

Nearmap



Exec Summit

The Pendry, Park City UT



Site Intelligence with 3D Elevation Models

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Nearmap Director Solution Product
Management

Session Agenda

- Why earlier site intelligence changes the math
- Five site decisions you can de-risk before fieldwork
- Use of AI in building lifecycle phases
- What's Next?



9.5%

of total project cost is lost to design errors

“Design deviations averaged 79% of total deviation costs and 9.5% of total project cost.”

Lopez & Love, “Design Error Costs in Construction Projects,” Journal of Performance of Constructed Facilities

[researchgate.net/publication/273024833](https://www.researchgate.net/publication/273024833)

5 site decisions you can de-risk before fieldwork

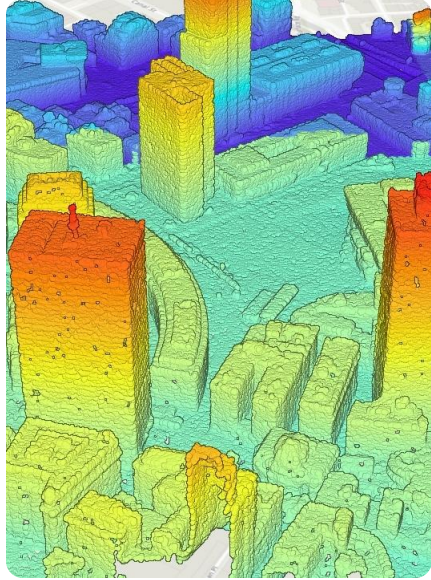
- Earthwork & grading — cut/fill before mobilizing
- Slope & access — equipment paths and staging
- Drainage & flood risk — flow paths and ponding
- Site logistics & constraints — clearances, laydown, easements, utility corridors
- Pre-bid site walks — feasibility from your desk



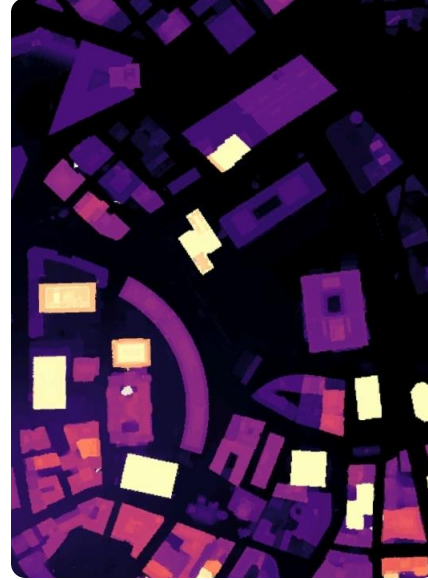
A Refresher: Nearthmap 3D Capabilities



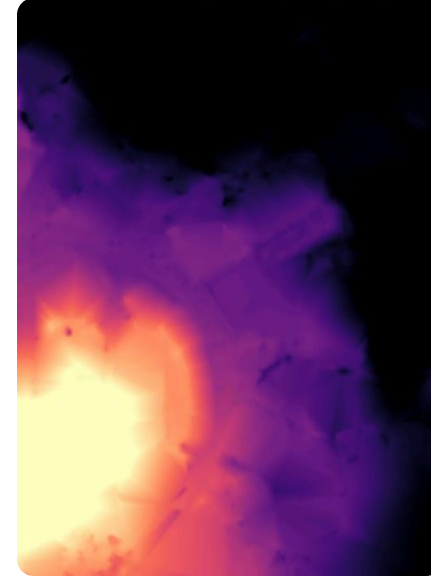
Textured mesh



Point Cloud



Digital Surface
Model



Digital Elevation
Model



True Ortho

Hours, not weeks: Self-serve 3D export

The screenshot displays the Nearnmap 3D export interface. On the left, a sidebar contains the following sections:

- EXPORT** (with a back arrow)
- Export type**: 3D (dropdown)
- Capture**: Boston MA — May 2023 (dropdown)
- Projection**: NAD83/UTM zone 19N (M... (dropdown)
- Content types (Max 4)**:
 - Textured Mesh (Multi dropdown)
 - Point Cloud 6in (LAS)
 - DSM 6in (GeoTIFF)
 - True Ortho 2in (GeoTIFF)
 - DEM 12in (GeoTIFF)
- Summary**:
 - Available m²: Unlimited
 - Export size: 0.0227 m²
 - Content types: 4 of 4
- REVIEW EXPORT** (button)

The main view shows an aerial 3D model of Fenway Park, Boston, with a white outline indicating the Area of Interest (AOI). The interface includes a search bar at the top with 'Fenway Park, 4...' and a navigation toolbar. At the bottom, there are controls for 'True Ortho' and 'Mon May 22 2023'.

- **Delivered in hours, vs. weeks for a traditional ground survey + report**
- Self-serve export, up to 20 sq mi per AOI
- DEM, DSM, textured mesh, point cloud, or true ortho
- Drops directly into Civil 3D, ArcGIS Pro, InfraWorks, Revit

Earthwork & grading: Cut/fill before mobilization



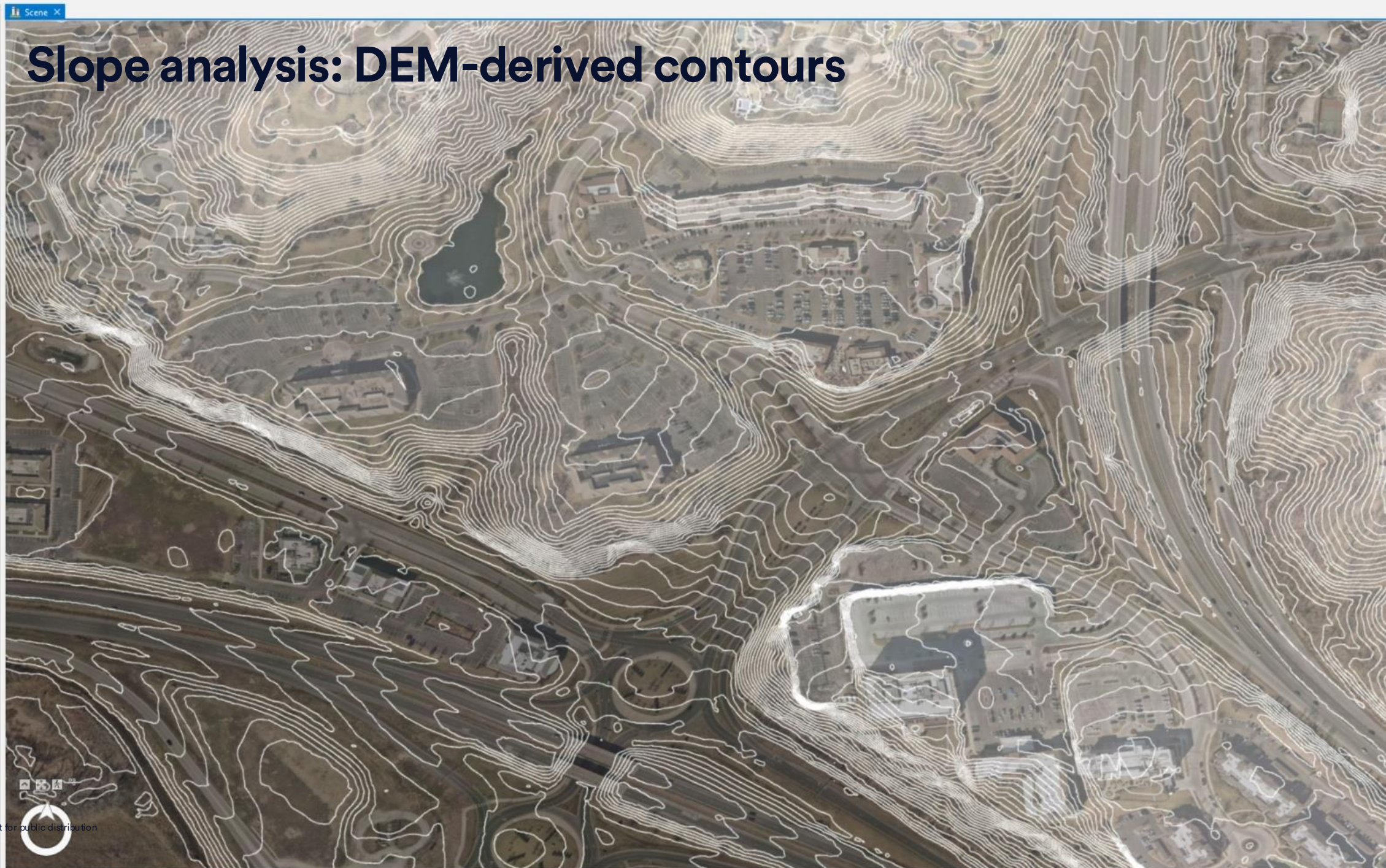
Slope analysis: DEM-derived contours

Contents

Search

Drawing Order

- Scene
 - 3D Layers
 - Mesh
 - PointCloud_KC
 - 2D Layers
 - Contours_KSCAOI
 - True Ortho
 - DSM_0_0.tif
 - DTM/DEM.tif
 - Value
 - 295.868
 - 207.237
 - Nearmap US Vertical Imagery
 - World Topographic Map
 - World Hillshade
 - Elevation Surfaces
 - Ground
 - WorldElevation3D/Terrain3D

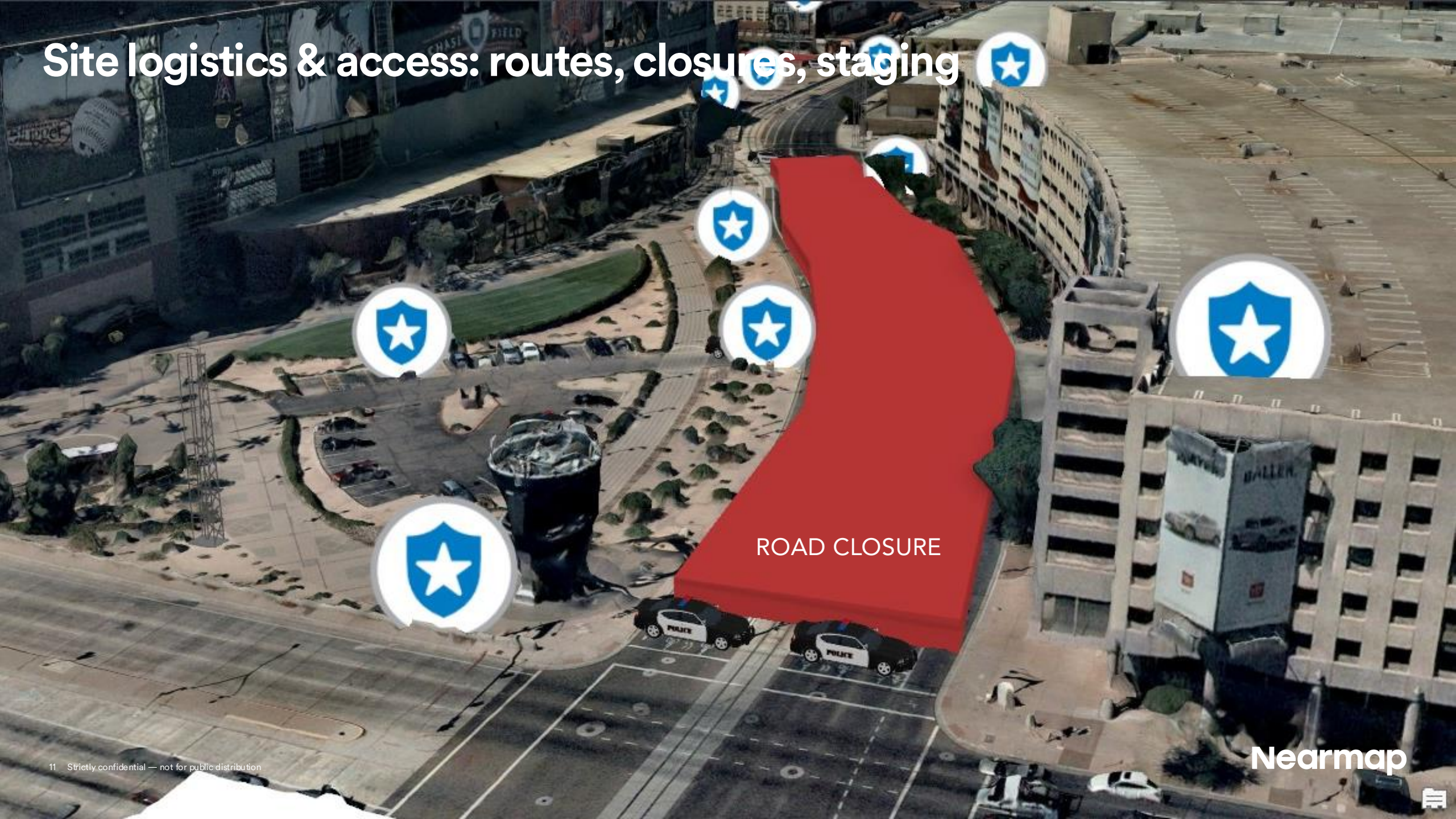


Drainage & flood risk: Catch issues before grading



Layers	Legend	
<input type="checkbox"/> Trees Extracted from Mesh using AI		☒
<input type="checkbox"/> Thematic Trees From Point Cloud		☒
<input type="checkbox"/> Trees from Point Cloud Classified usin...		☒
<input type="checkbox"/> 3D Mesh - Leaf Off		☒
<input checked="" type="checkbox"/> 3D Mesh - Leaf On		☒
<input checked="" type="checkbox"/> Flooding Layers		☒
<input type="checkbox"/> 9m		☒
<input type="checkbox"/> LOD2 Buildings from 3D + AI		☒
Ground		
<input type="checkbox"/> KC2020DTM_ElevSurface		☒


Site logistics & access: routes, closures, staging



Pre-bid site walks: Feasibility without leaving the office

Projects

← Back to List



Project - Board Approved

560-574 Commonwealth Avenue / 645-665 Beacon Street

[Project webpage](#)

The Proponent proposes to construct a new, 29-story, approximately 391-room hotel surrounded by a new, approximately half-acre public plaza. The Project also includes the demolition of the existing building at 560-574 Commonwealth Avenue, and shifting the building site east, amid the new public plaza. The shift allows construction of a new public street to connect Commonwealth Avenue and Beacon Street, in between the new plaza and the former building site. The Proponent will be responsible for construction of the new public plaza and roadway improvements, which will improve the pedestrian experience in Kenmore Square.

Date December 31, 2022



File Architecture Structure Steel Systems Insert Annotate Analyze Massing & Site Collaborate View Manage Add-Ins Modify

Modify Select

Wall Door Window Component Column Roof Ceiling Floor Curtain System Curtain Grid Mullion Railing Ramp Stair Model Text Model Line Model Group Room Room Separator Tag Room Tag Area

Build

Circulation

Model

Room & Area

Opening

Datum

Work Plane

Properties

3D View

3D View: (3D) Edit Type

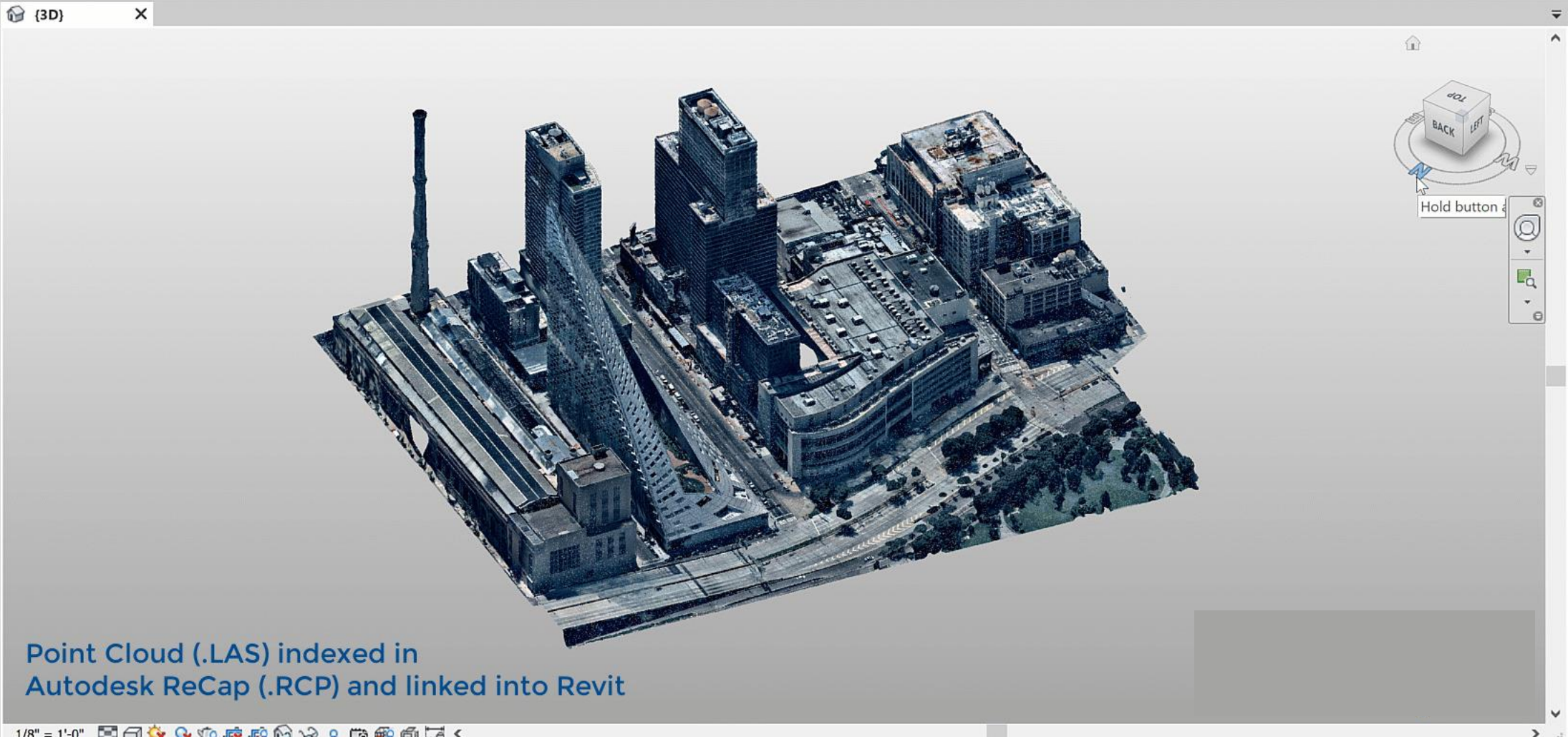
Graphics

View Scale	1/8" = 1'-0"
Scale Value	1: 96
Detail Level	Medium
Parts Visibility	Show Original
Visibility/Grp...	Edit...
Graphic Displa...	Edit...
Discipline	Coordination
Show Hidden	Rv Discipline

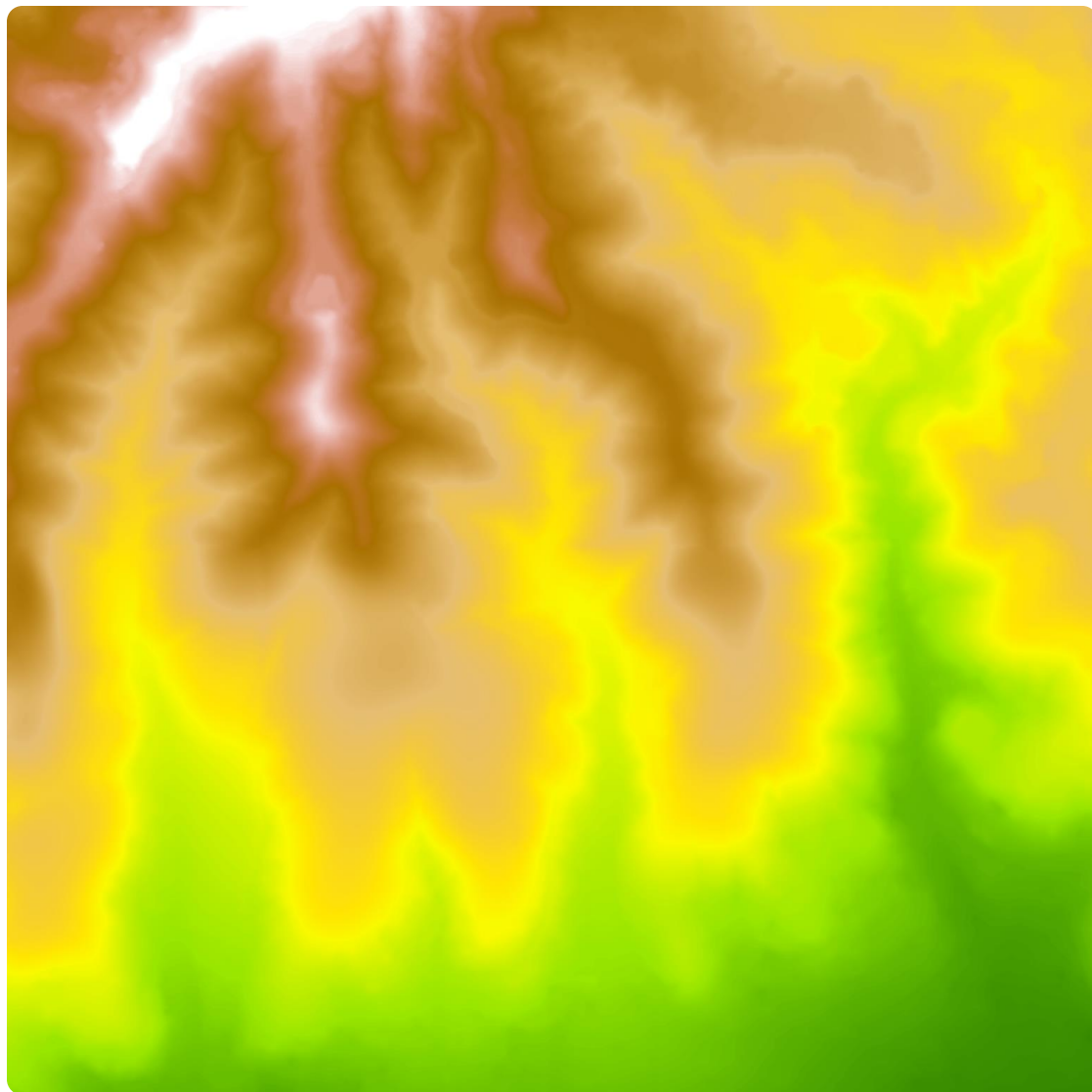
Properties help Apply

Project Browser - Via57.rvt

- Views (all)
 - Floor Plans
 - Level 1
 - Level 2
 - Site
 - Ceiling Plans
 - Level 1
 - Level 2
 - 3D Views
 - Elevations (Building Elevation)
 - East
 - North
 - South
 - West

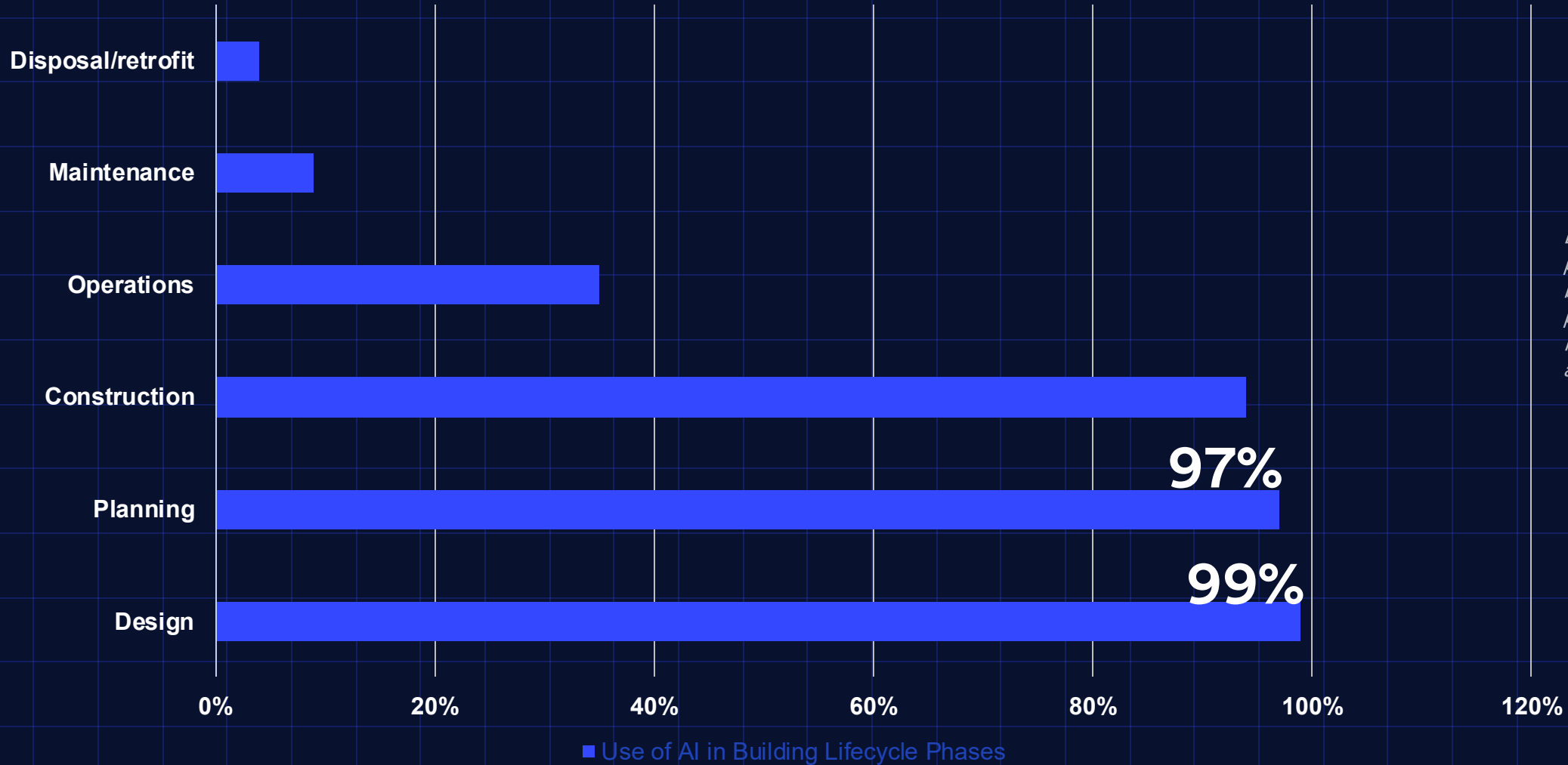


Where 3D fits: DEM (terrain) vs. DSM (everything above)



AI in Building Lifecycle trends?

Use of AI in Building Lifecycle Phases: 2026

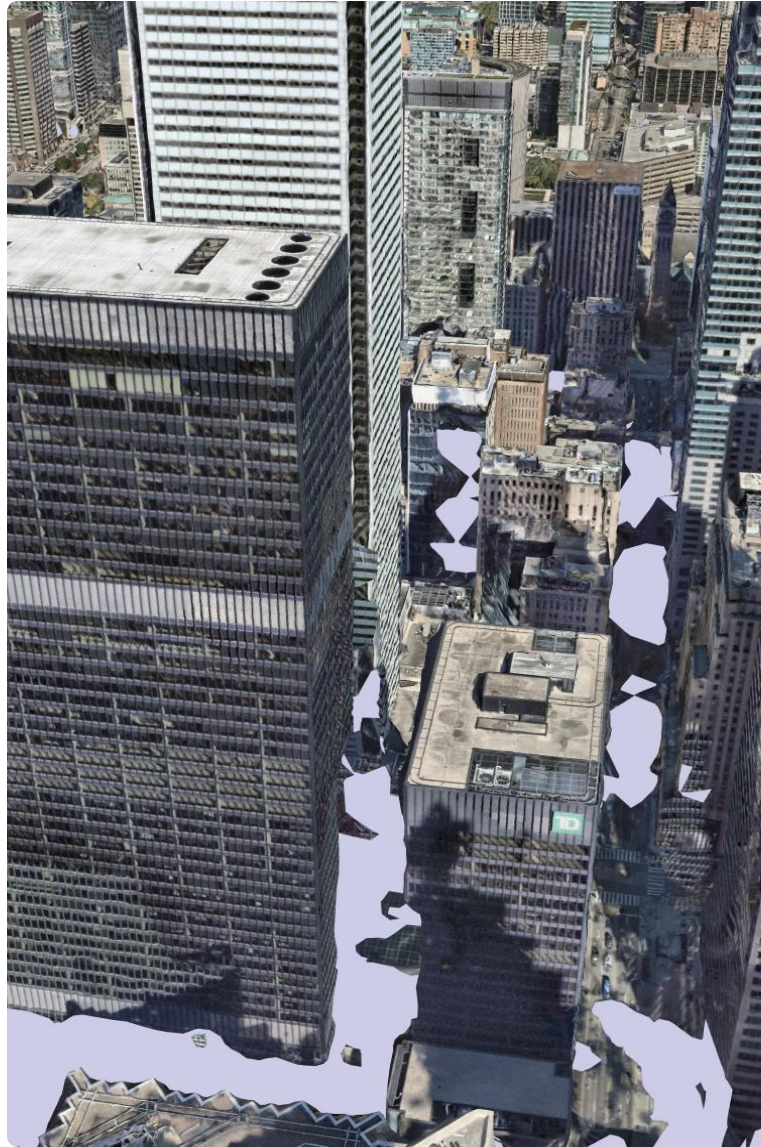


Directional view of AI penetration across building lifecycle phases by 2026 — Nearmap analysis. Not a forecast.

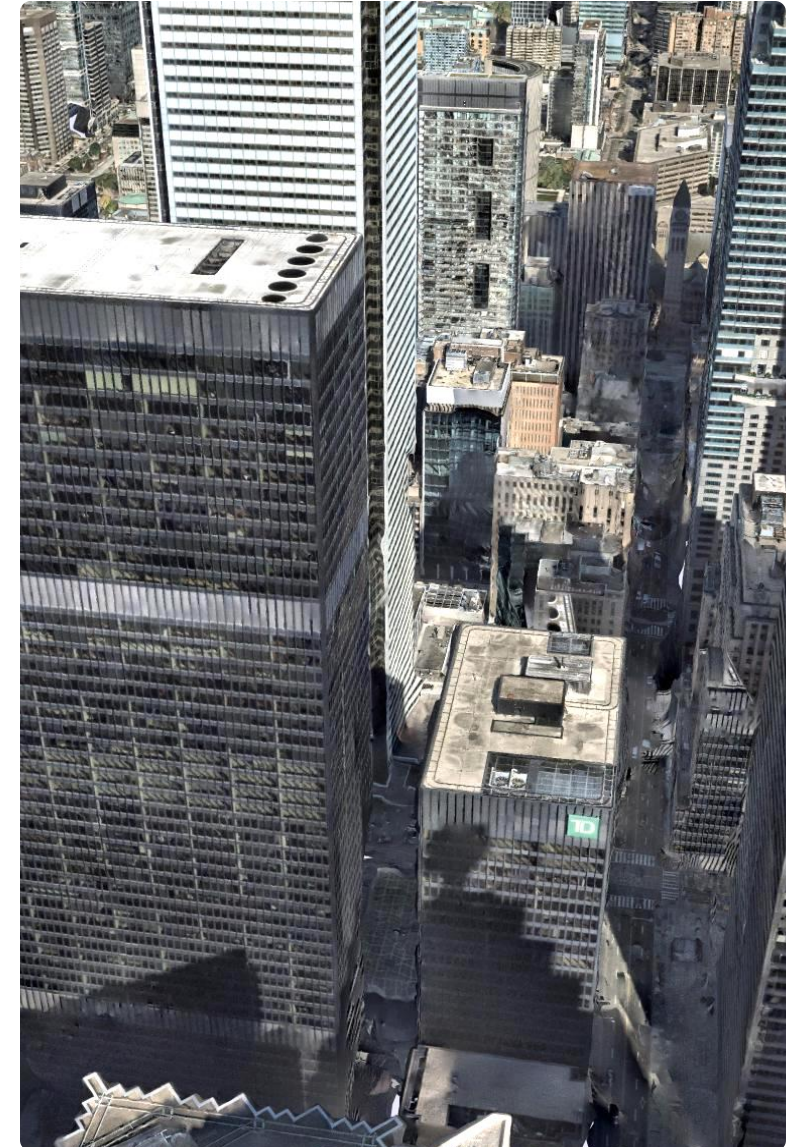
Next Generation 3d production system?

Next-gen 3D: cleaner, broader, sharper

- **Cleaner geometry** — fewer voids and warping in urban canyons
- **Better vegetation reconstruction** — dense canopy and forest areas hold together
- **Higher accuracy overall** — for downstream measurement workflows
- **ML-assisted roof + urban reconstruction** — sharper roof geometry beyond traditional photogrammetry
- **Impact Response 3D** — rapid post-event 3D reconstruction (on the roadmap)



Current



Next Gen

Nearmap

Nearmap

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