

Making the Right Choice

Selecting the right data collection method isn't about choosing between lidar and 360° imagery, it's about aligning technology with purpose. Each tool excels in different scenarios, and the best results come from matching the method to the questions you need answered.

In our experience, clarity comes from first defining why you're collecting data. Are you documenting assets for visibility and communication, or measuring them for compliance and design? Understanding that distinction guides every technical decision that follows, from equipment selection to data processing and integration.

| Use Case | Recommended Method | Why It Matters |
|--|------------------------------|---|
| Sign inventory, pavement markings, general asset mapping | 360° Imagery | Captures a complete, street-level visual record quickly and cost-effectively. Ideal for identifying and classifying assets with clear visual context. |
| ADA/PROWAG compliance, curb slopes | Lidar (or combined approach) | Provides precision surface modeling and slope measurements to meet regulatory standards with confidence. |
| Clearance verification (bridges, tunnels) | Lidar | Generates highly accurate 3D measurements to verify vertical and lateral clearances for safety and compliance. |
| As-built verification | Lidar | Delivers engineering-grade absolute accuracy for validating construction work and design conformance. |
| Public communication or condition documentation | 360° Imagery | Provides a visual medium that's easy to interpret and share, building transparency and public trust. |

Ultimately, we recommend thinking of lidar and imagery not as separate choices but as tools on a continuum, each suited to a specific level of precision, scale, and purpose. The key is to match the method to the decision it supports.

For example, a citywide sign inventory might rely primarily on imagery for speed and visual clarity, while a targeted ADA assessment could pair that imagery with lidar data to capture precise surface slopes. By making intentional choices, agencies can optimize both accuracy and efficiency, ensuring that every dataset collected serves a clear operational or strategic goal.

Conclusion

Turning Information into **Insight**

Data is only as powerful as the decisions it enables. The true promise of technologies like lidar and 360° imagery lies not in the tools themselves, but in how they are applied — with strategy, context, and purpose. When agencies align precision with need and technology with intent, they unlock a clearer understanding of their infrastructure and a stronger foundation for planning the future.

For more than 50 years, ICC-IMS has been at the forefront of that mission. As innovators in data collection and asset management systems, we've helped cities, counties, and transportation agencies transform how they see, measure, and manage their networks. Our experience spans generations of technology - from early pavement surveys to today's advanced mobile mapping - and one thing has remained constant: our commitment to helping clients make the best decisions for their communities.

We understand that every agency faces unique challenges, and there is no one-size-fits-all solution. That's why ICC-IMS brings a full toolbox of technologies, methodologies, and expertise — guiding partners to choose the right tools for the right tasks, at the right scale. Whether improving safety, planning capital investments, or achieving compliance, we work alongside agencies to build smarter, data-driven infrastructure programs that stand the test of time.

Seeing the full picture means understanding not just the pavement, but everything that surrounds and supports it.

At IMS, we combine decades of experience with the latest lidar and 360° imagery technologies to help agencies assess and manage the complete right of way — pavement, markings, signs, signals, and more. By turning complex data into clear insights, we empower communities to plan smarter, allocate resources confidently, and build transportation networks that stand the test of time.

Ready to bring your right of way into focus?

Learn more at icc-ims.com.