQUENCE #	SEQUENCE # '000'	SEQUENCE #	SEQUENCE #	SEQUENCE #
	⌀	⌀	FEATURE TYPE / SUB-FEATURE TYPE	FEATURE TYPE / SUB-FEATURE TYPE	FEATURE TYPE 'P' / SUB-FEATURE TYPE 'P'	FEATURE TYPE 'D' / SUB-FEATURE TYPE 'A'
20	# OF SECTIONS	SECTION # '00'	SECTION # '00'	SECTION #	SECTION #	SECTION # '00'
	CREATION DATE		FILLER	FILLER	FILLER	FILLER
			CENTROID CALCU-LATION CHECK	CENTROID CALCU-LATION CHECK	CENTROID CALCU-LATION CHECK	CENTROID CALCU-LATION CHECK
30	LAST UPDATE DATE	MUNICIPALITY NAME		NODE #	NODE #	ORIGINAL NAME
				NODE TYPE	NODE TYPE	
	UTM ZONE		FEATURE NAME	NODE X UTM	NODE X UTM	ORIGINAL STREET TYPE
40				NODE Y UTM	NODE Y UTM	ORIGINAL DIRECTION
				ADDRESS BEFORE LEFT		FILLER
	AREA MASTER FILE NAME			ADDRESS BEFORE RIGHT		ORIGINAL MUNICIPALITY CODE
50			STREET TYPE	ADDRESS AFTER LEFT		
			FEATURE DIRECTION	ADDRESS AFTER RIGHT		ORIGINAL FEATURE CODE
60	CHECK FIELD			CENTROID LEFT X		ORIGINAL SEQUENCE # '000'
	MINIMUM X			CENTROID LEFT Y		ORIGINAL NAME
	MAXIMUM X	FILLER		CENTROID RIGHT X	FILLER	ORIGINAL STREET TYPE
70				CENTROID RIGHT Y		
	MINIMUM Y		FILLER	CROSS-REFERENCE MUNICIPALITY CODE		
80	MAXIMUM Y			CROSS-REFERENCE FEATURE CODE		FILLER
	CENTROID SET BACK	CENTROID SET BACK		CROSS-REFERENCE SEQUENCE #		
90	FILLER	FILLER		CROSS-REFERENCE FEATURE NAME		
95				CROSS-REFERENCE STREET TYPE		

RECORD INTERRELATIONSHIP—ASCII

	1	2	3	4	5	6
	FILE HEADING RECORD	MUNICIPALITY RECORD	HEADER RECORD FOR ALL FEATURE TYPES	DETAIL RECORD STREET AND NON-STREET FEATURES	DETAIL RECORD POINT FEATURES	DETAIL RECORD ALIAS FEATURES

Column 1 — FILE HEADING RECORD
- METROPOLITAN AREA CODE
- 'F'
- FILLER
- SEQUENCE # '000'
- ¥
- # OF SECTIONS
- CREATION DATE
- LAST UPDATE DATE
- UTM ZONE
- AREA MASTER FILE NAME
- CHECK FIELD
- MINIMUM X
- MAXIMUM X
- MINIMUM Y
- MAXIMUM Y
- CENTROID SET BACK
- FILLER
- '0'
- FILLER

Column 2 — MUNICIPALITY RECORD
- METROPOLITAN AREA CODE
- MUNICIPALITY CODE
- 'M'
- SEQUENCE #
- ¥
- SECTION # '00'
- MUNICIPALITY NAME
- FILLER
- CENTROID SET BACK
- FILLER
- '0'
- FILLER

Column 3 — HEADER RECORD FOR ALL FEATURE TYPES
- METROPOLITAN AREA CODE
- MUNICIPALITY CODE
- FEATURE CODE
- SEQUENCE # '000'
- FEATURE TYPE
- SUB-FEATURE TYPE
- SECTION # '00'
- ¥
- CENTROID CALCULATION CHECK
- FEATURE NAME
- STREET TYPE
- FEATURE DIRECTION
- FILLER

Column 4 — DETAIL RECORD STREET AND NON-STREET FEATURES
- METROPOLITAN AREA CODE
- MUNICIPALITY CODE
- FEATURE CODE
- SEQUENCE #
- FEATURE TYPE
- SUB-FEATURE TYPE
- SECTION #
- ¥
- CENTROID CALCULATION CHECK
- NODE #
- NODE TYPE
- NODE X UTM
- NODE Y UTM
- ADDRESS BEFORE LEFT
- ADDRESS BEFORE RIGHT
- ADDRESS AFTER LEFT
- ADDRESS AFTER RIGHT
- CENTROID LEFT X
- CENTROID LEFT Y
- CENTROID RIGHT X
- CENTROID RIGHT Y
- CROSS-REFERENCE MUNICIPALITY CODE
- CROSS-REFERENCE FEATURE CODE
- CROSS-REFERENCE SEQUENCE #
- CROSS-REFERENCE FEATURE NAME
- CROSS-REFERENCE STREET TYPE

Column 5 — DETAIL RECORD POINT FEATURES
- METROPOLITAN AREA CODE
- MUNICIPALITY CODE
- FEATURE CODE
- SEQUENCE #
- FEATURE TYPE 'P'
- SUB-FEATURE TYPE 'P'
- SECTION #
- ¥
- CENTROID CALCULATION CHECK
- NODE #
- NODE TYPE
- NODE X UTM
- NODE Y UTM
- FILLER

Column 6 — DETAIL RECORD ALIAS FEATURES
- METROPOLITAN AREA CODE
- MUNICIPALITY CODE
- FEATURE CODE
- SEQUENCE #
- FEATURE TYPE 'D'
- SUB-FEATURE TYPE 'A'
- SECTION # '00'
- ¥
- CENTROID CALCULATION CHECK
- ORIGINAL NAME
- ORIGINAL STREET TYPE
- ORIGINAL DIRECTION
- FILLER
- ORIGINAL MUNICIPALITY CODE
- ORIGINAL FEATURE CODE
- ORIGINAL SEQUENCE # '000'
- ORIGINAL NAME
- ORIGINAL STREET TYPE
- FILLER

Byte offsets shown on left axis: 0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100, 110

B: <u>Field Description</u>
   <u>File Heading Record</u>

<u>Field</u>

1   **Metropolitan Area Code:** A four digit code identifying the
              Province Code (2 digits) and the Metropolitan Area
              or Agglomeration Area Code (2 digits) to which the
              area belongs (unique within one AMF). Note that
              these codes are unrelated to the Standard Geogra-
              phical Classification codes.

2   **Spaces:** A four digit field containing spaces

3   **Filler:** A six digit field used for internal purposes.
              Ignore.

4   **Sequence #:** A three digit field containing zeros. "000".

5   **Spaces:** A four digit field containing spaces.

6   **Number of Sections:** A two digit field containing a number
              representing the number of sections within the AMF.

7   **Creation Date:** A six digit field containing the creation
              date of the file (optional) (YYMMDD).

8   **Date of Last Update:** A six digit field containing the date
              that the last update run was executed (YYMMDD).

9   **UTM Zone:** A three digit field containing the value of the
              UTM zone in which the AMF is located.

10 **AMF Name:** A twenty digit field containing the name given to
              the AMF.

11 **Check Field:** A one digit code used for internal purposes.
              Ignore.

Fields 12 to 15 refer to the minimum and maximum UTM coordinate
values found throughout the extent of the AMF.
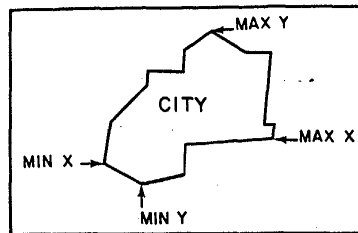
12   **Minimum X:** A six digit value representing the minimum X
          coordinate value found in the AMF.

13   **Maximum X:** A six digit value representing the maximum X
          coordinate value found in the AMF.

14   **Minimum Y:** A seven digit value representing the minimum Y
          coordinate value found in the AMF.

15   **Maximum Y:** A seven digit value representing the maximum Y
          coordinate value found in the AMF.

16   **Centroid Set Back:** A two digit field representing the number
          of metres which the centroid is set back from the
          street.

17   **Filler:** An eight digit field for internal purposes only.
          Ignore.

IN ASCII:
Field

18   **Zero:**   '0'

19   **Filler:** A fifteen digit field for internal purposes only.
          Ignore.

Field Description
Municipality Record

Field

1   Metropolitan Area Code: A four digit code identifying the
         Province Code (2 digits) and the Metropolitan Area
         or Agglomeration Area Code (2 digits) to which the
         area belongs (unique within one AMF). Note that
         these codes are unrelated to the Standard Geogra-
         phical Classification codes.

2   Municipality Code: A four digit code identifying the Census
         Division code (2 digits) and the Municipality Code
         (2 digits) of the municipality(ies) comprised in the
         file.

3   Spaces: A six digit field containing spaces.

4   Sequence #: A three digit field identifying the
         sequence of the record.

5   Spaces: A two digit field containing spaces.

6   Zeros: A two digit field containing zeros. '00'.

7   Municipality Name: A twenty digit field used to identify the
         name(s) of the municipality(ies) contained in the
         AMF. (Will be truncated if greater than 20
         characters.)

8   Filler: A forty-four digit field for internal use only.
         Ignore.

9   Centroid Set Back: A two digit field representing the number
         of metres which the centroid is set back from the
         street.

10 Filler: An eight digit field for internal purposes only.
         Ignore.

<u>Field Description</u>
<u>Header Record</u>

<u>Field:</u>

1   **Metropolitan Area Code:** A four digit code identifying the
          Province Code (2 digits) and the Metropolitan Area
          or Agglomeration Area Code (2 digits) to which the
          area belongs (unique within one AMF). Note that
          these codes are unrelated to the Standard Geogra-
          phical Classification codes.

2   **Municipality Code:** A four digit code identifying the Census
          Division code (2 digits) and the Municipality Code
          (2 digits) to which the feature belongs.

3   **Feature Code:** A six digit code given to each of the features
          corresponding to their alpha-numerical order. This
          code is right justified with leading blanks.

4   **Sequence #:** always set to zero '000'.

5   **Feature Type:** A one digit code which identifies the
          different types of features (see LIST A).

6   **Sub-Feature Type:** A one digit code used only to categorize
          'Feature Type' (see LIST A).

7   **Section #:** always set to zero '00'.

8   **Filler:** Three digits for internal use only. Ignore.

9   **Centroid Calculation Check:** Two digits for internal use
          only. Ignore.

10   **Feature Name:** A twenty character field containing the given
          name of the feature.

11 **Street Type:** A two digit field used for either:

      1) street identification when the street is a single or multiple lane addressable street (see LIST B).

    or

      2) to subdivide feature types (see LIST A).

12 **Feature Direction:** A two digit right justified code identifying the direction of the feature (see LIST C).

13 **Filler:** For internal use only. Ignore.

Field Description

Detail Record – Street & Non-Street Features

Field

1 **Metropolitan Area Code:** A four digit code identifying the Province Code (2 digits) and the Metropolitan Area or Agglomeration Area Code (2 digits) to which the area belongs (unique within one AMF). Note that these codes are unrelated to the Standard Geographical Classification codes.

2 **Municipality Code:** A four digit code identifying the Census Division code (2 digits) and the Municipality Code to which the feature belongs.

3 **Feature Code:** A six digit code given to each of the features corresponding to their alpha-numerical order. This code is right justified with leading blanks.

4 **Sequence #:** A three digit code in ascending order identifying each record within the feature.

5 **Feature Type:** A one digit code which identifies the different types of features (see LIST A).

6 **Sub-Feature Type:** A one digit code used only to categorize 'Feature Type' (see LIST A).

7 **Section #:** A two digit number identifying the section to which the node belongs. Large AMFs are divided into sections to facilitate manipulation.

8 **Filler:** Three digits for internal use only. Ignore.

9 **Centroid Calculation Check:** Two digits for internal use only. Ignore.

10 **Node Number:** A unique number given to each node. This
        number is made up of four digits and is unique
        within one section. If the section number is
        attached to a node number, then it becomes unique
        within the Area Master File.

11 **Node Type:** A one digit code which identifies the different
        types of nodes (see LIST D).

12 **Node X UTM:** is the UTM X coordinate value for the node.

13 **Node Y UTM:** is the UTM Y coordinate value for the node.

For a clearer understanding of fields 14 to 17, consult
Figure 3.

FIGURE 3   ADDRESSABLE FEATURE
OAK STREET
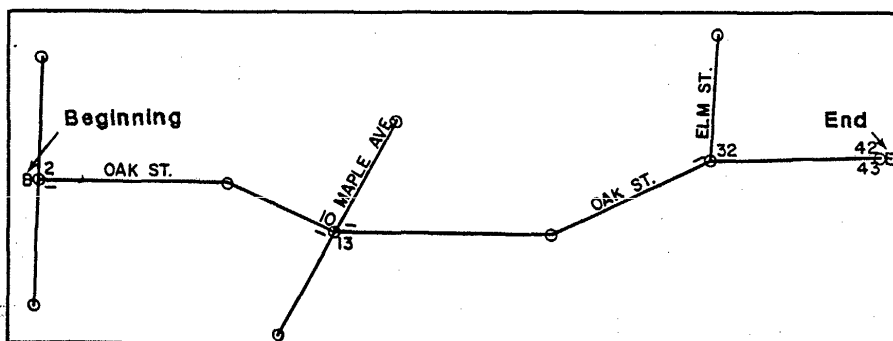
— (Dash) indicates that the address
    is unknown. The computer
    translates this code to '_____'
    (underscore) in the AMF print
    and file.

Please refer to item #6 in annex A

Fields 14 to 17 are five-digit codes which are right justified with leading blanks. Each may contain a real civic address, an "_ _ _ _ _" to represent an unknown address, or a blank to represent no address.

14   **Address Before Left:** It contains the civic address found on the left-hand side of the street before the node.
(from Figure 3)
eg.   1) address 10 at the intersection of Maple Av. with Oak St.
2) "-" (unknown) address at the intersection of Elm St. with Oak St.
3) address 42 at the end of Oak St.

15   **Address Before Right:** It contains the address found on the right-hand side of the street before the node.
(from Figure 3)
eg.   1) address 43 at the end of Oak St.
2) "_" (unknown) address at the intersection of Maple Av. with Oak St.
3) blank at the intersection of Elm St. and Oak St.

16   **Address After Left:** It contains the civic address found on the left-hand side of the street after the node.
(from Figure 3)
eg.   1) address 32 at the intersection of Elm St. with Oak St.
2) "_" (unknown) address at the intersection of Maple Av. with Oak St.
3) address 2 at the beginning of Oak St.

17   **Address After Right:** It contains the civic address found on the right-hand side of the street after the node.
(from Figure 3)
eg.   1) address 13 at the intersection of Maple Ave. with Oak St.

2.) "-" (unknown) address at the beginning of Oak St.

3.) blank address at the intersection of Elm St. with Oak St.

In reference to fields 18 to 21, the centroid value is stored at the last node (last record) forming the block-face.

18   **Centroid Left X:** Is the UTM X coordinate value for the centroid of the block-face on the left (in packed decimal in EBCDIC).

19   **Centroid Left Y:** Is the UTM Y coordinate value for the centroid of the block-face on the left (in packed decimal in EBCDIC).

20   **Centroid Right X:** Is the UTM X coordinate value for the centroid of the block-face on the right (in packed decimal in EBCDIC).

21   **Centroid Right Y:** Is the UTM Y coordinate value for the centroid of the block-face on the right (in packed decimal in EBCDIC).

The next five fields represent the reference information pertaining to one of the intersecting features at this intersection. (See #9 in Data Item Regulations and Clarifications).

22   **Cross-Reference Municipality Code:** Is the municipality code of the feature intersecting at the node.

23   **Cross-Reference Feature Code:** Is the feature code of the feature intersecting at the node.

24   **Cross-Reference Sequence Number:** Is the sequence at which the node appears on the intersecting feature.

25 Cross-Reference Feature Name: Is comprised of the first five characters of the given name of the intersecting feature.

26 Cross-Reference Street Type: Is the given street type of the intersecting feature.

<u>Field Description</u>
<u>Detail Record – Point Features</u>

Field Description is the same as for the Detail Record – Street
and Non-Street Features except:
  - Fields 14 to 26 are Filler
  - Always 'P' in 'Feature Type' and 'Sub-Feature Type' fields

<u>Field Description</u>
<u>Detail Record – Alias Features</u>

<u>Field</u>

1   **Metropolitan Area Code:** A four digit code identifying the
        Province Code (2 digits) and the Metropolitan Area
        or Agglomeration Area Code (2 digits) to which the
        area belongs (unique within on AMF). Note that
        these codes are unrelated to the Standard Geogra-
        phical Classification codes.

2   **Municipality Code:** A four digit code identifying the Census
        Division code (2 digits) and the Municipality Code
        to which the feature belongs.

3   **Feature Code:** A six digit code given to each of the features
        corresponding to their alpha-numerical order. This
        code is right justified with leading blanks.

4   **Sequence #:** A three digit code in ascending order
        identifying each record within the feature.

5   **Feature Type:** Always set to 'D'.

6   **Sub-Feature Type:** Always set to 'A'.

7   **Section #:** Always set to zero '00'.

8. **Filler:** Three digits for internal use only. Ignore.

9 **Centroid Calculation Check:** Two digits for internal use only. Ignore.

10 **Original Name:** A ten digit field used to identify the real name of the feature.

11 **Original Street Type:** A two digit code (see LIST A) used to identify the real street type.

12 **Original Direction:** A two digit code right justified (see LIST C) used to identify the real feature direction.

13 **Filler:** Is a five digit code for internal use only. Ignore.

14 **Original Municipality Code:** Is an eight digit code containing the municipality code of the real feature.

15 **Original Feature Code:** Is a six digit code containing the feature code of the real feature.

16 **Original Sequence #:** Always set to '000'.

17 **Original Name:** A five digit field used to identify the real name.

18 **Original Street Type:** A two digit code to identify the street type of the real street.

19 **Filler:** For internal use only. Ignore.

C: Record Layout

EBCDIC

Record Layout No.1

File Heading Record

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	AN	Spaces
3	6	9-14	AN	Filler
4	3	15-17	N	Sequence Number '000'
5	4	18-21	AN	Spaces
6	2	22-23	N	Number of Sections
7	6	24-29	AN	Creation Date
8	6	30-35	AN	Date of Last Update
9	3	36-38	N	UTM Zone
10	20	39-58	AN	Area Master File Name
11	1	59-59	AN	Check Field
12	6	60-65	AN	Minimum X
13	6	66-71	AN	Maximum X
14	7	72-78	AN	Minimum Y
15	7	79-85	AN	Maximum Y
16	2	86-87	AN	Centroid Set Back
17	8	88-95	AN	Filler

Record Layout No.2 – EBCDIC
Municipality Record

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Spaces
4	3	15-17	N	Sequence Number
5	2	18-19	AN	Spaces
6	2	20-21	N	Section Number '00'
7	20	22-41	AN	Municipality Name
8	44	42-85	AN	Filler
9	2	86-87	N	Centroid Set Back
10	7	88-95	AN	Filler

Record Layout No.3 – EBCDIC

Header Record – Street & Non-Street Features
      – Point Features
      – Alias Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number '000'
5	1	18-18	AN	Feature Type
6	1	19-19	AN	Sub-Feature Type
7	2	20-21	N	Section Number '00'
8	3	22-24	BIT	Filler
9	2	25-26	AN	Centroid Calculation Check
10	20	27-46	AN	Feature Name
11	2	47-48	AN	Street Type
12	2	49-50	AN	Feature Direction
13	45	51-95	AN	Filler

Record Layout No.4 – EBCDIC

Detail Record – Street & Non-Street Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number
5	1	18-18	AN	Feature Type
6	1	19-19	AN	Sub-Feature Type
7	2	20-21	N	Section Number
8	3	22-24	BIT	Filler
9	2	25-26	AN	Centroid Calculation Check
10	4	27-30	N	Node Number
11	1	31-31	AN	Node Type
12	4	32-35	PD	Node X UTM
13	4	36-39	PD	Node Y UTM
14	5	40-44	AN	Address Before Left
15	5	45-49	AN	Address Before Right
16	5	50-54	AN	Address After Left
17	5	55-59	AN	Address After Right
18	4	60-63	PD	Centroid Left X
19	4	64-67	PD	Centroid Left Y
20	4	68-71	PD	Centroid Right X
21	4	72-75	PD	Centroid Right Y
22	4	76-79	AN	Cross-Reference Municipality Code
23	6	80-85	AN	Cross-Reference Feature Code
24	3	86-88	AN	Cross-Reference Sequence Number
25	5	89-93	AN	Cross-Reference Feature Name
26	2	94-95	AN	Cross-Reference Street Type

Record Layout No.5 - EBCDIC
Detail Record - Point Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number
5	1	18-18	AN	Feature Type 'P'
6	1	19-19	AN	Sub-Feature Type 'P'
7	2	20-21	N	Section Number
8	3	22-24	BIT	Filler
9	2	25-26	AN	Centroid Calculation Check
10	4	27-30	N	Node Number
11	1	31-31	AN	Node Type
12	4	32-35	PD	Node X UTM
13	4	36-39	PD	Node Y UTM
14	56	40-95	AN	Filler

Record Layout No.6 – EBCDIC
Detail Record – Alias Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number
5	1	18-18	AN	Feature Type 'D'
6	1	19-19	AN	Sub-Feature Type 'A'
7	2	20-21	N	Section Number '00'
8	3	22-24	BIT	Filler
9	2	25-26	AN	Centroid Calculation Check
10	10	27-36	AN	Original Name
11	2	37-38	AN	Original Street Type
12	2	39-40	AN	Original Direction
13	5	41-45	AN	Filler
14	8	46-53	N	Original Municipality Code
15	6	54-59	AN	Original Feature Code
16	3	60-62	N	Original Sequence Number '000'
17	5	63-67	AN	Original Name
18	2	68-69	AN	Original Street Type
19	26	70-95	AN	Filler

Record Layout
ASCII

Record Layout No.1
File Heading Record

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	AN	Spaces
3	6	9-14	AN	Filler
4	3	15-17	N	Sequence Number '000'
5	4	18-21	AN	Spaces
6	2	22-23	N	Number of Sections
7	6	24-29	AN	Creation Date
8	6	30-35	AN	Date of Last Update
9	3	36-38	N	UTM Zone
10	20	39-58	AN	Area Master File Name
11	1	59-59	AN	Check Field
12	6	60-65	AN	Minimum X
13	6	66-71	AN	Maximum X
14	7	72-78	AN	Minimum Y
15	7	79-85	AN	Maximum Y
16	2	86-87	AN	Centroid Set Back
17	7	88-94	AN	Filler
18	1	95-95	AN	Zero '0'
19	15	96-110	AN	Filler

Record Layout No. 2 - ASCII

Municipality Record

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Spaces
4	3	15-17	N	Sequence Number
5	2	18-19	AN	Spaces
6	2	20-21	N	Section Number '00'
7	20	22-41	AN	Municipality Name
8	44	42-85	AN	Filler
9	2	86-87	N	Centroid Set Back
10	7	88-94	AN	Filler
11	1	95-95	AN	Zero '0'
12	15	96-110	AN	Filler

Record Layout No.3 – ASCII

<u>Header Record</u> – Street & Non-Street Features
                   – Point Features
                   – Alias Features

<u>Field</u>	<u>Size</u>	<u>Position</u>	<u>Type</u>	<u>Description</u>
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number '000'
5	1	18-18	AN	Feature Type
6	1	19-19	AN	Sub-Feature Type
7	2	20-21	N	Section Number '00'
8	3	22-24	AN	Spaces
9	2	25-26	AN	Centroid Calculation Check
10	20	27-46	AN	Feature Name
11	2	47-48	AN	Street Type
12	2	49-50	AN	Feature Direction
13	60	51-110	AN	Filler

Record Layout No.4 – ASCII
Detail Record – Street & Non-Street Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code →
4	3	15-17	N	Sequence Number
5	1	18-18	AN	Feature Type
6	1	19-19	AN	Sub-Feature Type
7	2	20-21	N	Section Number
8	3	22-24	AN	Spaces
9	2	25-26	AN	Centroid Calculation Check
10	4	27-30	N	Node Number
11	1	31-31	AN	Node Type
12	6	32-37	N	Node X UTM
13	7	38-44	N	Node Y UTM
14	5	45-49	AN	Address Before Left
15	5	50-54	AN	Address Before Right
16	5	55-59	AN	Address After Left
17	5	60-64	AN	Address After Right
18	6	65-70	N	Centroid Left X
19	7	71-77	N	Centroid Left Y
20	6	78-83	N	Centroid Right X
21	7	84-90	N	Centroid Right Y
22	4	91-94	AN	Cross-Reference Municipality Code
23	6	95-100	AN	Cross-Reference Feature Code
24	3	101-103	AN	Cross-Reference Sequence Number
25	5	104-108	AN	Cross-Reference Feature Name
26	2	109-110	AN	Cross-Reference Street Type

Record Layout No.5 – ASCII
Detail Record – Point Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number
5	1	18-18	AN	Feature Type 'P'
6	1	19-19	AN	Sub-Feature Type 'P'
7	2	20-21	N	Section Number
8	3	22-24	AN	Spaces
9	2	25-26	AN	Centroid Calculation Check
10	4	27-30	N	Node Number
11	1	31-31	AN	Node Type
12	6	32-37	N	Node X UTM
13	7	38-44	N	Node Y UTM
14	66	45-110	AN	Filler

Record Layout No.6 — ASCII
Detail Record — Alias Features

Field	Size	Position	Type	Description
1	4	1-4	N	Metropolitan Area Code
2	4	5-8	N	Municipality Code
3	6	9-14	AN	Feature Code
4	3	15-17	N	Sequence Number
5	1	18-18	AN	Feature Type 'D'
6	1	19-19	AN	Sub-Feature Type 'A'
7	2	20-21	N	Section Number '00'
8	3	22-24	BIT	Spaces
9	2	25-26	AN	Centroid Calculation Check
10	10	27-36	AN	Original Name
11	2	37-38	AN	Original Street Type
12	2	39-40	AN	Original Direction
13	5	41-45	AN	Filler
14	8	46-53	N	Original Municipality Code
15	6	54-59	AN	Original Feature Code
16	3	60-62	N	Original Sequence Number '000'
17	5	63-67	AN	Original Name
18	2	68-69	AN	Original Street Type
19	41	70-110	AN	Filler

ADDITIONAL INFORMATION

      Please direct any comments and suggestions you may have, and any technical information you may require regarding the Area Master File to:

> Geographic Network Base Unit
> Geography Division
> Statistics Canada
> Ottawa, Ontario
> K1A 0T6
> (613) 951-3921

     For acquisition of the AMF, and/or inquiries regarding other Geography Division products contact:

> Geography Information Services
> Geography Division
> Statistics Canada
> Ottawa, Ontario
> K1A 0T6
> (613) 951-3889

TABLES

LIST A: Feature Classification

Description

All features defined in an AMF are classified using a combination of three types, namely: the feature type, the sub-feature type and the street type.
Following is a list of all possible combinations with their corresponding interpretation:

Roadway, railway and associated features category

Feature		Street	
Type	Sub-type	Type	Interpretation
b	b	any type listed in LIST B	Addressable Single street & public access lane
E	b	any type listed in LIST B	Addressable Multiple street & public access lane
H	N	SI	Highway single
H	N	MU	Highway multiple
H	N	PR	Highway proposed
H	N	UC	Highway under construction
H	N	bb	Other Highway
B	N	SI	Bridge or Tunnel - Single Highway or Addressable Multiple street
B	N	MU	Bridge or Tunnel - Multiple Highway
B	N	MN	Bridge or Tunnel - Addressable Single street
B	N	bb	Other Bridge or Tunnel

| Feature | | Street | |
Type	Sub-type	Type	Interpretation
R	N	bb	Other Railway features
R	N	SI	Railway single track
R	N	MU	Railway multiple track
R	N	SG	Railway siding or yard
F	N	RA	Ramp
F	N	TR	Trail
F	N	WA	Walkway
F	N	EX	Feature extention
F	N	bb	Other Roadway Associated features

Hydrography and associated features category

W	N	CR	Creek - defined using streamline
W	N	AQ	Aqueduct
W	N	CA	Canal
W	N	RI	River
W	N	bb	Other Water body defined using streamline
S	N	CR	Creek - defined using shoreline
S	N	AQ	Aqueduct
S	N	CA	Canal
S	N	RI	River
S	N	LA	Lake

Feature Type	Sub-type	Street Type	Interpretation
S	N	PO	Pond
S	N	RE	Reservoir
S	N	OC	Ocean
S	N	bb	Other Waterbody defined using shorelines
I	N	FA	Falls
I	N	DA	Dam
I	N	bb	Other Associated features

Delemiter and associated features category

M	B	MU	Municipal Boundary
M	B	PR	Provincial Boundary
M	B	NA	National Boundary
M	B	FE	Federal Electoral District Boundary
M	B	bb	Other Political boundaries
C	B	EA	Enumeration Area Boundary
C	B	bb	Other Geostatistical area boundaries
G	B	PA	Park Boundary
G	B	GO	Golf Boundary
G	B	AI	Airport Boundary
G	B	HO	Hospital Boundary
G	B	bb	Other Property boundaries

Feature Type	Sub-type	Street Type	Interpretation
G	B	SH	Shopping Centre Boundary
G	B	SC	School Boundary
G	B	CO	College Boundary
G	B	UN	University Boundary
G	B	JA	Jail Boundary
G	B	CH	Church Boundary
G	B	GT	Government Boundary
U	B	b b	Other Urban-Rural boundaries

General Features category

P	P	PA	Park
P	P	GO	Golf
P	P	HO	Hospital
P	P	AI	Airport
P	P	SH	Shopping centre
P	P	SC	School
P	P	CO	College
P	P	UN	University
P	P	JA	Jail
P	P	CH	Church
P	P	GT	Government
P	P	b b	Other Point features

	Feature	Street	
Type	Sub-type	Type	Interpretation
O	N	FA	Cliff
O	N	DI	Ditch
O	N	bb	Other Topography features
Z	N	HY	Hydroline (Major)
Z	N	TE	Telephone line (Major)
Z	N	FE	Fence
Z	N	PI	Pipeline
Z	N	bb	Other features
D	A	bb	Alias features

b = Blank

<u>LIST B:</u> <u>Street Type List</u>

<u>Street Type</u>	<u>Interpretation</u>	<u>Street Type</u>	<u>Interpretation</u>
bb	No type/Pas de type	LI	Line
AL	Alley/Allée	LK	Link
AU	Autoroute	LN	Lane
AV	Avenue	ME	Mews
BA	Bay	MO	Montée
BP	By Pass	PL	Place
BV	Boulevard	PM	Promenade
CA	Carré	PR	Park
CH	Chemin	PU	Plateau
CL	Circle/Cercle	PY	Parkway
CN	Concession	RD	Road
CO	Côte	RG	Rang
CR	Crescent/Croissant	RI	Rise
CS	Close	RL	Ruelle
CT	Court	RO	Route
DR	Drive	RU	Rue
GN	Garden	RW	Row
GR	Green	SQ	Square
GT	Gate	ST	Street
GV	Grove	TL	Trail
HL	Hill	TR	Terrace/Terrasse
HT	Heights	VW	View
HY	Highway	WK	Walk
JA	Jardin	WY	Way

bb = Blank

LIST C: Feature Direction

Description

The feature direction is not to be mistaken as being the
geographic direction of a feature, but the direction used within
the feature's identification.

N	NORTH/NORD
S	SOUTH/SUD
E	EAST/EST
W	WEST
O	OUEST
NE	NORTH-EAST/NORD-EST
NW	NORTH-WEST
NO	NORD-OUEST
SE	SOUTH-EAST/SUD-EST
SW	SOUTH-WEST
SO	SUD-OUEST

LIST D: Node Type

The node type identifies the different types of nodes in an AMF feature:

B   Beginning node of a feature or a segment
E   End node of a feature or a segment
P   Point street feature
C   Curves (presently not used)
b   Other nodes

FIGURE 4 NODE TYPES

FOR FEATURE 'JOHN ST.'
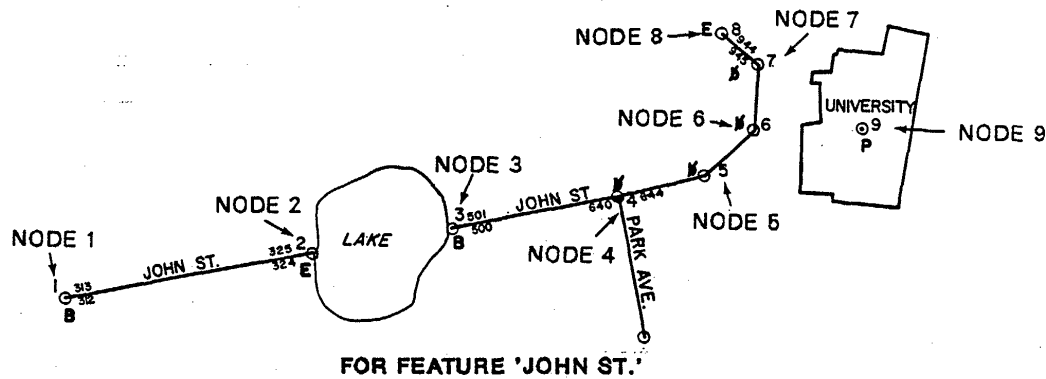
NODE 1 Is a B node as it begins the feature.

NODE 2 Is an E node as it ends the segment (JOHN ST. is severed by a lake).

NODE 3 Is a B node as it begins the segment (JOHN ST. resumes past the lake).

NODE 4 Is a blank node (b) as it is the junction of two features (JOHN ST. and Park Ave).

NODE 5 Is a blank node (b) as it signifies only a change in the feature's direction.

NODE 6 Same as node 5.

NODE 7 Same as node 5.

NODE 8 Is an E node as it ends the feature (JOHN ST.).

NODE 9 Is a P node as it locates a point feature, the University.

ANNEX A

Data Item Regulations And Clarifications

The following section lists regulations and clarifications concerning AMF data items. These AMF particulars may be of importance to the user in helping to reduce the possibility of misinterpretation.

1. **Metropolitan Area Code**
     The metropolitan area code is unique throughout the AMF.

2. **Sequence Number**
     For a Detail record, the sequence number must be greater than '000' and in ascending numerical order, starting with the 'B' node and ending with the 'E' node, within each feature code. For a Municipality record, the sequence number must be greater than '000' and in ascending numerical order, in correspondence with the municipal records.

3. **Unique Node Identification**
     When the section number is joined with the node number, it permits the unique identification of a node within an AMF.

4. **Node Type**
     (See LIST D)
     There is one 'B' node type per feature identifying its starting point, and one 'E' node type per feature identifying its end point. In some cases however, there are more than one 'B' and 'E':due to operational requirements all circular features such as lakes will have two 'B' and two 'E' points; features that have been physically interrupted will be defined with multiple 'B' and 'E's; due to programming requirements in address editing, any street in which odd and even addresses switch sides at an intersection will be divided into multiple 'B' and 'E's.

For addressable features, the direction of 'B' and 'E' follows the ascending order of the address. If the addresses on the feature are unknown, the direction of 'B' and 'E' follows the surrounding street pattern. If no fixed pattern is identified in the surrounding street network, then the direction is arbitrarily in a South to North and East to West direction.

For non-addressable features, the direction of 'B' and 'E' is in a South to North and East to West direction. Highway ramps, however, follow the traffic flow, and circular features follow a clockwise direction. For plotting requirements of shorelines, it has been decided that the following line symbol would represent the water body (where the dashed lines represent water).

The 'B' and 'E' are directed such that the water body is located to the right of the shoreline from 'B' to 'E'.

5. **Node XY Coordinates**

In most cases, the xy coordinate value of a node is within (+) or (-) 10 metres of the node's true ground value. However, when features have a minimum distance of 20 metres or less between them, one feature is adjusted to improve cartographic aesthetics. Features which are located too close to CSD limits are also moved to insure their centroid xy values are located within their respective CSD limit.

6. Addresses

Addresses are identified on the right and left hand side of addressable features before and after nodes defining the feature. Addresses are blank before the feature's beginning node and after the feature's ending node (on both sides). The address is either a civic number or '_____' (address unknown) after the feature's beginning node and before the feature's ending node (on both sides). The address is either a number or '-----' before and after an intersection node (on the side that intersects only). The address is blank before and after non-intersecting nodes.

For addressable features which follow a CSD limit, the addresses are found only on the one side of the feature that is contained within the CSD.

All addresses must be either odd or even on each side of the feature between its 'B' & 'E's.

7. Feature Name

The Feature Name field is alpha numeric, where the first character must be either A to Z or 0 to 9. The remaining characters may contain a combination of A to Z, 0 to 9, and ' . , - or blank. The name used for this field is the official name supplied by local expertise.

When the name exceeds the maximum field size of 20 characters, it is truncated (at the end). If the end result is meaningless, an abbreviation of the name may be used instead.

The following is a description of regulations pertaining to feature name coding:

Feature names containing prefixes such as:
Des, de, le, la, les, l', d', de l', du, de la, The, have these prefixes coded at the end of their names,

with a comma and a blank separating them from the name.
   ex: De l'école will be coded: ECOLE, DE L'

Formats of the word Saint and Sainte are coded as ST, STE
respectively. All numeric streets are coded numeric
without any suffix such as 'TH', 'ND' etc.

If space permits, all non-addressable features have the
feature's qualifier in the name field.
   ex: OTTAWA LIMIT
       DOW'S LAKE
In CSDs of the province of Quebec, the qualifier is coded
before the feature name.
   ex: LIMITE DE HULL
       LAC LEMAY

In feature names that contain a direction, such as
'Sherbrooke est', the direction is not coded in the name
but in the direction field.

Special attention should be taken for street names
containing 'Montée' and 'Côte' as they may appear in the
street name or street type.

Features which are unidentified are coded as:

a) For street features: ZXXX
     – where XXX is a three digit number assigned
       arbitrarily.
       eg. Z001 for an unidentified street

b) For non-street features: "Qualifier" XXX
     – where "Qualifier" is the type of feature such as
       lake, river.
     – where XXX is a three digit number assigned
       arbitrarily.
       eg. LAKE 001 for an unidentified lake.

Private streets are coded as 'PRIV.' in all CSDs.
Streets which are undergoing construction are coded in
Quebec CSDs as 'E.C.' (en construction), and in other
CSDs as 'U.C.' (under construction).

Proposed streets in Quebec CSDs will be coded as 'PROJ'
(projetées), and in other CSDs as 'PROP' (proposed).

Railway yards will be coded:
(name of railway) YARD XXX
where XXX (is a unique number assigned arbitrarily).
ex: CNR YARD 001.

8. **Centroid**

It is a point used as a spatial reference for a block-
face. The centroid is a coordinate in the Universal
Transverse Mercator (UTM) projection which is calculated
as follows:

1. The distance between all nodes comprising the block-
   face are totalled.
2. This total distance is then divided by 2.
3. The resultant distance (midpoint distance) is measured
   back from the end point along the arcs (segment
   between two nodes) until the midpoint distance along
   the block-face is reached.
4. The centroid is located at a point perpendicular to,
   and 22 metres back from, the arc. A UTM xy coordinate
   value is calculated for this centroid.

9. Cross-Reference

This field is automatically generated by the system, at the conclusion of each creation and updating procedure for each AMF. It is the identification of one feature which intersects with the feature in question at this node. The system allows for the generation of only one intersection (cross-reference) even though more than one may exist. The cross-reference is generated as follows:

1. The file is sequenced by Section # and Node # and then ordered by Feature Code and Sequence #.

eg. Section # Node #	Feature Code	Sequence #	Feature Name
012380	00068	028	Albert St.
012380	00174	003	James St.
012380	00196	014	Ottawa River
012381	00024	010	George St.

2. The system then implements a chaining procedure in which the first feature is chained to the second feature, and the second feature is chained to the third feature, and so on. The last feature within the same Section # Node # is chained or assigned to the first feature thus completing the chaining procedure for that particular Section # Node #.

3. The procedure continues for the entire file.

NOTE: Alias and Point features are bypassed in this procedure.

ANNEX B

Definitions Of Terms Referred To In The AMF

Address Range of a Block-face: The low and high address (civic number) found on a block-face (including commercial addresses).

Airport: Landing facility for aircraft, usually with more than one runway, with facilities for handling passengers and air freight and for servicing aircraft.

Approach to Highway: refer to Ramp.

Aqueduct: A water conduit, especially one for supplying water to a community from a distance.

Block-face: One side of a city street, between consecutive inter-sections with streets, physical features, start points or end points.*

Boundary: A line indicating the limit or extent of an area or territory.

Bridge: A structure erected over a water body which is defined using shorelines (instead of streamlines).

Canal: 1) An artificial waterway constructed to facilitate movement of ships and barges.
2) A watercourse built to convey water for irrigation.

Census Agglomeration (CA): The main labour market area of an urban area (the urbanized core) of at least 10,000 population.*

  * NOTE: A more complete definition of this term is provided in the <u>1986 Census Dictionary</u> (Catalogue No. 99-101E).

Census Metropolitan Area (CMA): The main labour market area of an urban area (urbanized core) of at least 100,000 population.*

Census Subdivision: This refers to the general term applying to municipalities, Indian reserves, Indian settlements and unorganized territories. In Newfoundland, Nova Scotia and British Columbia, the term also describes geostatistical areas that have been created by Statistics Canada in co-operation with the provinces as equivalents for munici-palities.*

Centroid: It is defined as being the mid-point between two inter-sections which form the beginning and end of a valid address range. The block-face centroid is set back at a right angle, a distance of 22 metres from the middle of the street. A centroid is provided for each block-face of an addressable feature.*

Cliff: A high and extremely steep rock face, approaching the vertical.

Control Point: A point location (usually an intersection of 2 features) with identifiable or known UTM coordinate values used in the AMF creation process (digitizing).

Creek: A small stream, indicated by a single line or streamline.

Dam: A barrier to prevent the flow of water or to raise and control the level of water, where the water body is defined by shorelines.

Ditch: A trench dug in the earth, as for drainage or irrigation.

* NOTE: A more complete definition of this term is provided in the <u>1986 Census Dictionary</u> (Catalogue No. 99-101E).

Enumeration Area: Refers to the area usually canvassed by one
Census Representative.*

Falls: A waterfall where the associated water body is defined by
shorelines.

Feature: An entity that will be included in the Area Master File.

Feature Extension: An extension (projection) of a feature for
internal operations. It is defined from the feature end
point to the extension end point.

Federal Electoral District (FED): Refers to any territorial unit
entitled to return a member to serve in the House of
Commons.*

Government: The exercise of authority over a district. In this case
refers to any level ie. municipal, provincial, federal.

Highway: A main road or thoroughfare.
For mapping purposes, this feature is divided into the
following:

1) **Single Highway** – A highway with 3 lanes or less without a
median (fence, grass etc.).
2) **Multiple Highway** – A highway with 4 lanes or more without a
median; or a highway with 2 lanes or more
with an median.

NOTE: For all of the above cases, if the total road width
is 100 metres or more, the feature will be defined as
2 parallel single highway.

Hydro Line: The complex of wires and pylons used in the transmission
of electrical power. The AMF recognizes only major ones.

Intersection: The junction of any two features except property
boundaries.

* **NOTE:** A more complete definition of this term is provided in
the <u>1986 Census Dictionary</u> (Catalogue No. 99-101E).

Island: A body of land completely surrounded by water or marsh.

Lake: A large, inland body of salt or fresh water, entirely surrounded by land. Larger than a pond.

Node: A geographic point with xy coordinates which is placed at every feature intersection and change of direction.

Park: An area set aside for recreation; also an area maintained in its natural state as public property.

Pipeline: A cylindrical passage of a substantial length for the transport of fluids or gases.

Pond: A natural body of standing fresh water occupying a small surface depression; usually smaller than a lake.

Proposed Road: A road that is in the planning stage.

Railway: A permanent way having rails which provide a track for train cars.

  1) **Single Track Railway** – a single railway line normally of standard gauge.
  2) **Multiple Track Railway** – two or more closely parallel rail lines.

Railway Siding: A single railway track parallel to a second track used for temporary storage of cars or for the passing of trains.

Railway Yard: A system of railway tracks within a prescribed limit.

Ramp: A short roadway providing access to or exit from a road or highway.

Reservoir: A natural or artificial storage place for water from which water may be withdrawn for irrigation, municipal water supply, etc.

River: A natural, freshwater surface body of running water that
serves as a natural outlet for a drainage area.
Indicated by shorelines.

Road: Refer to Street.

Shoreline: The limit of a body of water where it touches land. In
the AMF, the water body should on average be greater than
20 metres wide to be indicated by shoreline rather than
streamline.

Streamline: Used to define small creeks and rivers. The centre
line of a river or creek with an average width of less
than 20 metres.

Street: A throughfare within a city or town larger than an alley
or lane.
For mapping purposes this category is divided into the
following:

1) **Single Street**   – 3 lanes or less without a median.
2) **Multiple Street** – 4 lanes or more without a median, or
                          – 2 lanes or more with a median.

   NOTE: For all of the above cases, if the total road width is
   100 metres or more, the feature will be defined as 2
   parallel single streets.

Telephone Line: A wire used for transmitting telephone signals.
The AMF recognizes only major ones.

Trail: A track or path located in a park.

Tunnel: A subterranean passageway usually carrying a railway, road
or canal.

Under Construction: The term used to indicate that the feature on
the map is not completed but that construction has started.