

Floor Flatness Analysis

Project Number: 201034

Project Location:

Data Collected By: Rick Hardesty / Brandon French

Reported By: Jared White

Date of Field Work: 11/6/20 – 11/7/20

Data Collection Instruments: Leica RTC 360 & Trimble S6

Accuracy Statement:

Leica RTC:
Range Accuracy: 1.2mm + 10ppm over full range
3D Position Accuracy: 3mm at 50m; 6mm at 100m

Trimble S6:
Range Accuracy: 2mm + 2ppm over full range
Angular accuracy: 3"



Leica RTC



Trimble S6



Project Description:

The project was scanned with a calibrated and certified Leica ScanStation RTC 360 high definition laser scanner. A total of 510 scans were stitched together using cloud to cloud registration in Cyclone Register 360. The mean absolute error for all scan to scan constraints was 0.010 ft, with a range of 0.039 ft to 0.001 ft. The constraints were then locked and registered to survey control points established on-site with a maximum error of 0.041 ft.

Primary survey control points were established at ground level using a survey grade robotic Trimble S6 total station. One pre-established site benchmark located was and held to its known elevation at 819.256 ft (defined by client). While holding the elevation of the known benchmark, the traverse was rotated to an assumed coordinate system. Double round measurements were made to secondary control points in the corners of each floor, marked with a temporary sticker.

The following report reveals an elevation heat map of each level to show floor deviation. Spot elevations were picked throughout each slab for reference. The color scale range encompasses the entire measured floor profile on each level. Areas that were wet do not yield a return from the laser and will appear blank.



Full point cloud

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Flatness Report

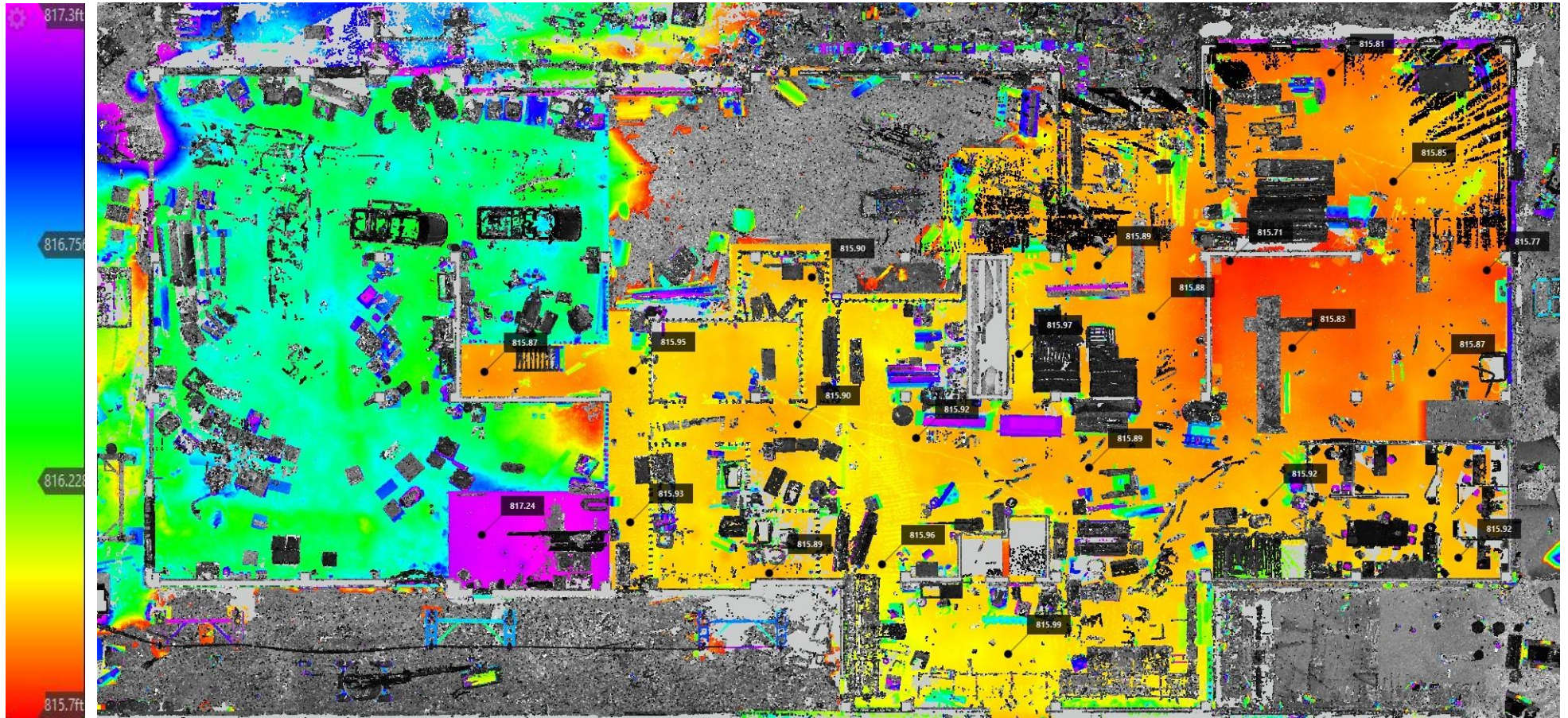
Truescan3D.com

513.755.8733



Level 1

Slab Elevation Heat Map



The image above encompasses floor elevations for Level 1. The color scale for the heat map above ranges from 815.70' (red) to 817.30' (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

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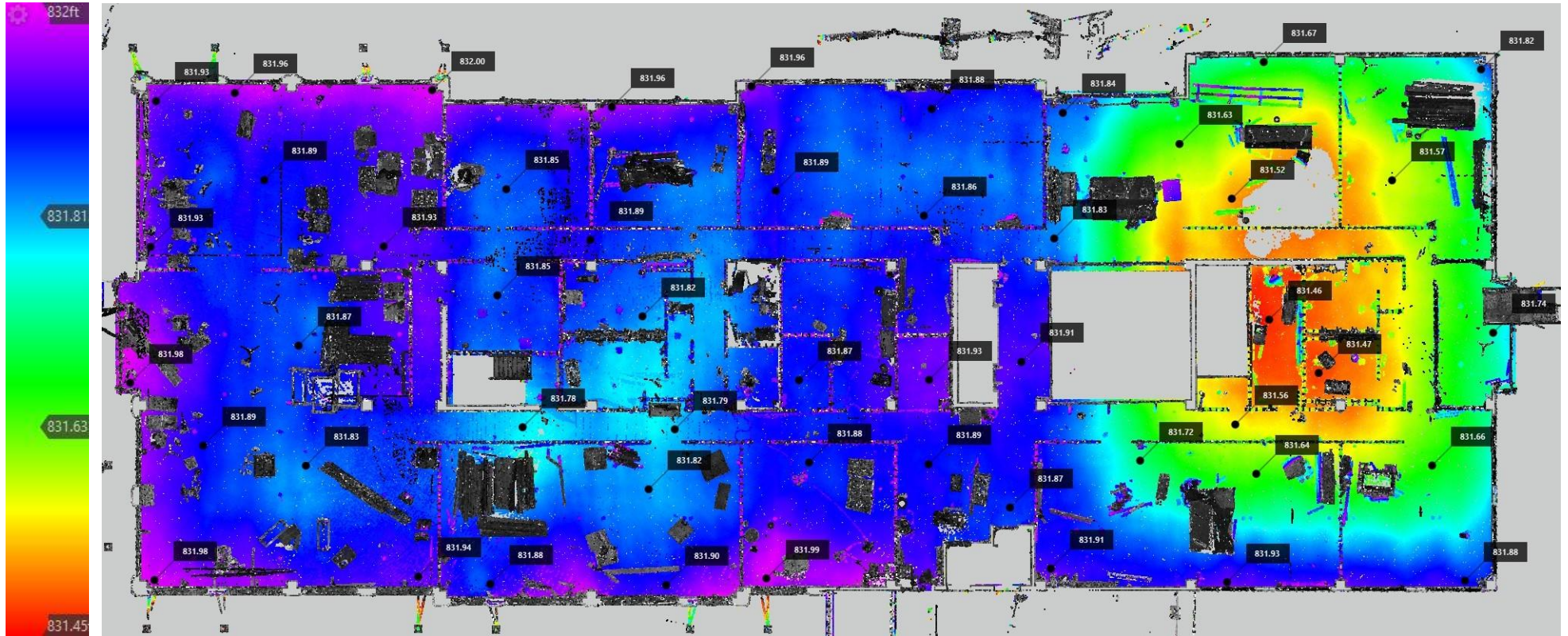
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Level 2

Slab Elevation Heat Map



The image above encompasses floor elevations for Level 2. The color scale for the heat map above ranges from 831.45' (red) to 832.00 (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

Note: Areas that were wet did not yield a return from the laser and will appear blank.

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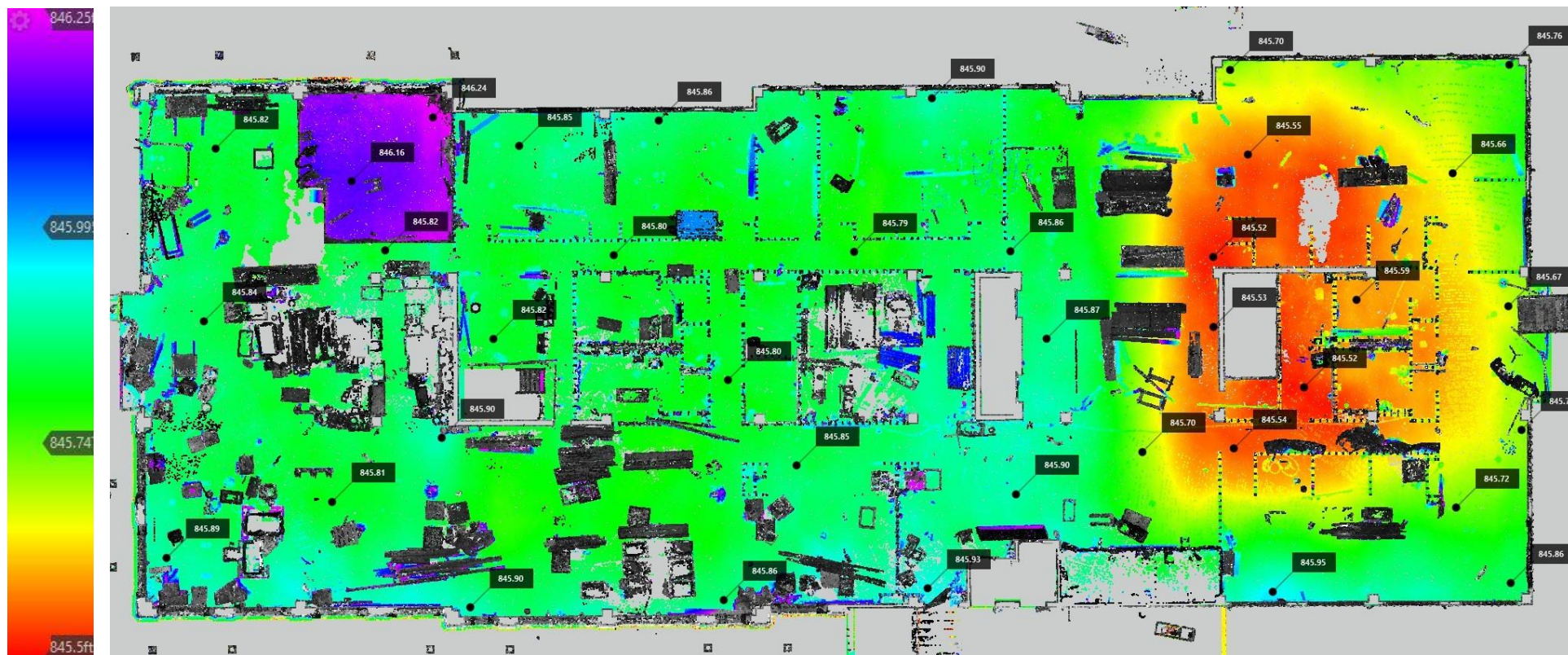
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Slab Elevation Heat Map

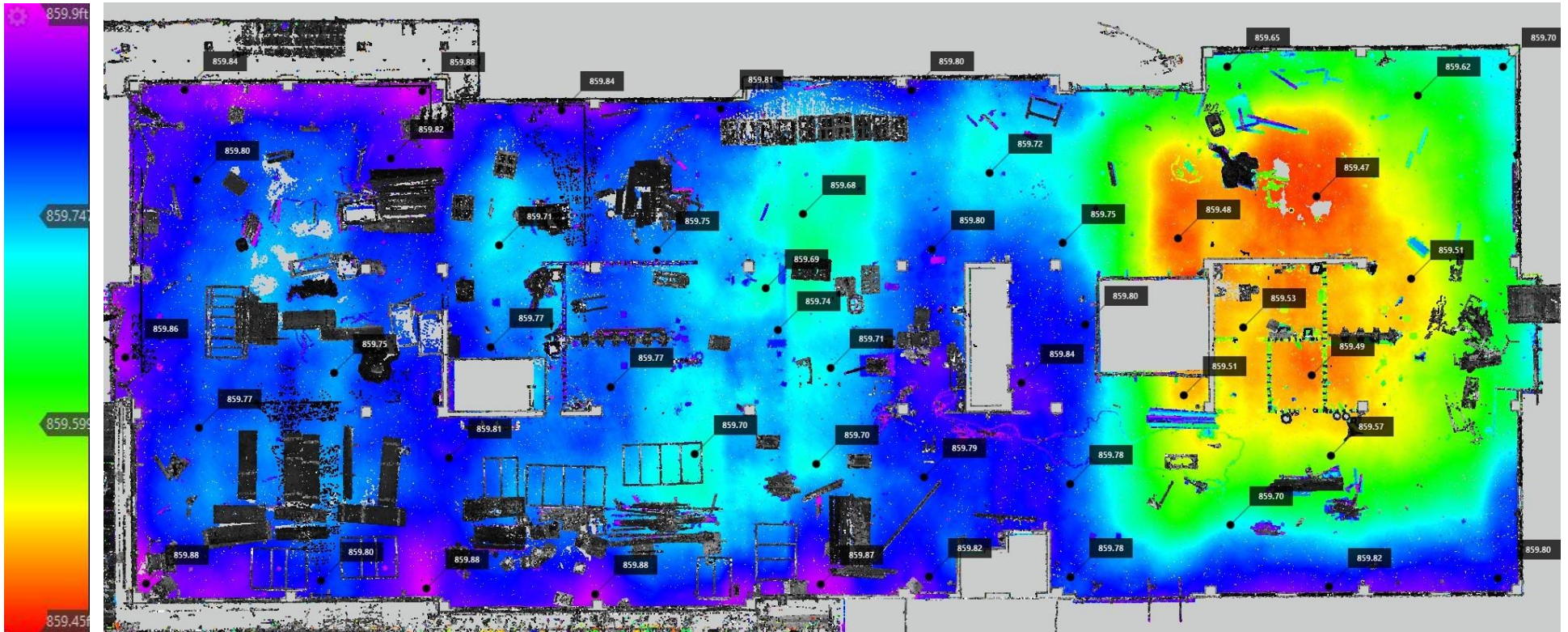


The image above encompasses floor elevations for Level 3. The color scale for the heat map above ranges from 845.50 (red) to 846.25 (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

Note: Areas that were wet did not yield a return from the laser and will appear blank.

Level 4

Slab Elevation Heat Map



The image above encompasses floor elevations for Level 4. The color scale for the heat map above ranges from 859.45 (red) to 859.90 (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

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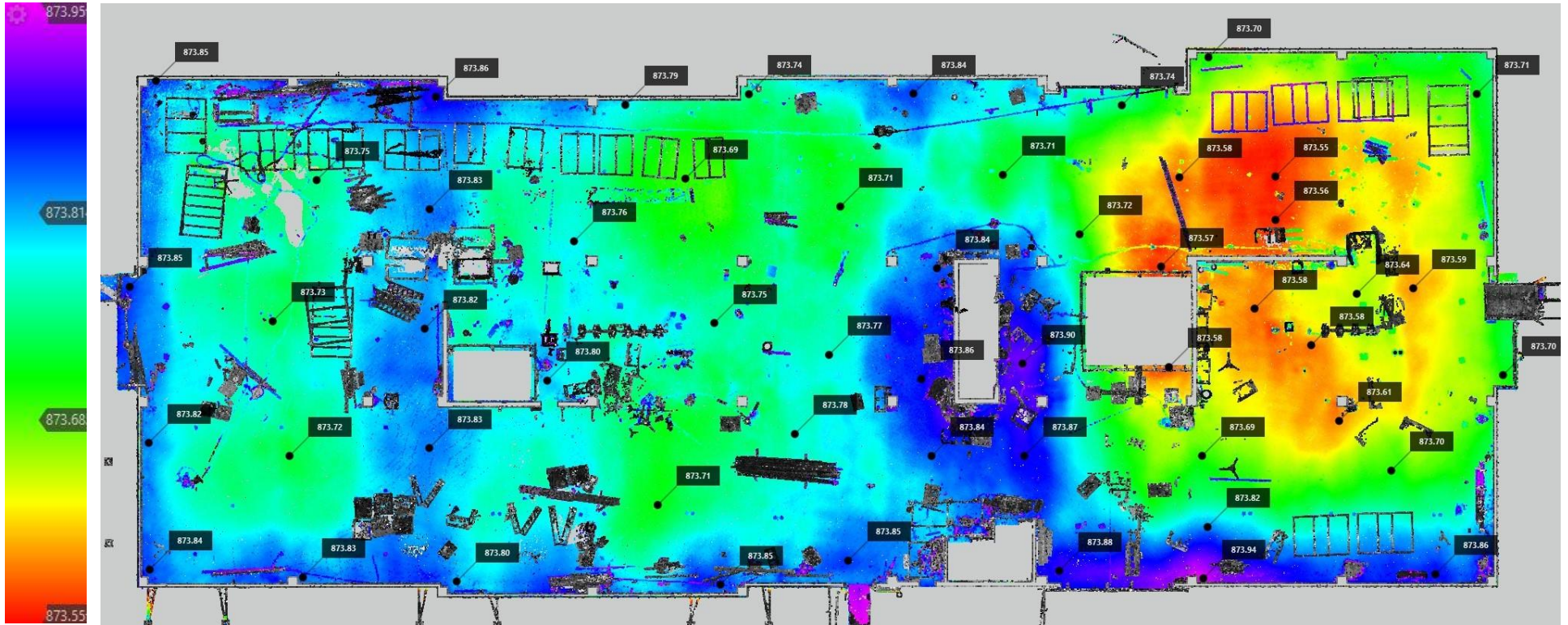
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Level 5

Slab Elevation Heat Map



The image above encompasses floor elevations for Level 5. The color scale for the heat map above ranges from 873.55 (red) to 873.95 (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

Note: Areas that were wet did not yield a return from the laser and will appear blank.

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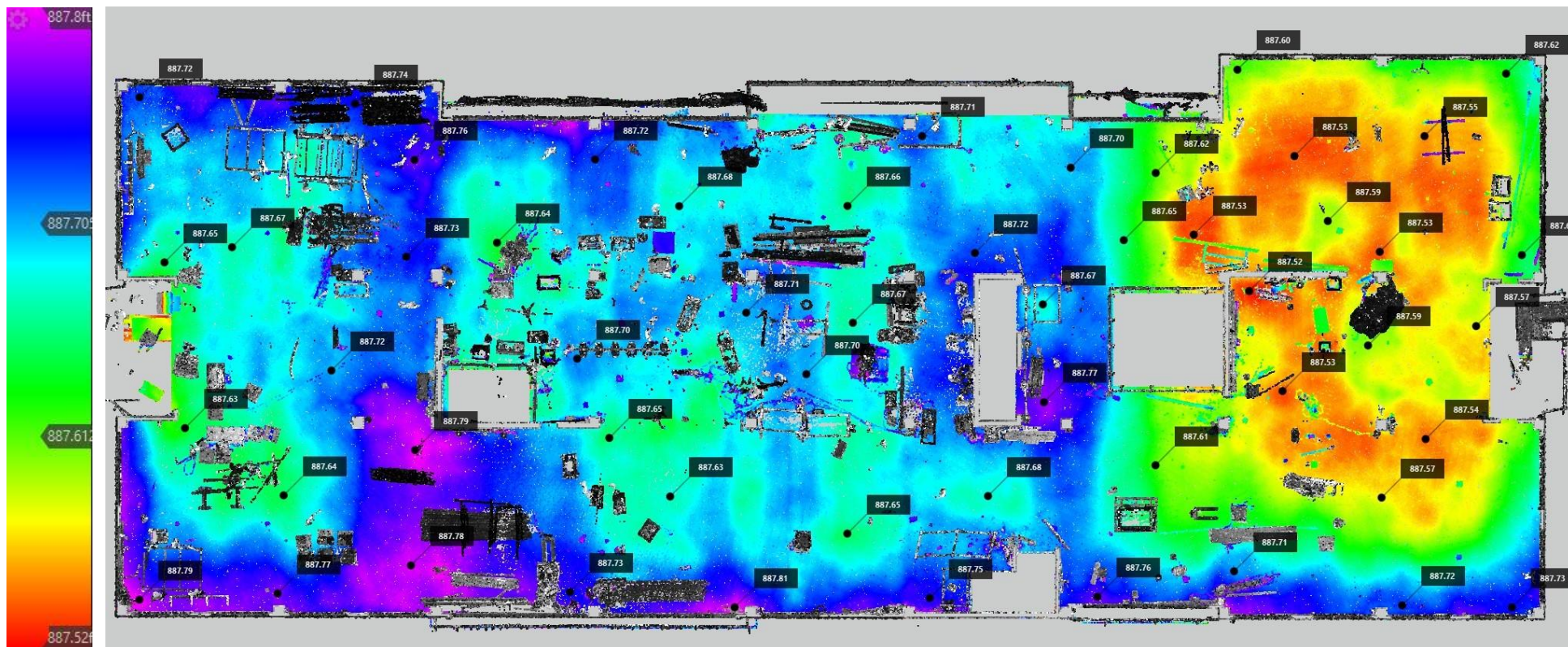
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Slab Elevation Heat Map



The image above encompasses floor elevations for Level 6. The color scale for the heat map above ranges from 887.52 (red) to 887.80 (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

Note: Areas that were wet did not yield a return from the laser and will appear blank.

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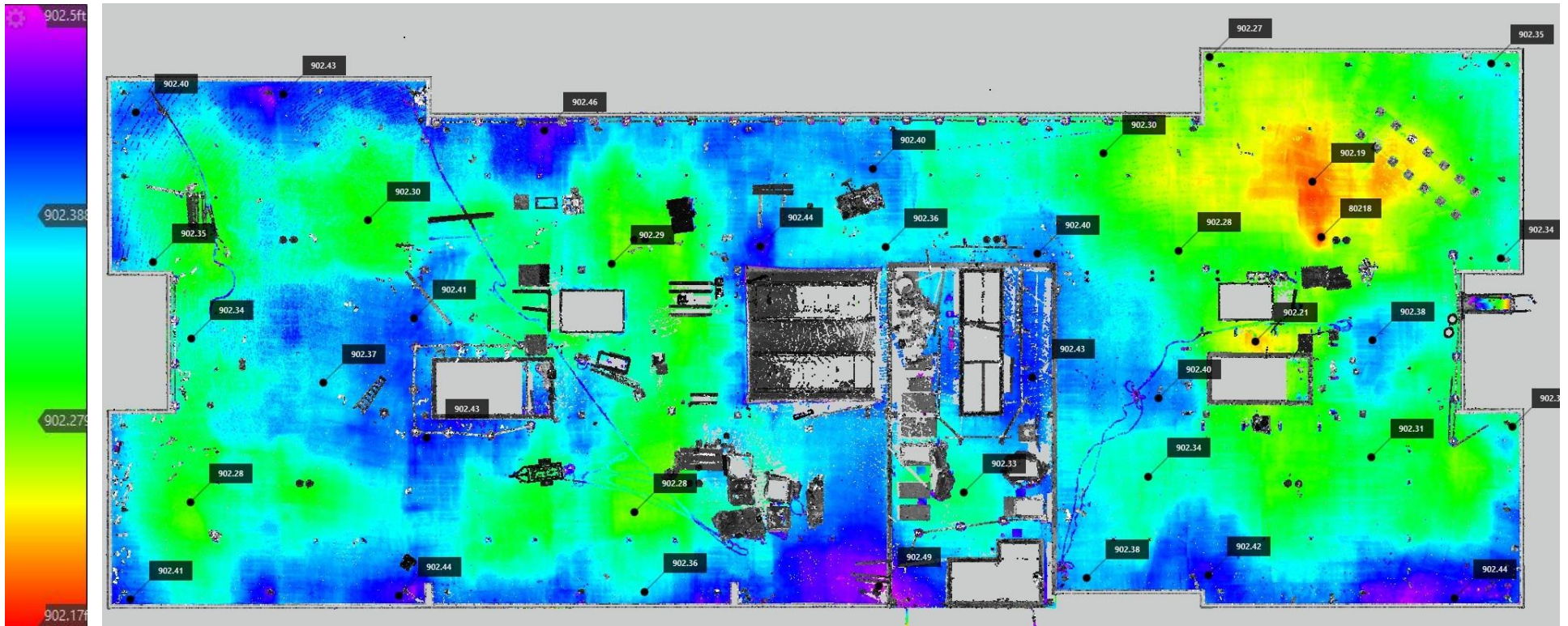
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Roof

Slab Elevation Heat Map



The image above encompasses floor elevations for the roof slab. The color scale for the heat map above ranges from 902.17 (red) to 902.50 (purple). Points outside of the defined range are displayed in grayscale. Several elevations were annotated across the concrete slab to highlight deviations.

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