

CASE STUDY

STRATEGIC INTERSECTION INTELLIGENCE

REDUCED PEDESTRIAN COLLISIONS BY 38% THROUGH DATA-BACKED INFRASTRUCTURE IMPROVEMENTS

By using AI-powered analytics and real-time data, VideoGuard helped a city identify high-risk intersection issues, optimize signal timing and crosswalk safety, and reduce pedestrian collisions through targeted infrastructure improvements.

AT A GLANCE

-  **38%** REDUCTION IN PEDESTRIAN COLLISIONS
-  DATA-BACKED INFRASTRUCTURE IMPROVEMENTS
-  AI-POWERED ANALYTICS IDENTIFY HIGH-RISK PATTERNS
-  REAL-TIME ALERTS ENABLE FASTER RESPONSE
-  SAFER STREETS. SMARTER CITIES. STRONGER COMMUNITIES.

THE CHALLENGE

- High rate of pedestrian collisions at key intersections
- Limited visibility into traffic and pedestrian behavior
- Outdated signal timing and infrastructure design
- Decisions made without real data or evidence

THE OBJECTIVE

- ✓ Identify and prioritize high-risk intersections
- ✓ Understand traffic and pedestrian patterns
- ✓ Optimize signal timing and crosswalk safety
- ✓ Reduce pedestrian collisions and improve safety for all road users

THE VIDEOGUARD SOLUTION

VideoGuard deployed AI-powered intersection analytics to collect and analyze traffic, pedestrian and incident data.

The system detects risky behaviors, counts demand, and provides actionable insights—enabling the city to implement targeted infrastructure and operational improvements.

TECHNOLOGY USED



-  **AI-POWERED ANALYTICS**
Detects risky behaviors, near-misses and conflict events.
-  **REAL-TIME ALERTS**
Instant notifications for incidents and unsafe conditions.
-  **EDGE PROCESSING**
On-device intelligence for real-time analysis and privacy protection.
-  **SENSOR INTEGRATION**
Combines video with traffic sensors, signals and detectors.
-  **SECURE CLOUD PLATFORM**
Centralized data storage, dashboards and reporting.

HOW IT WAS USED



INTERSECTION ANALYSIS
AI analyzes traffic, pedestrian flows, speeds and violations to identify high-risk locations.



PATTERN DETECTION
Identifies peak times, risky behaviors and infrastructure gaps.



OPTIMIZE OPERATIONS
Data-driven adjustments to signal timing, phasing and crosswalks.



INFRASTRUCTURE IMPROVEMENTS
Targeted upgrades including crosswalk enhancements, curb extensions, signage and lighting.



MEASURE & IMPROVE
Continuous monitoring measures results and drives ongoing improvements.

THE OUTCOME

38% REDUCTION IN PEDESTRIAN COLLISIONS

-  **SAFER PEDESTRIANS**
Fewer collisions and injuries at key intersections.
-  **DATA-BACKED DECISIONS**
Infrastructure investments based on real-world evidence.
-  **IMPROVED TRAFFIC FLOW**
Optimized signal timing reduces delays and congestion.
-  **COST SAVINGS**
Lower collision-related costs and more efficient use of resources.
-  **STRONGER COMMUNITIES**
Safer streets build confidence and enhance quality of life.

“ The data and insights from VideoGuard were critical to our success. With real evidence, we made smarter decisions that saved lives, improved our intersections, and delivered safer streets for everyone.

— City Transportation Director

