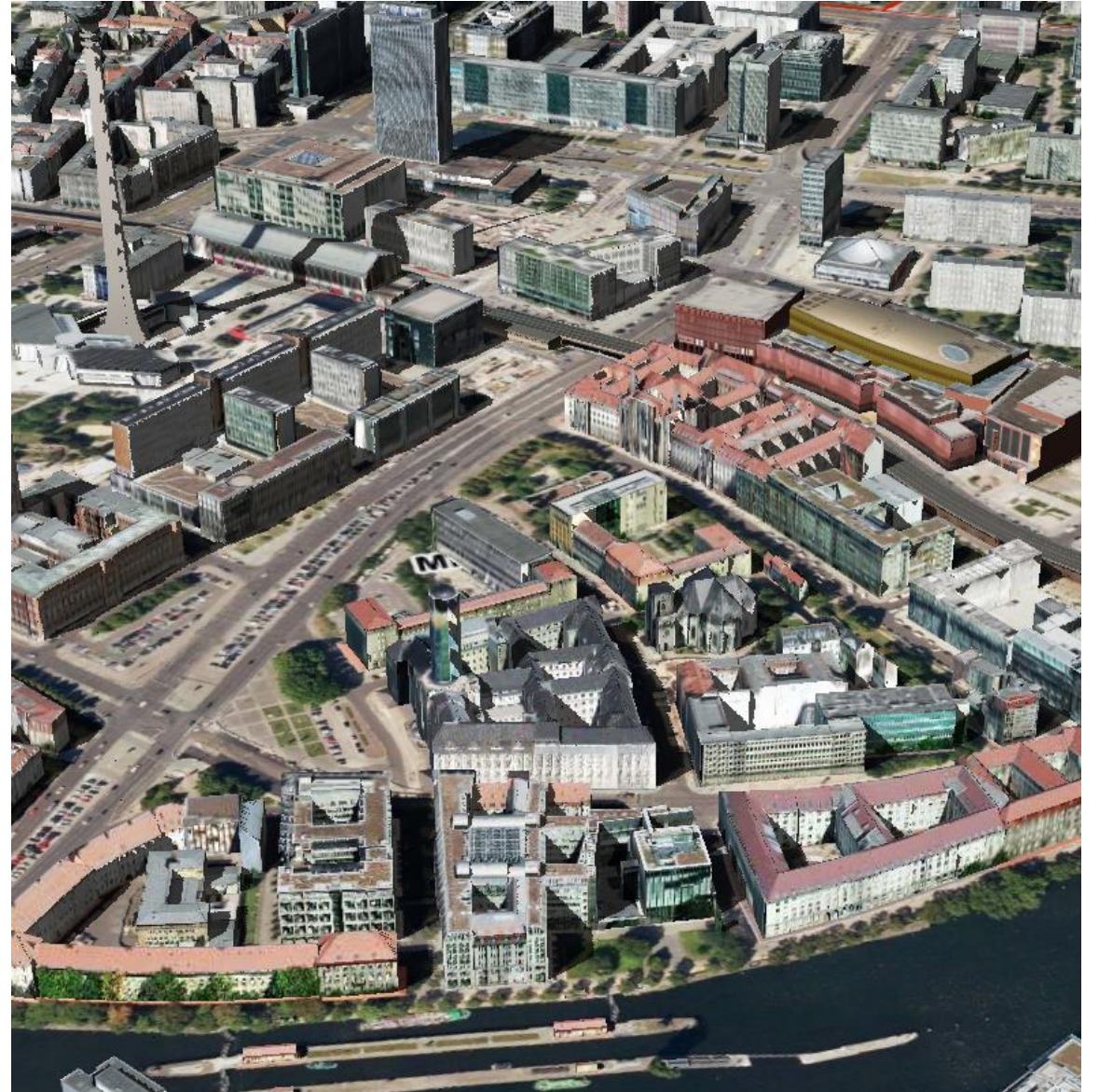# 3DCityDB Proof of Concept

What is 3DCityDB?

"a free geo database to store, represent, and manage virtual 3D city models on top of a standard spatial relational database."
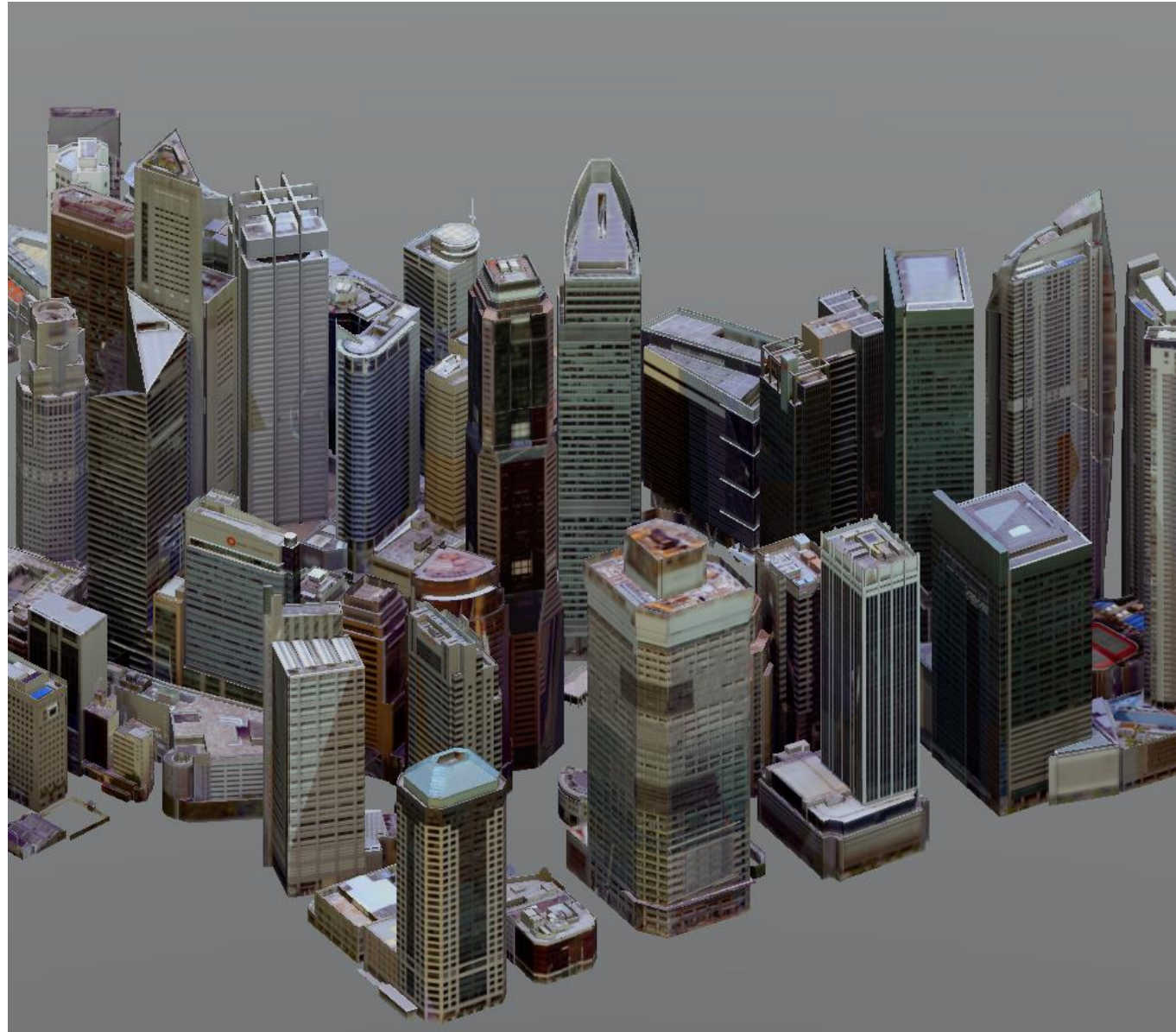
Why 3DCityDB?

- Implements the CityGML standard which is well known and well used in 3D city modeling applications
- Uses standard relational databases
  - Easily query any part of the database
  - Access control
  - Security
  - Corporate wide access
  - Scalability
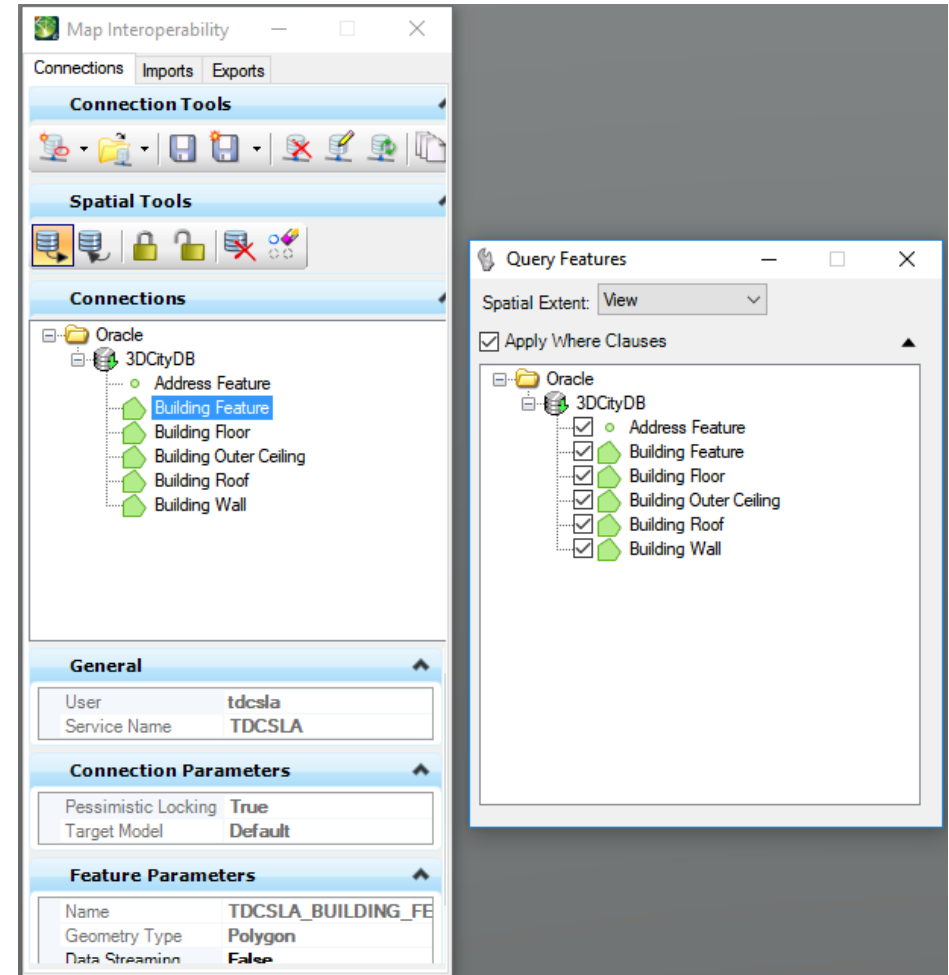 - Server side analysis

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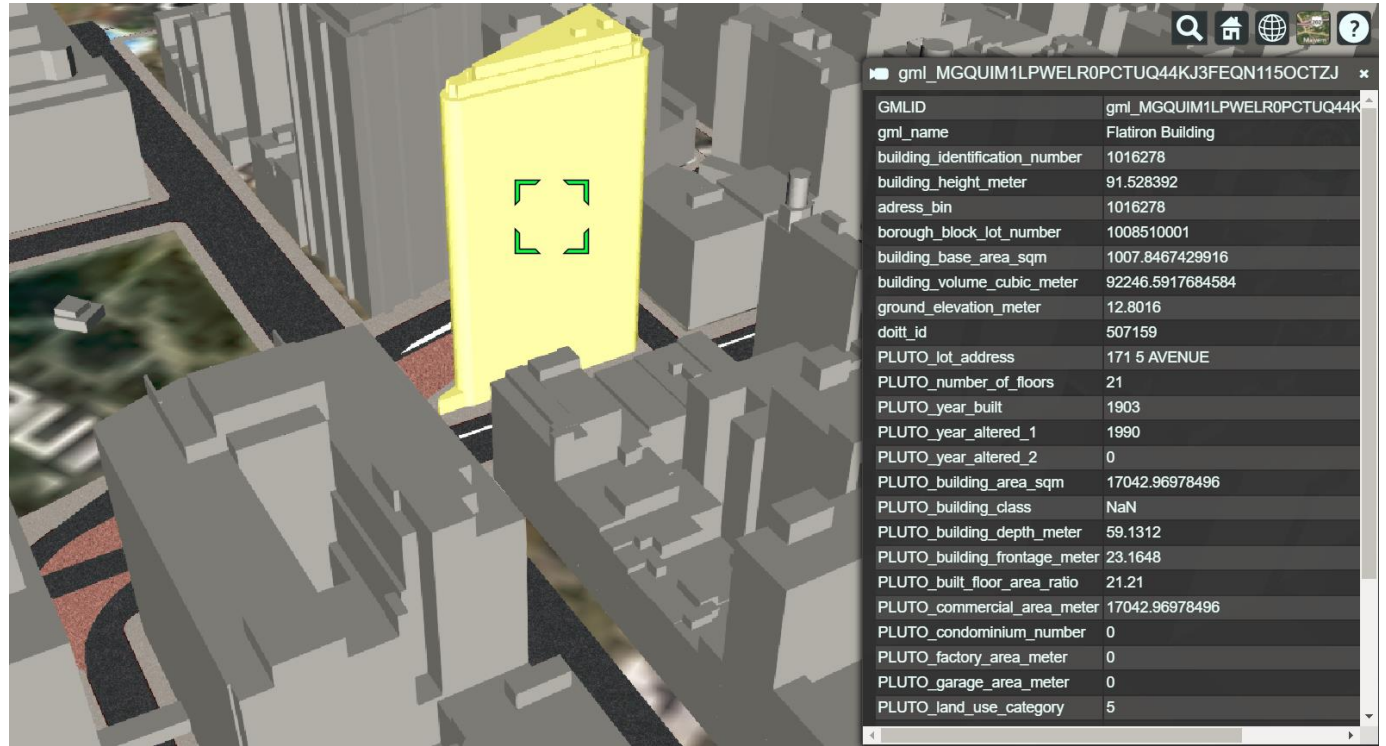
Scope of Work

- Implement a 3DCityDB storage Proof of Concept
  - Query features (buildings to LOD 2)
  - Polygons only, no solids
  - Include textures
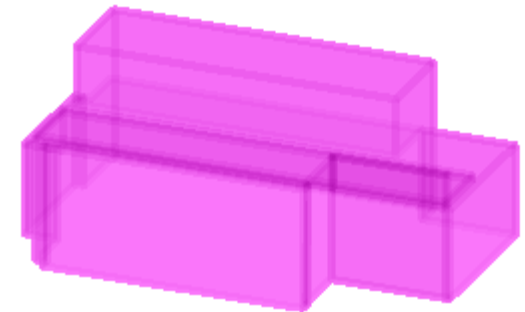 - Edit attributes, modify simple geometry
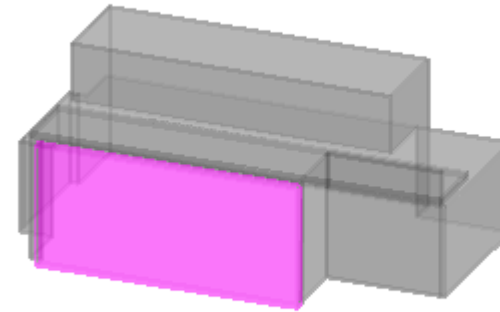 - Post features

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Query Features

- Direct connection to Oracle and 3DCityDB data model
  - By view or fence
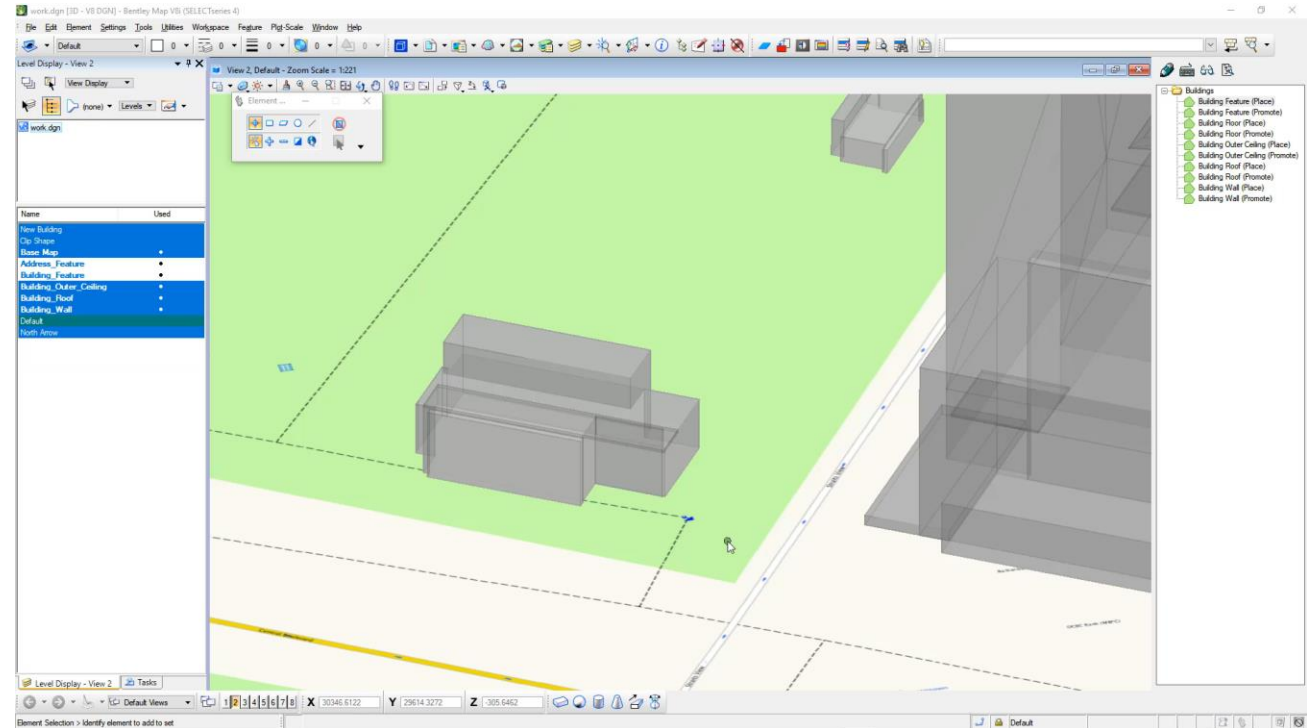 - Attributes

Select Building

- Buildings are composed of many parts
  - Walls, floors, roofs
- Proper editing requires the ability to select the complete building
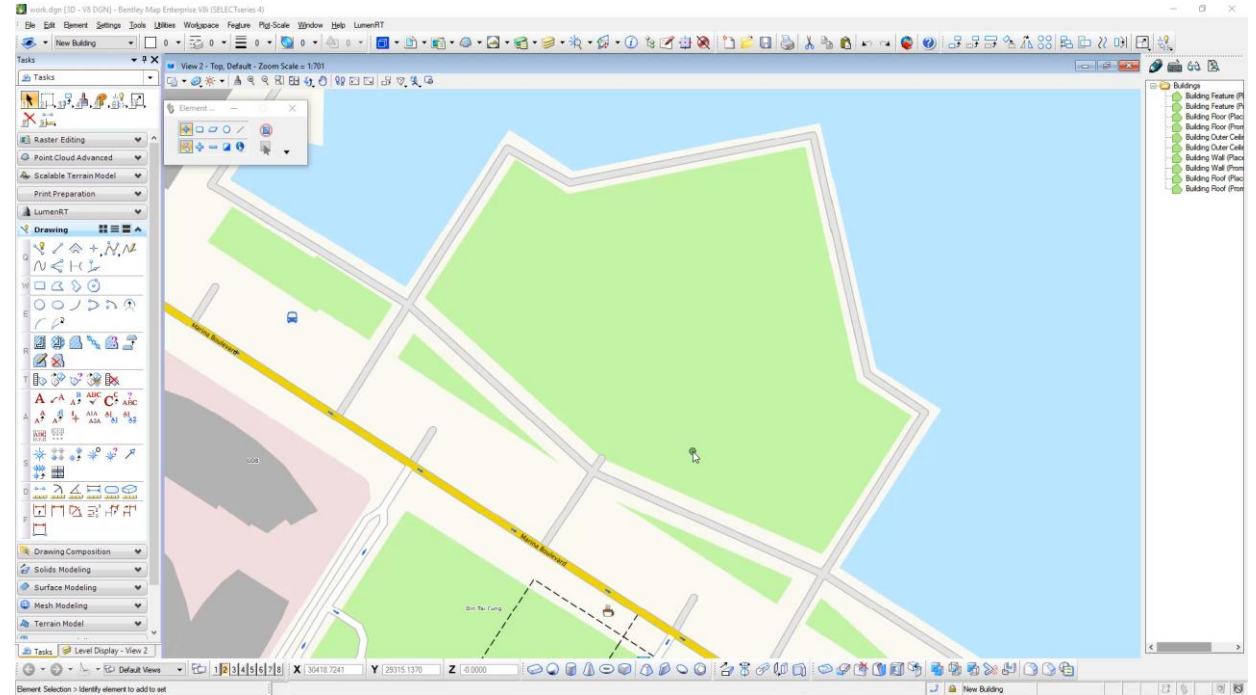
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Edit Properties

- Data Browser is used to display properties of building and components, one tab for each

- Edit to update multiple rows

- Save results
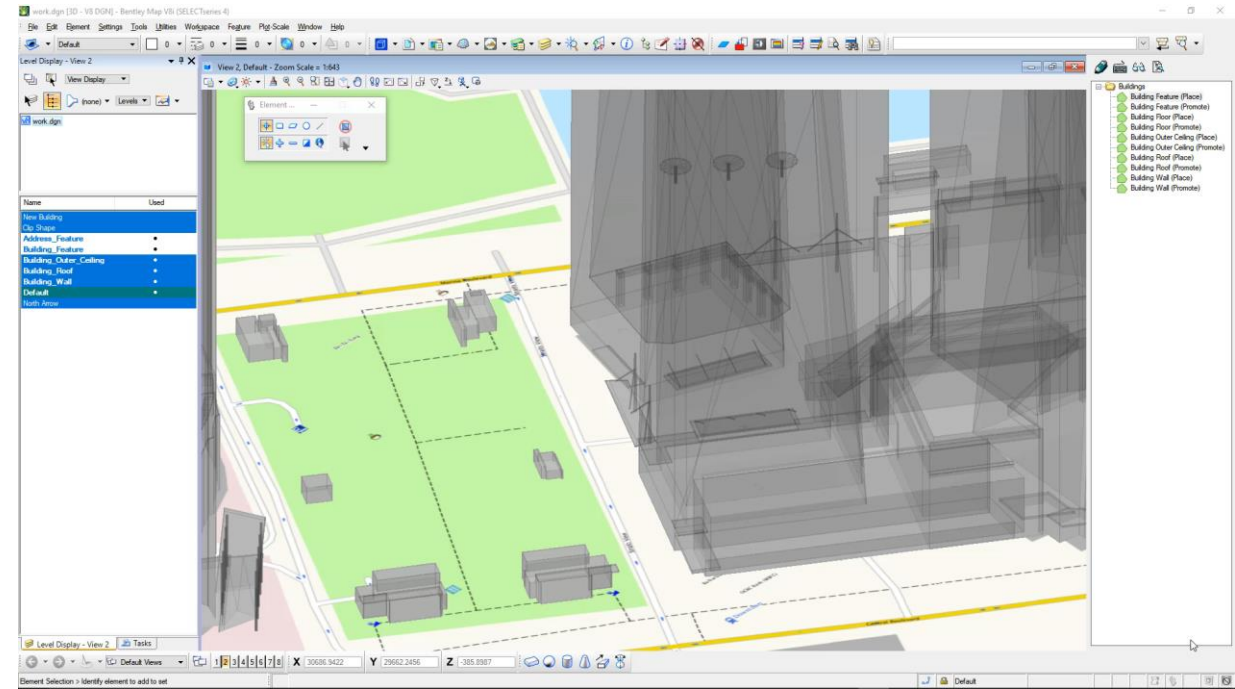
- Post changes

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Create New Building

- Use the solid modeling tools to create building

- Drop to component polygons

- Promote individual pieces to the appropriate building component

- Post new building

Remove Building

- Select building to be removed
- Delete building feature
- Post changes

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Requirements and Limitations

- Version 3.3.0 of 3DCityDB

- Database enhanced with various views and joins to simplify structure

- Polygons only supported

- No posting of textures

- Manual assignment of building IDs to create hierarchy

- Locking of features not currently supported

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