Creative Vector Basemaps

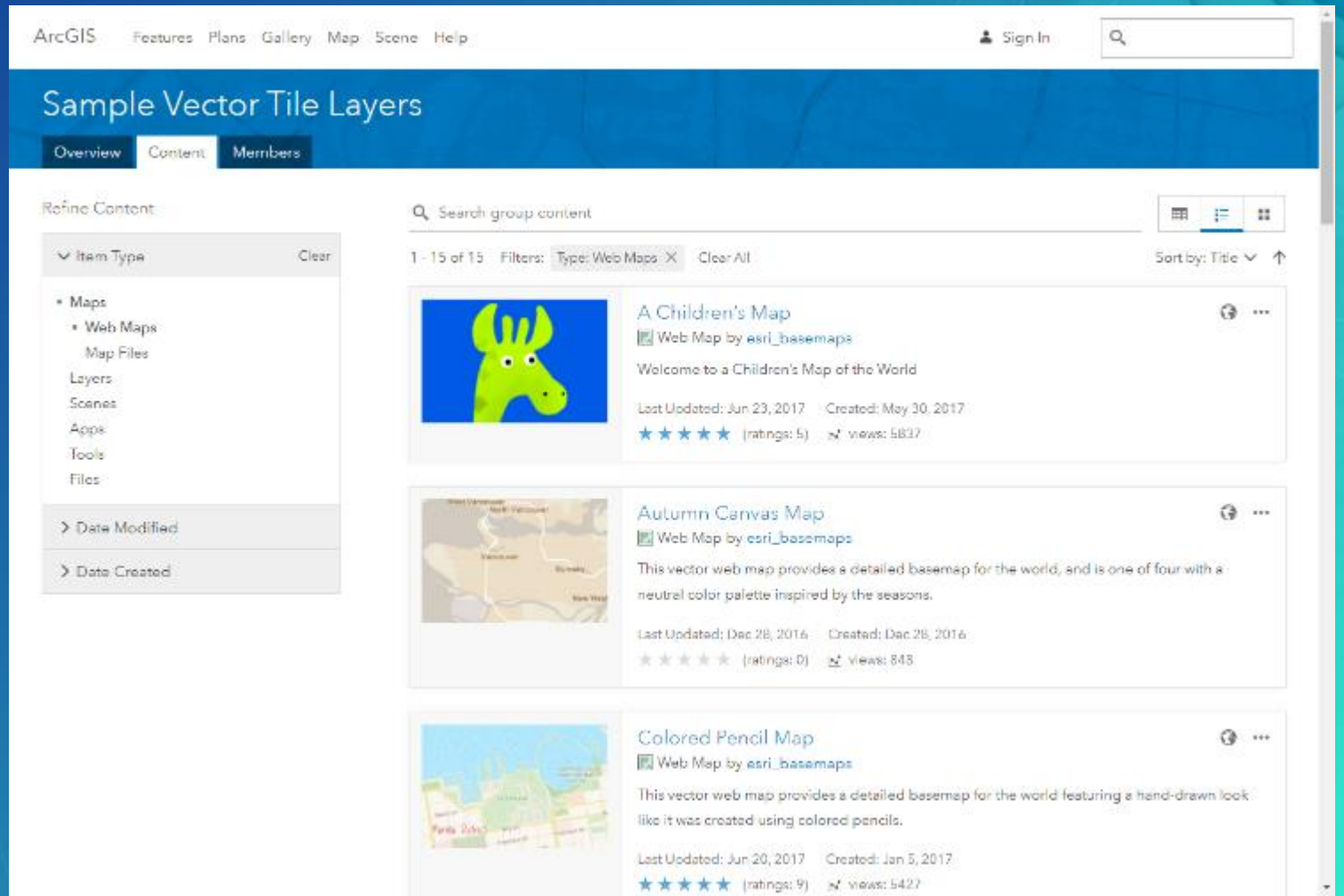
ANDY SKINNER

Creative Vector Basemaps

ANDY SKINNER

http://esriurl.com/StylizedVectorMapsGroup

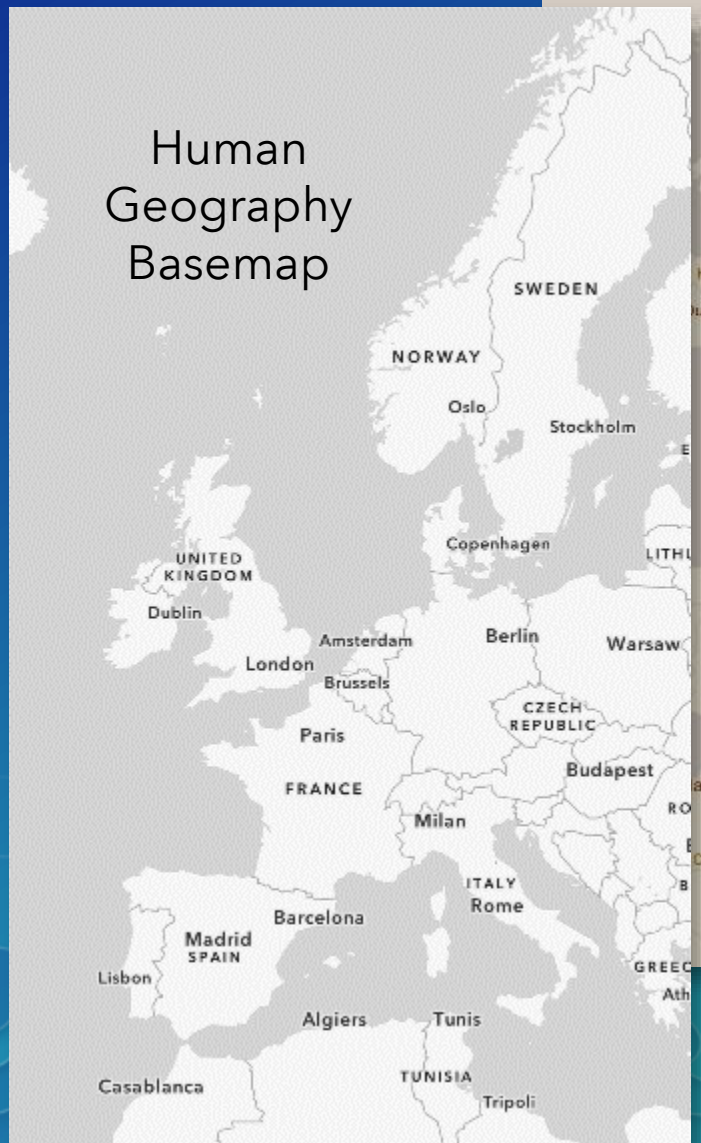
How many of you have seen this web page on ArcGIS Online?



Sample Vector Tile Layers

Autumn Canvas

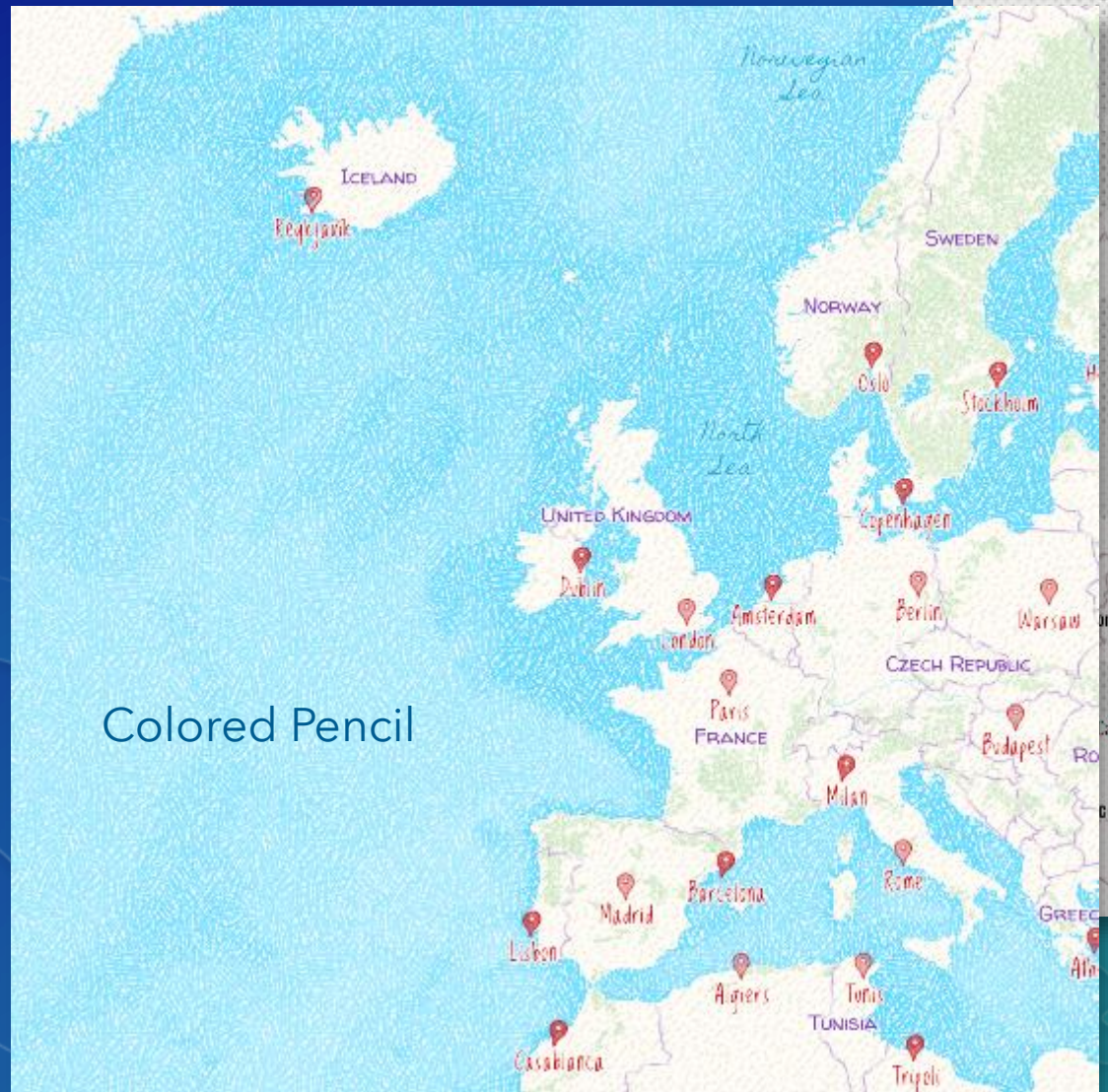
Human Geography Basemap



Black and White

Sample Vector Tile Layers

Colored Pencil



Newspaper

Mid-Century

Starting Out

Requirements

A copy of one of our existing vector basemap layers or …

ArcGIS Pro

… and a graphics drawing application that will allow you to create custom symbols

but most of all …

Requirements

A copy of one of our existing vector basemap layers or …

ArcGIS Pro

… and a graphics drawing application that will allow you to create custom symbols

but most of all …

Changing Fonts

USING THE FONTS AVAILABLE IN OUR BASEMAPS

Create your own copy of a layer

Sign in to your organizational account.

Search for ‘basemaps’ in the Living Atlas and choose one.

Make sure you pick a ‘Vector Tile Layer’

Make a copy of the layer, and save it to your account.

Save a copy of the json and open it, or open the layer into a map editor app.

We’ve got a couple in beta:

http://esri.github.io/arcgis-vectortile-style-editor/#

https://maps.esri.com/jg/VectorBasemapStyleEditor/index.html

Available Fonts for use
with Esri Vector Basemaps
http://esriurl.com/VectorRefDoc

Arial

Avenir Next

Oswald

Just Another Hand

Belleza

Cabin Sketch

Noto Sans
Noto Serif

Palatino Linotype

Ubuntu
Ubuntu Condensed
Ubuntu Mono

Special Elite

syncopate

Josefin Slab

Playfair Display
PLAYFAIR DISPLAY SC

Redressed

Available Fonts for use
with Esri Vector Basemaps
http://esriurl.com/VectorRefDoc

Arial

Avenir Next

Oswald

Just Another Hand

Belleza

Cabin Sk

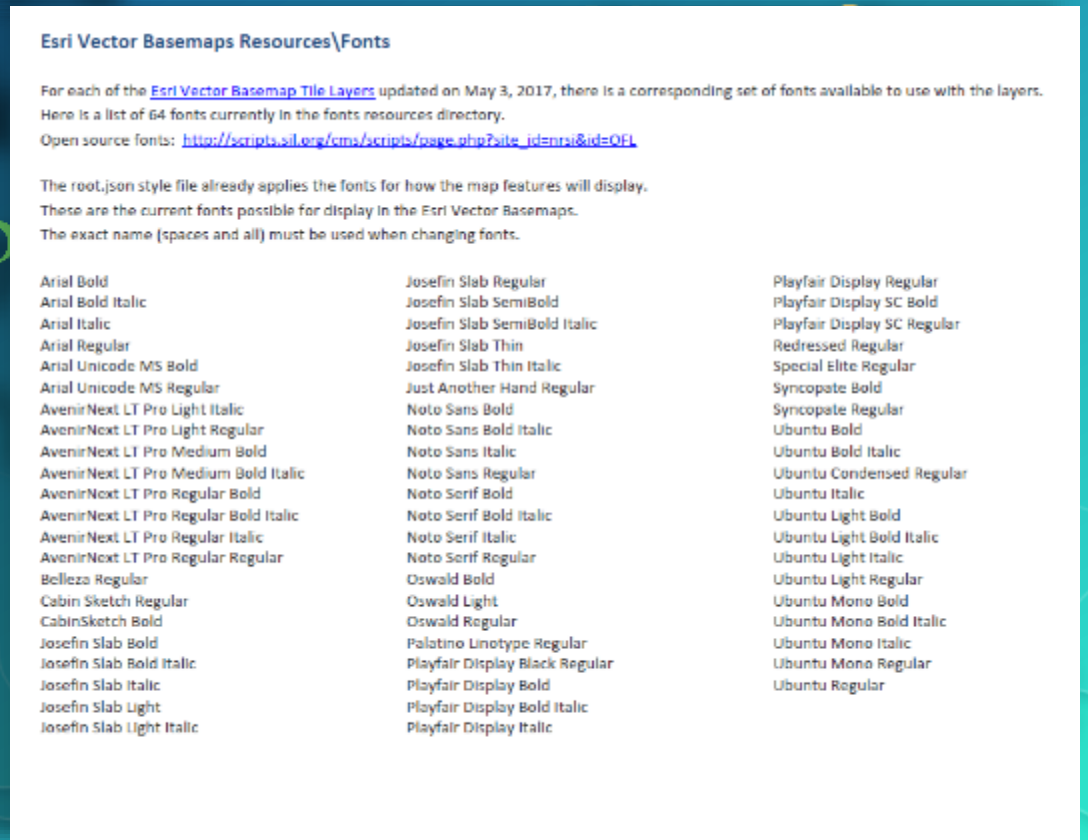
Palatino Linotyp

Ubuntu
Ubuntu Condensed
Ubuntu Mono

syn

Josefin Slab

Redressed



Esri Vector Basemaps Resources\Fonts

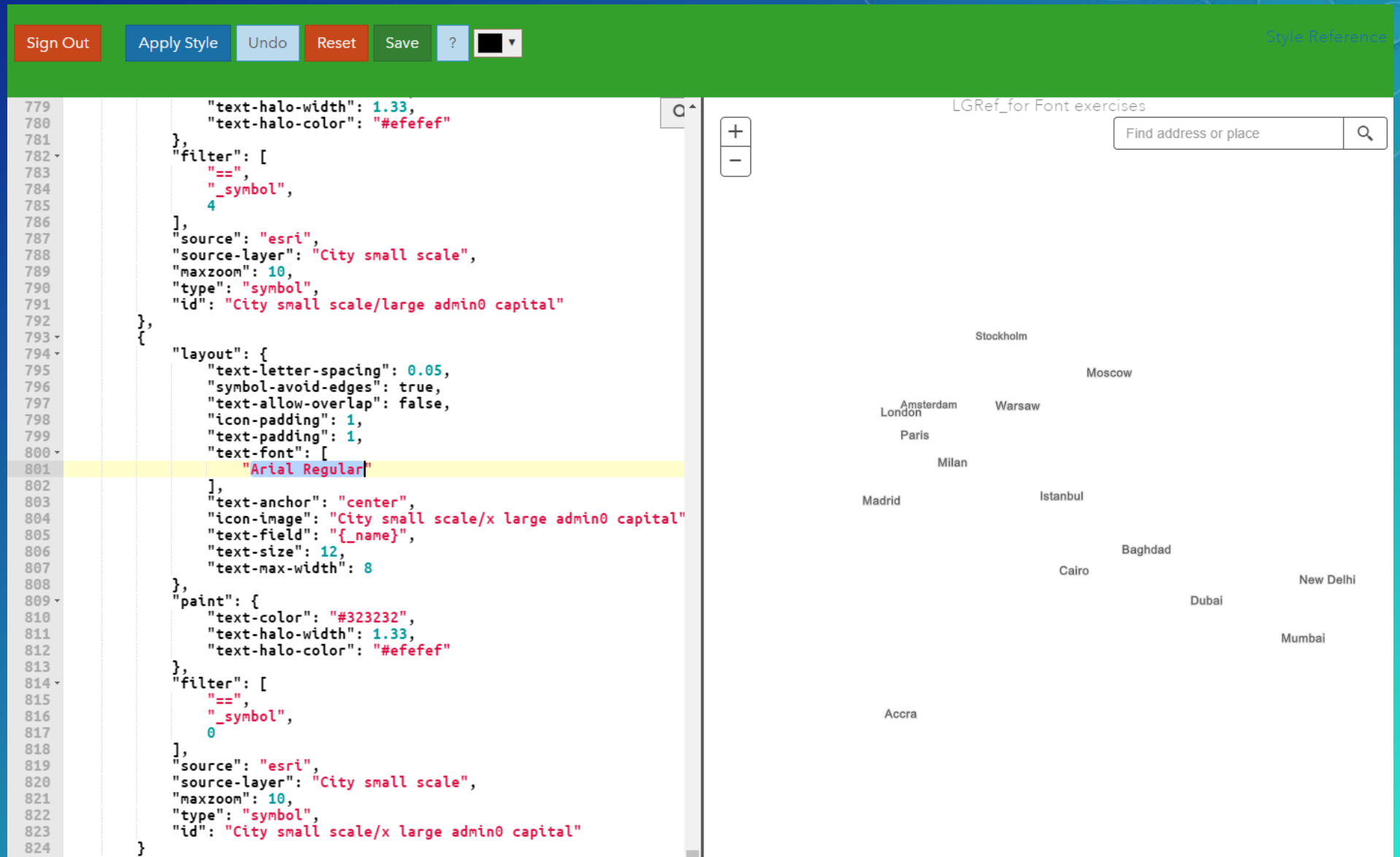
For each of the Esri Vector Basemap Tile Layers updated on May 3, 2017, there is a corresponding set of fonts available to use with the layers.
Here is a list of 64 fonts currently in the fonts resources directory.
Open source fonts: http://scripts.sil.org/cms/scripts/page.php?site_id=nrsi&id=OFL

The root.json style file already applies the fonts for how the map features will display.
These are the current fonts possible for display in the Esri Vector Basemaps.
The exact name (spaces and all) must be used when changing fonts.

Arial Bold
Arial Bold Italic
Arial Italic
Arial Regular
Arial Unicode MS Bold
Arial Unicode MS Regular
AvenirNext LT Pro Light Italic
AvenirNext LT Pro Light Regular
AvenirNext LT Pro Medium Bold
AvenirNext LT Pro Medium Bold Italic
AvenirNext LT Pro Regular Bold
AvenirNext LT Pro Regular Bold Italic
AvenirNext LT Pro Regular Italic
AvenirNext LT Pro Regular Regular
Belleza Regular
Cabin Sketch Regular
CabinSketch Bold
Josefin Slab Bold
Josefin Slab Bold Italic
Josefin Slab Italic
Josefin Slab Light
Josefin Slab Light Italic
Josefin Slab Regular
Josefin Slab SemiBold
Josefin Slab SemiBold Italic
Josefin Slab Thin
Josefin Slab Thin Italic
Just Another Hand Regular
Noto Sans Bold
Noto Sans Bold Italic
Noto Sans Italic
Noto Sans Regular
Noto Serif Bold
Noto Serif Bold Italic
Noto Serif Italic
Noto Serif Regular
Oswald Bold
Oswald Light
Oswald Regular
Palatino Linotype Regular
Playfair Display Black Regular
Playfair Display Bold
Playfair Display Bold Italic
Playfair Display Italic
Playfair Display Regular
Playfair Display SC Bold
Playfair Display SC Regular
Redressed Regular
Special Elite Regular
Syncopate Bold
Syncopate Regular
Ubuntu Bold
Ubuntu Bold Italic
Ubuntu Condensed Regular
Ubuntu Italic
Ubuntu Light Bold
Ubuntu Light Bold Italic
Ubuntu Light Italic
Ubuntu Light Regular
Ubuntu Mono Bold
Ubuntu Mono Bold Italic
Ubuntu Mono Italic
Ubuntu Mono Regular
Ubuntu Regular

Change Fonts

JSON map editor




```
            "text-halo-width": 1.33,
            "text-halo-color": "#efefef"
        },
        "filter": [
            "==",
            "_symbol",
            4
        ],
        "source": "esri",
        "source-layer": "City small scale",
        "maxzoom": 10,
        "type": "symbol",
        "id": "City small scale/large admin0 capital"
    },
    {
        "layout": {
            "text-letter-spacing": 0.05,
            "symbol-avoid-edges": true,
            "text-allow-overlap": false,
            "icon-padding": 1,
            "text-padding": 1,
            "text-font": [
                "Arial Regular"
            ],
            "text-anchor": "center",
            "icon-image": "City small scale/x large admin0 capital"
            "text-field": "{_name}",
            "text-size": 12,
            "text-max-width": 8
        },
        "paint": {
            "text-color": "#323232",
            "text-halo-width": 1.33,
            "text-halo-color": "#efefef"
        },
        "filter": [
            "==",
            "_symbol",
            0
        ],
        "source": "esri",
        "source-layer": "City small scale",
        "maxzoom": 10,
        "type": "symbol",
        "id": "City small scale/x large admin0 capital"
    }
```

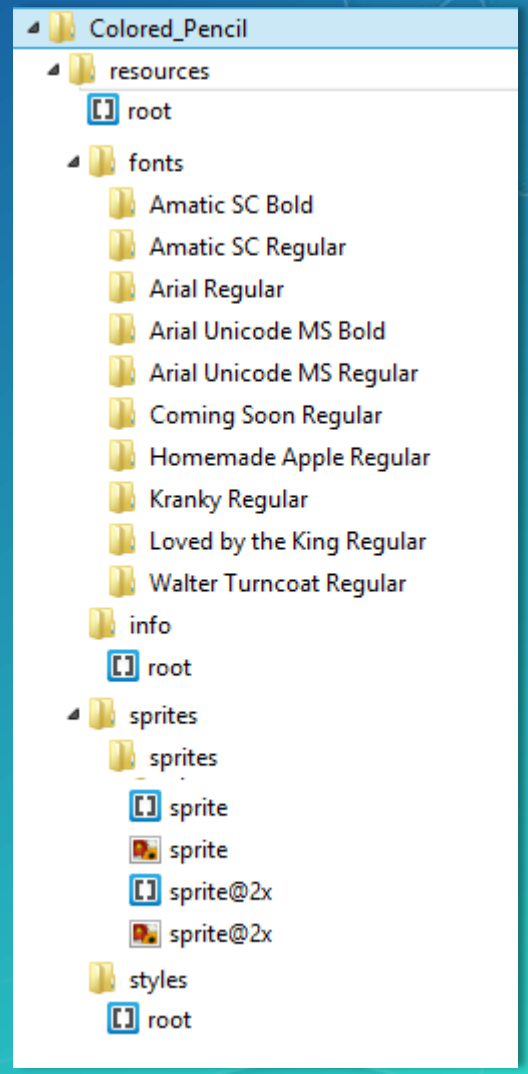
Creating Custom Symbols

USING SPRITES TO ADD SPECIAL EFFECTS

Build your map in ArcGIS Pro

Decide if you want to build a completed map, or a master document.

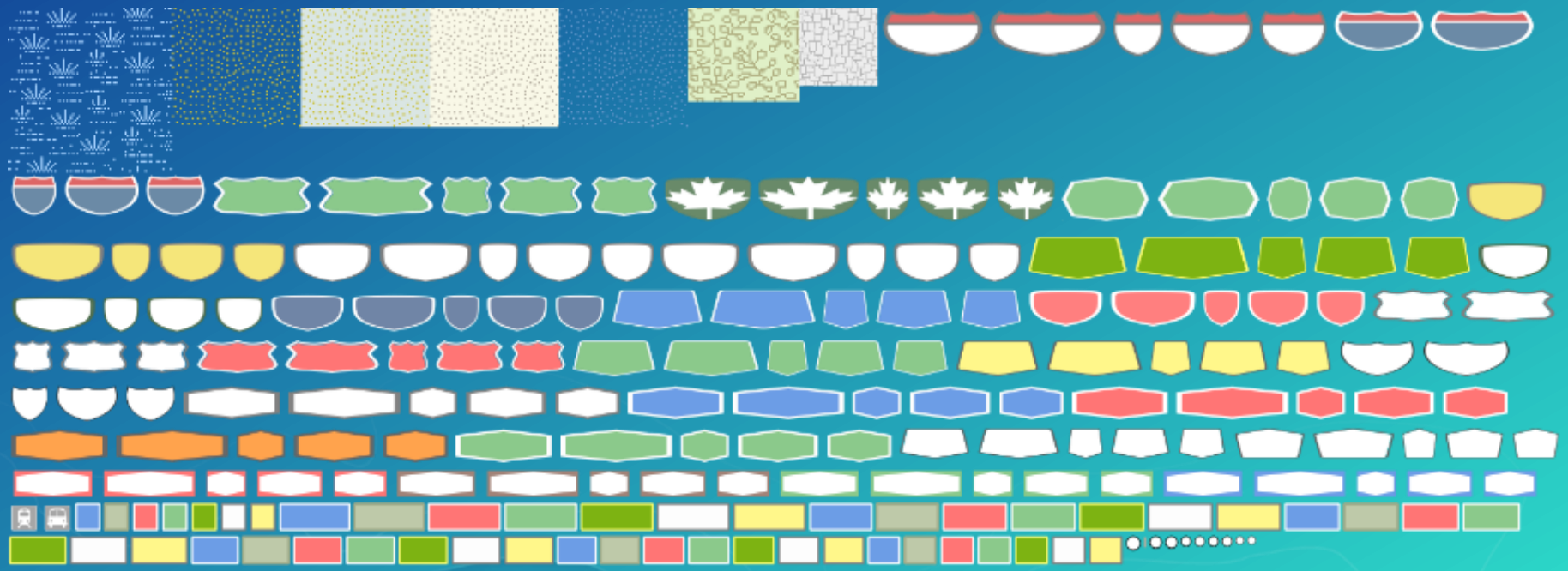
- Are the changes you need to make easily handled in the json?
- Are all of the fonts you require included?
- Can the derived maps be built using one set of sprites?



Steps for customizing sprites

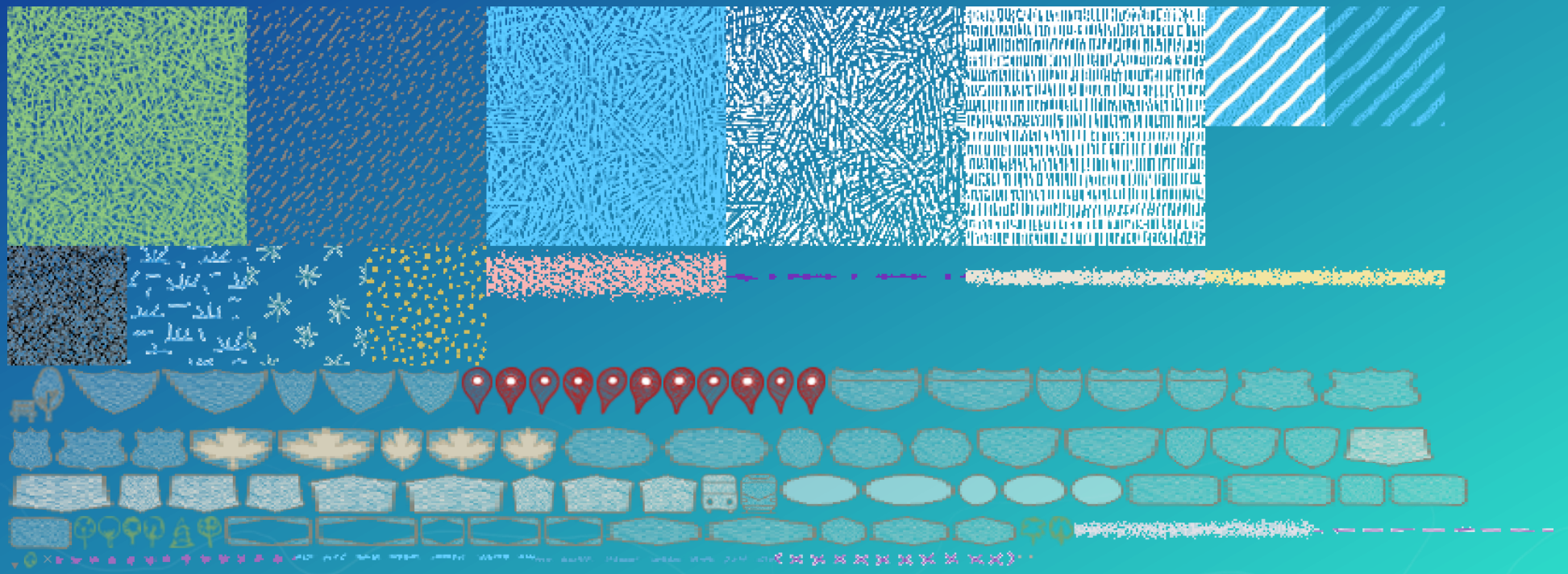
- Building the symbols
- Applying them in ArcGIS Pro
- Publishing a tile package

Sprites for the 'Street' Vector Basemap



Sprites

Sprites for the ‘Colored Pencil’ Vector Basemap

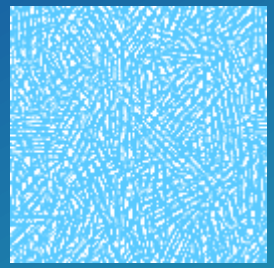
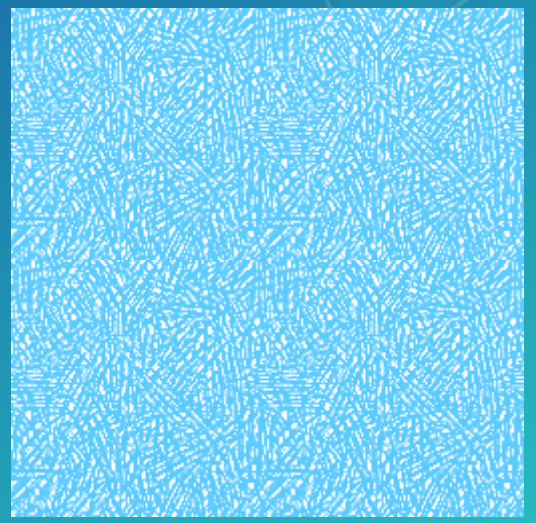


Building the Symbols

Point symbols are straight forward – Use your imagination!

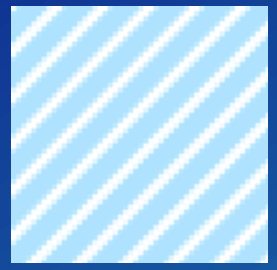
Building the Symbols

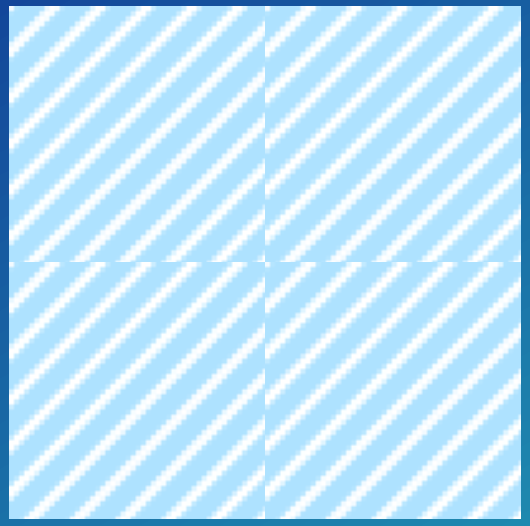
Line and polygon symbols are not as simple as they may at first seem …

Building the Symbols

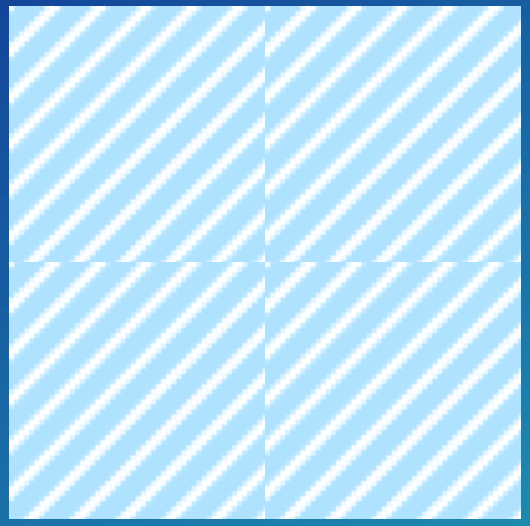
A cropped version of the hatched tile …



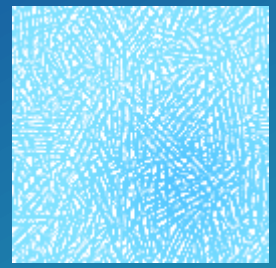


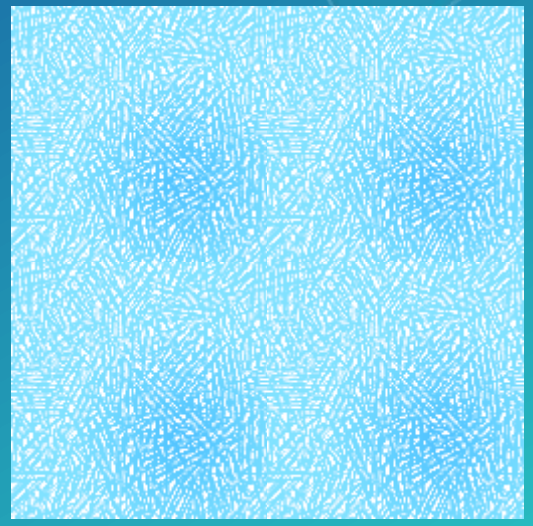
Building the Symbols

A cropped version of the hatched tile …



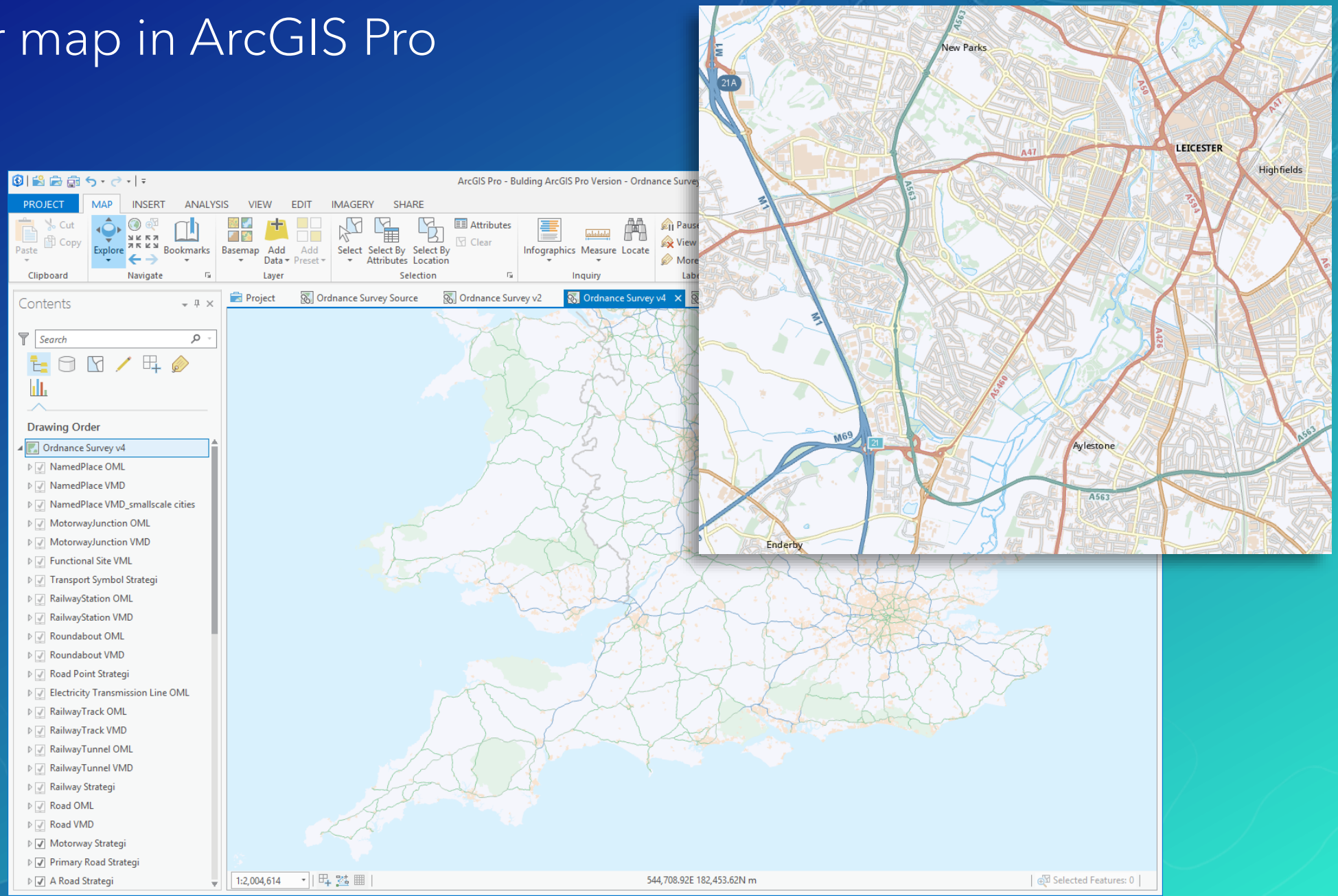
and an uneven version of the texture.





Build your map in ArcGIS Pro

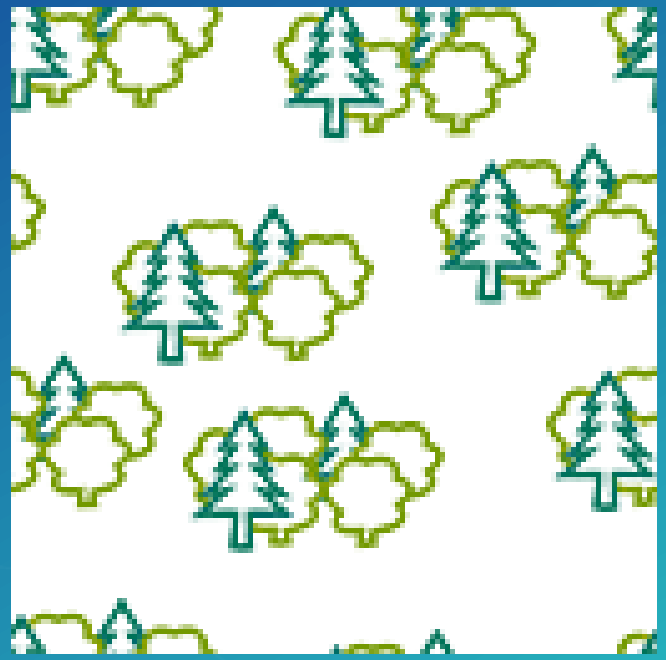
Ordnance Survey Open Data



Artwork for sprites

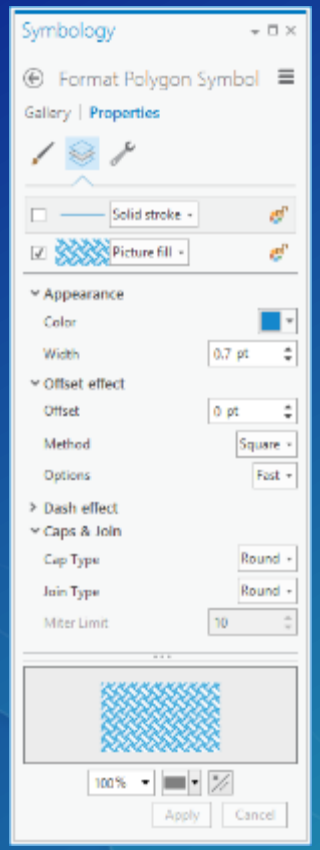
Pattern Tile for water

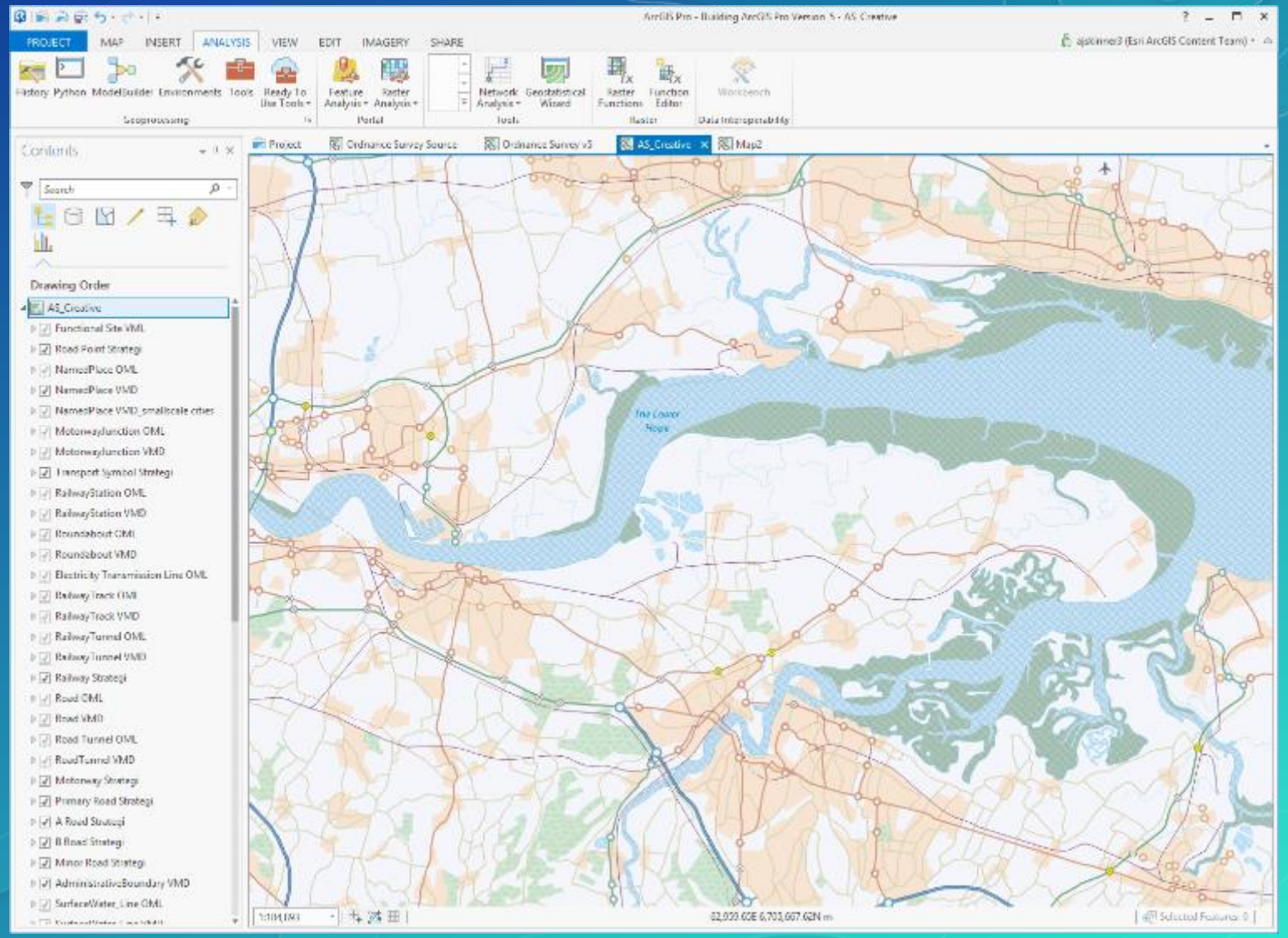
Pattern tile for forest



Add special effects

Textured effect in water

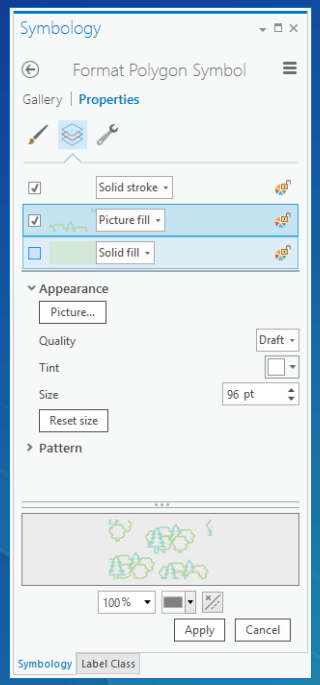


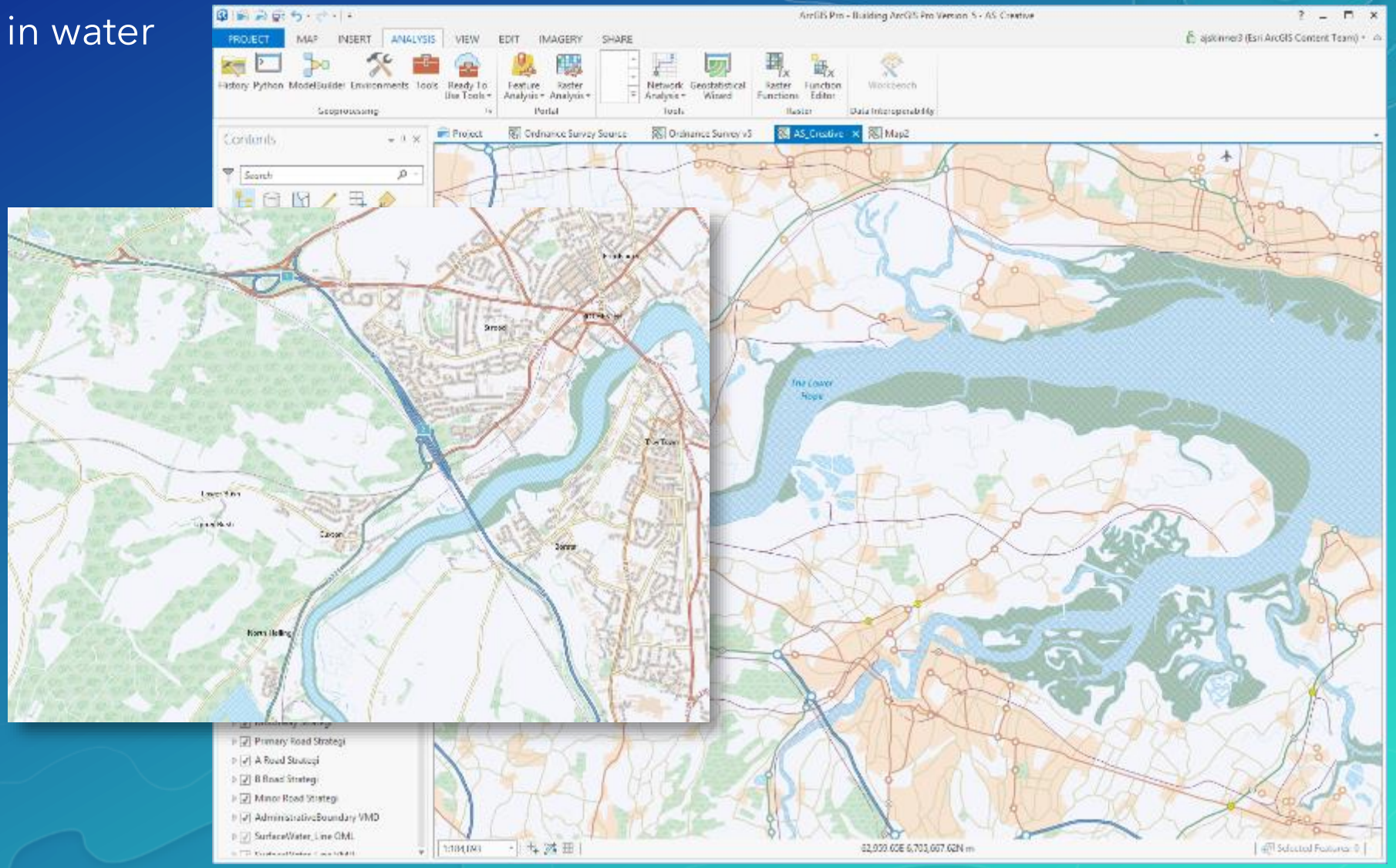


Add special effects

Textured effect in water

Pattern effect for woodland.





Headline Here

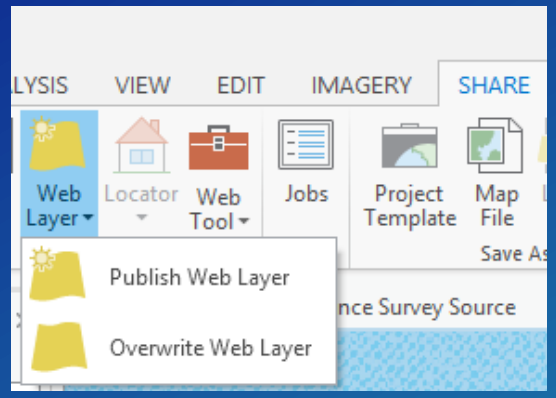
Point symbols

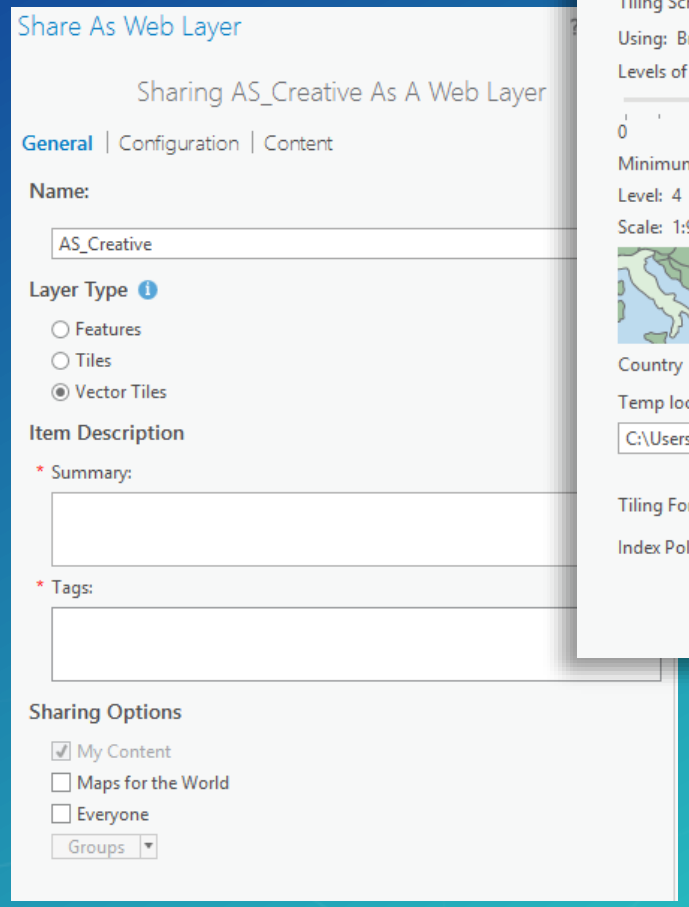
Publishing the Map

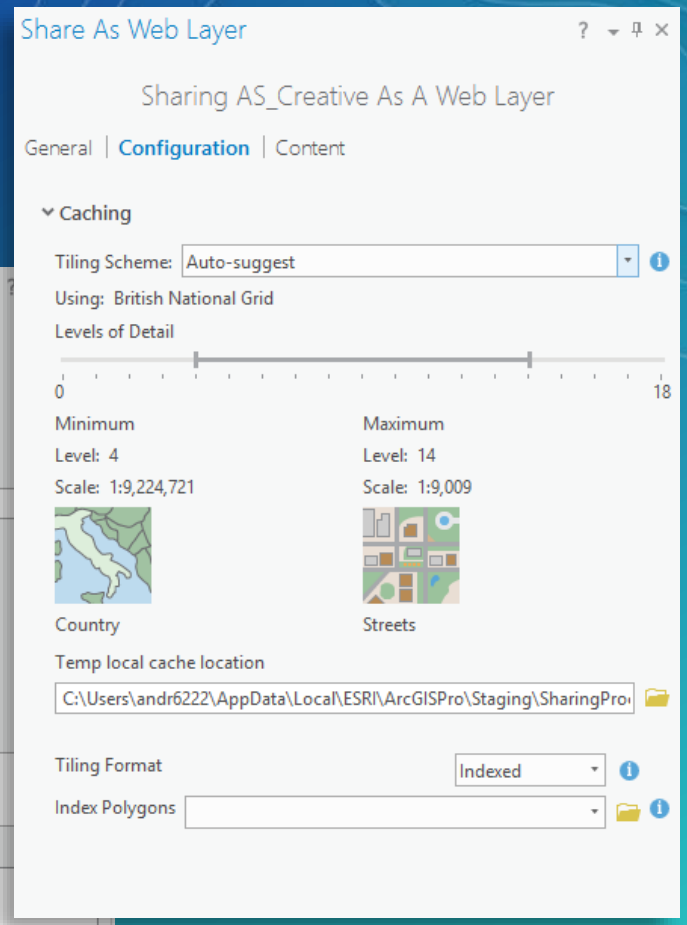
CREATING A VECTOR TILE LAYER

Publishing the service

Directly to a web layer

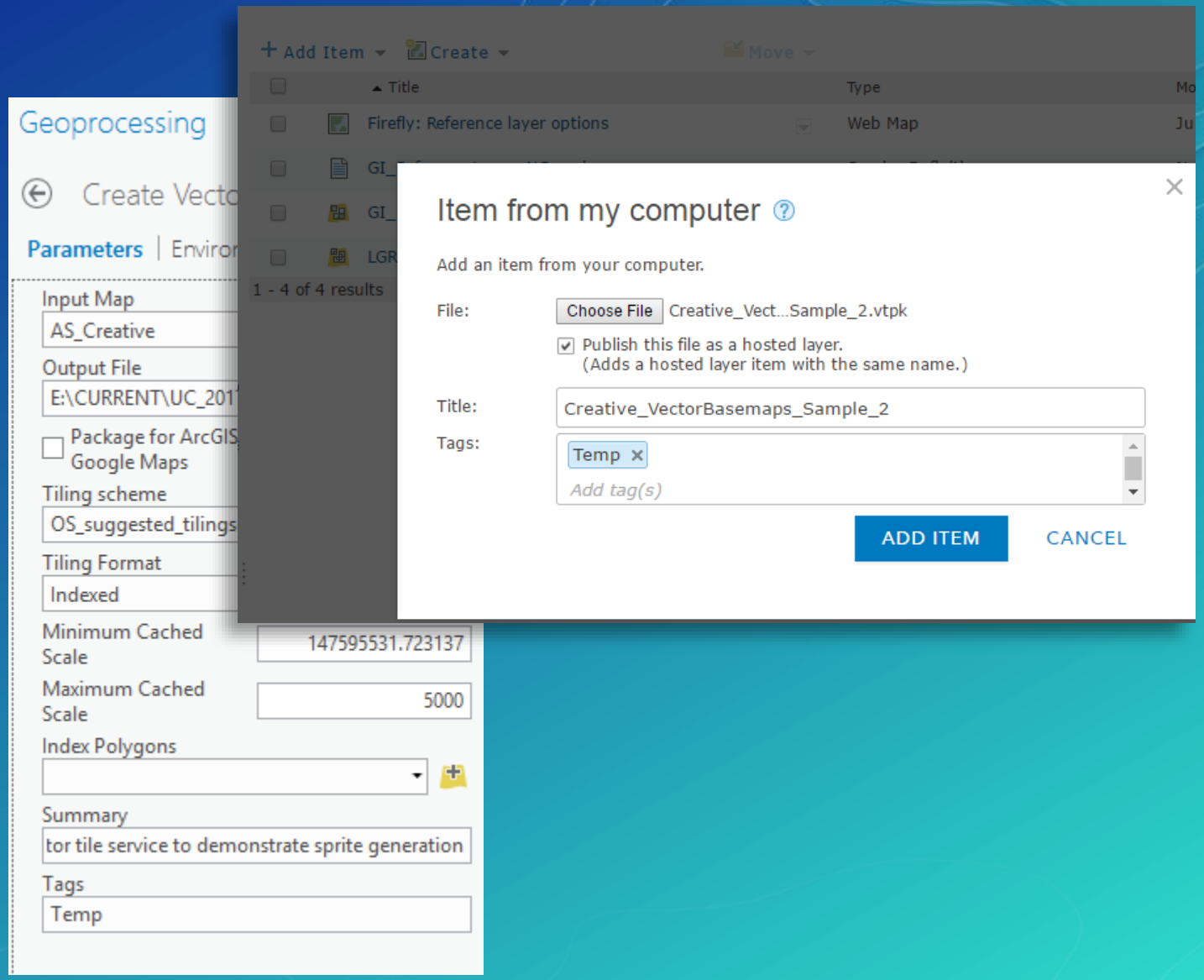






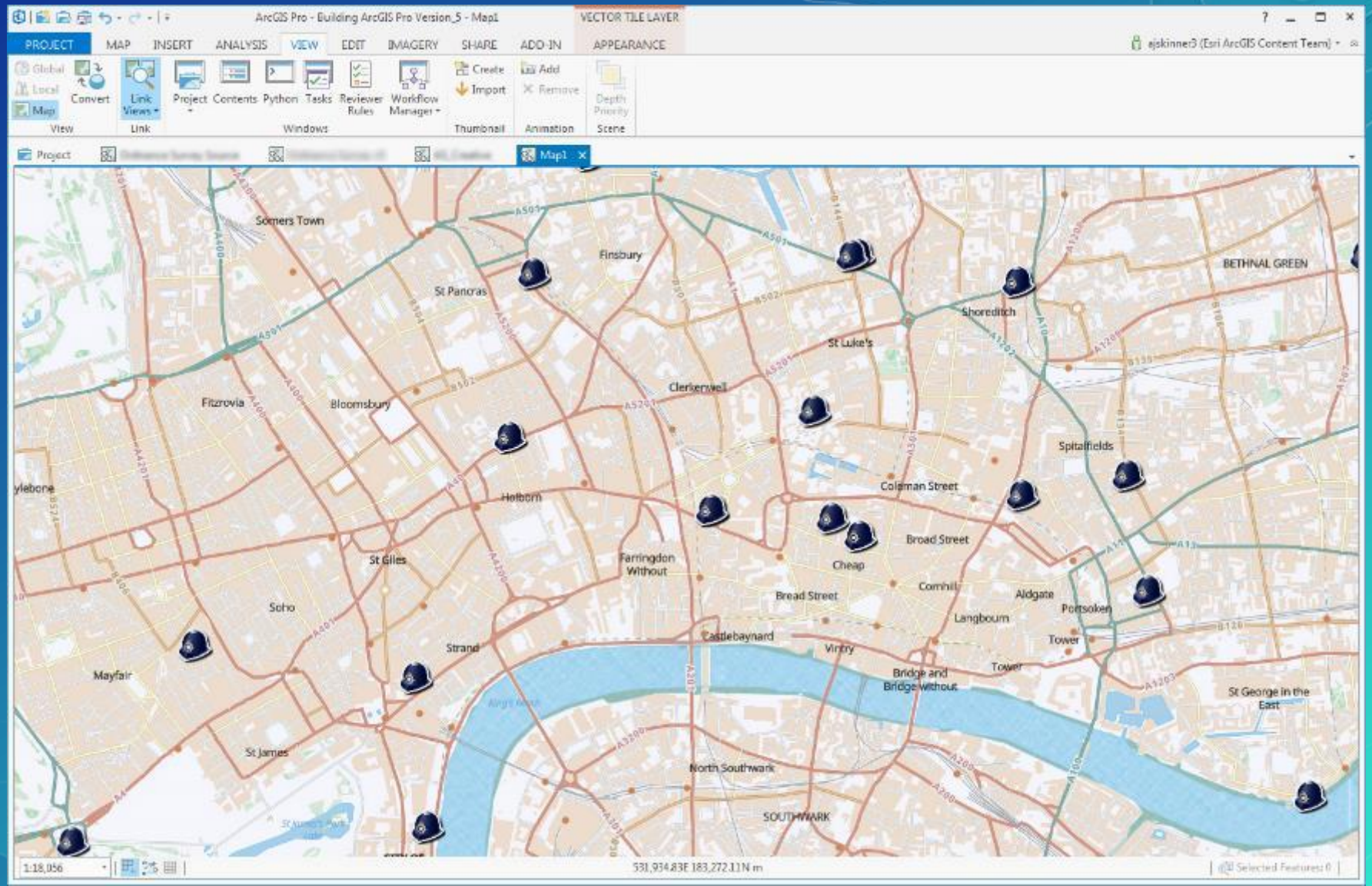
Publishing the service

Via a
Vector Tile
Package



The Final Result

Previewed in ArcGIS Pro



Links

ArcGIS.com 'Vector Basemaps' http://arcg.is/1NbxHKj

All of our core set of Vector Tile Basemaps

ArcGIS.com 'Sample Vector Tile Layers' http://arcg.is/1LKa9VN

Our experiments using some of the techniques discussed here

JSON Map Editor http://esri.github.io/arcgis-vectortile-style-editor

Simple vector tile editor with JSON code alongside a preview map

'GUI'-style Map Editor https://maps.esri.com/jg/VectorBasemapStyleEditor/index.html

Vector tile editor that itemizes by layer

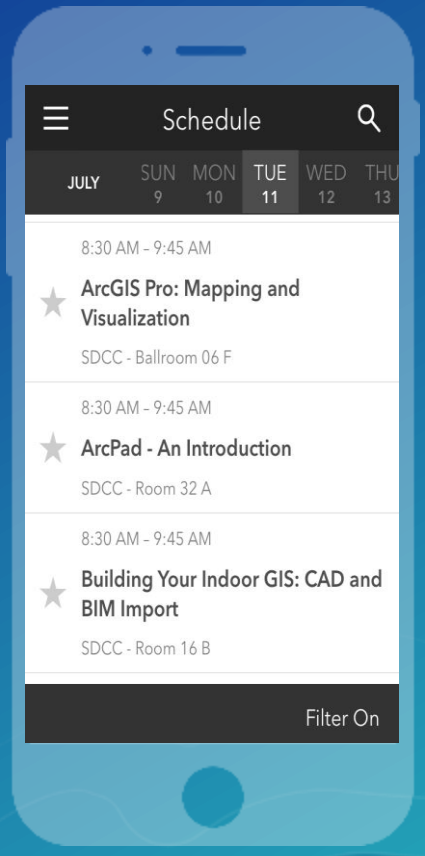
JSON Lint https://jsonlint.com

A useful (and free) online tool for reformatting JSON files and validating the final result

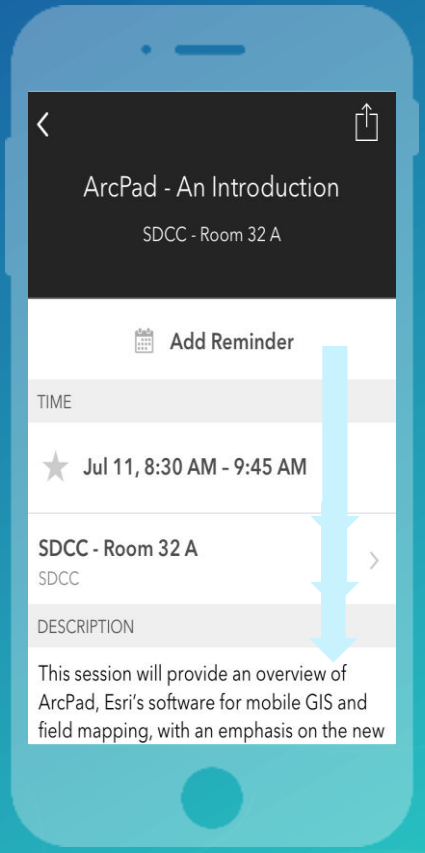
Please Take Our Survey on the **Esri Events App!**

Download the Esri Events app and find your event

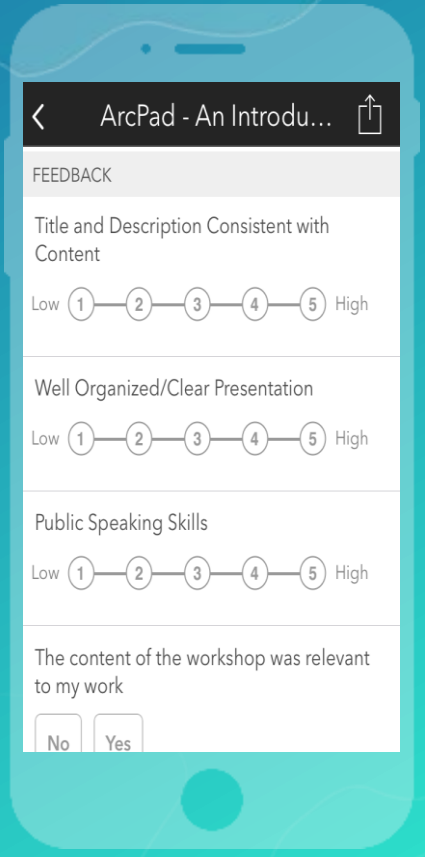
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"



esri
THE SCIENCE OF WHERE