

Road Safety Audit Stage 2 - Designer's Response

Road Safety Audit Response Report in accordance with GG 119 – completion of detailed design

Project	A999 Example Junction Improvement, Fictional Town	Document no.	RRD-SMP-XX-XX-RP-C-0003
Client	None – illustrative capability sample	Revision / status	P02 / S3
Originator	RoadRail Design (NRDMG Yapı Sistemleri A.Ş.)	Date	09/10/2026
Discipline	Highways – road safety	Security	Public – sample
Prepared by	Senior Highway Engineer	Checked by	Principal Highway Engineer
Approved by	Associate Director – Highways	Classification	Report (RP)

Rev	Date	Status	Description	Prepared	Checked	Approved
P01	30/09/2026	S3	Designer's responses to RSA Stage 2 report	Snr Hwy Eng	Prin. Hwy Eng	Assoc. Dir.
P02	09/10/2026	S3	Overseeing Organisation decisions and agreed actions incorporated	Snr Hwy Eng	Prin. Hwy Eng	Assoc. Dir.

Illustrative sample. This document describes a fictional scheme prepared solely to demonstrate RoadRail Design's report structure, technical approach and standards knowledge. Locations, data, chainages, survey information, traffic figures and collision records are invented. It is not a client project and must not be relied upon for design. References are to the Design Manual for Roads and Bridges (DMRB) documents current at the date of issue; the applicable version of each standard would be confirmed with the Overseeing Organisation on a live project.

1. Introduction

A Stage 2 Road Safety Audit (completion of detailed design) of the fictional A999 Example Junction Improvement was undertaken by an independent Road Safety Audit Team in accordance with GG 119. The audit considered the detailed design drawings at revision P01 (drawing register in RRD-SMP-XX-XX-RP-C-0001), the departure application D-001 and the illustrative collision data. The RSA Team identified **9 problems**.

This RSA Response Report records, for each problem, the design organisation's response and the Overseeing Organisation's decision, together with the agreed actions. Where a recommendation is not accepted, the reasons and the alternative measure are recorded in the exception report (Section 4). The RSA Team's findings are summarised; the full audit report remains the reference document.

Item	Detail (illustrative)
RSA stage	Stage 2 – completion of detailed design
RSA report reference	SMP-RSA2-R01 (fictional), dated 22/09/2026
RSA Team	Independent RSA Team Leader and RSA Team Member (named in audit report; withheld in sample)
Site visit	Daylight and night-time visits, 16/09/2026 (fictional)
Overseeing Organisation	Highway authority for the A999 (fictional)
Response key	A = accepted; AA = accepted with alternative measure; NA = not accepted (see exception report)

2. Problems, recommendations and responses

No.	Location	Problem (summary)	RSA recommendation	Designer's response	Res p.	OO decision / agreed action
2.1	Ghost island, Ch 0+500-0+620	Ghost island hatching taper may be used for overtaking queued right-turners, risk of head-on collision.	Provide solid-edged hatching and extend double white line on approaches.	Agreed. Hatching changed to TSRGD diagram 1040.4 (solid boundary); double white lines extended 60 m each approach.	A	Accepted. Revise DR-C-0010 to P02.
2.2	B9999 junction, nearside verge	Proposed advance direction sign within the minor road visibility splay (x = 4.5 m, y = 160 m) obstructs view of approaching traffic.	Relocate sign outside visibility envelope.	Agreed. Sign relocated 25 m east and mounted on passively safe posts outside splay.	A	Accepted. Revise DR-C-0010 and DR-C-0007.
2.3	Shared-use path crossing of B9999	No dedicated crossing for pedestrians/cyclists on the minor arm; users may cross where turning vehicles are fast.	Provide an uncontrolled crossing with dropped kerbs, tactile paving and refuge set back from the give-way.	Agreed in part. Uncontrolled crossing with tactile paving set back 10 m; minor road width does not allow a 2.0 m refuge without reducing swept path.	AA	Accepted with alternative (no refuge); see exception report E-01.

No.	Location	Problem (summary)	RSA recommendation	Designer's response	Res p.	OO decision / agreed action
2.4	HC2, Ch 0+700-0+920	Relaxation R-01 radius with 6.4% superelevation; risk of loss of control in wet conditions on outside of bend.	Provide chevron signs and high-friction surfacing on the curve.	Agreed in part. Chevrons (diagram 515.1) provided; surface course specified to higher site category PSV per CD 236. Proprietary high-friction surfacing not required on 400 m radius at 50 mph.	AA	Accepted. Monitor at Stage 4.
2.5	Crest VC3, Ch 1+180	Reduced SSD (departure D-001); risk of shunt collisions with slow agricultural vehicles beyond the crest.	Consider warning signs and ensure no accesses within the crest length.	Agreed. Field access relocated to Ch 1+320; double white lines and studs per D-001 mitigation; no additional warning sign (avoid sign clutter).	A	Accepted. Linked to D-001 decision.
2.6	Junction lighting, Ch 0+540	Lighting column located 0.9 m behind kerb in 50 mph environment, unprotected.	Use passively safe columns or protect with VRS.	Agreed. Passively safe columns (EN 12767 class 100 HE) specified; set back 1.5 m.	A	Accepted. Revise lighting drawings.
2.7	VRS terminal, embankment Ch 0+980	Safety barrier terminal faces approaching traffic, risk of spearing/vaulting.	Flare terminal away from carriageway or use energy-absorbing terminal.	Agreed. Terminal flared and an assessed P-class terminal specified in accordance with CD 377 and the RRRAP assessment.	A	Accepted. Revise DR-C-0011.
2.8	Gully at bus stop, Ch 0+610	Gully located within bus stop boarding area, risk of trip/wheel trap to passengers.	Relocate gully or use kerb-type drainage.	Agreed. Combined kerb drainage unit adopted through bus stop; gully spacing rechecked (CD 526).	A	Accepted. Revise DR-C-0501.
2.9	Eastern tie-in, Ch 1+350	Change from 7.3 m with hard strips to 6.7 m existing road may surprise drivers.	Extend the cross-section 200 m beyond the tie-in.	Not accepted. Extension is outside scheme boundary and land control. Taper lengthened to 1:50 with edge-line hatching and 'road narrows' sign (diagram 517).	NA	Designer's alternative accepted; see exception report E-02.

3. Agreed actions

Action	Problem(s)	Action description	Owner (role)	Deliverable	Due
AC-01	2.1, 2.2, 2.4, 2.9	Revise road markings and signs drawings	Senior Highway Engineer	DR-C-0010 P02	16/10/2026
AC-02	2.2, 2.5	Update visibility envelopes and confirm sign/access locations	Senior Highway Engineer	DR-C-0007 P03	16/10/2026
AC-03	2.3	Detail uncontrolled crossing and tactile paving	Highway Engineer	DR-C-0006 P03	23/10/2026
AC-04	2.6	Specify passively safe lighting columns	Lighting Engineer	Lighting layout P02	23/10/2026
AC-05	2.7	Revise VRS layout and RRRAP record	Senior Highway Engineer	DR-C-0011 P02	23/10/2026
AC-06	2.8	Revise drainage at bus stop; recheck spacing	Senior Drainage Engineer	DR-C-0501 P03	23/10/2026
AC-07	All	Issue revised drawings to RSA Team for information; brief Stage 3 RSA	Principal Highway Engineer	Transmittal	30/10/2026

4. Exception report

GG 119 requires that where the design organisation does not accept an RSA recommendation, the reasons and any alternative measure are recorded and agreed by the Overseeing Organisation.

Ref.	Problem	Reason recommendation not (fully) accepted	Alternative measure	OO position
E-01	2.3	A 2.0 m refuge would reduce minor road entry width below that required for the 16.5 m articulated vehicle swept path (DR-C-0009).	Crossing set back 10 m from give-way line; tactile paving; enhanced crossing visibility ($\geq$ SSD for 30 mph minor road).	Agreed
E-02	2.9	The extension lies outside the scheme boundary and the land within highway control; would require new consents.	1:50 taper, edge-line hatching, 'road narrows' warning sign and road studs. To be reviewed at Stage 4 RSA.	Agreed

5. Sign-off

Role	Organisation	Signature	Date
Design team leader (Associate Director – Highways)	RoadRail Design		09/10/2026
Overseeing Organisation project sponsor	Highway authority (fictional)		-
RSA Team Leader (for information)	Independent RSA Team	-	-

Stage 3 RSA (completion of construction) will review the as-built scheme, and Stage 4 monitoring will use 12- and 36-month collision data, in accordance with GG 119.