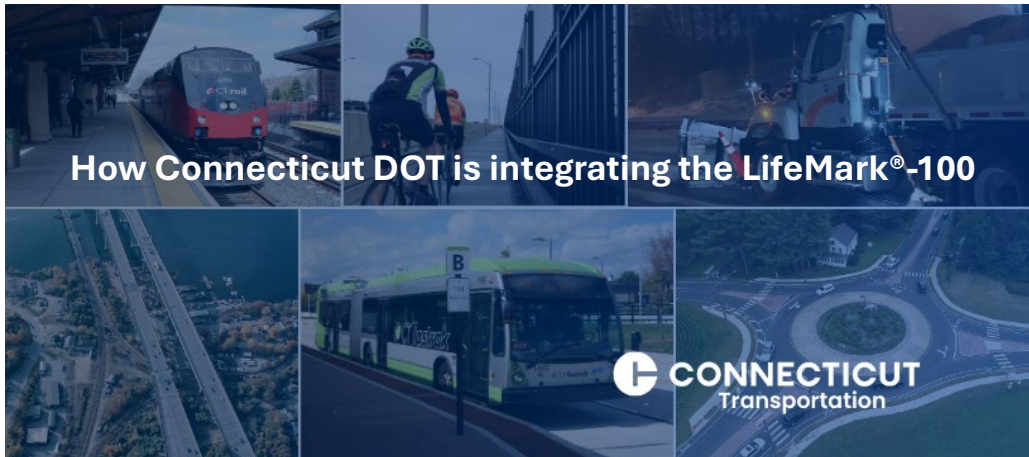


CASE STUDY SERIES: In the Field with LifeMark



Connecticut Department of Transportation –

Connecticut | State Department of Transportation | LifeMark®-100 System

Title: *State DOT Uses Automation to Improve Safety, Accuracy, and Pavement Marking Operations*

Subtitle: *How Connecticut DOT is integrating the LifeMark®-100 into statewide layout, resurfacing, data collection, and contractor-supported workflows*

“When I drove that truck ... I told Eric B., buy four! This is the best thing that the department can have for line striping.”

— Christopher J., Connecticut DOT

HIGHLIGHT PANEL

System Used: LifeMark®-100

Agency: Connecticut Department of Transportation

Deployment: Four systems across four maintenance districts

Primary Uses: Resurfacing layout, marking restoration, data capture, district pavement marking support

Primary Benefits: Reduced worker exposure, faster layout, improved accuracy, reusable roadway marking data

Overview



Connecticut Department of Transportation has become one of the more experienced state-agency users of the LifeMark®-100 Auto Layout System. What began as a safety-driven technology adoption has grown into a practical statewide tool for pavement marking layout, resurfacing support, and roadway marking data collection. CTDOT now operates four LifeMark®-100 systems, one for each of its four maintenance districts, giving district crews direct access to automated layout technology instead of relying on one centralized unit.

Agency Background

CTDOT's maintenance organization includes district-level signs and markings crews. The agency performs much of its own waterborne paint layout and marking restoration, while durable markings such as epoxy are generally handled by contractors. This creates a demanding operating environment: CTDOT crews often support vendor-in-place resurfacing projects, work behind milling and paving operations, and reestablish markings before roads are fully returned to normal service.



Why LifeMark®-100

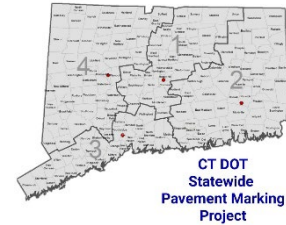
The first driver was worker safety. Eric B., Head of Planning for Central Maintenance Operations, said he saw the LifeMark technology at ATSSA and other conferences and recognized its value for crews who were traditionally walking roads with string line, measuring wheels, and paint cans. He summarized the priority clearly: “Number one, safety. I don’t think you can ever put that aside from number one.”



Safety was not the only reason CTDOT moved forward. The department also saw value in productivity, repeatability, data collection, and improved line quality. Eric B. pointed to an early District 3 project on I-95 where the resulting lines were “dead straight,” calling the outcome a testament to the quality the system can produce.

Deployment Across the State

Rather than keeping the systems in one location, CTDOT has deployed them across its four maintenance districts. Each district has signs and markings personnel, and during the summer marking season, additional crew members may be pulled into paint operations as needed. William S. described the reality simply: “Come summertime, everybody’s a paint guy.” The district-based model gives each area access to the system, but it also makes training and consistent usage important because each district needs capable operators.



How CTDOT Uses the System



CTDOT is using the LifeMark®-100 primarily for resurfacing-related layout and pavement marking restoration. Crews record existing markings before paving season, then use that recorded data after milling, after pre-leveling, and after top coat. Christopher J. explained that on vendor-in-place paving jobs, “We’re using it three times on each VIP paving job.” For a two-, three-, or four-mile project, crews may line-mark the entire segment multiple times as the paving operation progresses.

This approach helps keep marking work moving with the paving schedule. Instead of trying to recreate markings from memory, plans, fixed landmarks, or string lines after the road has been milled or paved, CTDOT can record what exists and put it back down more quickly and consistently. The system is being used for centerlines, lane lines, skip lines, shoulder lines, and other layout needs. CTDOT has even used it in commuter parking lots to record and replace parking stall markings.

Data Collection and Roadway Records

One of the most important findings from the discussion is that CTDOT sees value in the data, not just the dots placed on the road. Christopher J. said crews went out during the winter and “recorded every segment of the projects coming up for this season.” Michael B. added that his district is “trying to map as much as we can” and has already recorded “quite a bit of road.”



At this stage, the data is primarily being used by field crews to restore known project markings. However, CTDOT also identified a next-step opportunity: connecting maintenance field data more effectively with traffic engineering. Several participants noted that engineering design changes, revised intersections, and software/data editing are areas where more training and coordination would increase the system's value.

Changing the Layout Process



Before LifeMark®-100, CTDOT crews often had to walk roadways with rope, string line, measuring wheels, and upside-down paint cans. Christopher J. described pulling 700 to 1,000 feet of rope and recreating arcs by hand. With the LifeMark®-100, if existing lines are recorded accurately, crews can reproduce them with far less exposure and greater consistency.

Michael B. pointed to the I-91/I-95 merge area, a hazardous corridor where traditional stringing would have required extensive time in live traffic. Instead, he said CTDOT completed the work “within hours,” adding that the safety benefit in that area was “priceless.”

Impact on Contractor-Supported Workflows

CTDOT is not using LifeMark®-100 primarily as a formal contractor inspection platform. The immediate value is operational. Contractors perform milling, paving, and durable marking installation, while CTDOT crews use the system to record, restore, and maintain paint layout through the resurfacing sequence. That creates a cleaner handoff between construction phases, reduces the need for manual layout under pressure, and helps contractors and CTDOT crews keep projects moving.

The department also sees future opportunities to use the technology to support pavement seam placement, bike lanes, buffer zones, offsets, and possibly future integration with centerline or smaller paint trucks.

Results & Impact

- **Worker Safety:** Fewer workers walking live roadways with string lines, wheels, and cans.
- **Efficiency:** Faster restoration of markings after milling, pre-leveling, and top coat.

- **Accuracy:** More consistent reproduction of existing markings and straighter lines.
- **Data Foundation:** Recorded project data can be reused throughout the paving season.
- **Contractor Coordination:** Better support for paving and durable marking workflows.
- **Training Opportunity:** CTDOT sees value in continued hands-on training, especially around offsets, synchronization, file setup, and data editing.

Message to Other DOTs

When asked what they would tell another DOT, CTDOT participants emphasized safety, efficiency, and buying enough capacity to make the technology useful. One participant said, “On a safety standpoint, I think it’s great,” while also cautioning agencies to be open-minded because workers still need to understand the truck, watch the carriages, and handle field conditions. Christopher J. was more direct: “I would tell other agencies to buy two trucks, not one.”



His summary captured the operational case well: crews are “way more productive” than six people walking down the road, measuring, stringing, and trying to stay safe in traffic.

Final Thoughts

Connecticut DOT’s experience shows how automated layout can move from an innovative concept to a practical statewide tool. The LifeMark®-100 is helping CTDOT reduce worker exposure, improve marking accuracy, support resurfacing operations, and build a growing base of roadway marking data. The case also shows that successful DOT adoption requires more than equipment. It requires district deployment, operator repetition, training, field-to-engineering coordination, and a willingness to keep expanding how the data and technology are used.

Want to learn how the LifeMark®-100 can work for your agency or pavement marking program? Visit www.limntech.com or contact us at sales@limntech.com