

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?

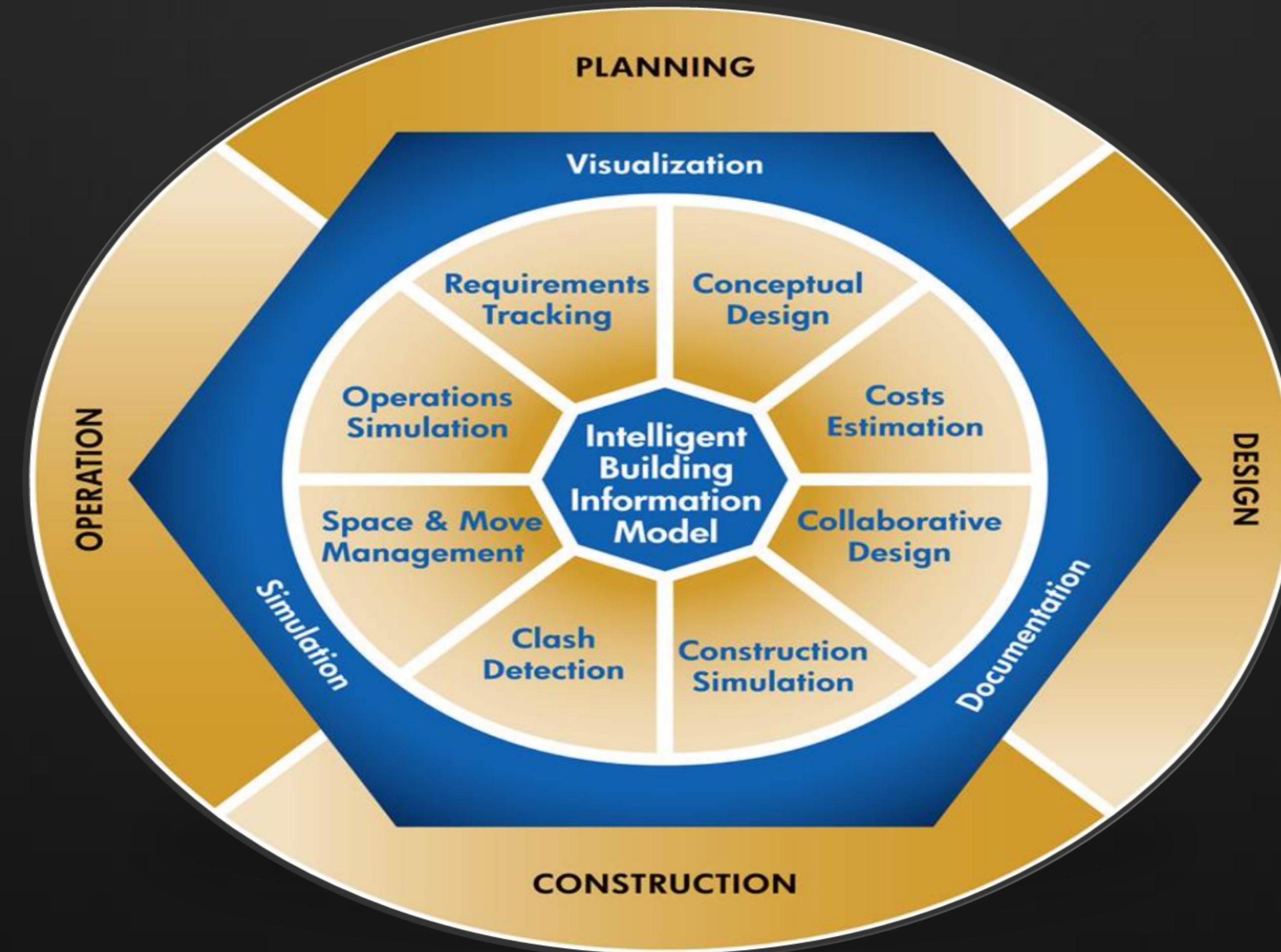
Learning Objectives

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

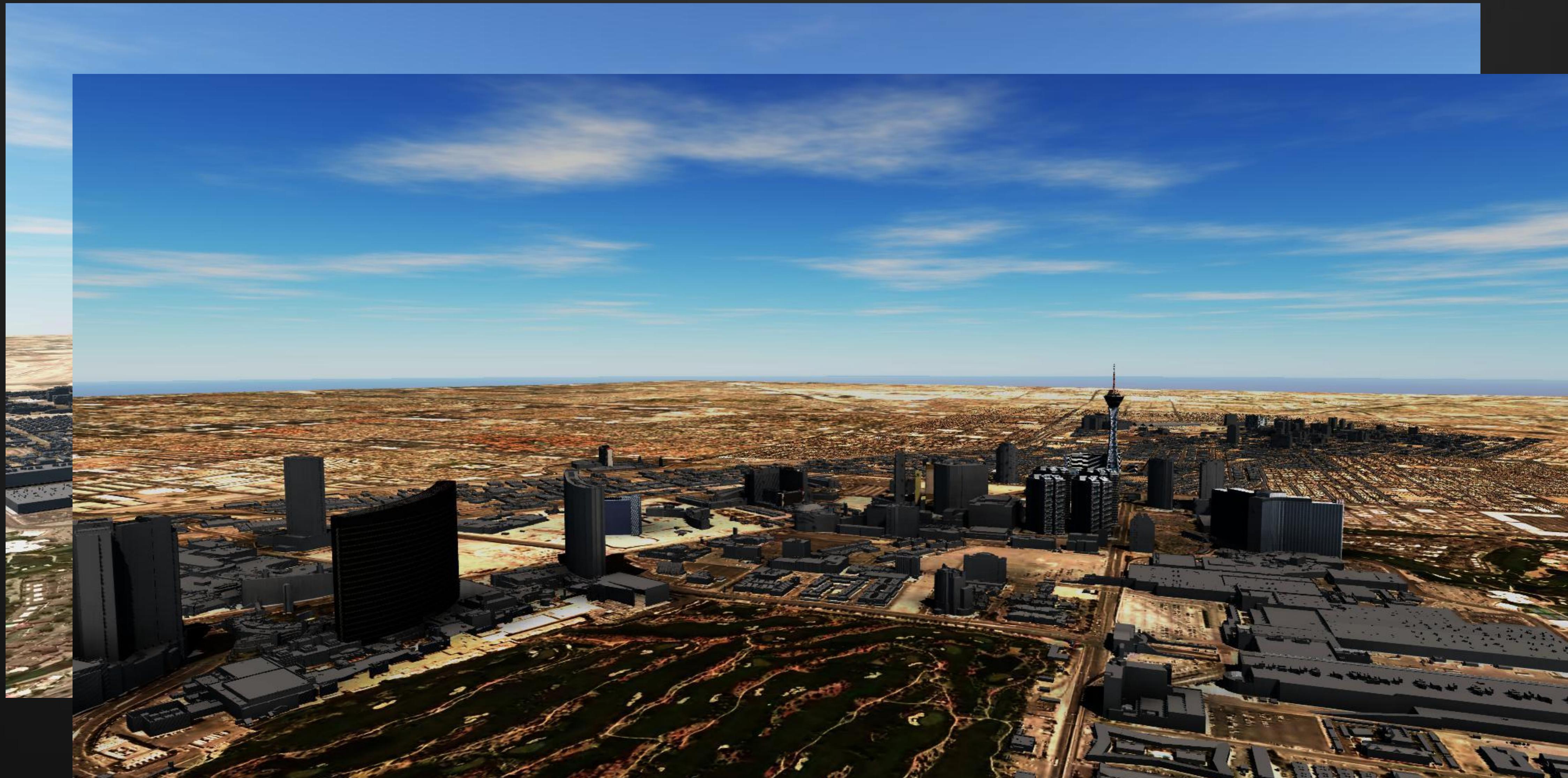
- Learn how Infrastructure Modeler can help your business
- Find data to create compelling models
- Create compelling stories for your stakeholders
- Publish Scenarios to AIM 360

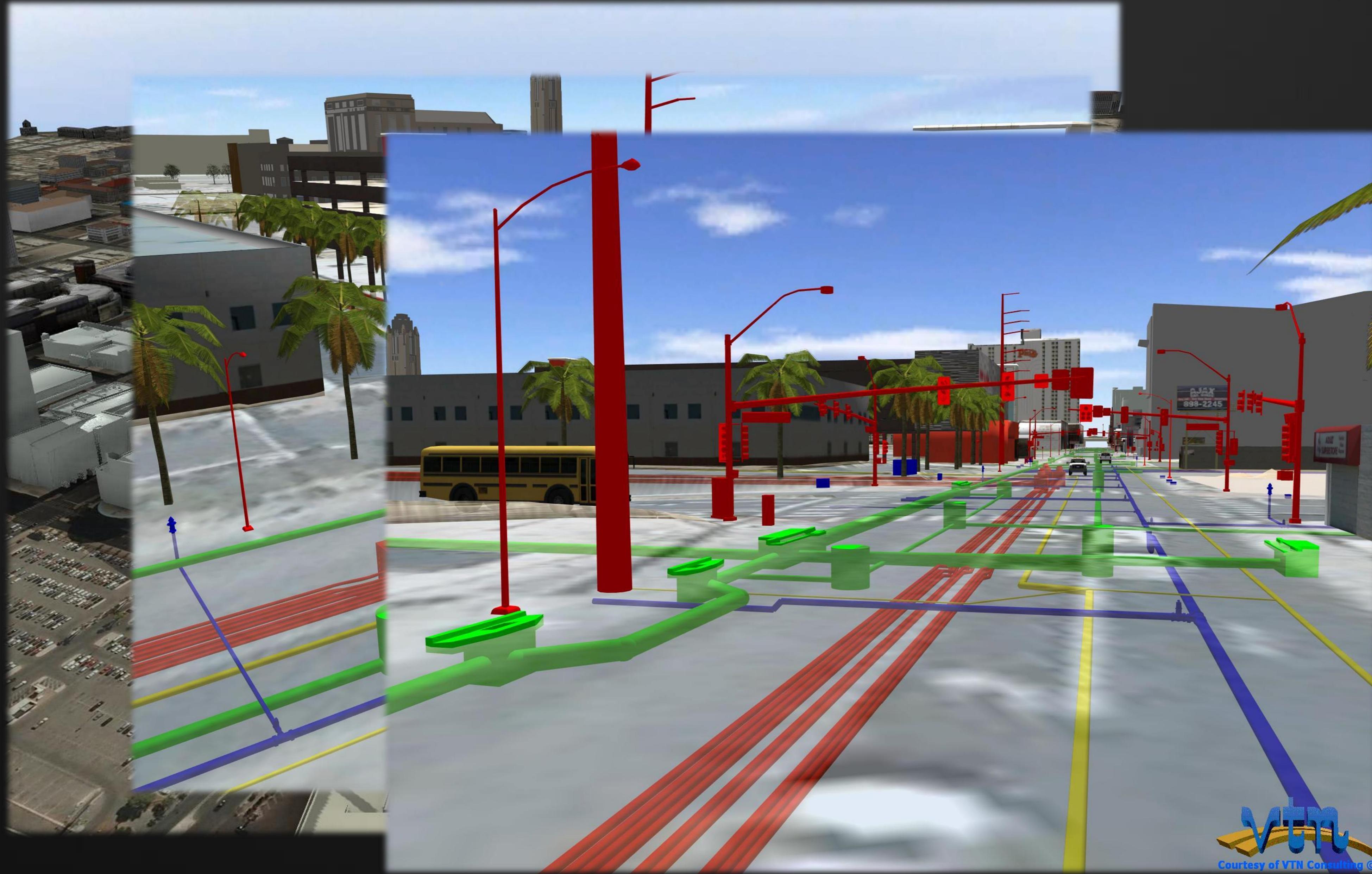


How will this help my business?









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

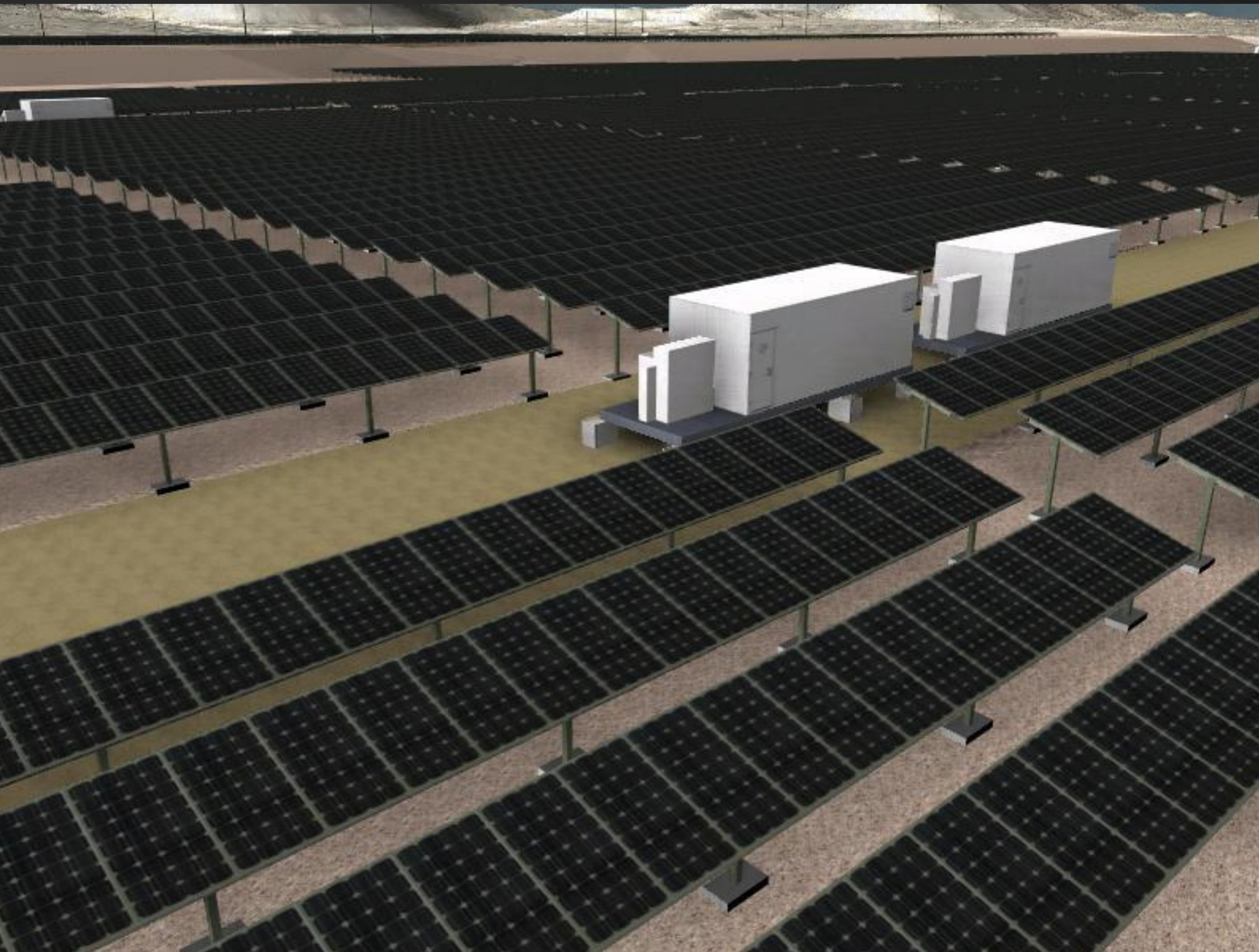
Aerial or satellite photos provide color, texture, and orientation to the model, but no depth. They also provide a stencil for tracing city features such as buildings, trees, or roads.

Terrain

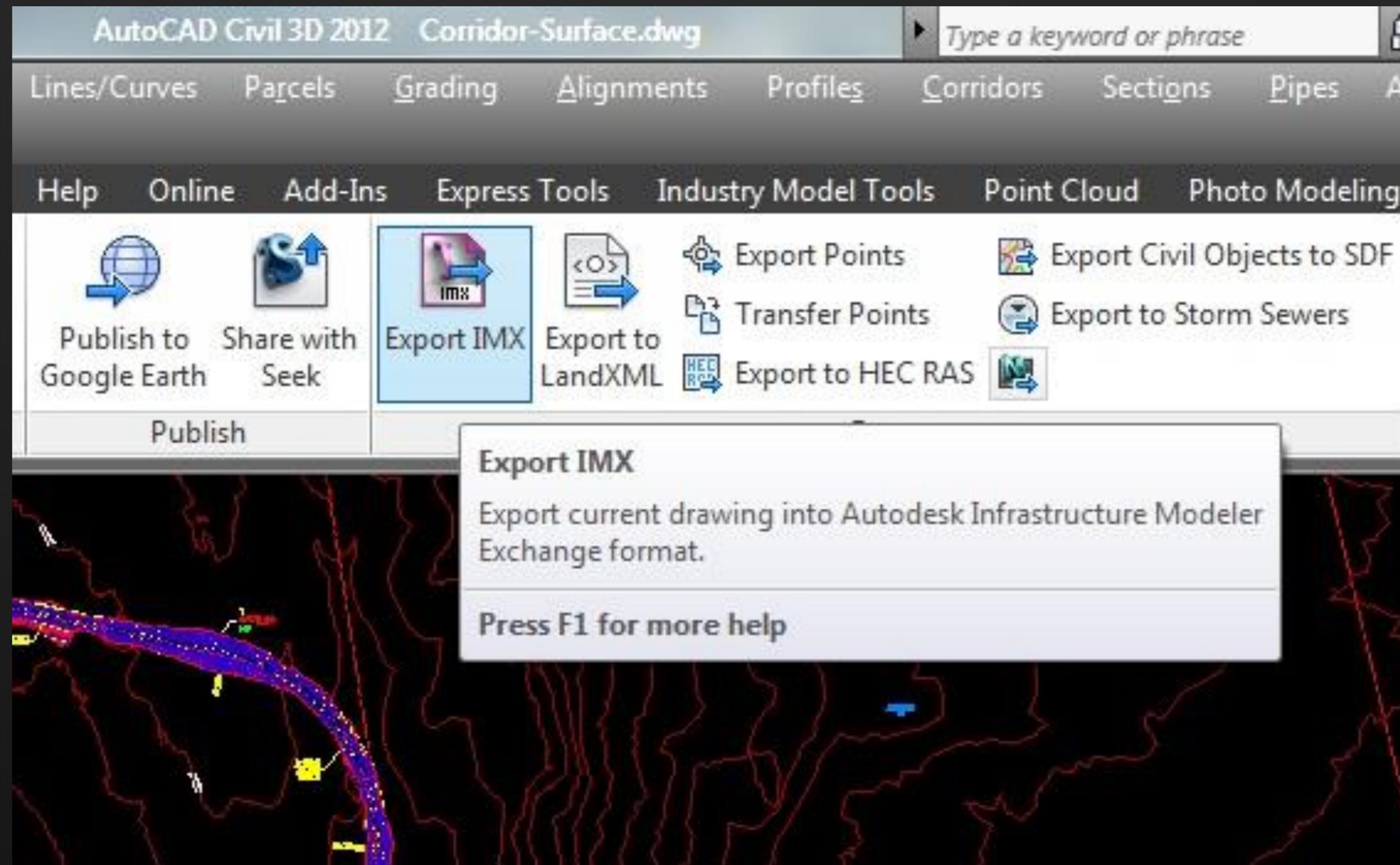
Terrain, or an elevation model, is required to get started using AIM. GeoTiffs, DTMs, and DEMs are freely available from a variety of sources. USGS is the first place to start.

AEC Solutions

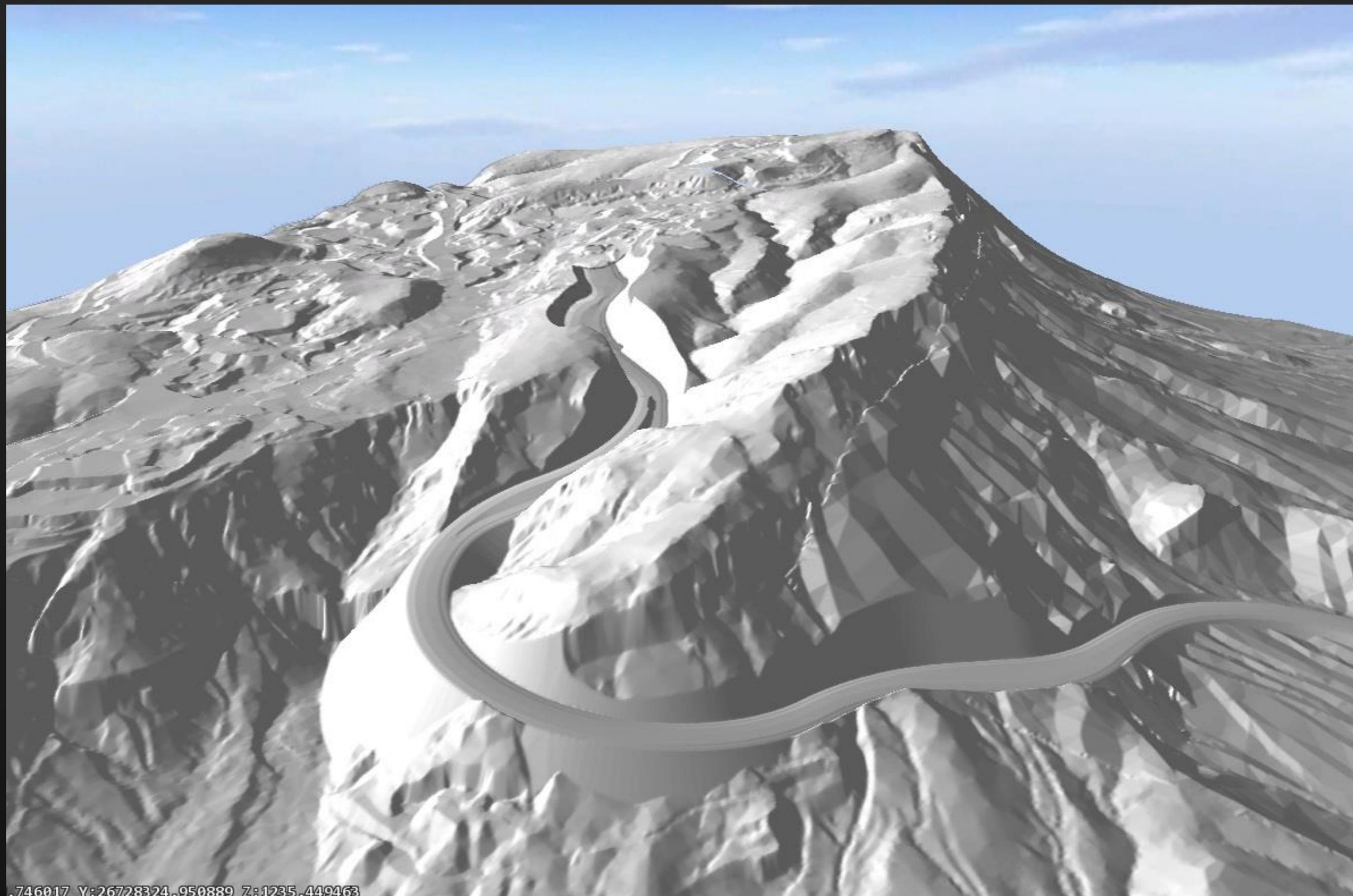
- 3D Geospatial Data (GIS)
- 3D Intelligent Modeling
- Urban Planning and Design
- Space Planning
- Property Resources
- Emergency Response
- Building Services
- Public Safety
- Utilities Networks

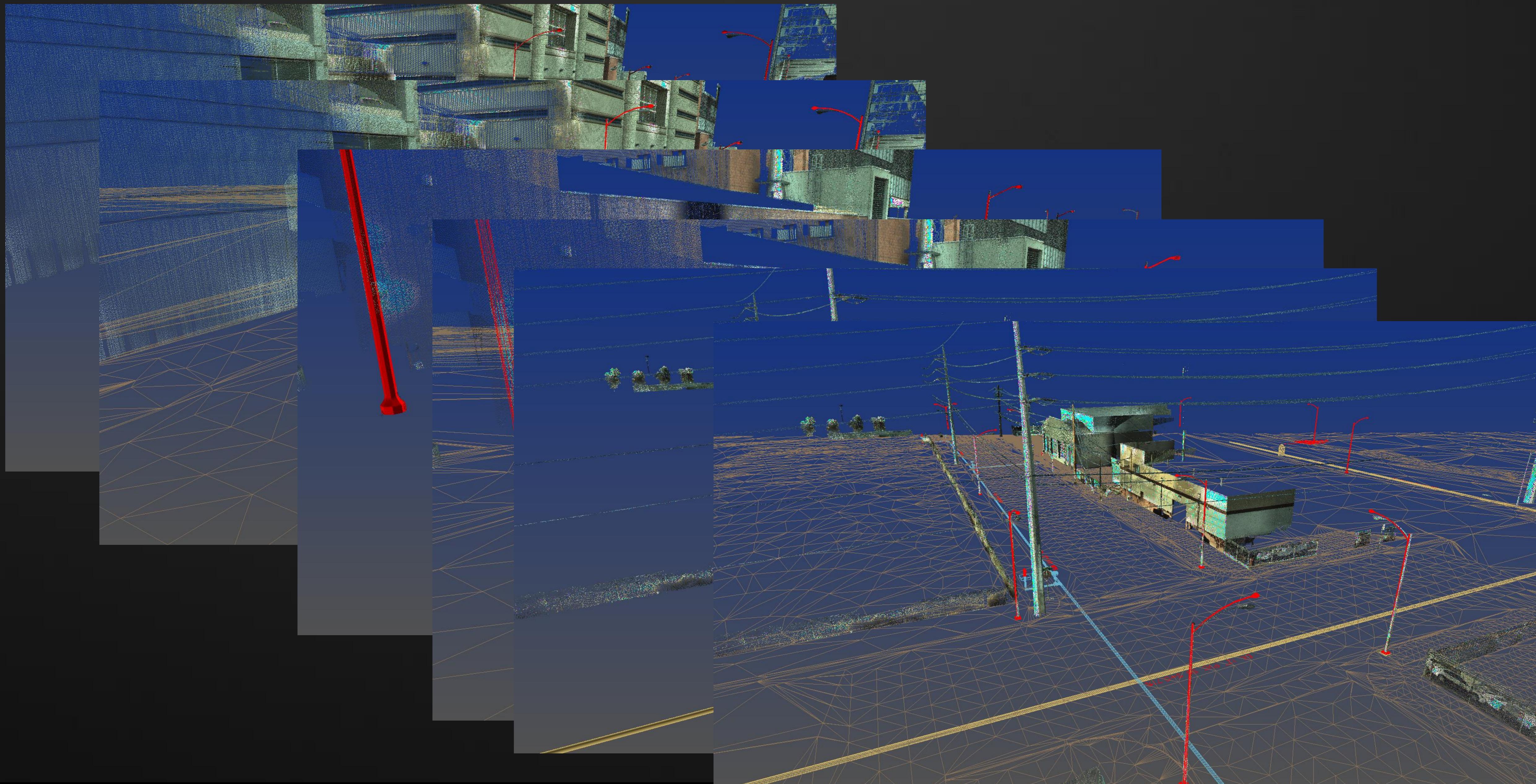


Exporting from Civil 3D

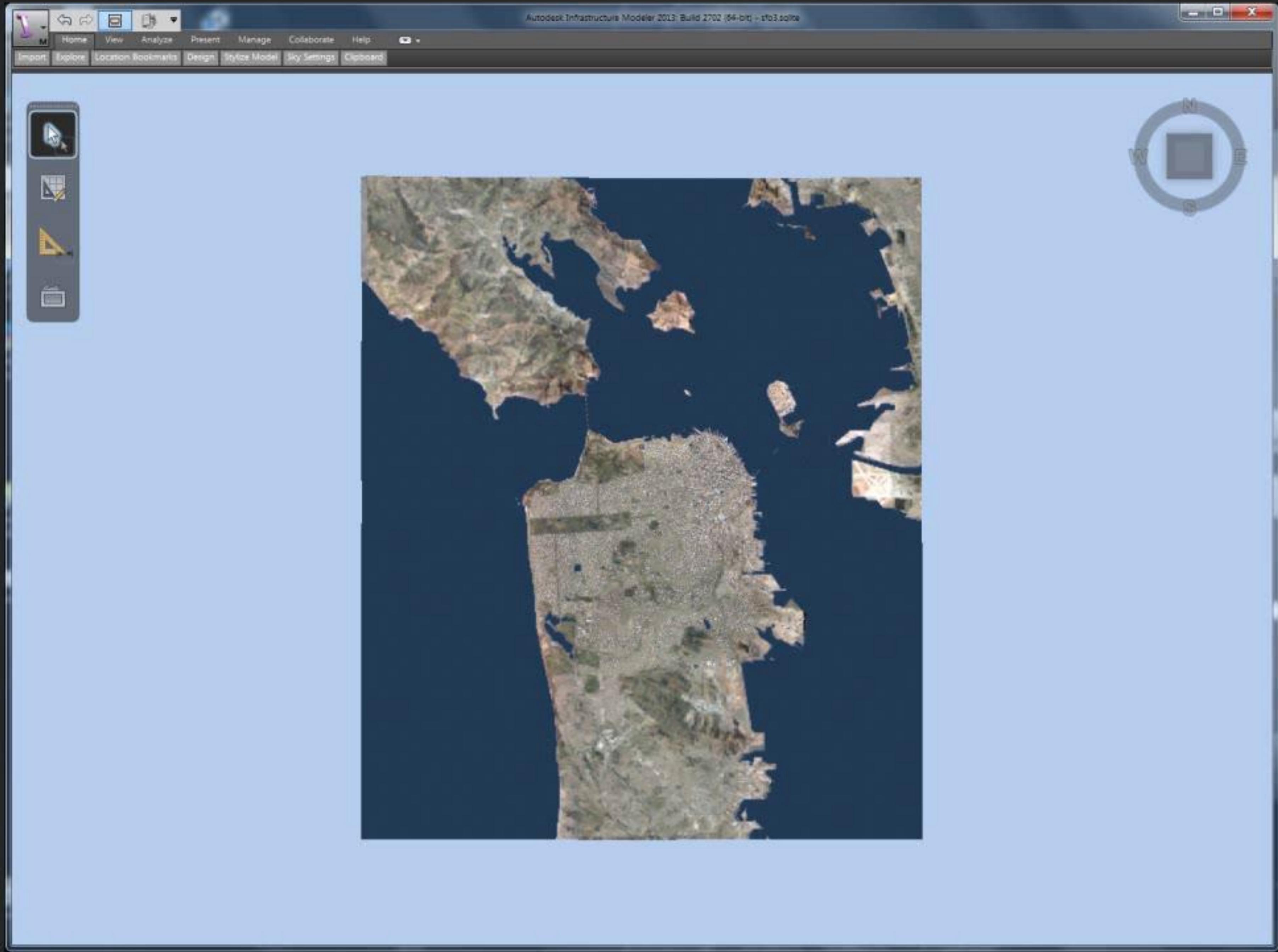


Importing from Autodesk Civil 3D Into Autodesk Infrastructure Modeler®

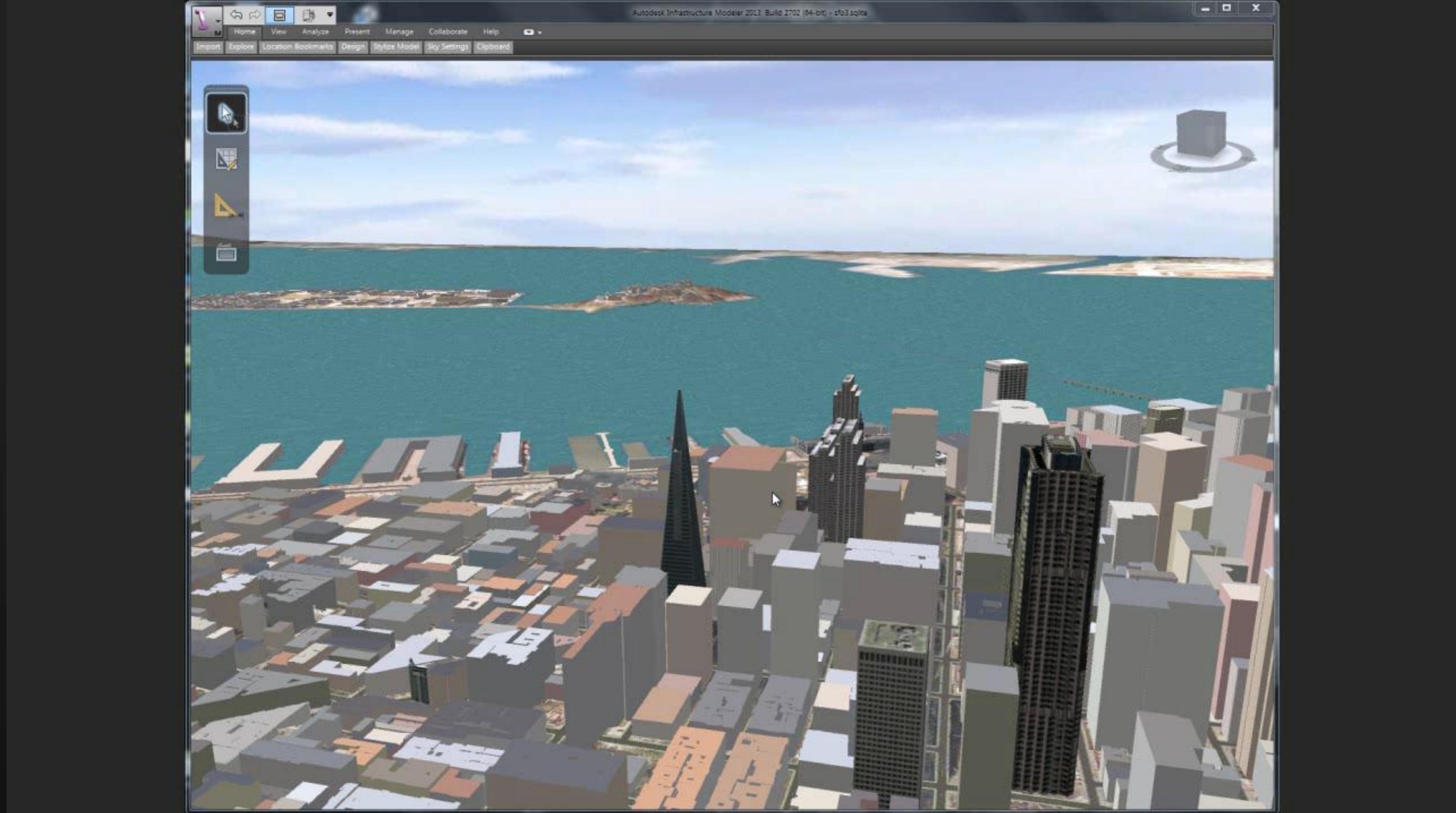


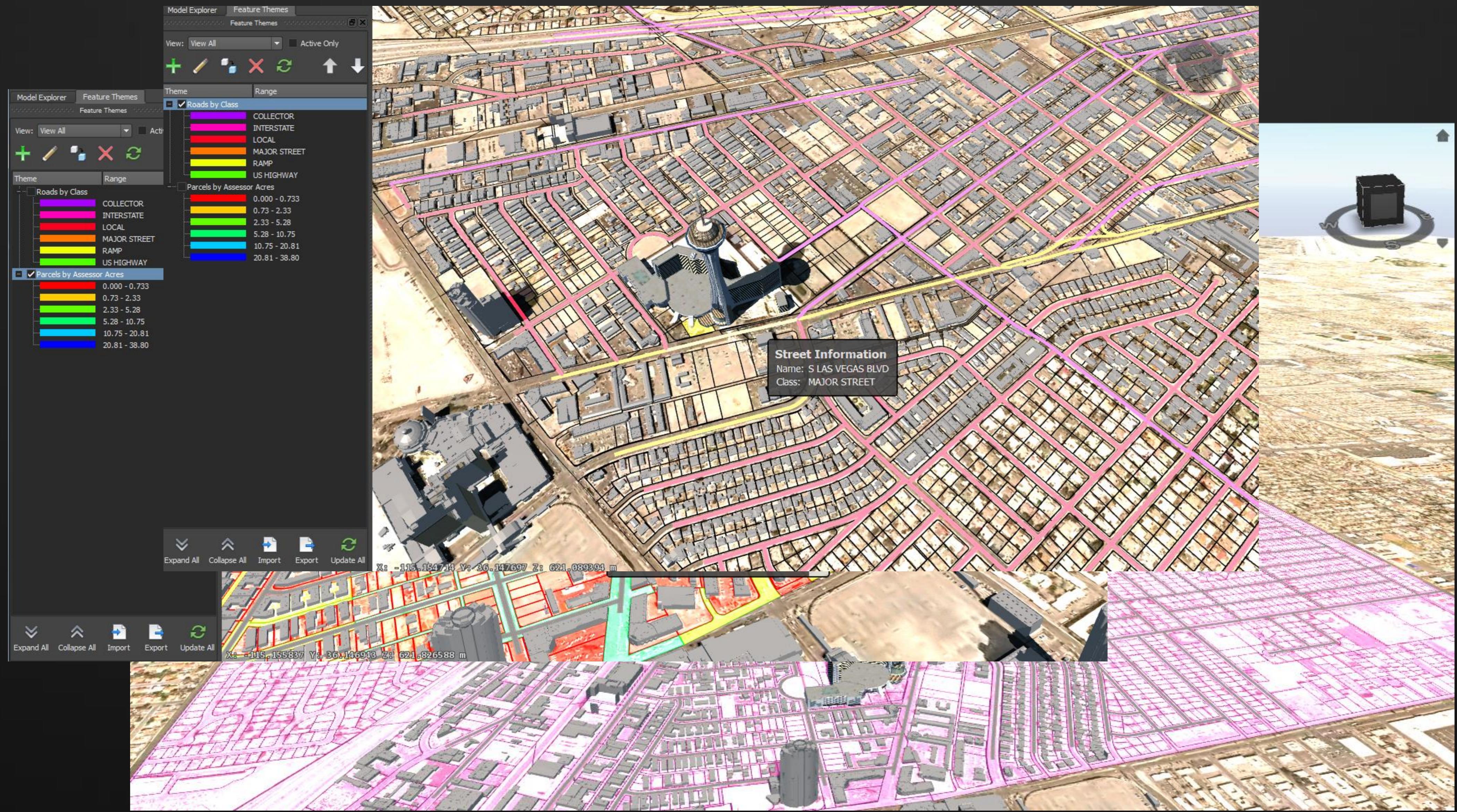


How do I put this to use?



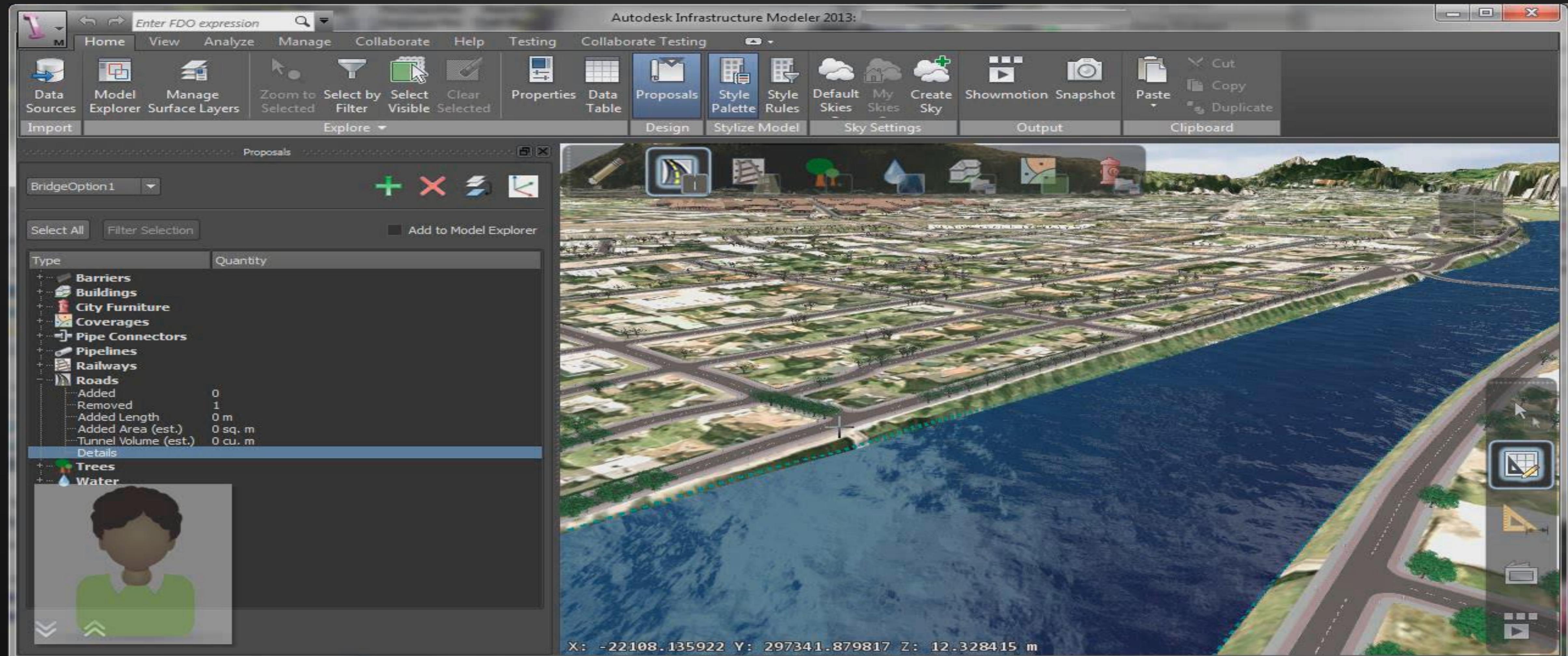
*How can these models be used as the basis for more
modeling and even collaboration*





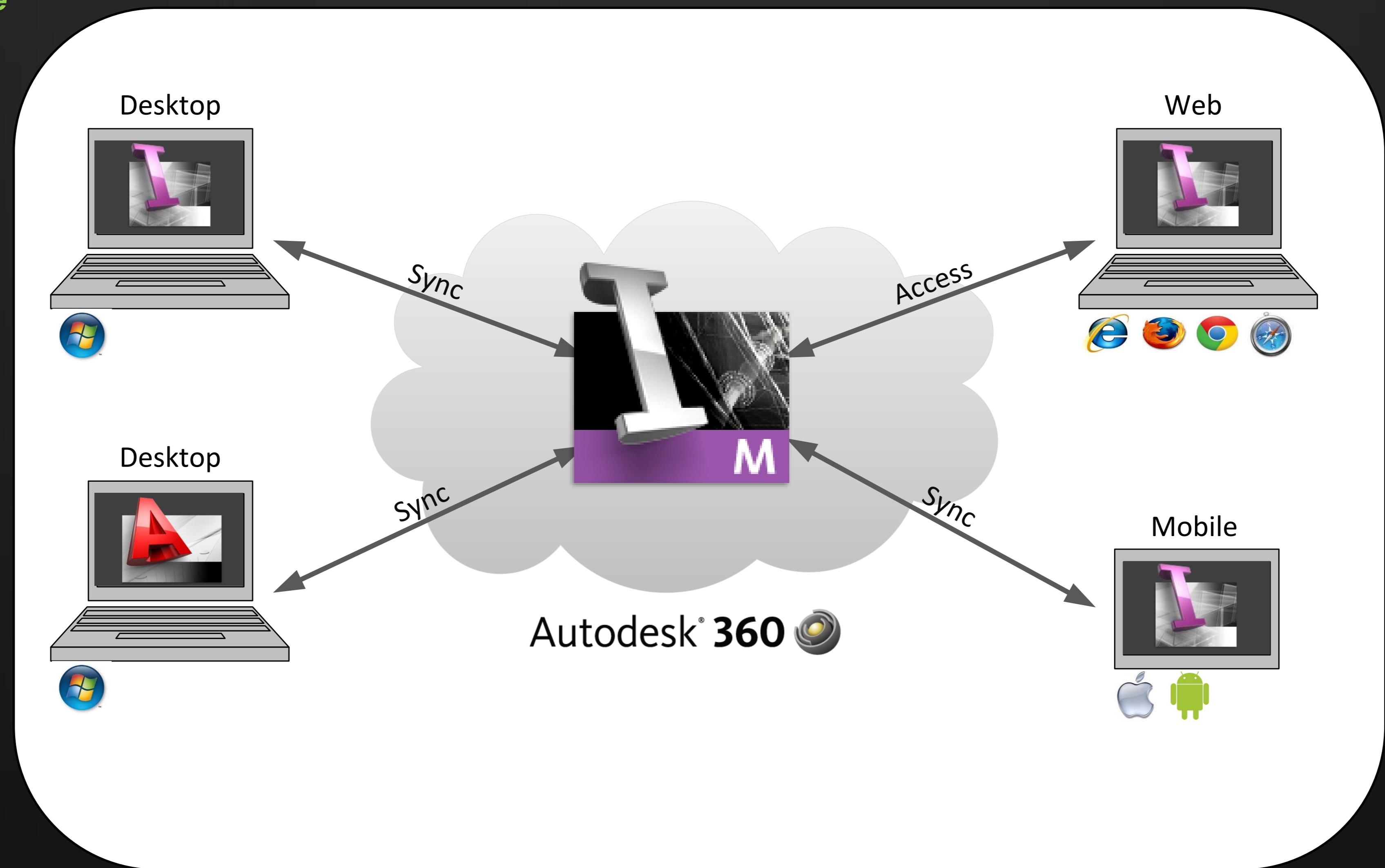
Model Collaboration via AIM 360

One Model – Multiple Designers, Multiple proposals via the Desktop



Goal: Continuous Collaboration

Any device, anywhere

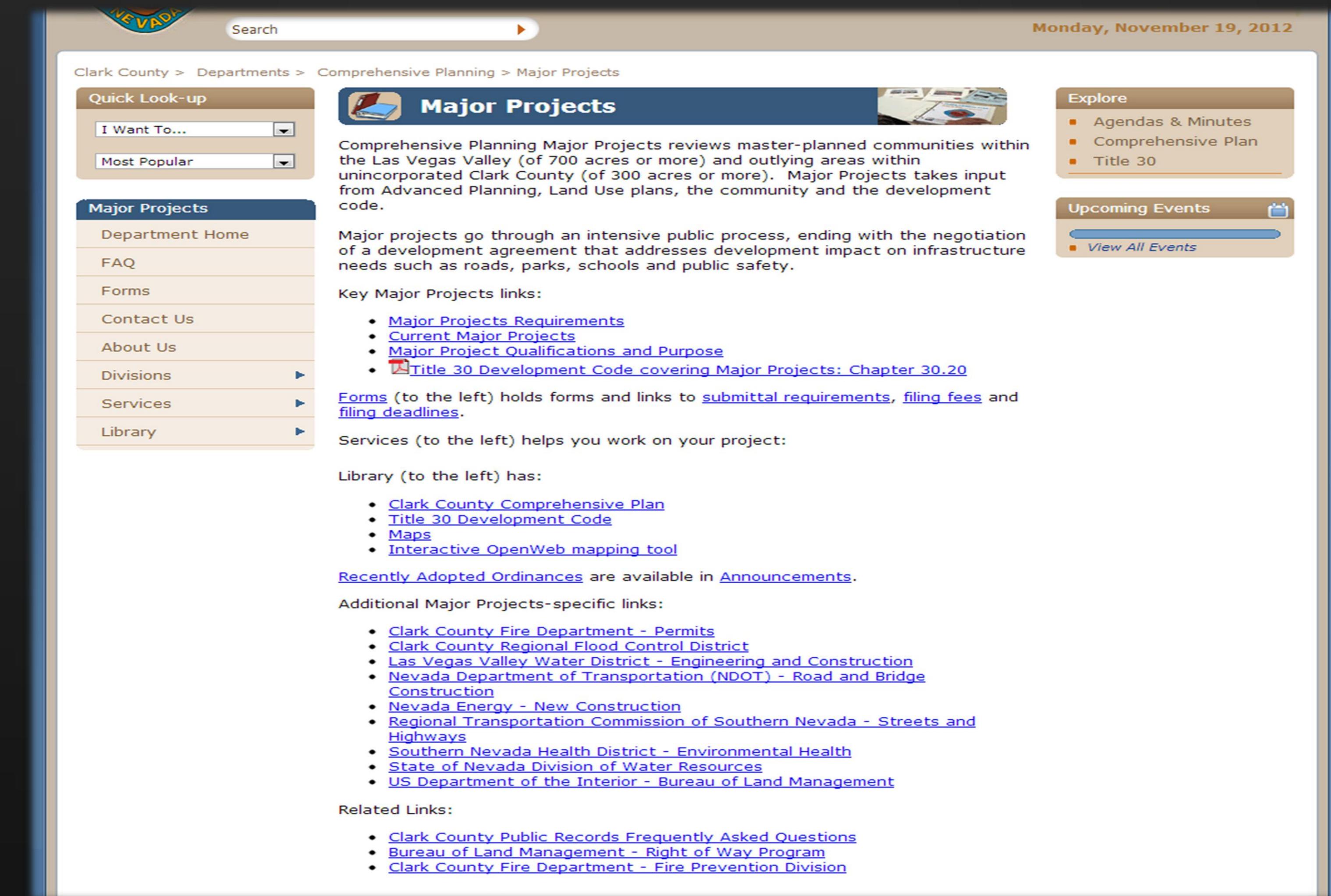


Infrastructure Model . . . Access Anywhere
Share & Collaborate Securely

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 traditional website layout for the Clark County Major Projects. The top navigation bar includes a Nevada state logo, a search bar, and the date "Monday, November 19, 2012". The main content area is titled "Major Projects" and contains a brief description of the department's role in reviewing master-planned communities. It features a sidebar with "Quick Look-up" filters, a "Major Projects" menu, and sections for "Explore" and "Upcoming Events". The main content area also includes links to "Major Projects Requirements", "Title 30 Development Code", and "Recently Adopted Ordinances". A sidebar on the left provides links to "Department Home", "FAQ", "Forms", "Contact Us", "About Us", "Divisions", "Services", and "Library".

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](#)

Presenting Concepts via Storytelling

1. Provide a graphic way to describe concepts

The screenshot displays the Presidio Parkway website. At the top is a logo for 'PRESIDIO PARKWAY' featuring a stylized bird. To the right is a 'DID YOU KNOW?' box with text about bridge piles. Below the logo is a search bar. The main content area is titled 'Video Gallery' and shows a thumbnail for 'Phase 1 Construction' with a play button. The sidebar on the left contains a menu with items like 'About the Project', 'Presidio Parkway Features', 'Construction Overview', 'Traffic Phasing', 'Project Documents', 'Photo Gallery', 'Video Gallery', 'Webcams', 'Meetings', 'FAQs', 'Press Center', 'Contact Us', 'Small Business Info', 'Contractor Info', and 'Driver Toolbox'. At the bottom is a '511 Call 511 | 511.org' section with a phone icon and a link for free information about Bay Area traffic.

2. Describe to users what they're looking at

3. Include useful project information

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

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

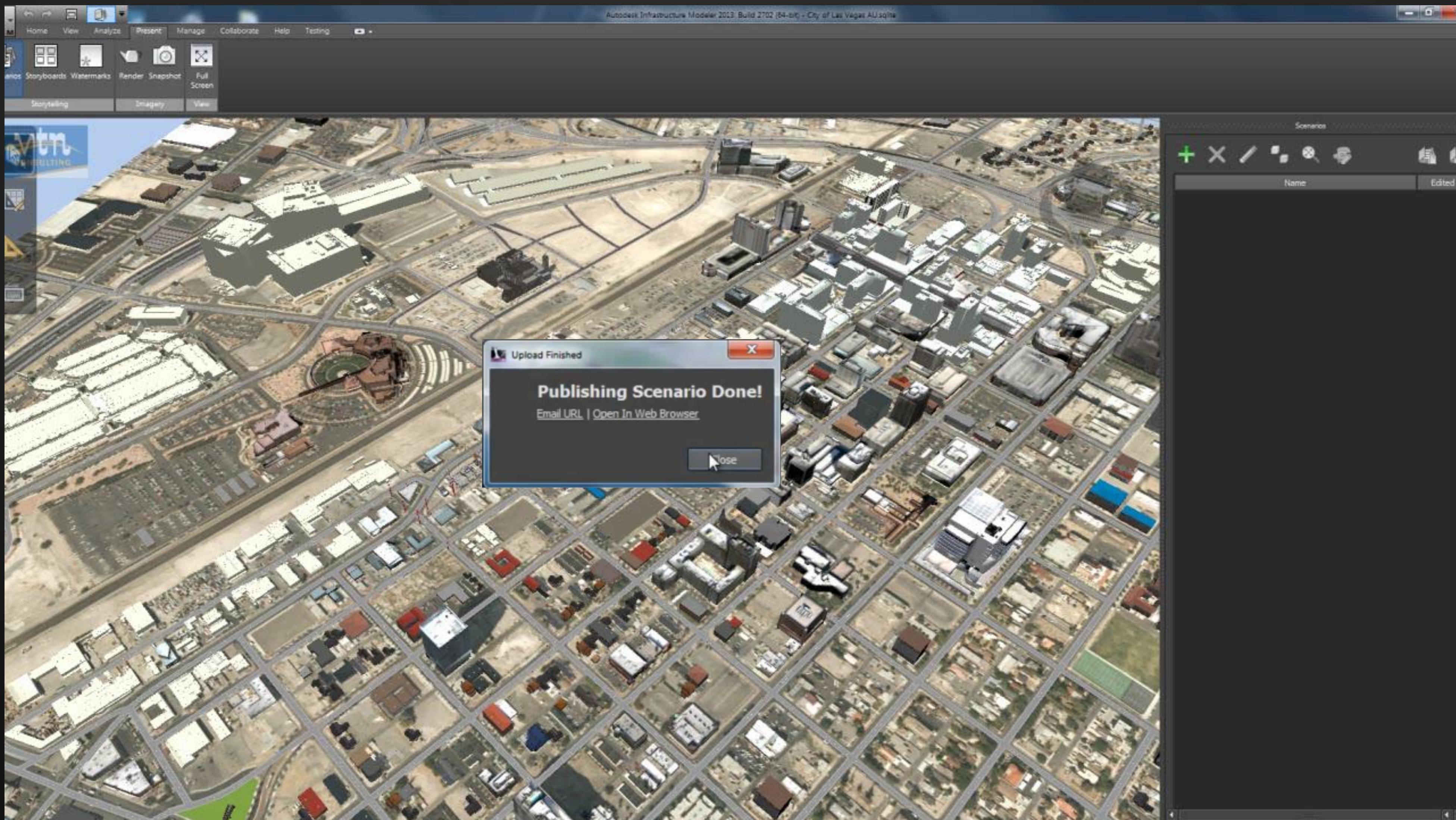
Narrating Design Intent



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

