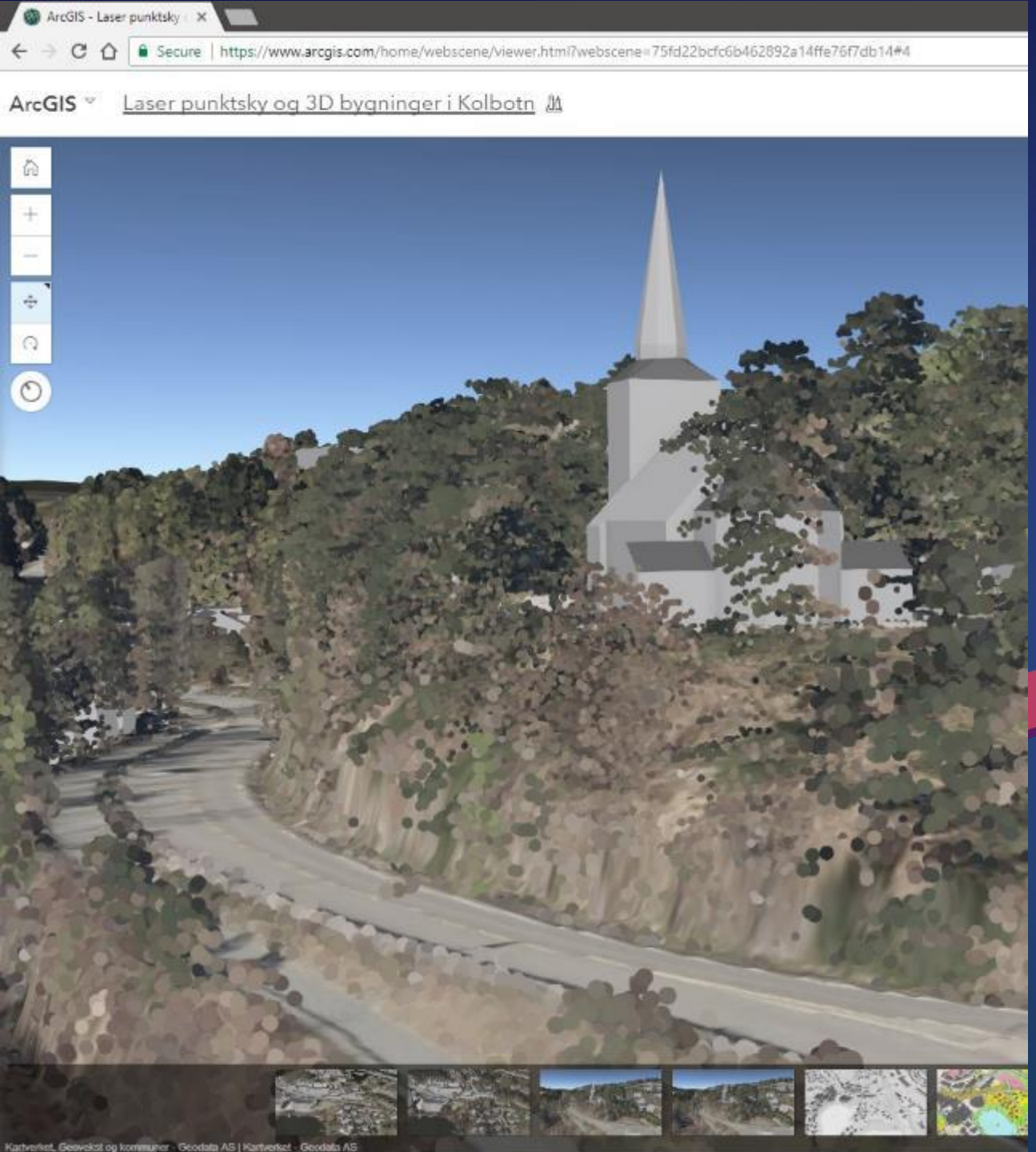
Creating and Sharing Awesome 3D Web Scenes

Madeline Schueren – Solution Engineer

Nathan Shephard – 3D Development Team



Agenda

Introduction to Web Scenes

Madeline Schueren | Esri

Examples and Best Practices

Nathan Shephard | Esri

Q&A

esri | THE SCIENCE OF WHERE

Introduction to Web Scenes

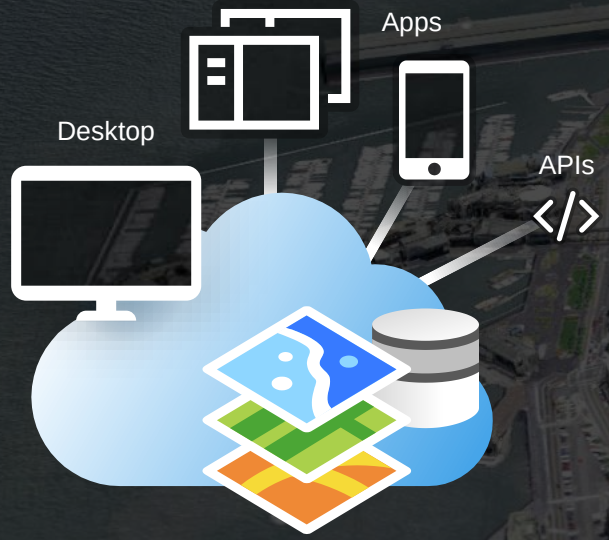
Madeline Schueren – Solution Engineer

GIS INSPIRING WHAT'S NEXT

Core 3D Capability

A 3D GIS builds on your existing data and infrastructure to help you apply 3D visualization and analytics to create a model of your environment.

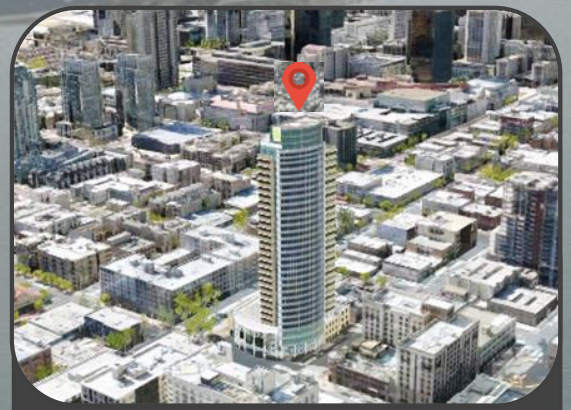
- Securely collect, manage, curate 3D data
- Reuse 2D and 3D as dynamic services across clients
- Create tailored experiences for different types of users



Cross-platform

Open

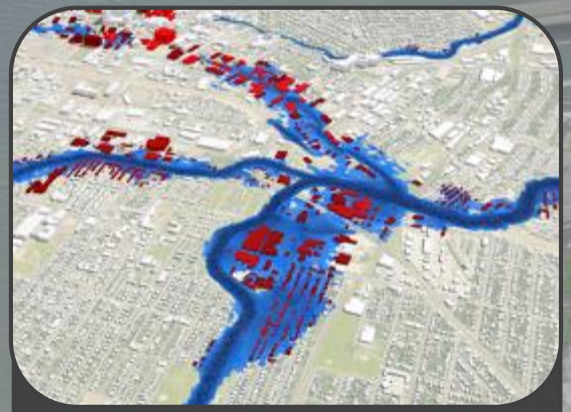
Accessible



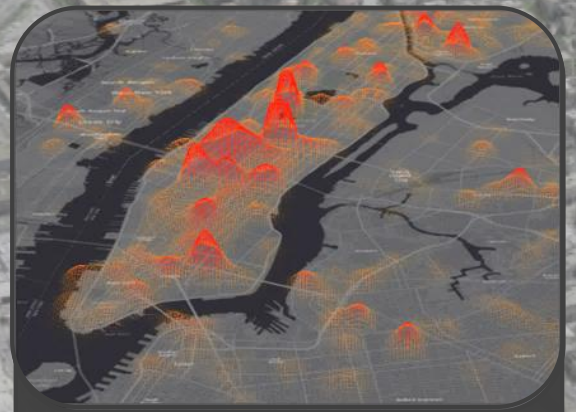
Planning, economic development, and mobility

Facilities, real estate, and campuses

Utilities and underground infrastructure

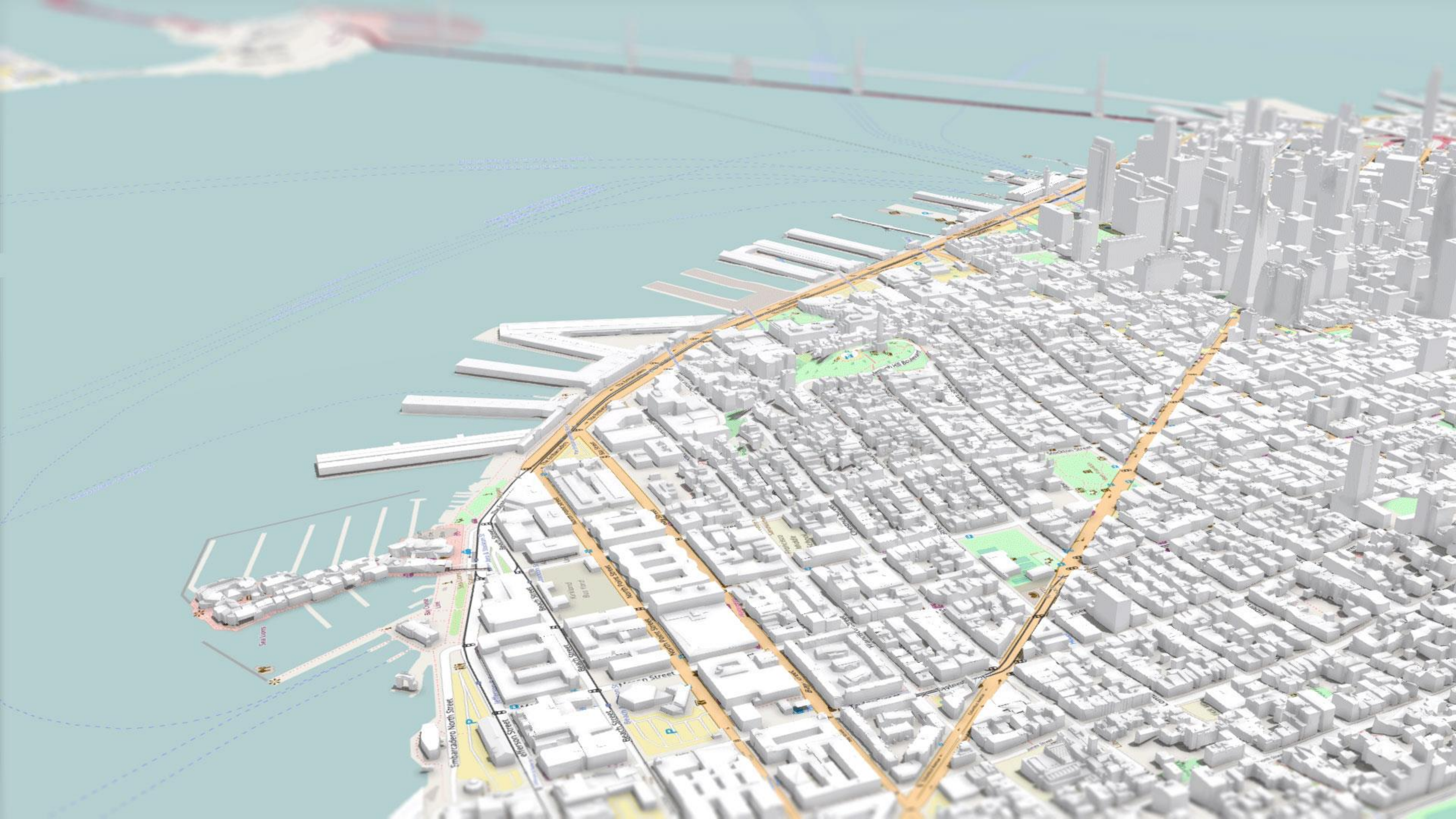


Public safety and natural risk assessment



IoT/Real Time Sensors

Cadastral Mapping



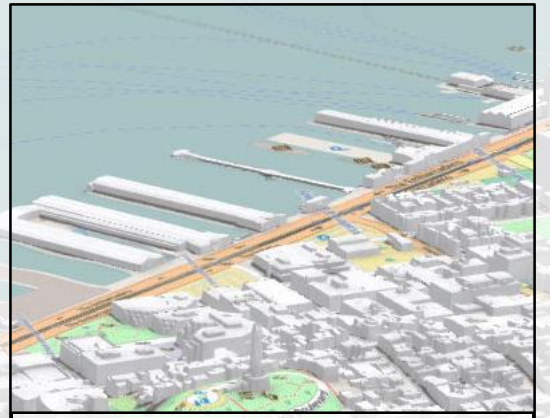
Embarcadero North Street
Jefferson Street
Beach Street
Beach Street
North Point Street
North Point Street
Bay Street
Kirkland Bus Yard
Sea Lions
Bay Cruise
Francisco Middle School
Telegraph Hill Boulevard

3D City Model

A model of the urban environment involves creating the existing urban form and structure, a system of record, established on existing best available data.

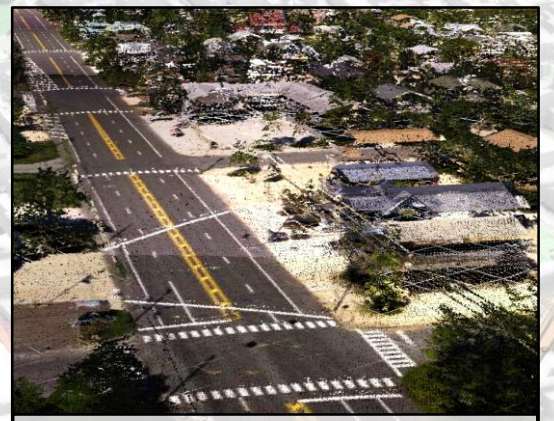
Lidar + Buildings	→	**3D Buildings**
Lidar + Trees	→	**3D Trees**
Parcels	→	**3D Spaces**
2D Basemap	→	**3D Basemap**
Imagery	→	**Imagery Overlay**
Lidar DTM	→	**Ground Elevation**

3D System of Record

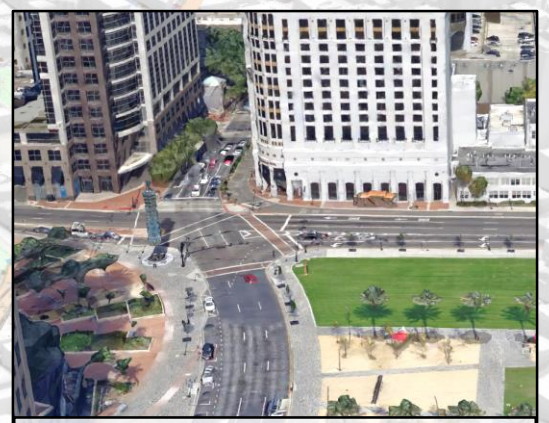


3D Features Untextured

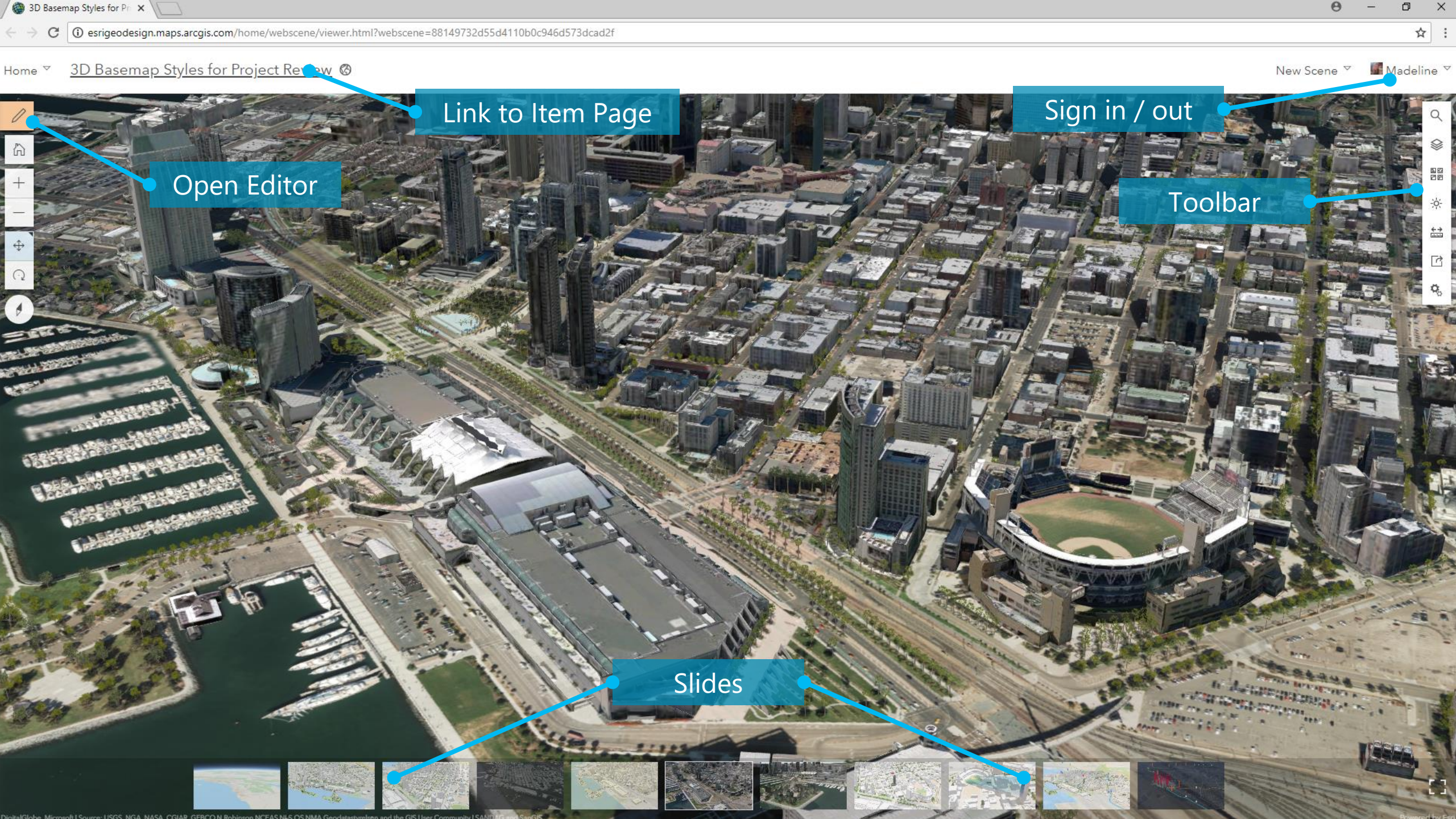
3D Features Textured



3D Point Cloud



3D Mesh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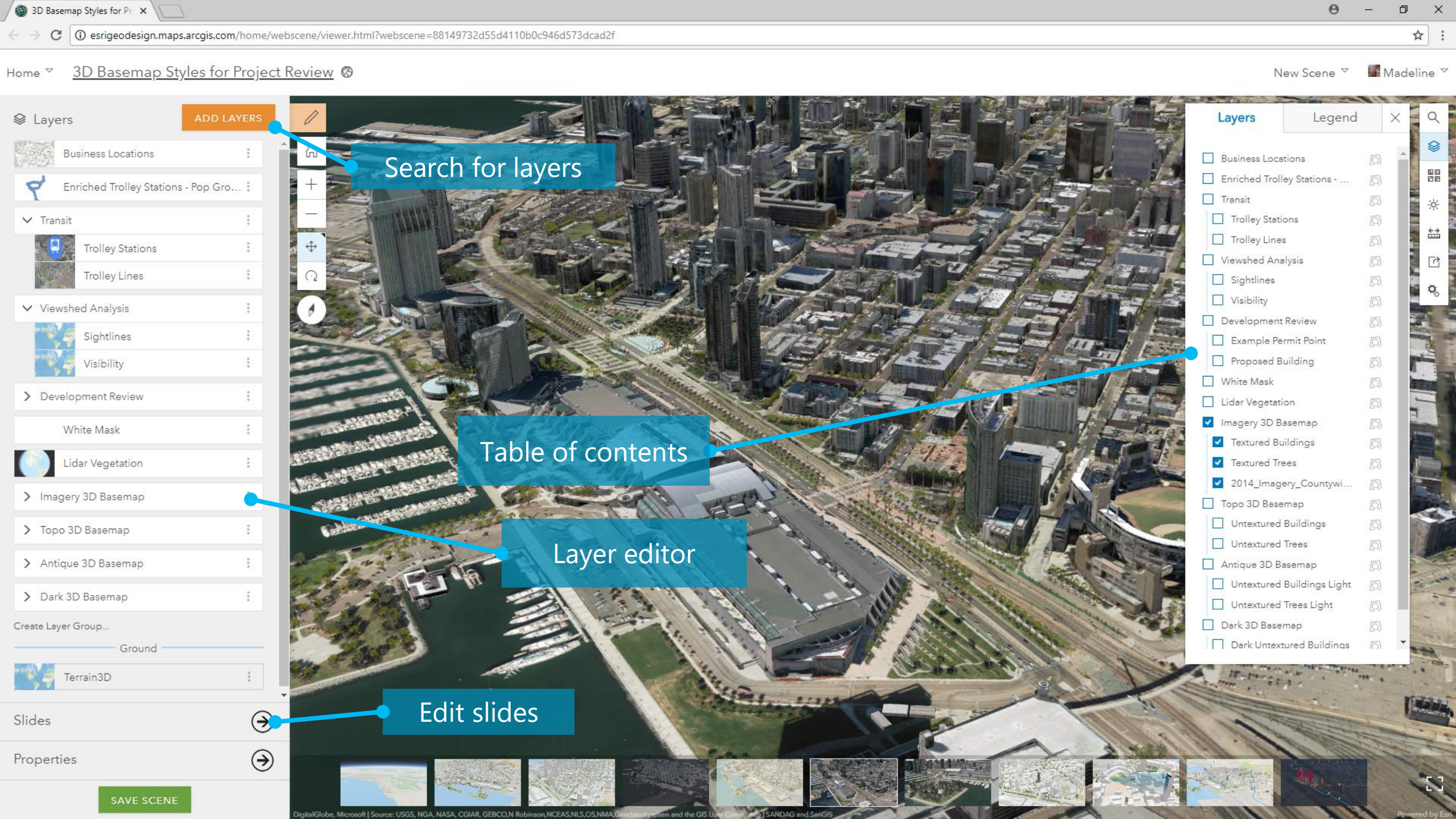
Home
3D Basemap Styles for Project Review
New Scene
Madeline
Link to Item Page
Sign in / out
Open Editor
Toolbar
Slides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Home
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New Scene
Madeline
Layers
ADD LAYERS
Business Locations
Enriched Trolley Stations - Pop Gro...
Transit
Trolley Stations
Trolley Lines
Viewshed Analysis
Sightlines
Visibility
Development Review
White Mask
Lidar Vegetation
Imagery 3D Basemap
Topo 3D Basemap
Antique 3D Basemap
Dark 3D Basemap
Create Layer Group...
Ground
Terrain3D
Slides
Properties
SAVE SCENE
Search for layers
Table of contents
Layer editor
Edit slides
Layers
Legend
Business Locations
Enriched Trolley Stations - ...
Transit
Trolley Stations
Trolley Lines
Viewshed Analysis
Sightlines
Visibility
Development Review
Example Permit Point
Proposed Building
White Mask
Lidar Vegetation
Imagery 3D Basemap
Textured Buildings
Textured Trees
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Untextured Buildings
Untextured Trees
Antique 3D Basemap
Untextured Buildings Light
Untextured Trees Light
Dark 3D Basemap
Dark Untextured Buildings
DigitalGlobe, Microsoft | Source: USGS, NGA, NASA, CGIAR, GEBCO,N Robinson,NCEAS,NLS,OS,NMA,Geodatastyrelsen and the GIS User Community | SANDAG and SanGIS
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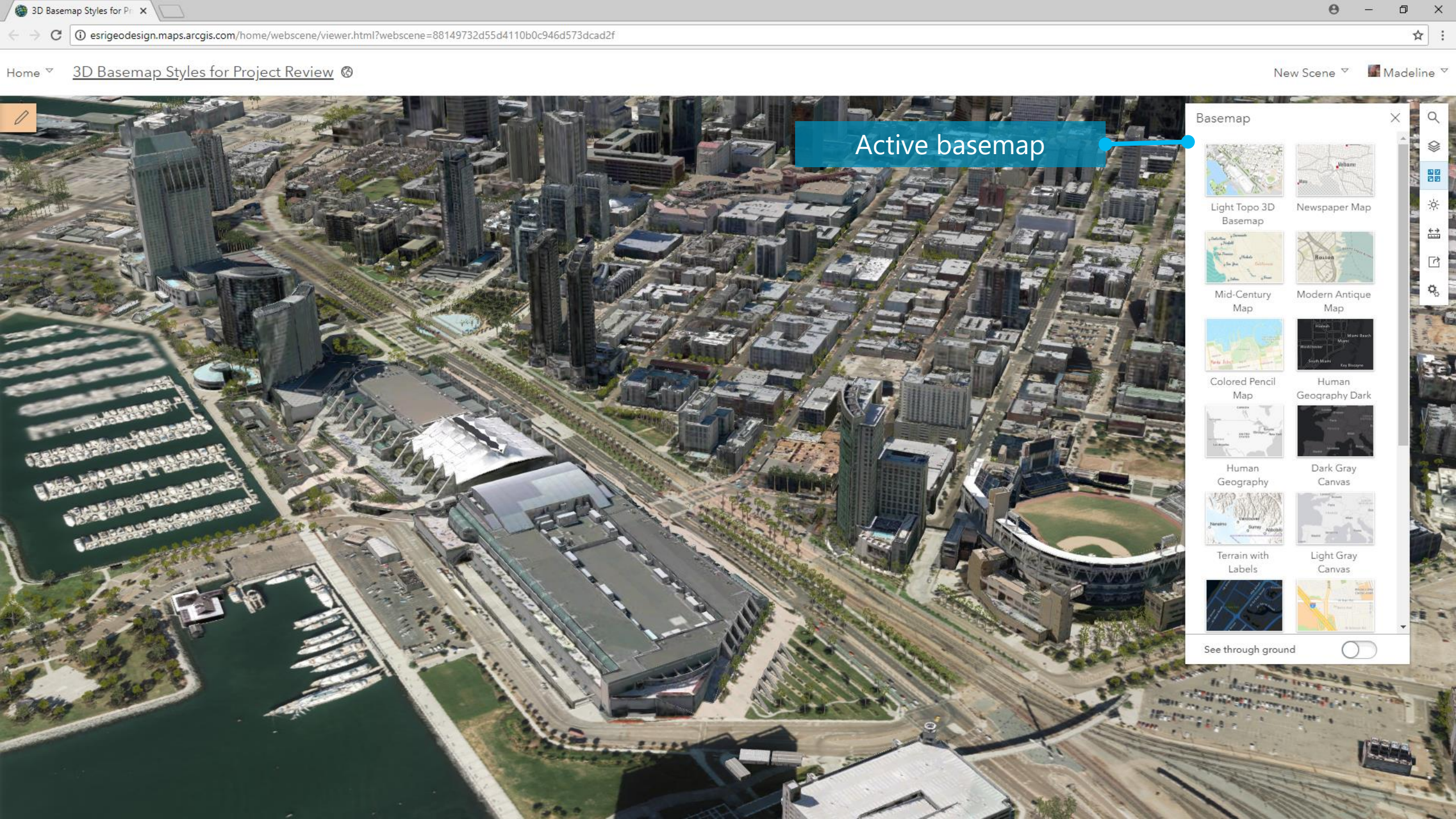
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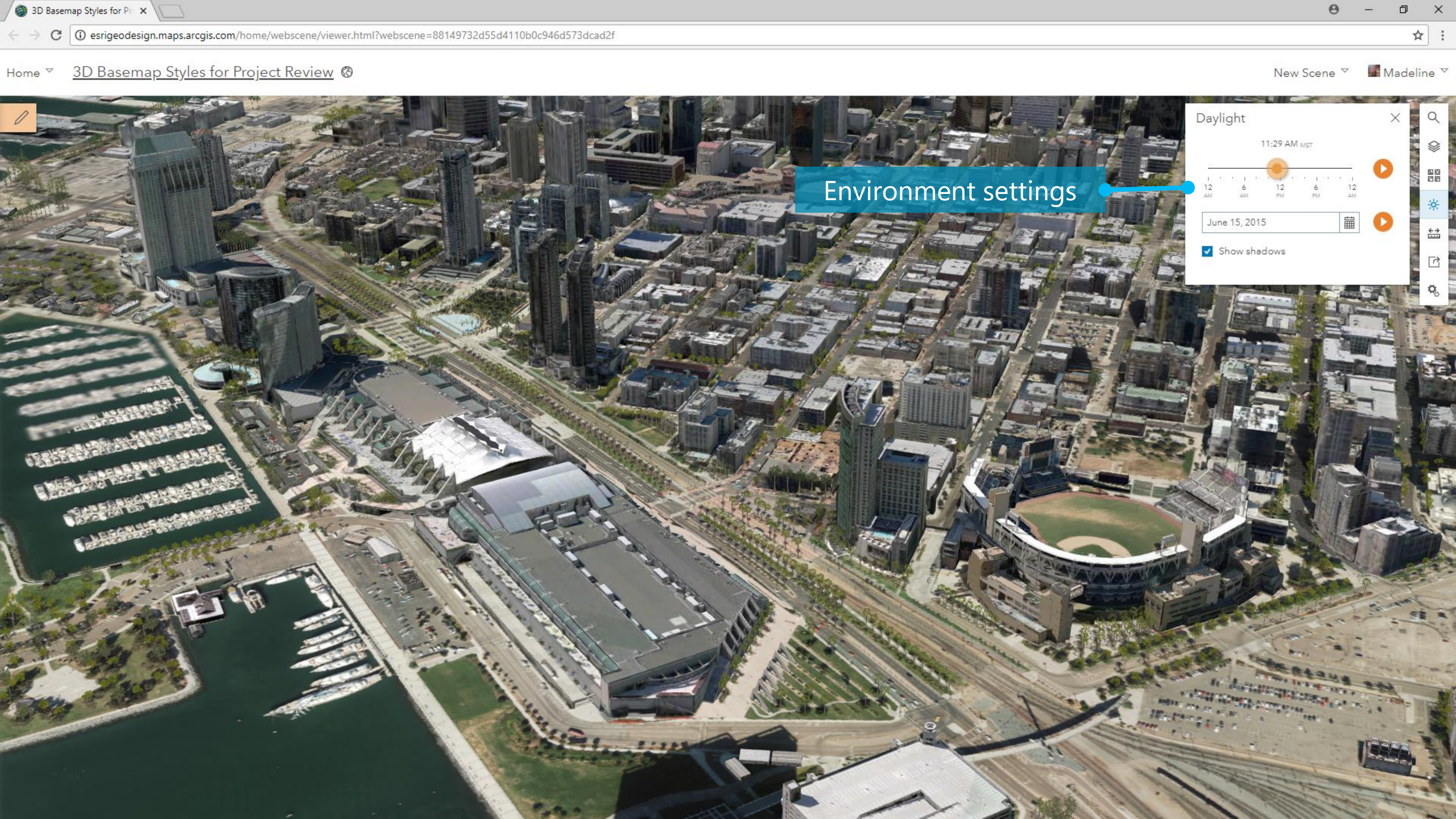
New Scene
Madeline
Active basemap
Basemap
Light Topo 3D Basemap
Newspaper Map
Mid-Century Map
Modern Antique Map
Colored Pencil Map
Human Geography Dark
Human Geography
Dark Gray Canvas
Terrain with Labels
Light Gray Canvas
See through ground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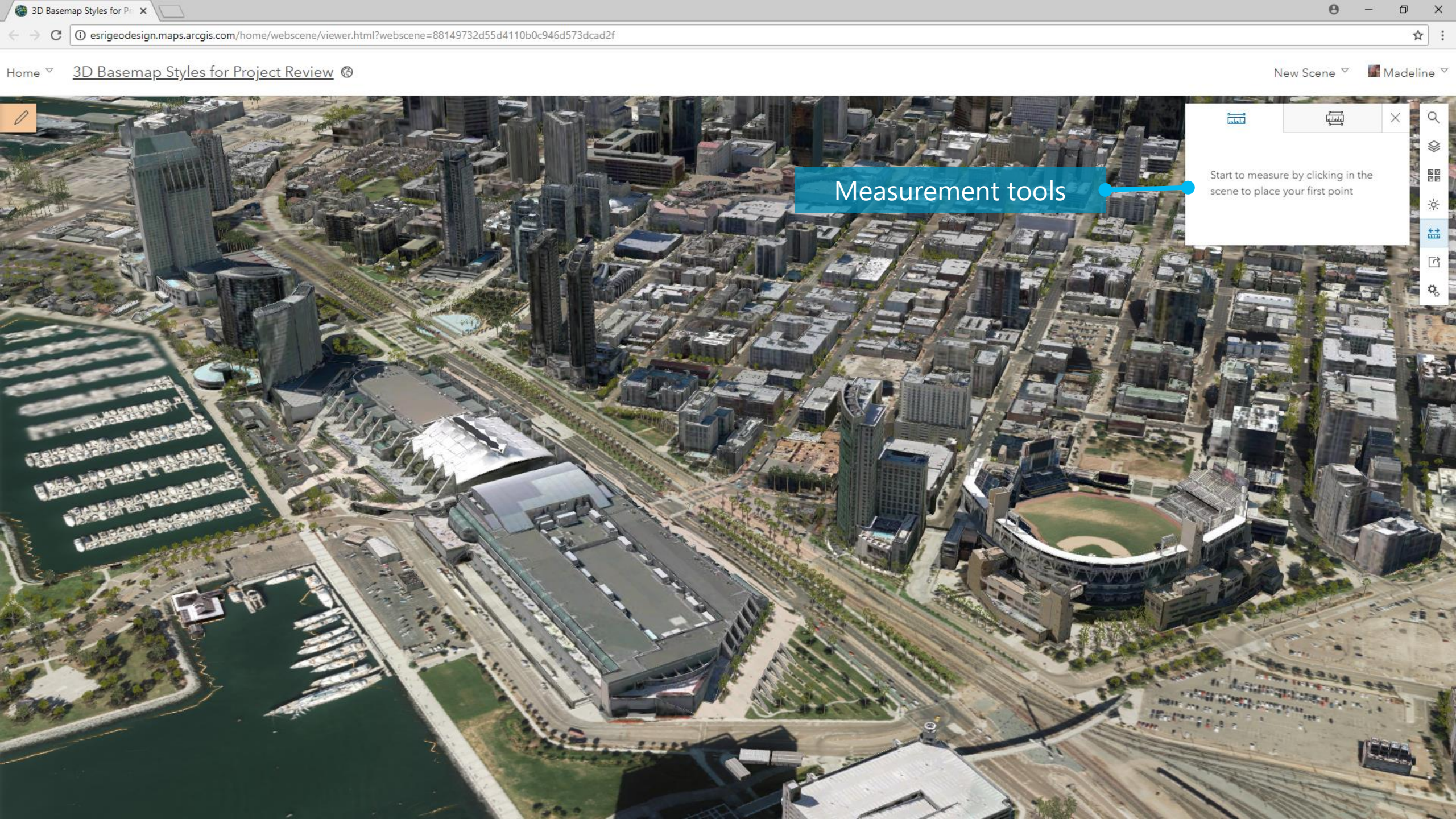
Home
3D Basemap Styles for Project Review
New Scene
Madeline
Environment settings
Daylight
11:29 AM MST
12 AM
6 AM
12 PM
6 PM
12 AM
June 15, 2015
Show shadows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Home
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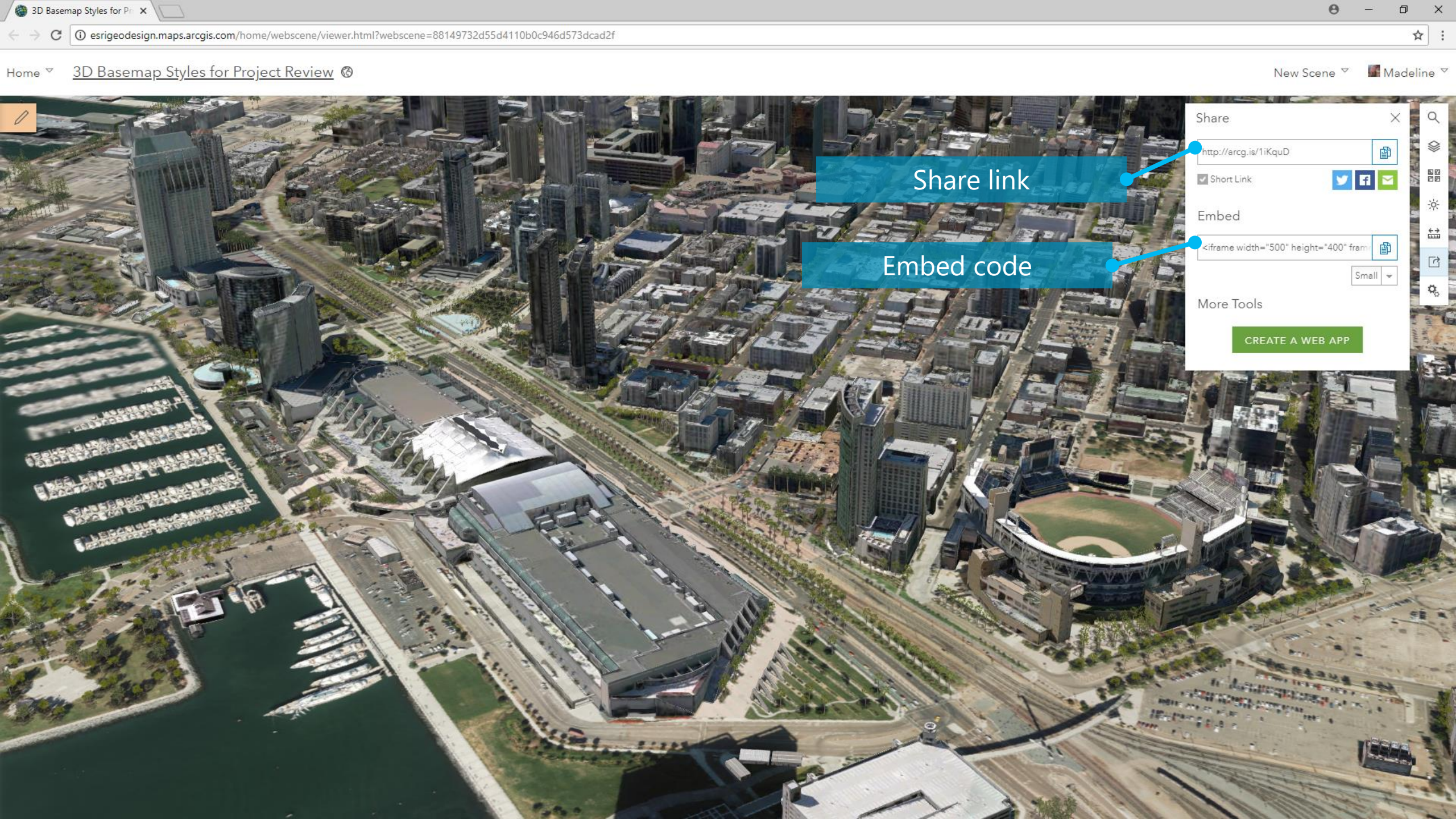
New Scene
Madeline
Measurement tools
Start to measure by clicking in the scene to place your first point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Home
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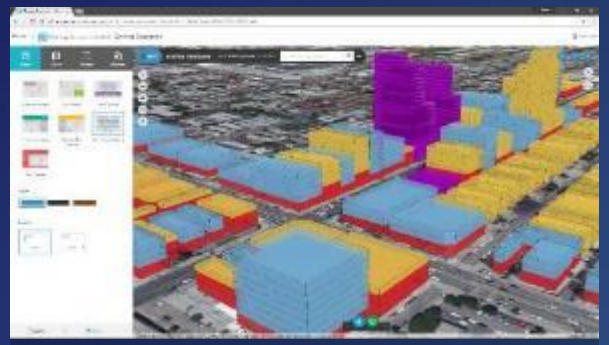
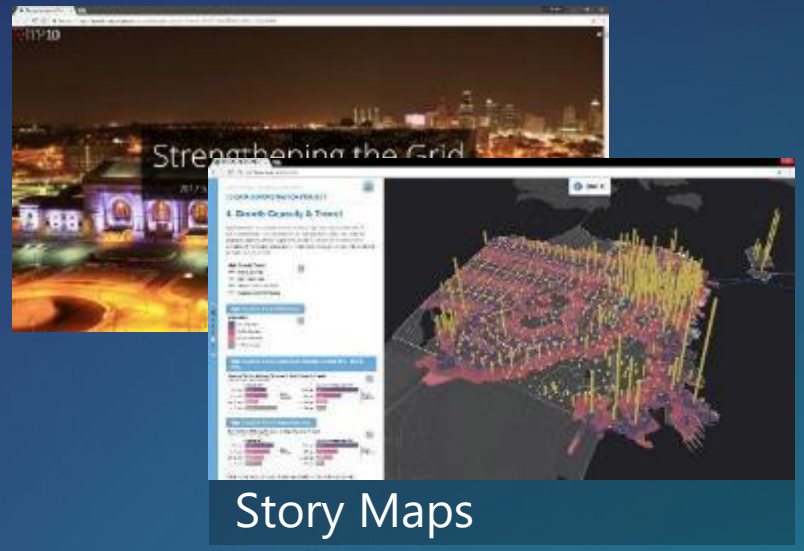
New Scene
Madeline
Share
http://arcg.is/1iKquD
Short Link
Embed
<iframe width="500" height="400" fram
Small
More Tools
CREATE A WEB APP
Share link
Embed code

3D Web Apps

Part of Any ArcGIS Online Organization



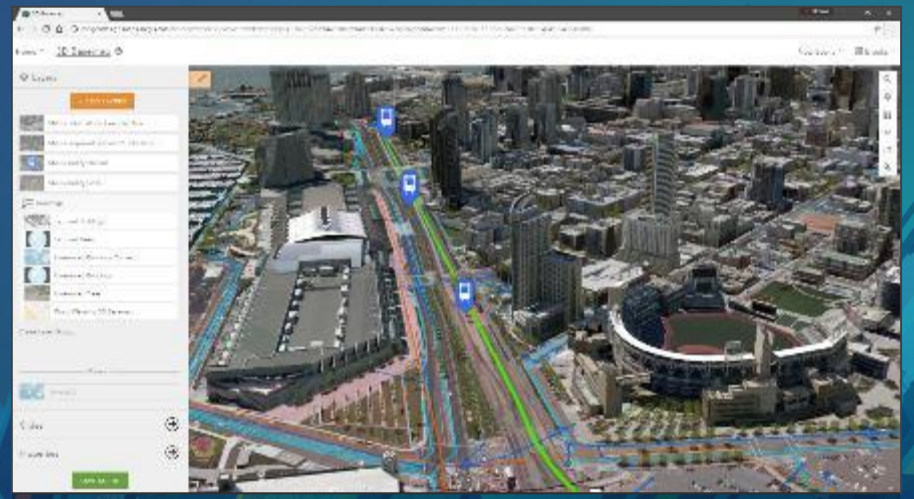
Web AppBuilder



Story Maps

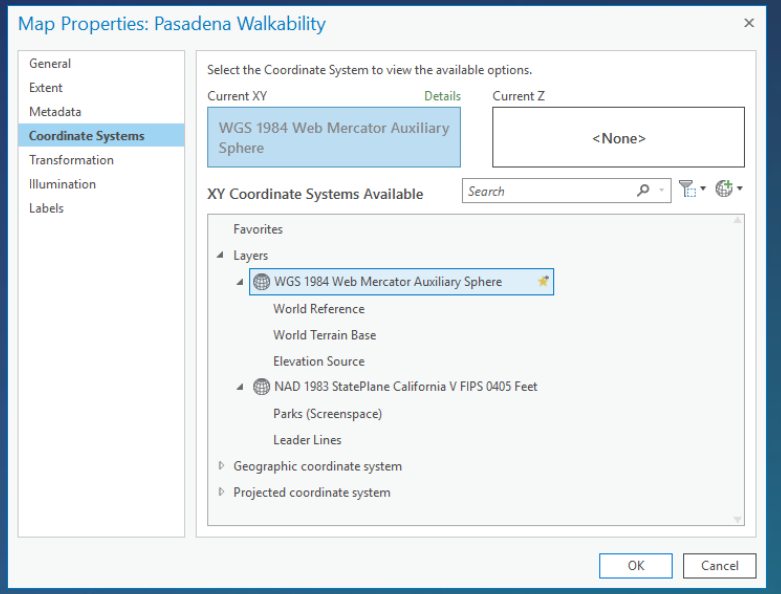
3D Public Survey

Initiative Web Site



Scene Viewer

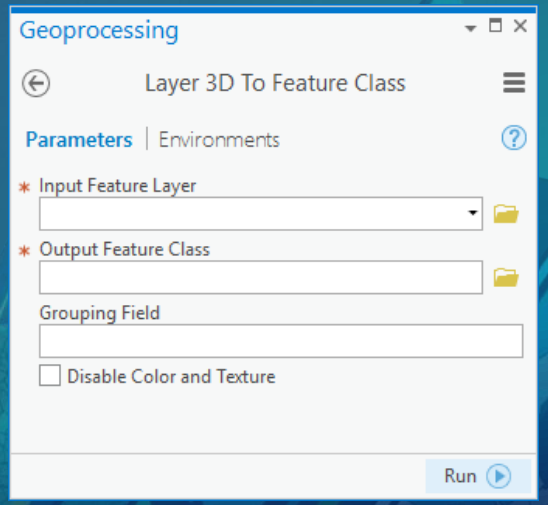
Preparing to publish from ArcGIS Pro



- The Scene Viewer does not support projection-on-the-fly
  - Publishing global scenes : auto-converts to WGS84
  - Publishing local scenes : ensure common PCS/VCS

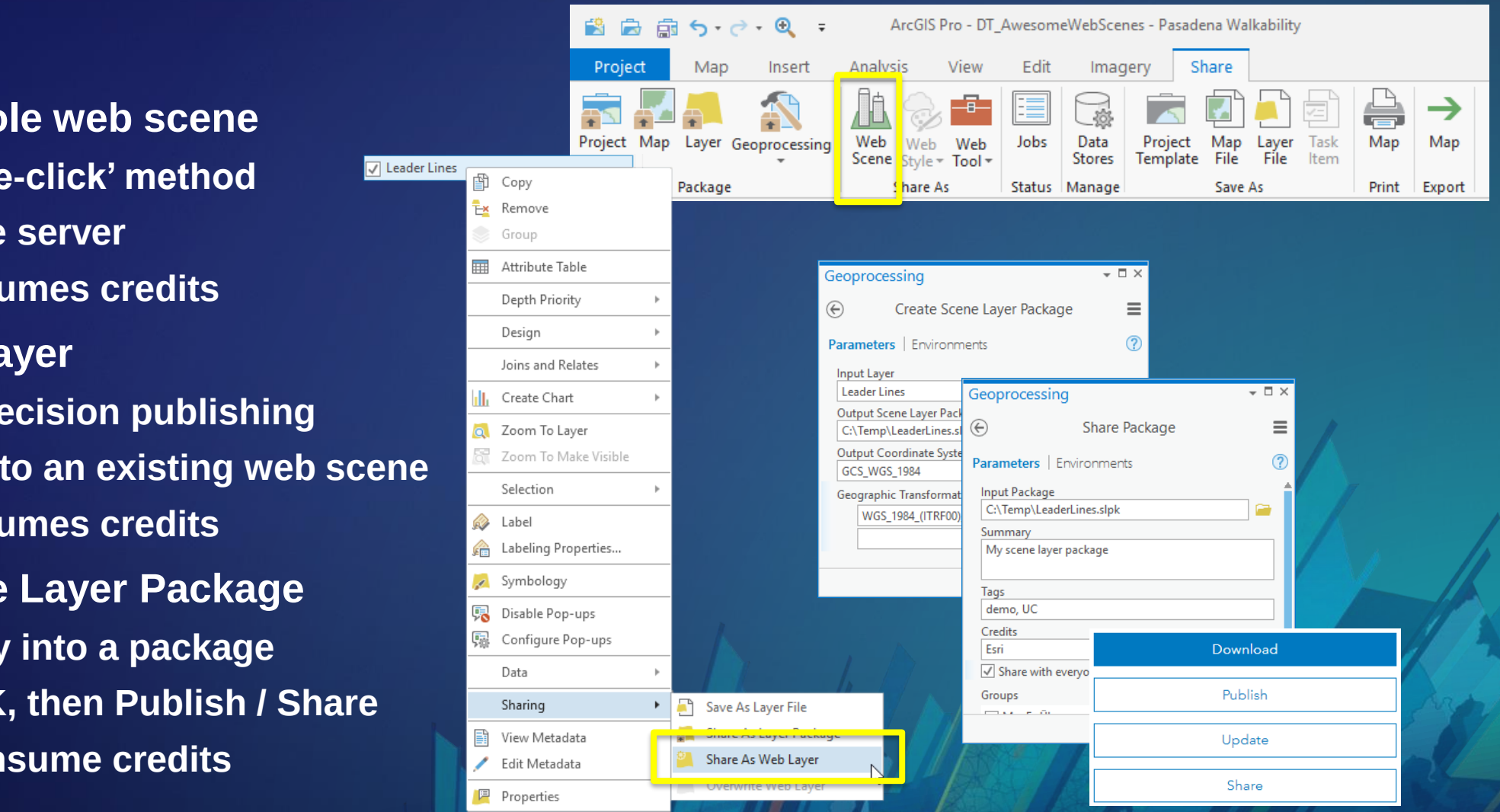
- Most (but not all) 3D symbology is supported across the platform
  - If in doubt, convert 3D layers into multipatches via ‘Layer 3D to Feature Class’

- Re-use service layers from other web scenes
  - Especially for base content / elevation content
  - When sharing, the layer is simply referenced

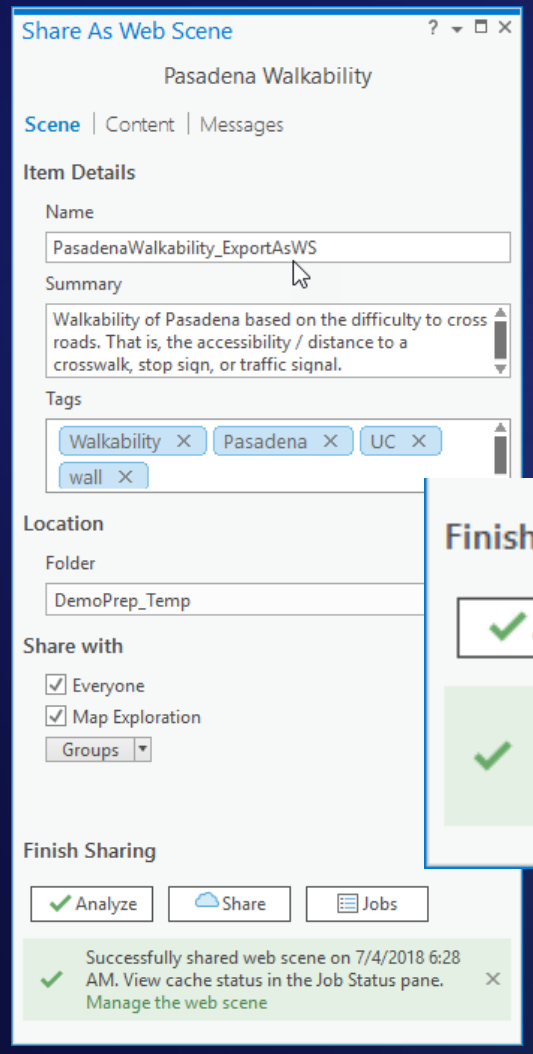


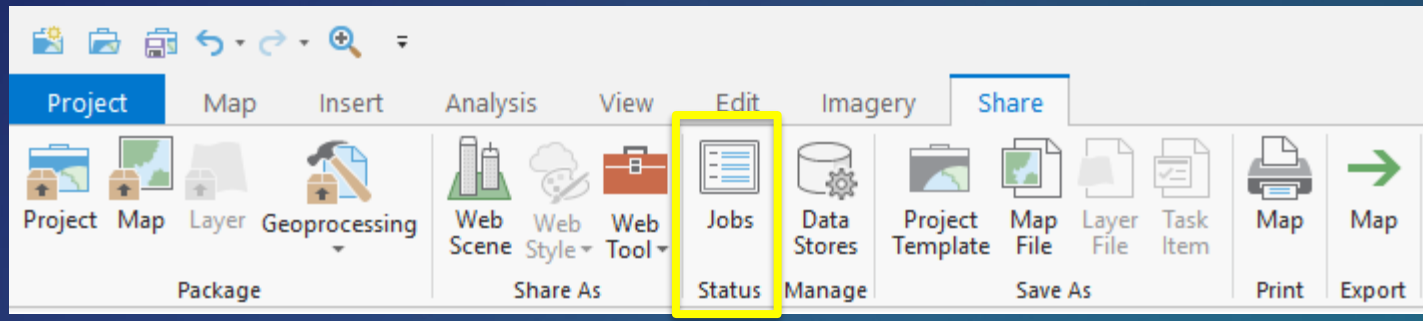
Publishing 3D web content from ArcGIS Pro

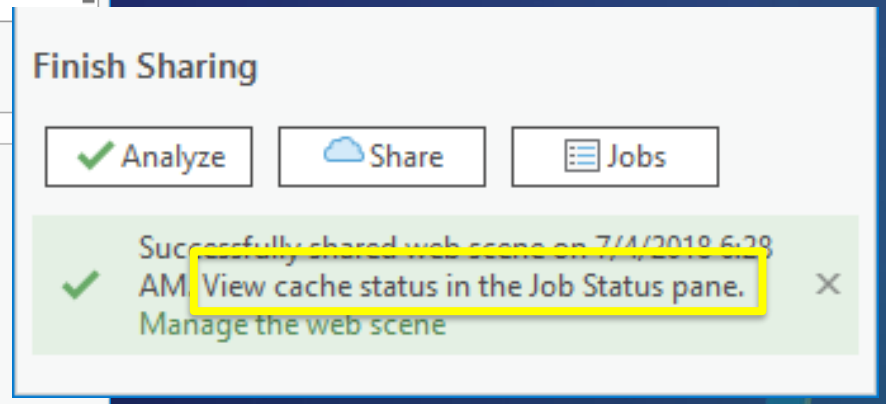
- **Share the whole web scene**
  - Simplest ‘one-click’ method
  - Cooks on the server
  - AGOL: Consumes credits
- **Share a web layer**
  - Effective / precision publishing
  - Add content to an existing web scene
  - AGOL: Consumes credits
- **Share a Scene Layer Package**
  - Cooks locally into a package
  - Upload SLPK, then Publish / Share
  - Does not consume credits



Knowing when publishing is complete…





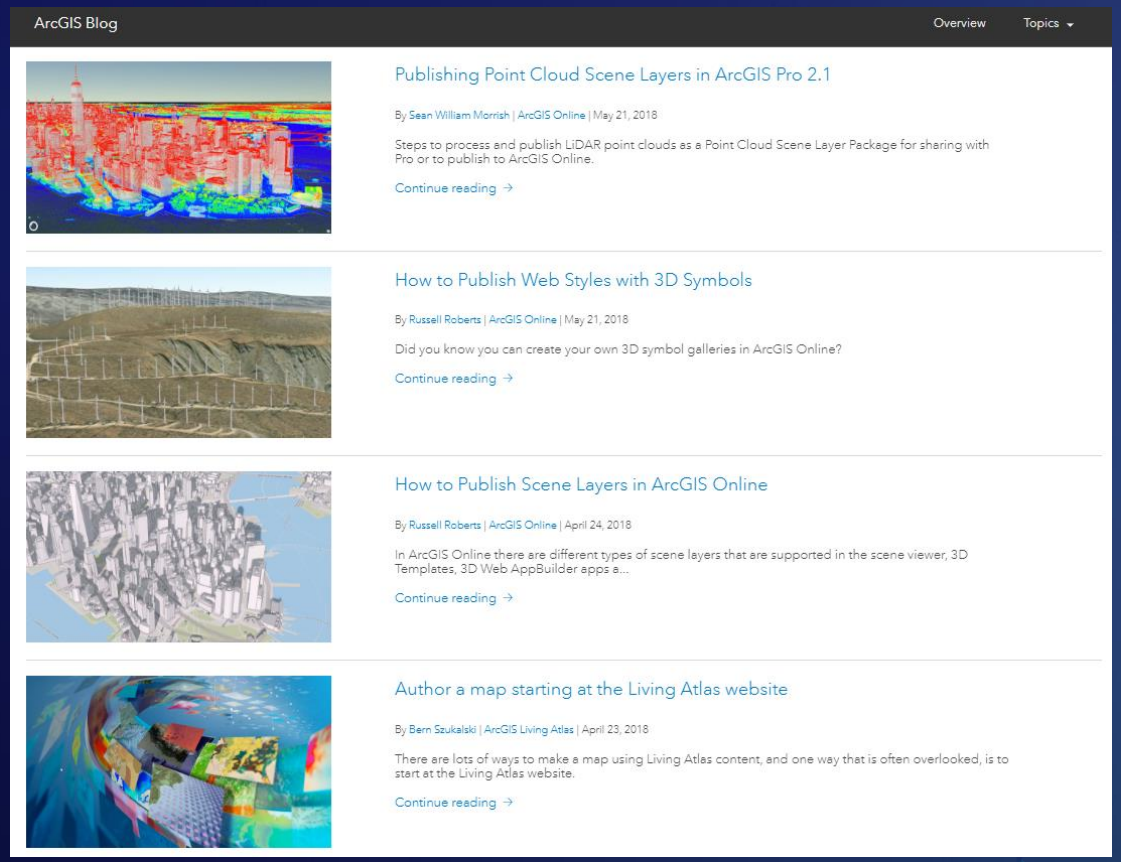


Demo

Nathan Shephard

Resources

Scene Viewer Blogs



Sample scenes, story maps going over what's new, sample data, and more

http://bit.ly/SceneViewer18

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