

Road Safety Audit Report

Automated Video-Based Road Condition Assessment

Audit Date: 2025-12-11T18:46:53.046626

Final PCI Rating: Satisfactory

GIS Context Summary

Parameter	Value
Context	Urban
Traffic Density Adt	6000
Heavy Vehicle Share	0.15
Recent Rainfall Mm	40.0
Drainage Quality	Moderate
Soil Type	Mixed
Accident Hotspot	False

Pavement Condition Index (PCI)

Metric	Base	Present
PCI Score	79	79
Condition Rating	Satisfactory	Satisfactory
Change in PCI	—	0

Aggregate Defect Comparison

Defect Type	Base	Present	Δ Change
Potholes	6	2	-4
Cracks	17	8	-9
Faded Marking Frames	442	253	-189

IRC Maintenance Recommendations

Frame 27 (5.4 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 34 (6.8 seconds)

Defect: Crack

Action: Crack sealing

IRC Reference: IRC:82-2015

Materials: Cold-applied crack sealant

Notes: Suitable for hairline cracks (<3 mm). Clean crack before sealing.

Frame 40 (8.0 seconds)

Defect: Road Sign

Action: Install/repair damaged or missing sign

IRC Reference: IRC:67-2012

Materials: Retro-reflective signboard, GI Post, M20 concrete

Notes: Follow IRC dimensions, mounting height and lateral clearance.

Frame 49 (9.8 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 57 (11.4 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 61 (12.2 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 92 (18.4 seconds)

Defect: Road Sign

Action: Install/repair damaged or missing sign

IRC Reference: IRC:67-2012

Materials: Retro-reflective signboard, GI Post, M20 concrete

Notes: Follow IRC dimensions, mounting height and lateral clearance.

Frame 115 (23.0 seconds)

Defect: Road Sign

Action: Install/repair damaged or missing sign

IRC Reference: IRC:67-2012

Materials: Retro-reflective signboard, GI Post, M20 concrete

Notes: Follow IRC dimensions, mounting height and lateral clearance.

Frame 169 (33.8 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 178 (35.6 seconds)

Defect: Crack

Action: Crack sealing

IRC Reference: IRC:82-2015

Materials: Cold-applied crack sealant

Notes: Suitable for hairline cracks (<3 mm). Clean crack before sealing.

Frame 180 (36.0 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 184 (36.8 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 185 (37.0 seconds)

Defect: Road Sign

Action: Install/repair damaged or missing sign

IRC Reference: IRC:67-2012

Materials: Retro-reflective signboard, GI Post, M20 concrete

Notes: Follow IRC dimensions, mounting height and lateral clearance.

Frame 188 (37.6 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 192 (38.4 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 196 (39.2 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 217 (43.4 seconds)

Defect: Crack

Action: Crack filling + slurry seal

IRC Reference: IRC:82 / MORTH 300

Materials: Bituminous filler, Slurry seal

Notes: Fill and overlay with slurry; inspect for progressive fatigue.

Frame 229 (45.8 seconds)

Defect: Guardrail / Furniture

Action: Replace/repair guardrail (W-Beam)

IRC Reference: MORTH Section 800

Materials: W-beam panel, Crash barrier posts

Notes: Ensure embedment depth, spacing and proper torque tightening.

Frame 233 (46.6 seconds)

Defect: Crack

Action: Crack sealing

IRC Reference: IRC:82-2015

Materials: Cold-applied crack sealant

Notes: Suitable for hairline cracks (<3 mm). Clean crack before sealing.

Frame-Level Change Log

Frame 27 (5.4 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 34 (6.8 seconds)

- **Cracks:** New or widened cracks observed (medium)

Frame 40 (8.0 seconds)

- **Road Signs:** Possible missing or damaged sign(s) (high)

Frame 49 (9.8 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 57 (11.4 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 61 (12.2 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 92 (18.4 seconds)

- **Road Signs:** Possible missing or damaged sign(s) (high)

Frame 115 (23.0 seconds)

- **Road Signs:** Possible missing or damaged sign(s) (high)

Frame 169 (33.8 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 178 (35.6 seconds)

- **Cracks:** New or widened cracks observed (medium)

Frame 180 (36.0 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 184 (36.8 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 185 (37.0 seconds)

- **Road Signs:** Possible missing or damaged sign(s) (high)

Frame 188 (37.6 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 192 (38.4 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 196 (39.2 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 217 (43.4 seconds)

- **Cracks:** New or widened cracks observed (medium)

Frame 229 (45.8 seconds)

- **Roadside Furniture:** Missing or damaged roadside asset(s) (high)

Frame 233 (46.6 seconds)

- **Cracks:** New or widened cracks observed (medium)

Comparison Images



Figure 1: Comparison Frame 00027



Figure 2: Comparison Frame 00028



Figure 3: Comparison Frame 00034



Figure 4: Comparison Frame 00040



Figure 5: Comparison Frame 00049



Figure 6: Comparison Frame 00057

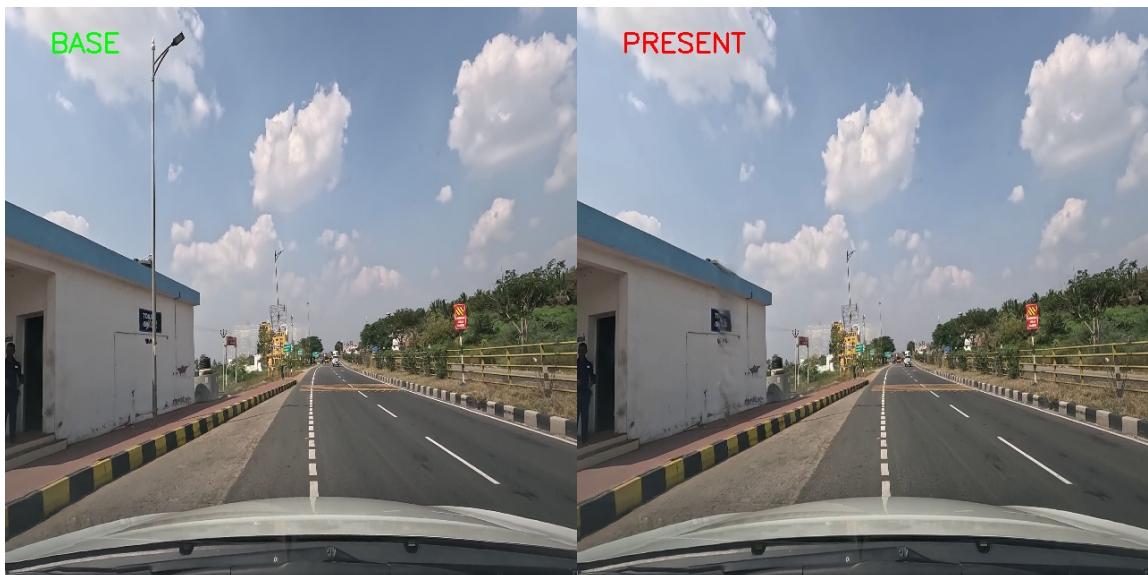


Figure 7: Comparison Frame 00058

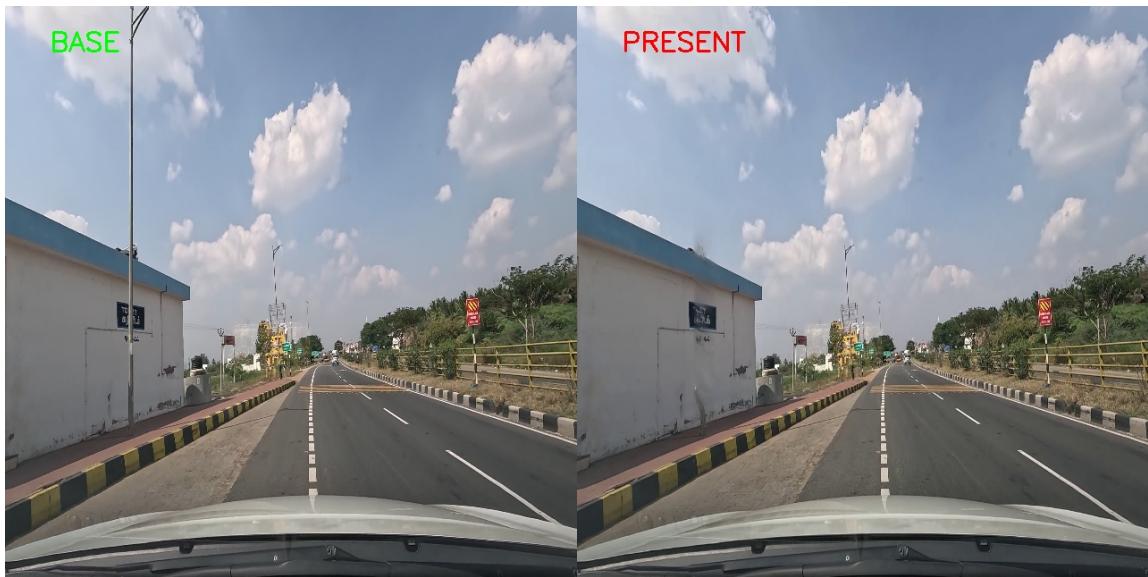


Figure 8: Comparison Frame 00059



Figure 9: Comparison Frame 00060



Figure 10: Comparison Frame 00061



Figure 11: Comparison Frame 00092



Figure 12: Comparison Frame 00093



Figure 13: Comparison Frame 00094

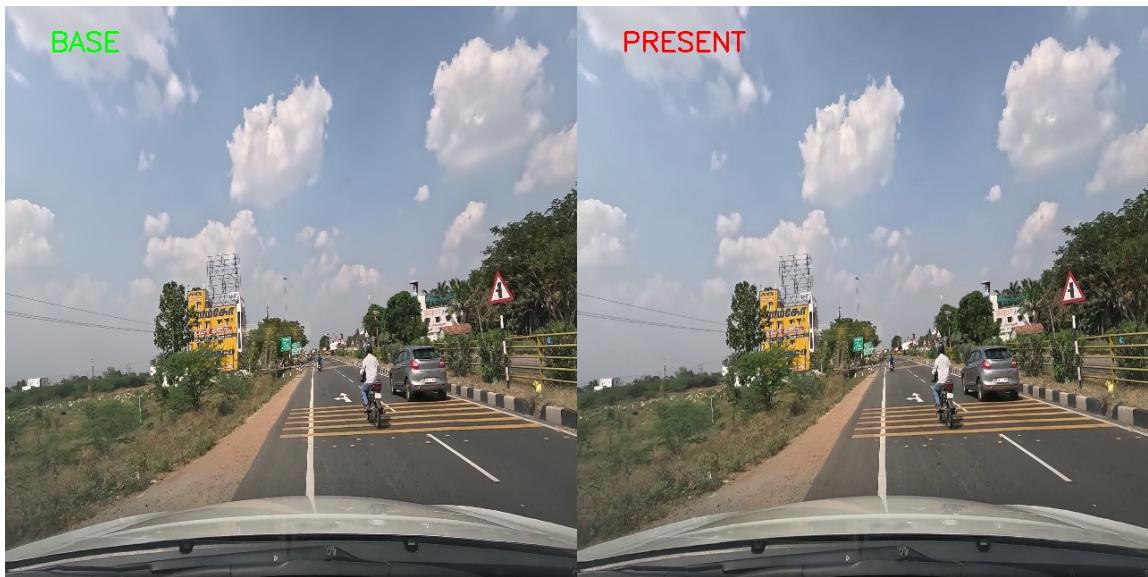


Figure 14: Comparison Frame 00115



Figure 15: Comparison Frame 00169



Figure 16: Comparison Frame 00178



Figure 17: Comparison Frame 00180



Figure 18: Comparison Frame 00181



Figure 19: Comparison Frame 00182



Figure 20: Comparison Frame 00184



Figure 21: Comparison Frame 00185



Figure 22: Comparison Frame 00186



Figure 23: Comparison Frame 00187



Figure 24: Comparison Frame 00188



Figure 25: Comparison Frame 00189



Figure 26: Comparison Frame 00190



Figure 27: Comparison Frame 00191



Figure 28: Comparison Frame 00192



Figure 29: Comparison Frame 00193



Figure 30: Comparison Frame 00194



Figure 31: Comparison Frame 00195



Figure 32: Comparison Frame 00196



Figure 33: Comparison Frame 00197



Figure 34: Comparison Frame 00198



Figure 35: Comparison Frame 00217



Figure 36: Comparison Frame 00229



Figure 37: Comparison Frame 00231



Figure 38: Comparison Frame 00233



Figure 39: Comparison Frame 00235



Figure 40: Comparison Frame 185



Figure 41: Comparison Frame 40



Figure 42: Comparison Frame 92