
A Presentation of Street Addressing

Over the last few decades, the majority of cities in developing countries have undergone considerable urban development, characterized by the appearance of numerous settlements that have no infrastructure.

Previous street identification systems, often applied to old town centers, have rarely been extended to these new settlements on the periphery of the city.

This results in an alarming situation with regard to how urban services function. Without an identification system, how do you find your way in an ever-expanding town? How can we direct ambulances, fire or security services? How can a courier or message be sent to a person's home? How can urban facilities and equipment be identified? How can water, electricity or telephone network breakdowns be tracked? How can tax collection services function? In spite of certain makeshift solutions, urban services function with difficulty, if at all, for the poor majority of the cities.

To overcome these difficulties, since the 1980s so-called "street addressing" techniques have been developed. This manual contains a generic plan for carrying out street addressing in a town, in a short period of time and at a set cost.

What is street addressing?

The street addressing operation enables people to locate a plot of land or a dwelling, i.e., to define its address by means of a system of maps and street signs indicating the numbers or names of streets and buildings. The address is defined in relation to the street.

This idea can be extended to urban networks and services. In other words, it is possible to allocate an address not only to a building but also to a specific “urban object” such as a hydrant, a street light, a taxi station, etc.

But street addressing is more than just a signaling operation; it is also an indispensable foundation for urban management. The tools put in place during this operation also serve to improve urban and municipal management.

Which cities should do street addressing?

All cities of 10,000 inhabitants and above with no system for locating and identifying addresses, and those that have a partial system and wish to see it generalized.

Street addressing can thus be seen as a basis for helping manage cities. It is available to all those who contribute to this urban management, whether they be elected officials or designated managers. Its scope is urban, including facilities and equipment, services, and finances.

Why carry out a street addressing operation?

Street addressing serves several purposes:

For inhabitants, the operation:

- facilitates identification and location by means of a simple, low-cost, user-friendly identification system;
- assists emergency services (ambulances, fire services, police, etc.);
- helps various urban services locate destinations: taxis, mail delivery and home delivery of goods and services, etc.

For municipal authorities, network administrators and concessionaries, street addressing makes it possible to:

- facilitate the work of utility operators (electricity, water, telecommunications), principally for infrastructure installation and collection of fees;
- improve local taxation by drawing up fiscal registers or inventories;
- rationalize the establishment of monitoring and assistance to urban programming with regard to streets, different utility networks, and facilities and equipment;
- establish electoral lists and the geographic area of the different polling offices;
- combat epidemics by monitoring the propagation of the disease; etc.

The principles on which the system is based:

The street addressing concept is based on three principles:

1. Streets are codified quickly, until they can be named.

The street numbering system should allow for:

- easy identification within the town;
- different types of urbanization to be taken into account;
- forecasts of urban development.

The principle of the operation is based on the application of a coding system (names or numbers) that assigns a code to every district, neighborhood, street and building. If a numbering system is chosen, the address assigned to the house situated in Neighborhood 3, at No.27, 56th Street, will be: No.27 3.056 Street. The system makes it easy for users, since the address code immediately indicates in which neighborhood the street can be found. Since streets are numbered according to a predefined order of progression, it is easy to locate each street.

2. An entryway-numbering system is identified by which urbanization can be monitored.

Using the metric system, changes in each plot or building can be monitored, through periodic, systematic visual inspections.

3. The system must be adapted to the financial and technical capacities of each town.

In addition to facilitating address location, the street addressing operation should be seen as a mechanism for improving urban management. This objective is based on three complementary elements:

- production of a complete map of the town, so the system can be used by different municipal services;
- implementation of a systematic census to collect important urban and demographic data;
- constitution of an address database thus enabling the processing, updating, and querying of census data.

Implementation: the five steps involved in street addressing:

The street addressing operation comprises five related actions:

- Codifying: defining a system for identifying streets and numbering entryways
- Mapping: creating the basis for a working map, street addressing and signposting maps, and the street map
- Signing: installing signposts and street plaques at intersections
- Numbering: attaching numbers to entryways. This is done in parallel to signposting.
- Address indexing: The computerized address index is established on the basis of information collected during the entryway numbering process, and can be a reference point for all government offices and concessionaries.

1. Codifying

- Rule 1: Decide on a street identification system
- Rule 2: Integrate the existing identification system
- Rule 3: Section the town geographically
- Rule 4: Select the organization for street numbering
- Rule 5: Select a system for codifying buildings
- Rule 6: Select zones to be addressed

2. Mapping

- Rule 7: Prepare the preliminary mapping work program
- Rule 8: Establish the basic addressing map
- Rule 9: Draw up signposting maps (intermediary work mapping)
- Rule 10: Edit and publish the final street addressing map (final mapping)

3. Signposting

- Rule 11: Select the type of signposts to be used
- Rule 12: Organize the work
- Rule 13: Install street plaques and signposts

4. Numbering

- Rule 14: Organize a public awareness campaign
- Rule 15: Add numbers to entryways in the pilot zone
- Rule 16: Number all entryways in areas where street addressing is to take place

5. Address indexing

- Rule 17: Carry out a door-to-door census in parallel with numbering
- Rule 18: Create the address index

Task organization schedule

1 Codifying				
2 Mapping			6 Publication	
	3 Street signposting			
	4 Numbering entryways			
	5 Address index			
				7 Management
1 and 2:	<p>Codifying and mapping may be started at the same time. Mapping will continue until the editing phase. Codifying should be completed before the signposting and numbering phases.</p>			
3, 4 and 5:	<p>These 3 may or may not be carried out simultaneously. Signposting may begin before or after numbering. However, the address index can be created only during or after numbering and census-taking.</p>			

Which urban services are involved?

Technical services

A good knowledge of public property (streets, facilities and equipment, lineation, quantity, state, etc.) makes it possible to set up a system of monitoring and assistance to urban planning with regard to highways, public services, different utility networks, and facilities and equipment. This is only possible if a preliminary census is carried out, and the data are updated regularly.

Financial services

Street addressing makes it possible to locate and register people or companies for taxation. This gives a better definition of the tax base, and offers the opportunity to establish an urban services tax.

The conjunction of these two makes for better urban management since, on the one hand, financial resources increase and, on the other hand, at any point in time and in any sector of the town, data on available resources and the state of equipment (streetways, water supply or lack thereof, electricity, etc.) can be accessed and worked with.

Setting up a street addressing operation

A method that can be adapted to individual cases

The street addressing operation presented in this manual is intended to be as complete and versatile as possible. But just as each town is different, so too will each street addressing operation be different. The method proposed must, and should be, modified on a case-by-case basis.

Each town has its own individual characteristics:

- It is laid out differently, which calls for a variety of codifying methods,
- There is already a street identification system in place, covering part of the town,
- Given the different budget levels, objectives and design of the system will vary.

Three options will be presented, each one reflecting different financial situations.

A street addressing operation: the town of Doloba

To better understand the problems likely to be encountered, this manual is illustrated by a typical operation (that of the town of Doloba), which covers the most frequently asked questions.

Doloba municipality has approximately 800,000 inhabitants. To increase its fiscal resources and to improve management of its urban services, the town decides to undertake a general street addressing operation.

Doloba already has a street identification system in the densely populated, very old, town center. Numbering follows a classic system with even numbers on one side of a street and odd numbers on the other.

The Manual program

The street addressing operation comprises three very different phases:

Preliminary tasks:

- Create an orientation package
- Define tasks and responsibilities
- Set up a Street Addressing Unit

The 12 implementation data sheets:

1. Preparing the cartography base
2. Identifying zones to be addressed
3. Selecting the codification system
4. Establishing the basic street addressing map
5. Developing signposting maps
6. Instituting a public awareness campaign
7. Addressing a pilot zone
8. Calling for bids and analyzing responses
9. Installing signposts and street plaques
10. Numbering entryways and carrying out the baseline census
11. Developing an address index/database
12. Preparing and publishing the final street addressing map

Application and maintenance:

1. Continue and expand street addressing
2. Ensure that the physical street addressing is maintained
3. Apply the operation to urban management