LINDSAY™ | REMOTE ASSET MONITORING CASE STUDY

Enhancing Roadside Safety with ImpactAlert™

Safer Roads via Faster, Lower-Cost Repairs

ROAD CONNECT™

lindsay.com

How Does Impact Alert by Lindsay helps to protect lives while reducing the cost of road assets monitoring?

Roadside safety is a critical aspect of transportation infrastructure. Effective monitoring and maintenance of safety assets—such as guardrails, signage, crash cushions and cable barriers—are essential to ensuring the safety of road users.

Achieving this requires constant, effective, and efficient monitoring. However, this task is inherently challenging due to the limited financial and personnel resources that Departments of Transportation (DOTs) typically face.

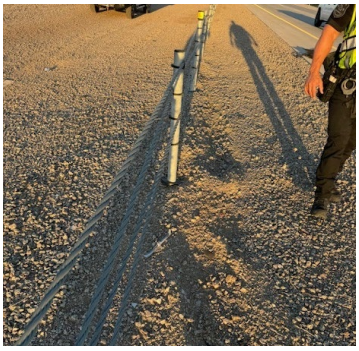
ImpactAlert offers a solution by enabling automatic, 24/7 monitoring of roadside assets at a fraction of the cost of traditional maintenance patrols. This system supports faster emergency responses and reduces the time damaged assets remain on the roadway. Prompt notifications help mitigate the risk of secondary incidents, improving safety for both road users and maintenance crews.

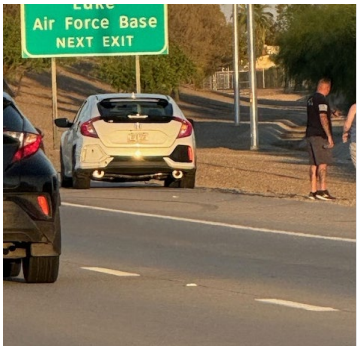
Additionally, timely alerts ensure that inoperable assets are addressed quickly, enabling safer restoration of traffic flow and minimizing prolonged roadway disruptions.

How Does Impact Alert helps to recuperate repair cost?

When a real-time alert is received, DOT personnel and/or law enforcement can promptly respond to the site and potentially collect driver and insurance information to help recover the cost of repairs. The following example illustrates a real-life scenario that occurred in cable barriers being monitored by ImpactAlert in Glendale Arizona.

During the testing of ImpactAlert by the City of Glendale, alerts of two impacts were detected within a stretch of just 0.8 miles of cable barrier. When the first impact occurred, Ariana Granillo of Brown and White Inc. (the contractor for the City of Glendale) was able to promptly mobilize to the site and collect photographic evidence of the damage, the police report, as well as the driver's license and insurance information.



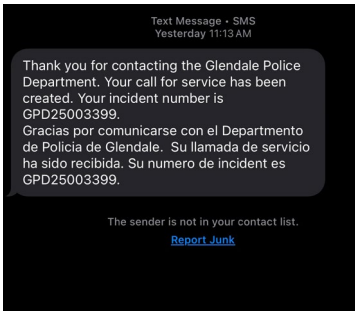


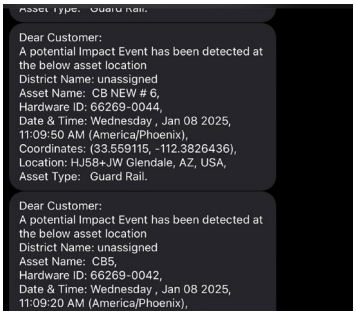
Pictures taken right after the incident occurred.

In a second incident, Ariana was in a different city; however, the ImpactAlert notification—received via text message and email—enabled her to promptly call 911 and ensure that first responders were dispatched to secure the scene.

After the event, Ariana received a Glendale Police Incident Report Number, which she was able to present to the City of Glendale DOT.







Pictures taken right after the second incident occurred.

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What Customers Are Saying About ImpactAlert

TESTIMONIALS: **Ariana Granillo- Project Manager for Brown and White Inc (BWI)**
Becca Fastje, P.E. – Transportation Engineer city of Glendale

How was it for your department to implement and use the system during the pilot study?

- ***Fastje, P.E.**: Very easy to use.*
- ***Granillo**: User-friendly, which allowed our department to quickly adapt and start using it efficiently.*

How did receiving timely notifications of incidents affect the city's response time?

- ***Fastje, P.E.**: Response time was better.*
- ***Granillo**: Significantly improved. When notifications were received, BWI was able to eliminate any downtime between the city receiving the alert and dispatching someone to the site.*

Prior to using ImpactAlert, how long did it take to assess the damage and authorize repairs?

- ***Fastje, P.E.**: Assets were remote and knowing right away when an impact occurred was very helpful.*
- ***Granillo**: Prior to using ImpactAlert™, the typical timeframe to assess damage and authorize repairs ranged from one to three months, from the day we sent out the quote to the actual repair being completed. In comparison, the new system has significantly shortened this process, enabling quicker assessments and faster authorization of repairs, leading to more efficient resolution times.*

How was the ability to quickly collect police reports, evidence, and insurance information impacted the speed at which you were able to act after an incident?

- ***Fastje, P.E.**: Having immediate notification allowed for quick request/collection of necessary data as time and date of impact, so repairs could start much sooner.*
- ***Granillo**: Upon receiving alerts about the impact, I immediately contacted the police to ensure they would arrive at the scene to assess the situation. I was able to reach the site within 30 minutes, and by that time, the vehicles were still at the accident location. Within an hour and a half, I had successfully retrieved the police report, insurance information, and vehicle details, enabling me to take prompt and informed action.*

Did the system improve communication between the city authorities, contractors, and other stakeholders involved?

- ***Fastje, P.E.**: The system allowed the contractor and the City's Transportation Department to be notified of the incident simultaneously and begin working concurrently to get the repair process started.*
- ***Granillo**: Yes, by promptly collecting all necessary information, I was able to send it to the City of Glendale within three hours of the accident. This included all relevant details required for them to obtain the necessary information from the police, which enabled them to move forward with the repair process without delay.*

Did the use of ImpactAlert lead to any noticeable time or cost savings for the city?

- ***Fastje, P.E.**: Due to the section where this system was installed is out in the rural part, it helps with being notified when an impact of the cable happens. Before the system was installed, we would have to inspect the area for damage once to twice a week now with this system we have cut back to once a month. Which lets a technician take care of other safety issues in other areas.*
- ***Granillo**: The use of ImpactAlert™ resulted in noticeable time and cost savings for the city. Without ImpactAlert, incidents such as those involving a hit-and-run or requiring a police report can cause significant delays, as the city would need to manually review multiple accident reports to gather the necessary information. By receiving immediate alerts and key details, the city was able to act quickly, reducing the time spent on investigative follow-up and expediting the repair process. This streamlined workflow ultimately leads to cost savings by minimizing downtime and ensuring that resources are deployed more efficiently.*

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What impact did the system have on reducing delays in authorization and maintenance work?

- ***Fastje, P.E**.: The system reduced the time since the contractor was aware of the hit at the same time as the city.*
- ***Granillo**: It enabled the city to quickly narrow down the search for relevant hit-and-run reports, eliminating the need to review extensive monthly records, allowing for faster authorization and quicker response times in addressing maintenance needs.*

Did the system contribute to any improvements in safety or reduced disruption for the public?

- ***Fastje, P.E**.: Quicker time to repair for struck assets resulted in an improvement in safety.*
- ***Granillo**: By receiving live alerts, we were able to quickly dispatch local authorities to secure the area, ensuring the safety of drivers and minimizing the risk of further incidents. This prompt response allowed us to efficiently manage any wreckage and restore traffic flow as swiftly as possible, minimizing disruption to the public.*

How satisfied were you with the overall performance of Impact Alert?

- ***Fastje, P.E**.: Impact Alert™ did provide rapid notification of struck assets and allowed for a quicker time to repair.*
- ***Granillo**: The system has proven to be invaluable in maintaining our assets in optimal condition. Its efficiency in delivering timely alerts has enhanced our ability to respond quickly and take necessary actions, contributing to the overall success of our asset management efforts. Impact Alert™ has been an essential tool in improving both safety and operational efficiency, and we look forward to continuing to utilize it in the future.*

What long-term benefits do you anticipate as a result of continuing to use Impact Alert for monitoring roadside safety assets?

- ***Fastje, P.E**.: Long term benefit would be a reduction in time of having a technician inspecting a guardrail or cable barrier for any damage that could jeopardize the safety of the motorist until struck safety assets can be repaired.*
- ***Granillo**: This product has the potential to revolutionize asset management by allowing BWI to monitor assets in real time, significantly reducing downtime between the time of an incident and the retrieval of necessary information. This timely data not only helps municipalities manage repair costs more effectively but also ensures a quicker response to keep roads safe for the public. Ultimately, the system will enhance efficiency, improve safety, and contribute to long-term cost savings in maintaining critical infrastructure.*

The Benefits of ImpactAlert

ImpactAlert enabled Ariana Granillo to mobilize immediately to the scene or contact emergency responders when she was in a remote location with limited travel access. Upon arrival, she was able to collect photographic evidence of the vehicle and damage, gather insurance information, and obtain the police report. All of this information was immediately shared with the City's Traffic Mitigation Team, which then authorized the repairs without delay. This resulted in the following benefits:

- Prompt restoration of cable barriers to working condition, maintaining protection for drivers
- Immediate detection and identification of impacts, reducing delays and avoiding multiple site visits
- Decreased time spent collecting necessary information
- Streamlined and expedited work order authorization from the city

ImpactAlert provides a comprehensive solution for remotely monitoring roadside assets, leveraging advanced technologies to enhance safety, efficiency, and cost-effectiveness. Continuous 24/7 surveillance ensures that issues are detected immediately, enabling quick responses and proactive management and repairs — ultimately reducing the risk of secondary accidents.

Data from ImpactAlert can be collected and analyzed in RoadConnect for further review, aiding in the identification of high-risk areas and the implementation of targeted safety measures.

All of this is achieved not only by reducing the cost of frequent on-site inspections — saving both labor and transportation costs — but also by enabling the recovery of costs through insurance claims and reducing the number of hit-and-run scenarios.

CONCLUSION

ImpactAlert's robust IoT technology is revolutionizing how roadside safety assets are monitored and maintained. Through remote monitoring and real-time alerts, ImpactAlert helps ensure safer roads by optimizing resource use, enabling faster first responder access to crash scenes, and increasing the likelihood of identifying involved parties for insurance purposes and cost recovery.

For more information about ImpactAlert, please contact:

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