

# OPEN SOURCE, OPEN DATA IN COMMERCIAL REAL ESTATE

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Presented by:

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**CBRE**  
CB RICHARD ELLIS



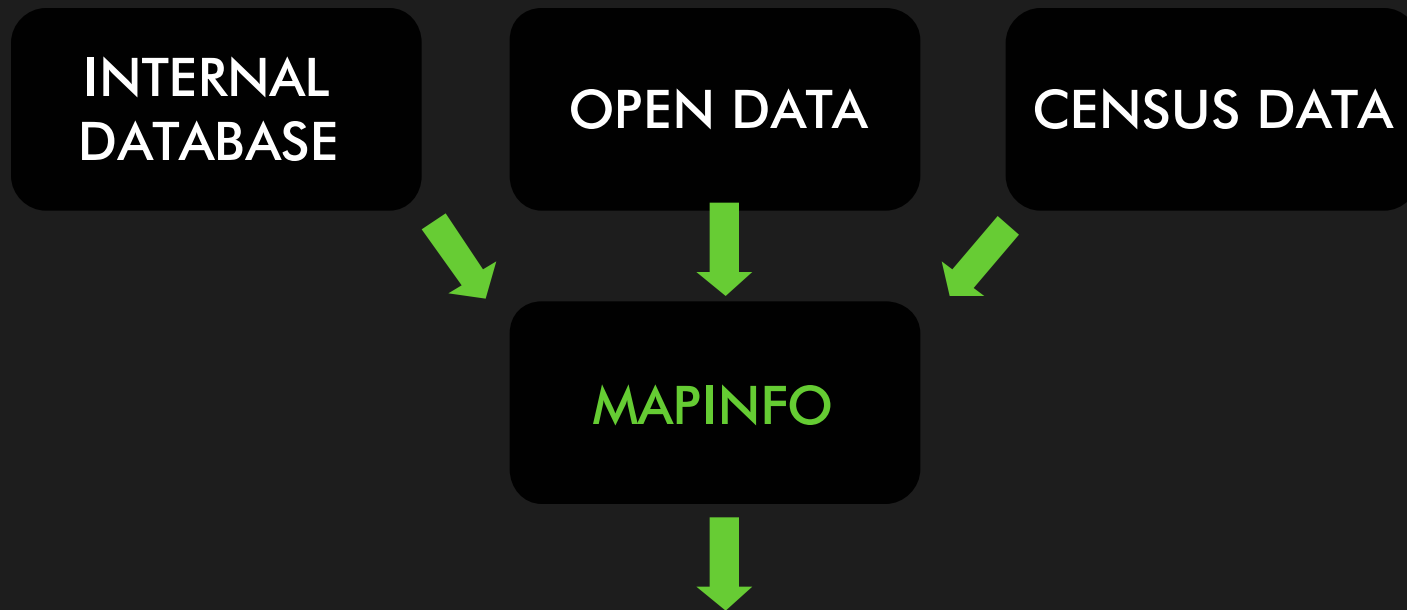
# OPEN SOURCE, OPEN DATA IN COMMERCIAL REAL ESTATE

## OVERVIEW

- Using Open Data
  - How?
  - Examples...
  - Benefits
- Future of Open Data
- Conclusion

# OPEN SOURCE, OPEN DATA IN COMMERCIAL REAL ESTATE

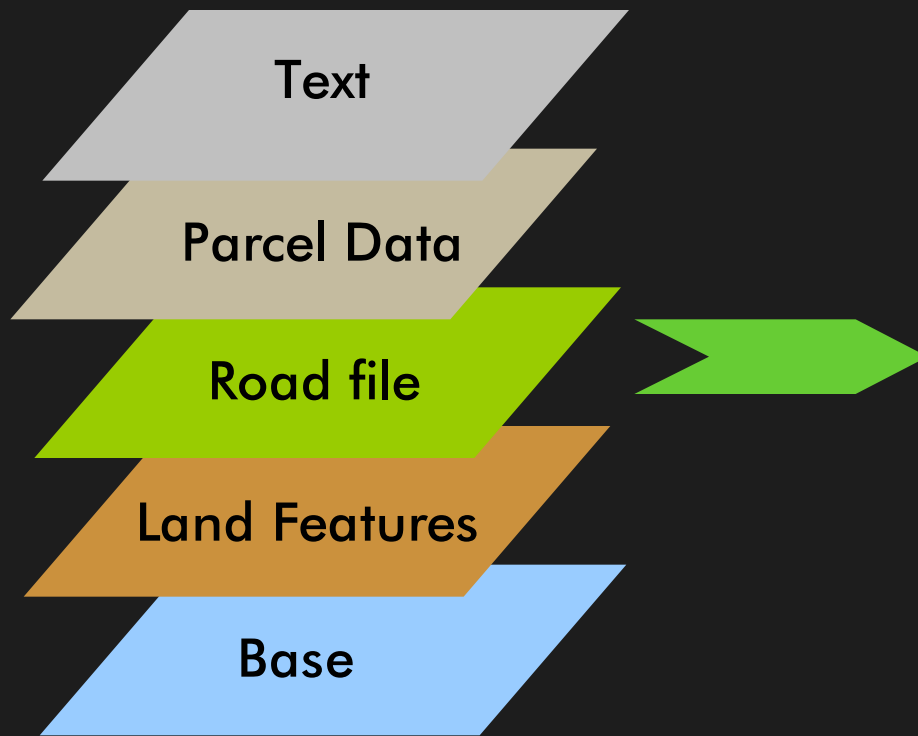
## FLOW CHART



Location map, Available Properties map, Thematic map, Survey map, Zoning map, Aerial map, etc...

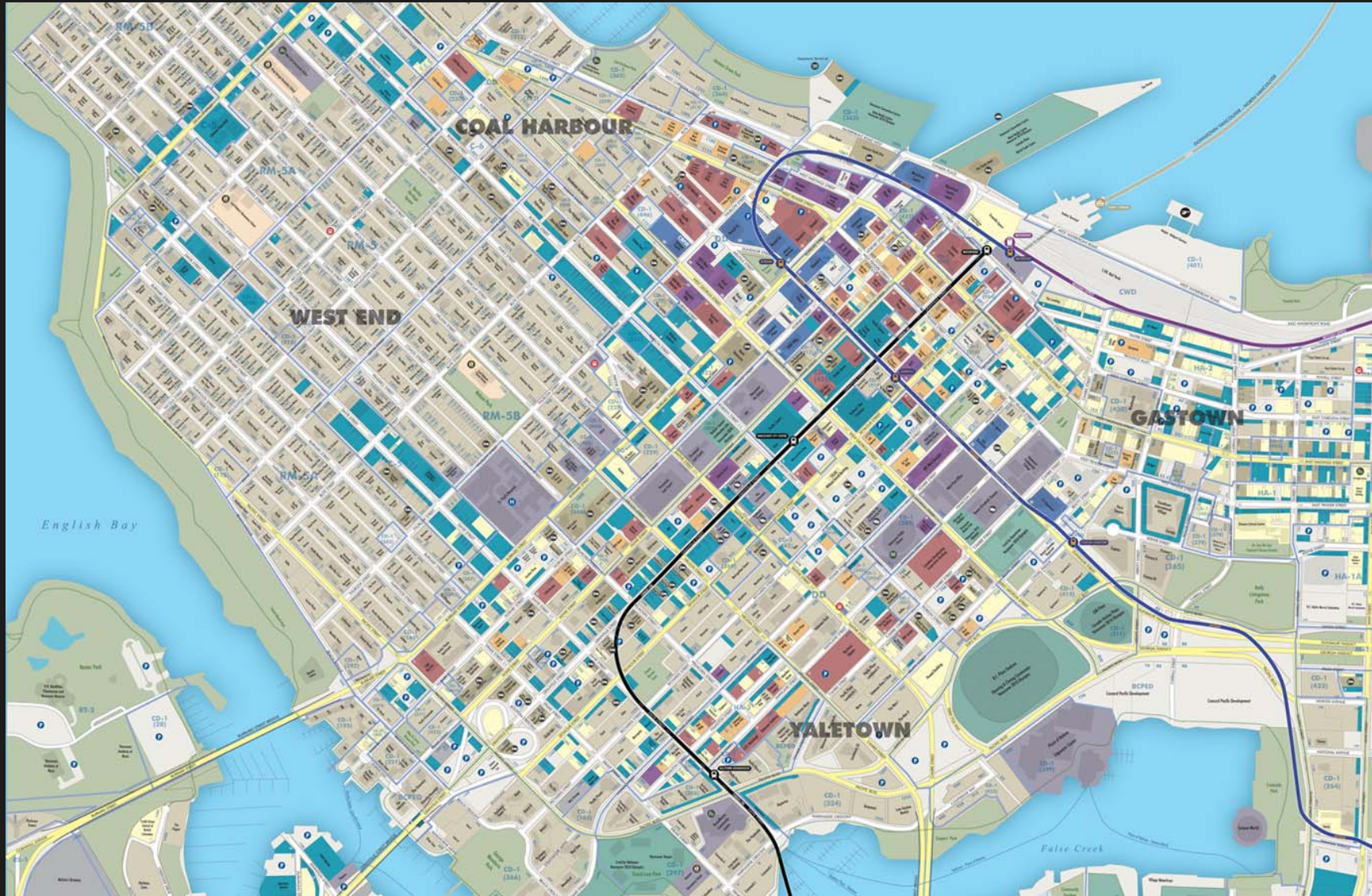
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## THE PROCESS



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# USING OPEN DATA



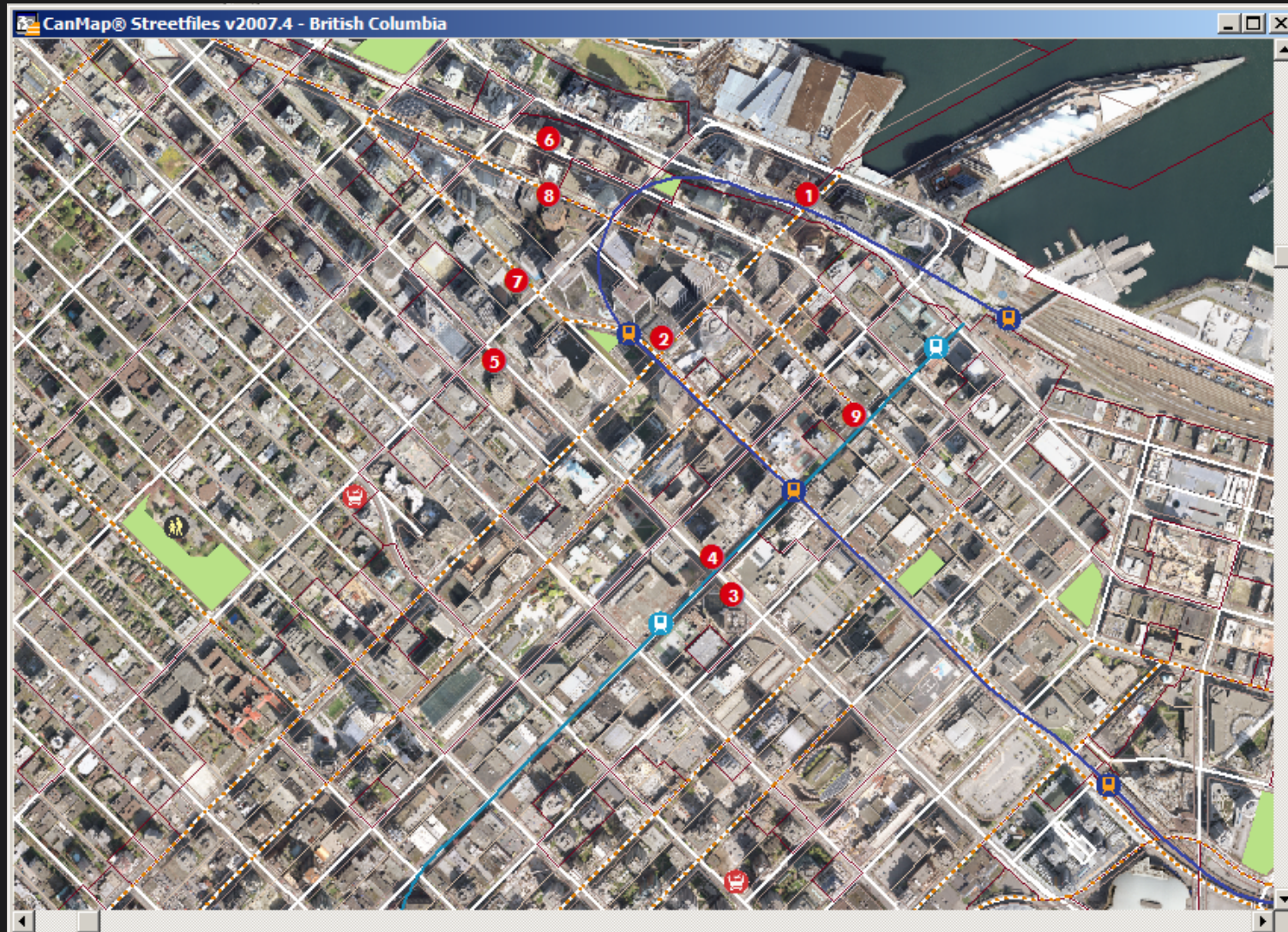
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## Central Business District



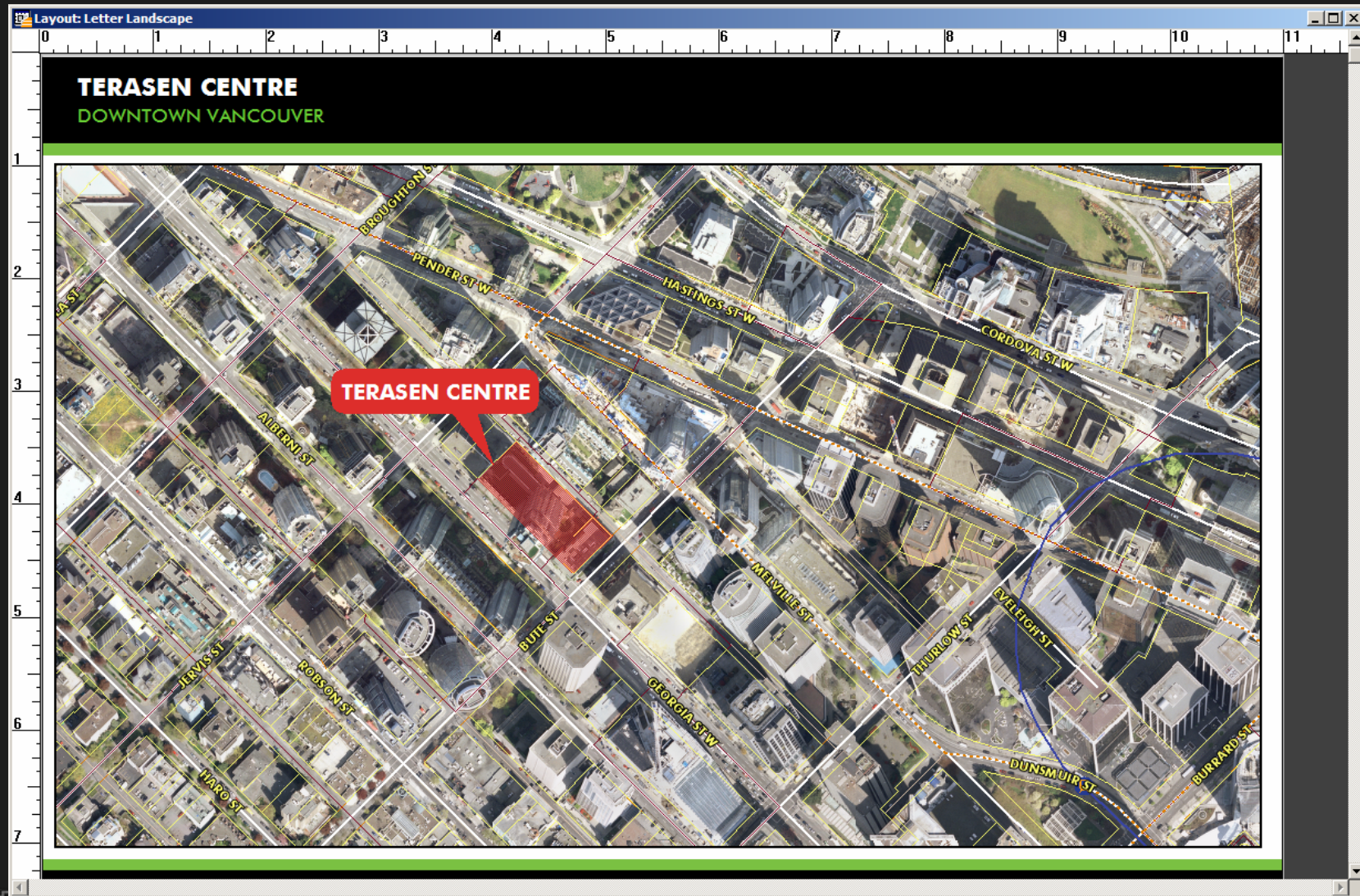
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## Available Properties – City of Vancouver Open Data



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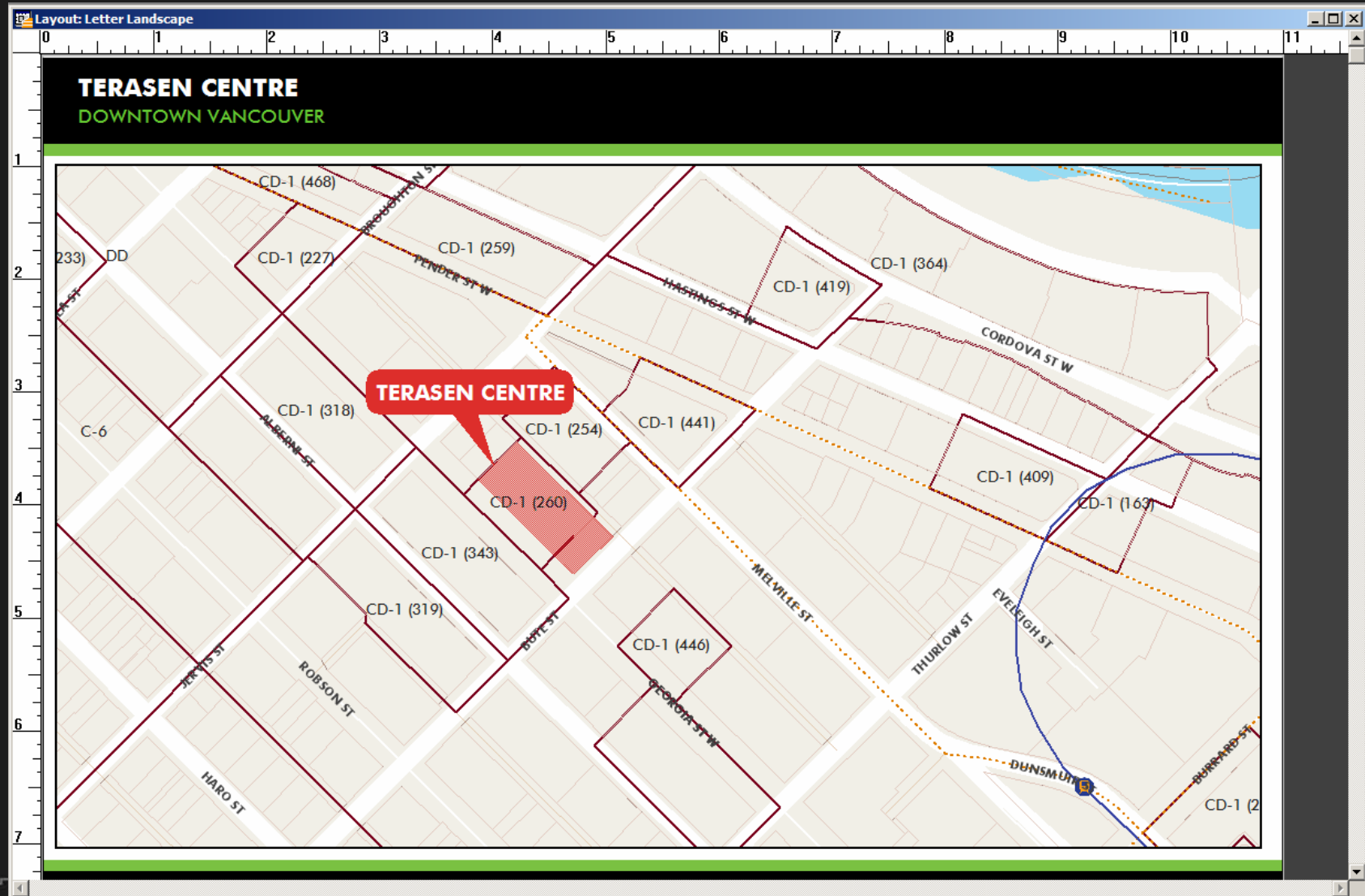
## Location map – City of Vancouver Open Data





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# Zoning – City of Vancouver Open Data



## BENEFITS OF USING OPEN SOURCE DATA

- Getting it, Changing it, Sharing it!
- Cost – no cost!
- Up-to-date

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## FUTURE OF OPEN SOURCE

# The Future is Open!

OPEN SOURCE, OPEN DATA **IN COMMERCIAL REAL ESTATE**

# **OPEN SOURCE SOFTWARE**

## MapGuide Open Source

- Web-based platform
- Enables users to develop and deploy web mapping applications
- Supports most geospatial file formats, databases and standards
- Application development with PHP, .NET, Java and JavaScript APIs
- Source: *MapGuide Project Home* [ <http://mapguide.osgeo.org/> ]

# Overview of Features

The screenshot displays a web-based mapping application titled "Metro Vancouver - Commercial & Industrial Areas". The interface includes a top toolbar with navigation and tool icons, a left sidebar with a "Layers" panel and a "Properties" panel, a central map area, and a right sidebar with an "Overview" panel. The "Layers" panel lists various map features such as Office QRT, Industrial QRT, Shopping Centers, Airports, Commercial Areas, Industrial Areas, ALR, Roads & Municipal Data, Municipal Data, Roads, Public Transit, and Geography. The "Properties" panel shows "Shopping Centers" with a count of 1. The map displays a grid of streets in Vancouver, with several features highlighted in different colors: Shopping Centers (green triangles), Commercial Areas (blue squares), and Industrial Areas (red squares). The "Overview" panel provides a welcome message and instructions on how to use the application's tools: Query, Buffer, and Measure. The status bar at the bottom shows coordinates, a scale of 1:15000.00, a map size of 3.25 x 2.95 km, and the application is powered by MapGuide. The browser's address bar shows "Local intranet" and the zoom level is set to 100%.

**Layers**

- Features
  - Office QRT
  - Industrial QRT
  - Shopping Centers
  - Airports
  - Commercial Areas
  - Industrial Areas
  - ALR
- Roads & Municipal Data
  - Municipal Data
  - Roads
- Public Transit
- Geography

**Properties**

Shopping Centers 1

Name	Value

**Overview**

Welcome to the CBRE Mapping Application.

Select a tool from the bar above the map window to begin finding your way around Vancouver.

The tasks in the Tasks drop-down list directly above contain functions that perform the following:

- Query:** Search for map features and zoom to them.
- Buffer:** Draw an area around selected features based on a user-defined distance.
- Measure:** Draw lines on the map and calculate the real world distance.

Server Platform: Apache

X: -9079.743750, Y: 32869.125000 (METER) 3 Shopping Centers selected 1: 15000.00 3.25 x 2.95 (km) Powered by MapGuide

Local intranet 100%

## Overview of Features - Tasks

- Query Features  
Perform attribute-based searches
- Buffer Features  
Create zones around map features
- Select Within  
Determine spatial intersections between features
- Measure  
Draw paths on the map and measure real world distance

# MapGuide – Query Features

The screenshot displays the MapGuide Query Features interface. On the left is a map of Vancouver, BC, with several shopping centers highlighted in purple and orange. The right panel is titled "Query Features" and contains the following configuration options:

- Select a Layer:** Layer: Shopping Centers
- Property Filter:**  Property Filter; Property: Address; Operator: Contains; Value: broad
- Spatial Filter:**  Spatial Filter; Digitize: Rectangle, Polygon, Clear
- Output:** Output property: Centre
- Execute:** Max results: 100
- Results:** (Empty list)
- Scale:** 20000; Zoom; Select

Layer: Shopping Centers

Property: Address  
Operator: Contains  
Value: "broad"

Output: Centre



# MapGuide – Query Features

The screenshot displays the MapGuide Query Features interface. On the left is a map of a city area with various streets and landmarks labeled, including Waterfront, Burrard, Granville, Stadium, and Yaletown-Roundhouse. A purple polygon is drawn on the map, indicating the query area. On the right is the Query Features panel, which includes a search bar, navigation controls, and a 'Tasks' menu. The main panel is titled 'Query Features' and contains the following sections:

- Select a Layer:** Layer: Shopping Centers
- Property Filter:**  Property Filter. Property: Address. Operator: Contains. Value: broad.
- Spatial Filter:**  Spatial Filter. Digitize: Rectangle, Polygon, Clear.
- Output:** Output property: Centre.
- Execute:** Execute button, Max results: 100.
- Results:** A list of results: Kingsgate Mall, Fairchild Plaza, West Broadway & Granville St.
- Scale:** 20000, Zoom, Select buttons.

- Click Execute to perform query
- List of results is returned

# MapGuide – Query Features

**Metro Vancouver - Commercial & Industrial Areas**

**Layers**

- Features
  - Office QRT
  - Industrial QRT
  - Shopping Centers
  - Airports
  - Commercial Areas
  - Industrial Areas
  - ALR
- Roads & Municipal Data
  - Municipal Data
  - Roads
- Public Transit
- Geography

**Properties**

Shopping Centers 1

Name	Value

**Query Features**

Select a Layer: Shopping Centers

Property Filter

Property: Address

Operator: Contains

Value: broad

Spatial Filter

Digitize: Rectangle Polygon Clear

Output: Centre

Execute Max results: 100

**Results**

- Kingsgate Mall
- Fairchild Plaza
- West Broadway & Granville St.

Scale: 20000 Zoom Select

X: -5831.843680, Y: 31014.456318 (METER) 1 Shopping Centers selected 1: 19000.00 4.12 x 3.74 (km) Powered by MapGuide Local intranet 100%

## MapGuide – Buffer Features

- Create zones around map features
- User defines the buffer distance
- Can be used to perform spatial analysis
  - Example: Find shopping centers downtown that are within 500 meters of the Canada Line.

# MapGuide – Buffer Features

**Metro Vancouver - Commercial & Industrial Areas**

**Layers**

- Features
  - Office QRT
  - Industrial QRT
  - Shopping Centers
  - Airports
  - Commercial Areas
  - Industrial Areas
  - ALR
- Roads & Municipal Data
  - Municipal Data
  - Roads
- Public Transit
- Geography

**Properties**

Shopping Centers 1

Name	Value

**Create a Buffer**

**Buffer settings**

Select features on the image.

Distance around features:  
1 Kilometers

Layers to include in the buffer:  
<No layer selected>

Refresh

Name for the resulting buffer layer:  
Buffer 1

Merge buffer areas

Fill style	Border style
Fill pattern: Solid	Line pattern: Solid
Foreground color: [Red]	Line color: [Black]
Transparency: 50 %	Line thickness: 1
Background color: transparent	

Done Cancel

Results of the buffer are put into a new layer above the top feature layer. This buffer layer has the name you enter here.

- To create multiple buffer layers, use different buffer names.
- To hide buffer layers, turn them off.
- Buffer layers are temporary and are removed when you close the viewer.

X: -1275.593750, Y: 31826.931250 (METER) 47 features selected 1: 75000.00 16.27 x 14.76 (km) Powered by MapGuide Local intranet 100%

# MapGuide – Buffer Features

**Create a Buffer**

**Buffer settings**

Select features on the image.

Distance around features:  
500 Meters

Layers to include in the buffer:

- Shopping Centers
- Canada Line (Stations)
- Skytrain (Stations)
- West Coast Express (Stations)

Refresh

Name for the resulting buffer layer:  
Canada Line Buffer

Merge buffer areas

Fill style	Border style
Fill pattern: Solid	Line pattern: Solid
Foreground color: Red	Line color: Black
Transparency: 50 %	Line thickness: 1
Background color: transparent	

Done Cancel

# MapGuide – Buffer Features

**Metro Vancouver - Commercial & Industrial Areas**

**Layers**

- Canada Line Buffer
- Features
  - Office QRT
  - Industrial QRT
  - Shopping Centers
  - Airports
  - Commercial Areas
  - Industrial Areas
  - ALR
- Roads & Municipal Data
  - Municipal Data
  - Roads
- Public Transit
- Geography

**Properties**

Shopping Centers 1

Name	Value

**Create Buffer**

Canada Line Buffer has been created.

1 buffer feature was created.

OK

X: -977.937500, Y: 27620.056250 (METER) 47 features selected 1: 75000.00 16.27 x 14.76 (km) Powered by MapGuide

Local intranet 100%

# MapGuide – Select Within

**Metro Vancouver - Commercial & Industrial Areas**

**Layers**

- Canada Line Buffer
- Features
  - Office QRT
  - Industrial QRT
  - Shopping Centers
  - Airports
  - Commercial Areas
  - Industrial Areas
  - ALR
- Roads & Municipal Data
  - Municipal Data
  - Roads
- Public Transit
- Geography

**Properties**

Canada Line Buffer 1

Name	Value
------	-------

**Select Within**

Select areas on the image.

Restrict results to selected layers:

- Canada Line Buffer
- Office QRT
- Industrial QRT
- Shopping Centers
- Municipal Data
- Canada Line (Stations)
- Evergreen Line (Stations)
- Seabus (Stations)
- Skytrain (Stations)

Refresh

- If you continue to select areas on the image, click "Refresh" to update the layer list.
- To finish and select all features within the highlighted areas, click "Done".
- To start over, click "Clear".

Done Clear

X: -6194.859375, Y: 32569.881250 (METER) | 1 Canada Line Buffer selected | 1: 21000.00 | 4.56 x 4.13 (km) | Powered by MapGuide

Local intranet | 100%

# MapGuide – Select Within

The screenshot displays the MapGuide application interface for Metro Vancouver. The main map area shows a street grid with several red circular buffers drawn around specific locations, including Waterfront, Vancouver City Ctr, Granville, Yaletown-Roundhouse, and Olympic Village. The interface includes a top toolbar with navigation and tool icons, a left sidebar with a 'Layers' panel and a 'Properties' panel for 'Shopping Centers', and a right sidebar with an 'Overview' section. The 'Overview' section contains a welcome message and a list of tool functions: Query, Buffer, and Measure. The status bar at the bottom indicates '9 Shopping Centers selected', a scale of 1:21000.00, and a map size of 4.56 x 4.13 (km). The application is powered by MapGuide and runs on a Local intranet.

**Metro Vancouver - Commercial & Industrial Areas**

**Layers**

- Canada Line Buffer
- Features
  - Office QRT
  - Industrial QRT
  - Shopping Centers
  - Airports
  - Commercial Areas
  - Industrial Areas
  - ALR
- Roads & Municipal Data
  - Municipal Data
  - Roads
- Public Transit
- Geography

**Properties**

Shopping Centers 1

Name
1
2
3
4
5
6
7
8
9

**Overview**

Welcome to the CBRE Mapping Application.

Select a tool from the bar above the map window to begin finding your way around Vancouver.

The tasks in the Tasks drop-down list directly above contain functions that perform the following:

- Query:** Search for map features and zoom to them.
- Buffer:** Draw an area around selected features based on a user-defined distance.
- Measure:** Draw lines on the map and calculate the real world distance.

Server Platform: Apache

X: -10395.384375, Y: 31208.600000 (METER)

9 Shopping Centers selected

1: 21000.00

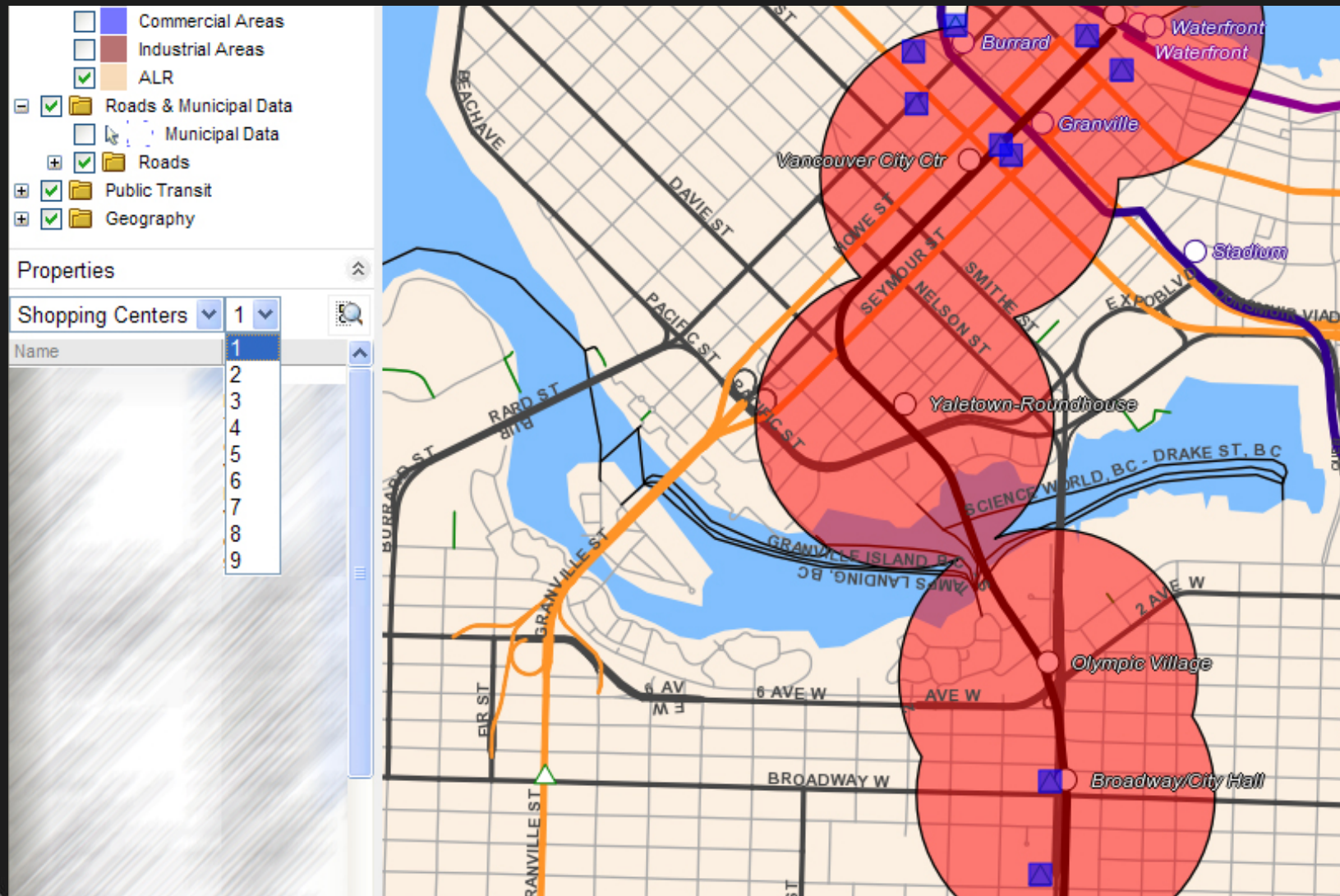
4.56 x 4.13 (km)

Powered by MapGuide

Local intranet 100%



# MapGuide – Select Within



# MapGuide – Measure

Commercial Areas

Measure Distance

Click a start and end point.

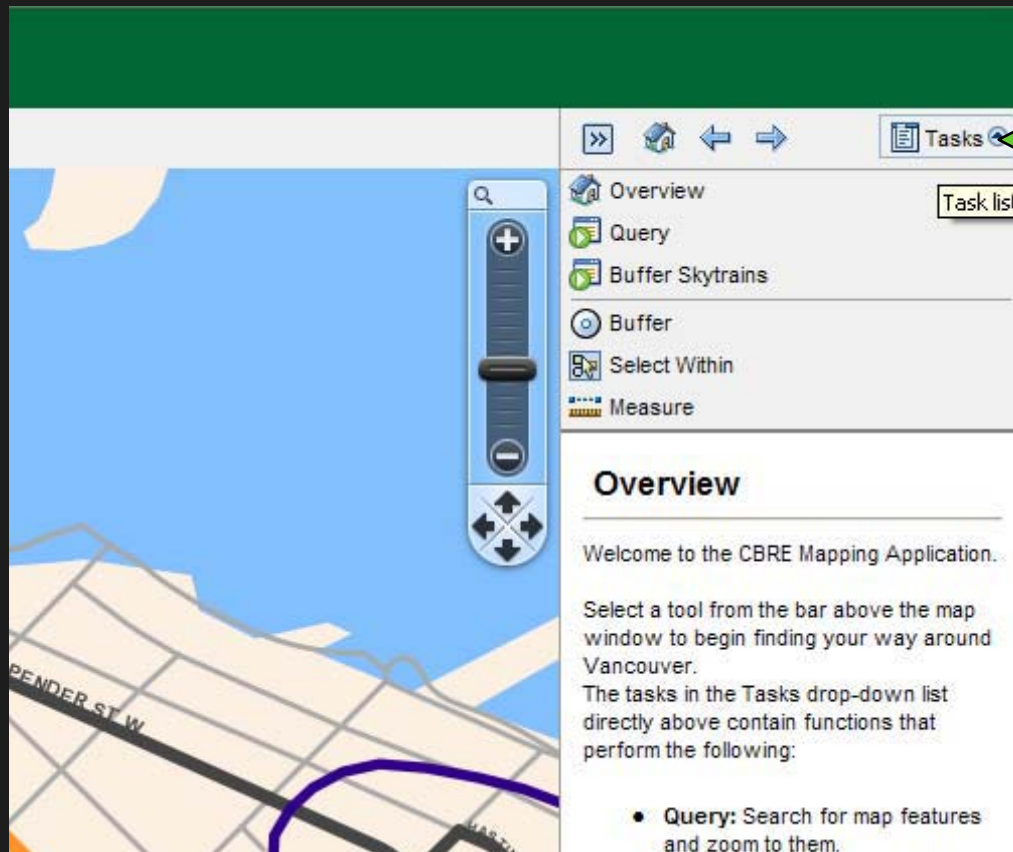
Segment: 0.36 (Kilometers)

Total: 1.77 (Kilometers)

- To measure multiple distances, continue clicking new points.
- To finish, click "Stop".
- You can pan or zoom and continue measuring by clicking "Resume".
- To start over, click "Clear".

Clear Stop

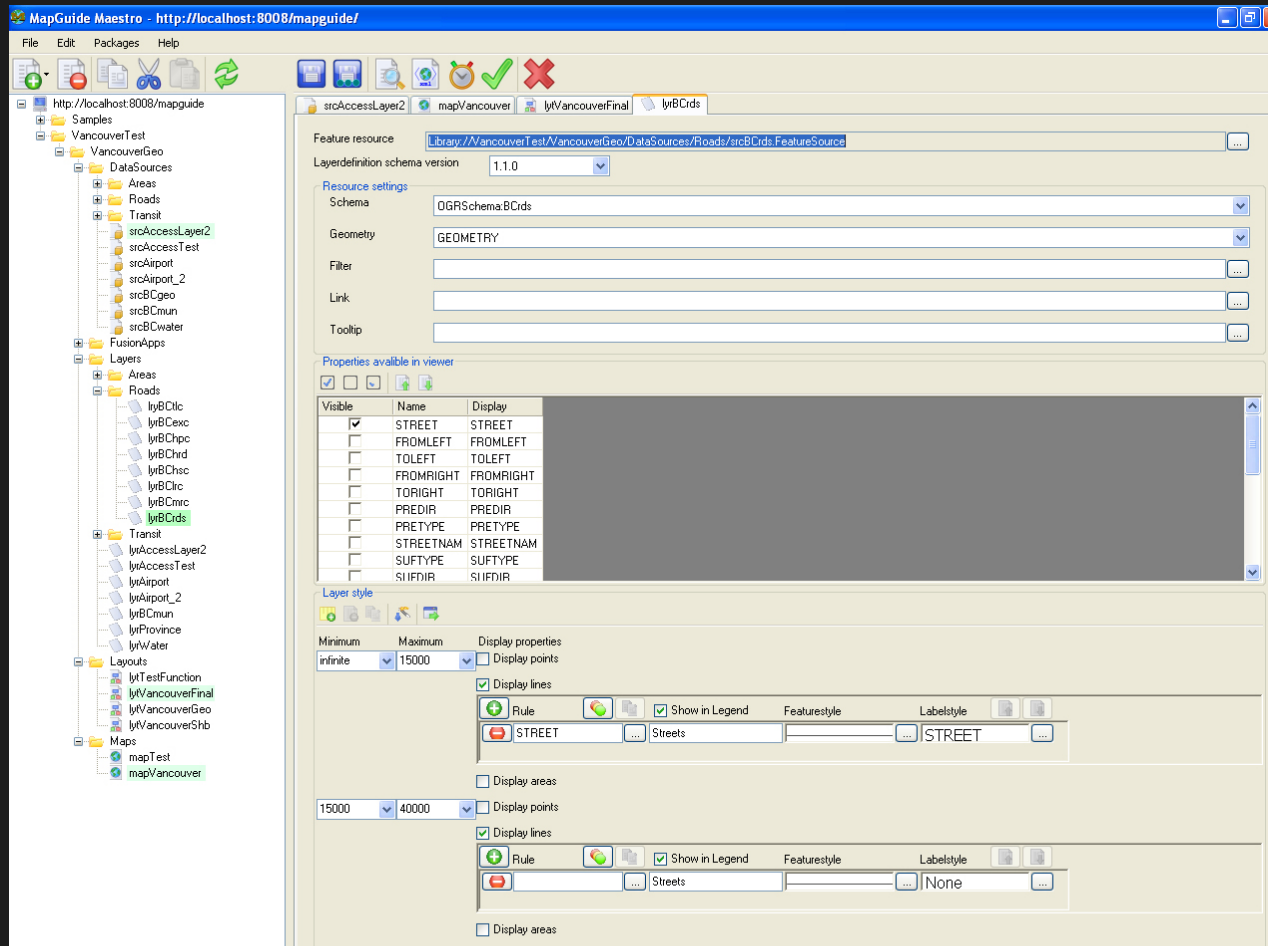
# MapGuide – Task Menu



Click here to access these functions in MapGuide.

# Maestro

- Open source map authoring tool for MapGuide



# Maestro

- Used to manage map resources
  - Data Sources
  - Map Layers
  - Maps
  - Basic and Flexible Web Layouts

Layers

Layers by group | Layers by drawing order | Base layer groups

- BCFeatures
- BCVancouver
- BCTransit
  - lyrCanadaLine\_Stns
  - lyrCanadaLine\_Line
  - lyrEvergreenLine\_Stns
  - lyrEvergreenLine\_Line
  - lyrSeabus\_Stns
  - lyrSeabus\_Routes
  - lyrSkytrain\_Stns
  - lyrSkytrain\_Line
  - lyrWestcoast\_Stns
  - lyrWestcoast\_Line
- BCGeo

Layer style

Minimum: infinite | Maximum: 15000 | Display properties:  Display points,  Display lines

Rule	Show in Legend	Featurestyle	Labelstyle
STREET	<input checked="" type="checkbox"/>	Streets	STREET

Minimum: 15000 | Maximum: 40000 | Display properties:  Display points,  Display lines

Rule	Show in Legend	Featurestyle	Labelstyle
	<input checked="" type="checkbox"/>	Streets	None

Thank you.

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