It could take weeks to find and scrub through a massive array of video footage from all the places where the gunman may have traveled.

Police believe the suspect arrived in New York City 10 days before the killing – on November 24, a law enforcement official told CNN. Throughout his stay, the suspect appeared on camera numerous times – but always kept his hood over his head and wore a mask in public places.

"He knows he's on camera – it's New York," said John Miller, CNN's chief law enforcement and intelligence analyst.

Police are searching for and scouring countless hours of video footage in hopes of finding more clues, such as whether the suspect met with anyone while in the city.

"It will take them weeks. ... They will build out every step of his trip that's on video," Miller said. "They will create a movie of his every move."

While the gunman meticulously planned many parts of his crime and getaway, he might be surprised by "how far the NYPD is going to go in collecting video," said former NYPD Chief of Department Kenneth Corey.

"And they're not just going to take it from the crime scene to his escape route," Corey said. "They're actually going to rewind now, and they're going to try to account for all 10 days that he spent in New York City. And I don't think that he anticipates that."

Minutes after Thompson was gunned down Wednesday, surveillance video captured the suspect riding an electric bike into colossal Central Park at 6:48 a.m.

Spanning 843 acres, Central Park is larger than the country of Monaco. "It's a big park, and it's complicated terrain," Miller said.

The suspect apparently left the park within minutes. After reviewing security footage, police believe he may have left the park through the West 77th Street exit – but without the "distinctive gray backpack" seen on the suspect during the shooting.