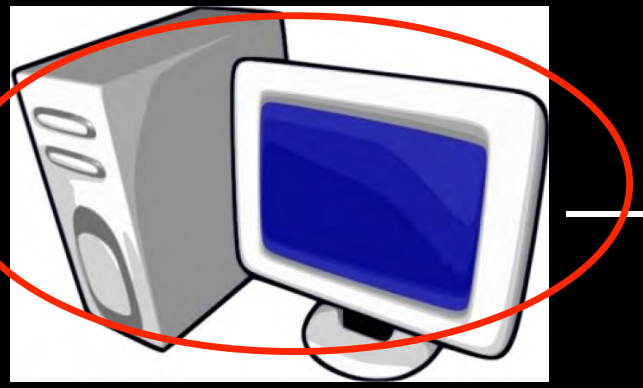
Working with Your Data in QGIS

Kurt Menke, GISP, Bird's Eye View

Bird's Eye View GIS

The Mapping Workflow

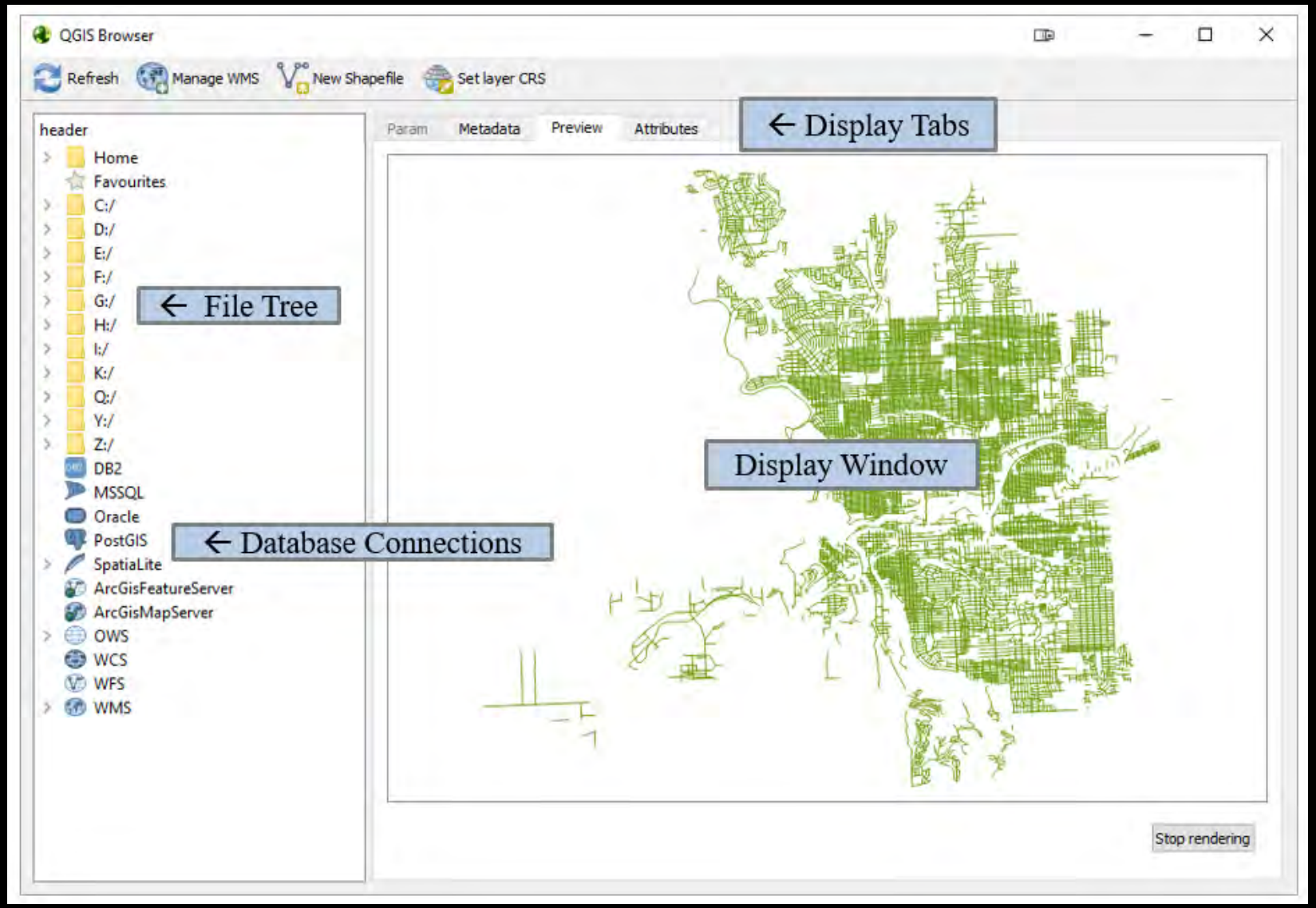
Tablet/Smart Phone
with apps



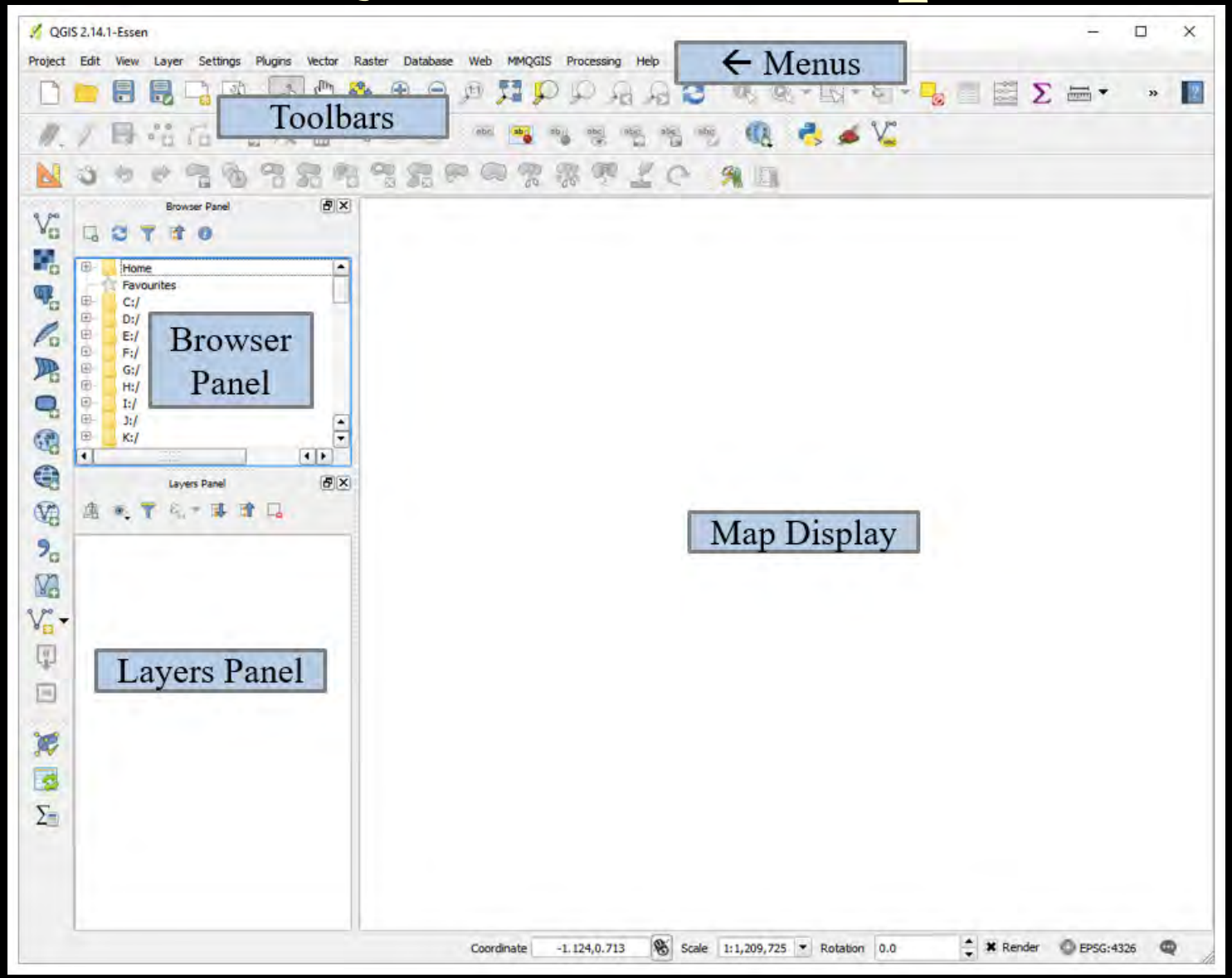
Computer → GIS

Internet Mapping

QGIS Browser

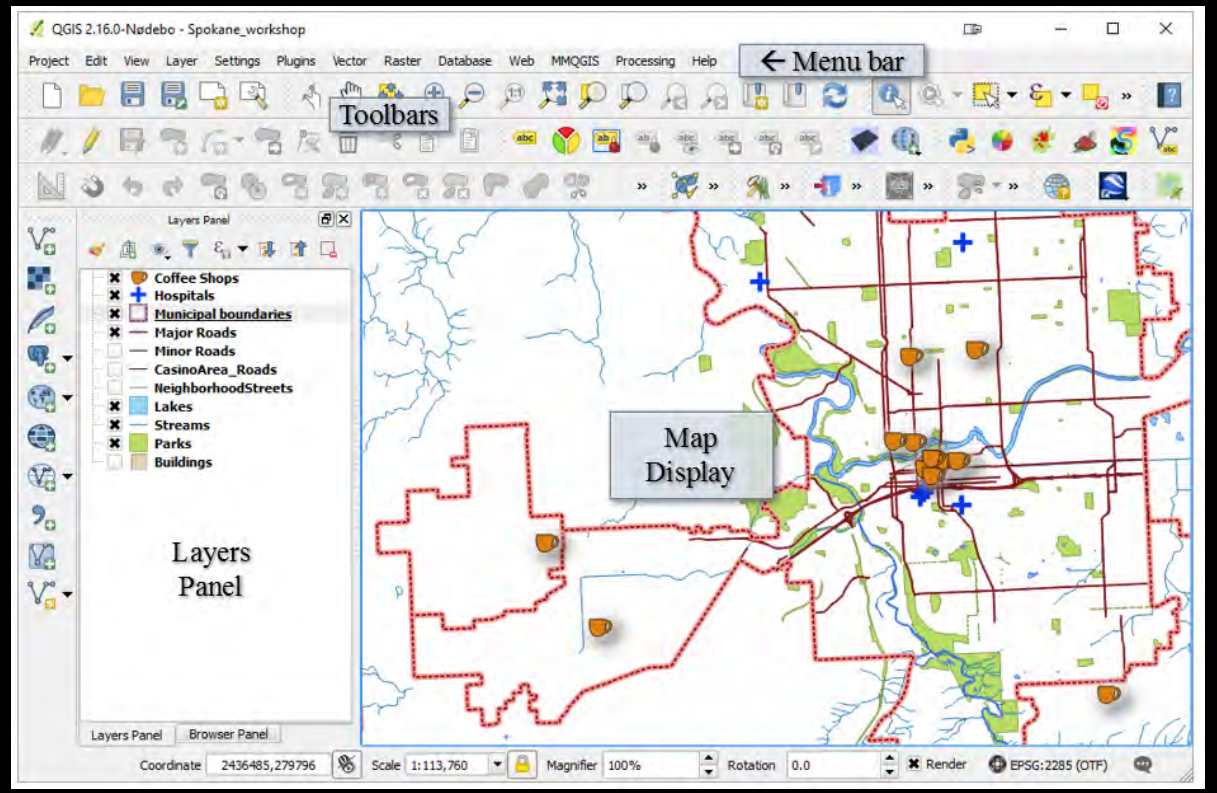


QGIS Desktop

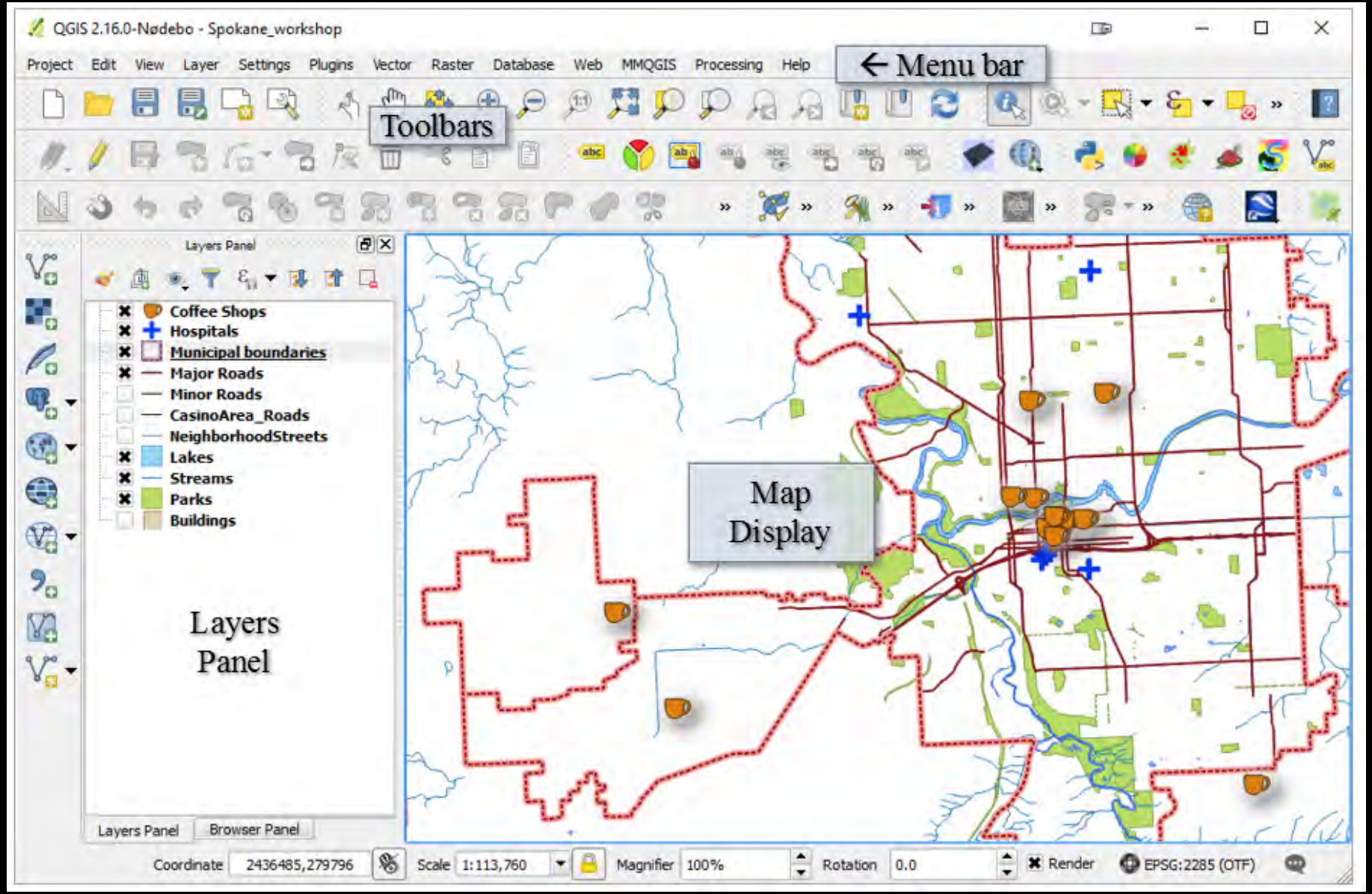


Open Map Document

- Open QGIS Desktop.
- Click on the Project menu and choose Open
- Navigate to the QGIS folder and open the Spokane_workshop.qgs file.

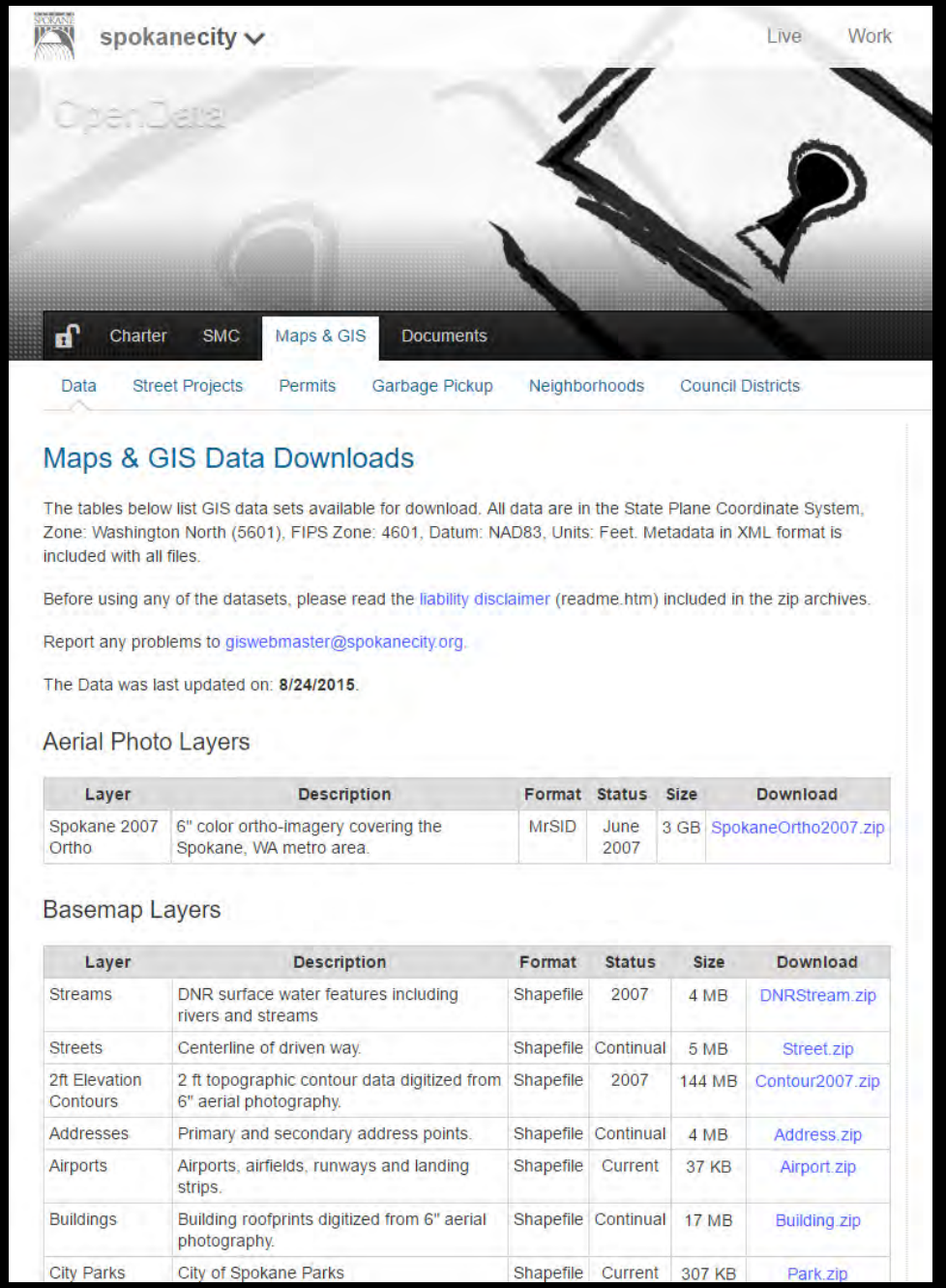


QGIS Desktop

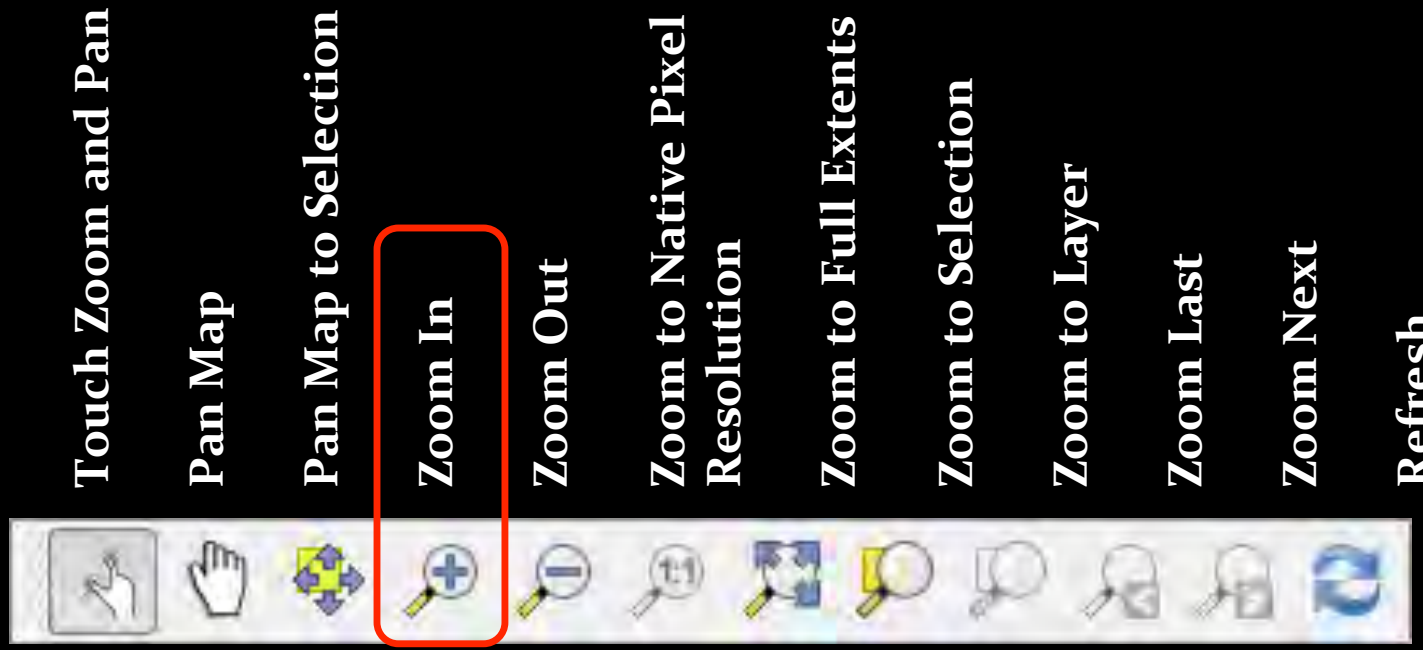


The Data

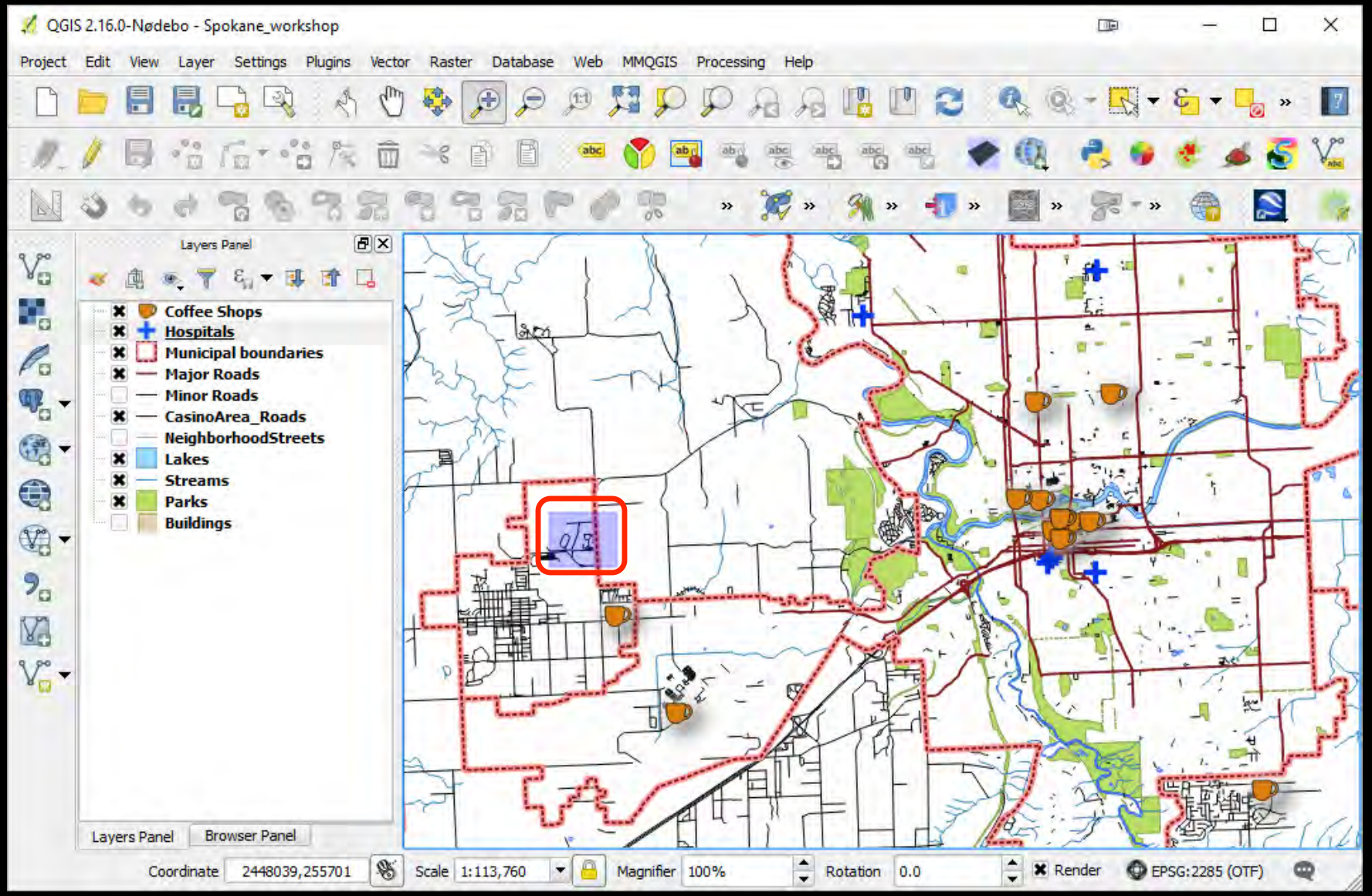
https://my.spokanecity.org/opendata/gis/data/



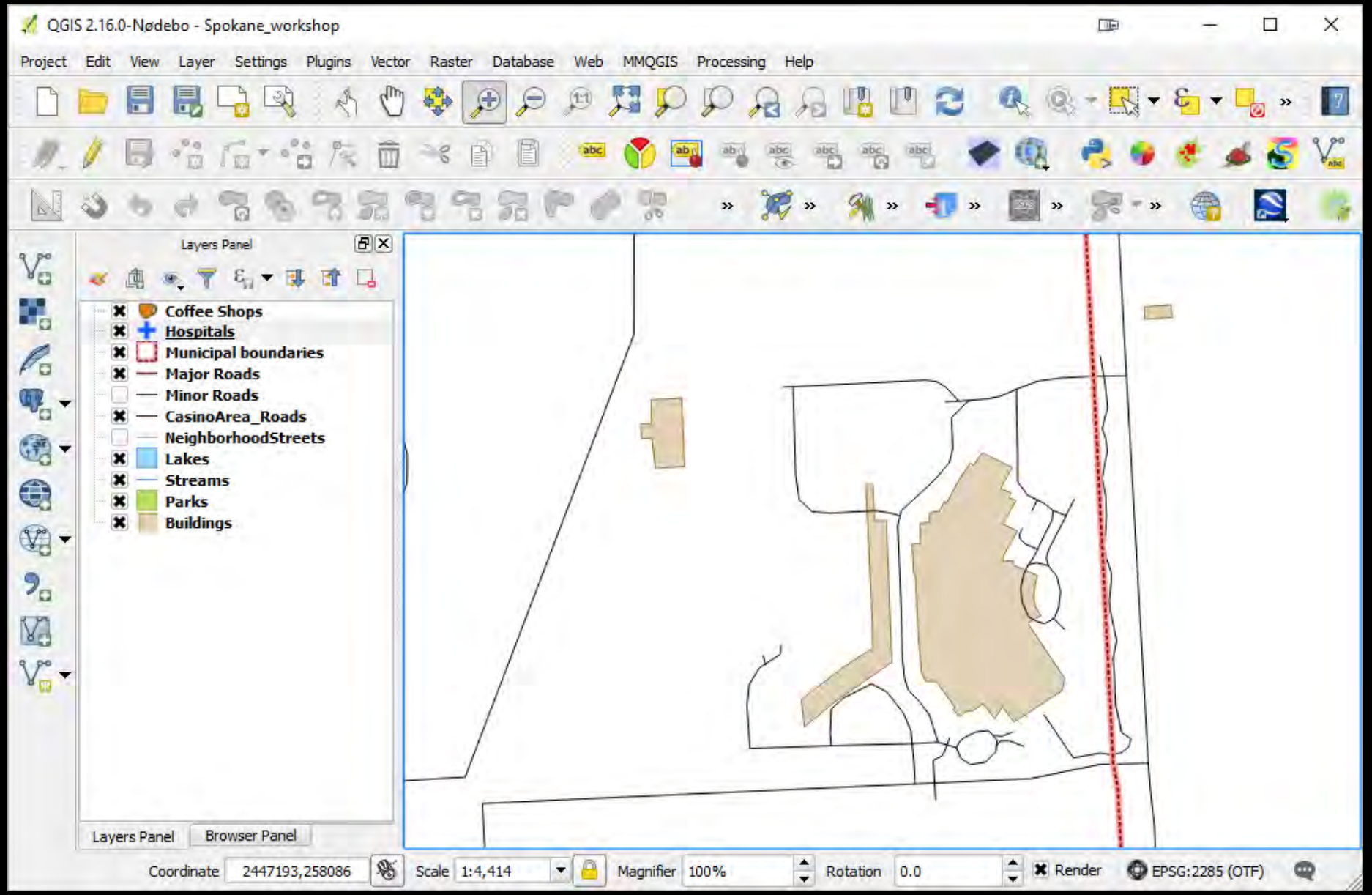
Map Navigation Controls



Turn on *CasinoArea_Roads* & Zoom In

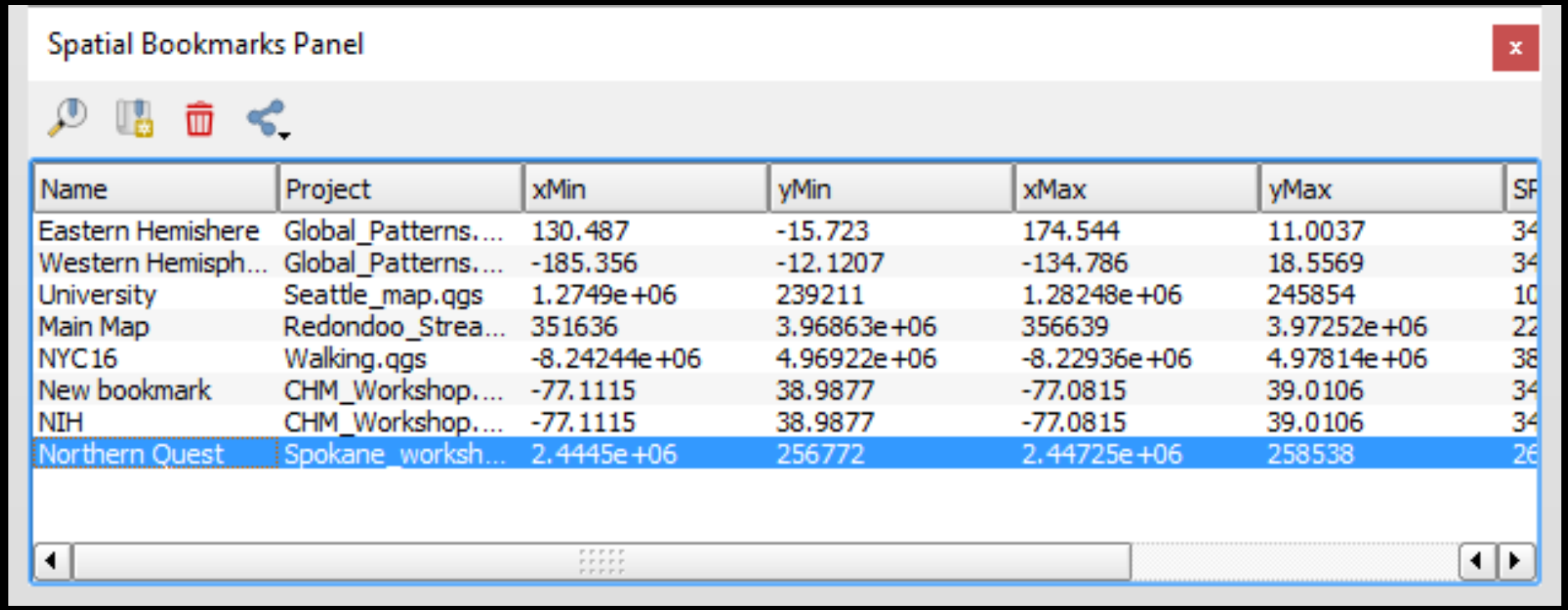


Turn on Buildings



Map Bookmarks

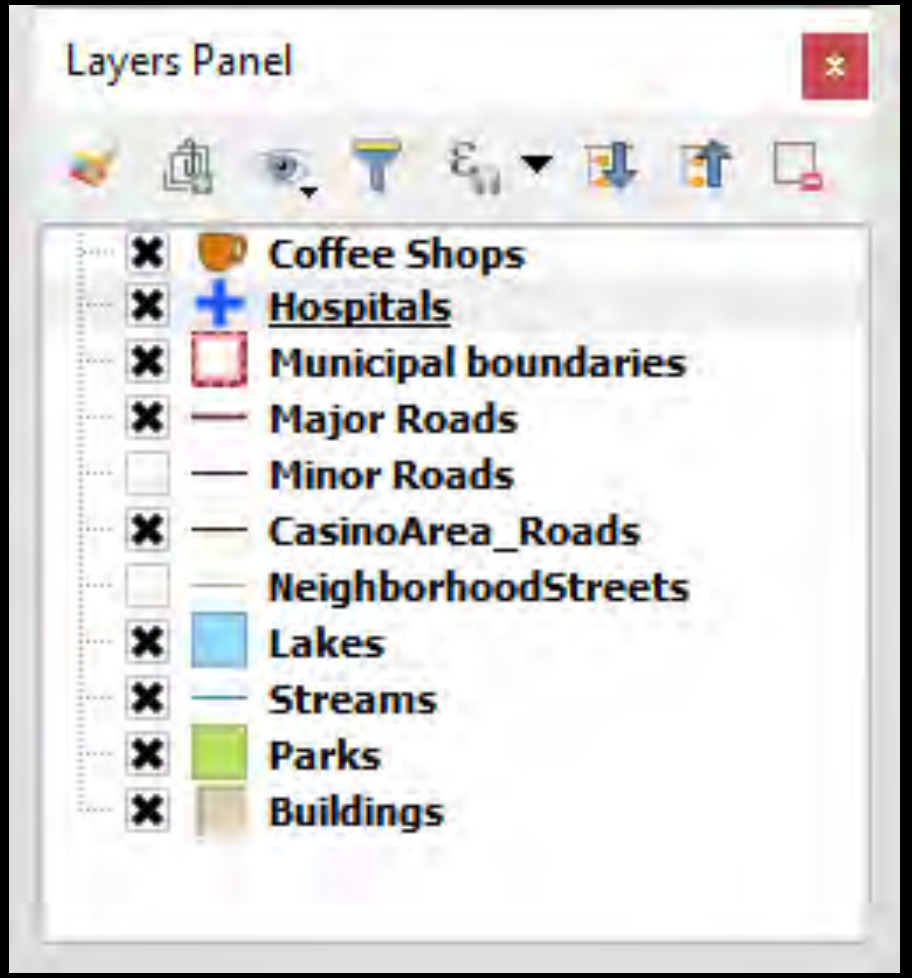
- View → New Bookmark



Name	Project	xMin	yMin	xMax	yMax	SR
Eastern Hemishere	Global_Patterns....	130.487	-15.723	174.544	11.0037	34
Western Hemisph...	Global_Patterns....	-185.356	-12.1207	-134.786	18.5569	34
University	Seattle_map.qgs	1.2749e+06	239211	1.28248e+06	245854	10
Main Map	Redondoo_Strea...	351636	3.96863e+06	356639	3.97252e+06	22
NYC16	Walking.qgs	-8.24244e+06	4.96922e+06	-8.22936e+06	4.97814e+06	38
New bookmark	CHM_Workshop....	-77.1115	38.9877	-77.0815	39.0106	34
NIH	CHM_Workshop....	-77.1115	38.9877	-77.0815	39.0106	34
Northern Quest	Spokane_worksh...	2.4445e+06	256772	2.44725e+06	258538	26

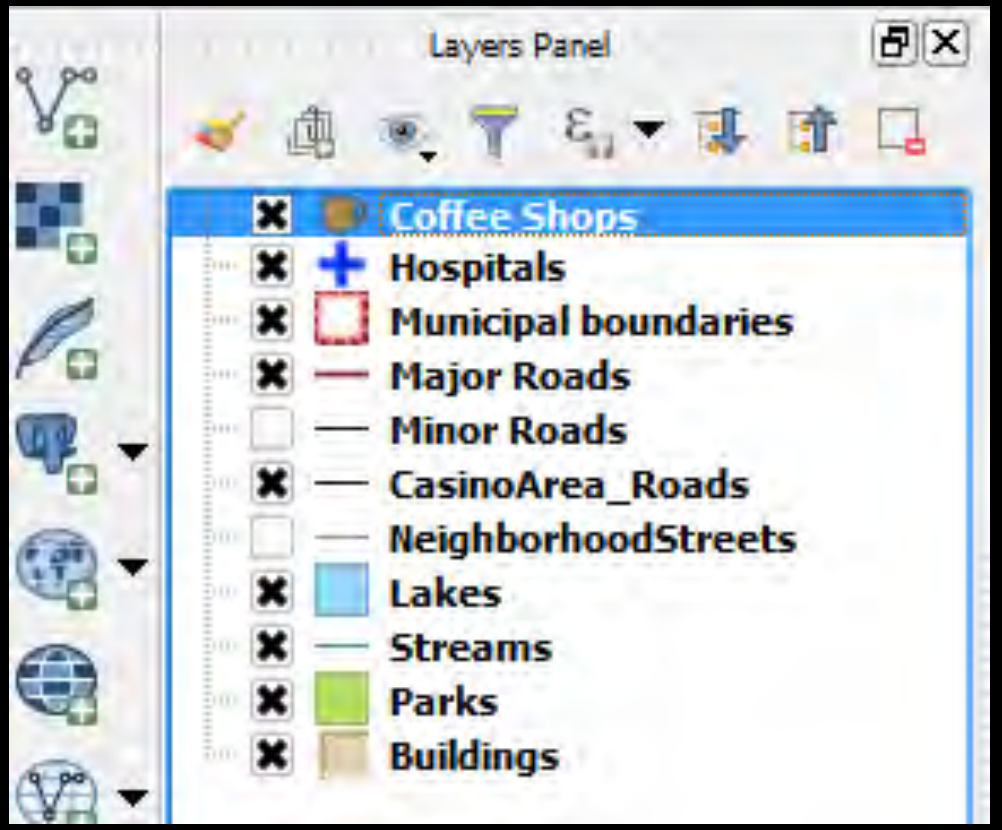
Layers Panel

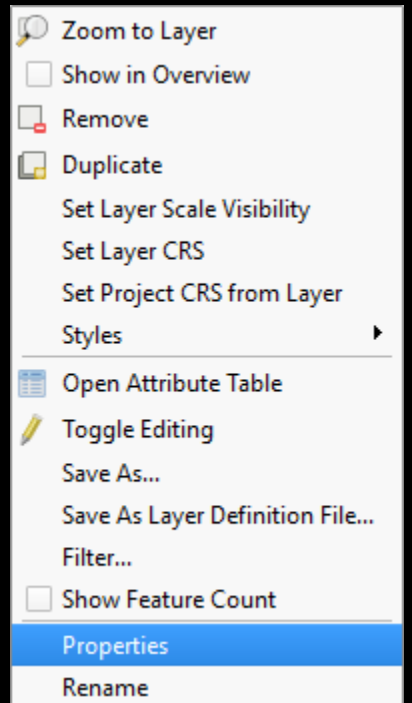
- Layer Drawing Order
- Turning Layers On/Off
- Symbols



Layers Panel

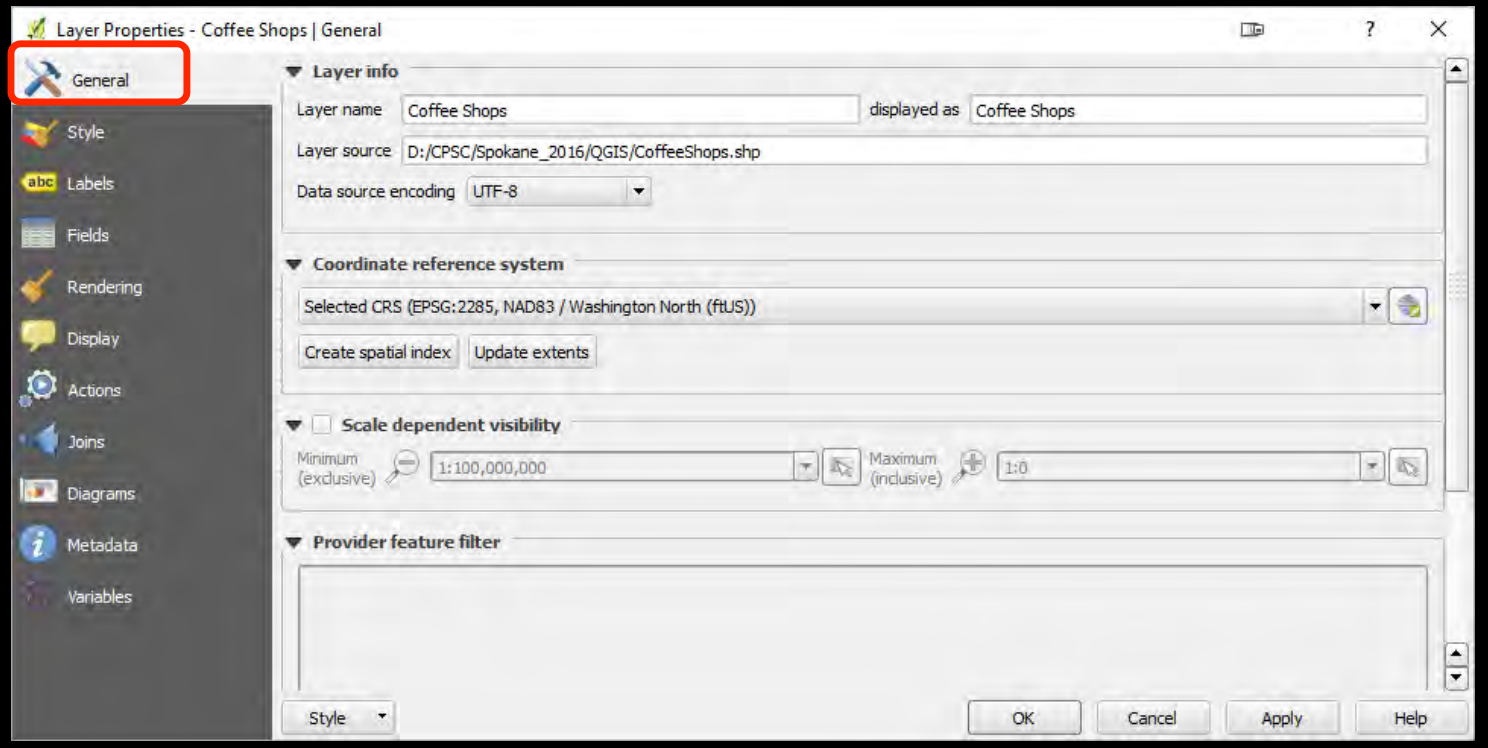
- Layer Drawing Order
- Turning Layers On/Off
- Symbols
- Right-click context menu





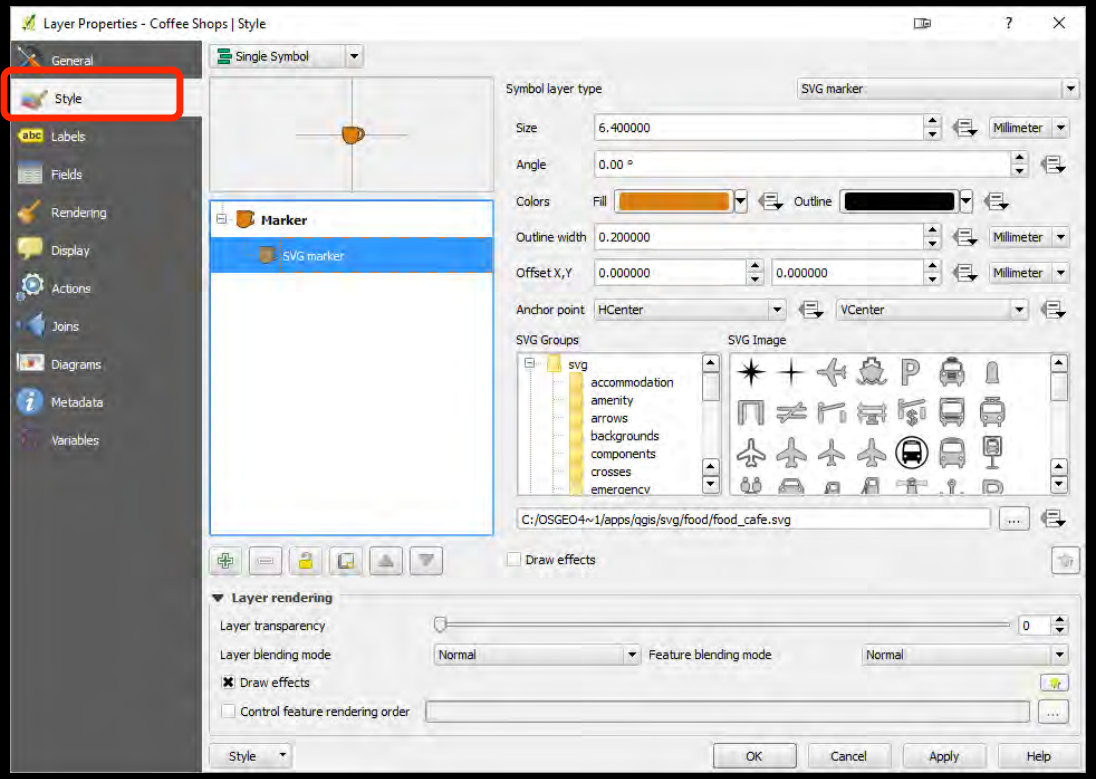
Layer Properties

- General Tab – basic info about the layer
- Style Tab – change the colors and symbols
- Labels Tab – label features



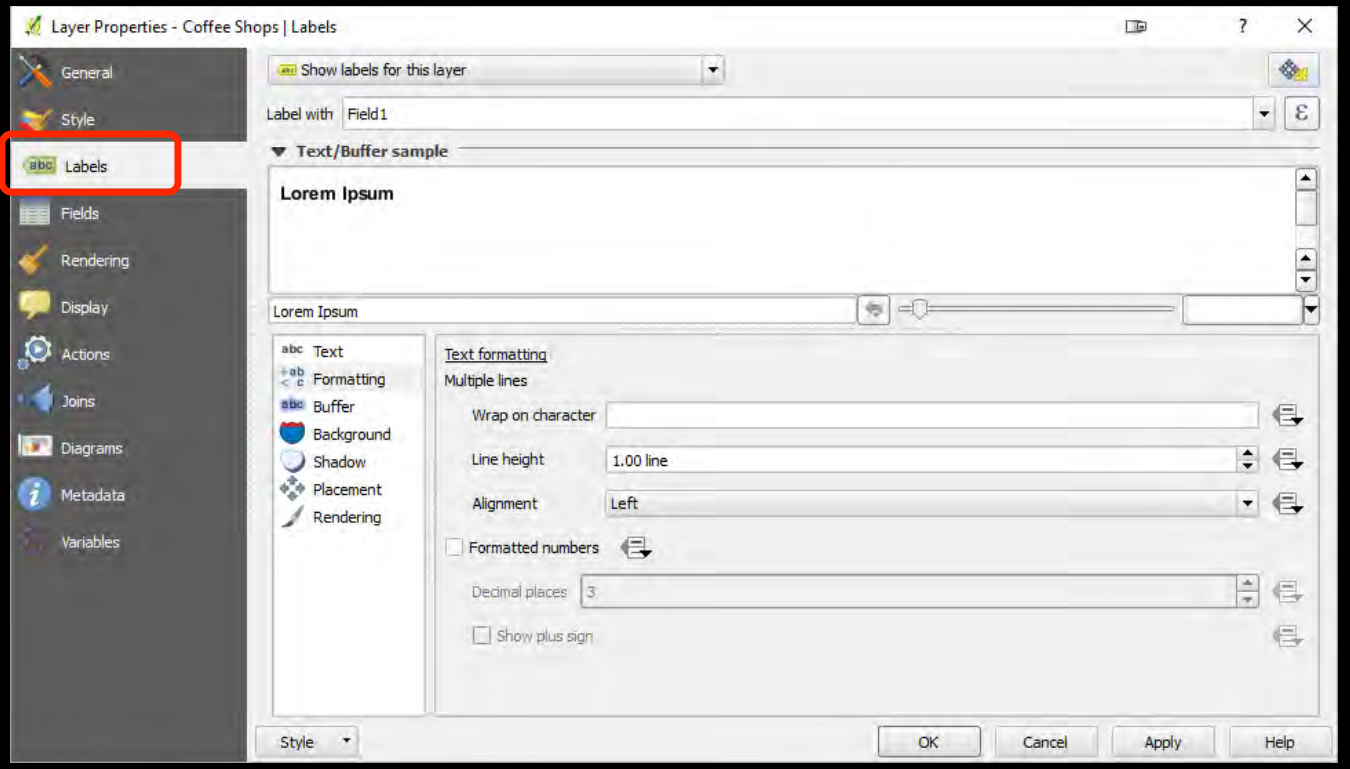
Layer Properties

- General Tab – basic info about the layer
- Style Tab – change the colors and symbols
- Labels Tab – label features



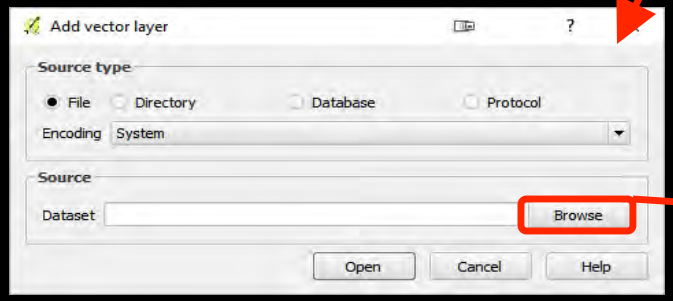
Layer Properties

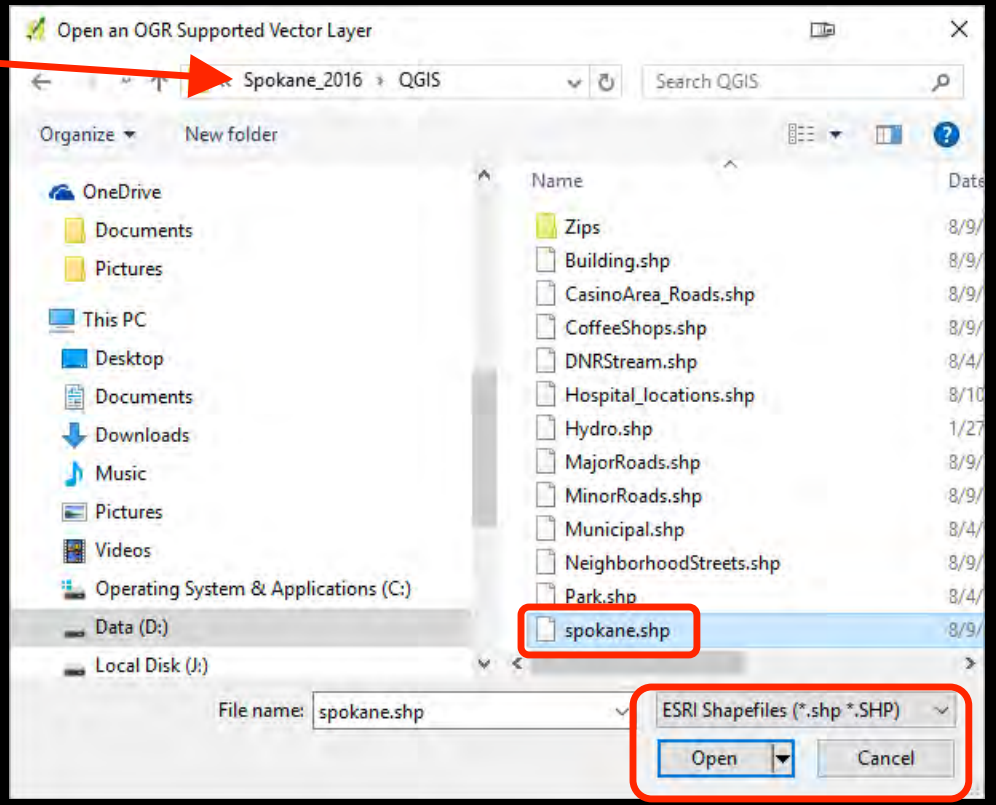
- General Tab – basic info about the layer
- Style Tab – change the colors and symbols
- Labels Tab – label features

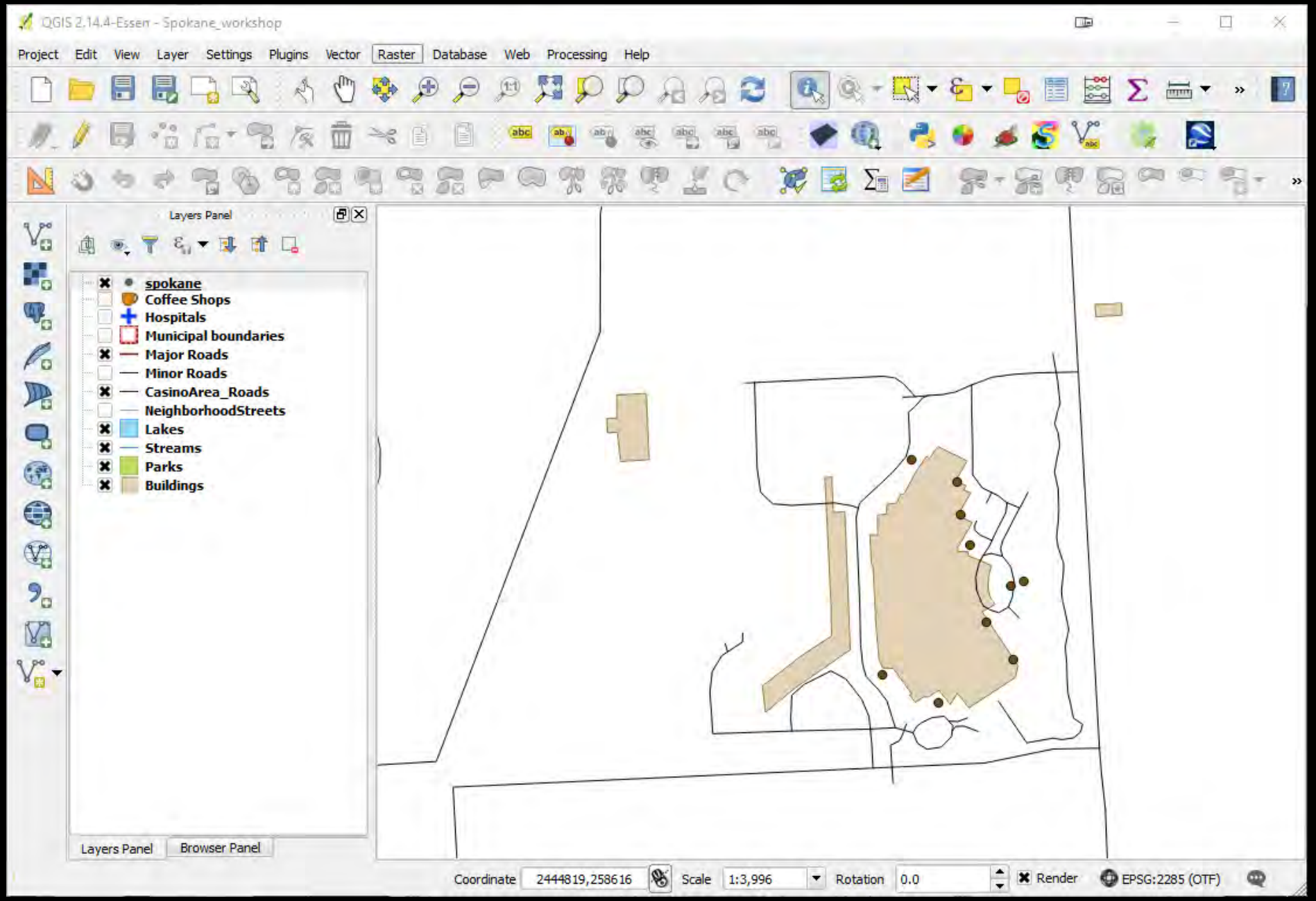


Adding Data

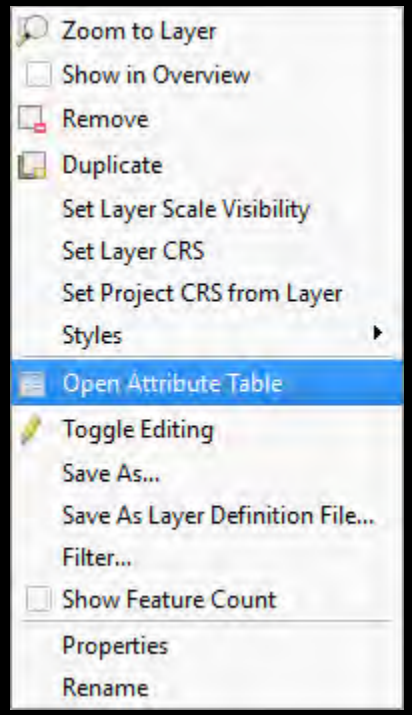
- Add Vector Layer

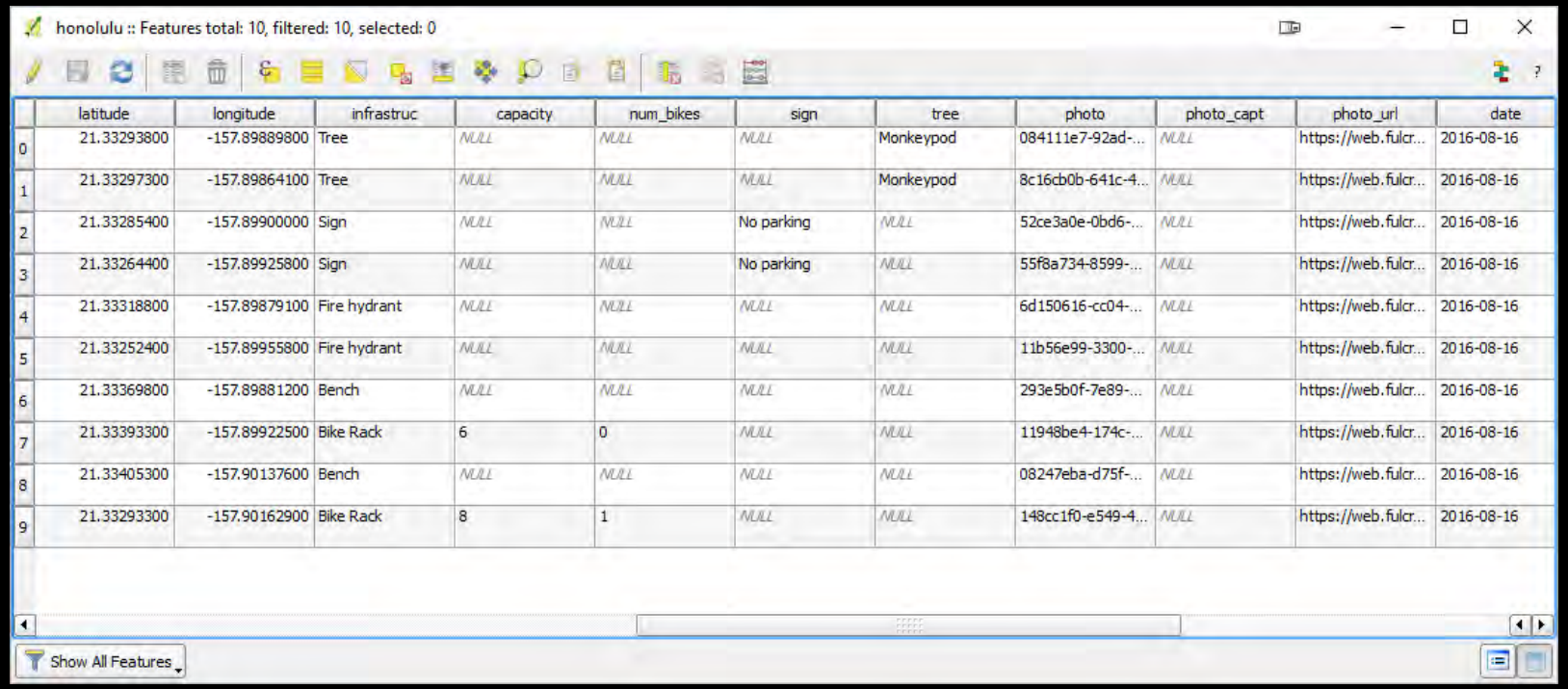





QGIS 2.14.4-Essen - Spokane_workshop
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
Layers Panel
spokane
Coffee Shops
Hospitals
Municipal boundaries
Major Roads
Minor Roads
CasinoArea_Roads
NeighborhoodStreets
Lakes
Streams
Parks
Buildings
Layers Panel
Browser Panel
Coordinate 2444819,258616
Scale 1:3,996
Rotation 0.0
Render
EPSG:2285 (OTF)

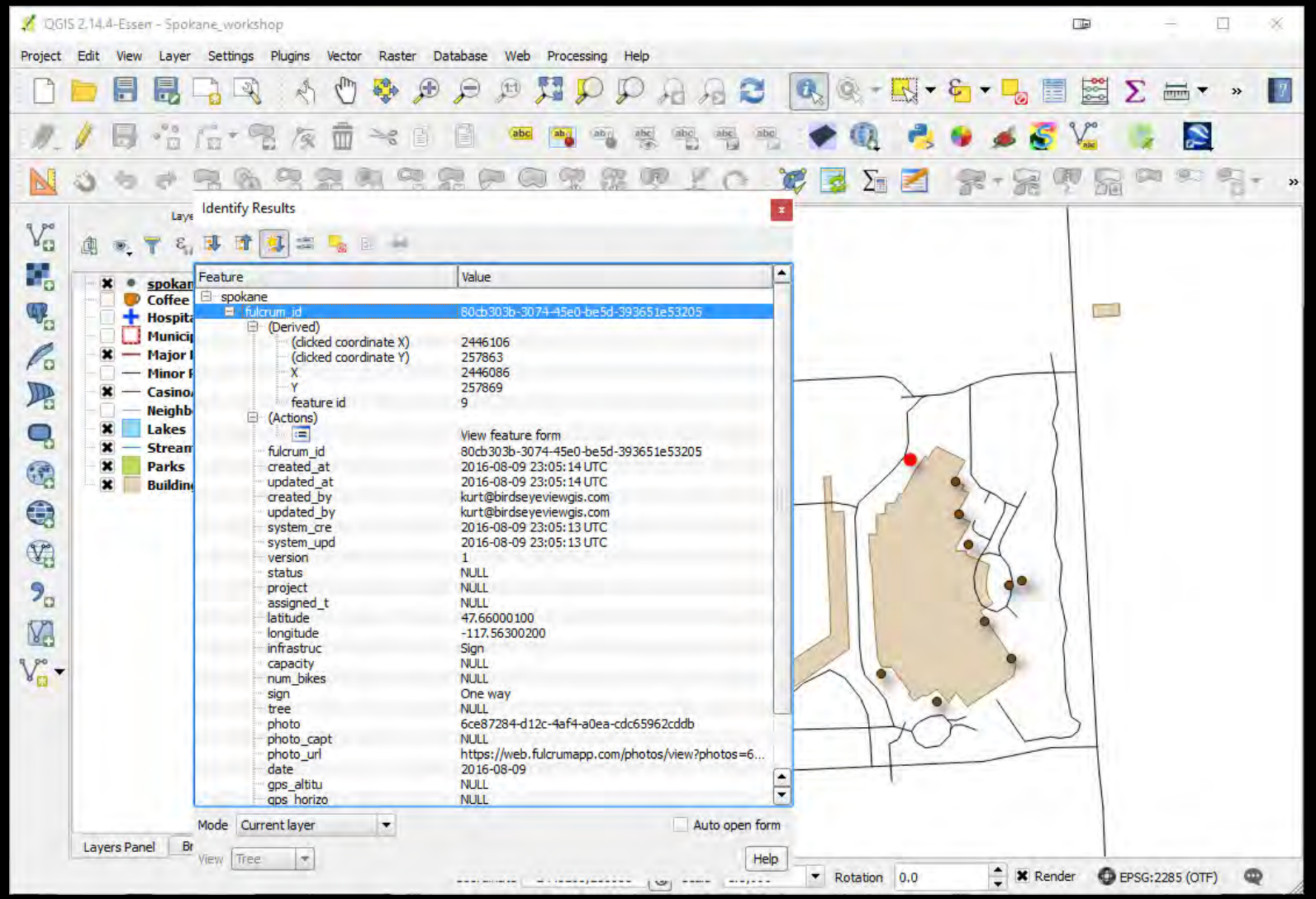
Attribute Tables





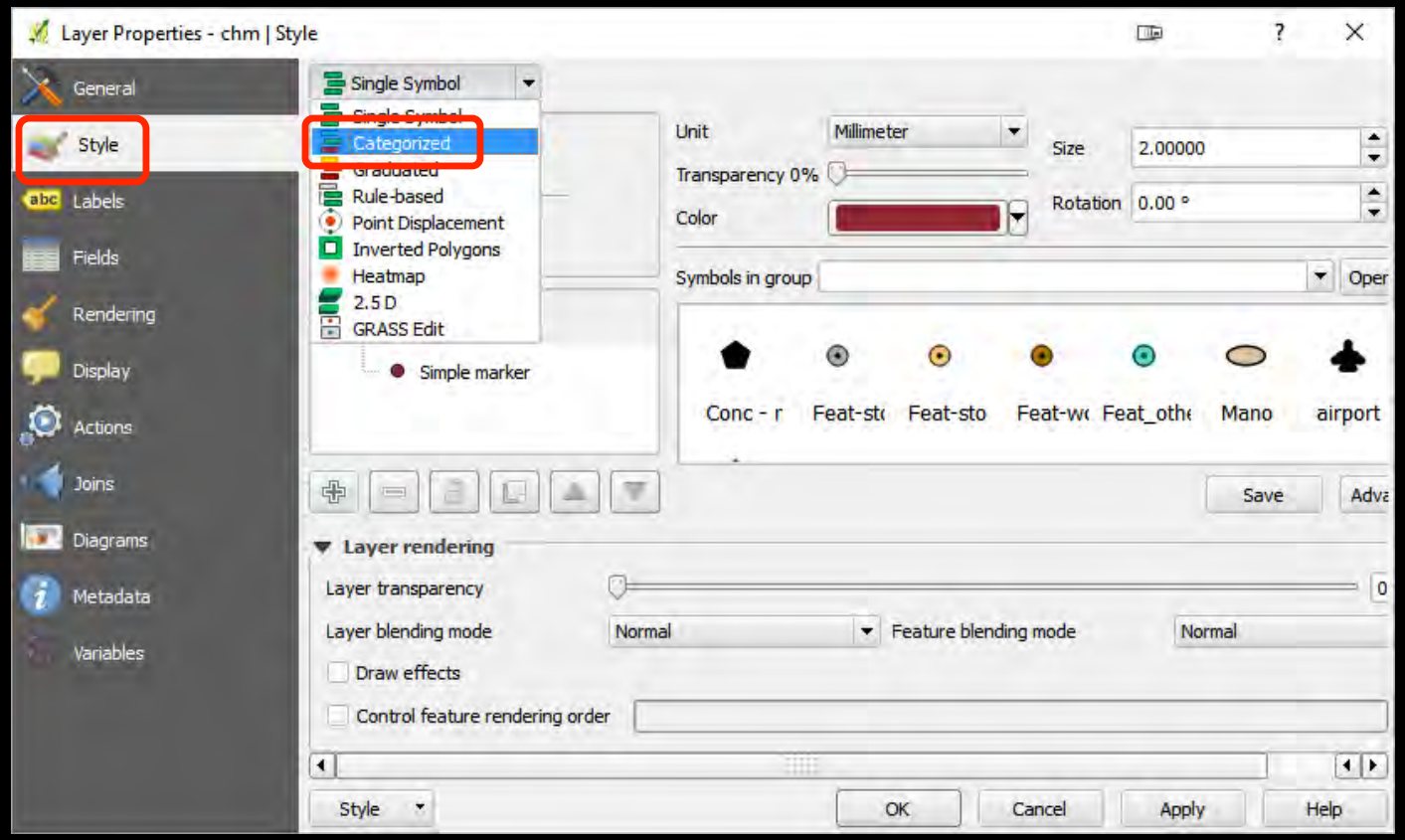
	latitude	longitude	infrastruc	capacity	num_bikes	sign	tree	photo	photo_capt	photo_url	date
0	21.33293800	-157.89889800	Tree	NULL	NULL	NULL	Monkeypod	084111e7-92ad-...	NULL	https://web.fulcr...	2016-08-16
1	21.33297300	-157.89864100	Tree	NULL	NULL	NULL	Monkeypod	8c16cb0b-641c-4...	NULL	https://web.fulcr...	2016-08-16
2	21.33285400	-157.89900000	Sign	NULL	NULL	No parking	NULL	52ce3a0e-0bd6-...	NULL	https://web.fulcr...	2016-08-16
3	21.33264400	-157.89925800	Sign	NULL	NULL	No parking	NULL	55f8a734-8599-...	NULL	https://web.fulcr...	2016-08-16
4	21.33318800	-157.89879100	Fire hydrant	NULL	NULL	NULL	NULL	6d150616-cc04-...	NULL	https://web.fulcr...	2016-08-16
5	21.33252400	-157.89955800	Fire hydrant	NULL	NULL	NULL	NULL	11b56e99-3300-...	NULL	https://web.fulcr...	2016-08-16
6	21.33369800	-157.89881200	Bench	NULL	NULL	NULL	NULL	293e5b0f-7e89-...	NULL	https://web.fulcr...	2016-08-16
7	21.33393300	-157.89922500	Bike Rack	6	0	NULL	NULL	11948be4-174c-...	NULL	https://web.fulcr...	2016-08-16
8	21.33405300	-157.90137600	Bench	NULL	NULL	NULL	NULL	08247eba-d75f-...	NULL	https://web.fulcr...	2016-08-16
9	21.33293300	-157.90162900	Bike Rack	8	1	NULL	NULL	148cc1f0-e549-4...	NULL	https://web.fulcr...	2016-08-16

Using Identify



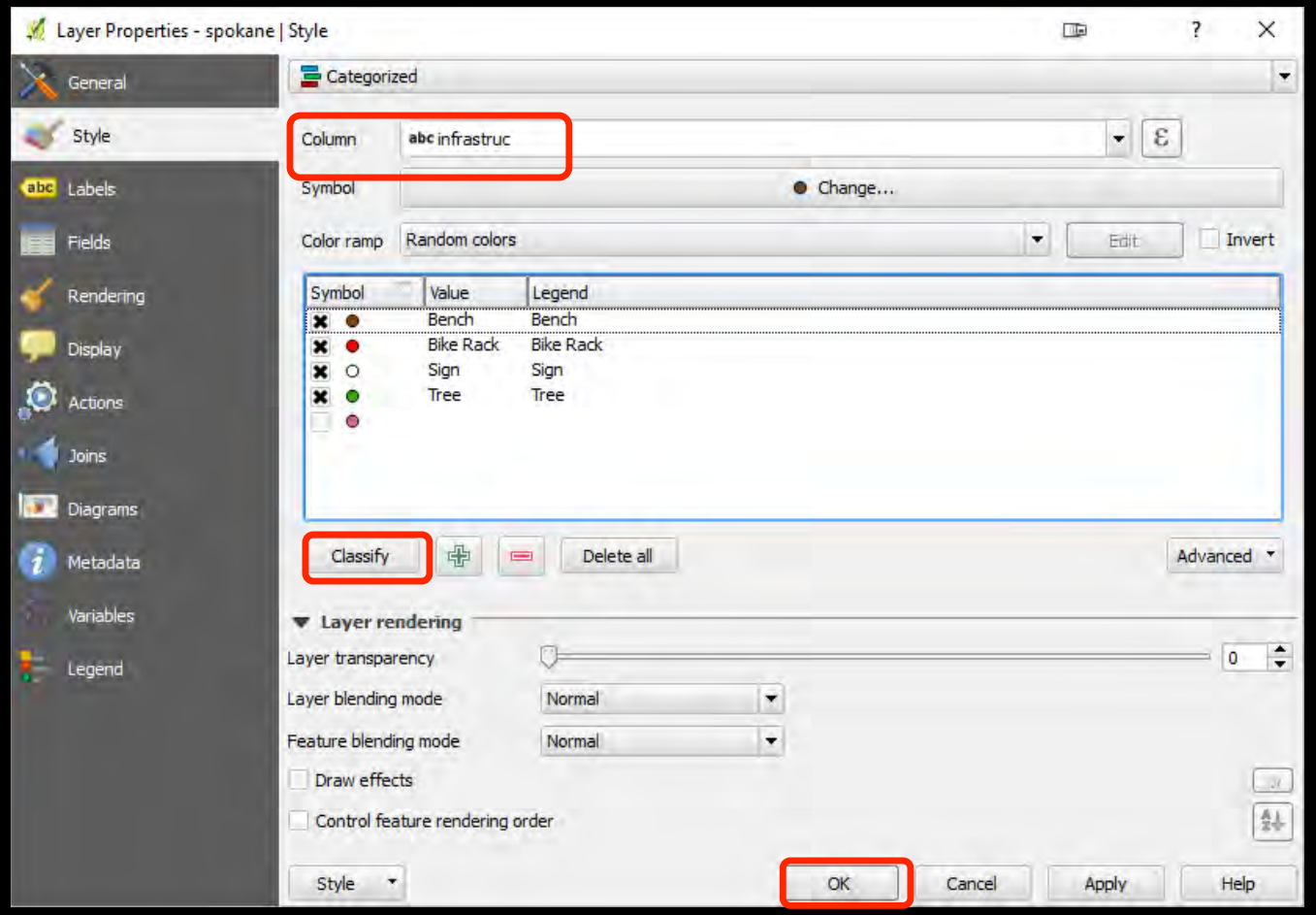
Styling Data

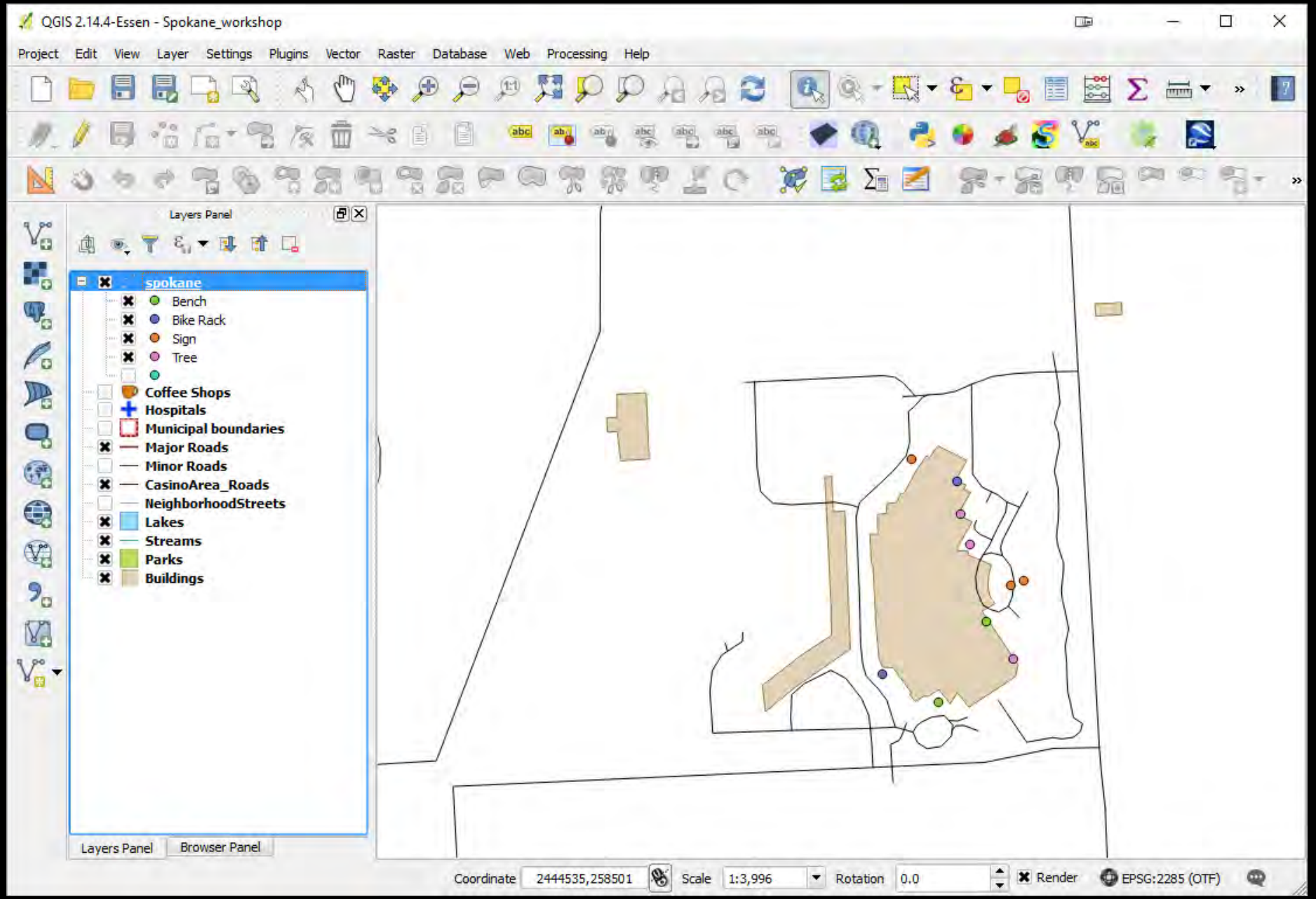
- Layer Properties → Style tab → Categorized



Styling Data

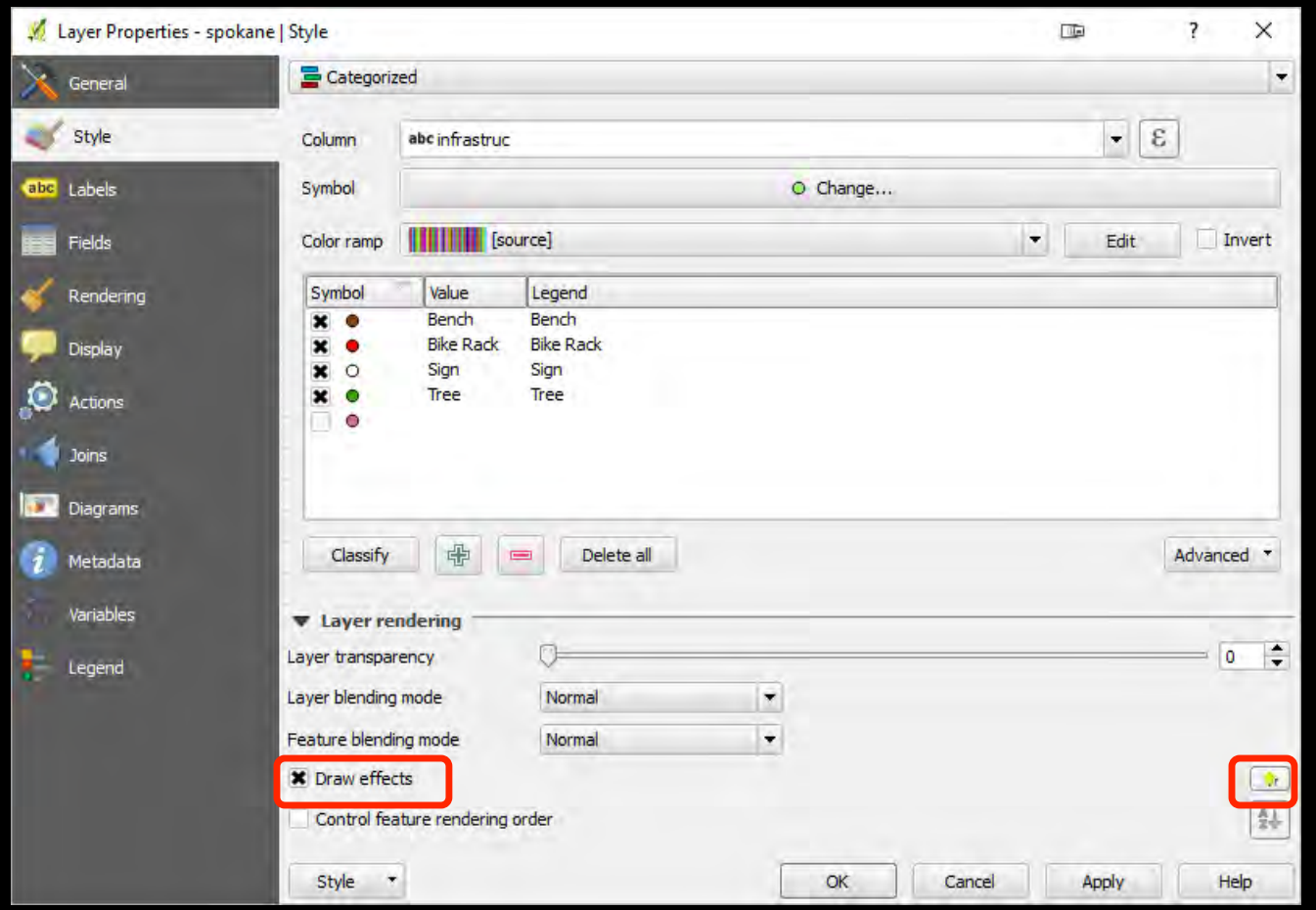
- Column → *infrastruc*
- Classify



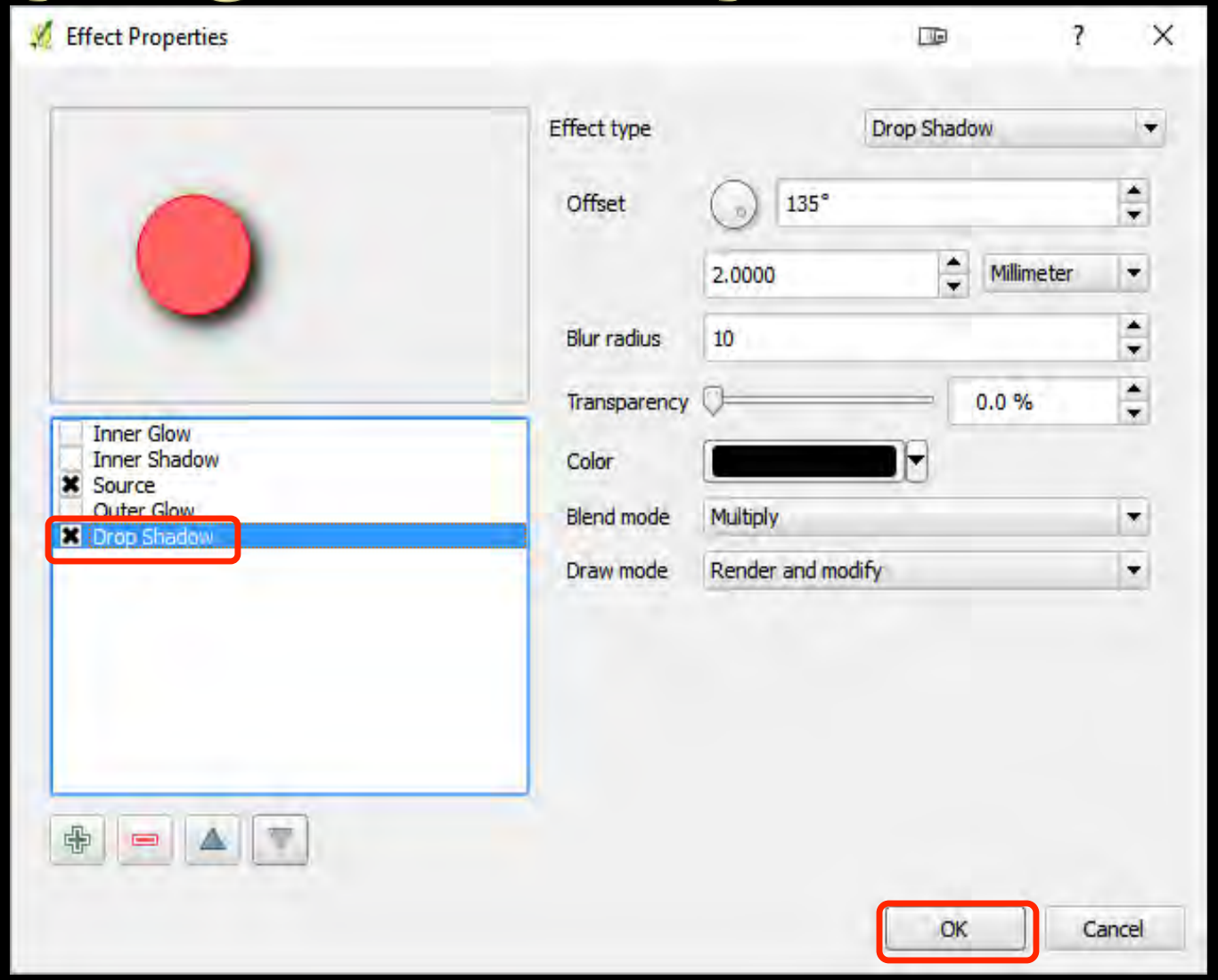

QGIS 2.14.4-Essen - Spokane_workshop
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
Layers Panel
spokane
Bench
Bike Rack
Sign
Tree
Coffee Shops
Hospitals
Municipal boundaries
Major Roads
Minor Roads
CasinoArea_Roads
NeighborhoodStreets
Lakes
Streams
Parks
Buildings
Layers Panel
Browser Panel
Coordinate 2444535,258501
Scale 1:3,996
Rotation 0.0
Render
EPSG:2285 (OTF)

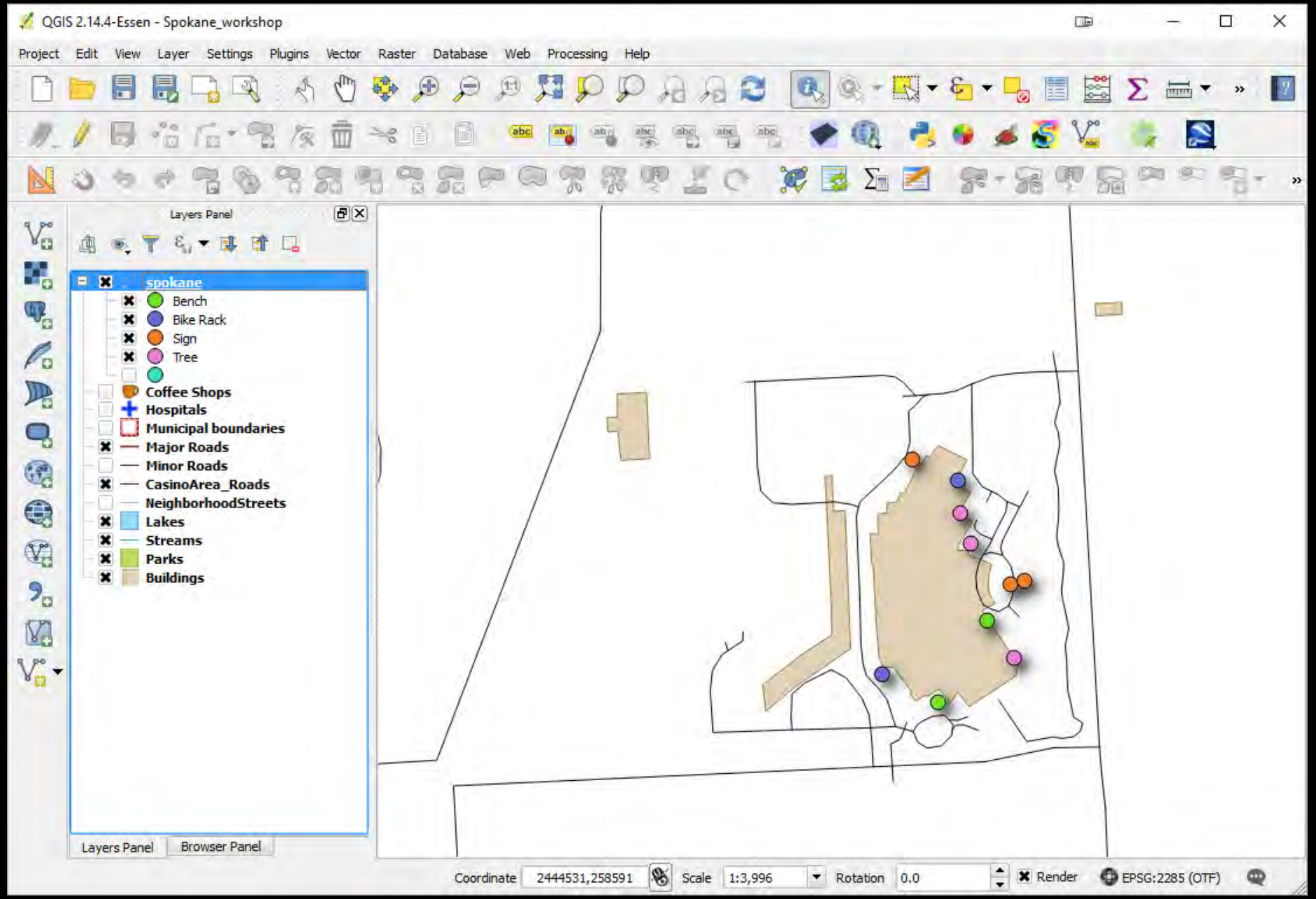
Styling Data – Layer Effects

- Draw effects



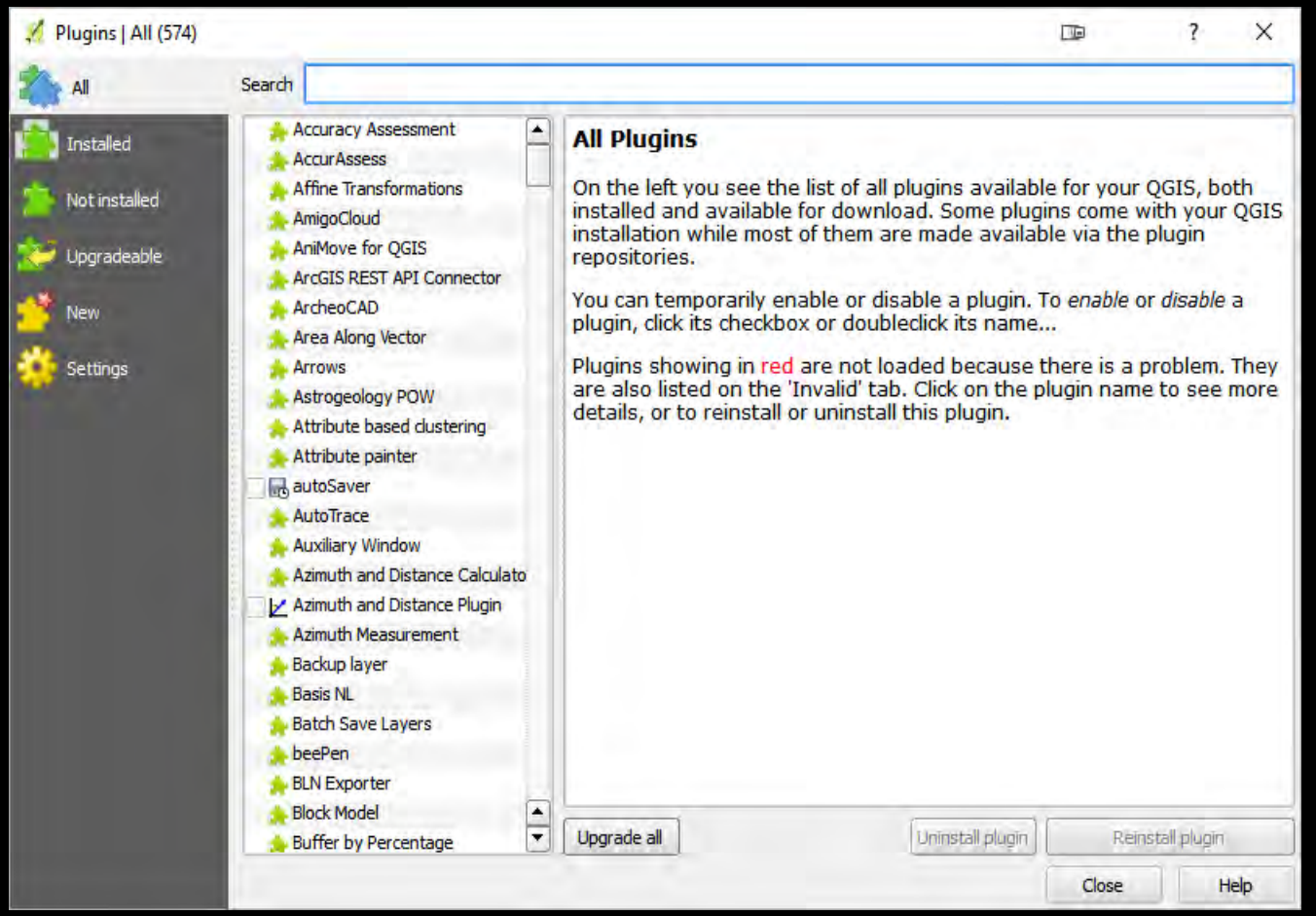
Styling Data – Layer Effects




QGIS 2.14.4-Essen - Spokane_workshop
Project Edit View Layer Settings Plugins Vector Raster Database Web Processing Help
Layers Panel
spokane
Bench
Bike Rack
Sign
Tree
Coffee Shops
Hospitals
Municipal boundaries
Major Roads
Minor Roads
CasinoArea_Roads
NeighborhoodStreets
Lakes
Streams
Parks
Buildings
Layers Panel
Browser Panel
Coordinate 2444531,258591
Scale 1:3,996
Rotation 0.0
Render
EPSG:2285 (OTF)

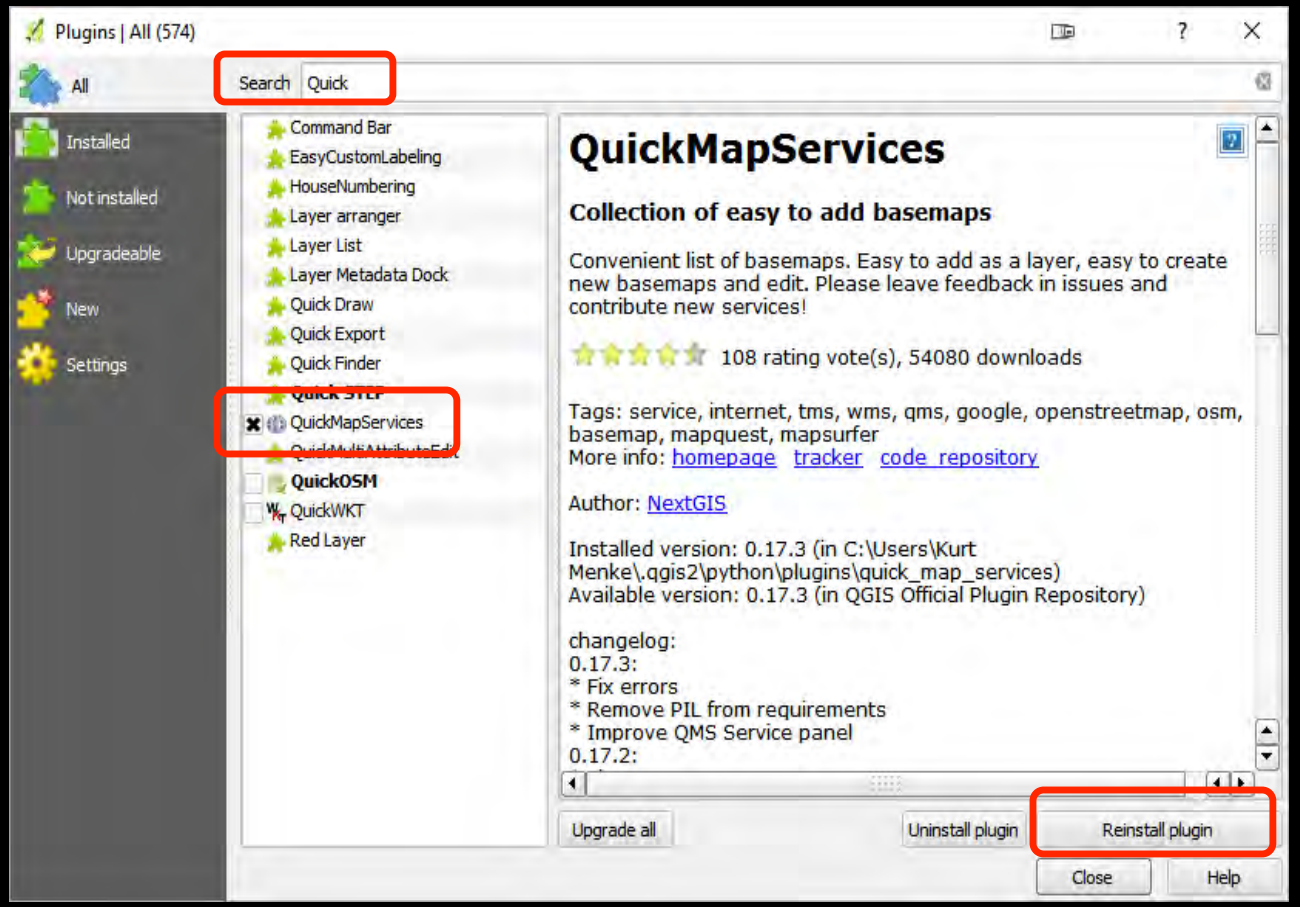
Using a Plugin – Adding Basemap

- Plugins → Manage Plugins



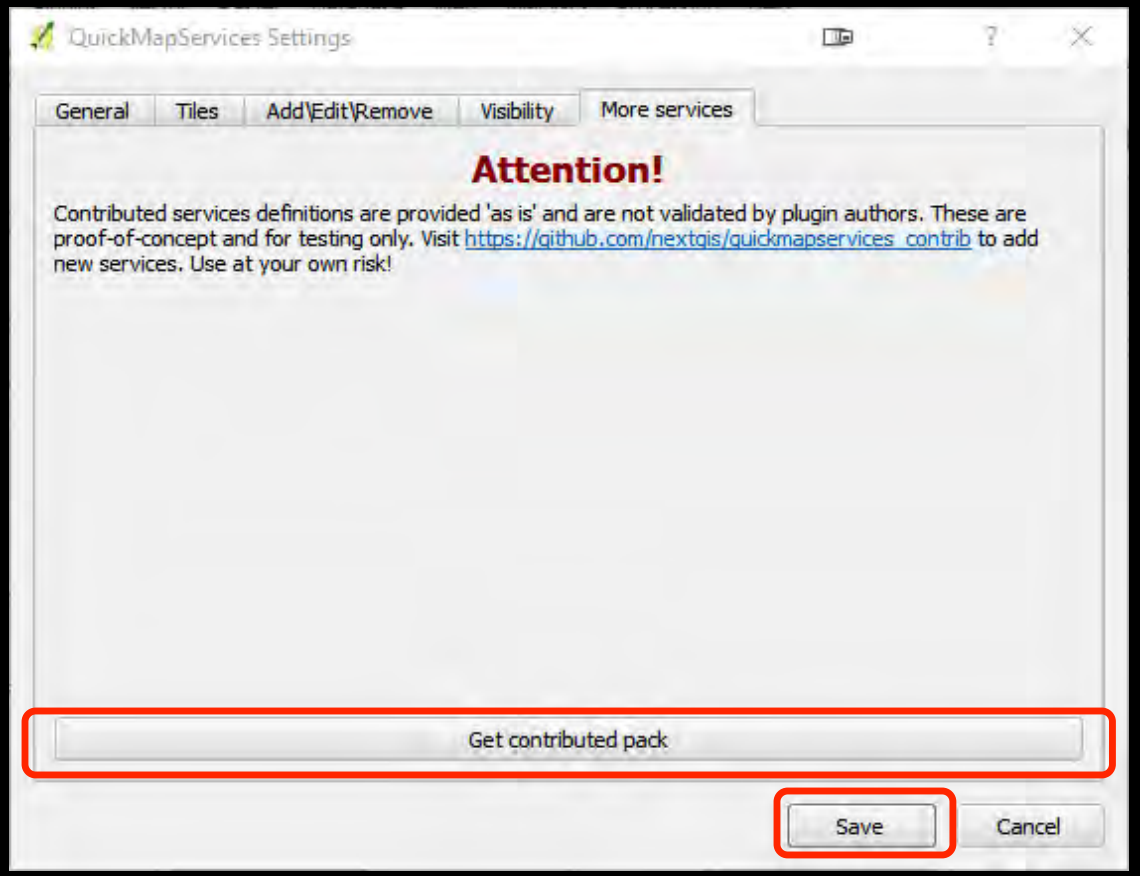
Using a Plugin – Adding Basemap

- Search→ Quick

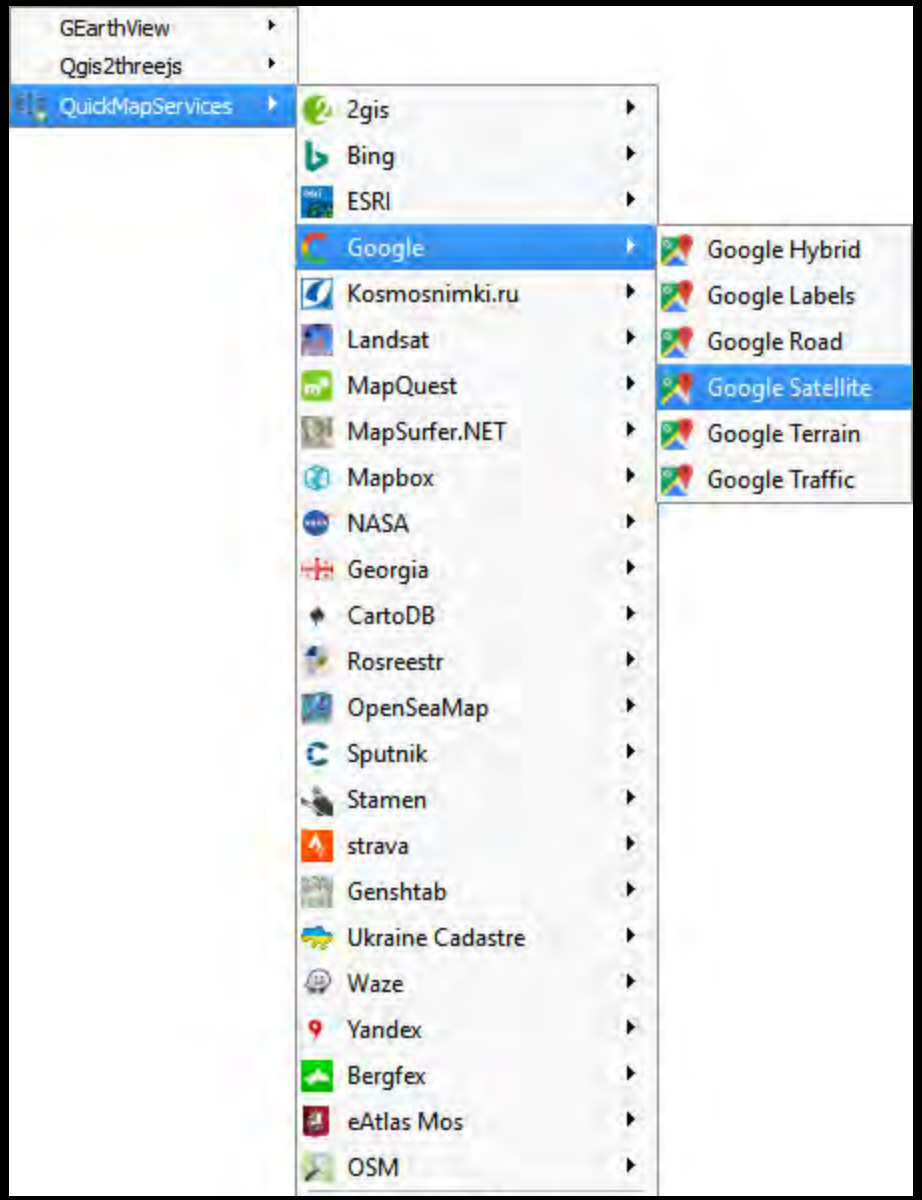


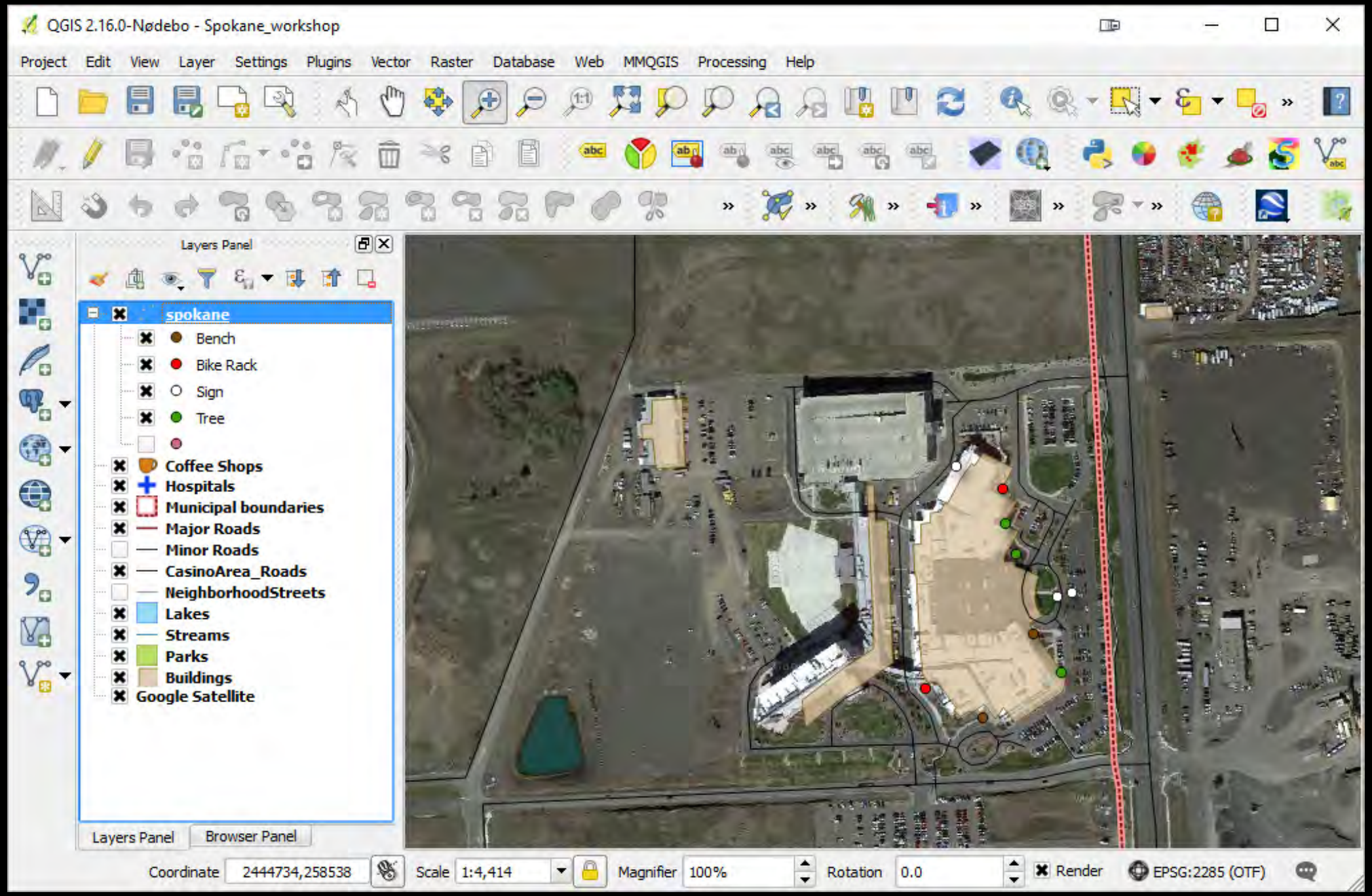
Using a Plugin – Adding Basemap

- Web → QuickMapServices→Settings



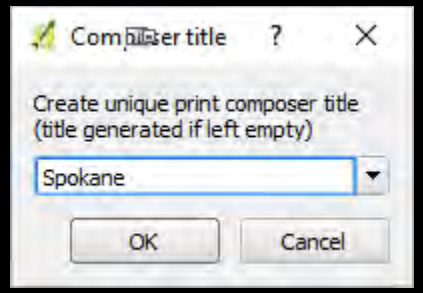
Using a Plugin – Adding Basemap

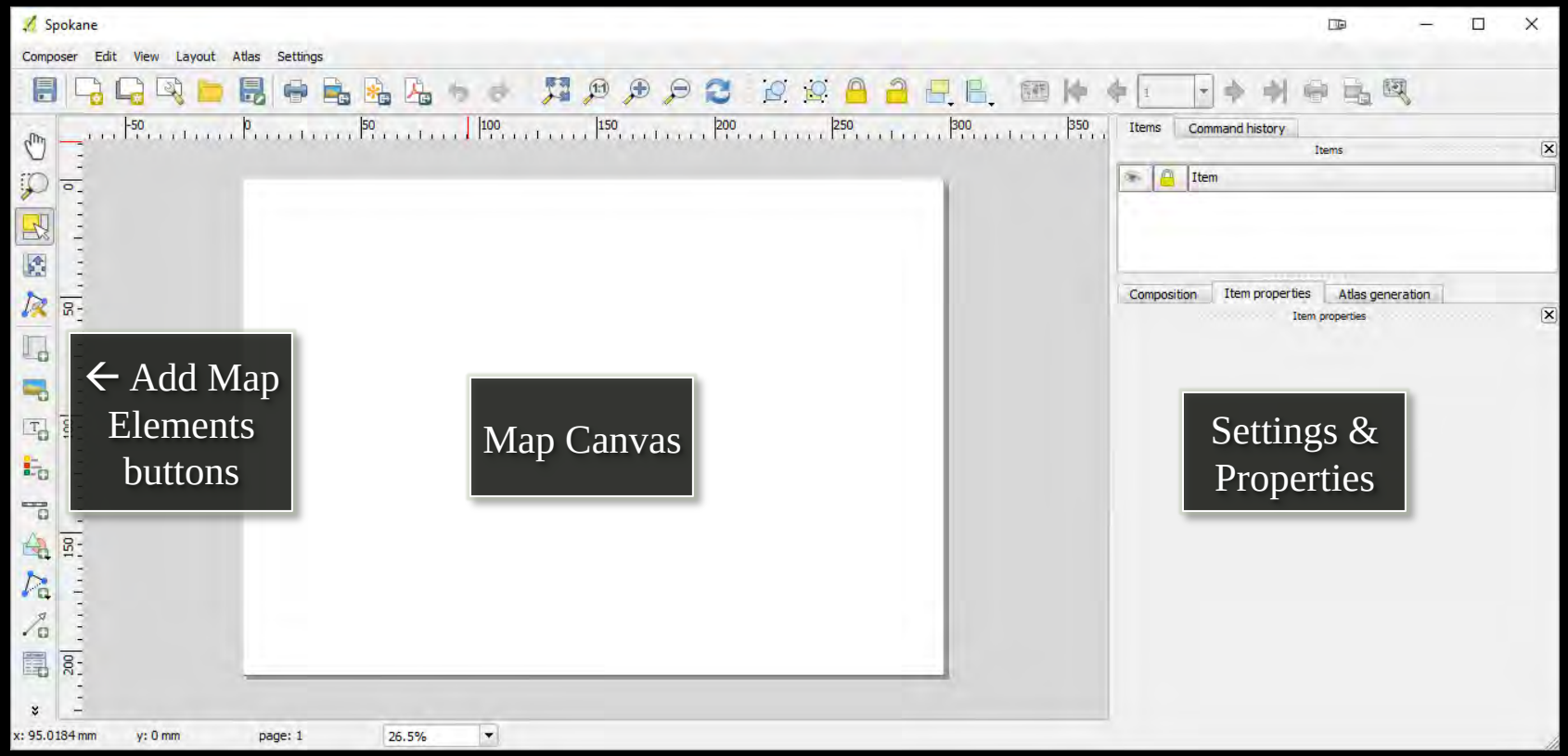



QGIS 2.16.0-Nødebo - Spokane_workshop
Project Edit View Layer Settings Plugins Vector Raster Database Web MMQGIS Processing Help
Layers Panel
spokane
Bench
Bike Rack
Sign
Tree
Coffee Shops
Hospitals
Municipal boundaries
Major Roads
Minor Roads
CasinoArea_Roads
NeighborhoodStreets
Lakes
Streams
Parks
Buildings
Google Satellite
Layers Panel
Browser Panel
Coordinate 2444734,258538
Scale 1:4,414
Magnifier 100%
Rotation 0.0
Render
EPSG:2285 (OTF)

Making a Map

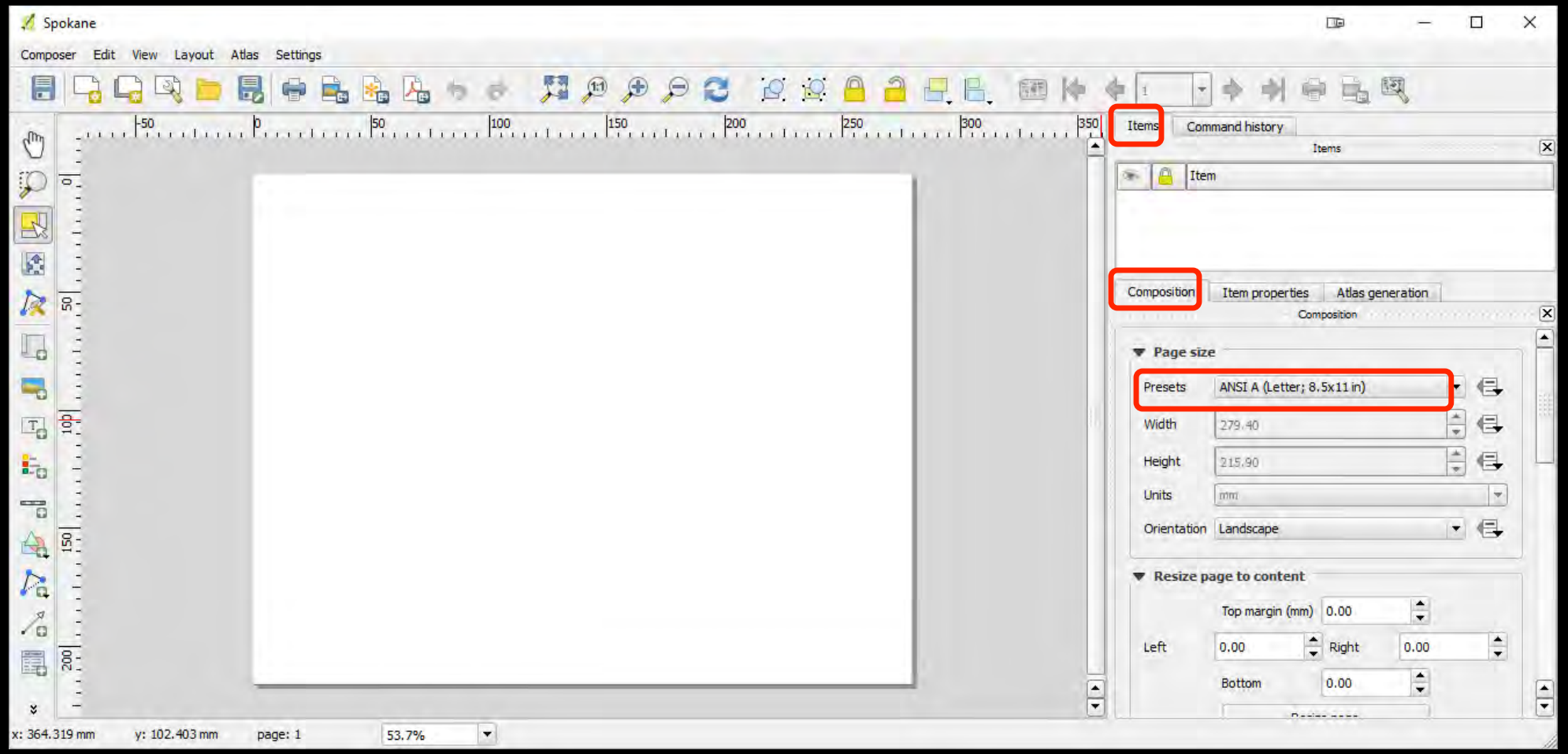
- Project→ New Print Composer





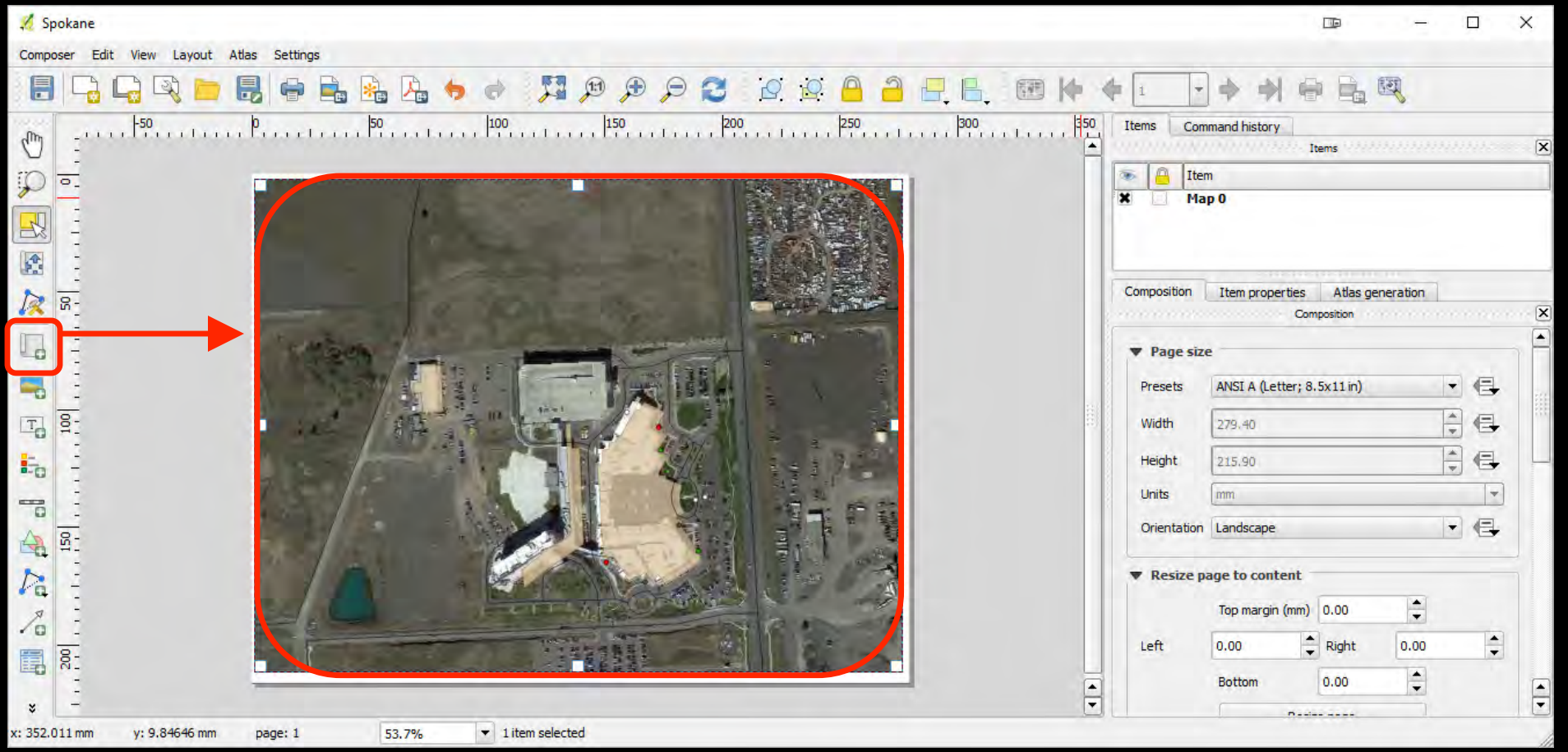
Print Composer

- Set Paper Size
  - Items tab → Composition tab→ Page size → Letter



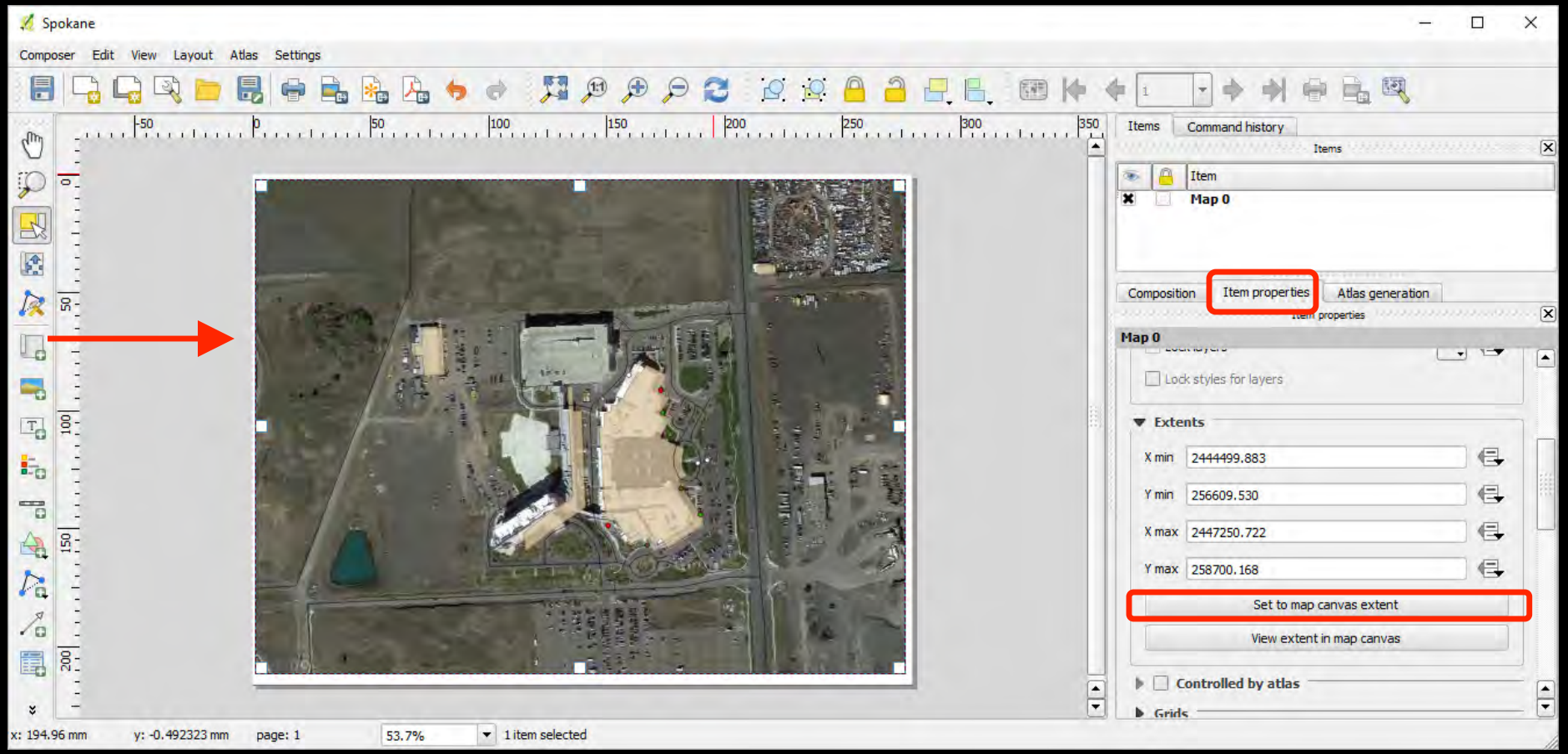
Add Map to Composition

- Add Map button → drag a box onto map canvas 



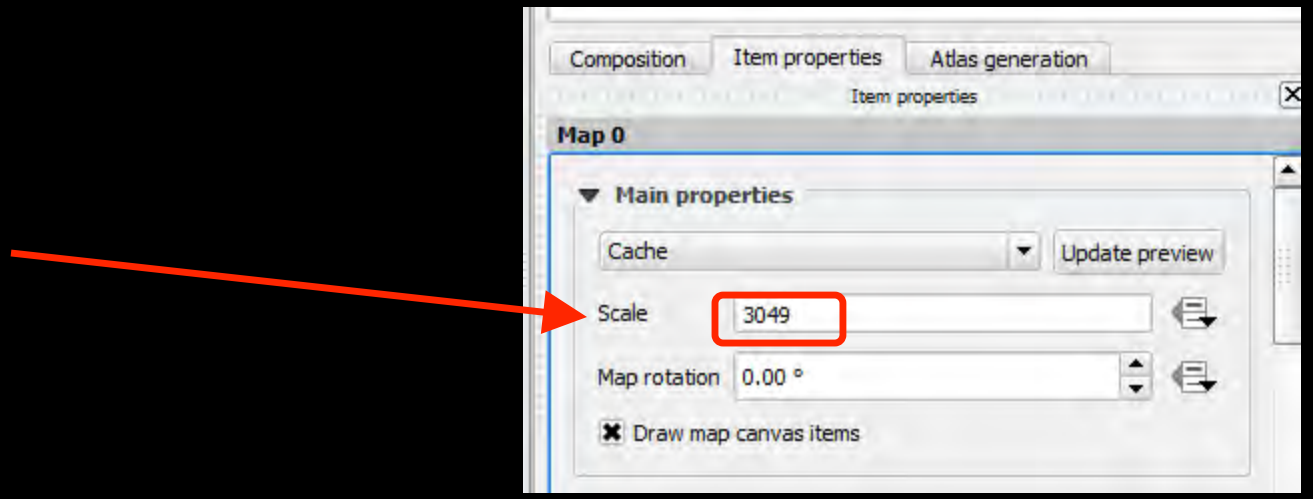
Getting the Map Extent Correct

- Item Properties → Set to map canvas extent



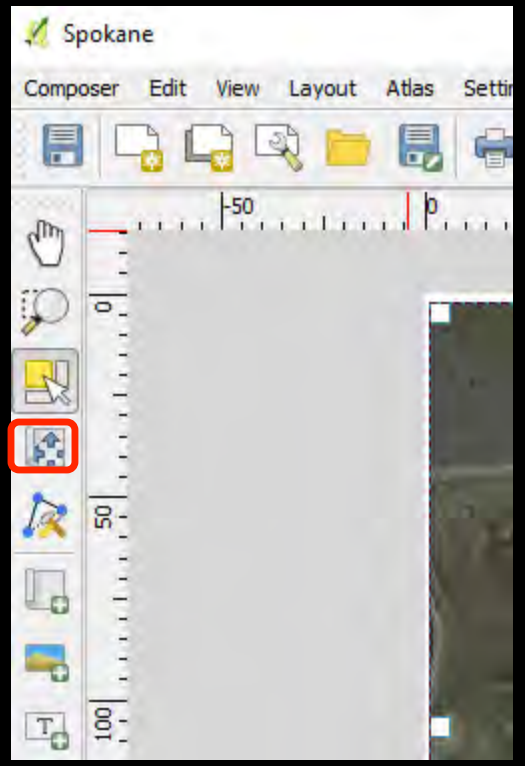
Getting the Map Extent Correct

- Set the map Scale
  - A bigger number will zoom out
  - A smaller number will zoom in



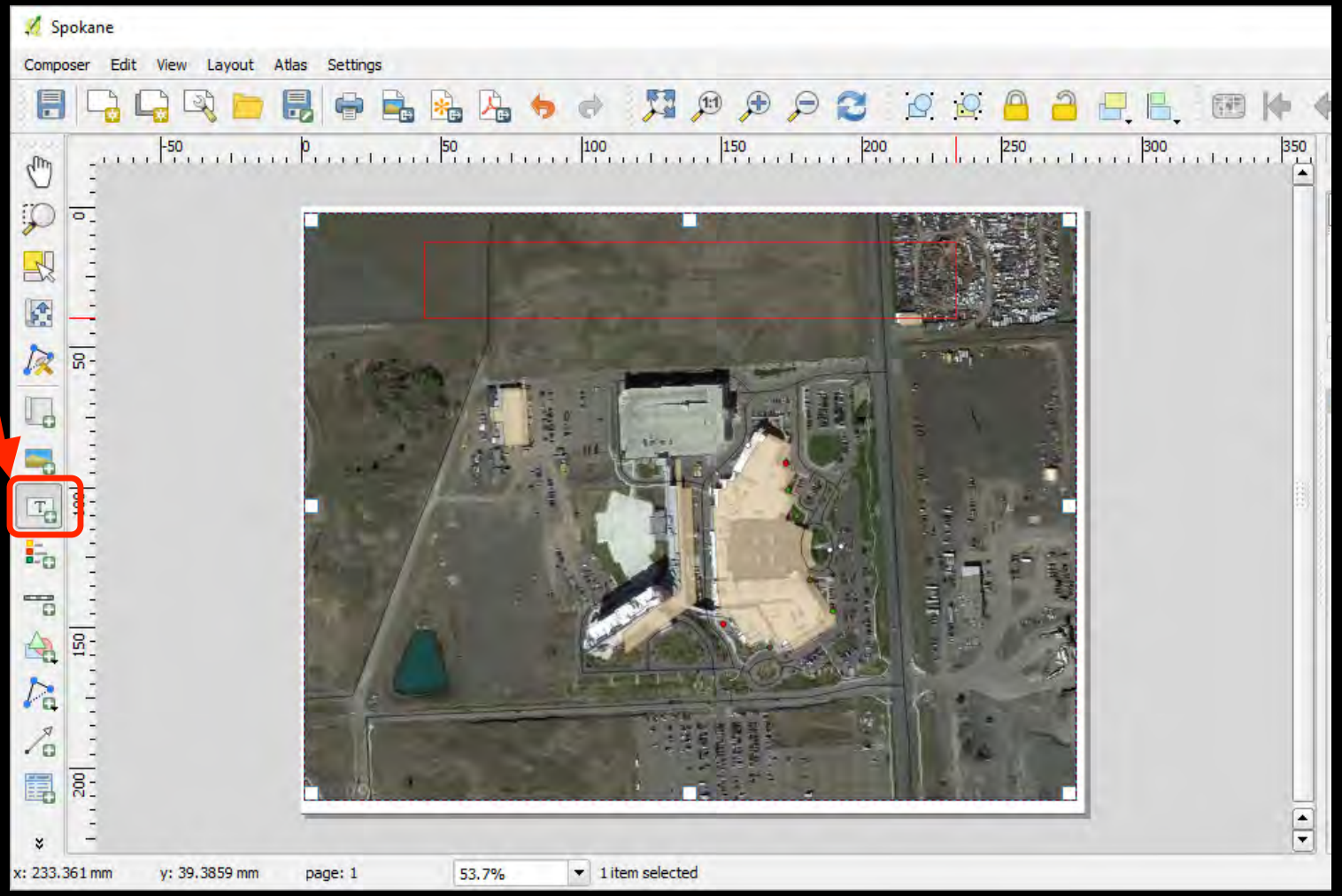
Fine Tuning the Map Extent

- Move item content button 
  - Pans the map
  - Let's you center the map image on the canvas



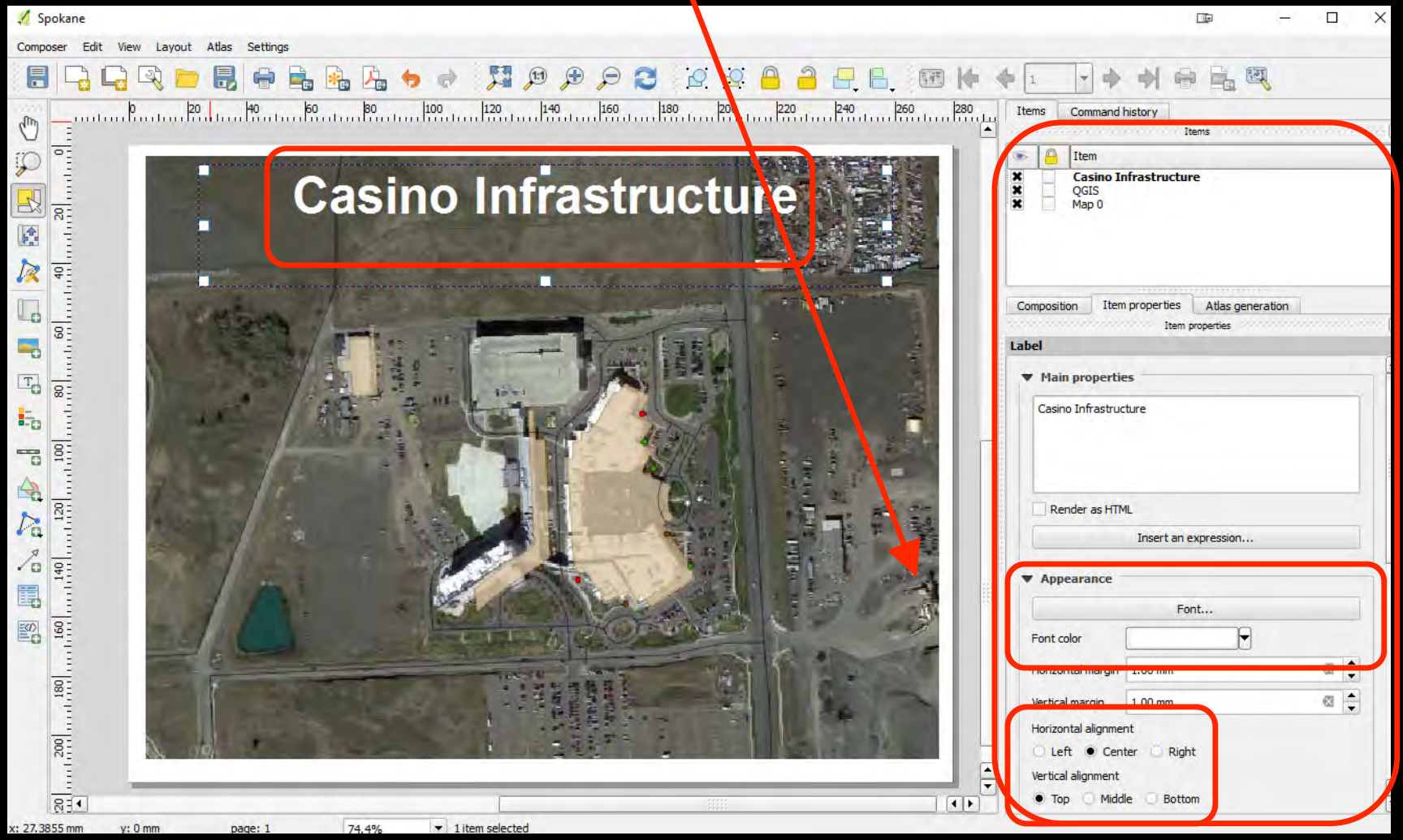
Adding a Title

- Add new label button



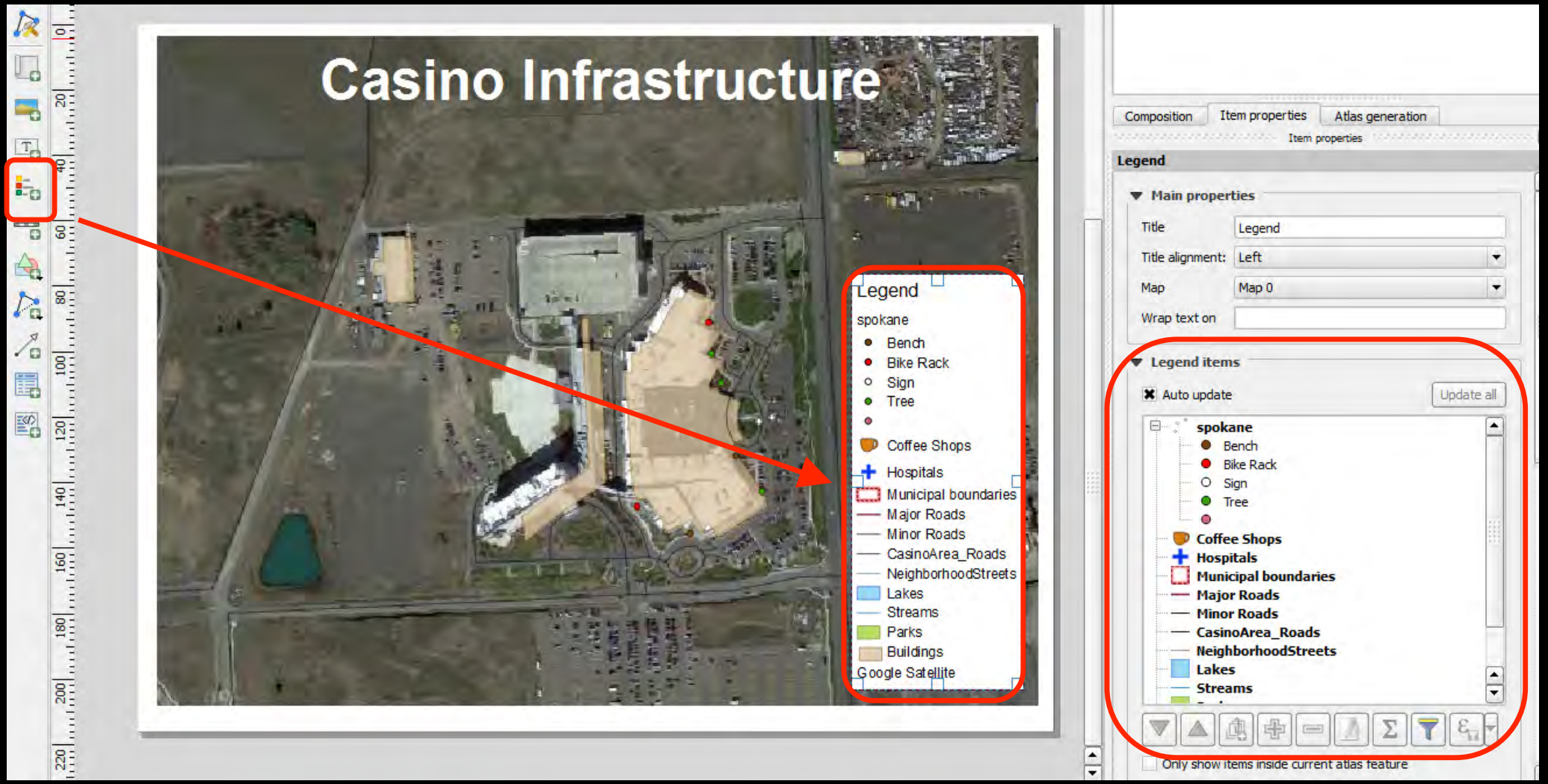
Type in the Title

- Click the Font button to adjust font
- Use Font Color to set text color
- Use Alignment buttons to align title



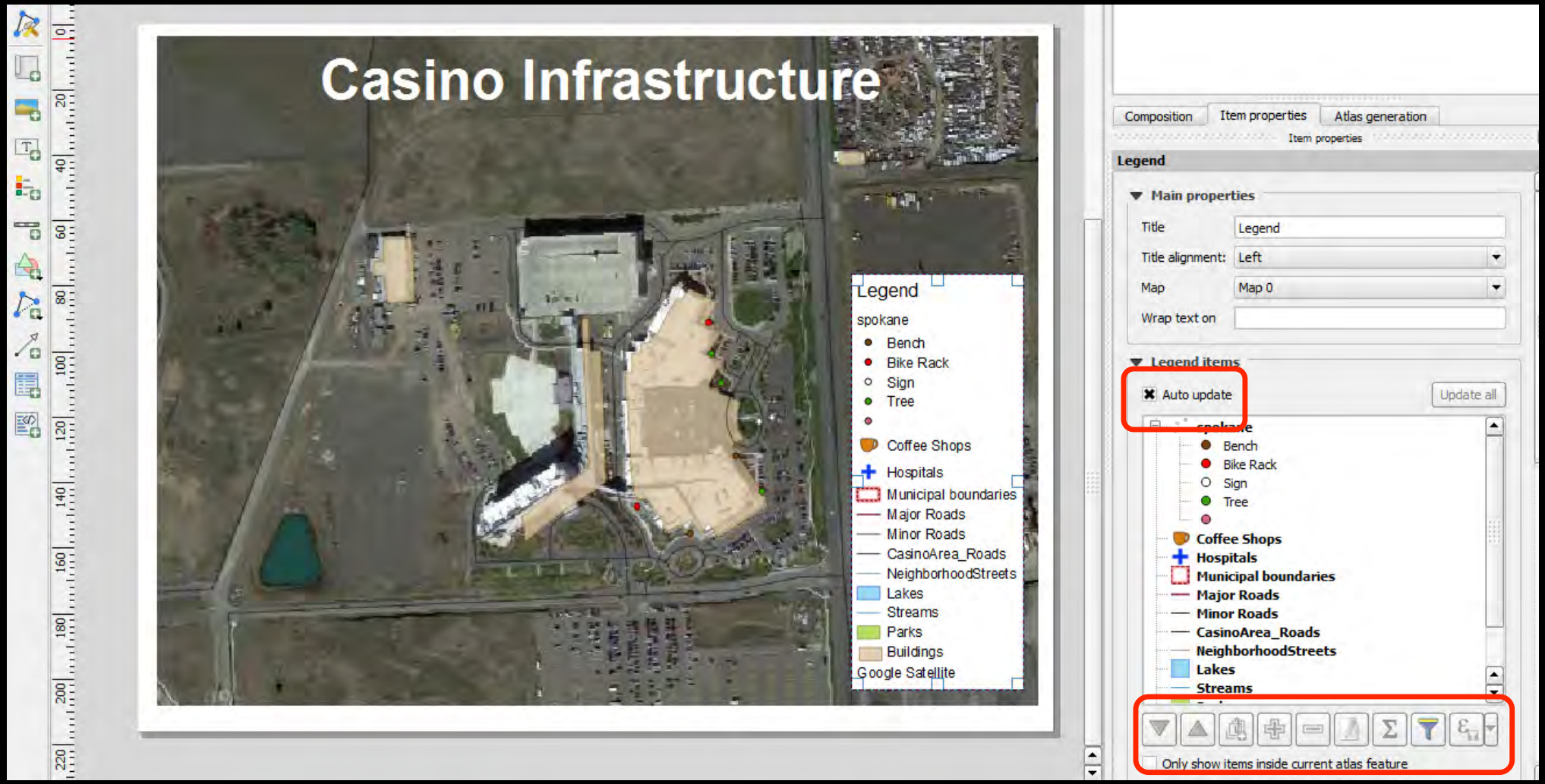
Add Legend

- Add Legend button



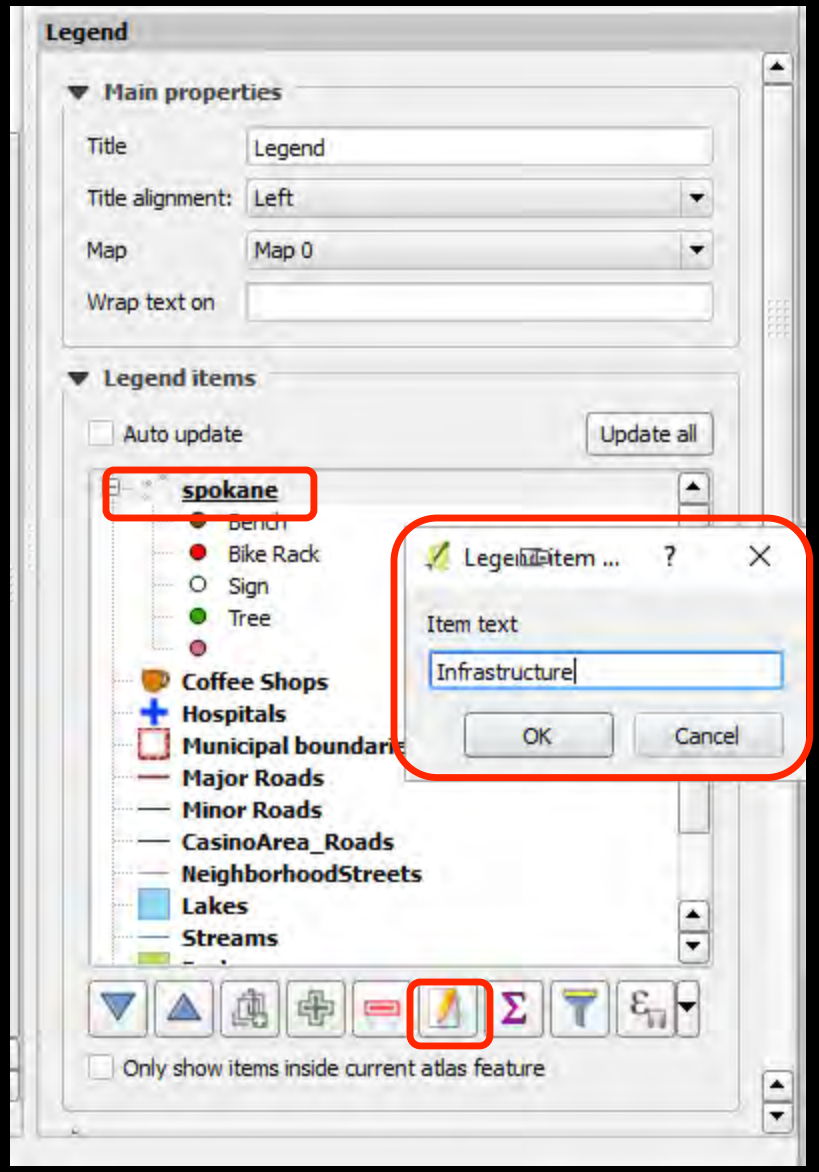
Edit Legend

- Uncheck Auto update & edit



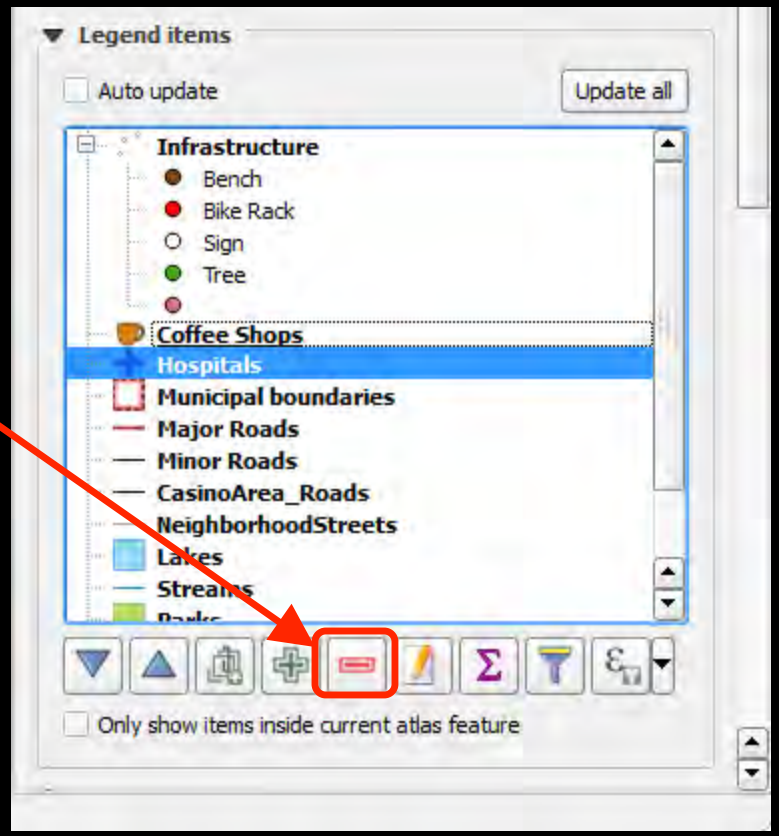
Edit Layer Names

- Select the layer
- Click the Edit button



Remove Unnecessary Layers

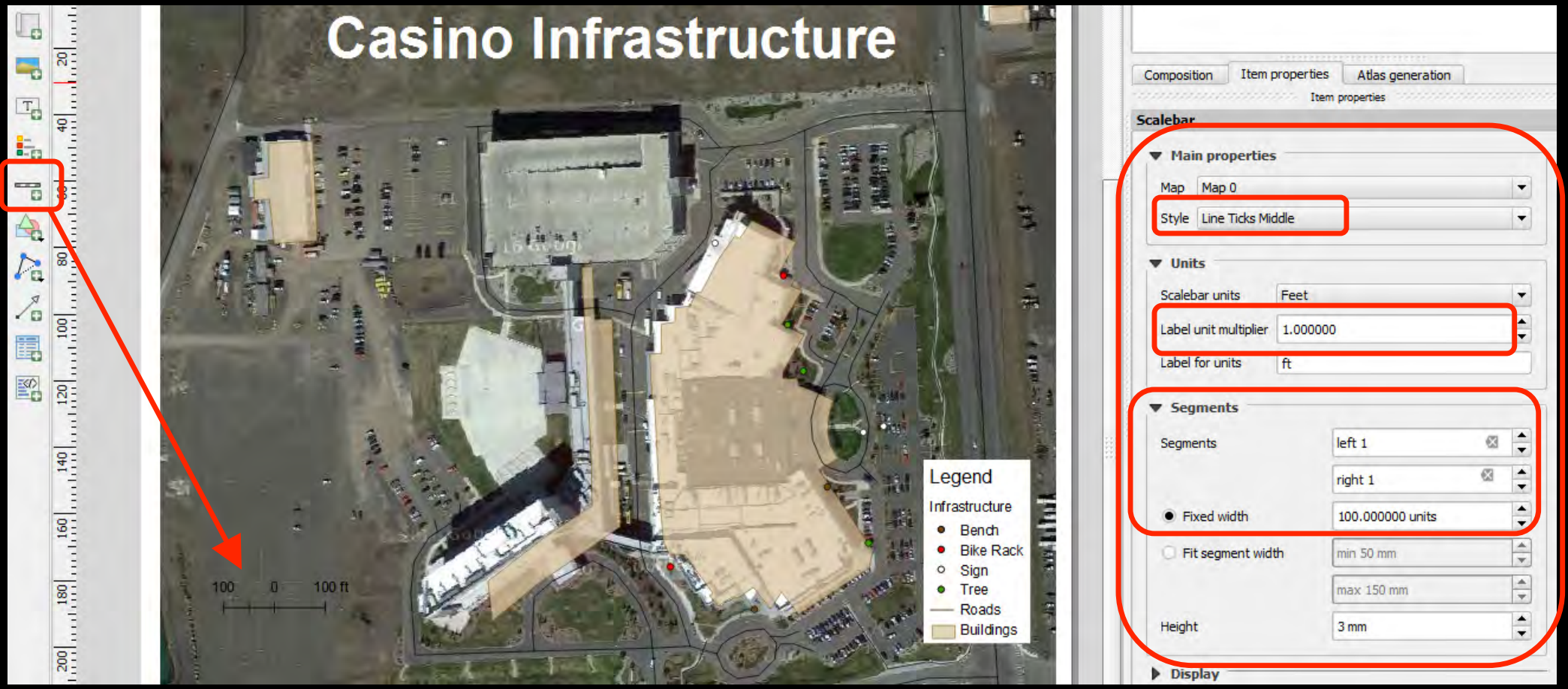
- Select the layer
- Click the Remove button




Casino Infrastructure
Legend
Infrastructure
Bench
Bike Rack
Sign
Tree
Roads
Buildings

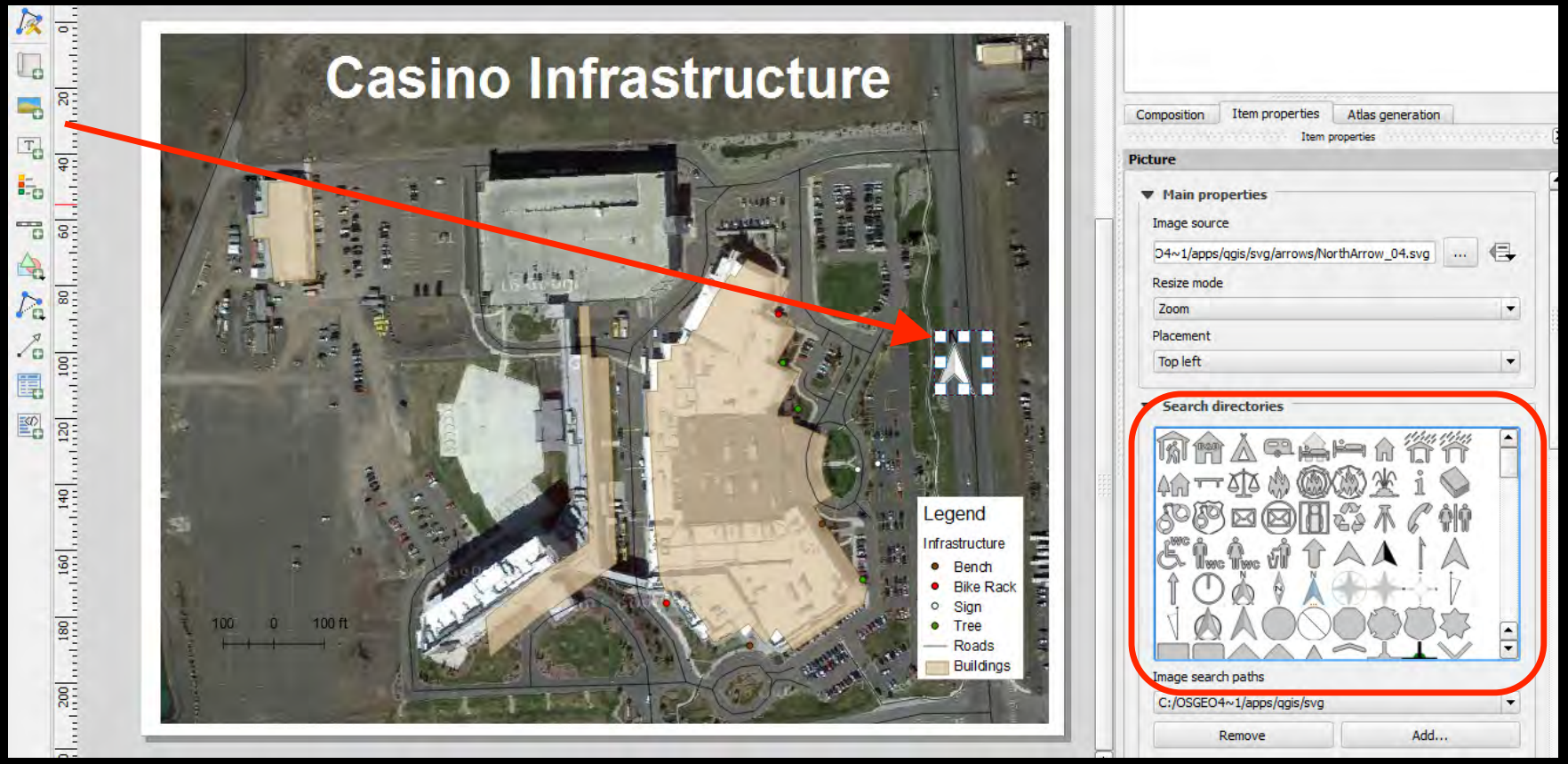
Adding a Scale Bar

- Use the Add scalebar button
- Adjust style & units in Item properties



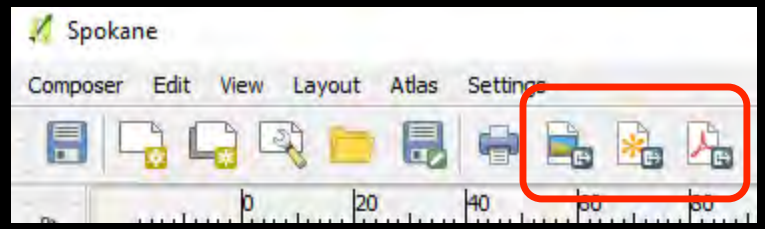
Adding a North Arrow

- Use the Add image button 
- Item properties → Search directories & choose arrow



Exporting Map

- Export as Image, SVG or PDF




Casino Infrastructure
N
100 0 100 ft
Legend
Infrastructure
Bench
Bike Rack
Sign
Tree
Roads
Buildings

Challenge Exercise

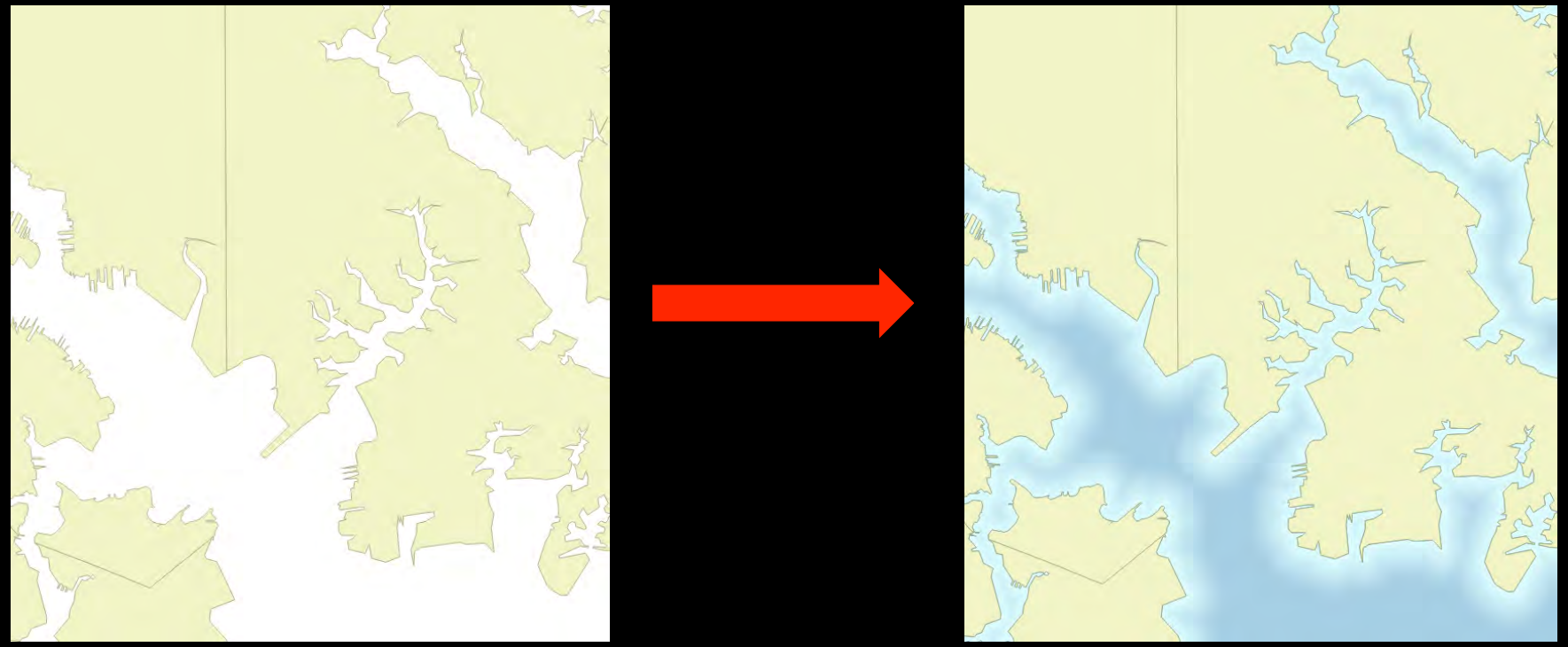
- Make a map of Coffee Shops to Try

The End!

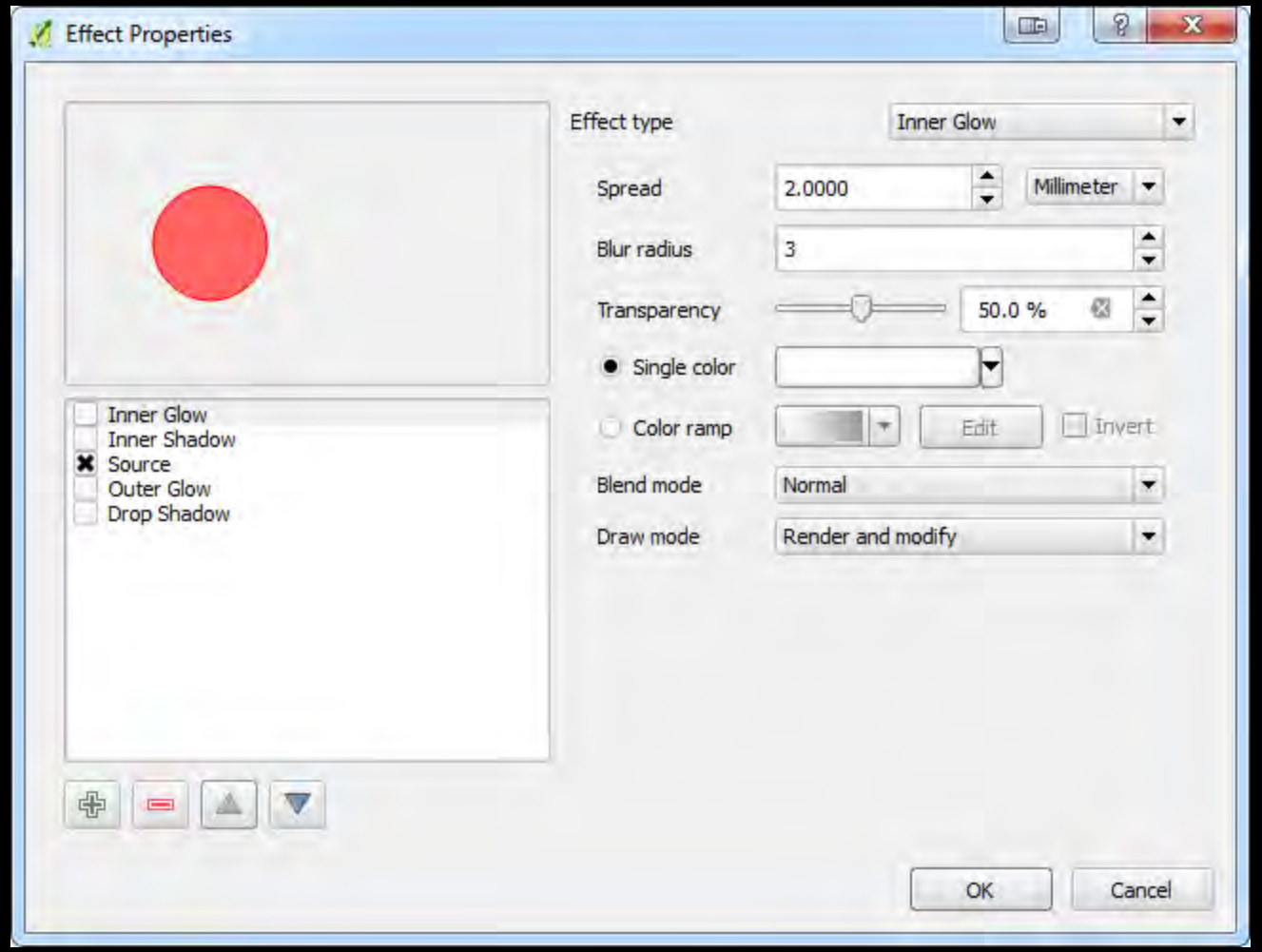
John Scott
Center for Public Service Communications
jcscott@cpsc.com

Kurt Menke, GISP
Bird's Eye View
www.BirdsEyeViewGIS.com
kurt@birdseyeviewgis.com

~ Unique to QGIS ~
Inverted Polygon Shapeburst Fills



~ Unique to QGIS ~
Live Layer Effects



~ Unique to QGIS ~
Live Layer Effects