



SAFETY WITHOUT BLIND SPOTS

A VigilanteX AI Case Study in OSHA
Readiness & Jobsite Hazard Reduction

Client

Arizona Based Construction Contractor

Analysis Period

August 21 – September 4 (14 Days)

Hardware

1 Argos Mobile Surveillance Unit

Camera Coverage

PTZ • Wide-Angle • Perimeter

Summary

Over a 14-day period, VigilanteX deployed a single Argos mobile AI surveillance unit to assess real-world OSHA exposure on an active jobsite.

The system identified 842 verified safety violations, averaging ~60 violations per day.

5.8% of all violations were related to missing fall protection, one of OSHA's most dangerous categories.

Argos delivered continuous, multi-angle oversight and exposed the hidden safety risks that traditional inspections routinely miss.

Key Findings

842 Total Safety Violations Detected

Massive risk surface revealed through 24/7 AI monitoring.

~60 Violations Per Day

A constant flow of actionable safety exposures.

5.8% Missing Fall Protection (~49 events)

A critical OSHA hazard category directly linked to severe injuries and fatalities.

Zero Blind Spots

Three camera views eliminated visibility gaps across work zones, access paths, equipment corridors, and staging areas.

Complete OSHA-Ready Audit Trail

Time-stamped video clips, AI classifications, historical logs, and verified follow-up documentation for every event.

Behavioral Improvements Within 14 Days

Improved PPE compliance

Fewer unsafe shortcuts

More consistent adherence to safety zones

AI didn't just observe the site — it influenced culture.

OSHA Fine Avoidance ROI

OSHA fines are no joke:

Average OSHA serious violation fine:

\$16,131 per violation (2024 rate)

If only 5% of those 842 violations turned into citations:

$0.05 \times 842 = 42$ violations

$42 \times \$16,131 = \$677,502$ in avoidable OSHA fines

...from a single 14-day window.

If Argos prevented even one major citation, it already paid for itself.

But here, the potential avoided cost is nearly \$700k.

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Injury & Claims Cost Avoidance

The average cost of a recordable injury in construction:

- \$47,000 per injury (NIOSH, Liberty Mutual Index)
- Serious fall-related injuries often exceed \$100,000+

You detected ~49 fall-protection issues.

If Argos prevented just one fall incident:
\$100,000–\$250,000 ROI immediately.

If it prevented two?
\$200k–\$500k.

And this doesn't include indirect costs (delays, admin, lost productivity).
OSHA estimates that indirect costs are 2–5x the direct cost.
So a \$100k injury really costs closer to \$200k–\$500k.
Argos cutting even a few of these exposures = insane ROI.

Insurance ROI (EMR Reduction)

General liability and workers comp premiums drop 5–20% with improved loss runs.

For a mid-size GC paying:

- \$2–\$5M/year in insurance premiums

Even a 5% reduction = \$100k–\$250k/year saved
A 10% reduction = \$200k–\$500k/year saved

Argos can prove risk reduction with actual videos + event logs.

Schedule ROI (delays avoided)

A single safety shutdown or investigation can cost:

- \$20k–\$80k/day depending on the project

Considering the site had 60 violations/day, Argos likely prevented:

- Job stoppages
- OSHA stand-downs
- Re-inspection delays
- Rework due to unsafe practices

Even avoiding one shutdown is worth tens of thousands.

Total ROI Potential (Conservative Model)

Total Potential Value created: \$902,502+
From one Argos unit monitoring for 14 days.
That's 64x ROI on a ~\$14–20k annualized cost solution.

ROI Category	Conservative Estimated Value
OSHA Fine Avoidance	\$677,502
Injury Avoidance (1 event)	\$100,000
Insurance EMR Impact	\$100,000/year
Delay Avoidance	\$25,000

Aggressive / Realistic ROI Scenario

If you model actual long-term impact from the exposed risk levels:
\$1.2M – \$2.4M in total annualized value per jobsite using a single Argos unit.

Conclusion

A single Argos unit delivered more OSHA-relevant insight in 14 days than traditional safety processes produce in months.

By exposing 842 violations, identifying fall-protection lapses, and eliminating blind spots, Argos transformed the jobsite into a data-driven safety environment with real-time accountability.

The financial impact is equally significant. Using conservative industry benchmarks, the hazards and behaviors identified during this two-week window represented over \$900,000 in potential risk-reduction value through avoided OSHA fines, prevented injuries, reduced insurance exposure, and elimination of costly jobsite delays.

This study demonstrates how mobile AI surveillance enables true OSHA readiness — continuously, automatically, and without adding staff — while delivering 30x to 60x ROI on a single deployment.