InfraWorks 360 for Infrastructure Construction Planning

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Class summary

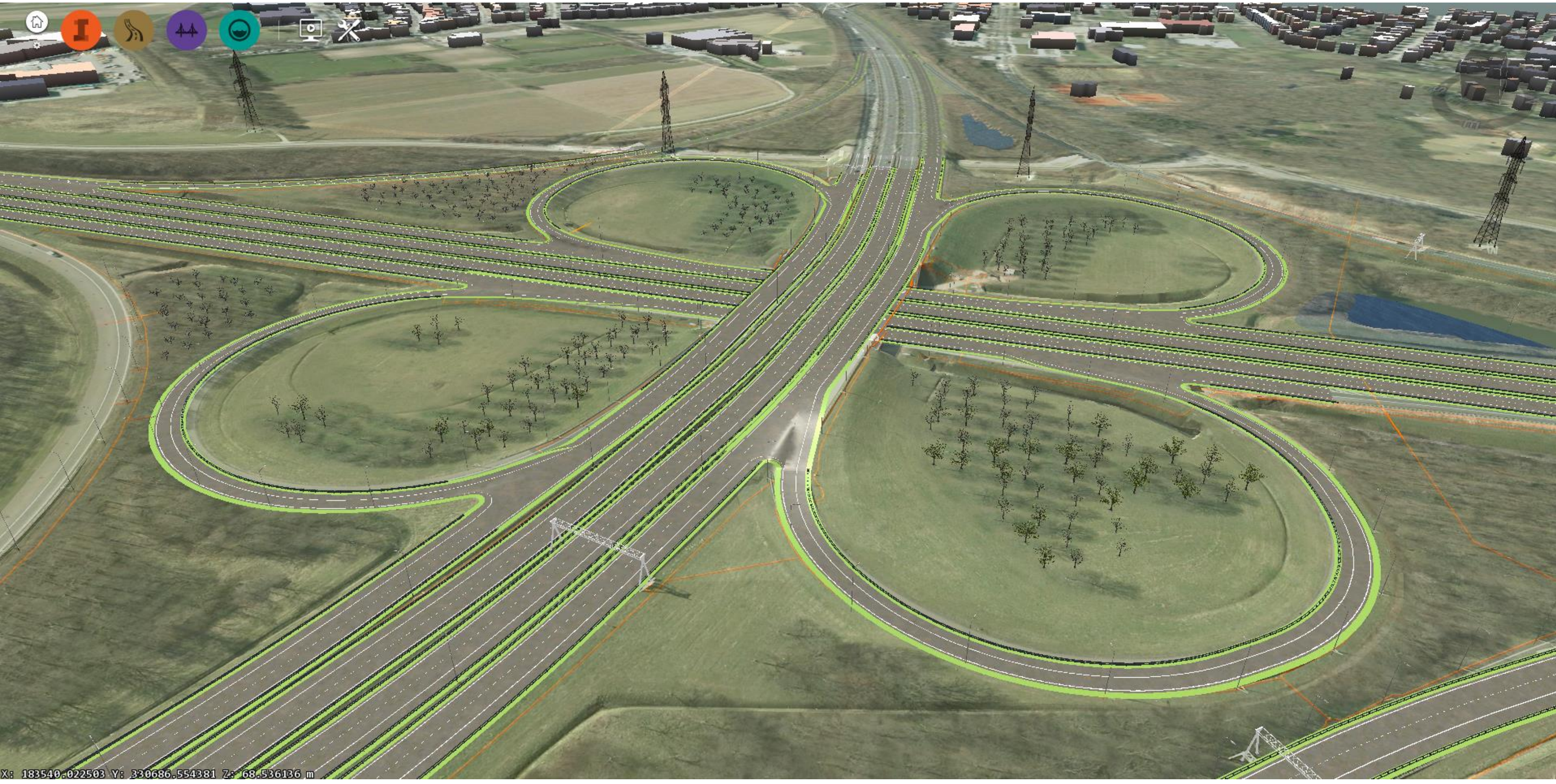
This class is all about combining the traditional software tools like AutoCAD Map 3D software, AutoCAD Civil 3D software, Revit software, Vehicle Tracking software, and Navisworks software with more recent technology like InfraWorks 360 software and ReCap 360 software in order to support the infrastructure construction process. The focus will be mainly on preliminary construction planning and visualization. We will also look at the capabilities of communicating information to the different stakeholders in the project. This session features InfraWorks 360 and AutoCAD Civil 3D.A

Key learning objectives

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

- Understand how InfraWorks 360 can help with infrastructure construction planning
- Use InfraWorks 360 to communicate the planned construction progress
- Combine InfraWorks 360 with information for Vehicle Tracking
- Use Vehicle Tracking in the construction process

Introduction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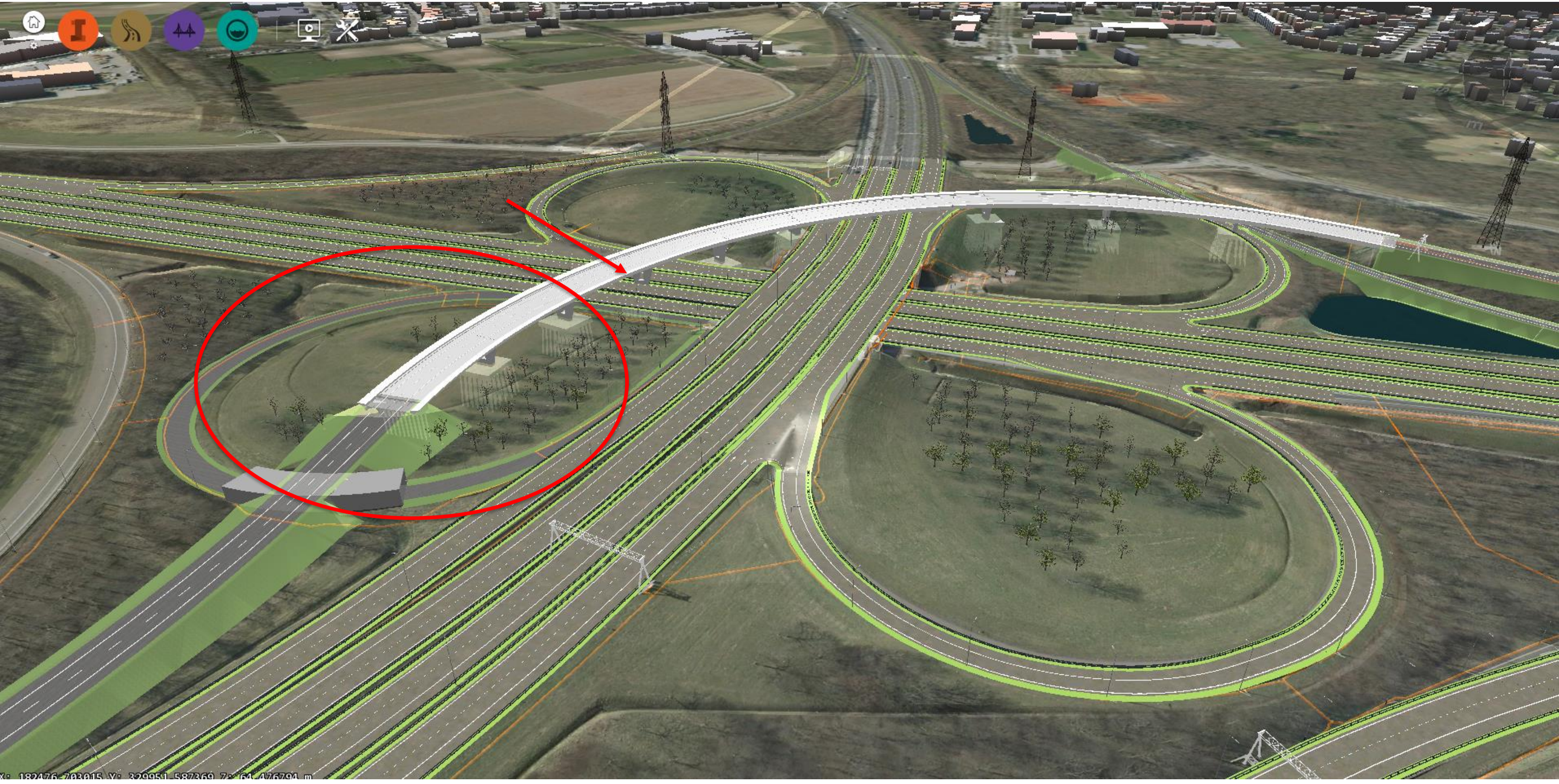
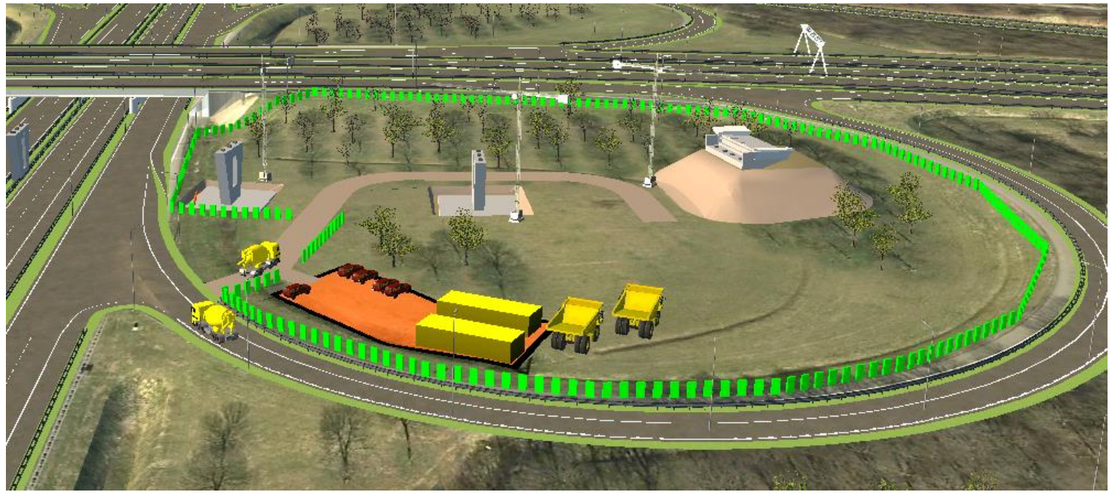


Workflow

Create phase 1 (proposal)

- Phase 1a (Initial site setup) -
  - Load Partial Revit Model
  - Create Site Access Road
  - Create earthwork for piers and abutment
  - Define zones or location for crane, parking, office,…

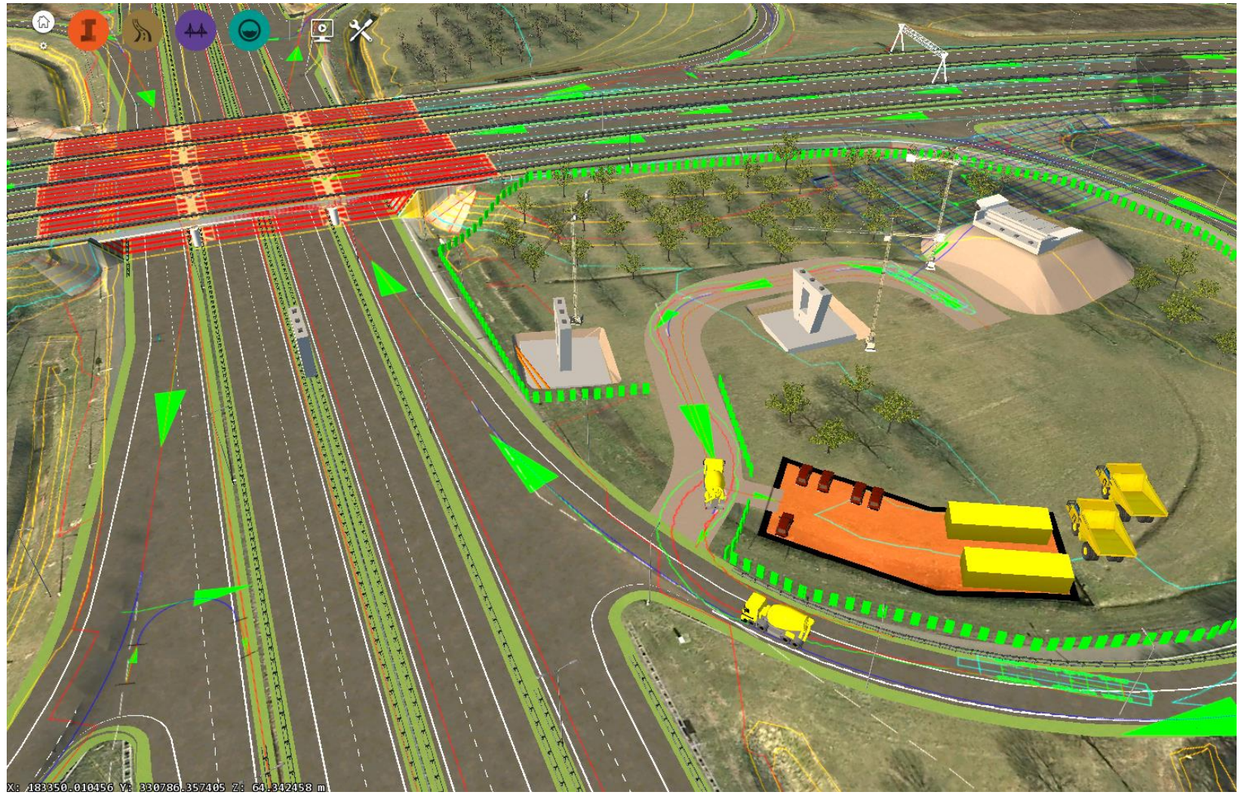


Create phase 1 (proposal)

- Phase 1b (Optimized site setup) -

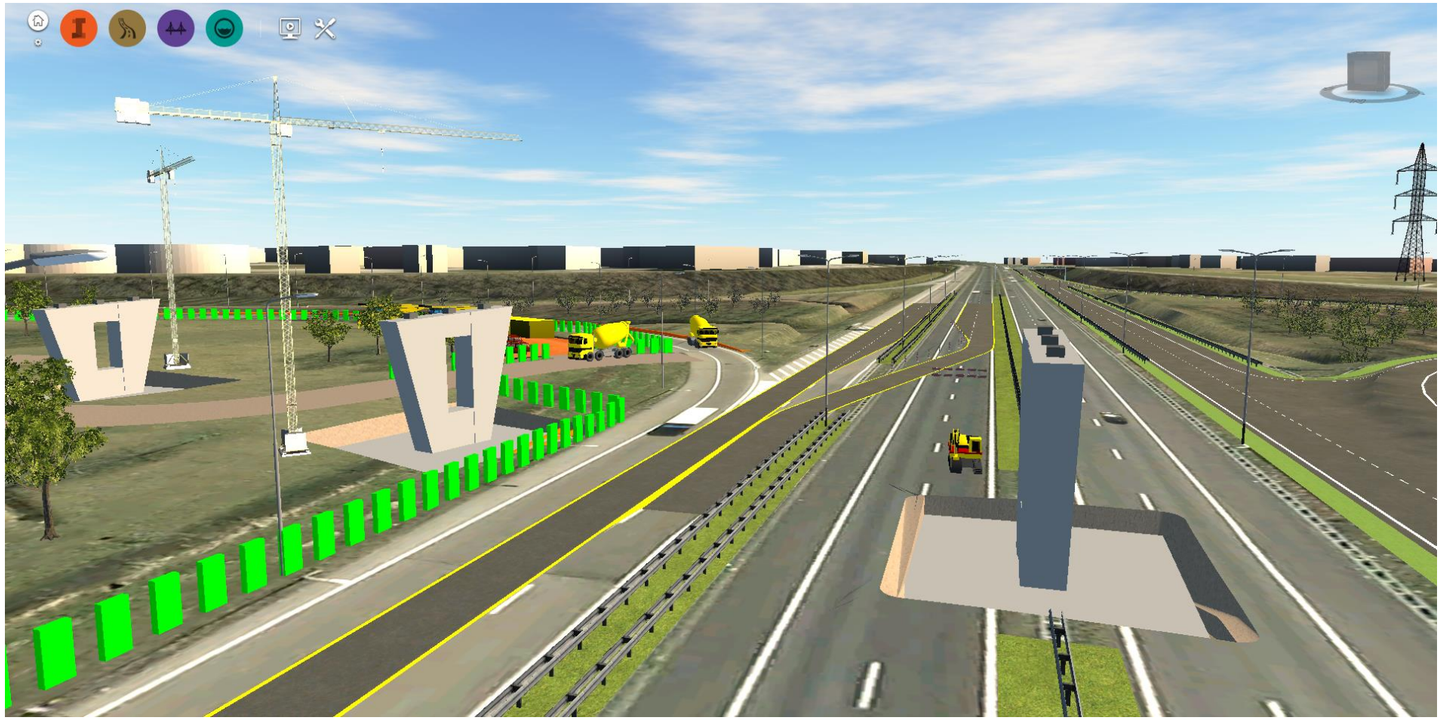
  - Verify Site Access Road (vehicle Tracking)

  - Update Site Access Road



Create phase 1 (proposal)

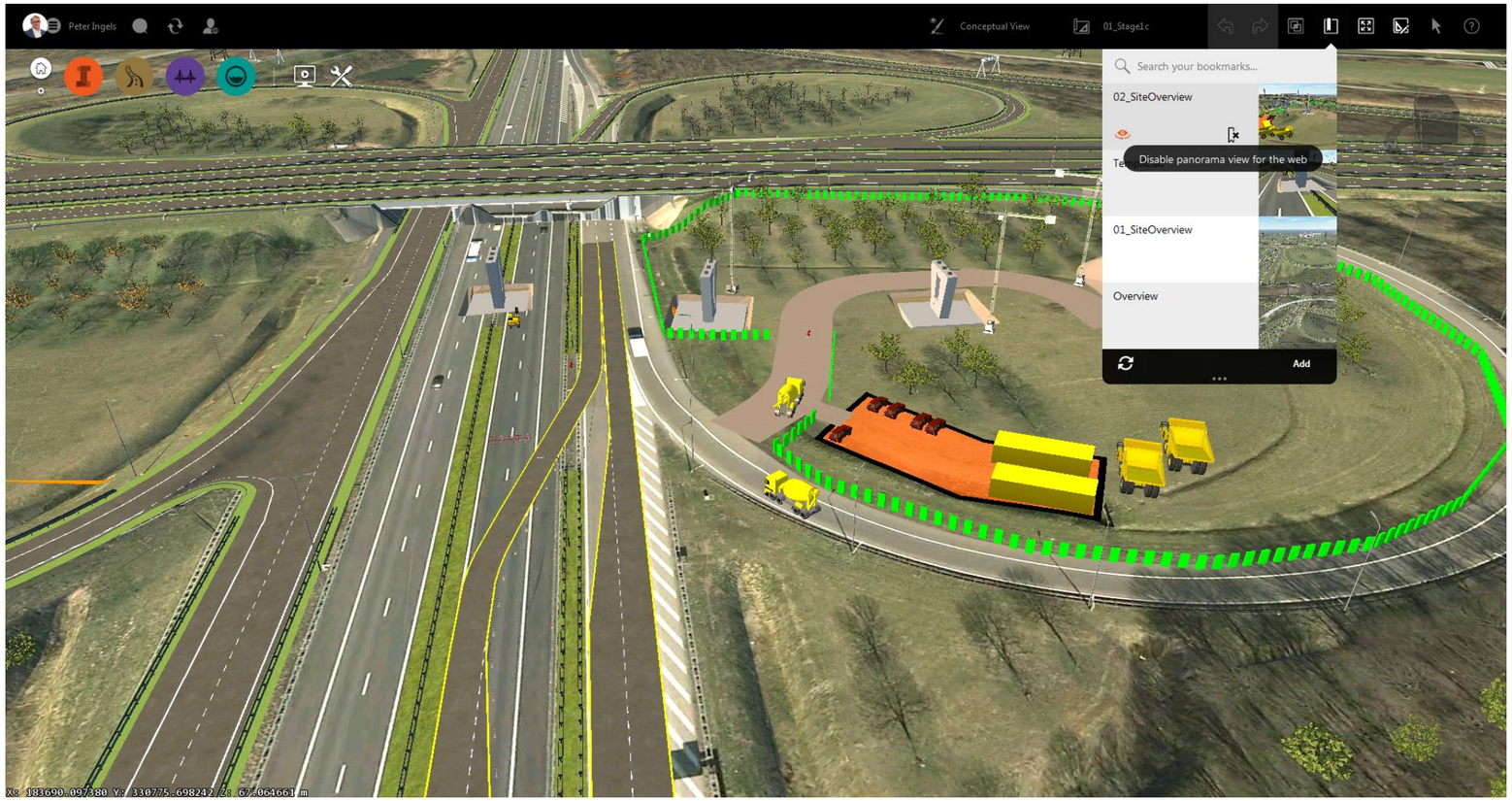
- Phase 1c (Temporary Roads) -
  - Component Roads for Temporary Road Design
  - Add Signaling (City Furniture)



Communication

Prepare model for Web Viewing

- Create bookmarks for 360° renderings



Prepare model for Web Viewing

- Create Point of Interest with hyperlinks
  - Youtube
  - BIM 360 Team Model Viewer
  - …

Prepare model for Web Viewing

- Create Point of Interest with hyperlinks
  - Youtube - Tooltip

```
<p>Temporary Road Drive Through</p>
<iframe width="560" height="315"
src="https://www.youtube.com/embed/BkjBQQdBfso"
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```

Prepare model for Web Viewing

- Create Point of Interest with hyperlinks
  - Large Model Viewer - Link

    http://a360.co/2fFk5ZE (Flyover)

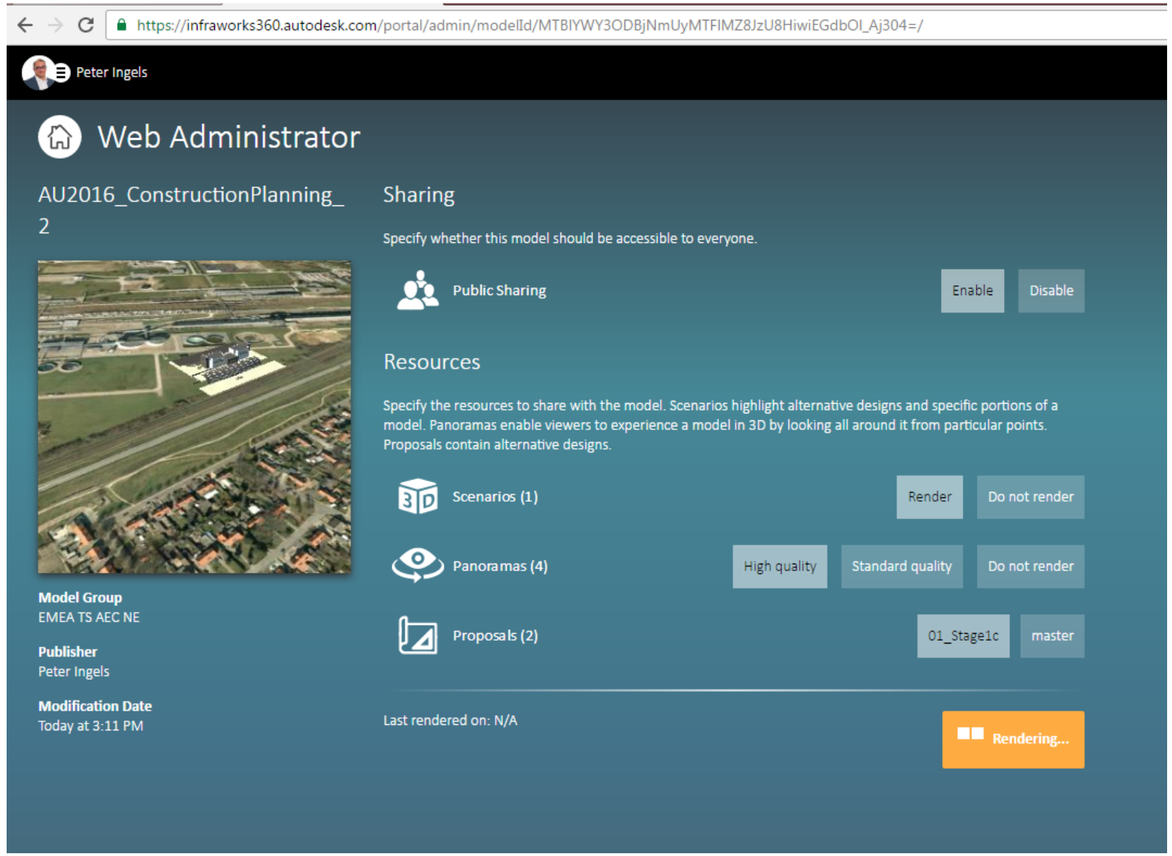
    http://a360.co/2fFpvUa (Vehicle tracking drawing)

Prepare model for Web Viewing

- Create Scenarios for interactive viewing

Prepare model for Web Viewing

- Sync Model to the cloud and define what to see



Web Viewing

- Results
  - Stage 1c

Bonus Section

Web Viewing

- Embed Infraworks Webviewer in your own website

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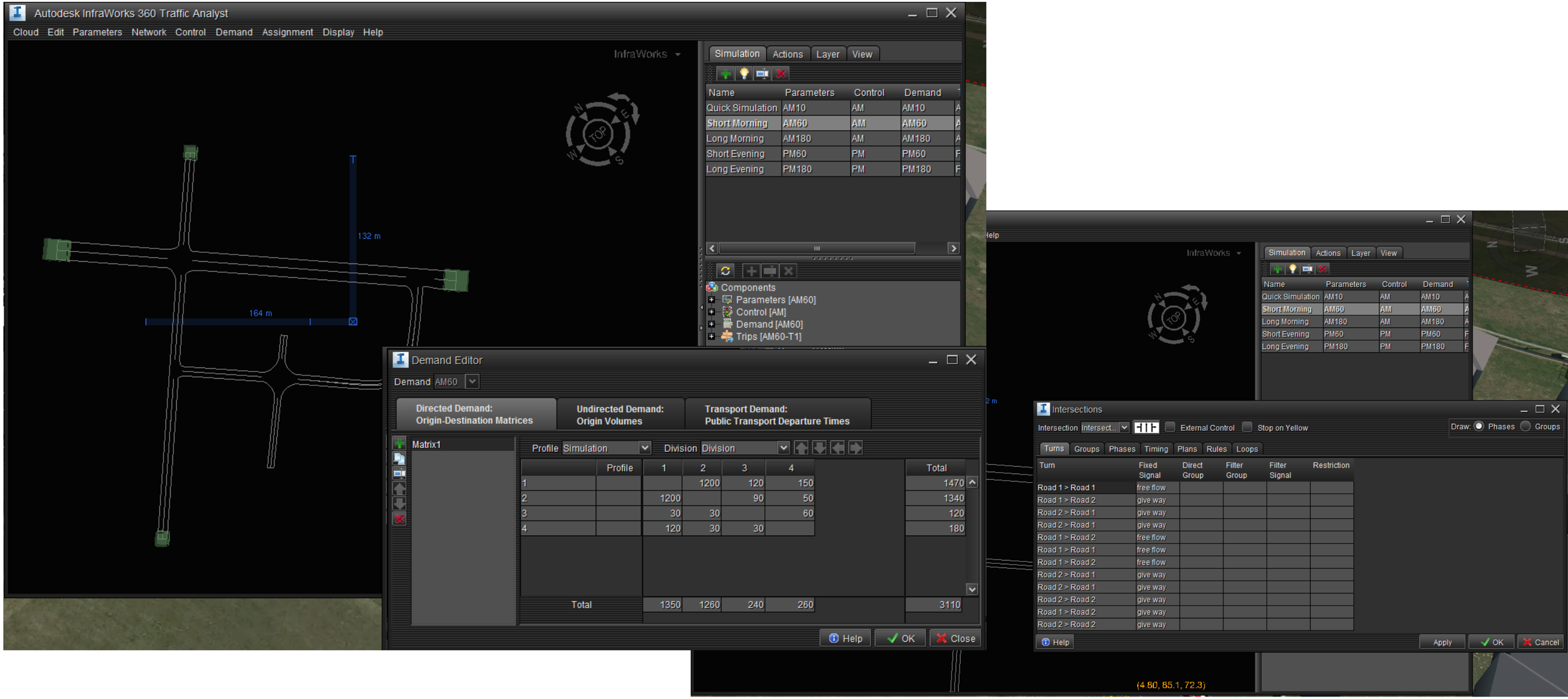
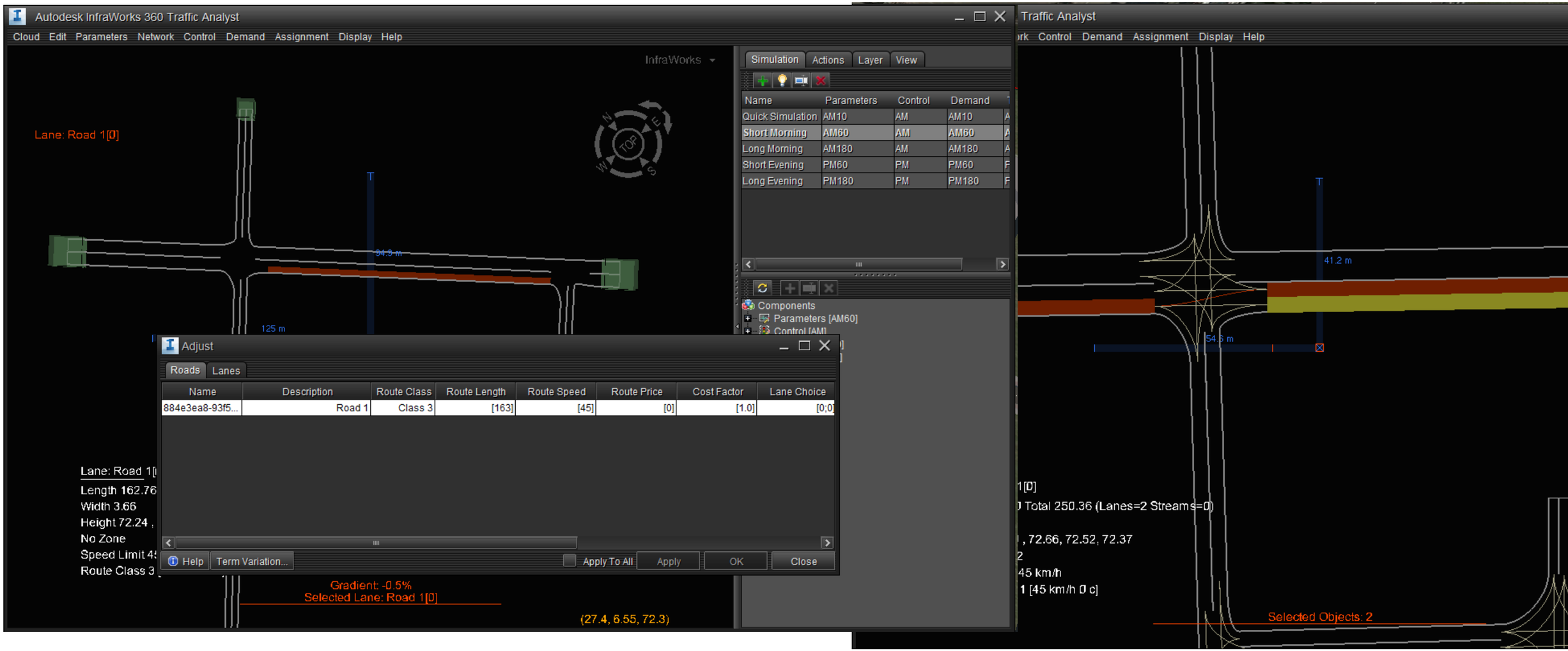
Traffic Simulation – Current Situation



Traffic Simulation – Define Work Zone



Traffic Simulation – Work Zone Simulation

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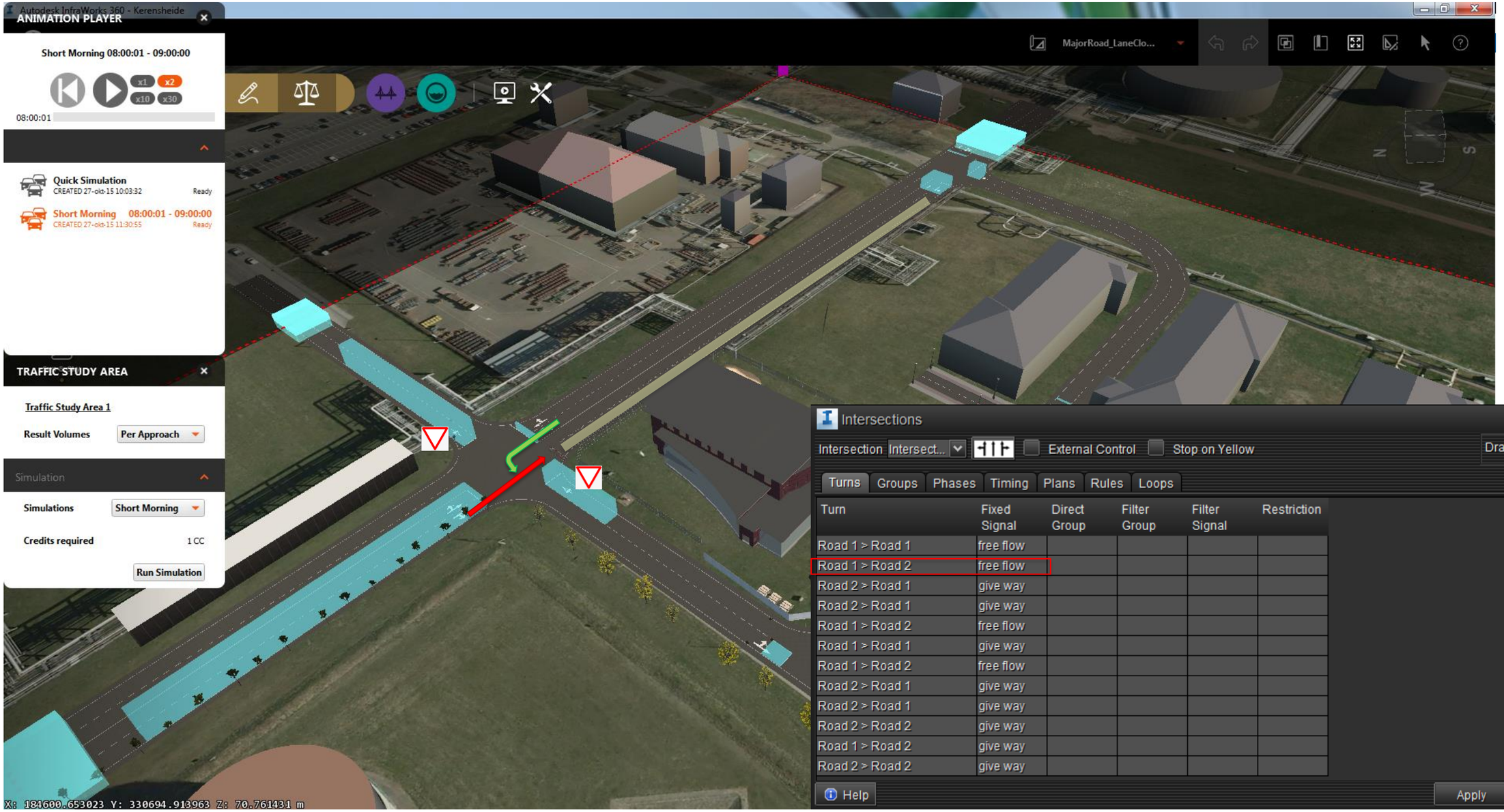
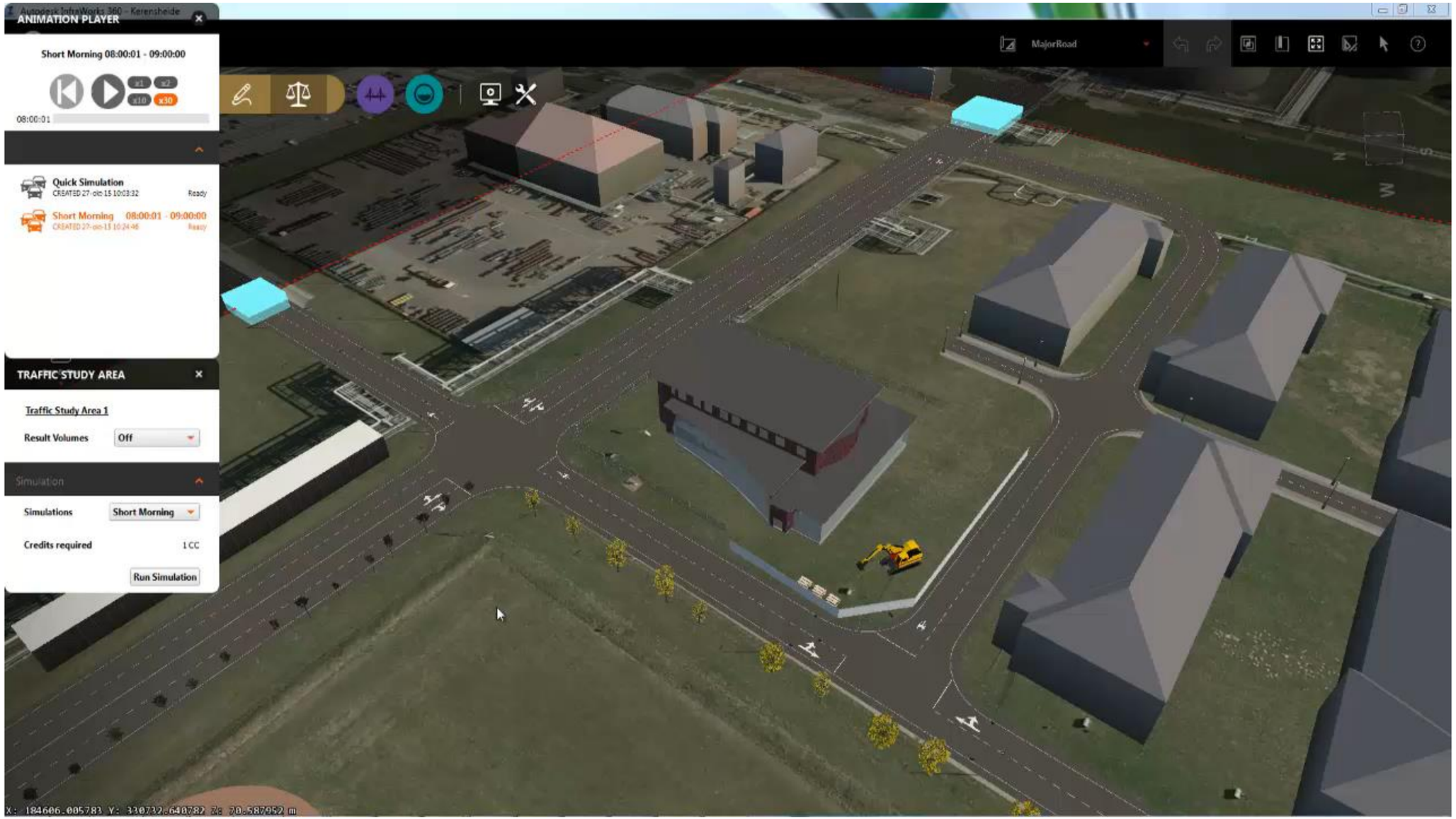
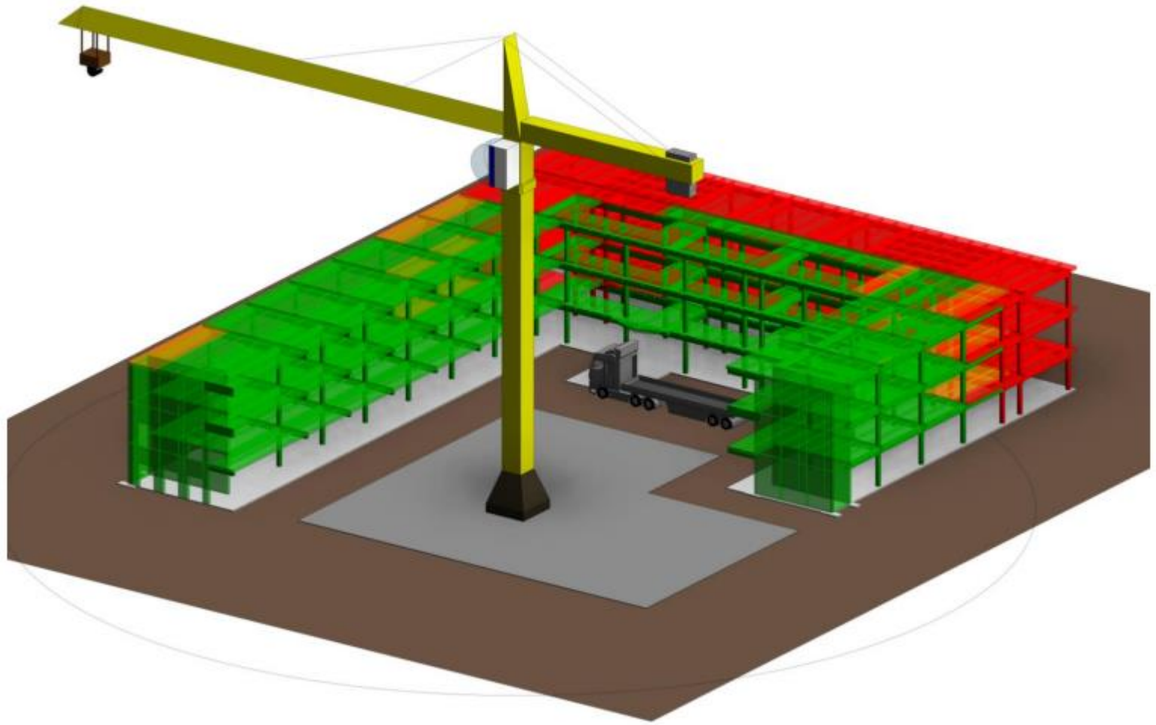


Traffic Simulation



Crane positioning optimization



CS21553 - Construction Dynam(o)ite — Explode Productivity with Dynamo