Laser Scanning Deliverables

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Point Cloud = Model
Parking Deck
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Parking Deck
NON-PLUMB WALLS

Warped Walls

UNEVEN FLOORS

DEFLECTED STEEL

SAGGING PIPES

NON-PARALLEL CORRIDORS

CHIPPED CONCRETE

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Topography Quantification

Metrics / Results

- Purpose: Scan Dirt Pile for quantify verification
- Scan:
  - 4 Hours total time
  - Total Setups: 20 @ 1/4th and 1/8th resolution (>95% accuracy)
- Traditional Method:
  - Shoot with Total Station
  - 2 people, ~2 days on 10’x10’ grid @ 80% accuracy
As-Built Model Validation

Metrics / Results

- Purpose: Scan 3 floors of existing office building
- Scan:
  - 4 Hours total time/floor
  - Total Setups: 24/floor
  - Resolved discrepancies ahead of time

- Traditional Method:
  - Shoot with Total Station
  - ‘As-Built’ drawings
  - Lots of time...lots of inaccuracy
Construction Verification

Metrics / Results

• Purpose: Scan installed fume hood scope to validate location
• Scan:
  • 2 Hours – Scan + Registration & Overlay
  • Overlay Point Cloud with coordinated BIM
• Traditional Method:
  • Shoot with Total Station
  • Measuring Tape
  • “Hope nothing messes up”
Structure Installation Validation

Metrics / Results

- Purpose: Scan steel structure in fin to assess issues with installation
- Scan:
  - 3 Hours Total Time
  - Total Setups: 4
  - Created Revit Arch/Struct/MEP Model

- Traditional Method:
  - Shoot with Total Station
  - Hope the siding fit the structure
Pre-Pour As-Builts

Metrics / Results

- Purpose: Scan a slab prior to concrete covering up rebar, PT, embeds, stub-ups, etc.

- Scan:
  - 30 Minutes total time
  - Total Setups: 5

- Traditional Method:
  - Shoot with Total Station
  - X-Ray slab post pour
  - Chip out incorrectly located scope
CHALLENGE