



Super-Realistic Models Make Your Clients Notice

CI8480

Presenter Keith Warren
BIM Manager
VTN Consulting

Co-Presenter Eric Fain
User Experience Architect,
Infrastructure Core Modeling
Autodesk®

Class Summary

This session will show how VTN Consulting is using Autodesk Infrastructure Modeler[®] to create and communicate conceptualizations of 3D city designs, above and below ground with real engineering data compiled from GIS, CAD, 3D Models, and civil engineering cad files.



Presenter Keith Warren

BIM / Visualization

Manager

VTN Consulting

- 14 - Years with VTN Consulting
 - 25 - Years in Civil Engineering (From A to Z)
 - 8 - Years Teaching at UNLV
-
- Advisory Board Member Autodesk IDEAS The Innovation + Design Series
 - Founder of BIM Source
 - Member Autodesk Virtual Design & Construction Group
 - Member BUG (BIM User Group)
 - Member Autodesk LABS

Co-Presenter Eric Fain

User Experience Architect

Autodesk Infrastructure Modeler

- 3 – Years developing AIM
- 15 - Designing & developing user interfaces and interactions
- 8 – Years GIS- and retail real estate-related design

Eric Fain is the User Experience Architect for Autodesk Infrastructure Modeler. Eric has worked with the Infrastructure Modeler engineering and product management teams since 2010 to create and implement user-centered designs. Eric lives and works in San Rafael, California.

What will I see today?

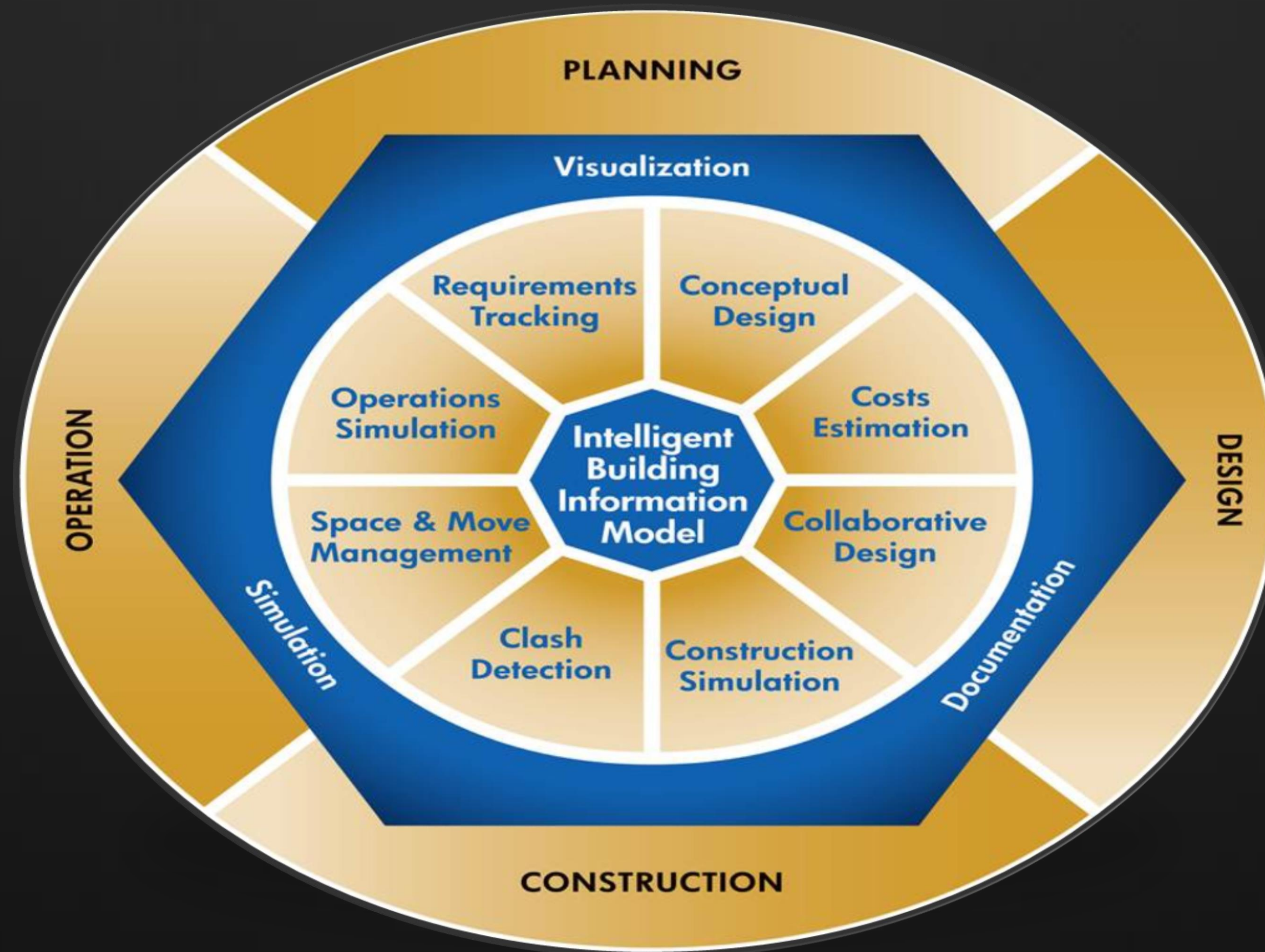
Learning Objectives

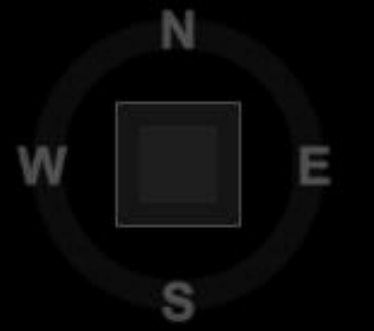
At the end of this class, you will be able to:

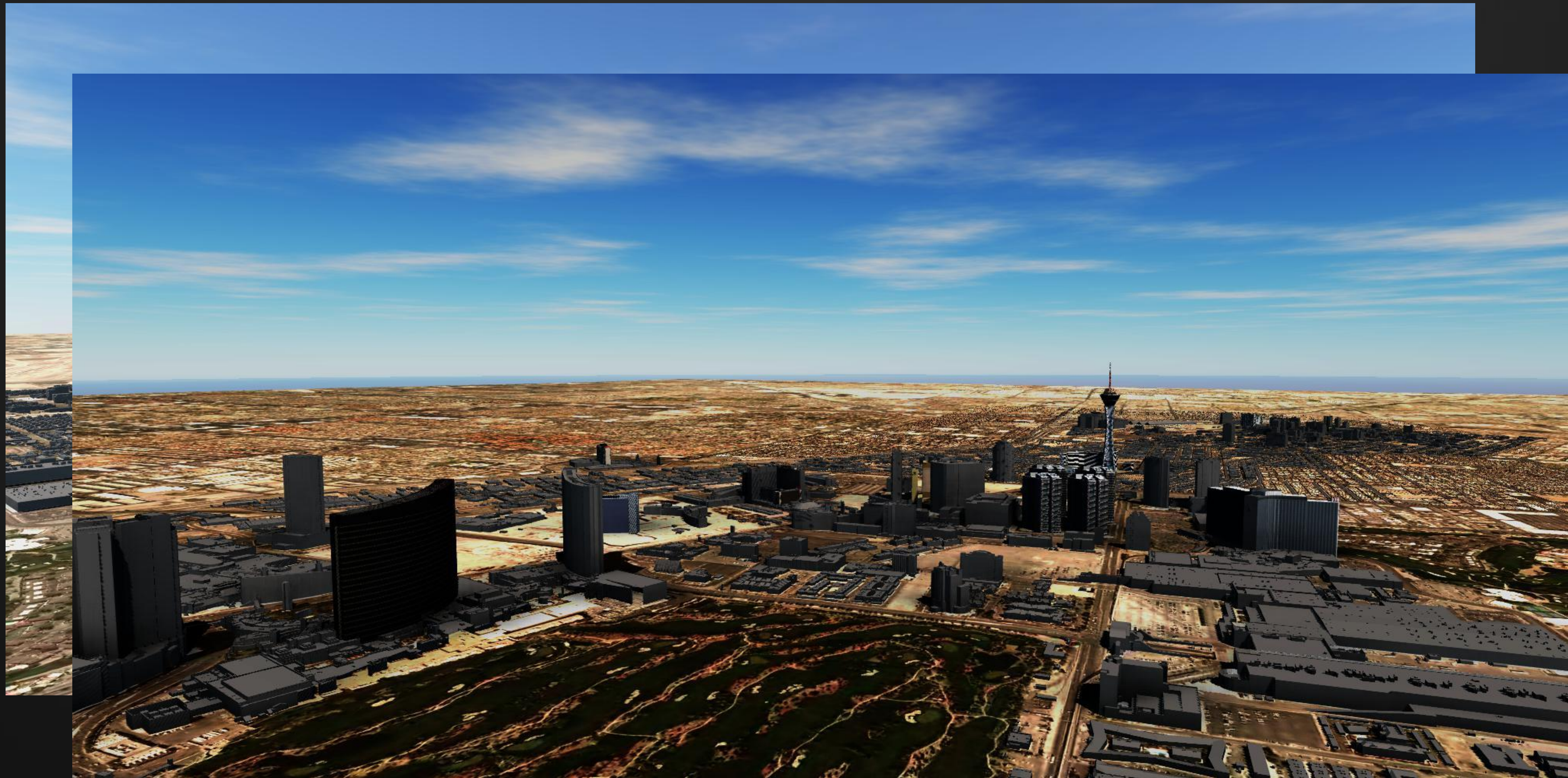
- Learn how Infrastructure Modeler can help your business
- Find data to create compelling models
- Create compelling stories for your stakeholders
- Publish Scenarios to AIM 360

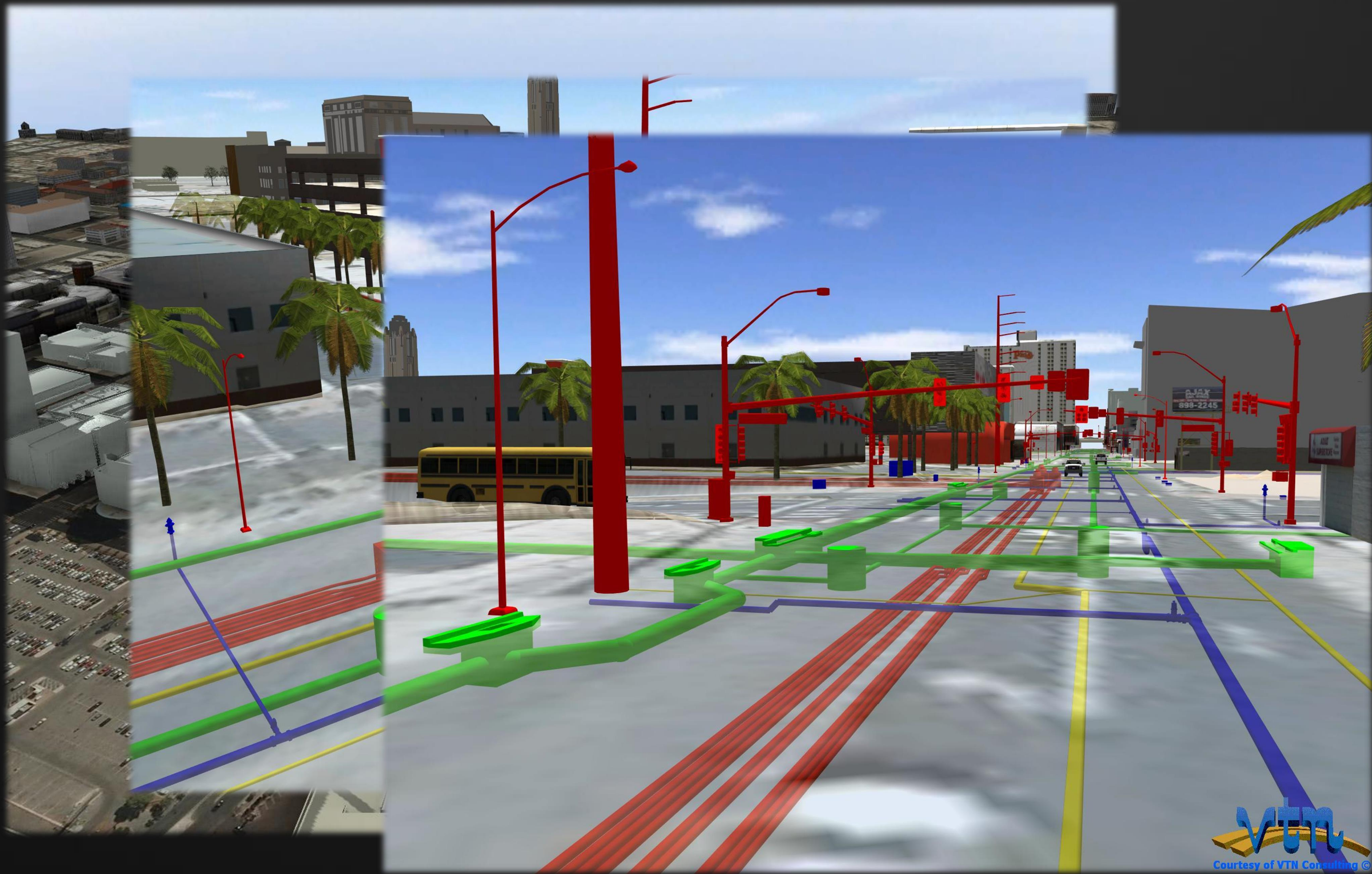


How will this help my business?









Where do I get the data?

Free data sources

- USGS for Terrain & Imagery-<http://viewer.nationalmap.gov/viewer/> (formerly Seamless)
- Municipalities for GIS data
- Open Street Maps
- Tiger Data (Streets)
- Trimble 3d Warehouse for buildings



Help?

A detailed tutorial will be posted on the AIM Wiki Help site in the next few weeks outlining where to find data, and how to go about loading it into AIM.

How do I get started?

Roads

Roads also provide context to the model, as well as a data source to display road names via tooltips in the model.

Aerial

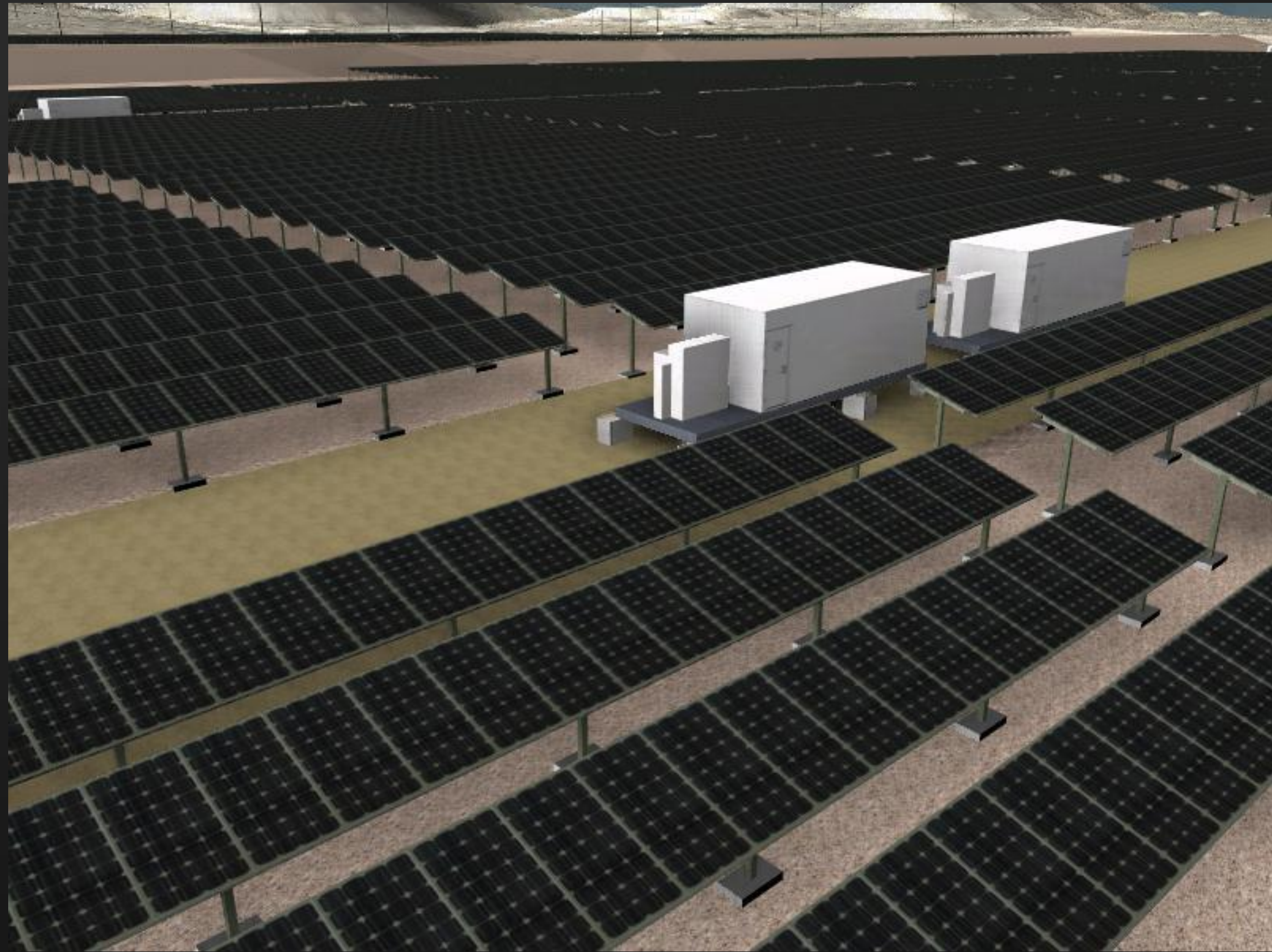
Aerial or satellite photos provide color, texture, and orientation to the model, but no depth. They also provide a stencil for tracing city features such as buildings, trees, or roads.

Terrain

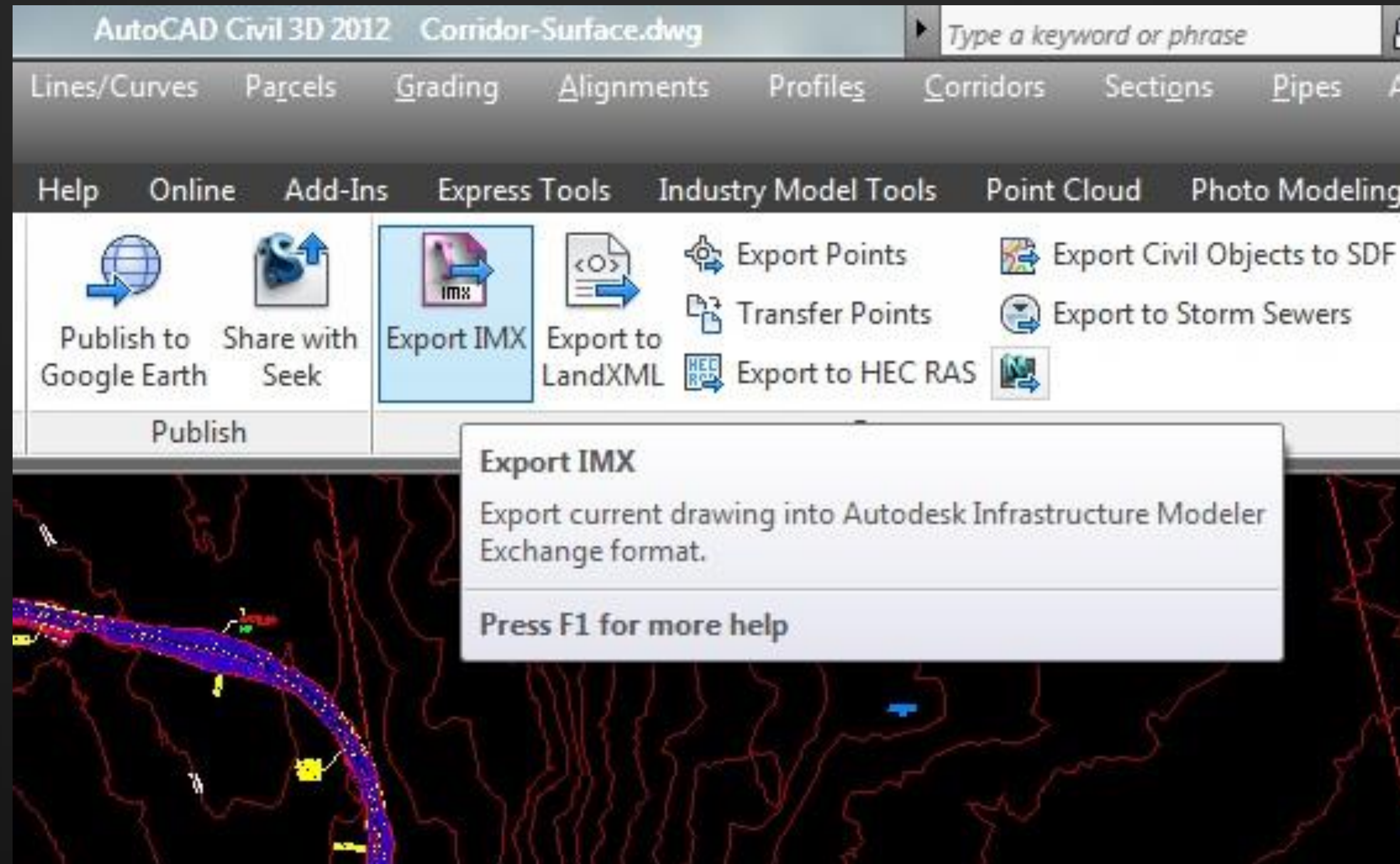
Terrain, or an elevation model, is required to get started using AIM. GeoTiffs, DTMs, and DEMs are freely available from a variety of sources. USGS is the first place to start.

AEC Solutions

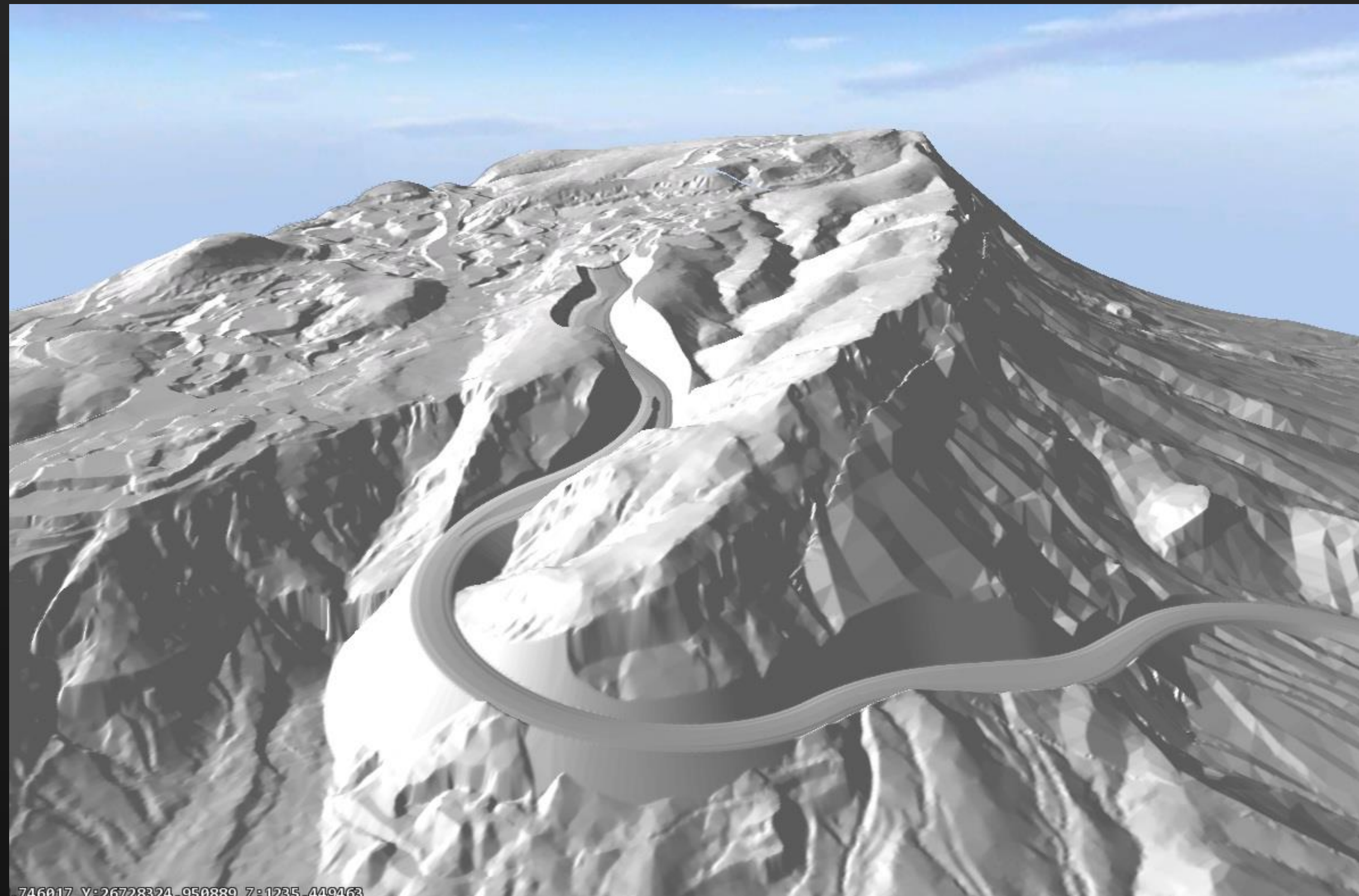
- 3D Geospatial Data (GIS)
- 3D Intelligent Modeling
- Urban Planning and Design
- Space Planning
- Property Resources
- Emergency Response
- Building Services
- Public Safety
- Utilities Networks

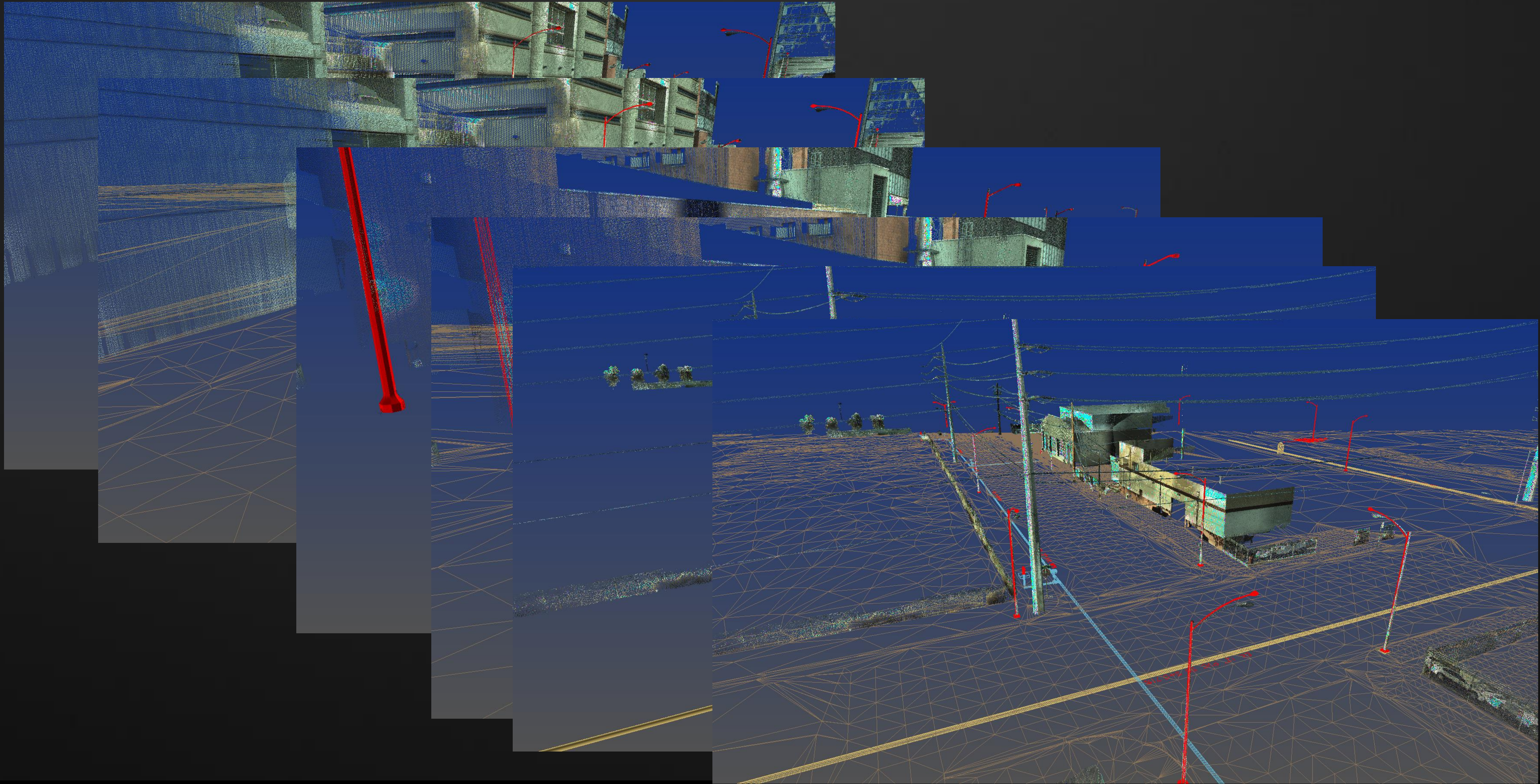


Exporting from Civil 3D

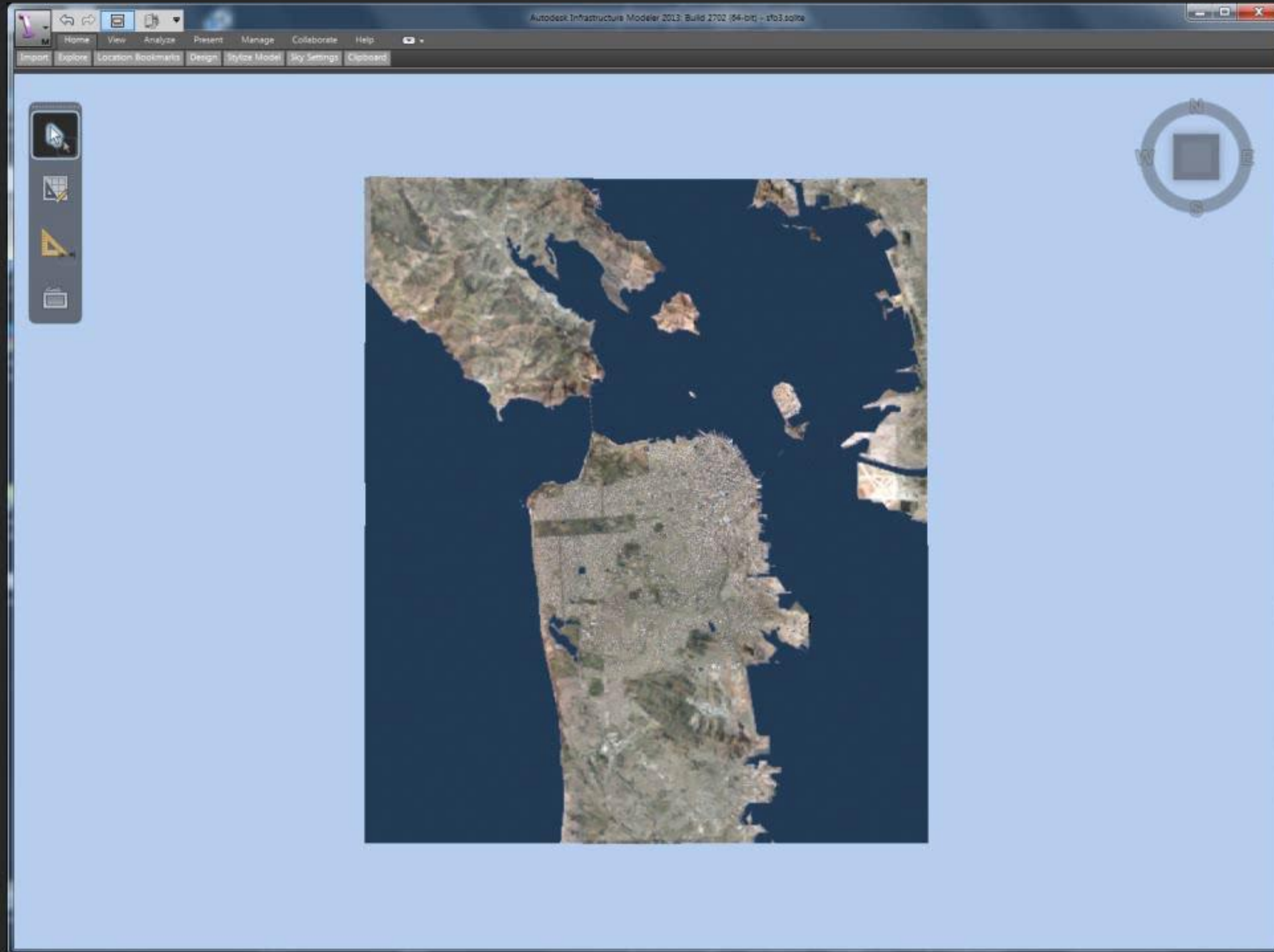


Importing from Autodesk Civil 3D Into Autodesk Infrastructure Modeler®

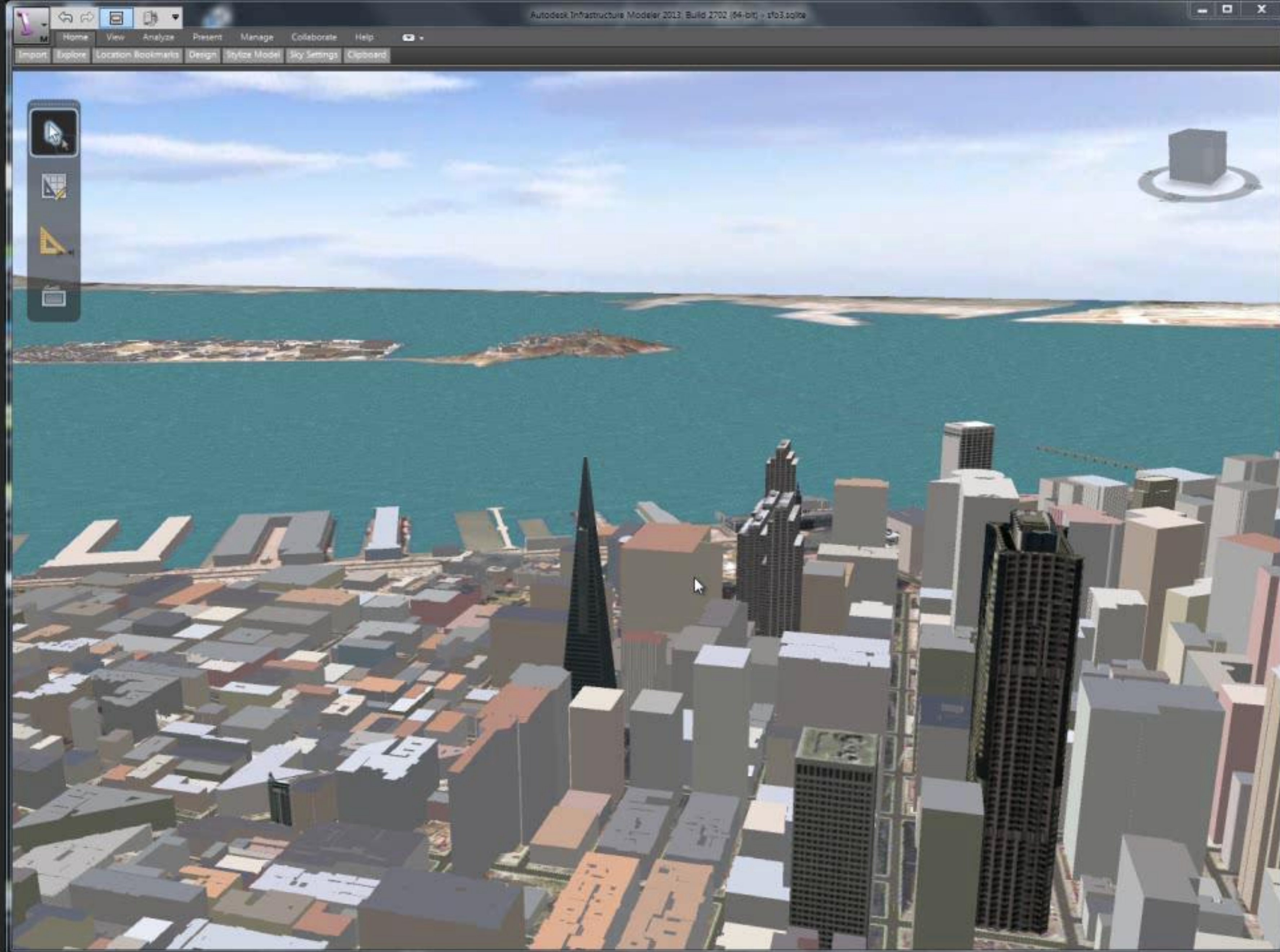




How do I put this to use?

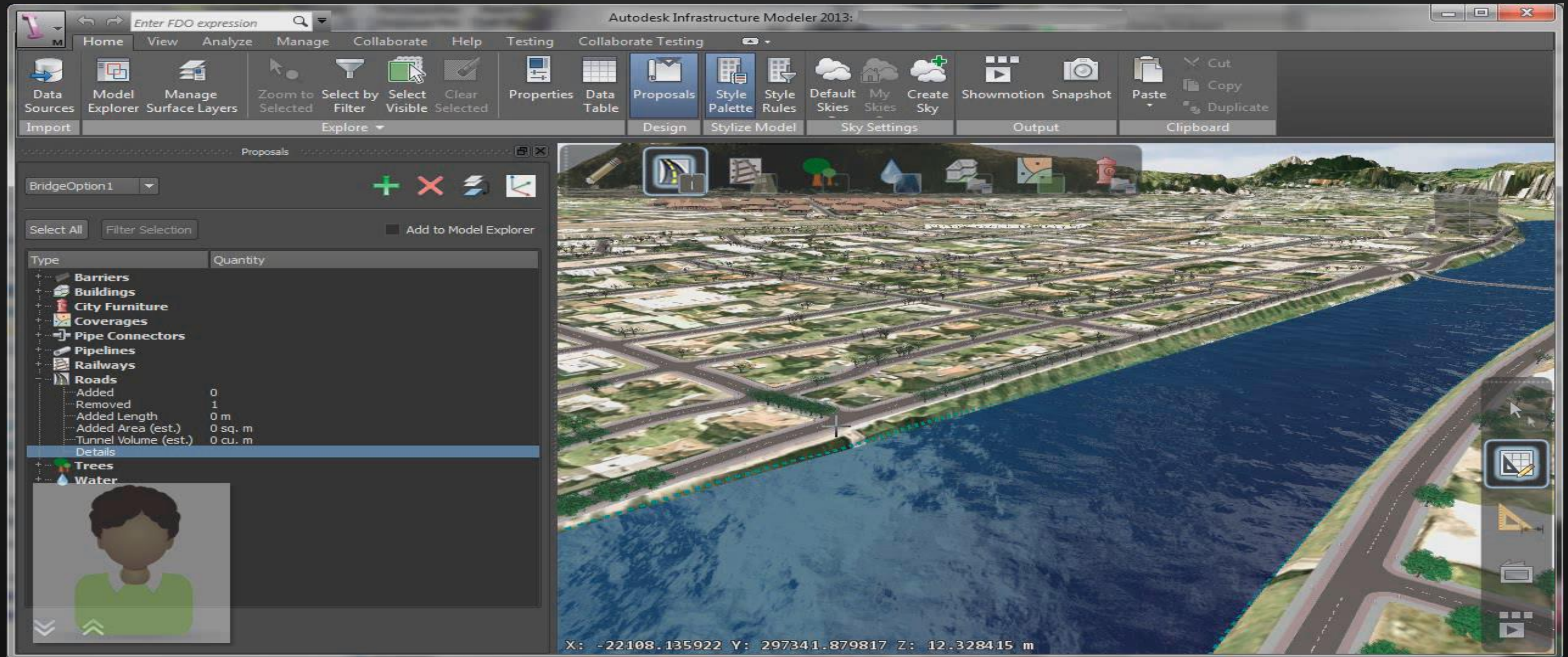


How can these models be used as the basis for more modeling and even collaboration



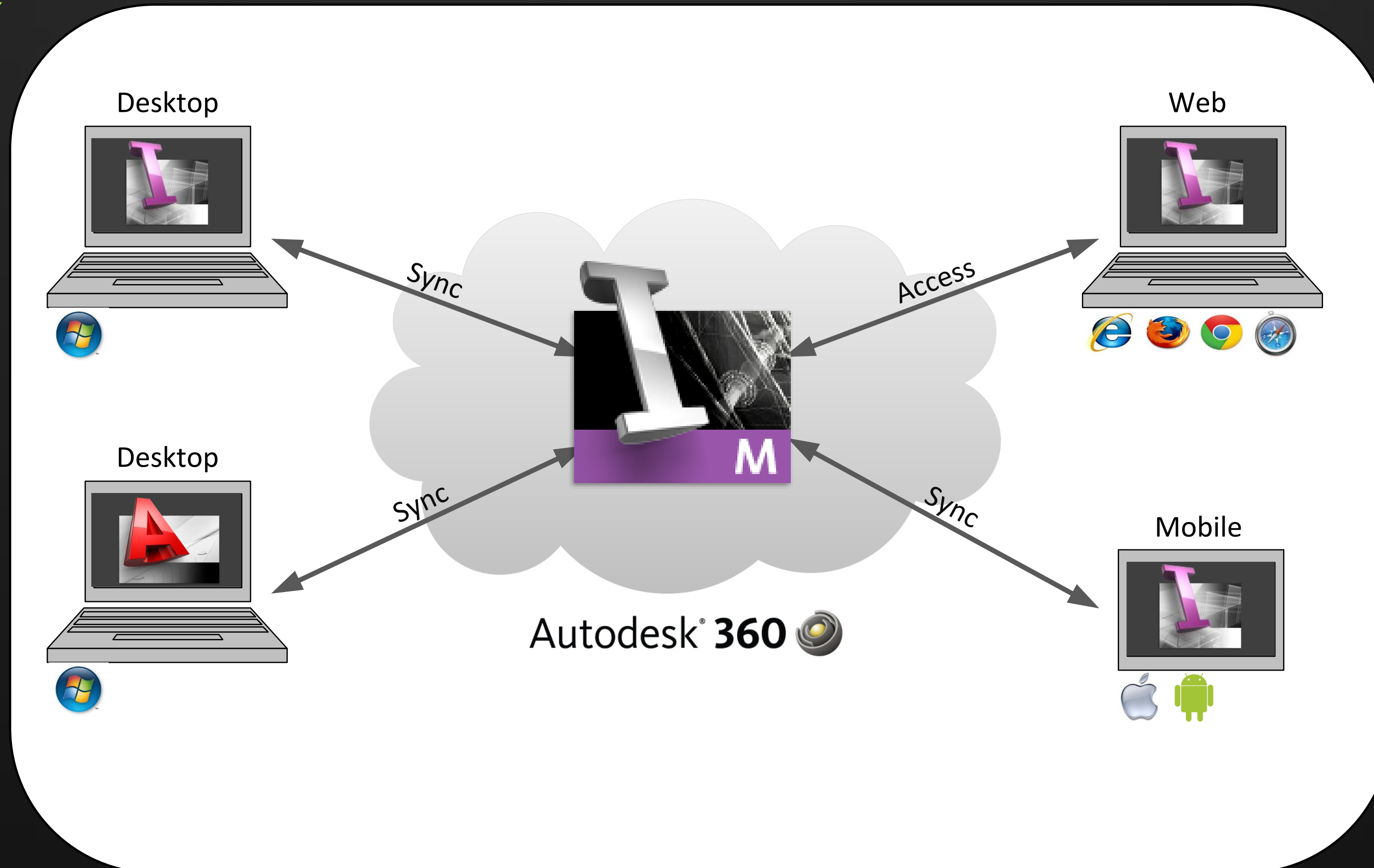
Model Collaboration via AIM 360

One Model – Multiple Designers, Multiple proposals via the Desktop



Goal: Continuous Collaboration

Any device, anywhere



Infrastructure Model . . . Access Anywhere
Share & Collaborate Securely

Storytelling: Communicate design intent

How do we help firms to win more work and public organizations to communicate with constituents?

Traditional Project Site

The screenshot shows a web browser displaying the Clark County Major Projects website. The page has a header with the Nevada state seal, a search bar, and the date "Monday, November 19, 2012". The breadcrumb trail reads "Clark County > Departments > Comprehensive Planning > Major Projects".

Quick Look-up

I Want To...
Most Popular

Major Projects

- Department Home
- FAQ
- Forms
- Contact Us
- About Us
- Divisions
- Services
- Library

Major Projects

Comprehensive Planning Major Projects reviews master-planned communities within the Las Vegas Valley (of 700 acres or more) and outlying areas within unincorporated Clark County (of 300 acres or more). Major Projects takes input from Advanced Planning, Land Use plans, the community and the development code.

Major projects go through an intensive public process, ending with the negotiation of a development agreement that addresses development impact on infrastructure needs such as roads, parks, schools and public safety.

Key Major Projects links:

- [Major Projects Requirements](#)
- [Current Major Projects](#)
- [Major Project Qualifications and Purpose](#)
- [Title 30 Development Code covering Major Projects: Chapter 30.20](#)

[Forms](#) (to the left) holds forms and links to [submittal requirements](#), [filing fees](#) and [filing deadlines](#).

[Services](#) (to the left) helps you work on your project:

Library (to the left) has:

- [Clark County Comprehensive Plan](#)
- [Title 30 Development Code](#)
- [Maps](#)
- [Interactive OpenWeb mapping tool](#)

[Recently Adopted Ordinances](#) are available in [Announcements](#).

Additional Major Projects-specific links:

- [Clark County Fire Department - Permits](#)
- [Clark County Regional Flood Control District](#)
- [Las Vegas Valley Water District - Engineering and Construction](#)
- [Nevada Department of Transportation \(NDOT\) - Road and Bridge Construction](#)
- [Nevada Energy - New Construction](#)
- [Regional Transportation Commission of Southern Nevada - Streets and Highways](#)
- [Southern Nevada Health District - Environmental Health](#)
- [State of Nevada Division of Water Resources](#)
- [US Department of the Interior - Bureau of Land Management](#)

Related Links:

- [Clark County Public Records Frequently Asked Questions](#)
- [Bureau of Land Management - Right of Way Program](#)
- [Clark County Fire Department - Fire Prevention Division](#)

Explore

- Agendas & Minutes
- Comprehensive Plan
- Title 30

Upcoming Events

[View All Events](#)

Presenting Concepts via Storytelling

1. Provide a graphic way to describe concepts

4. Get the story in front of the people who matter

The screenshot shows the Presidio Parkway website. At the top left is the Presidio Parkway logo featuring a stylized bridge and the text 'PRESIDIO PARKWAY'. To the right is a 'DID YOU KNOW?' section with a cartoon bird and text about pile installation. Below this is a search bar. On the left is a vertical navigation menu with links: About the Project, Presidio Parkway Features, Construction Overview, Traffic Phasing, Project Documents, Photo Gallery, Video Gallery, Webcams, Meetings, FAQs, Press Center, and Contact Us. Below the menu are three green buttons: Small Business Info, Contractor Info, and Driver Toolbox. At the bottom left is the 511 logo and text: '511 Call 511 | 511.org' and 'For free information about Bay Area Traffic, Transit, Rideshare, or Disasters...'. The main content area is titled 'Video Gallery' and features a large video player showing an aerial view of a highway interchange with a play button overlay. To the right of the video player is a text box titled 'Phase 1 Construction' with details about the project's first phase. Below the video player are three smaller video thumbnails with titles and durations: 'Presidio Parkway - Project Overview', 'Presidio Parkway', and 'Why Must Doyle Drive Be Replaced?'. A 'Browse:' dropdown menu is set to 'Top Videos', and a 'Showing: Top Videos' label is present. A 'Show All Videos' button is at the bottom right of the video gallery section.

PRESIDIO PARKWAY

DID YOU KNOW?
Many of the piles for the high viaduct will be 12 feet in diameter, requiring a special oscillator rig for installation of the piles. Larger, deeper piles mean fewer piles are necessary, opening views from the Presidio to the bay.

Video Gallery

Replacement of Ruckman Bridge on Highway 1

Phase 1 Construction
February 15, 2012 | 01:36
Late 2009-Spring 2012
Watch construction of the project's first phase which includes the new southbound high viaduct bridge, the southbound Battery Tunnel and a temporary bypass. Upon completion, traffic was transferred onto this seismically safe condition.

Small Business Info
Contractor Info
Driver Toolbox

511 Call 511 | 511.org
For free information about Bay Area Traffic, Transit, Rideshare, or Disasters...

Presidio Parkway - Project Overview
02:54 | Dec 21, 2011

Presidio Parkway
01:57 | Mar 18, 2011

Why Must Doyle Drive Be Replaced?
00:56 | Jul 15, 2009

2. Describe to users what they're looking at

3. Include useful project information

What is Visual Storytelling?

How do you empower every single digital artist, engineer, architect, and product designer to tell a story...

What is Visual Storytelling for AIM?

Timeline

Titles

Captions

Point of Interest
(POI)

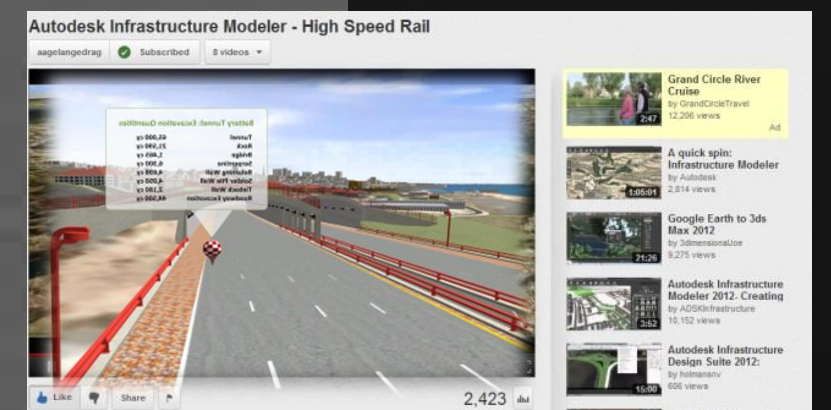
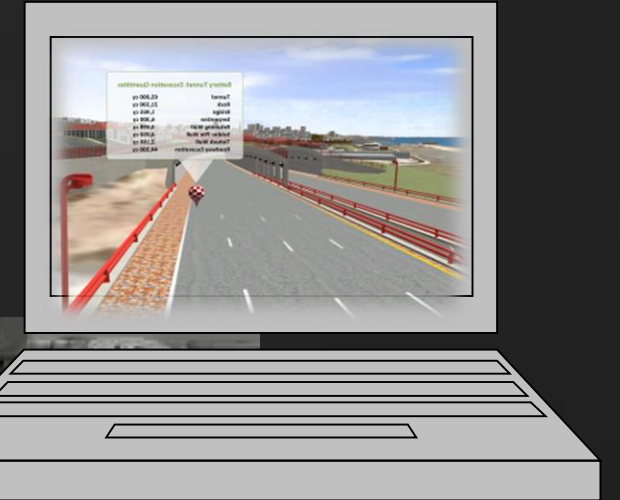
Watermarks

Publishing

Provide publishers tools to annotate key conceptual areas along a timeline, showing the viewer of the story highlights of the design.

...constructing the story

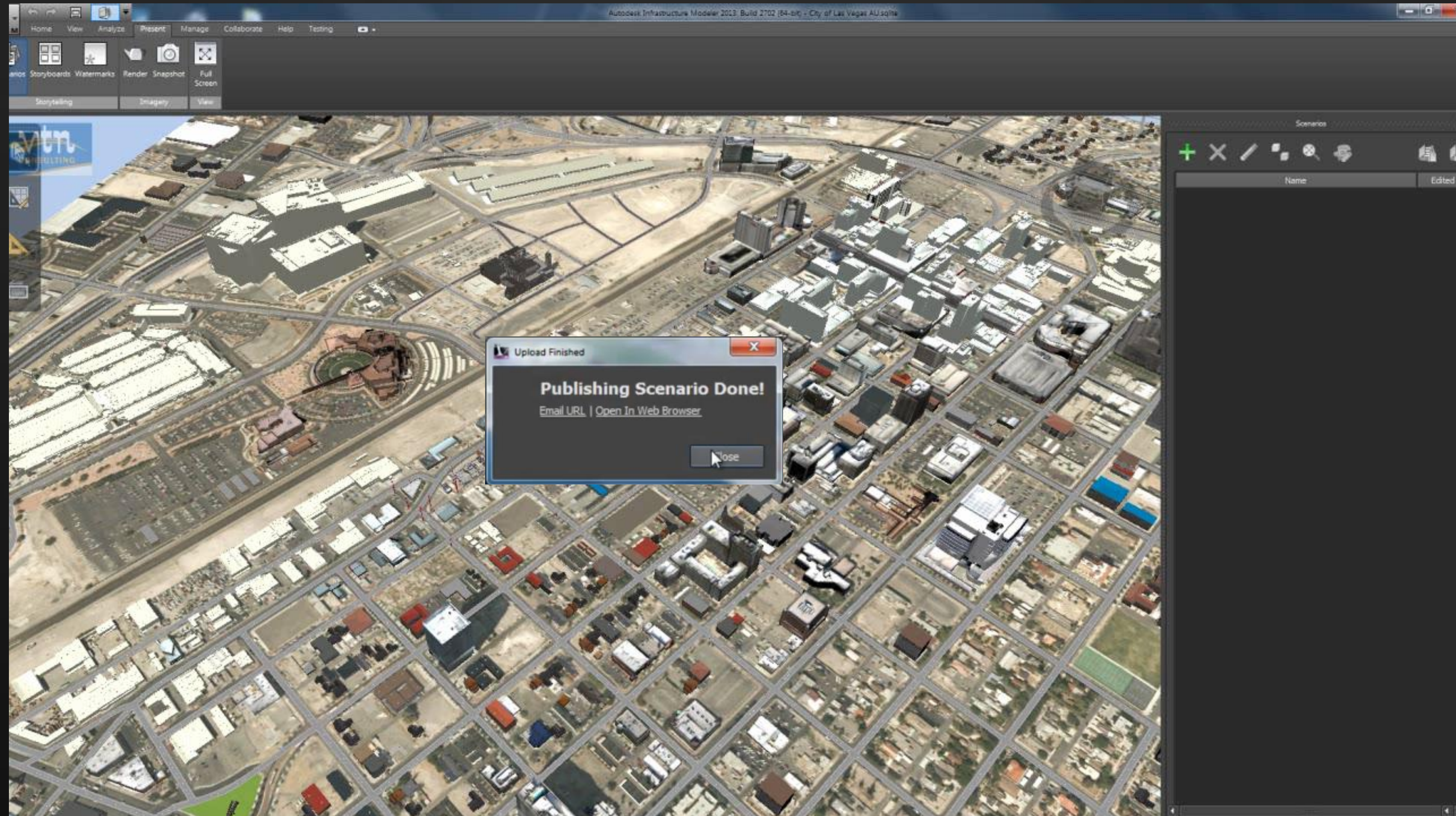
Narrating Design Intent



How do I this?

- 2 Points of Interest (POI) with Proximity Tooltips
- 2 Watermarks
- 1 Intro, and 1 Credit Title
- 3 Captions
- 2 Camera paths and 2 Animations

Publishing for Your Stakeholders



High Quality Rendered Output



- Progressive ray trace – continues refinement until user is satisfied
- Realistic sun/sky model
- HDR and LDR output

What will I need?

- Autodesk Infrastructure Modeler 2013 Release 2 installed
- AIM 360 Web Viewer Installed
- AIM 360 Mobile installed from the Apple App Store (optional)
- AIM 360 Set up for publishing (optional)

Q & A....

Keith Warren - VTN Consulting

keithw@vtnnv.com

Eric Fain – Autodesk

eric.fain@autodesk.com

