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Density Control of Vehicles on Bridge Using PLC

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Abstract: *The increasing number of vehicles on bridges and rising water levels pose safety risks, including congestion, accidents, and structural damage. The "Density Control of Vehicles on Bridge Using PLC" project proposes an automated system using IR and water level sensors. A PLC processes real-time data, controlling entry gates and traffic signals when vehicle density or water levels exceed safe limits. A buzzer alerts authorities and drivers, ensuring timely action. This fully automated system minimizes manual intervention, enhancing bridge safety. By integrating cost-effective sensors, it prevents overcrowding and flood-related risks, ensuring smooth traffic flow and safer commuting for all*

Keywords: Vehicle Density Control, PLC Automation, Bridge Safety, Infrared Sensors ,Water Level Monitoring, Traffic Management System