Tips to Organize and Build Large 3ds Max Scenes for Large Roadway Visualizations

Things We've Learned From Several Years of Developing Many Very Large Roadway Design Visualizations in 3ds Max Including Working With Large Aerial Textures, Vector Map Materials, Xrefs and Rendering Elements For Creating Motion Graphics in Post-Production

Class Objectives

- How to prepare aerial bitmap textures in Max
- How to use vector maps to create crisp pavement markings
- Why you should use XREFs. And why you shouldn’t.
- How to create geometry for quick and effective use in post-production

About Me

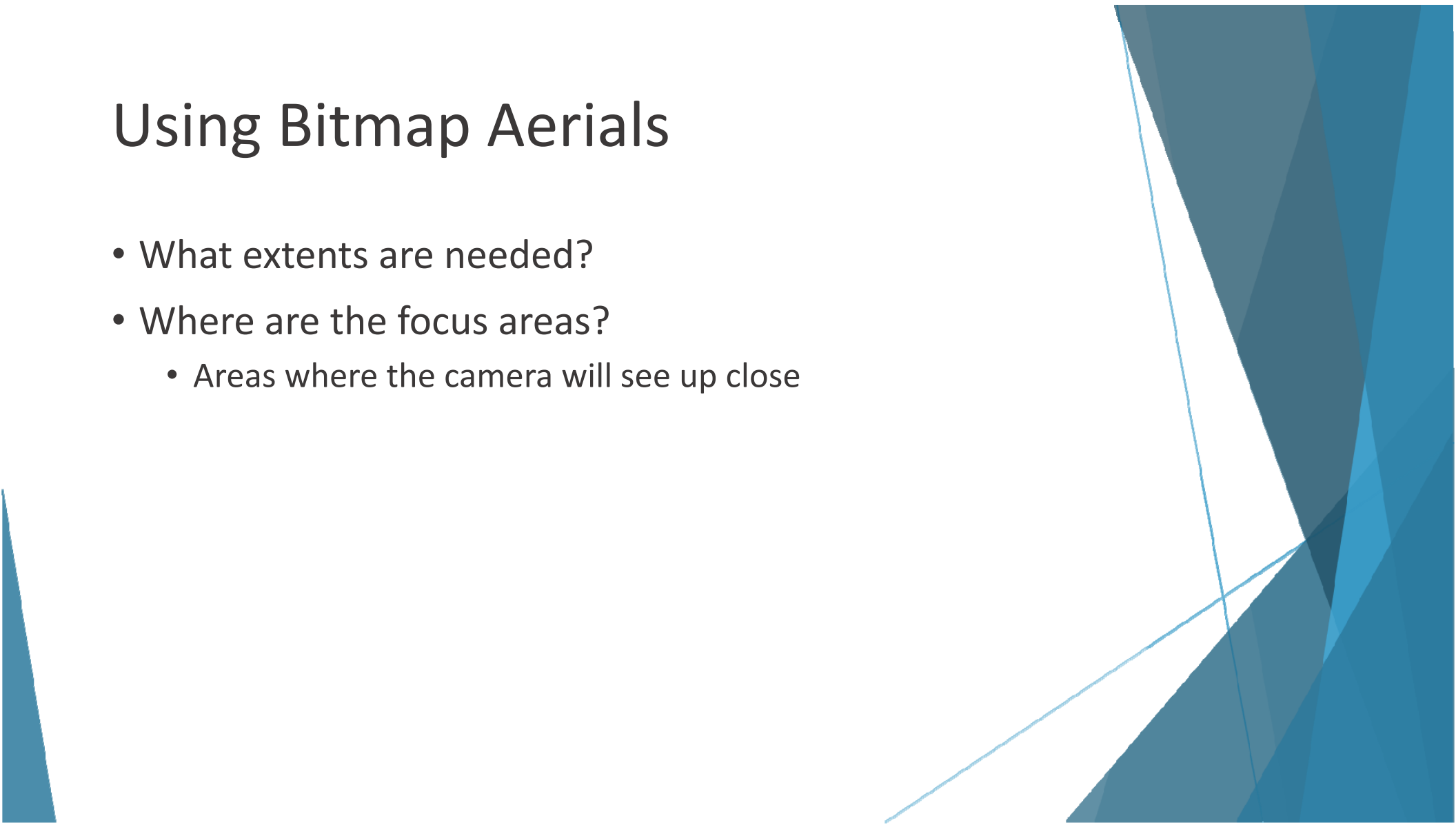
- Ian McRobbie
- Degree in game art and design
- Creating visualizations for 5 years at RS&H
  - AEC firm specializing in the transportation, health and science, defense, corporate, aviation and aerospace industries

Using Bitmap Aerials

- Large texture files can bog Max down
- Low resolution textures can make a model look terrible
- Best of both scenarios:
  - Get good-looking aerial where you need it, not where you don't

Using Bitmap Aerials

- What extents are needed?
- Where are the focus areas?
  - Areas where the camera will see up close



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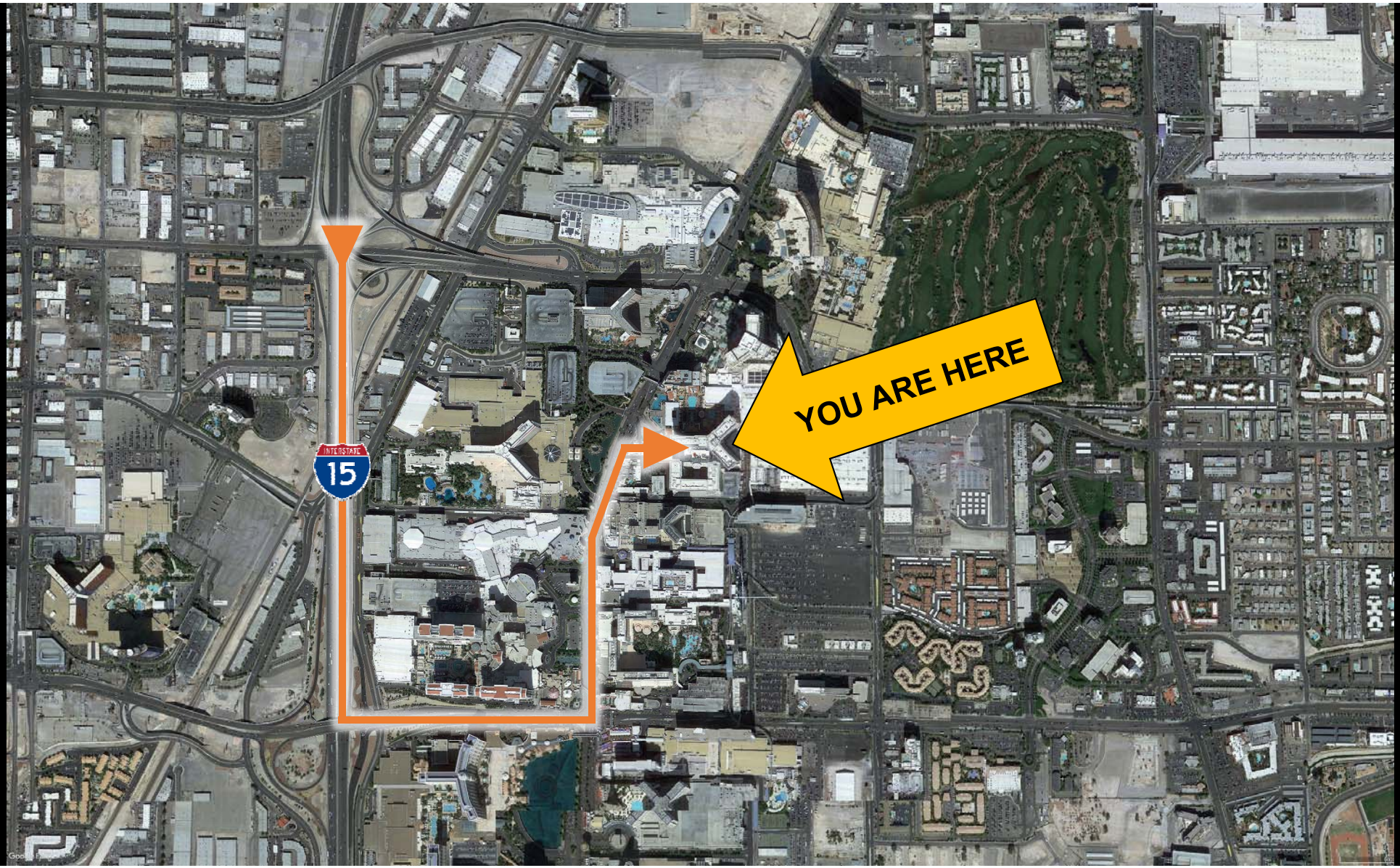
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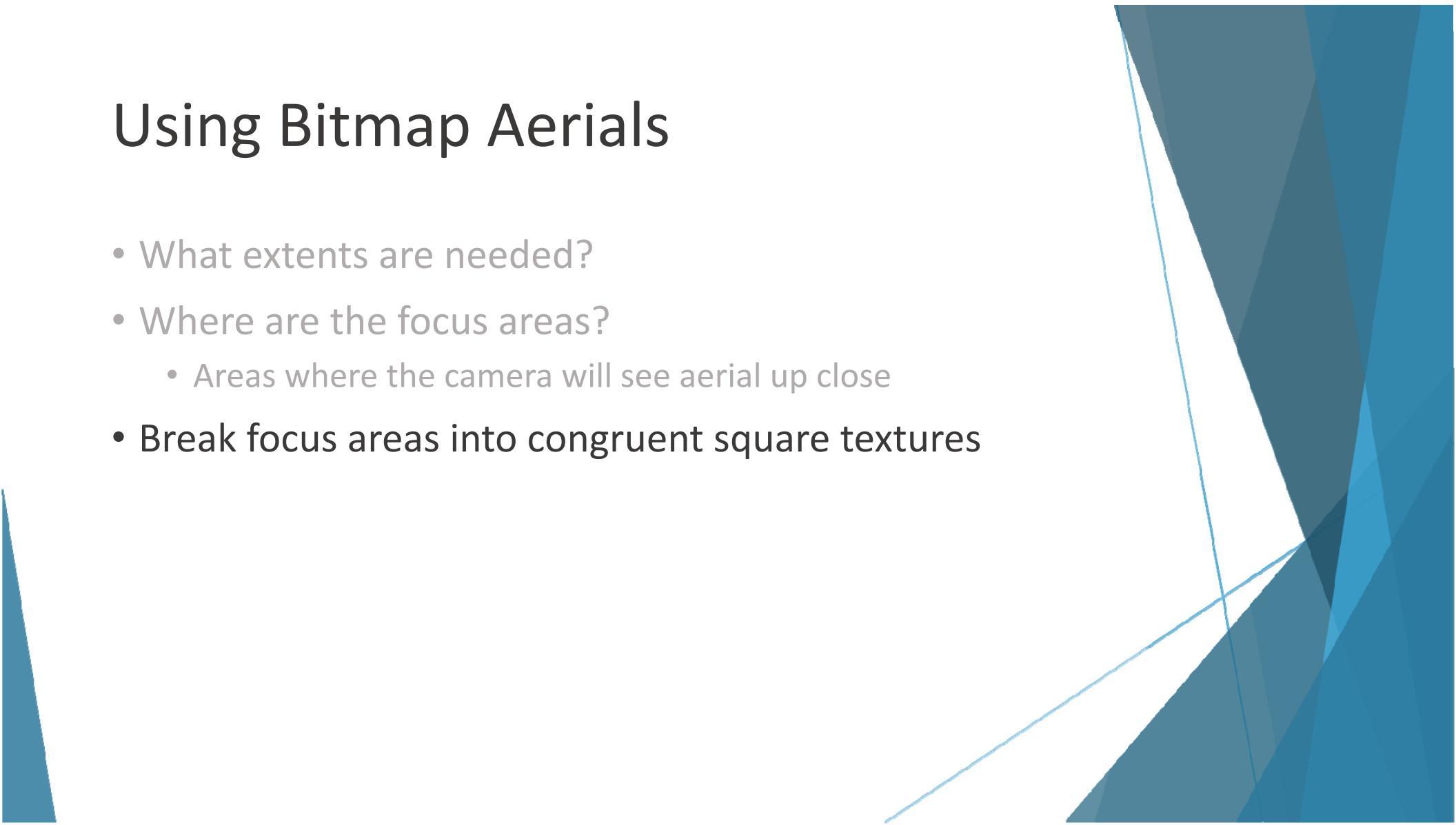
Using Bitmap Aerials

- What extents are needed?
- Where are the focus areas?
  - Areas where the camera will see aerial up close
- Break focus areas into congruent square textures



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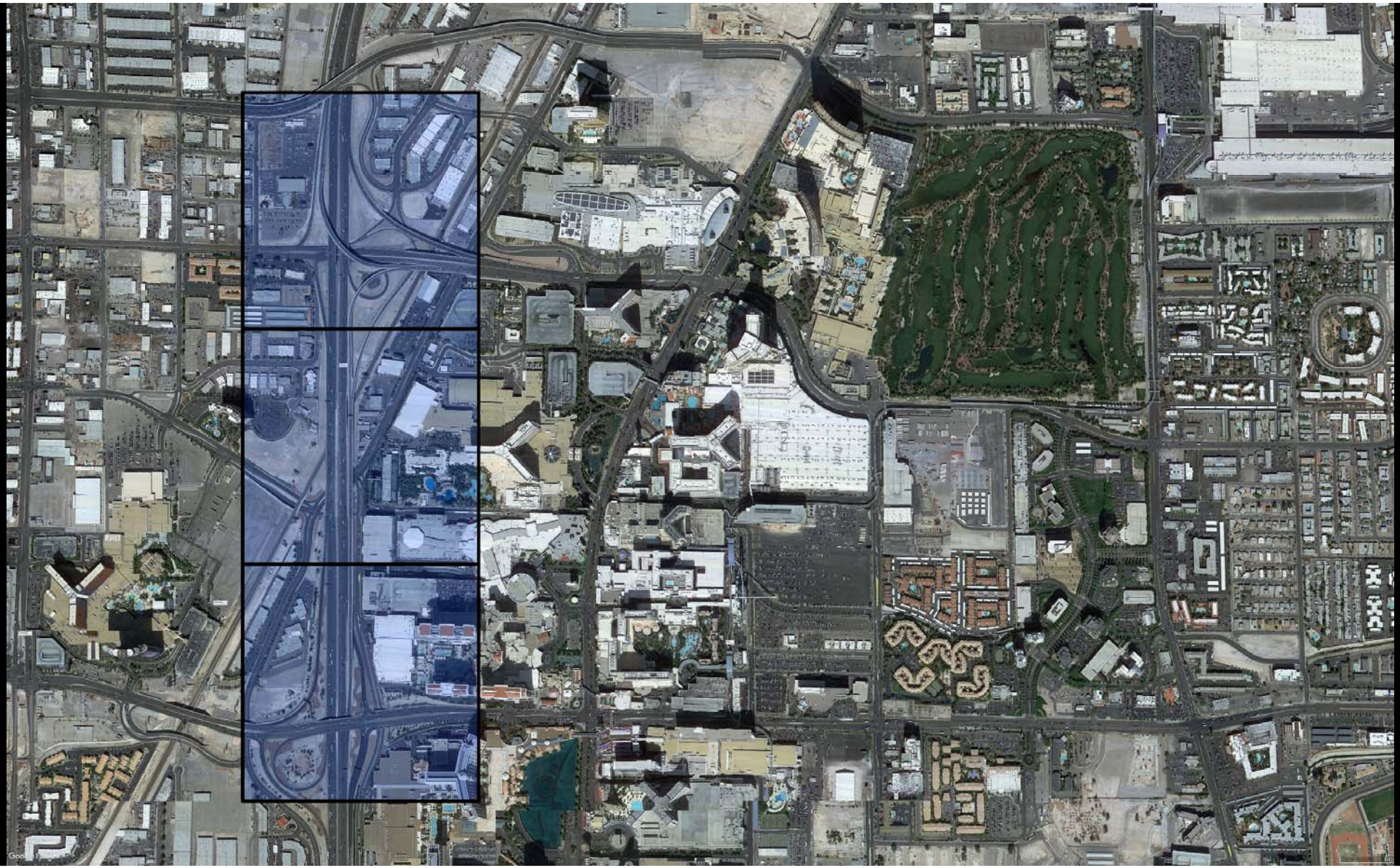
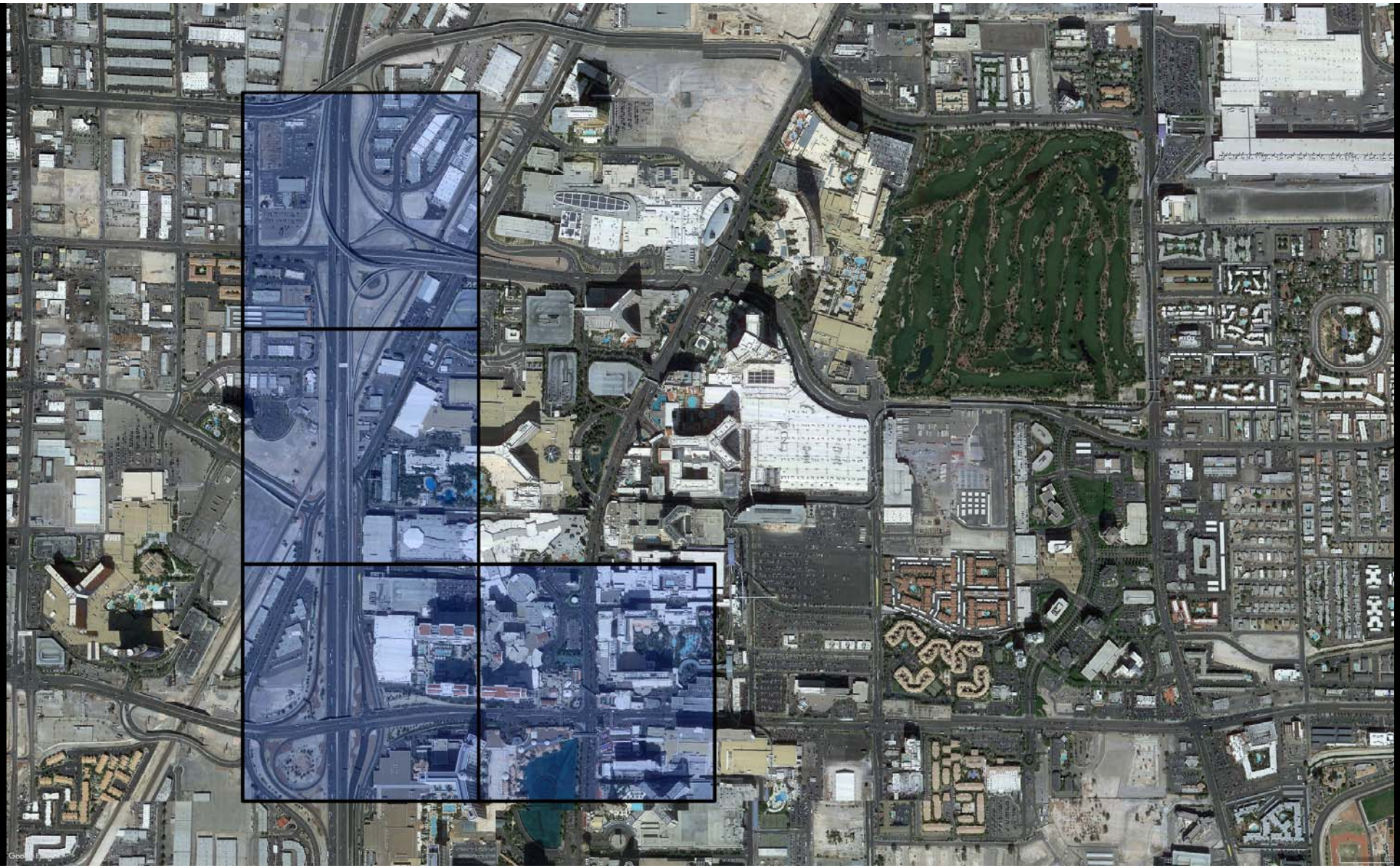
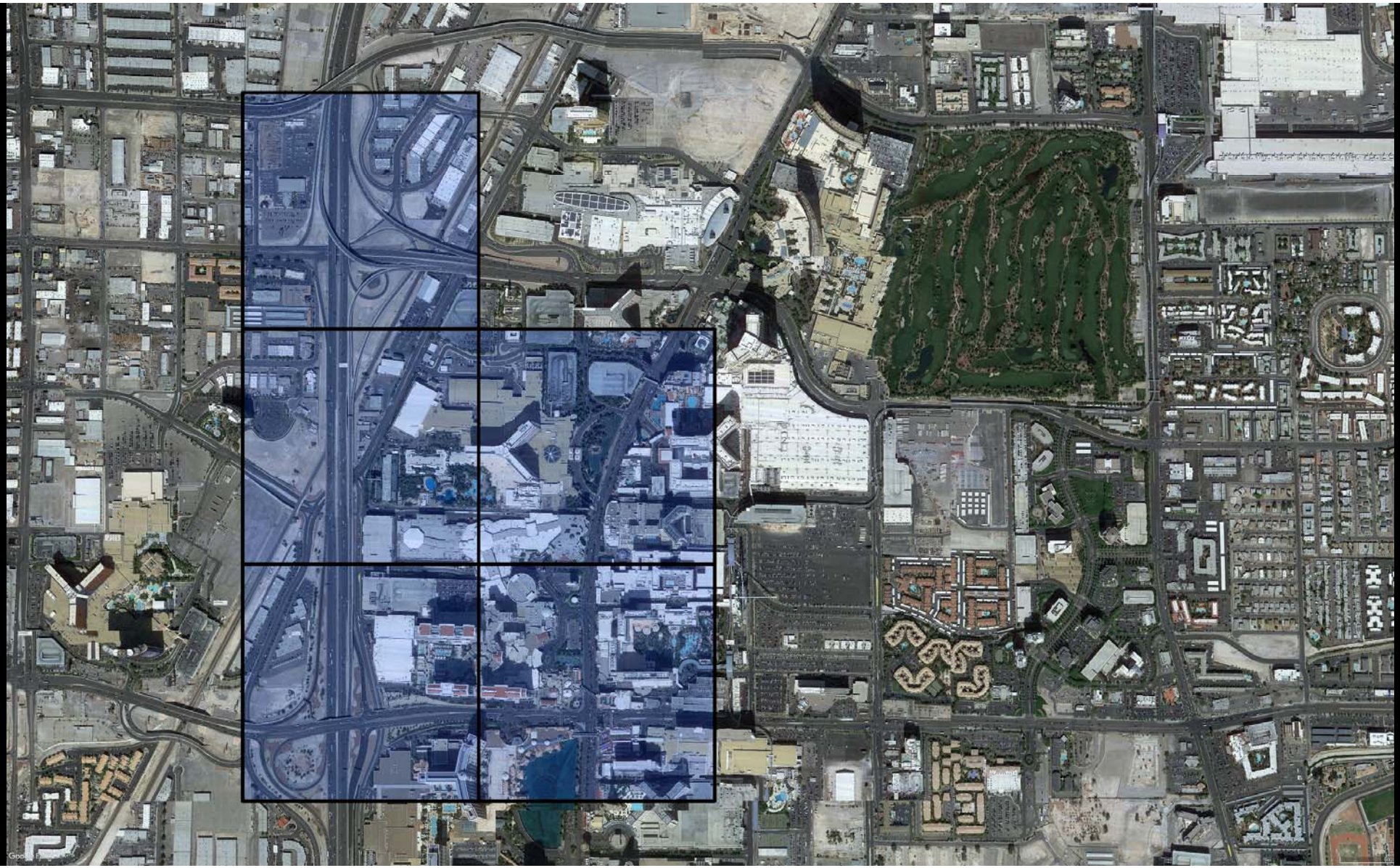
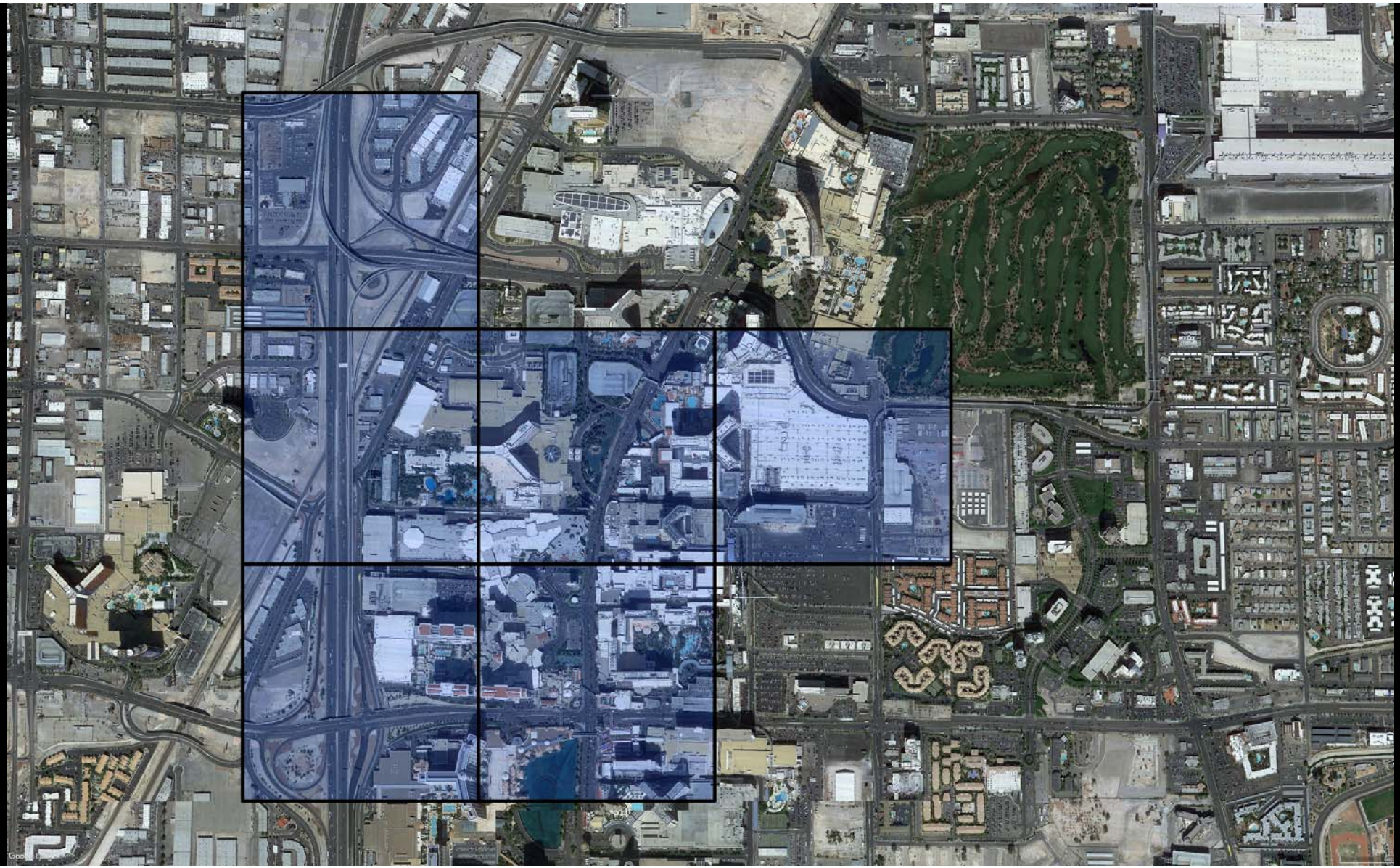
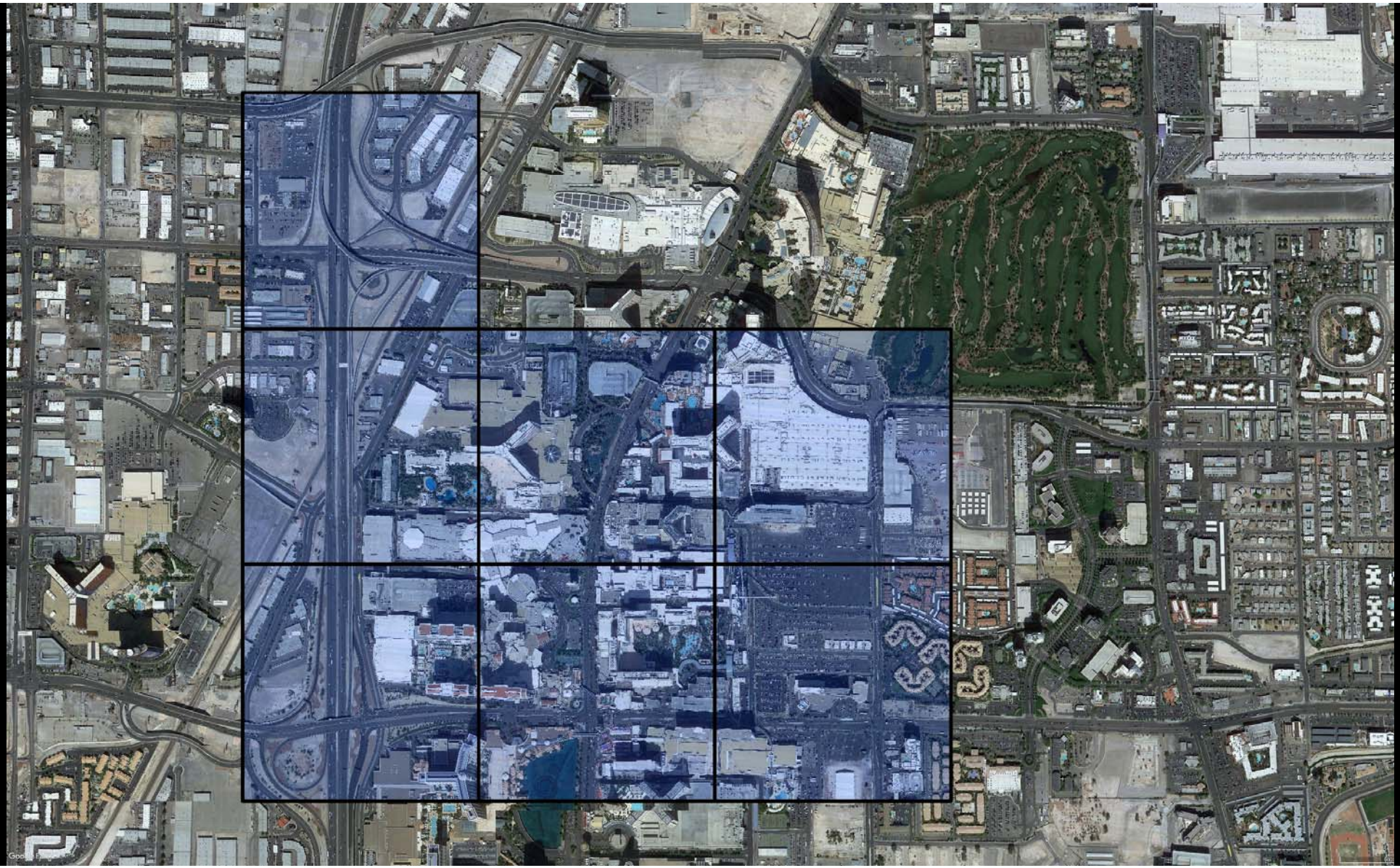








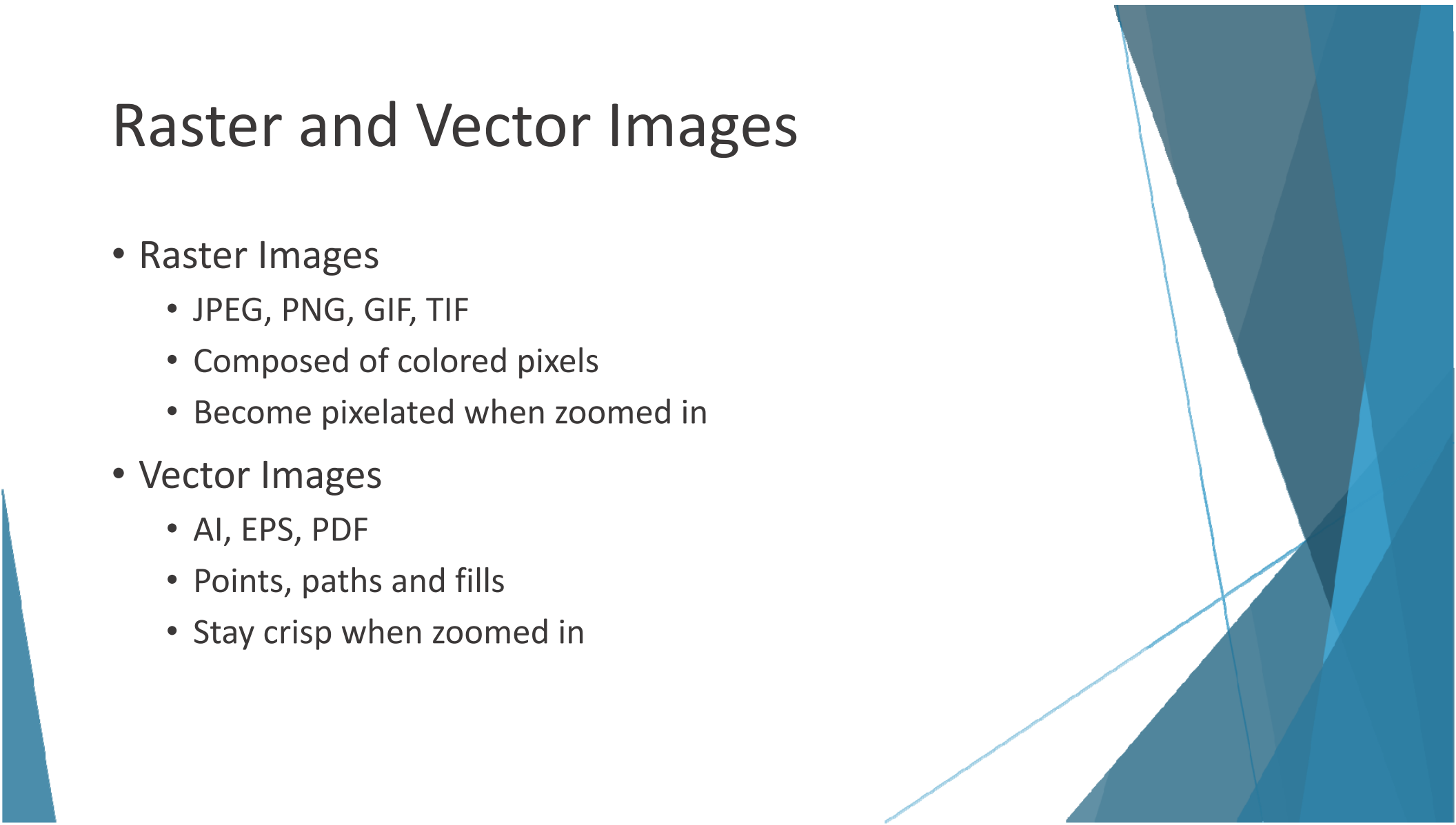


Using Bitmap Aerials Summary

- Determine the extents needed
  - Start with a low resolution image
- Identify focus areas seen near the camera
  - Break focus areas up into multiple high resolution squares
- Combine in 3ds Max
  - Do you need more high res images? Fewer?

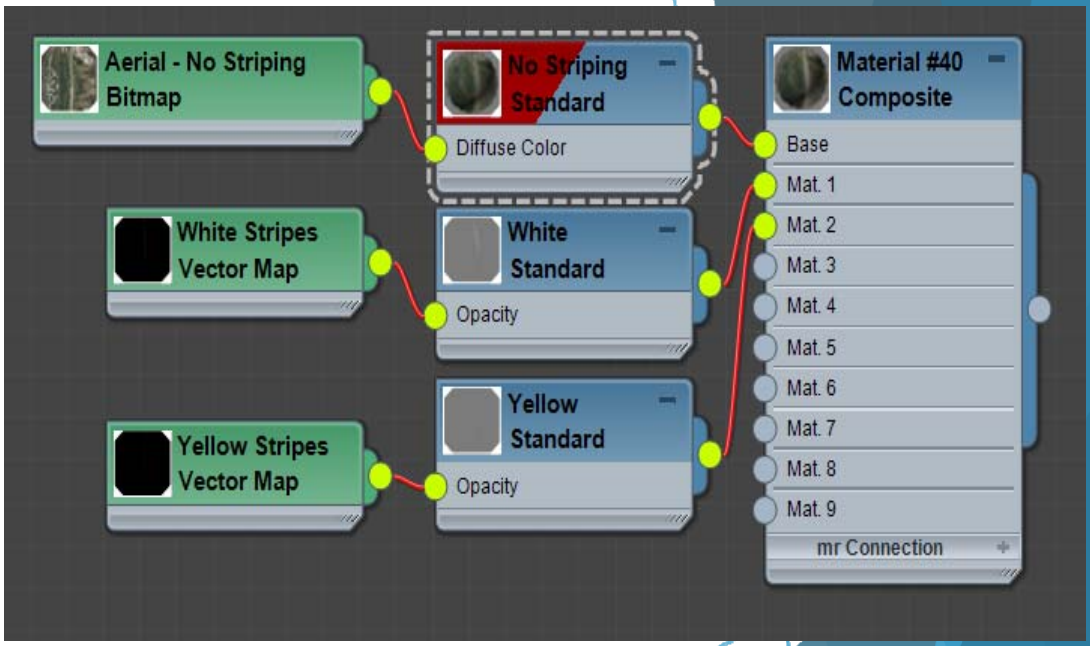
Raster and Vector Images

- Raster Images
  - JPEG, PNG, GIF, TIF
  - Composed of colored pixels
  - Become pixelated when zoomed in
- Vector Images
  - AI, EPS, PDF
  - Points, paths and fills
  - Stay crisp when zoomed in



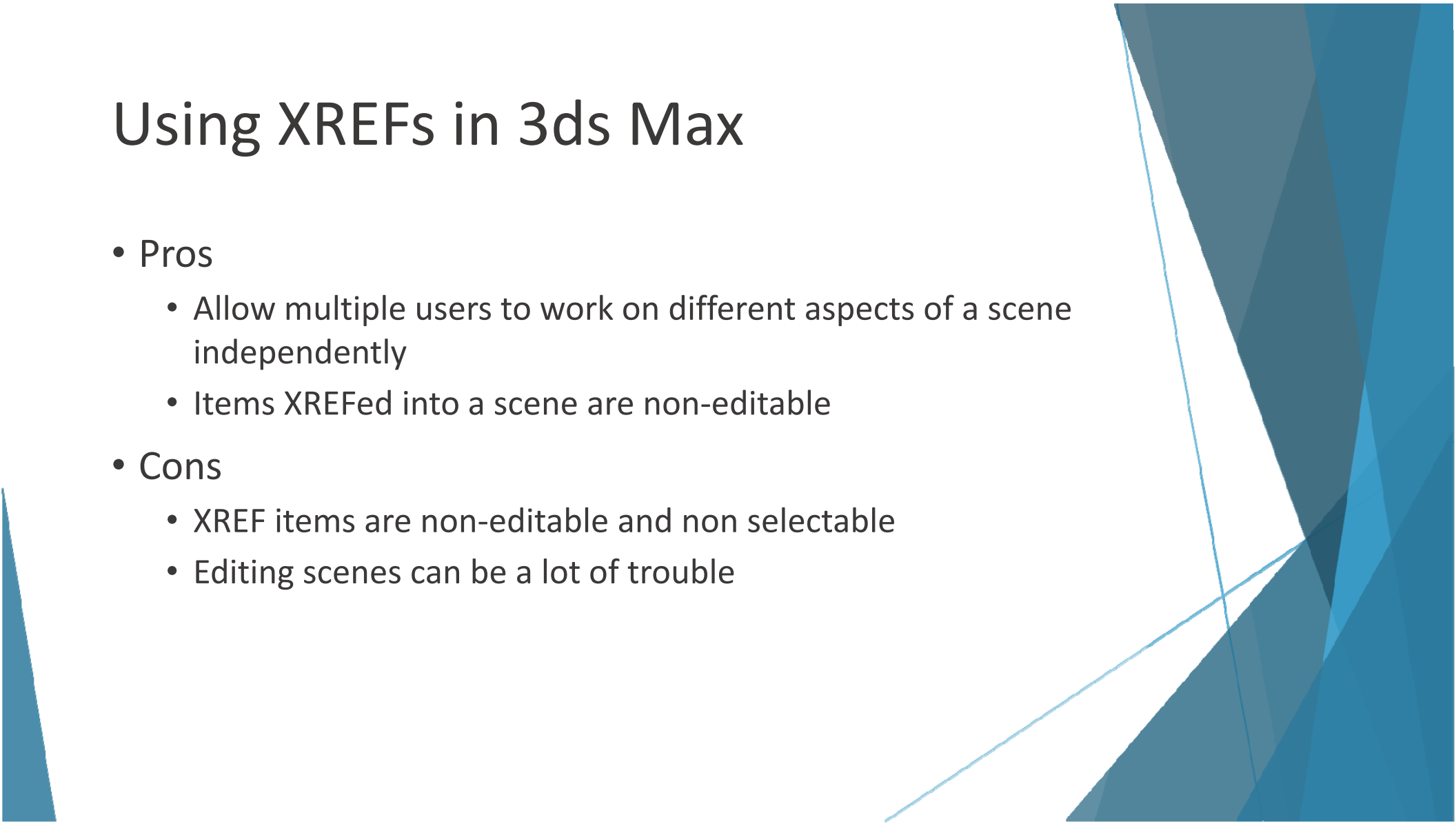
Using Vector Images in Max

- Create Composite Material
- Put aerial material into base slot
- Put material with its diffuse set to white into Mat 1. slot
- Put vector(PDF) into opacity slot with its Alpha Source set to Image Alpha
- Repeat for yellow striping material



Using XREFs in 3ds Max

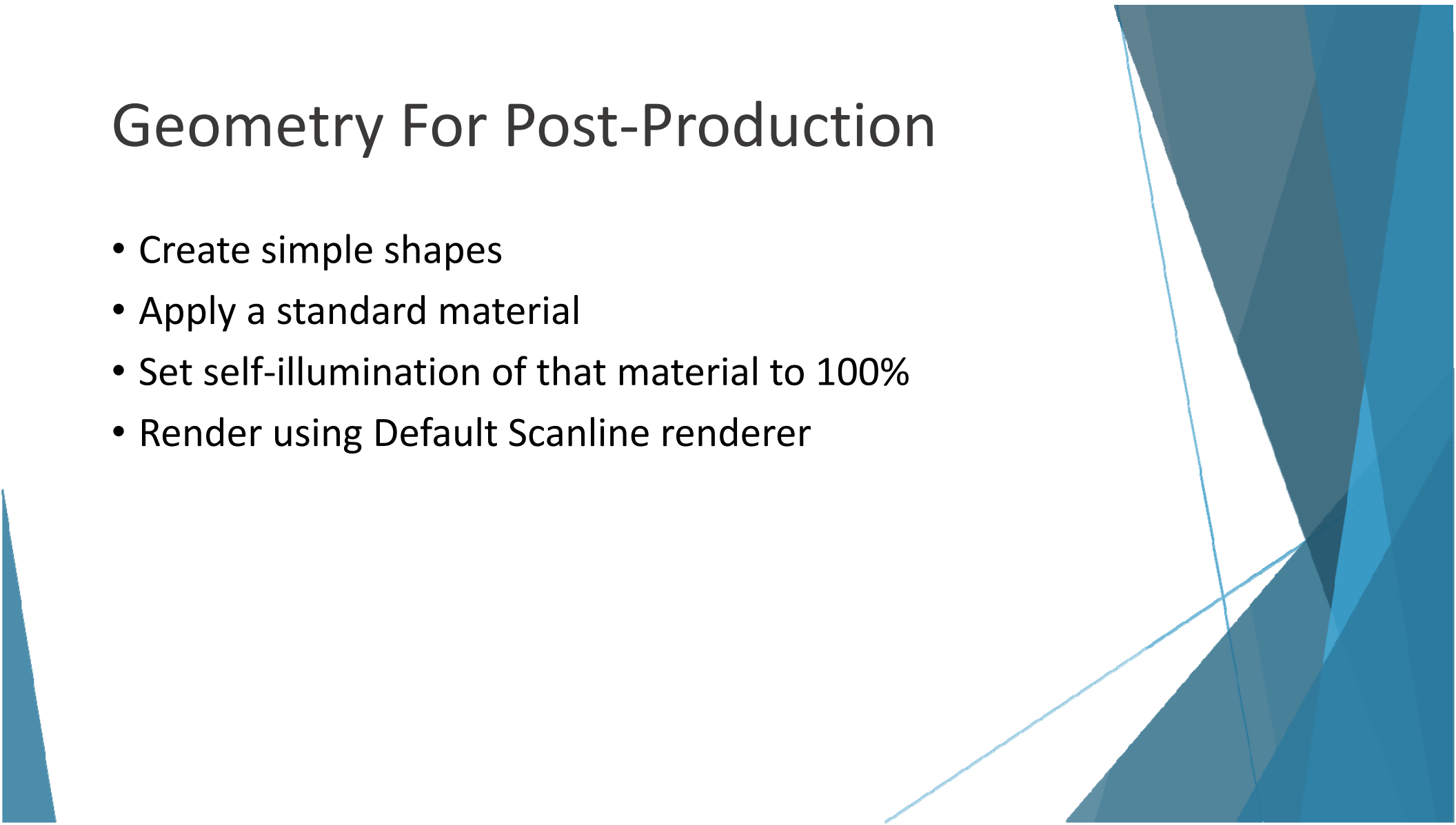
- Pros
  - Allow multiple users to work on different aspects of a scene independently
  - Items XREFed into a scene are non-editable
- Cons
  - XREF items are non-editable and non selectable
  - Editing scenes can be a lot of trouble



Geometry For Post-Production

Geometry For Post-Production

- Create simple shapes
- Apply a standard material
- Set self-illumination of that material to 100%
- Render using Default Scanline renderer



THANKS FOR ATTENDING!