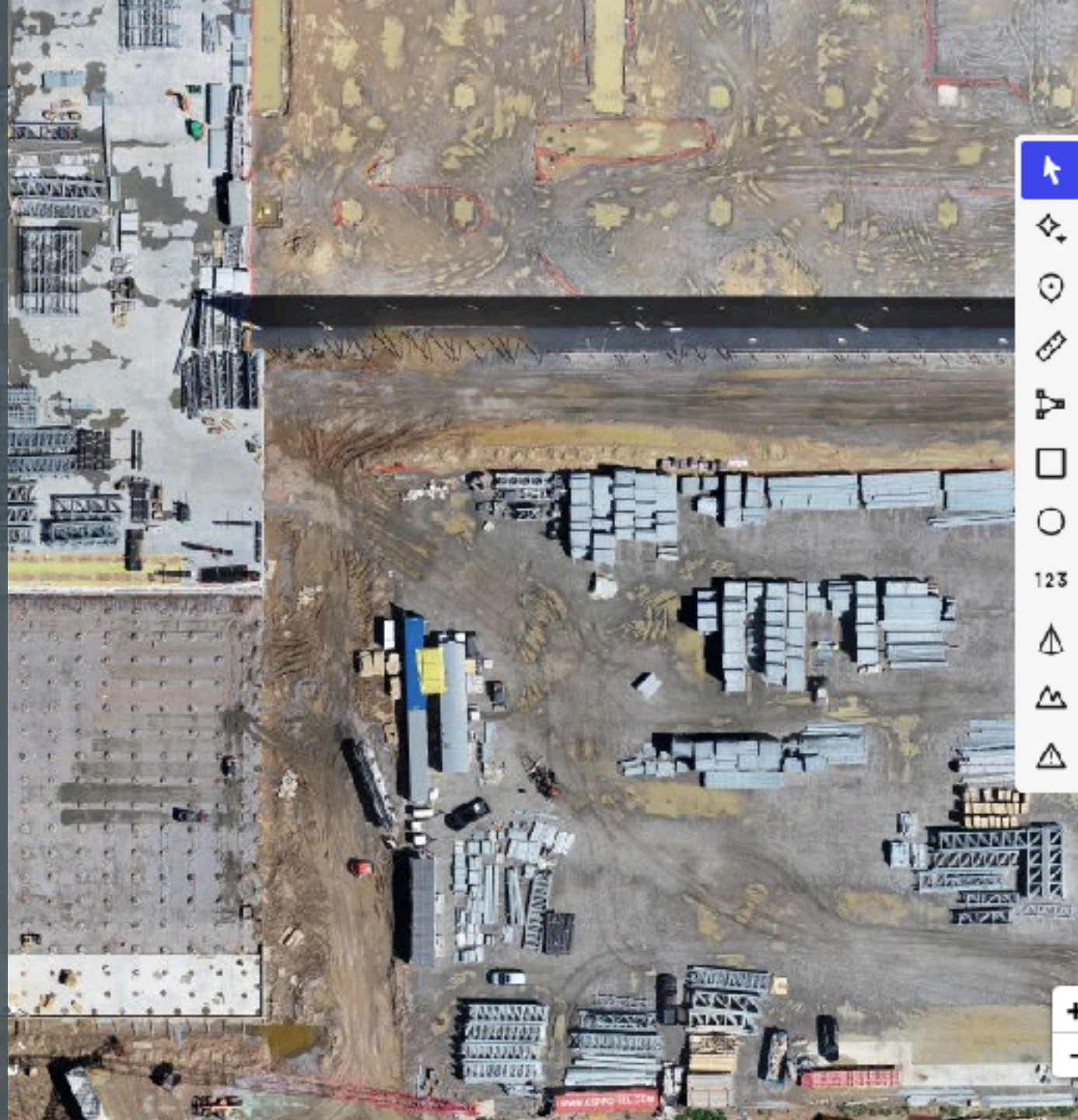


# DRONE BROTHERS

NATIONWIDE LEADERS IN DRONE CONSTRUCTION SERVICES

## CONSTRUCTION PLAYBOOK

DRONE USES AT EVERY STAGE OF CONSTRUCTION





As the leader of nationwide drone services, we provide a range of services to many of the largest, most respected construction firms in the industry and their clients.

Using the latest technologies and tools, we keep projects safe, underbudget, and on time.



# INDUSTRY LEADERS IN QUALITY & SERVICE

## Nationwide Availability

- A network of pilots, editors and experienced map makers to fly at any project, anywhere

## Insured For Peace of Mind

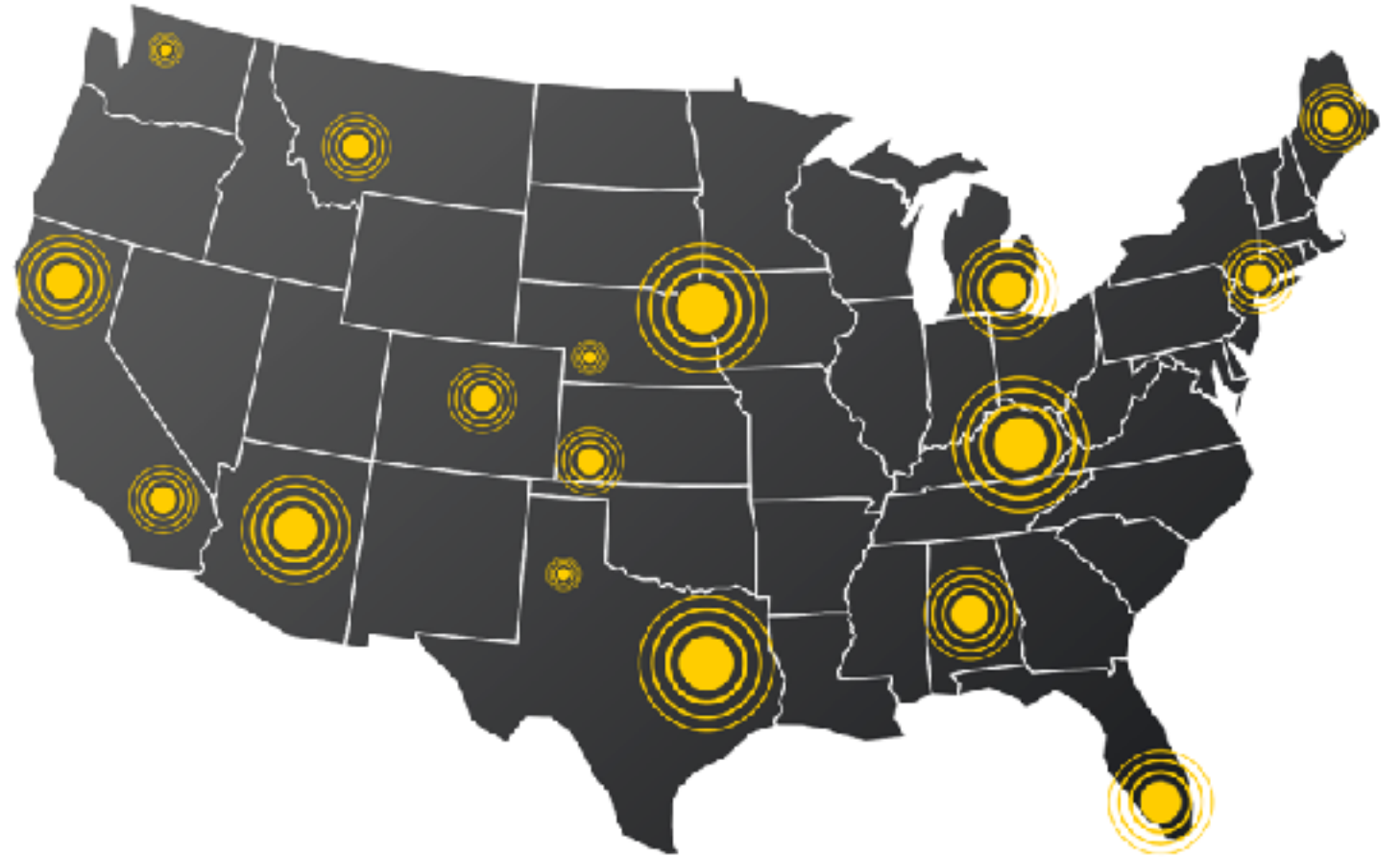
- With an over \$2 million dollar liability policy on drones, equipment and pilots

## FAA Part 107 Certified

- This certificate demonstrates that our pilots are knowledgeable and up to date on the regulations, operating requirements, and procedures for safely flying drones

## 5-Star Reputation

- Utilizing the latest technology and software, our clients know our standard for delivering high-quality assets and customer service – every project, every time



WHAT ARE  
DRONES  
USED FOR?



# DRONES IN CONSTRUCTION – STATE OF THE INDUSTRY

A 2022 DroneDeploy™ study documented that the construction industry was the only industry that **64%** of its problems could be **solved** by drone usage

- 42% Improved On-Site Safety
- 57% Increased Productivity
- 64% Improved Documentation
- 59% Improved Operations
- 43% Reduction in Overall Costs

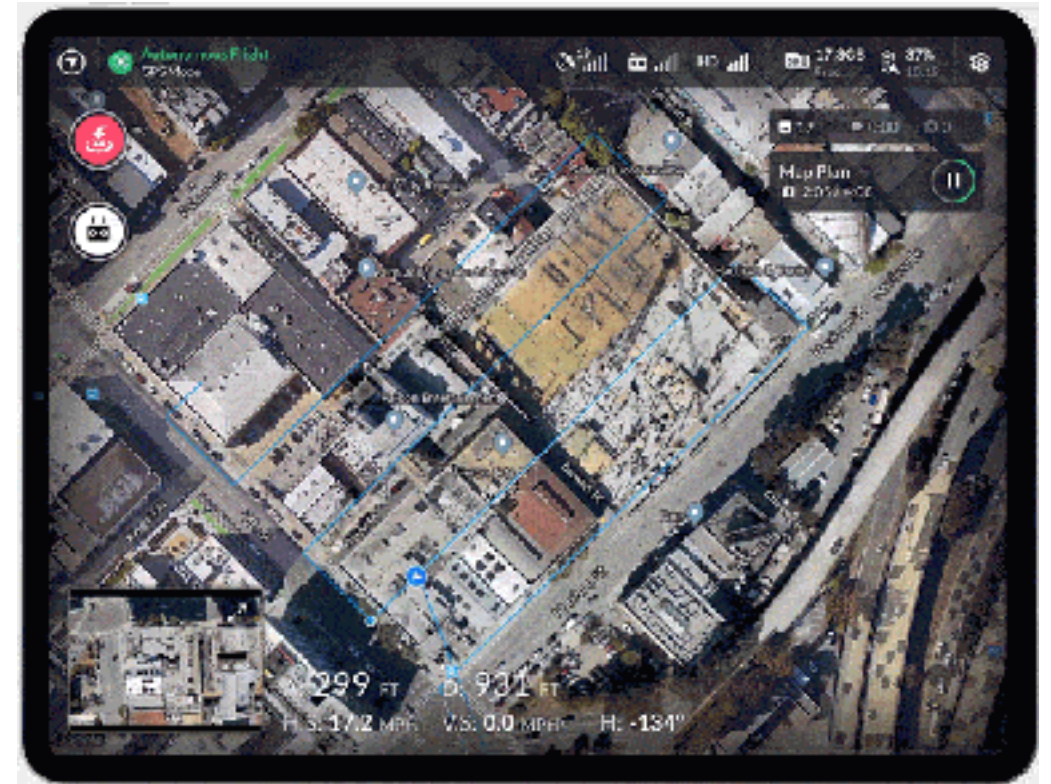
**54%** of construction respondents forecast drones will be a necessity in the industry by 2024 and 2025; with 21% reporting they will be ubiquitous



# CREATING DIGITAL REPRESENTATIONS OF YOUR CONSTRUCTION SITE

Our platform is designed to make this process fast, automated, seamless and provide multiple real-time benefits

- Improve site documentation and communication
- Accurately track changes over time
- Make comparisons between designs and as-built
- Reduce the risk of expensive rework
- Save time spent on in-person inspections
- Virtually visit your job site from anywhere
- Easily share data internally and with stakeholders



**69%** of construction respondents plan to expand beyond aerial drone mapping in 2023, compared to 57% last year (2022)


# DRONE REALITY CAPTURE LIFECYCLE

Drone reality capture is the process of creating digital representations of your construction sites using drones.

PRE-CONSTRUCTION

CONSTRUCTION

POST-CONSTRUCTION

A photograph showing several people's hands working on architectural blueprints on a table. One person is pointing at a drawing, another is holding a pen over it, and a third is holding a pencil. A yellow tape measure and a blue pen are also visible on the table. The scene is brightly lit, suggesting an office or studio environment.

# PRE- CONSTRUCTION

Site Selection

Legal Protection

Zoning Meetings

360 Rendering Video

Setting Up Drone Deploy Account



# SITE SELECTION

- Get the most updated view of the property
- Document existing site conditions
- Include PDF of survey data in the contract for a comprehensive overview
- [Site Selection Demo](#)





# LEGAL PROTECTION

- Capture a base map of the job site and surrounding roads
- Date and time-stamp map of current road conditions means you're never accused by the city, county, or state, of existing damages – saving you time and money

- [Legal Document Demo](#)



# ZONING MEETINGS

- Save time and money by speeding up the approval process
- Bring the site to your meeting with video footage

[Zoning Meeting Demo](#)

# 360 RENDERING VIDEO

- Overlay 360 degree A.I. generated model of your new building as if it already exists
- Impress your prospects and clients to give them a view of their finished building without moving a single piece of dirt



[Watch Full 360 Rendering Demo](#)

# SET UP YOUR DRONEDEPLOY ACCOUNT

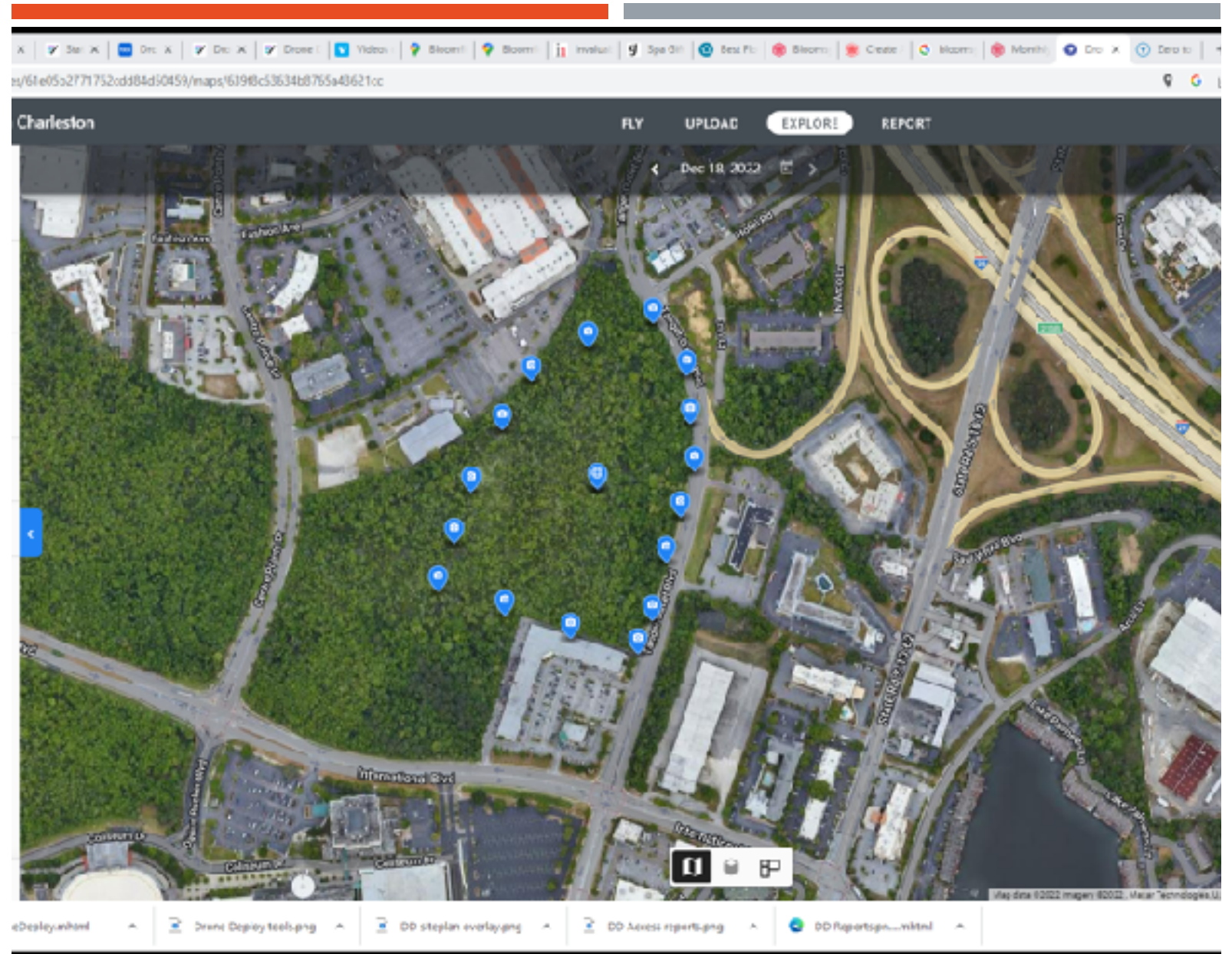
You and your team will have more than just 'view only' access. Creating the account allows you and your team FREE access to ALL the Drone Deploy tools

Login:

[Projectname@DroneBros.com](mailto:Projectname@DroneBros.com)

Password:

[ProjectName123](#)





# CONSTRUCTION

Progress Photos & Video

Mapping

Site Plan Overlays -

Underground Utilities, Foundation

Stockpile Volumetrics

Concrete, Steel Structure, Roofing, Facade

Interior Captures

# WEEKLY PROGRESS PHOTOS & VIDEO

Capture your job site weekly or bi-weekly. This will allow you to cover the most trafficked areas and reference back at any timestamp.



■ [Progress Photos](#)

■ [Panoramas](#)

■ [Photo Tours](#)

■ [Progress Video](#)

# MAPPING EARTHWORK & CUT-FILL ANALYSIS

- Reality capture provides accurate snapshots of how much earthwork is on-site at any given date.
- Compare progress over time.
- Contractors gain insights about the area's topography and receive a survey that's accurate down to the centimeter.

## Mapping Example



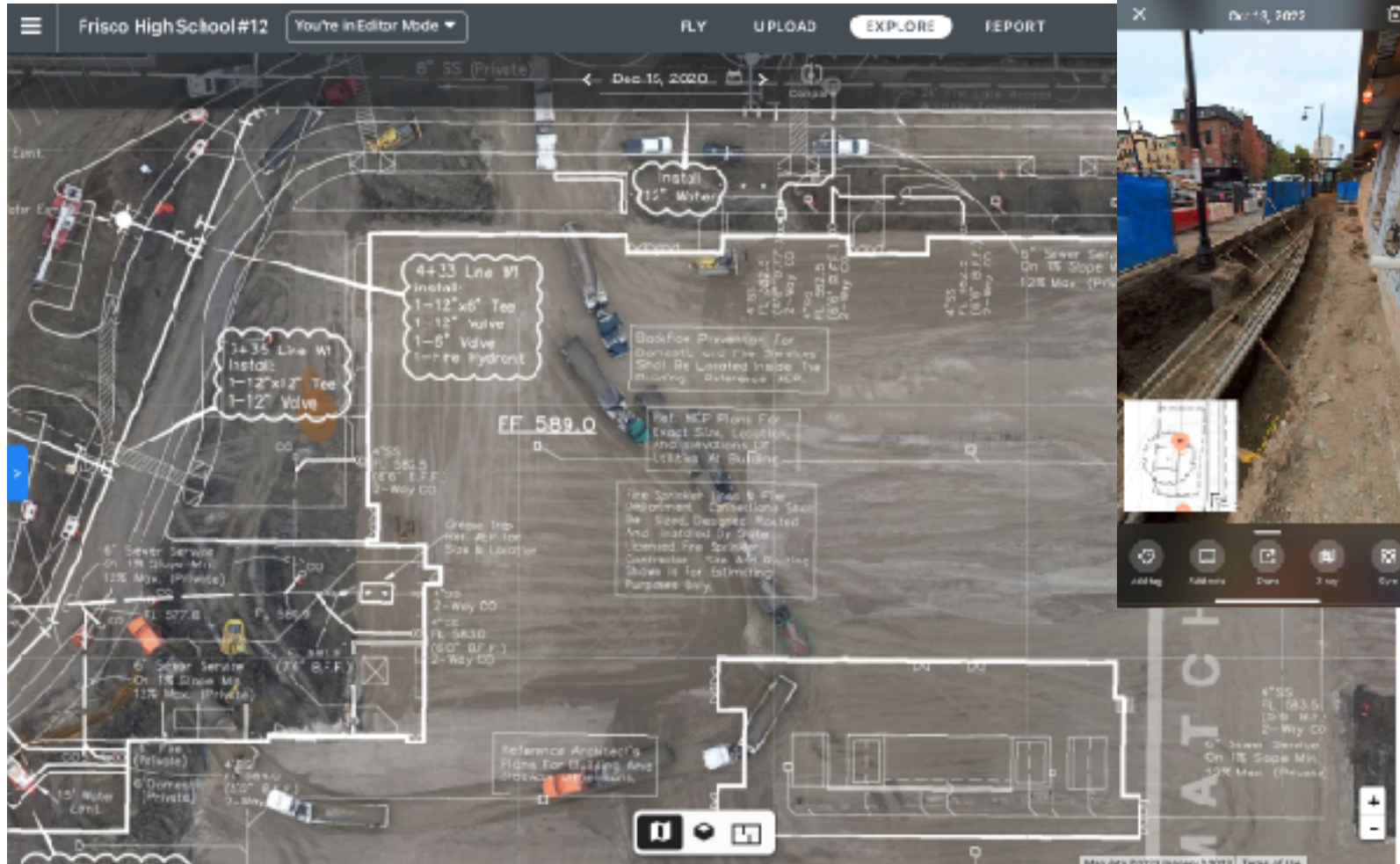




# SITE PLAN OVERLAYS

- Import your site plan as a separate layer in our drone maps or we can export our contour maps for use in your CAD system.
- Overlay drone maps with site plans such as wastewater, utility, and equipment clearances.
- Compare real-time site conditions against plans.
- Catch conflicts early and redirect them at a minimal cost.

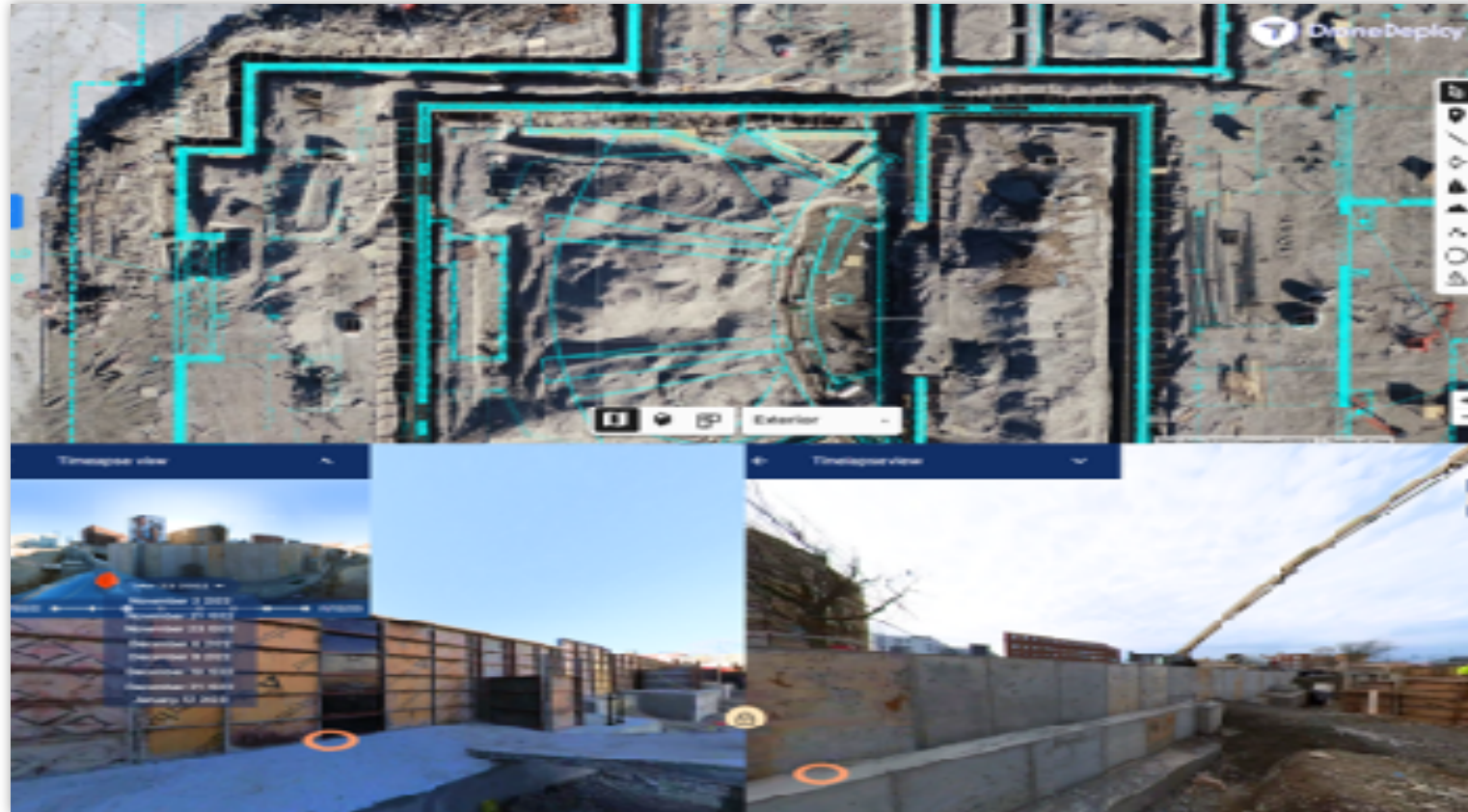
[Overlay Sample](#)



## SITE PLAN OVERLAY UNDERGROUND UTILITIES

- The reality capture of underground utilities lets you able to view components that will later be covered
- Coordinate logistics with trade partners easily, including turnover to concrete and other vendors
- Determine the root cause of efflorescence, spalling, or water intrusion

For example, water intrusion in the site work section such as tears, holes, and improper installation of vapor barriers can be documented



# FOUNDATION & UTILITIES

- Capturing locations of structural elements ensures everything is in the right location before concrete is permanently placed.
- View aerial imagery to get a holistic view of progress as foundations are being installed.
- Use ground 360 imagery to inspect work installed and validate installation of key structural elements.



CRITICAL MILESTONE CAPTURES:

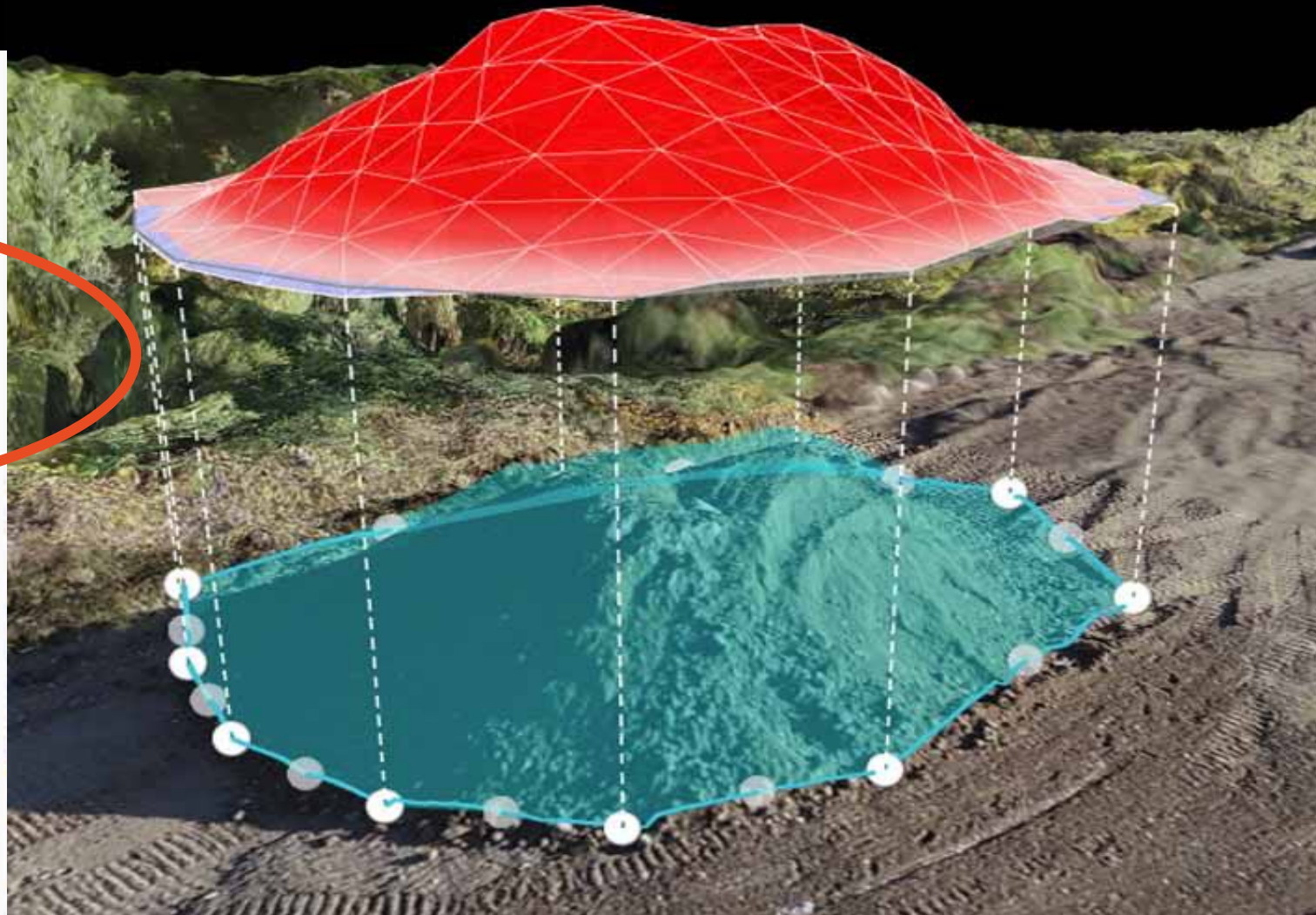
- Drilled piers
- Foundation walls
- Grade beams

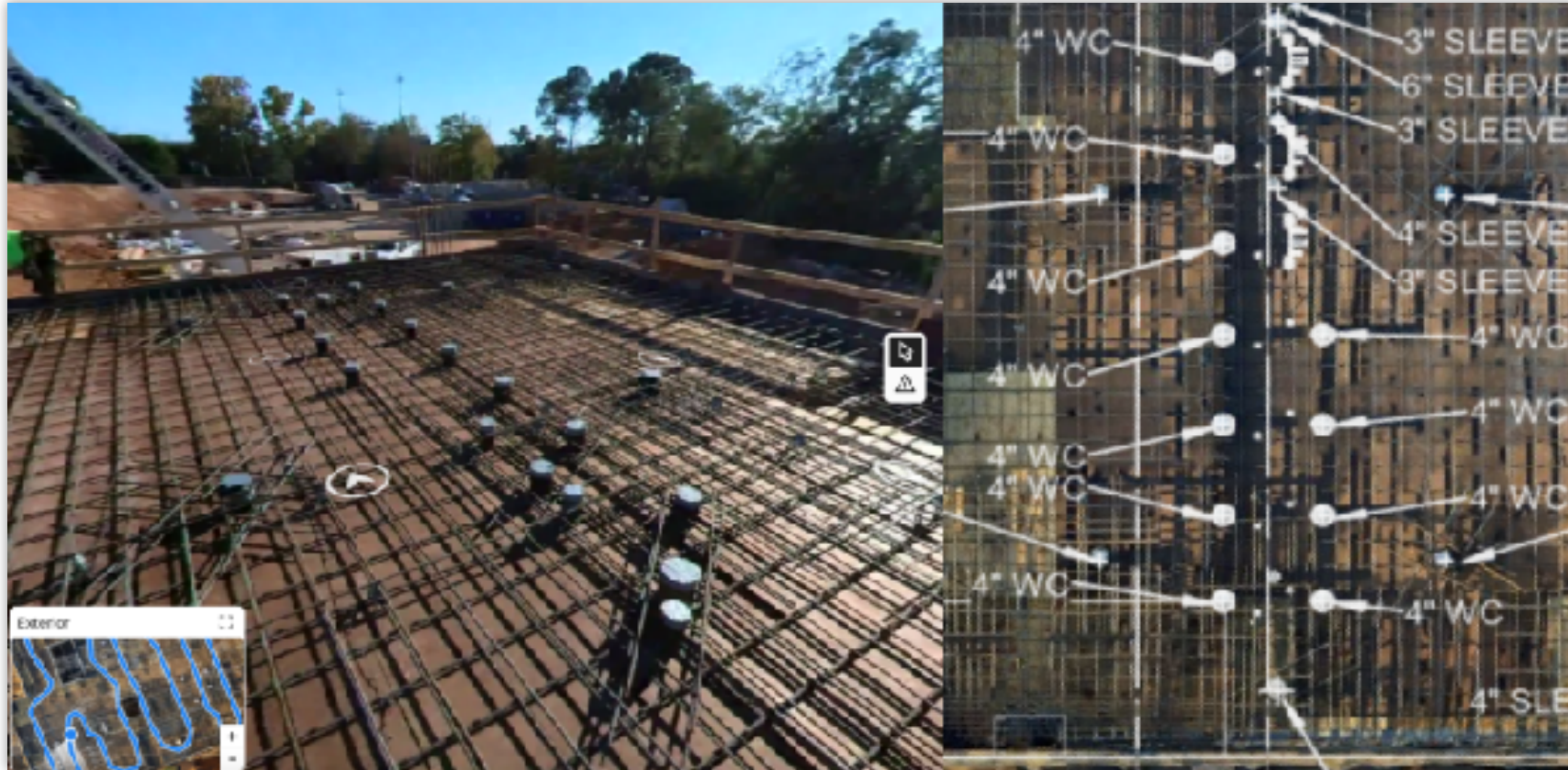
# STOCKPILE VOLUMETRICS

Is that pile of crushed concrete really 800 cubic yards? How many truckloads will be needed to haul this material away?

Rather than waiting for weeks for your stockpile data, drones can capture and accurately measure this information within hours and at a fraction of the cost of surveying. [Stockpile Report](#)

Title	
Stock pile N of pond	 
Area	1532 ft <sup>2</sup>
Cut	211.1 y <sup>3</sup>
Fill	-0.2 y <sup>3</sup>
Volume	210.9 y <sup>3</sup>
Material	▼
Surface	●
Digital Surface Model	▼
Base Plane	●
Linear fit	▼

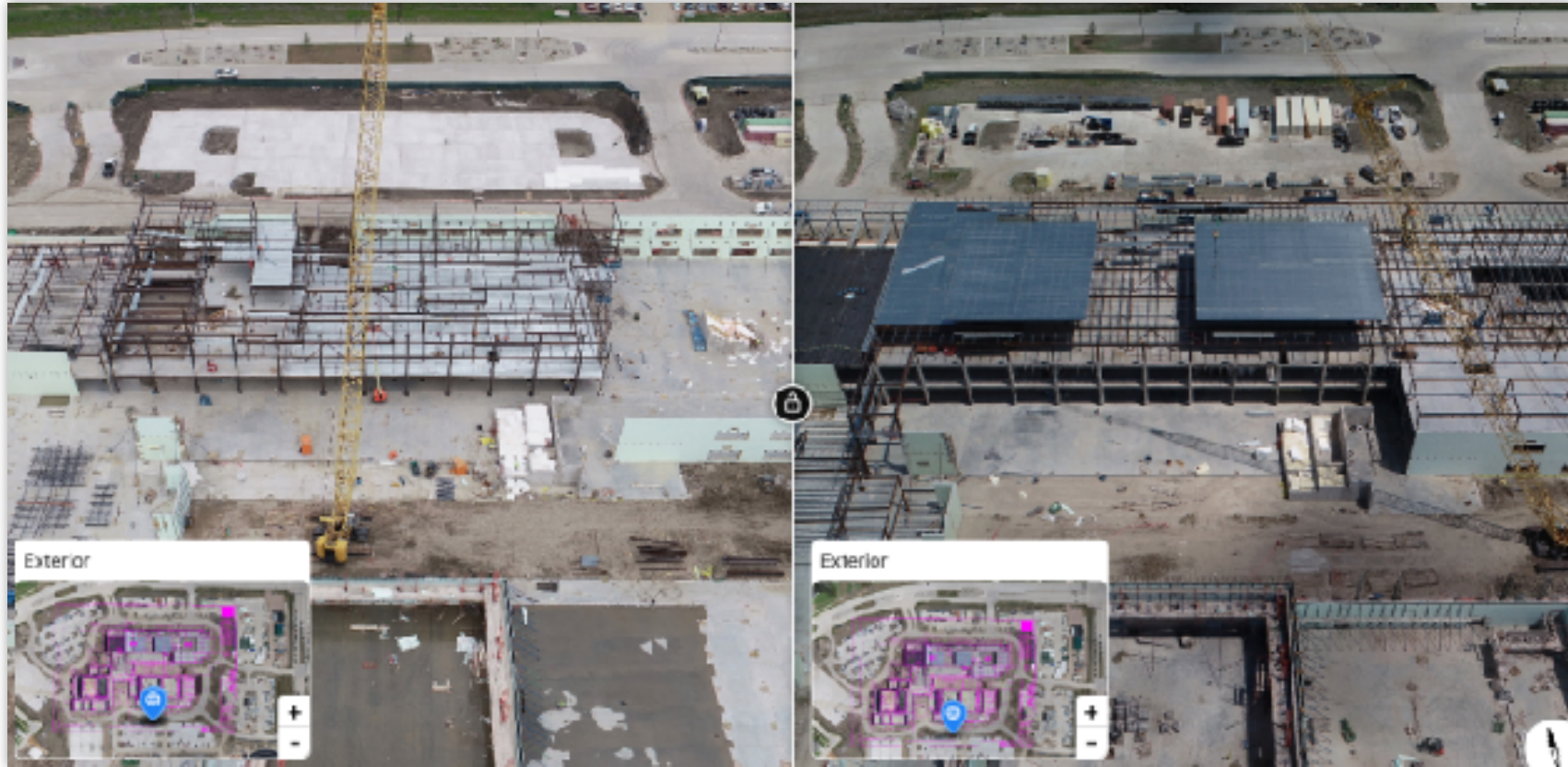




# CONCRETE STRUCTURES

After concrete is placed, find missing sleeves or spacers, check forms for cleanliness, and know where rebar and post-tension cables are in the slab – especially in the event core drilling is necessary.

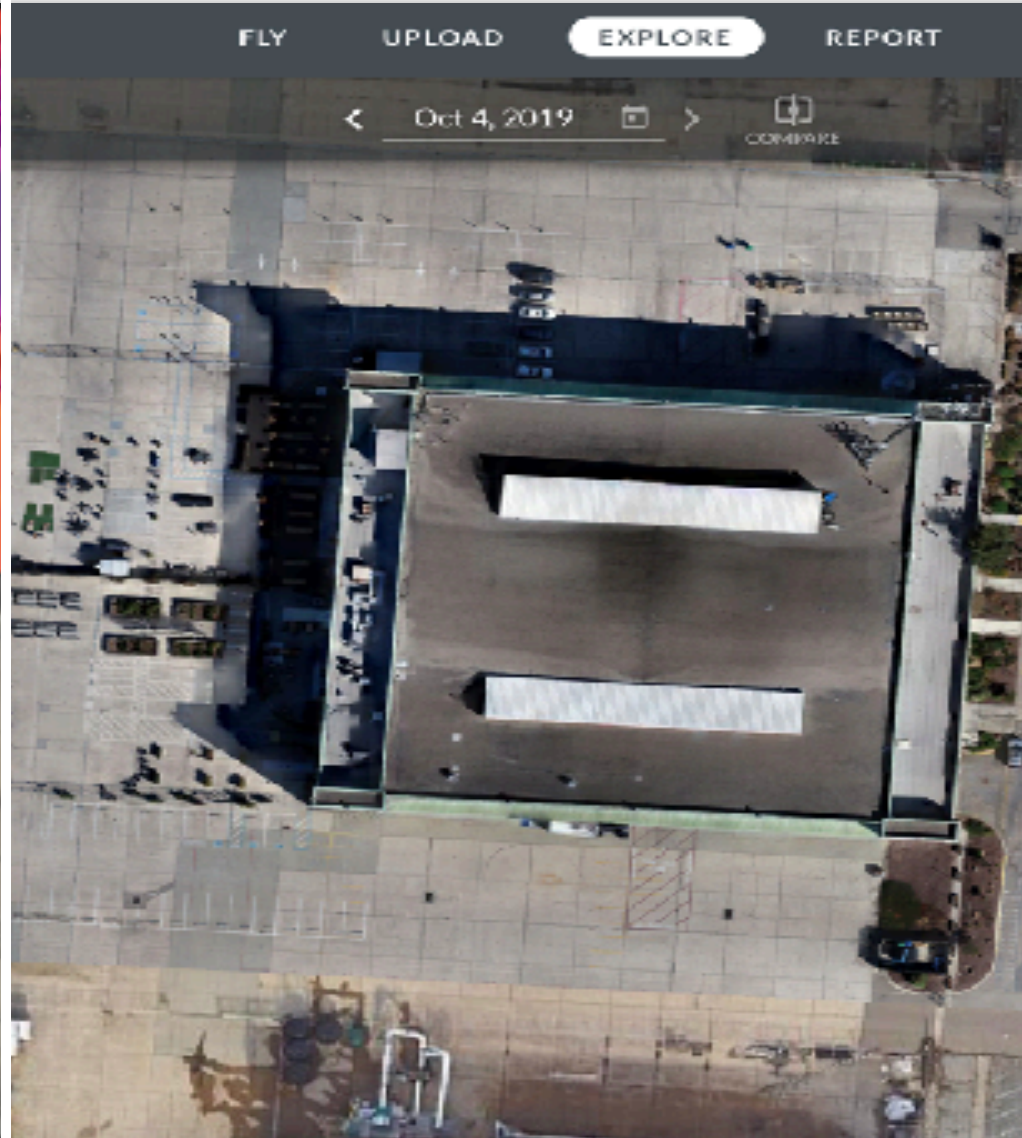
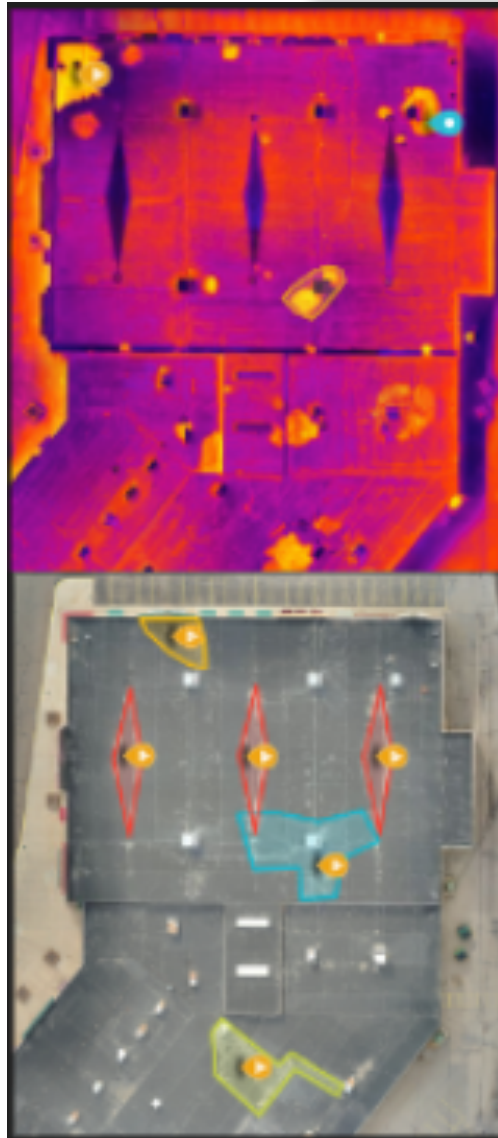
Allow VDC engineers to QC penetrations remotely, reducing the need for costly slab scanning.



# STEEL STRUCTURES

Visually documenting the progress of structural steel and decking on a weekly or monthly basis can help with quantity and schedule comparison.

Reality capture also aids with the verification of work completed, since many of the connections/members will be covered up by other elements in future phases.



# ROOFING

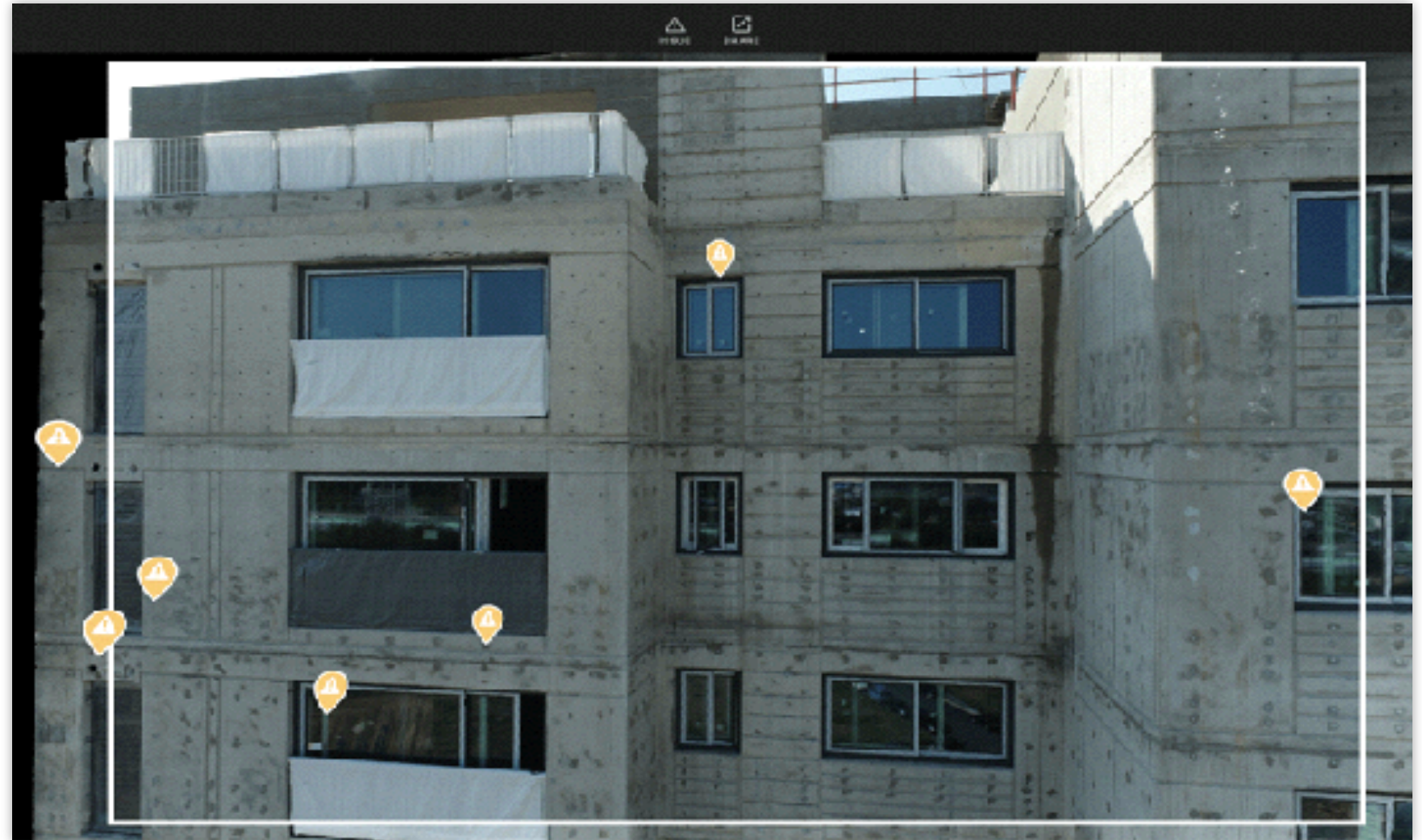
- Water intrusion is a common problem in construction.
- It can lead to serious issues such as mold growth, deterioration of building materials, and structural damage.
- Reality capture can help resolve water issues, as the quality of work can be verified without having to open the roofing system.
- Increase time and safety by using drones instead of sending workers to investigate problem areas.

# FACADE INSPECTION

Reality capture allows you to efficiently check the installation and quality of work at key exterior milestones.

Send drones on autonomous inspection missions to capture building exteriors, keeping team members out of dangerous conditions.

[Facade Video Demo](#)





# INTERIOR CAPTURES

We capture interiors with a drone fly-through; great for large-scale warehouse-type projects (+100,000ft) as well as more detailed FPV (First Person View) tours using a high-definition video camera that broadcasts live footage back to the pilot on the ground.

[Interior Capture](#)





# POST- CONSTRUCTION

System Training Videos  
Final Project Tours  
Marketing Material  
Groundbreaking Ceremonies  
Time Lapse Videos  
A Day In The Life  
FPV Technology



# SYSTEM TRAINING VIDEOS

With our nationwide team of videographers, we can help capture and produce system training videos for you to hand over to your clients

- HVAC operations
- Fire suppression systems
- Alarm operations
- And more

[System Training Video Sample](#)

# FINAL PROJECT TOURS

- Highlight the hard work your company invested into completing your project.
- Using drone footage and interior fly-throughs with specialty FPV drones, we provide your company with an outstanding final video tour.
- Deliver a final polished product to showcase to the client and use for marketing material.

[Project Tour Sample](#)



# MILESTONE CAPTURES

## GROUNDBREAKING & TOP-OFF CEREMONIES

Drones make for a great tool to capture your team, your client, and local government officials with their hard hats and shovels for the groundbreaking ceremony. Create videos to use in all social media and marketing efforts.

[Milestone Examples](#)



# END OF PROJECT TIME LAPSE VIDEOS

Time lapses are a great way to show off your work, impress existing clients, and show prospective clients the caliber of your work.

[Time Lapse Sample](#)



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# A DAY IN THE LIFE VIDEO

Every business has a story to tell. Enhance your marketing efforts by helping tell your company's story from real people and boots on the ground.

[Day in the Life Demo Video](#)



# FPV – FIRST PERSON VIEW

- First Person View (FPV) is the new frontier in drone video production
- Each FPV drone contains a high-definition camera that broadcasts live footage back to the pilot
- With FPV goggles, the pilot has the immersive experience of flying a drone as if floating in the sky next to it
- The world of FPV is rapidly growing, creating a whole new genre of video capture. The footage is immersive, exciting, and fun to watch, providing the perfect marketing tool for raising equity and awareness for your brand

[FPV Sample](#)





# DRONE SERVICE PACKAGES

\*PRICES & SERVICES SUBJECT TO CHANGE

## COACH

25 hand-flown photos

Photo tour report

*photos taken from the same spots every single flight*

Interactive panoramic photos

Non-Reoccurring  
One-time flight:  
\$595

Recurring:

1x /month: \$495/ flight

2x /month: \$465/ flight

4x /month: \$435/ flight

## BUSINESS

60-90 second professionally  
edited video

+ \$100

*\*includes all coach services*

## FIRST

2D electronic orthomosaic map

Up to 3 site plan overlays

Elevation map

3D Interactive Modeling

+ \$250~

*\*includes all business services*



# ***DRONE BROTHERS***

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## **WANT TO LEARN MORE? SCHEDULE A FREE LUNCH & LEARN**



**INFO@DRONEBROS.COM**

**WWW.THEDRONEBROTHERS.COM**