

# SR 99 Tunnel Project

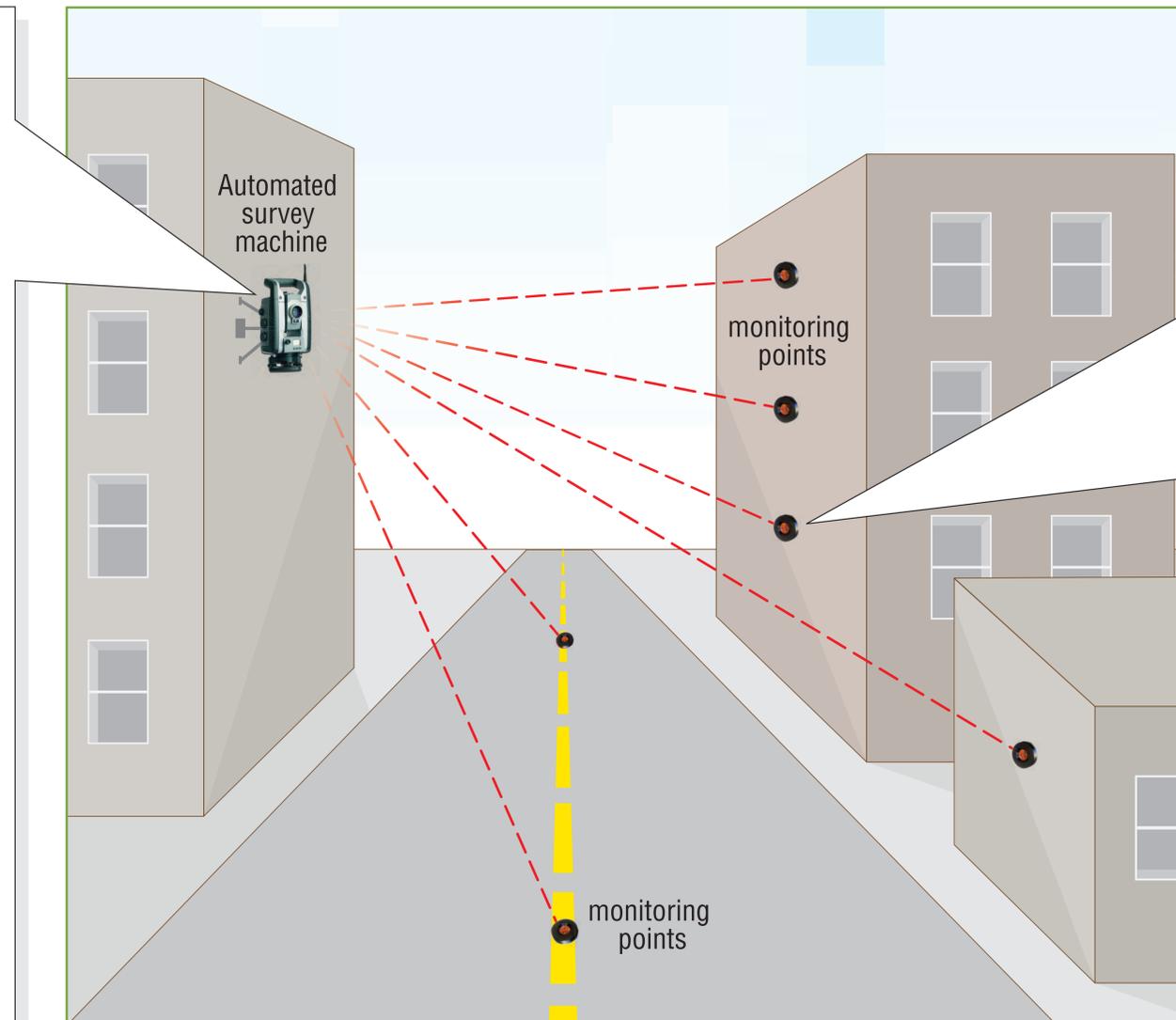
## Monitoring Buildings During Construction

All buildings above the SR 99 tunnel route will have instruments installed to measure any movement before, during and after tunnel construction.

### Automated Survey Machines



An automated survey machine is a 1-foot by 6-inch machine placed on a wall or rooftop.



Automated survey machines monitor building movement by continuously scanning predetermined points on adjacent buildings and in the street.

### Monitoring Points



Monitoring points are typically 6-inch by 6-inch prisms mounted on buildings with a 2-inch long by 1/2-inch diameter screw.



Monitoring points can also be as small as the head of a nail.

## Monitoring Buildings During Construction

A limited number of buildings along the SR 99 tunnel route will require monitoring equipment on their interiors. These sensors will electronically transmit any building movement to the project team.

### Tiltmeter



A tiltmeter is a 3-inch by 12-inch device fastened to an interior wall with bolts or brackets.

### Liquid Level Sensor



A liquid level sensor is a 6-inch by 3-inch device connected to a half inch diameter tube filled with water and mounted on a wall with bolts or brackets.

### Crack Gauge



Small gauges measure changes in the size of existing building cracks.

## Building Monitoring Timeline

