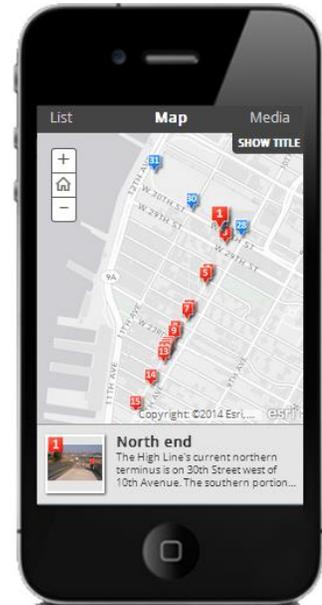
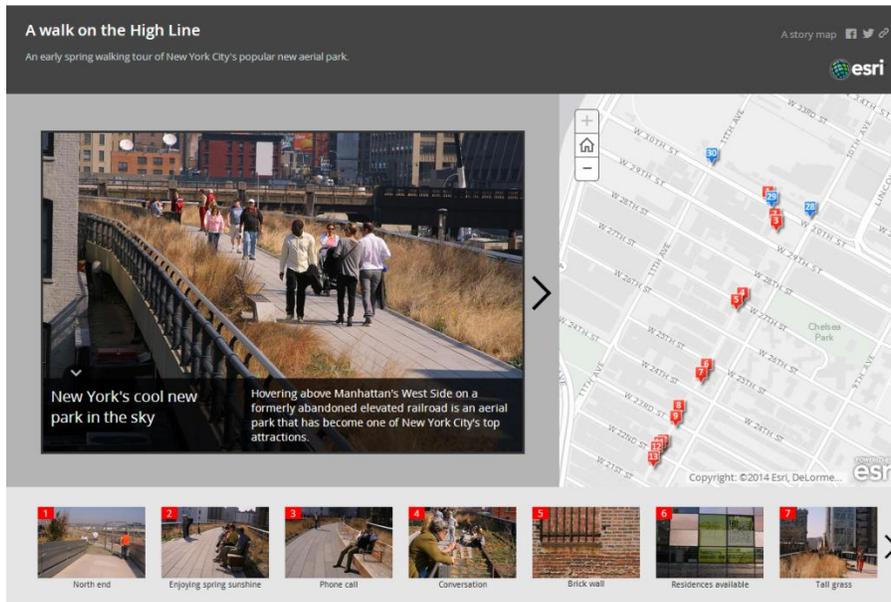


# Welcome to the Map Tour story map application template

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## Introduction

The Map Tour story map application template by Esri lets you publish an attractive, easy-to-use web application that lets you present a small set of places on a map in a numbered sequence through which users can browse. A large image showing the current place along with a descriptive caption is shown alongside the map. All the places in the tour are shown in a thumbnail carousel at the bottom of the web page so the user can easily go to a specific place of interest if they don't want to step through all the places in order. They can also click or tap on a place on the map to see the image and caption for that place. Videos can also be used instead of images for some or all of your tour points. Here's an example, [A walk on the Highline](#).



This template is designed for presenting geographic information where there is a strong visual and photographic element to the story you want to tell. Some potential uses of this template include showing the world the work that your government department, organization, or agency does; showcasing key attractions in a city or region; introducing people to a park or preserve and educating them about what's there; touring people around a campus, outdoor art collection, or historical district; highlighting environmental or infrastructure improvements; educating people about areas of scientific or geographic interest; outreach to show where there are places you want to improve or protect; and creating online photo journals of a trip or event.

The template is designed to be used in any web browser on any device, including smartphones and tablets. The template layout you see in your PC web browser also fits nicely on the iPad's web browser when the iPad is held in landscape orientation. On smartphones and tablets held in portrait orientation, the layout template automatically rearranges itself to make it easy to use the tour.

***Before you continue reading this document:*** Be sure to have a look at the [Map Tour section](#) of the [ArcGIS Story Maps](#) website if you've not already been there. It includes a [gallery](#) of map tour examples and a [tutorial](#) that outlines the steps for making a hosted map tour with our interactive builder.

## Do you need to download this template?

This downloadable application template can be deployed by anyone who has access to a web server or web site on which to host the application. This simply means that you download the template's files and put them onto the file structure of your existing website or web server in the same way as you would put new HTML pages and graphics onto your website. You don't need to set up a web server in order to use the template and you don't need to have a web server running on your computer. By downloading this template and making it available on your web server or web site you can easily create and configure a map tour. And because we provide the source code you can use it to add your own customizations, from minor tweaks to major changes. But you don't have to download the template to use it! You can create and deploy a map tour using the hosted version of this template that is built into ArcGIS.com. This is available to all ArcGIS Online account levels including the free Public account. We host the template for you so you don't have to download the template and put it on your server or website. There's an interactive WYSIWYG builder too that makes it easy to author your map tour. Using the hosted template is the easiest and fastest way to create a map tour.

*To use the interactive builder application to create a hosted map tour, see the [Map Tour Tutorial](#) on our website.*

You can also use the interactive builder in conjunction with the template download. For example if you build a hosted map tour with the builder and then decide you want to do additional customization by downloading and installing the template, you can use the web map from the hosted map tour in your template installation. Similarly if you create a web map containing map tour points using the instructions in this document, or already have such a web map prepared, you can use your web map in the hosted map tour template instead of installing the template yourself. Also you can configure a map tour in the interactive editor and automatically create a map tour web mapping application, and then point this template download at that application. In this way you can do all the setup and layout of the map tour interactively, including adding your own logo graphic and color scheme, and then run that application via the download, without having to make those changes in the download code.

## Overview of how to make a map tour with this template

Assembling your images and writing your descriptive captions is likely to be the most time consuming part of creating your map tour. The quality and impact of the images is a key part of these map tours. Get great images, even if the subject of your tour is fairly mundane. A good photographer can make even a fairly standard looking place appear interesting. Include some close ups or images with people to add variety. The images in your map tour are referenced by URLs so the image files can either reside on your website or web server, or on any other server which makes them accessible via a URL to the image file. Your images don't have to be located on the same web server as the template because they are referenced by URLs. You also have the option of using a feature service to define the points in your tour with the images stored in the service as attachments.

The map tour template accesses and displays an ArcGIS web map. You author this map using ArcGIS Online, Esri's online GIS and mapping system. You can access ArcGIS.com with either a free Public account (for use by individuals, community groups, small non-profit organizations, students, educators, etc.) or an ArcGIS For Organizations subscription (government, large non-profit, and commercial use). The web map you create is hosted and served by ArcGIS. ArcGIS for Desktop and ArcGIS for Server are not required, although those products can of course be used to create content for use in your map tour. The template you download just points at your ArcGIS web map and automatically applies formatting to it, etc. so you don't have to download any additional files or 'put' the web map anywhere.

In order to be displayed in the map template, your web map needs to contain a point layer defining each stop in the tour. The map tour template automatically applies its own numbered marker symbology to the points in the map tour layer. The template expects this layer to use a certain set of attributes (the map tour 'schema') to specify the name, description, and image for each stop in the tour. You can add a point layer to your web map containing all the map tour points by uploading a text file (i.e. a comma-separated value .CSV file, .TXT or .GPX), uploading a shapefile, or adding a feature service hosted on ArcGIS or served from ArcGIS Server. If you assemble your tour points in a text file, you can use either lat, long coordinates or addresses to geolocate the points, and you can use a program like Microsoft Excel to edit your file and then export it to CSV format. One convenient workflow is to create and edit your points in ArcGIS for Desktop using a geodatabase feature class and then export that to a CSV file.

You can also add additional supporting layers into the map. These layers will appear in your map tour to provide orientation, background, and any other geographic features you want the map to show in addition to the map tour points, such as a study area, a walking or driving route linking your tour points, etc. These layers can be in any format supported by ArcGIS web maps and they don't need to follow the map tour attribute schema because they are just being displayed on the map. The template displays these additional supporting layers using the symbology you specify in the web map.

Once you have downloaded the template you can customize the code any way you like. The most common customization most map story authors do is to change the logo and links in the top right hand corner of the template to reflect your own organization or agency.

**Tip:** If you want to create multiple map tours, you don't need to download the template multiple times. You can conveniently access your map tour template, and the customizations you have made to it, via a URL to your template that contains a parameter that sends the ID of the web map you want the template to display. In this way you can easily create a series of map tours all based on the single installation of the template. You configure your template to only accept web maps owned by your ArcGIS account name, so unauthorized map authors can't access your template in this way.

# 1. Download and install the template

If you've not downloaded the template zip file yet, you can get the zip file that contains it via this link:

[http://links.esri.com/storymaps/map\\_tour\\_template\\_zip](http://links.esri.com/storymaps/map_tour_template_zip)

Unzip the zip file and copy its contents into a new folder in the file structure of your existing website or web server. The location of the template's Index.html file defines the URL that will be used to access your map tour. For example if your website is using a web server like Internet Information Services(IIS) you would create a folder in its root file structure (C:\inetpub\wwwroot) and copy the contents of the template zip file into it. So if you created a folder called:

```
C:\inetpub\wwwroot\map_tour
```

and your website's domain is <http://www.example.com> then the URL of your map tour will be:

```
http://www.example.com/map_tour
```

When we talk about a web server here we're not talking about ArcGIS for Server. ArcGIS for Server is a product that allows organizations to create and serve web services that use GIS data. ArcGIS for Server is not needed in order to use this template. By 'web server' we mean the standard web server that you use for your website or web pages. This might be a web server that you or your organization maintains. Or it may simply be a folder on a shared or hosted web server that you use for your website or web pages.

For example imagine you are a small community organization, like a 'Friends of the Bay' type environmental group, whose website is hosted on one of the popular web hosting sites, like iPage or Bluehost. In order to deploy a map tour you would simply download the template and then log in to your account, and put the files into a new folder in the file tree for your website. If you work in a large organization you might work with the administrator of your organization's website or web servers, to install the template file. In other words, downloading the template and hosting it isn't a big deal. You are just putting some files onto the web so they can be accessed by people.

**Tip:** We don't recommend installing the template in an online file sharing system like Dropbox. We have noticed that story map templates installed on a Dropbox account sometimes don't load when opened in certain browsers because of how they handle Dropbox security.

## 2. Assemble the images and videos

Map tours can contain image and videos. We'll start by describing how to use images. For each image in your map tour, you need two image files, one at full size for display to the left of the map, and a small thumbnail image for display in the thumbnail strip at the bottom of the app. Images should be in JPG or PNG format. BMP and GIF are supported but not recommended. We recommend using a file naming convention to differentiate the full size images from their respective thumbnail images, such as buckwheat.jpg and buckwheat\_thumbnail.jpg.

For the full size image, we recommend landscape orientation photos instead of portrait. Portrait orientation images can be used but on smaller screens like the iPad, a lot of the photo may be obscured by the caption, because text takes up more space when it is displayed in a tall area compared to a wide area. Although images of different sizes, shapes and orientation can be used in one map tour, we recommend using the exact same size and shape for all the images. In this way, the user won't be distracted by different sized images as they follow the tour. Also, the size and shape of the first image in your tour determines the size and shape of the image viewing area to the left of the map: the size and shape of that area doesn't change while a map tour is being viewed (unless the user resizes their browser window or changes the orientation of the mobile device they are holding).

For the full size image, the recommended size is 1000 pixels wide x 750 pixels tall (4:3 aspect ratio). This ensures your images are nice and crisp on a variety of monitor sizes and fill the image area to the left of the map nicely. Taller landscape images up to about 1000 x 800 also work OK, and fill the available space even more. Images in the common 3:2 aspect ratio work OK too, but they don't fill the available image area quite as fully and there is less space for the caption when the tour is viewed on a small display such as the iPad. The recommended size for 3:2 aspect ratio images is 1000 pixels wide x 667 pixels tall. The size you use may depend on the format you obtain your images in and how much manipulation of the images you are willing to do. Don't worry if your images don't match the recommendations above, because images that are larger or a different aspect ratio still work OK. We scale them down to fit. Images can be smaller but on large displays they will be stretched to fit which might make them fuzzy.

The thumbnail images should be landscape orientation in 3:2 aspect ratio and the recommended size is 200 pixels wide x 133 pixels tall. Larger thumbnails will be scaled down to fit.

Each point feature in your map tour layer normally references its image and its thumbnail image via two URLs. However, if you are creating an ArcGIS feature service for your map tour points, you also have the option to handle your images as attachments, in which case the images are stored in the feature service itself.

If your images will be accessed via a URL, which is normally the case, you can put them anywhere on the web. For example you could make them available via your own website or web server, or you could put them on public file or photo sharing site, such as Flickr, as long as you can get a direct URL to the actual image file itself, (not to a web page such as a page in a gallery in which the image file is embedded). If you choose to put the images on your own web server or website, you could put them in the same folder into which you copied the template file, but it is better to put them in a separate folder, especially if you intend to run multiple map tours from the same template installation.

Third party images on public websites can be accessed in the map tour via a URL but this of course doesn't give you control over the size, format and availability. Be aware of copyright restrictions on images. If there's a photo credit or acknowledgement, include it in the caption.

## Using videos instead of images

You can display videos instead of images for some or all of the points in your tour. The template doesn't include a generic video player. Instead you use the URL that your video hosting service, such as YouTube, provides for embedding videos via a link. So look for the option to embed the video and copy the URL present in the code that is provided. (If you want to host the videos yourself, you can create an HTML page that contains a video player like <http://www.videojs.com/>)

To embed a video in your map tour, you need to specify a URL that goes to the video itself, not to a web page which features the video, like a YouTube page. For example, let's say you want to embed the YouTube video that appears on this page:

[http://www.youtube.com/watch?v=EI2\\_1n-45q4](http://www.youtube.com/watch?v=EI2_1n-45q4)

into your tour. On that YouTube page, click the Embed option, and then copy the URL shown for the 'src' portion of the embed code:

Share this video   **Embed**   Email

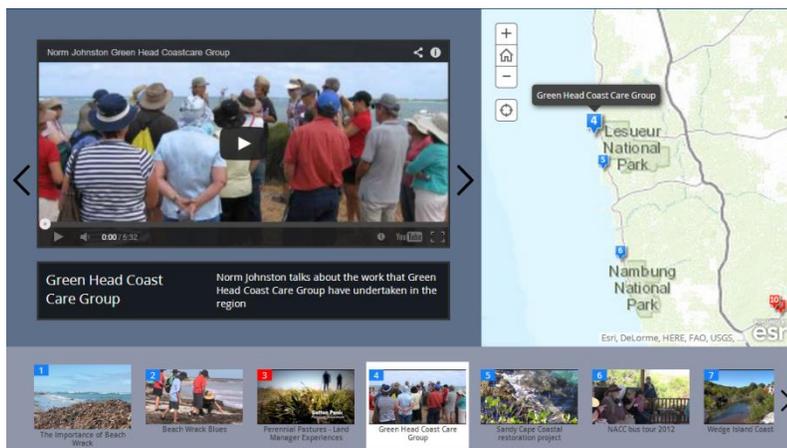
```
<iframe width="420" height="315" src="//www.youtube.com/
/embed/EI2_1n-45q4" frameborder="0" allowfullscreen>
</iframe>
```

and then add that into your map tour layer preceded by http://, so the URL will be:

[http://www.youtube.com/embed/EI2\\_1n-45q4](http://www.youtube.com/embed/EI2_1n-45q4)

Then in your map tour layer, make sure there is a field called is\_video, and make the value of that field is the string "true". (All of the sample data files that come with the template already contain that field).

Here's an example of a video from YouTube used instead of an image in a map tour. The area for the name and caption is automatically positioned underneath the video display so that the controls at the bottom of the video are not obscured.



When you use a video, you still need to provide a thumbnail image. This could be a photo, like in the example above. Or you could make a little screenshot of the video itself and use that as the thumbnail.

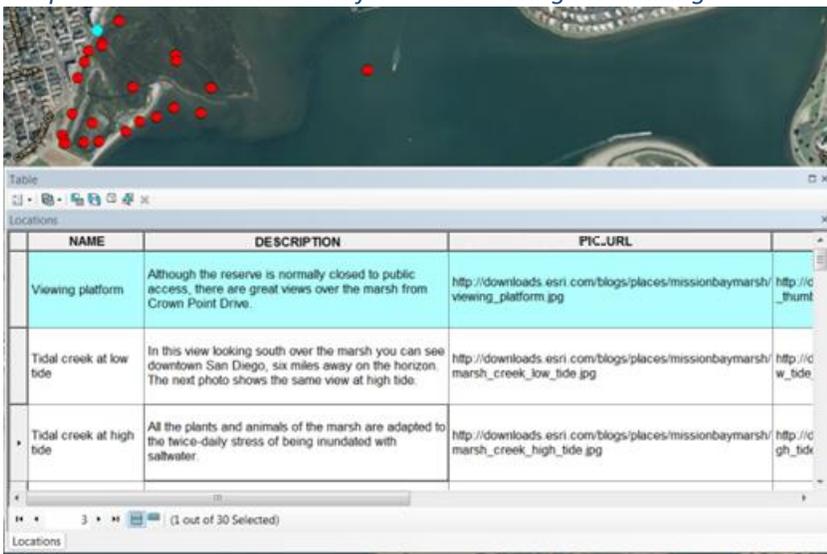
### 3. Assemble the map tour points layer

You have several options for assembling your map tour point layer. These are all standard options for adding data to ArcGIS web maps so these will probably already be familiar to you if you have been using ArcGIS Online:

A) Create a text file (i.e. a CSV file) which you can then upload into your web map as a layer. To create a CSV file you can use Microsoft Excel to create a spreadsheet which you then export as a CSV file, or you can so the work directly in a text file editor like Windows Notepad. Each line in your CSV file defines one point in your map tour. The geographic location of each point is given either by Lat/Long coordinate values or street addresses. This is the simplest way to create your tour point layer. We recommend using Excel to create your CSV file because it automatically handles CSV formatting such as enclosing text strings in double quotes if they contain commas.

B) If you have ArcGIS for Desktop, create and edit your points as a feature class and then export that feature class to a CSV file. This is a handy workflow that saves you having to manually assemble Lat/Longs or addresses for your points, because you can take advantage of ArcMap's editing tools to interactively place and edit the points in your layer without having to manually assemble Lat/long coordinates or street addresses. This workflow also lets you re-use your existing GIS data as map tour points. Before you export your feature class to CSV, you need to add Lat/Long fields in Double field type format and populate them using the Calculate Geometry command in the ArcMap table window. To export your feature class to CSV, look for the Export command in the table window's Options menu. ArcMap's CSV export automatically applies formatting to your data, such as enclosing text strings that contain commas in double quotes.

*The screenshot below shows map tour points being edited in ArcMap prior to being exported to a CSV file. You can use the Cell Height setting in the ArcMap table window Appearance dialog to make the long text strings wrap around inside their cells for easier reading and editing.*



The screenshot shows the ArcMap interface with a map of a coastal area. A table window titled 'Table' is open, displaying a list of map tour points. The table has three columns: NAME, DESCRIPTION, and PIC\_URL. The data is as follows:

NAME	DESCRIPTION	PIC_URL
Viewing platform	Although the reserve is normally closed to public access, there are great views over the marsh from Crown Point Drive.	<a href="http://downloads.esri.com/blogs/places/missionbaymarsh/viewing_platform.jpg">http://downloads.esri.com/blogs/places/missionbaymarsh/viewing_platform.jpg</a>
Tidal creek at low tide	In this view looking south over the marsh you can see downtown San Diego, six miles away on the horizon. The next photo shows the same view at high tide.	<a href="http://downloads.esri.com/blogs/places/missionbaymarsh/marsh_creek_low_tide.jpg">http://downloads.esri.com/blogs/places/missionbaymarsh/marsh_creek_low_tide.jpg</a>
Tidal creek at high tide	All the plants and animals of the marsh are adapted to the twice-daily stress of being inundated with saltwater.	<a href="http://downloads.esri.com/blogs/places/missionbaymarsh/marsh_creek_high_tide.jpg">http://downloads.esri.com/blogs/places/missionbaymarsh/marsh_creek_high_tide.jpg</a>

**Tip:** we have noticed a bug in the CSV export from ArcMap where the CSV file may be incorrectly formatted if the field containing the caption includes HTML tags such as links. If you'll be including HTML tags in your caption, a recommended workflow is to add them after exporting the table to CSV by loading the CSV file into an app like Excel, or using the feature class to Excel geoprocessing tool in ArcMap 10.2 to go directly from an ArcMap layer to Excel, from where you can then export the file to a CSV file).

C) In ArcGIS for Desktop create a point shapefile, or re-use an existing shapefile, which you can then upload into your web map as a layer. Using a shapefile lets you position and edit your tour points in ArcMap interactively without having to manually assemble Lat/long coordinates or street addresses. Because shapefiles can be uploaded directly into ArcGIS web maps, there's no export you need to do. After you have completed your shapefile, simply zip all its constituent files up into a .zip file (for example by using the 'Send to Compressed Folder' option in Windows Explorer) and then you can upload it into your web map. However note that shapefiles impose a 254 character maximum length on text fields which may not be long enough for the captions you typically want to use in a map tour.

D) Create an ArcGIS feature service containing point features which you can then add into your web map as a layer. You can create a feature service containing your map tour points in ArcGIS Online using an ArcGIS for Organizations subscription or with ArcGIS for Server. One advantage of using a feature service is that you have the option of storing your map tour images as attachments in the service, so that all the content is managed in one place.

## Samples folder

Irrespective of which option you choose for assembling your map tour point layer, its attributes need to follow the schema that the template expects. This schema is described later in this section. But the easiest way to assemble your map tour layer is to use one of the ready-to-use sample files that you can find in the \samples folder in this template download. These files already use the map tour schema, so you can simply fill in your own information in place of what is there.

There are some ready-made CSV and Excel files in each of the common geocoding styles. If you want to use Excel to assemble the point data, use the XLSX file and then export it to a CSV file using the Save As command in Excel:

```
\samples\csv_file__lat_long
  Locations.csv
  Locations.xlsx

\samples\csv_file__address__one_field
  Locations.csv
  Locations.xlsx

\samples\csv_file__address__four_fields
  Locations.csv
  Locations.xlsx
```

There's a shapefile called Locations, along with the MXD file used to edit it. In the MXD file, we've formatted the Locations layer's table window to make it easy to work with long strings:

```
\samples\shapefile
  Locations
  Locations.zip
  Map Tour.mxd
```

There's a geodatabase point feature class provided in both LPK and MPK formats:

```
\samples\feature_class
  Locations.lpk
  Map Tour.mpk
```

You can use this geodatabase point feature class sample if you want to define your map tour points as a geodatabase feature class in ArcMap and then export them to a CSV file. Before you export the layer to a CSV file, be sure to recalculate the LONG and LAT fields in the layer, so the locations of your map tour points are captured in the layer's attribute table before you export it. You can also use this sample geodatabase feature class if you want to create a feature service, in which case you can delete the LONG and LAT fields (because they aren't needed in the case of a feature service). This sample references the images via URLs rather than storing them as attachments. If you want to store your images as attachments in the feature service you create you can delete the URL and THUMB\_URL fields. The full sized images need to be the first attachment in the service and the thumbnail images need to be the second attachment.

## Map tour layer schema

Here is a list of the attributes the map tour template expects your map tour point layer to have. If you have used one of the samples that come with the template you can probably skip this section because your map tour layer will already have the correct schema.

The order of the fields doesn't matter. Neither does the case of the field name. Your file can also contain additional fields, but they are ignored by the template and the information in the extra fields doesn't appear in the map tour. For example, if you have a point feature class in ArcMap containing additional attributes that you want to export as a CSV file, you don't need to remove or rename those existing fields as long as they don't conflict with the field names the template is expecting.

(If you are using a feature class or shapefile to assemble your points, note the list below doesn't include the ID and SHAPE fields that ArcGIS for Desktop automatically manages. If you are using a shapefile there is a 254 character limit to the length of text strings, including spaces).

*NAME* A text string containing the name of the place. This can contain multiple words. Don't make these too long. The name appears next to the caption on top of the full sized image and underneath the thumbnail image, where there is space for it to wrap around onto a second line. There's not a third line so names that don't fit get truncated.

*DESCRIPTION* A text string containing the caption. Your description text can include HTML tags to format the text or provide hyperlinks. See below for some examples of this. Try and use no more than approximately 350 characters (including spaces) for your captions. Longer captions are allowed and on a big screen it may seem like there is lots of space but when a map tour is displayed in a small browser window or a small display like the iPad in landscape orientation the area for the caption is limited, and users may have to scroll to see the complete caption. For this reason we recommend reviewing your map tour on an iPad in landscape orientation before finalizing your captions to see how they behave. (You can call this field CAPTION instead of DESCRIPTION. For example if you are creating a shapefile use CAPTION as DESCRIPTION is too long to be used as a field name in a shapefile).

*PIC\_URL* The full URL path and name of the full size image starting with http:// or https://. Relative paths are also supported if your images are installed on the same web server or location on your website as the map tour template itself. You can take advantage of this capability if you want to store your image files with the template files and avoid having to specify the full URL to each image in your map tour point file. For example, if you store your image files in the same folder as the map tour template, you can specify them in this URL field just as file names, with no URL path. (You can also call this field URL).

If you are using a feature service you have the option to omit the PIC\_URL field and instead store the images in the feature service as attachments. If you use attachments, the full size images have to be the first attachment in the feature service. Instead of being an image, this field may also be a video. To link to a video, the URL has to a) be the URL that the video hosting service provides for embedding video in a

web page, so that the host video player can also be accessed in the map tour and b) should be proceeded with the special parameter #isVideo (which is case sensitive) to tell the map tour template to handle the link as a video, for example: <http://www.youtube.com/embed/MaLetlLba5c#isVideo>

- THUMB\_URL** The full URL path and name of the thumbnail image starting with http:// or https://. Relative paths are also supported if your images are installed on the same web server or location on your website as the map tour template itself. If you are using a feature service you have the option to omit this field and instead store the images in the feature service as attachments. If you use attachments, the thumbnail images have to be the second attachment in the feature service.
- ICON\_COLOR** Field that specifies the color of each tour point. The value of this field must be one of the following single letters: R, G, B, or P, for Red, Blue, Green or Purple. We recommend keeping things simple and just using one color for all the tour points, unless there's a reason that will be obvious to the user of your tour (remember there's no legend in the map tour).
- IS\_VIDEO** Optional text field uses to specify whether the PIC\_URL points at a video or an image. Use this field if your map tour contains any video. If the PIC\_URL goes to a video the value of this field should be "true". If the value of this field is empty or "false" then the PIC\_URL is handled as an image. If the field is omitted, all PIC\_URLs are handled as images unless they end in the #isVideo qualifier (which was how video content was specified in the previous version of the template).

**Tip:** If you have existing data that you want to use in map tours without changing field names to match the schema shown above, you can customize the set of field names that the template expects in the /app/maptour-config.js file in the template. In that file, look for the FIELDS\_CANDIDATE settings.

If you will be uploading your points into your web map in a CSV file, you'll also need to specify the geographic location of each point. This is the standard functionality in ArcGIS Online for uploading CSV files into web maps as layers so you can refer to the ArcGIS Online help to find out more details. In CSV files the locations of the points are specified either as latitude and longitude coordinate fields in decimal degrees, a single field containing a complete street address, or four fields containing each of the components of the street address, as shown below:

**LONG** Longitude (X) coordinate in decimal degrees, *e.g.* -117.17582  
**LAT** Latitude (Y) coordinate in decimal degrees, *e.g.* 32.73634

Or:

**ADDRESS** Text string containing the entire street address, *e.g.* 4015 Crown Point Drive, San Diego, CA 92109

Or:

**ADDRESS** Text string the street or road name and number, *e.g.* 4015 Crown Point Drive  
**CITY** Text string the city or town name, *e.g.* San Diego  
**STATE** Text string containing the state name or abbreviation, *e.g.* CA  
**ZIP** Text string containing the zip code or post code, *e.g.* 92109

**Tip:** We recommend using lat/long fields in your CSV file instead of street addresses to specify the location of your points. Using lat/long gives you complete control over the exact location of your points, whereas street addresses are anchored to the street network and for many places, like parks, etc, the actual street number location or mailing address may not be the best location for the place's marker symbol. Remember you can edit the locations of the places in your CSV file interactively after you have uploaded them into the web map, so you don't need to assemble the exact locations in the CSV file before you upload it. However, in our experience the best practice is to put the exact lat/long values into the CSV file before uploading it into your web map instead of relying on interactive editing of the points. In this way, if you find you need to reload the

CSV file, for example, to reorder the points or add new ones, you won't need to reapply any manual edits to the data after the reload. An easy way to gather lat/long coordinates for the places in your CSV file is to use the Measure tool in the ArcGIS.com map viewer with any web map showing your area of interest. Another reason to use lat/long for your CSV file is that you can drag and drop this CSV file into the interactive map tour builder to define a map tour in the hosted version of the map tour. (The interactive map tour builder doesn't geocode street addresses when you drag and drop a CSV file into it).

If you are going to create your CSV file by exporting a **feature class** from ArcMap, your feature class attribute table must contain the lat/long or address fields before you export it to CSV format. Lat/long is best because it works for any type of point location and doesn't require address geocoding. The Lat/Long fields in your feature class attribute table can be populated and updated automatically in ArcMap using the Calculate Geometry command.

If will be uploading your points as a **shapefile** or using a feature service you don't need to include these fields because those formats automatically stores the point locations.

### **Tour point order**

The order of the records in your map tour point layer determines the order of the places on the map. To reorder your tour points you therefore need to change the order that their records appear in the layer. You can do this manually in a CSV file but if you are using Excel to create your CSV file it is easiest to add an additional column into the file containing the numeric sequence of your points, and then just sort your records on that field in Excel if you want to change their order. Similarly, if you are creating your tour points as a shapefile feature class in ArcMap, it is useful to include an additional numeric field in your layer's attributes containing the numeric sequence you want. You can then edit that field and sort the layer's records on that field using the Sort geoprocessing tool in order to change the tour point order. Use the Short integer data type for the number field you add.

### **The intro image and caption**

By default the first record in your layer is treated as being the intro or 'cover' picture for your map tour. This isn't shown on the map as a numbered tour point. This enables you to show a photo and some text to introduce the tour before people advance to the first place. Even though it isn't shown on the map, this first record in your map tour point layer still needs to be a geographic feature with a point location like all the other points in your tour. This is so it is accepted as a feature by the web map when you add into the map. So you'll need to specify a location for this first record, even though by default it won't be shown in your map tour as a point.

If you don't want your map tour to have an intro picture, and would rather the map tour open up showing the first point in the tour, there is a configuration parameter you can specify to override the intro, in which case the first record in your layer is treated as the first map tour point.

### **Layer name and position in your web map's drawing order**

You can give the CSV file, shapefile or feature service you create any name. 'Locations' is a good name to use, and it was the default name used in earlier versions of this template. So if you are using a CSV file you can call your file Locations.csv. The map tour template uses the point feature layer (i.e. layer based on CSV, shapefile or feature service) in your map that highest in the drawing order. So for most web maps the template will find your layer automatically, especially as most web maps used in the map tours just contain one layer, the map

tour layer, in addition to the basemap. If you will be adding several layers to your web map, and you want to make sure the template uses the correct one as the map tour layer, there is a configuration parameter you can use to tell the template the name of your map tour layer. See the details below.

## Formatting your caption text using HTML tags

The caption text can include HTML tags to define formatting and links. For example, the caption text below is formatted so that the photo credit part of the caption appears on a separate line in a smaller italic font than the rest of the caption:

This bustling New York-style deli is a long-time favorite of locals, visitors, and convention attendees. Breakfast starts at 7am daily so get there early!  
(Photo: Eric Laycock/Esri)



In the example below, the caption text below contains a hyperlink. Use the target attribute to make the link open in a new browser tab so that the user doesn't lose their place in the tour if they follow the link.

Much of the art collection here was donated or loaned by some of the town's wealthy and celebrity residents. Free admission every Thursday evening. (Photo: Palm Springs Bureau of Tourism). [More Info](http://www.psmuseum.org)



**Tip:** The examples above show how you would specify the formatting in the caption if you are editing your tour points in Excel or ArcMap. If you are editing your CSV file directly in a text editor like Windows Notepad, you have to double up any double quotation marks inside HTML tags if the caption text is itself inside double quotes. So the font size attribute is specified as ""1"" in the example below because the entire caption string is inside double quotes (which is how the CSV format handles strings containing commas). The doubled up quotation marks tells the CSV file that you want the caption string to contain a double quote character, and prevents it from handling the double quote as though it was the end of the string.

```
Sherman's Deli and Bakery,"This bustling New York-style deli is a long-time favorite of locals, visitors, and convention attendees. Breakfast starts at 7.00 a.m. daily, so get there early!  
(Photo: Eric Laycock/Esri)",-116.543243,33.822873,http://downloads.esri.com/blogs/places/palmsprings/tour/shermans_deli.jpg,http://downloads.esri.com/blogs/places/palmsprings/tour/shermans_deli_thumbnail.jpg
```

There's no need to double up quotation marks in HTML tags if you are using Excel, ArcMap, or any other app that lets you export a CSV file, because those apps will automatically do that for you as part of the export.

## 4. Create your web map

This step involves logging in to ArcGIS.com with your free or organizational subscription account and creating a web map either with the [ArcGIS.com map viewer](#) and then loading in the tour points layer you created in the previous step. After loading in your tour points layer, you don't need to specify symbology or popups for it in the web map. The template automatically defines how the tour points layer is handled in the application.

You can use any of the built-in ArcGIS basemaps, or use any custom basemaps. For example, if your organization has created its own basemap, simply use that in your web map. Don't forget that you can also apply transparency to your web map's basemap to mute or tone down its colors. This can be useful if you want to make the map tour points, or other supporting layers in the map, stand out more prominently on the map. To apply transparency to the basemap, use the ArcGIS.com map viewer because ArcGIS Explorer Online doesn't let you do that.

### Add optional supporting layers

In addition to the layer containing the points in your map tour, and the basemap that you choose, you can also add additional data into your web map that the map tour application will display. For example if your map tour is of a particular park, reserve or study area, you could add a boundary into the web map showing the outline of that area. Or if your map tour is a walking or driving tour you could add a line to the map showing the recommended route to take between the different points in the tour.

You can draw these additional features onto your web map using the built-in editable map notes functionality in ArcGIS.com. (Note that if you use editable map notes to add additional features, they will be drawn underneath the tour point symbols in the map tour application, even though in the web map, these editable map note layers appear above the tour points layer in the drawing order). You can also upload these additional layers as point, line or polygon shapefiles created with ArcGIS for Desktop or any type of services served with ArcGIS Server or via an ArcGIS organizational subscription.

You should symbolize any additional layers that you add in your web map in the way you want them to appear on your map tour. However you don't need to define popups for these supporting layers. The map tour template doesn't supporting getting popups or any other information from supporting layers: they are just for display.

### Choose the initial extent of your map

The initial extent of a web map is simply the spatial extent it shows when it is opened. This extent is whatever extent was being displayed the last time that the map's author saved the map.

When a user opens a map tour application app, the first extent they see is the initial extent of the web map. After they've navigated around the map, they can also return to this initial extent by using the Home button (the house icon) on the map. This provides a nice way for people to get back to base after they've been somewhere else.

Your initial extent is an important information design choice for your map tour application. You can choose between having all of the tour points visible in the initial extent or just showing a subset of them. In the latter case, the template will automatically pan the map to show the user the location of the tour point the user has advanced to if it isn't visible in the map's current extent. Your choice may depend on the density of places on your map.

## **Save your map, specify its name and summary, and make it public**

When you save your web map, the title you specify is used as the title for your map your application, and the summary you specify becomes the byline or subtitle in the map tour banner. You can always change this text later by editing the web map's details. The other information on the Details page, such as Description, Access Constraints and Tags is not used by the template. You must also make the web map public via the Share button on the Details page for the web map. (Story map templates don't currently support private or restricted access web maps out of the box).

You are done with the web map part of the process! That's the hard part done. Now you just need to put the template on your server and configure it so that it uses your web map.

## 5. Configure the template

Now you've created your web map and shared it publically, you are ready to configure the template to tell it to use your web map, to use your organization's own logo instead of Esri's logo, and so on.

### Point the template at your web map

1. In the template folder, open the **index.html** file in the text editor of your choice such as Windows Notepad or Windows WordPad. Look for the template configuration section of the file. Go to the Template configuration section of the file.

```
//-----  
//      Template configuration (ignored on Portal)  
//-----
```

2. In the template configuration section, update the **webmap** property to be the ID of your web map. This tells the application which web map to use. For example, our National Mall walking tour web map has this URL <http://www.arcgis.com/home/webmap/viewer.html?webmap=a5019e8c55d547eab69c0777dcd7509a> and the ID of this map is the last part a5019e8c55d547eab69c0777dcd7509a.

```
configOptions = {  
    // Enter either a web map ID or a web application ID  
    // - Using a Map Tour application ID created through the interactive builder in  
    //   ArcGIS.com allow to reuse the settings like the header configuration  
    //   without having to edit any configuration here  
    // - Web map and application can be dynamically specified through url parameters  
    //   (webmap and appid) if the authorizedOwners property is specified (see below)  
    // - If an application id is specified, the webmap configuration isn't used.  
    webmap: "a5019e8c55d547eab69c0777dcd7509a",  
    appid: "",
```

(Make sure you don't delete the comma at the end of the line when you edit this parameter or any others).

Leave the **appid** property that you see on the next line empty (like you see in the example above).

Leave the **authorizedOwners** property that you'll see lower down in the template configuration section blank. You've specified the webmap ID so there's no need to specify **authorizedOwners**.

**Tip:** if you have used the hosted map tour template (available in the Share As Web Mapping Application dialog in ArcGIS Online when you share a web map) to configure a map tour, you also have the option of referencing your existing map tour web mapping application from the template you have downloaded. In this case, leave the **webmap** property empty and enter the ID of your web mapping application into the **appid** property. This enables you to display an existing map tour and all its settings that have been configured in the interactive builder (such as the logo graphic and color scheme) using your template installation. In this case, the settings in the application you reference will be honored by the template, so you don't have to make these settings in your template installation.

### Configure optional settings

The template configuration section contains several optional settings. The key ones are listed below.

The **zoomLevel1** parameter lets you optionally specify a scale to which the map tour will automatically zoom when the user goes from your first tour point to the next one. By making the map auto-zoom at that point you

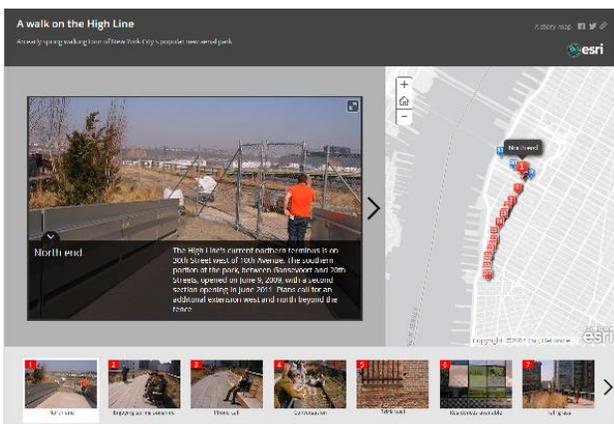
can establish the scale at which you think the user should ideally view the tour. This zoom level scale is maintained as the user proceeds through your tour. But if the user manually zooms in or out, the map tour respects their choice and no longer applies your auto zoom level. The zoomLevel is off by default (set to -1). You specify the zoom level as a number from 0 to 19. These numbers correspond to ArcGIS Online basemap scale levels. [See this help link for the list of these](#). The largest available scales will depend on the basemap you are using.

```
// Optional zoom level to be applied for the story points following
// introduction (e.g: 0 to 16 for Gray Canvas, 0 to 19 for Street
// Map, -1 to disable)
zoomLevel: -1,
```

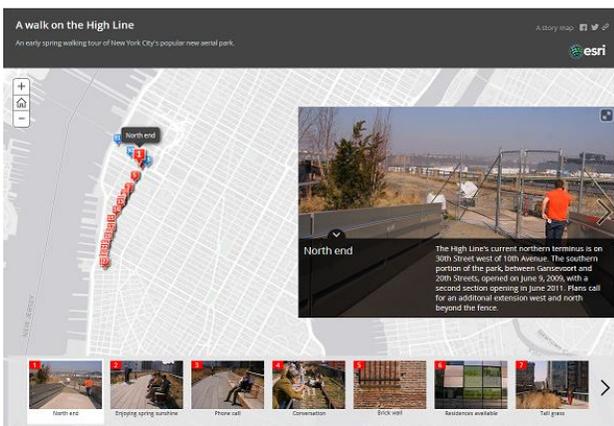
The firstRecordAsIntro parameter lets you control whether the first record in your map tour layer to be handled as an intro for the application. This is true by default. If you then change this to be false then the first record in your map tour layer will appear as point 1 in the tour.

```
// Use the first data record as an introduction instead of a point
// (can be overridden through URL)
firstRecordAsIntro: true,
```

The layout parameter lets you choose between the default three-panel layout, which has the image over to the left of the map in a separate panel:



and the integrated layout in which the image appears on top of the map and the arrow controls for moving forward and back through the tour appear when the user hover the cursor over the image:



**Tip:** The integrated layout works best when the images in your tour are all exactly the same size and shape so that the floating image area doesn't keep changing size as the user proceeds through the tour:

```
// Select the application layout between "three-panel" and "integrated"
layout: "three-panel",
```

The `sourceLayerTitle` parameter lets you specify by name which point layer in your web map you want the template to use as the tour point layer. You don't normally need to specify this because the template automatically uses the upper most visible feature-based layer in your web map as the map tour layer and that handles most cases. But there may be some advanced situations in which there are other point feature layers above your map tour point layer, in which case you can use this parameter to tell the template which layer name to use.

```
// Optionally force a web map layer to be used as the tour points
// data source (can be overridden through URL). Otherwise the upper
// visible point layer is used (excluding map notes)
sourceLayerTitle: "",
```

The `DISPLAY_LOCATE_BUTTON` parameter in the `apps/maptour-config.js` file lets you enable a Locate button in your map tour which your users can press to see their current location. When the Locate button is pressed a blue symbol shows the users location and remains on-screen for a few seconds. This functionality is dependent on the web browser and computer being used and may not work in all web browsers. When this button is pressed it may invoke a message from the web browser letting the user confirm that they want to share their location with the app so it can be displayed.



The Locate button is off by default. To enable it in your map tour, go to the `apps/maptour-config.js` file and change the following line to be true instead of false.

```
DISPLAY_LOCATE_BUTTON: false,
```

## Add your own logo and links to the title bar of your map tour

In the `\app` folder in the template download, open the `maptour-config.js` file in a text editor. These parameters at the top of the file let you change the logo graphic and links shown in the top right hand corner of the story map. To use your own logo graphic, put the image in the `resources/icons` folder in the template and update the `HEADER_LOGO_URL` parameter with the name of your file.

You can also change the colors used by the story map:

```
// Header Logo
HEADER_LOGO_URL: "resources/icons/esri-logo.png",
HEADER_LOGO_TARGET: "http://www.esri.com",
// Header top right link
HEADER_LINK_TEXT: "A story map",
HEADER_LINK_URL: "http://storymaps.esri.com/home/",
// Header, Picture Panel and Carousel colors
COLORS: ["#444", "#797979", "#c2c2c2"],
```

## Multiple map tour configuration

This enables you to use your map tour template installation for multiple map tours without having to make multiple installations of the template. This can be very convenient because you can perform customizations, like adding your organization's logo to the upper right hand corner of the template, once and then use that installation for multiple map tours. In this configuration, instead of putting the ID of a web map into the `webmap` property in the `Index.html` file, you'll pass the template the ID of the web map in the URL that is used to launch the map tour template.

1. Leave the `webmap` and `appid` properties empty. In the `authorizedOwners` property add one or more ArcGIS account user names. These are the ArcGIS users whose web maps the template will accept as valid inputs via the URL that is used to launch the template. In the example below, web maps owned by two ArcGIS accounts have been specified as valid for use in your map tour.

```
// Optional list of authorized application or web map owners
// Has to be specified when using appid or webmap url parameters
// e.g. ["user1"], ["user1", "user2"]
    authorizedOwners: ["TourismDepartment", "GISDepartment"],
```

2. In the URL you use to launch the template, include the `webmap` parameter that specifies the ID of the web map owned by the authorized owners that you want the template to display:

```
http://www.example.com/map_tour/?webmap=a5019e8c55d547eab69c0777dcd7509a
```

That's it.

3. *Optionally*, the `firstRecordAsIntro`, `sourceLayerTitle` and `zoomLevel` parameters can also be added to the URL.

Add the `firstRecordAsIntro` parameter and make it equal to `false` if you don't want the first record in the map tour layer to be treated as an intro panel for the web map:

```
http://www.example.com/map_tour/?webmap=a5019e8c55d547eab69c0777dcd7509a&firstRecordAsIntro=false
```

Add the `sourceLayerTitle` parameter if the web map contains multiple point layers and you want to make sure that the template uses the correct layer as your map tour layer:

```
http://www.example.com/map_tour/?webmap=a5019e8c55d547eab69c0777dcd7509a&sourceLayerTitle=mymaptourpoints
```

Add the `zoomLevel` parameter if you want the map tour to automatically zoom to a particular scale as the user proceeds through the tour. You specify the zoom level as a number from 0 to 19. These numbers correspond to ArcGIS Online basemap scale level. [See this help link for the list of these.](#)

```
http://www.example.com/map_tour/?webmap=a5019e8c55d547eab69c0777dcd7509a&zoomLevel=17
```

You can combine these optional parameters if you need to:

```
http://www.example.com/map_tour/?webmap=a5019e8c55d547eab69c0777dcd7509a&firstRecordAsIntro=false&sourceLayerTitle=mymaptourpoints&zoomLevel=17
```

Note that the ability to access your map tour template in multiple map tour configuration is disabled if the `webmap` property in the `index.html` file is set to the ID of a web map and the `authorizedOwners` property is blank. Multiple map tour configuration is only enabled if the `webmap` property is blank and the `authorizedOwners` property is set to one or more owner names. The list of `authorizedOwners` owners ensures that unauthorized users can't launch their map tours using your installation of the template.

**Tip:** The multiple map configuration can also be deployed using the `appid` of a hosted map tour web mapping application that you have already configured using the interactive map tour builder. In this case, you similarly leave the `webmap` and `appid` properties in the `Index.html` file empty, and then pass the ID of a hosted map tour web mapping application to the template installation using the `appid` URL parameter. As long as the app you reference is owned by one of the `authorizedOwners`, your template will display the map tour defined in that web mapping application:

```
http://www.example.com/map_tour/?appid=bf34cf8be894467c94581ed3eeb14c4c
```

## Other customizations

You can of course edit and customize the code in any way you want! That's why we freely provide the code for the template. The template is written in JavaScript.

Most of the settings you would tailor in the code to customize a map tour are in the `apps/maptour-config.js` file, so be sure to look in that file. For example the `USE_STATIC_ICON` parameter in the Map Markers section of that file enables you to customize your map tour so that places are shown with your own unnumbered static symbols instead of with our numbered symbols:



We often post nice examples of customizations users have created on the [@EsriStoryMaps](#) twitter feed.

*If you are a developer who wants to customize the map tour application, be sure to see the Map Tour template page on Github: <https://github.com/Esri/map-tour-storytelling-template-js>. Each of the Story Map application templates is an open source project, so developers can access the source code via Github.*

## Tips

### Keep your tour short

There's a limit of 99 map tour points in the map tour template. Most map tours will of course be significantly shorter than that. Don't expect your audience to want to step through too many tour points. You might find your subject fascinating, but don't assume they will too!

### You can include HTML tags in the subtitle of your map tour

Don't forget that in addition to including HTML formatting in your map tour's captions, you can also put HTML tags into the subtitle that appears in the header bar. For example, you might want to reference a website that is a source for the information that is in your map tour. You can turn that reference into a link. Use the `target="_blank"` tag so that the link gets launched in a separate browser tab. This ensures that the user won't lose their place in the map tour if they click the link when they have already started to proceed through your tour.

```
See the <a href="http://storymaps.esri.com/" style="color:yellow" target="_blank">Story Maps Website</a>
```

### Provide a good subtitle for your map tour

We see quite a lot of nice map tours that don't have good subtitles. Use the subtitle to draw people in and interest them in your content. Also use the subtitle to tell people what place or region your tour covers, by including the city name, state, province, country, etc. Even if your tour is designed for, say, the citizens of one city, it still really helps to put your city on the map by including the province or state name. In this way anyone who opens your tour can immediately see the place it is about.

So instead of just saying 'Art to see in our downtown' say something like 'Explore the great art in downtown Napier, Wisconsin' or 'Be inspired and surprised by the art in beautiful downtown Napier, Wisconsin'.

However, don't make subtitles be too long. People will resist reading really long subtitles, especially if it is so long that they have to scroll the subtitle down to view it all. Ideally your subtitle shouldn't wrap over onto a third line when you view it on the iPad in landscape orientation or in a web browser window resized so that 6 thumbnails appear in the carousel at the bottom.

### You can embed a map tour in a web page without the title header bar

Map tours can be embedded in a web page through an iframe. When you do this, you have the option to display the map tour without the title bar being displayed. This can save some space on the page and also lets you use the area around the embedded map tour to convey title info, etc, to the user. Simply add the optional `embed` parameter to the end of the URL you put in the iframe to access your map tour:

```
http://www.example.com/map_tour?embed
```

```
http://www.example.com/map_tour?webmap=a5019e8c55d547eab69c0777dcd7509a&embed
```

Alternatively you can also disable the header bar via code by changing the `EMBED` property in the `/app/maptour-config.js` file in the template to be `true` instead of `false`.

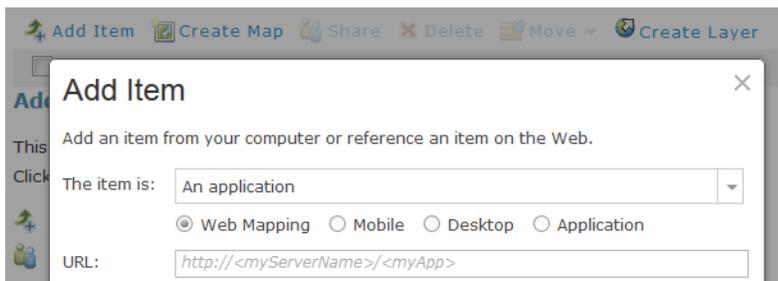
Note: if you embed a map tour in a web page make sure that the iframe is wide enough so that the map tour is displayed in Desktop mode. If the iframe is too small, the map tour will automatically switch its layout to the mobile layout, which is harder to use on a Desktop system because it is touch-orientated. The threshold is a width of 468 pixels. At 468 pixels wide and higher you will get the normal map tour layout. At 467 pixels wide and smaller you will get the mobile layout. So if you are specifying a fixed width for the embedded tour, we recommend 468 pixels or wider. If your whole web page is responsive to the browser window width, then it is best to embed the tour in a relatively sized frame whose width adjusts automatically to the browser window width.

### When you are done, add an entry for your app in ArcGIS Online

To help people find your map tour application, it is recommended that you add a 'web mapping application' entry for your map tour in ArcGIS Online once your tour is up and running.

These web mapping application entries are generated automatically for you if you use the hosted map tour that is built into ArcGIS Online. But if you download the map tour template, you should add a web mapping application entry into ArcGIS Online to represent your app. (This is also true if you download any of the story map templates or other ArcGIS Online templates). Without a web mapping application entry in place, people who search ArcGIS Online won't be able to find and launch your map tour app. They'll be able to find the entry for your web map, but they won't be able to find an entry for the app you made the map for, and so won't be able to immediately launch tour map tour. This entry is also important because the public entries in ArcGIS Online are crawled by search engines like Google. So adding this entry gives your map tour some important extra exposure because people will be able to find and then launch it via a Google search.

To add one of these entries into ArcGIS Online, go to 'My Content' and then press the 'Add Item' button. In the dialog that appears, choose 'The item is an application' from the dropdown list at the top, and, with the 'Web Mapping' radio button option selected, enter the URL of your app.



Put 'map tour' and 'story map' into the Tags field in the 'Add Item' dialog to make it easy for users to find your app if they search for examples of story maps and particularly examples of map tours. These tags also helps us in the Esri Story Maps team to find new examples of work. We are always looking for interesting examples to add into the [Story Maps community gallery](#) or to tweet on our official [@EsriStoryMaps](#) twitter account. Adding those tags ensures that your application will show up in the searches that we do. Don't forget to also add a full range of geographic place names in the Tags field. So if your map tour is about a particular city, put the city name, state or province, and region into Tags field. This all makes it easier for people to find your tour.

After you've added your item, ArcGIS Online will take you to the new entry you've created. On that page, use the Edit button to perform any further edits to the entry, especially adding a nice looking 200x133 thumbnail image, such as one of the images from your tour for the thumbnail, or a screenshot of the tour. After you've saved your edits, click the Share button to share your application item publicly.

Here are two nice examples of web mapping application entries added into ArcGIS Online, the first by us for one of the tours we made, the second by a user for a beautiful customized map tour they made.

San Diego Transportation Innovations

<http://www.arcgis.com/home/item.html?id=8d1df1eb2e1f4b6896a5cf0f1fc532dd>

Augusta, GA Public Art Tour

<http://www.arcgis.com/home/item.html?id=40bc5751851e4bb49ec281e09d6a5f1f>

### **Now you've made your map tour, promote it!**

You've made a great map tour, so make sure people can discover it. If you made your map tour in an official capacity for a government agency, get a link added into the appropriate part of that agency's website directly to your map tour, and have the agency do a tweet about your tour or add a link to it into Facebook. If you add a link to your map tour onto a website, a little thumbnail screenshot can be a good way to call attention to the link, and it also shows people what to expect before they click the link.

[Here's a nice example](#) of map tours being exposed on the website of a non-profit organization. They even provided PDF versions of the tour so that people who want to do on these tours can print out a hardcopy to take with them. So feel free to be creative!

We are on the lookout for interesting ways that map tours and other story maps have been customized, promoted and integrated with websites and blogs. We post great examples that we find in our official Twitter feed: <https://twitter.com/EsriStoryMaps>