

NHTSA ADS-DV Requirements and AV STEP

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NHTSA Frame

NHTSA ADS-DV requirements and AV STEP framework establish U.S. federal expectations for autonomous-vehicle safety demonstration, complementing state-level approval pathways. NHTSA's emerging FMVSS reform for ADS-DV vehicles increases architectural pressure.

Architecture Implications

AV STEP demonstration requires structurally-supported incident reconstruction, safety case demonstration, and emerging post-deployment monitoring. Implementation-level handling produces ongoing engineering cost.

Architectural Mapping

Stage-gated commitment supports phase-decomposed safety case demonstration. Reversibility classification supports incident-reconstruction analysis. Composite admissibility supports multi-authority operations (operator, state, federal).

NHTSA Trajectory

AV STEP maturation, emerging ADS-DV FMVSS reform, and emerging NHTSA AV-incident reporting frameworks all push toward structurally-supported architecture.