

What If There Are No Existing Markings to Record?

by [Greg Driskell](#) | Apr 18, 2025 |



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The LifeMark®-100 is a fully functional, high-speed survey and layout marking system. It works best when using its own natively recorded data—but what happens when there are no existing pavement markings to survey?

Fortunately, the LifeMark®-100 surveying technology is incredibly versatile. Achieving centimeter-level accuracy at highway speeds is remarkable, and while ideal conditions include visible markings, the system can still perform exceptionally well even when those markings are absent.

Here are your options when no pre-existing markings are available:

1. Upload High-Definition GPS Data

Many agencies or general contractors can provide high-definition GPS coordinates of the desired markings. This data can be formatted and uploaded to the LifeMark®-100, which will then follow the specified paths just as if it had surveyed them itself.

Important Considerations:

ON THE LINE

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- **Point Spacing:** The LifeMark®-100's native data collects the markings GPS position 50 times per second, which ensures extreme accuracy even on curves. If imported GPS points are spaced too far apart, particularly on radii, accuracy may suffer.
- **File Format:** Data is uploaded via a standard CSV file, but it must be properly formatted. This data can be prepared by your in-house GIS data expert, or with assistance from one of our trusted partners such as [SOLO – Speed Of Light Optics](#), who can format and modify your provided data for optimal performance. Of course, we'll also provide detailed formatting instructions if needed.

2. Create a Virtual Path

In the absence of existing data, you can create a virtual reference line—such as a centerline or edge line—and build the rest of your layout from it. The system typically records this path using its onboard cameras, but it can also record the survey based on carriage positioning.

Using the latter, a skilled operator can align a laser (either centered or offset with the carriage) and follow a seam or pavement edge. This generates a virtual baseline, from which the layout system can apply markings. The LifeMark®-100 enables operators to apply layout markings along a virtual path using the left-side carriage. When equipped with a dual carriage system, simultaneously, the right-side carriage can apply corresponding lane or edge lines at a precise, operator-defined offset. This adjustable lane width feature ensures consistent spacing between markings, enhancing efficiency and accuracy in multi-lane or edge line applications.

Important Considerations:

- **Driver Skill:** A qualified and experienced driver must be used to maintain proper positioning throughout the recording process.
- **Pavement Features:** There must be a dependable visual feature—such as a clean pavement edge or center seam—for the driver to follow accurately.
- **Dual Carriage Requirement:** This method requires a dual carriage configuration to apply both the virtual path and offset markings effectively.

Every system has its limitations, but the LifeMark®-100 is built with flexibility in mind—because not every jobsite is perfect.

For more detailed guidance, feel free to reach out to us at sales@limntech.com.