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4D - USING 3D MODELING AND ANIMATION FROM DESIGN TO PUBLIC INVOLVEMENT

The use of Lidar, Advanced 3D models and Animation tools are not only changing the way we design, but also changing the way in which we present a project to the Public.

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Courtesy of:
Marvel Film Guides

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- Preparation of 3D Modeling from FDOT District 7.
- Lidar Data – Capture – of a Historic Church Building – SR 52 (Courtesy of GPI).
- Rendered Point Cloud Data of Historic Church.
- Final Infraworks Model for SR 52 (District 7), and also Memorial Bridge (District 2)
- Final Animation in Lumenrt
- Live Cube Files – For Client (FDOT District 7 PM) Review and Interaction
- SR 52 - Public Involvement Meeting July 2018.
- Other forms of Public Interaction – QR codes with Video Streaming (YouTube etc.)
- Other Project Models and Renderings
- Q and A….

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- 3D models from FDOT District 7 and District 2
- Other 2D elements- signing and pavement markings, signals
- Model preparation for Rendering and Animation

(Bentley MS – FDOTSS4)

SR 52 Models
(Bentley MS – FDOTSS4)

Memorial Bridge
(Infraworks Model)

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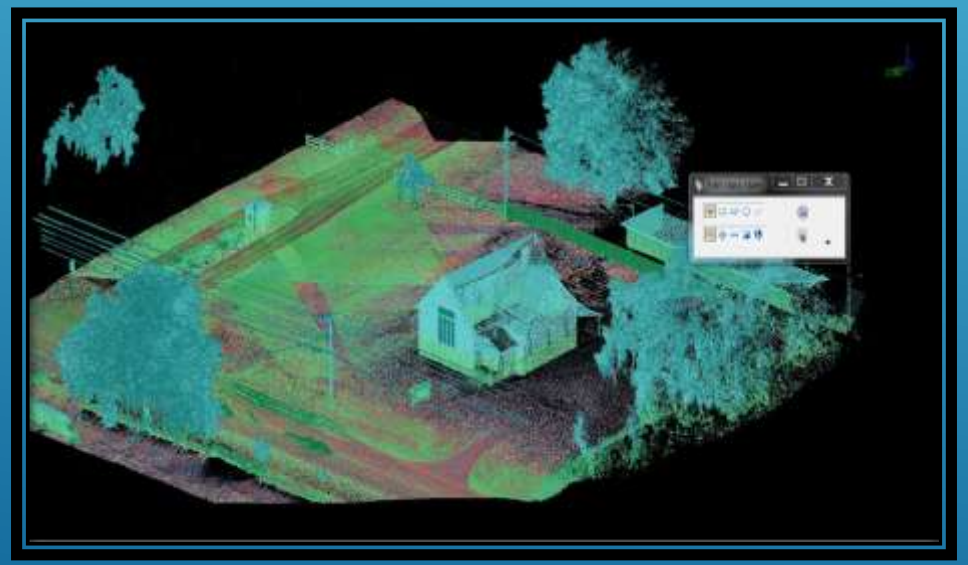
- Lidar Data – Capture – of a Historic Church Building – SR 52 (Courtesy of GPI).
- Rendered into InfraWorks along with other 3D objects



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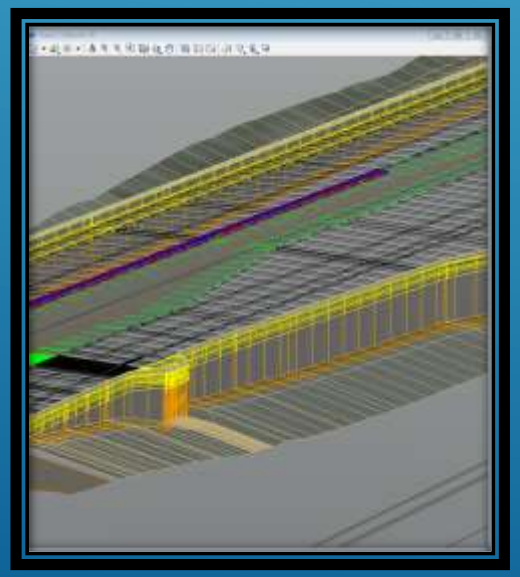
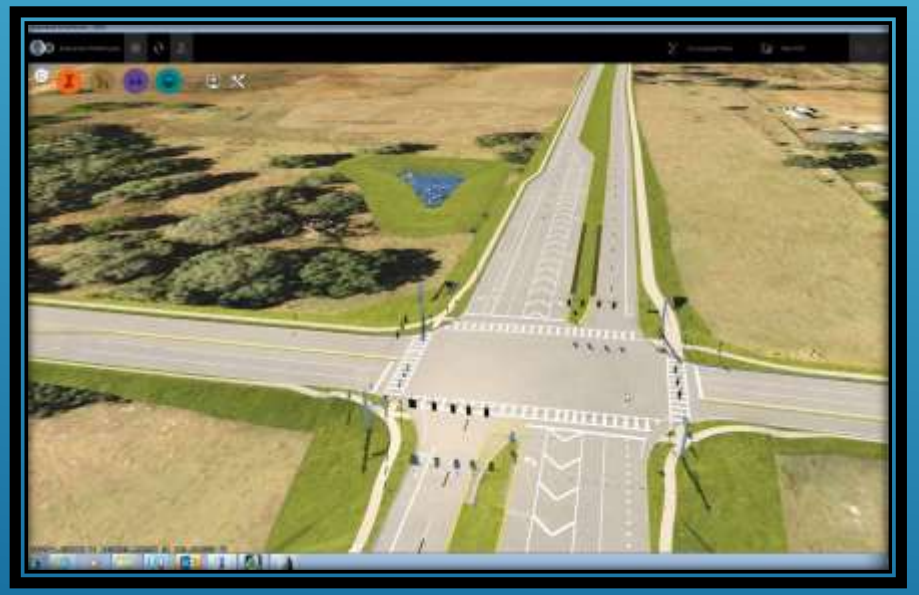
- From Design using OpenRoads (Bentley), InfraWorks (Autodesk), to Animation using Lumenrt (Bentley).





Bentley

INFRAWORKS

AUTODESK

Bentley

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SR 52 Rending
with Animation
LumenRT

Memorial Bridge
Lighting Rendering
LumenRT

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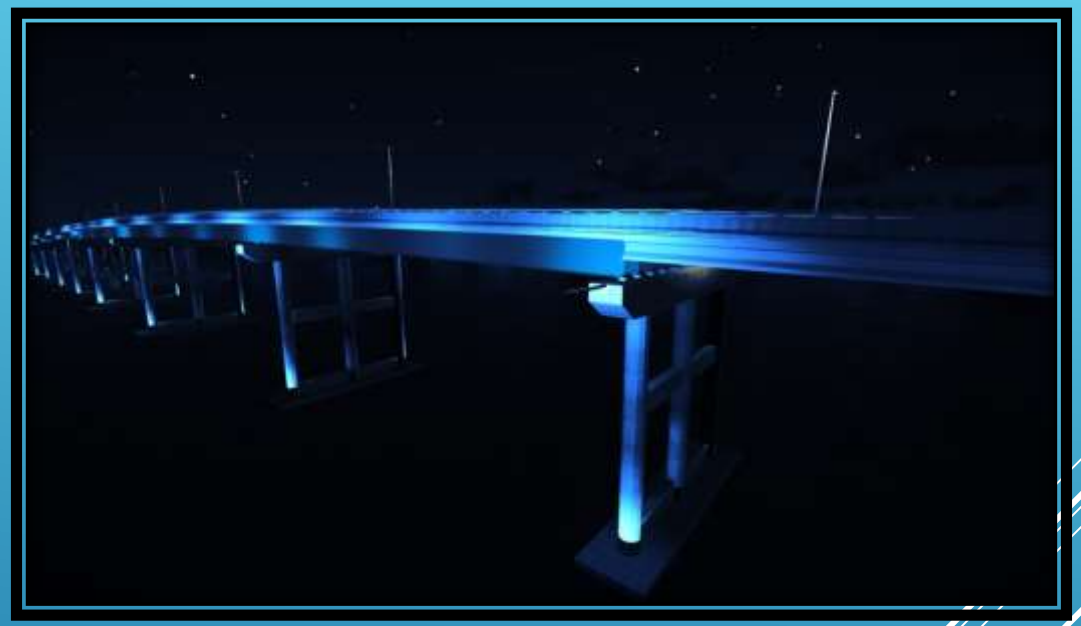
- Live Cube Files in Lumenrt
  - Executable file which can be used by client
  - Simple tools for Animation navigation.
  - Example – SR 52 and Memorial Bridge



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- Final Animation for the Public Involvement Meeting created optimum Public Interaction and feedback.
- A Better Virtual Design controls the costs – of both time and $$$.
- Virtual interaction – using technology to enhance the relationship between the Public and the Department.

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- **SR 52 Public Involvement Meeting**

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QR codes – another example of a way to promote Public interaction.

QR Code

Memorial Bridge

Lighting

QR Code

SR 52 Design Project

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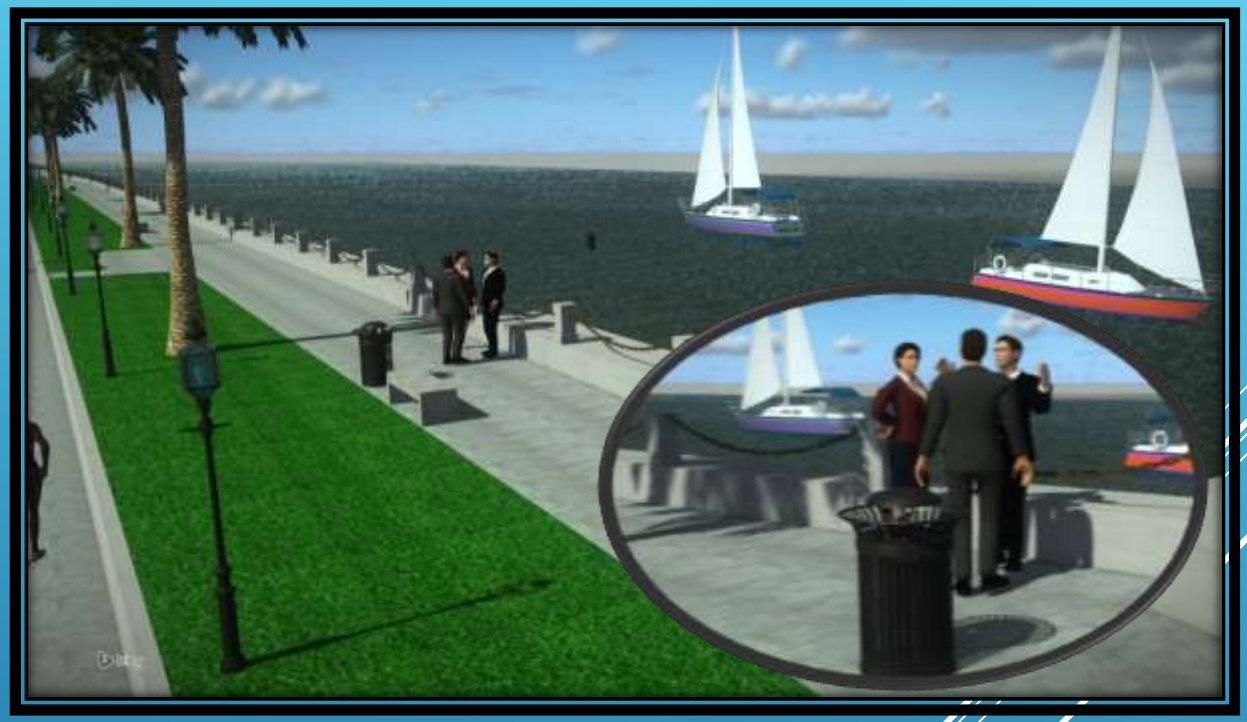
Other Project Models and Animation

Seawall Renderings



Chain Railing created with Trimble SketchUp

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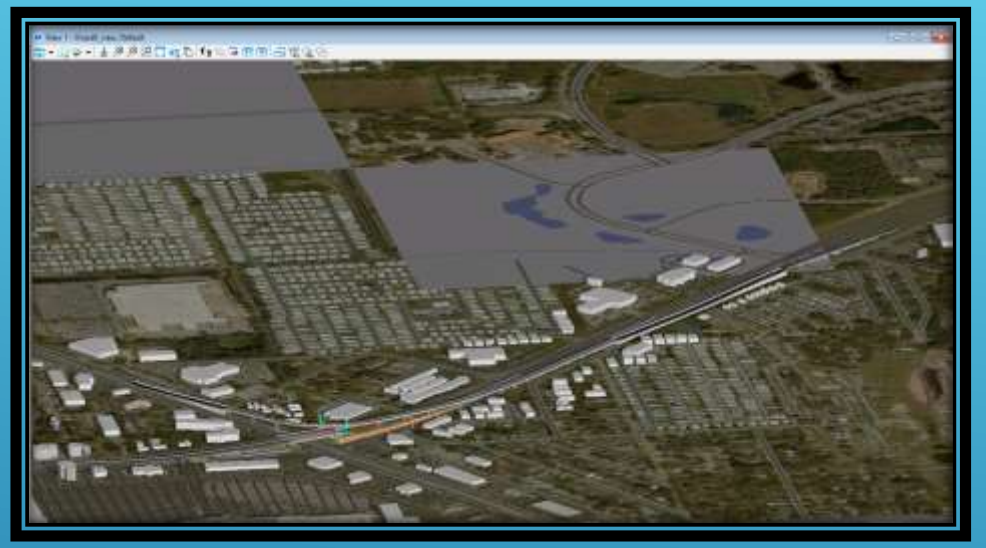
Flyover Modeling

Utilizing AutoDesk Infraworks, Bentley ORD (OpenRoads Designer), OBM (OpenBridge Modeler)



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- **Time for Questions?**

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- Minimum Hardware needs for 3D Rendering and animation
  - i7 processors
  - P-5000 Graphics Card with 16GB ram.

Items	Details	
Quadro P5000	Memory interface:	256-bit
	Memory bandwidth:	192.19 GB/s
	Total available graphics ...	32707 MB
	Dedicated video memory:	16384 MB GDDR5
	System video memory:	0 MB
	Shared system memory:	16323 MB
	Video BIOS version:	86.04.67.00.0A
	IRQ:	Not used
	Bus:	PCI Express x16 Gen3

Device specifications

HP ZBook 17 G4

Device name	LUS340863
Processor	Intel(R) Core(TM) i7-7820HQ CPU @ 2.90GHz 2.90 GHz
Installed RAM	32.0 GB (31.9 GB usable)
Device ID	586D84E1-B8A4-4DDB-9761-935E69063D8D
Product ID	00329-00000-00003-AA779
System type	64-bit operating system, x64-based processor
Pen and touch	No pen or touch input is available for this display

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