Bonneagar Iompair Éireann
Transport Infrastructure Ireland

Road Safety Improvement Scheme Procedures

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Transport Infrastructure Ireland

TII Standards Training 2021
16th April 2021

Presentation Outline

- Background – Need for the Process
- Contents of RSIS GE STY 01037
- Interaction with other TII Standards & Processes
- Common queries
- Preliminary Design Reports – DN GEO 03030
- Updates

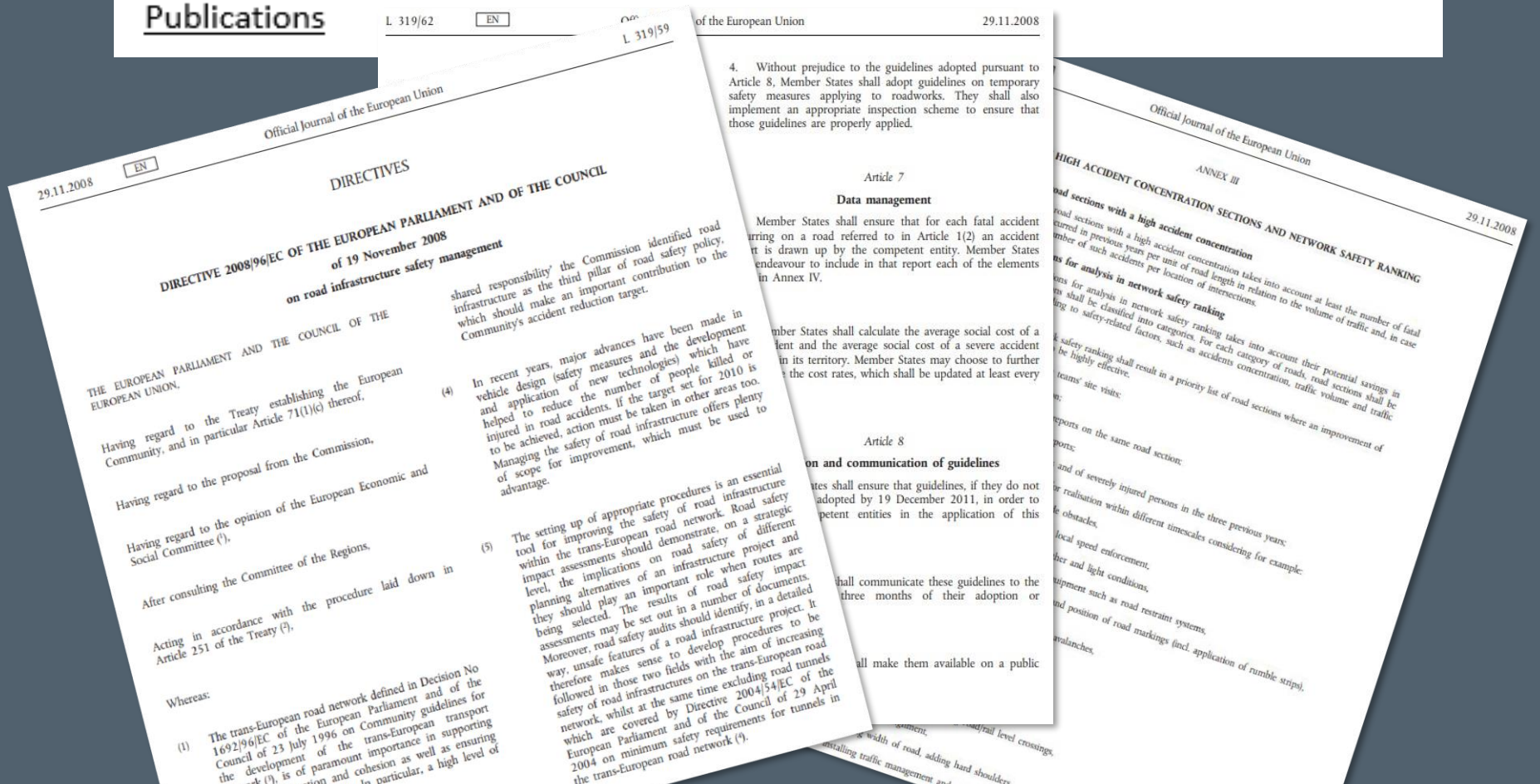
Close

TII Remit to provide Safe Infrastructure

EU RISM Directive 2008/96/EC

Transposed into SI 472 of 2011 – TII (NRA) Implementing Body

EU Directive on Road Infrastructure Safety Management (RISM) are met through TII Publications



L 319/62 EN Official Journal of the European Union 29.11.2008

L 319/59

DIRECTIVES

DIRECTIVE 2008/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

of 19 November 2008

on road infrastructure safety management

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 71(1)(c) thereof,

Having regard to the proposal from the Commission,

Having regard to the opinion of the European Economic and Social Committee (1),

After consulting the Committee of the Regions,

Acting in accordance with the procedure laid down in Article 251 of the Treaty (2),

Whereas:

(1) The trans-European road network defined in Decision No 1692/96/EC of the European Parliament and of the Council of 23 July 1996 on Community guidelines for the development of the trans-European transport network (3), is of paramount importance in supporting mobility and cohesion as well as ensuring

shared responsibility' the Commission identified road infrastructure as the third pillar of road safety policy, which should make an important contribution to the Community's accident reduction target.

(4) In recent years, major advances have been made in vehicle design (safety measures and the development and application of new technologies) which have helped to reduce the number of people killed or injured in road accidents. If the target set for 2010 is to be achieved, action must be taken in other areas too. Managing the safety of road infrastructure offers plenty of scope for improvement, which must be used to advantage.

(5) The setting up of appropriate procedures is an essential tool for improving the safety of road infrastructure within the trans-European road network. Road safety impact assessments should demonstrate, on a strategic level, the implications on road safety of different planning alternatives of an infrastructure project and they should play an important role when routes are being selected. The results of road safety impact assessments may be set out in a number of documents. Moreover, road safety audits should identify, in a detailed way, unsafe features of a road infrastructure project. It therefore makes sense to develop procedures to be followed in those two fields with the aim of increasing safety of road infrastructures on the trans-European road network, whilst at the same time excluding road tunnels which are covered by Directive 2004/54/EC of the European Parliament and of the Council of 29 April 2004 on minimum safety requirements for tunnels in the trans-European road network (4).

of the European Union 29.11.2008

4. Without prejudice to the guidelines adopted pursuant to Article 8, Member States shall adopt guidelines on temporary safety measures applying to roadworks. They shall also implement an appropriate inspection scheme to ensure that those guidelines are properly applied.

Article 7

Data management

Member States shall ensure that for each fatal accident urring on a road referred to in Article 1(2) an accident rt is drawn up by the competent entity. Member States endeavour to include in that report each of the elements in Annex IV.

mber States shall calculate the average social cost of a lent and the average social cost of a severe accident in its territory. Member States may choose to further the cost rates, which shall be updated at least every

Article 8

on and communication of guidelines

tes shall ensure that guidelines, if they do not adopted by 19 December 2011, in order to petent entities in the application of this

hall communicate these guidelines to the three months of their adoption or

all make them available on a public

Official Journal of the European Union 29.11.2008

ANNEX III

HIGH ACCIDENT CONCENTRATION SECTIONS AND NETWORK SAFETY RANKING

oad sections with a high accident concentration

road sections with a high accident concentration takes into account at least the number of fatal curred in previous years per unit of road length in relation to the volume of traffic and, in case mber of such accidents per location of intersections.

ns for analysis in network safety ranking

ons for analysis in network safety ranking takes into account their potential savings in ns shall be classified into categories. For each category of roads, road sections shall be ing to safety-related factors, such as accidents concentration, traffic volume and traffic

k safety ranking shall result in a priority list of road sections where an improvement of be highly effective.

teams' site visits:

eports on the same road section:

ports;

and of severely injured persons in the three previous years:

or realisation within different timescales considering for example:

e obstacles,

local speed enforcement,

her and light conditions,

uipment such as road restraint systems,

nd position of road markings (incl. application of rumble strips),

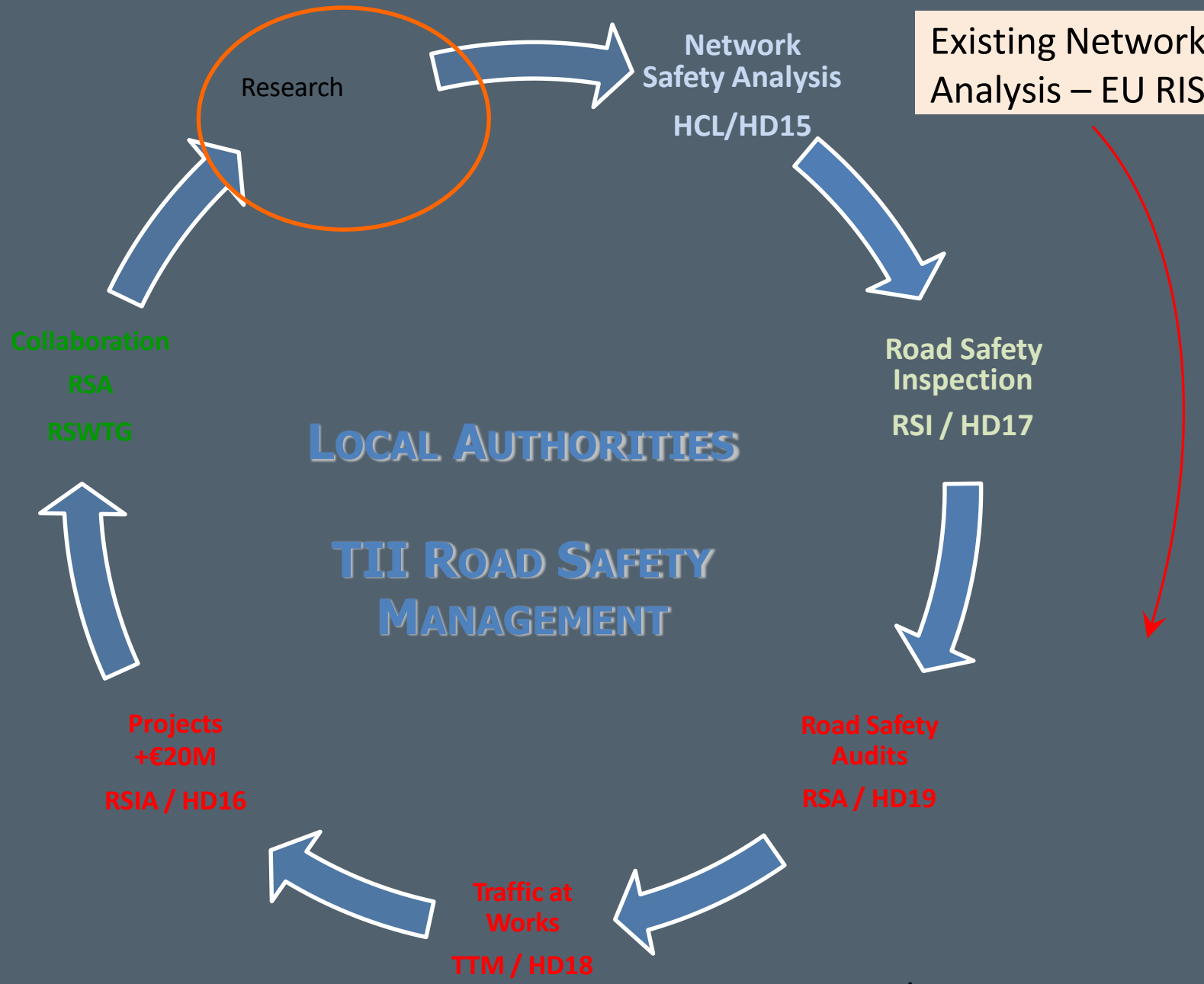
valanches,

width of road, adding hard shoulders

/rail level crossings,

installing traffic management and

TII Standards

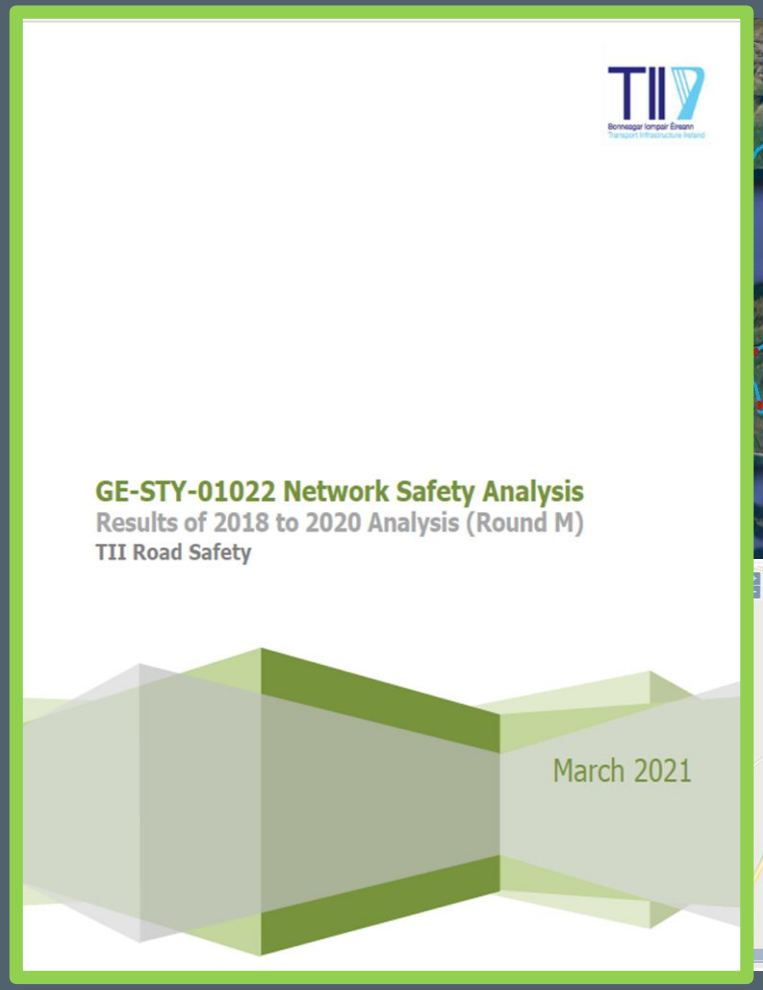


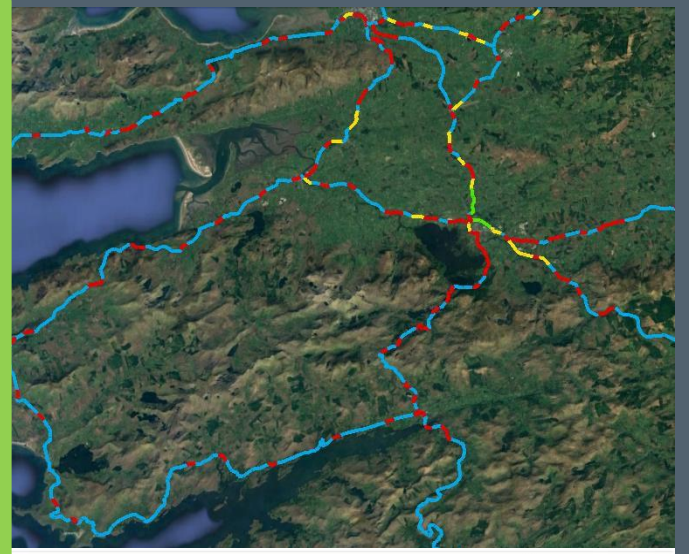
Existing Network Analysis – EU RISM

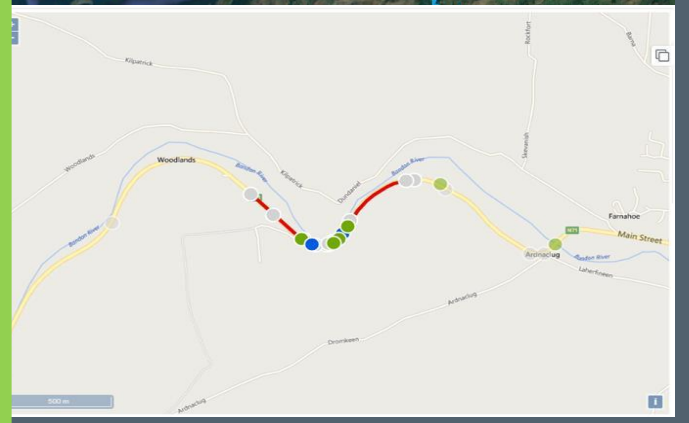
New Network

High Collision Location (HCL)(HD 15) – Level 1

- Re-Active Approach
- Collision rates for each kilometre of network
- Injury collisions per veh km
- Past 3 years
- Collision rate of each kilometre compared with average for its road type

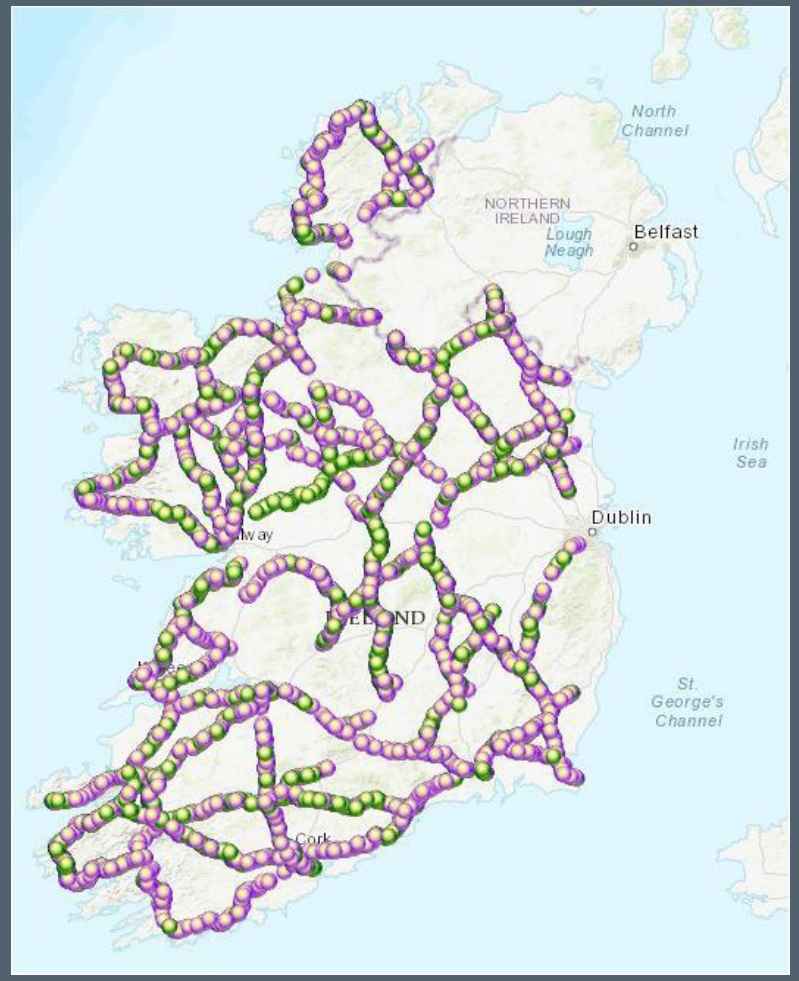






Road Safety Inspection Schemes (RSI)(HD 17)

- Proactive approach
- Background Data and Analysis compiled by TII GIS and Data Analysts – Risk and Severity
- 4 Year Cycle
- Inspection Teams
- Road safety Inspection Engineers



How to fund and Implement

Bonneagar Iompair Éireann
Transport Infrastructure Ireland

TII Publications

GE PE DN CC OP AM RE

Road Safety Improvement Scheme Approval Procedure

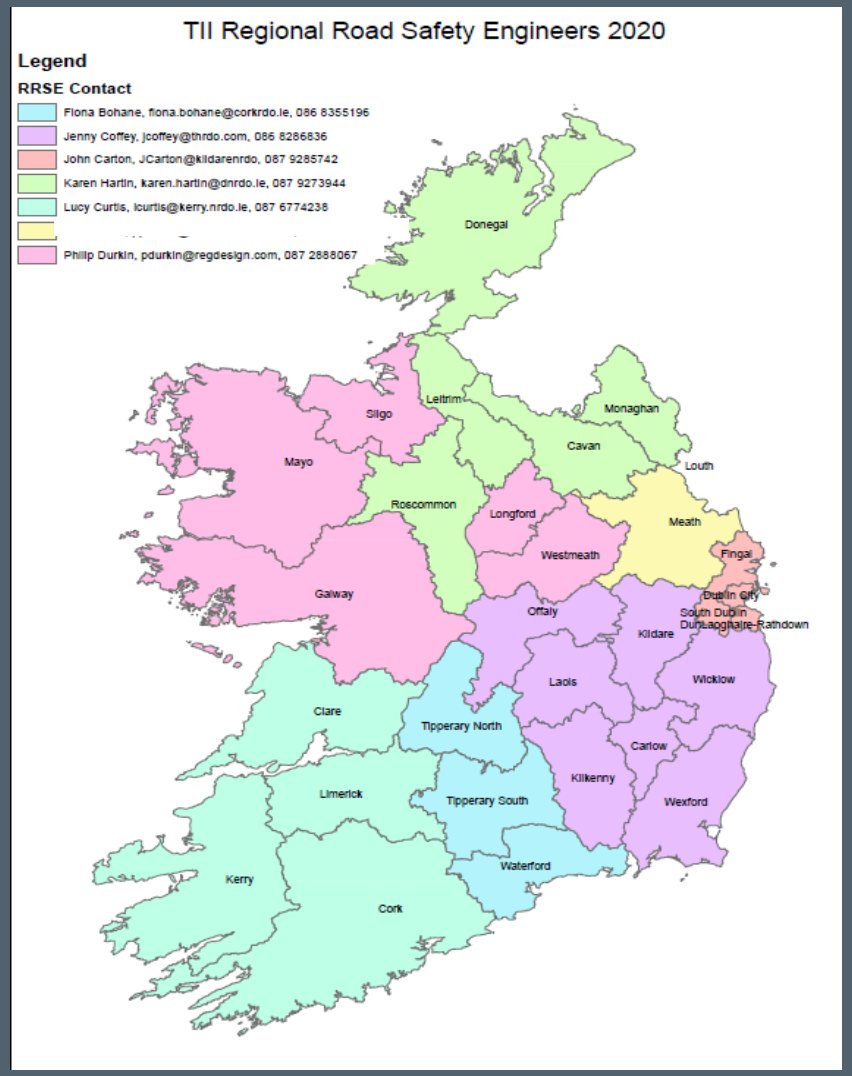
GE-STY-01037
March 2020

GE General

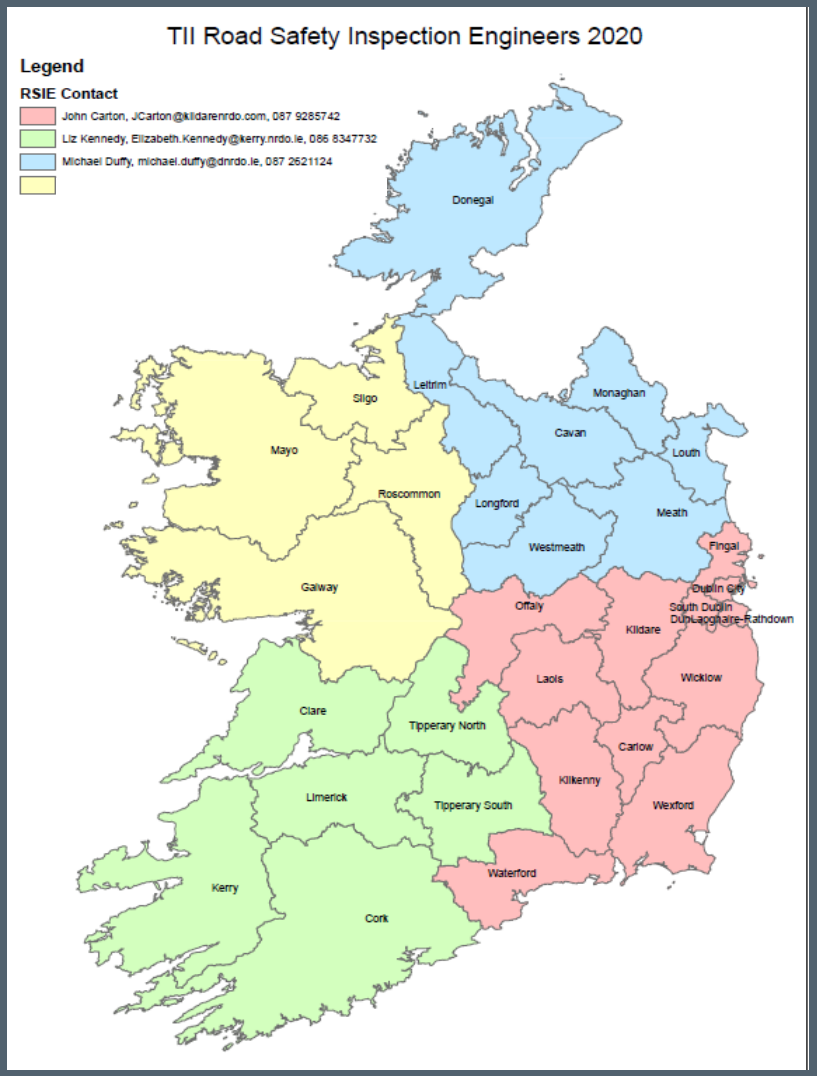
Standards

Contents Table

Co-ordination



- 8 TII Regional Road Safety Engineers/Road Safety Inspection Engineers
- Point of Contact Development of engineering solutions with the LA & Advisory role to LA in matters relating to road safety engineering
- Agree LA proposals prior to TII **Feasibility & Options Stage**



Example of the nature of RSIS in one county

County Donegal (Round L)

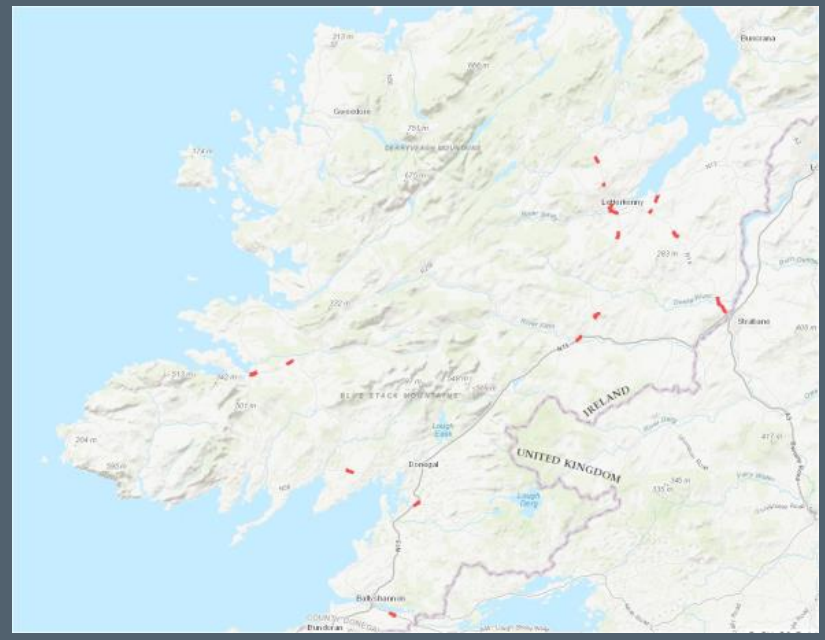
17 sites/schemes in HCL

6 Rural 1km links

5 Rural junctions

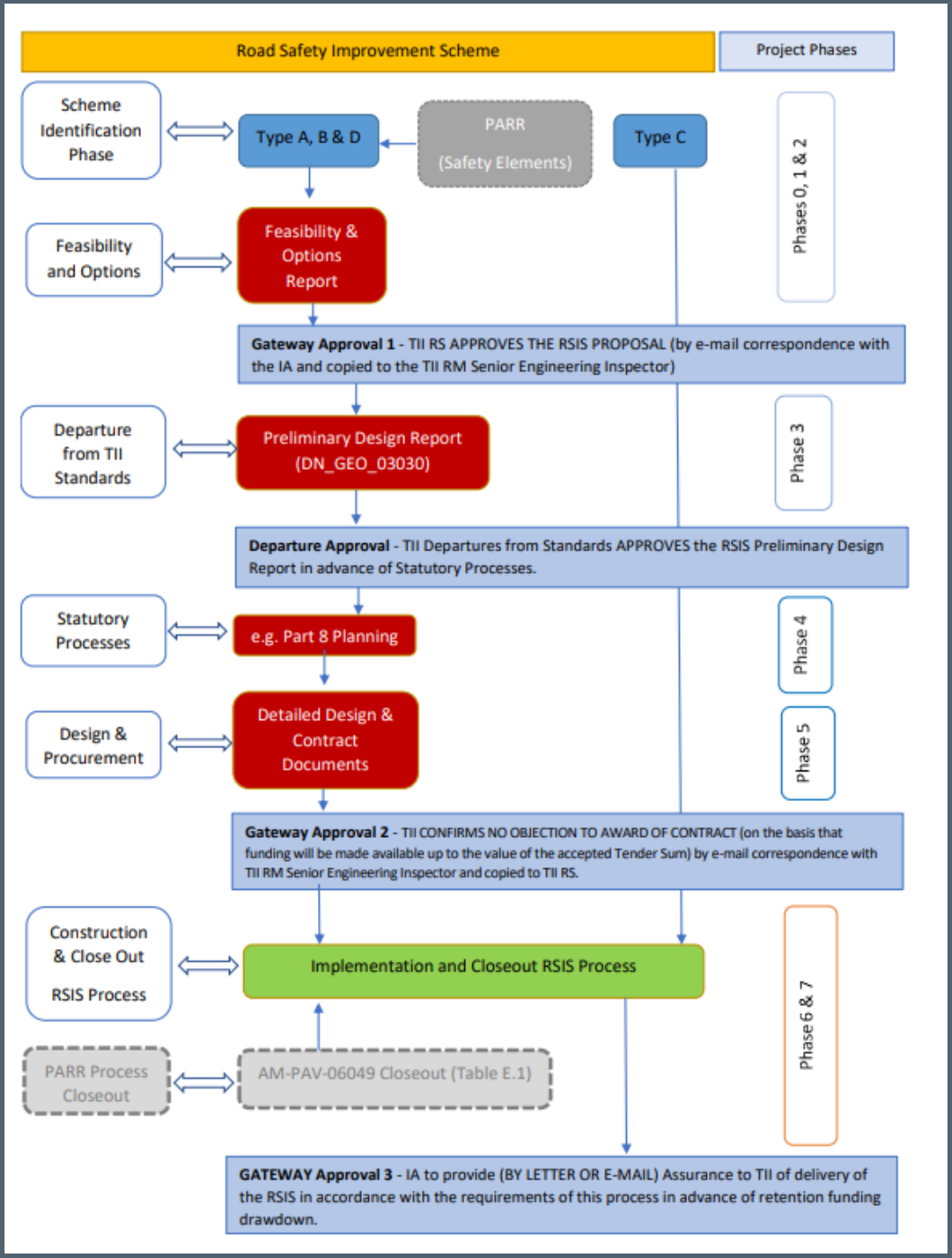
3 Urban transition sites

3 Urban sites



Range in value €20,000 to €4,000,000

This list does not include the RSI (1000+)



Phase 0 – 2
RRSE/RSIE

Phase 3 –
Phase 7
Regional
Management

- Approved RSIS (with estimated costs less than €500,000 including VAT)
  GE STY 01037 + DN GEO 03030 + RSAs

- Approved RSIS (with estimated costs less than €500,000 including VAT)
  GE STY 01037 + DN GEO 03030 + RSAs + PMG + PAG

- **TYPE A** High Collision Location (HCL)
- **TYPE B** Design Road Safety Inspection Schemes (RSIs)
- **TYPE C** Routine Road Safety Inspection Schemes (RSIs-simple *i.e. no Design needed*)
- **TYPE D** ***Other Road Safety Improvement***, Schemes identified by Local Authorities that demonstrates a safety benefit in accordance with GE STY 01037.

(e.g. Pedestrian Crossing County Monaghan to facilitate future Greenway and Existing Primary School)

Resources Available

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Feasibility and Options Report

[INSERT Scheme Name]

[INSERT TII Ref. No.]

(Type: A / B / C / D)

Local Authority Logo

Date: 01/01/2020

Contents

d Option

ion of Options

usses the estimated collision savings and oth
eferred option based on the FYRR and/or CMF

Modification Factor

ollision Modification Factor is evaluated us

Road Safety Remedial Measures Prograr
ented between 2004 and 2006', NRA, 201
-Predicting Road Accidents - A Transferal
earing House
ids

ain collision types at site XX the proposed
pes. The CMF calculated for each option i

1 – XX%
2 – XX%
3 – XX%]

ar Rate of Return Based on Collision H

ear Rate of Return (FYRR) was used to asse
iative implementation as follows:]

$$\frac{Annual\ Collision\ Savings \times Collision\ Cost \times 100}{Scheme\ Costs} = FYRR$$

rison table]

	Annual Collision Saving	Average Collision Cost* €	Scheme Cost €	FYRR** (%)
	0.09	162000*	49000	29.8
	0.18	162000*	1465000	2
	0.4	162000*	1893000	3.4

*** (Sample For illustration only)**- To calculate Average Collision Costs use the methodology in Chapter 5 of 'A Guide to Road Safety Engineering in Ireland (1996) Government. Publications Office. Dublin.

(Source: http://www.rmo.ie/uploads/8/2/1/0/821068/aguidetoroadsafetyengineeringinireland1996.pdf)

A-8

Road Safety Improvement Scheme Procedure Close Out Summary

TII Safety Scheme Name		
Route No.		
Implementation Authority		
Project Description		
PRS Code		
Delivered in conjunction with a PARR	Yes	No
Submitted the Table E.1 to TII *(TII Publication AM-PAV-06049) PARR schemes only)*	Yes	No
Delivery	Direct Labour	Contractor
Construction Commencement	Date:	
Scheme Completion	Date:	
As Built Drawings	Attach to this summary (digital format e.g. PDF, DWG etc.)	
Before/After photographs	Attach to this summary	
Stage 3 RSA Approved by TII	Yes	No
Works completed include those agreed in the Stage 3 RSA?	Yes	No
Final Scheme Costs	*(Safety only element if delivered in conjunction with a PARR)*	
Main Contract Construction		
Main Contract Supervision		
Archaeology		
Advance Works & Other Contracts		
Residual network		
Land & Property		
Planning & Design (incl. GI & Topo)		
Main Contract Construction		
Main Contract Supervision		
Other *(as appropriate)*		
Total	€ (Including VAT)	

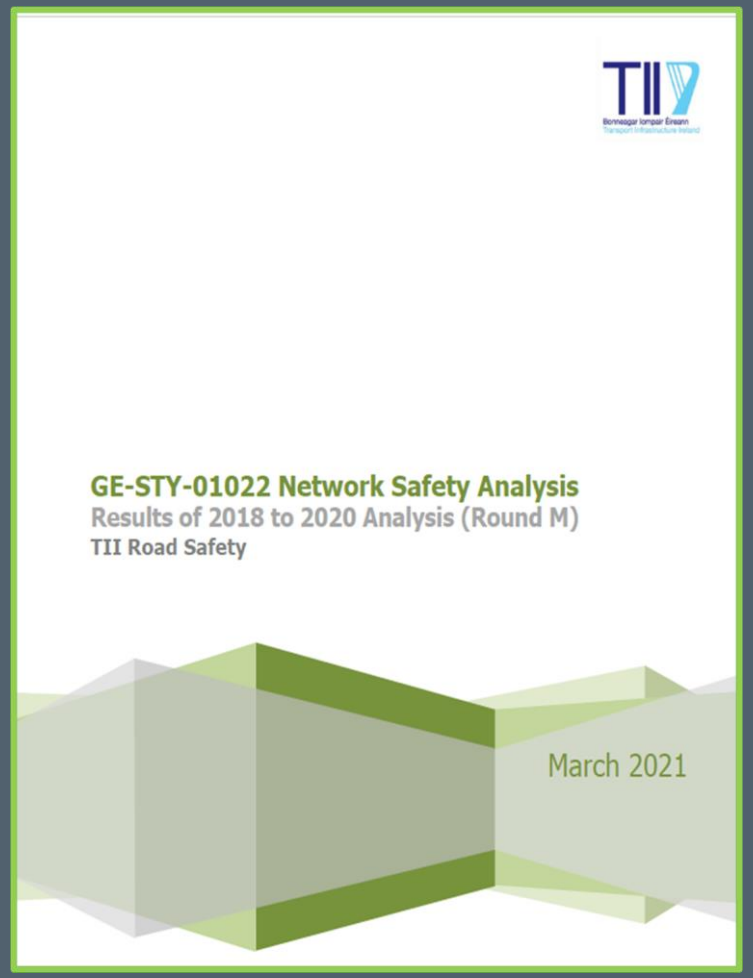
Downloads

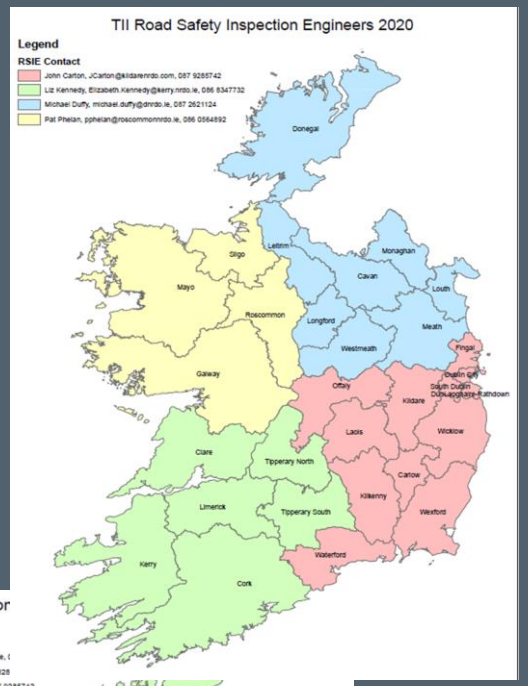
https://www.tiipublications.ie/downloads/

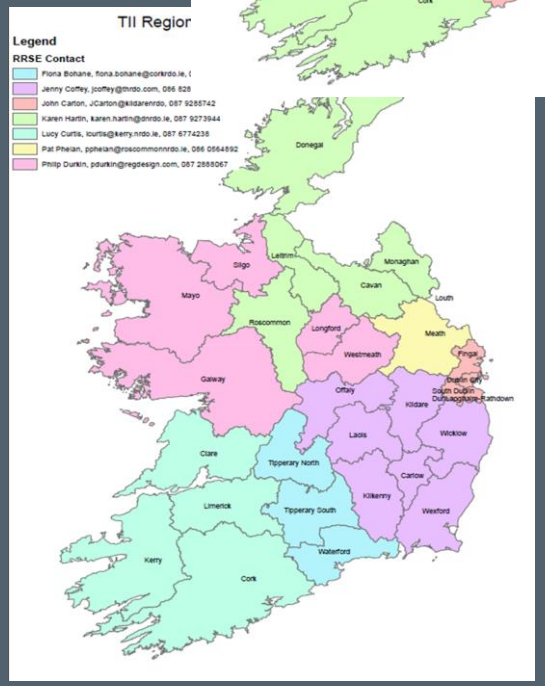
+ Transition Assessment Procedure Downloads
+ Traffic Signs Approvals Procedure Downloads
+ Standardised Public Lighting Inventory Template User Manual Downloads
+ DN-LHT-03038 Lighting Evaluation Downloads
+ Library of Standard Item Descriptions
+ TII Costs Estimating
+ Reinstatement of Openings in National Roads
− Appendices Associated with Road Safety Improvement Scheme Approval Procedure to GE-STY-01037

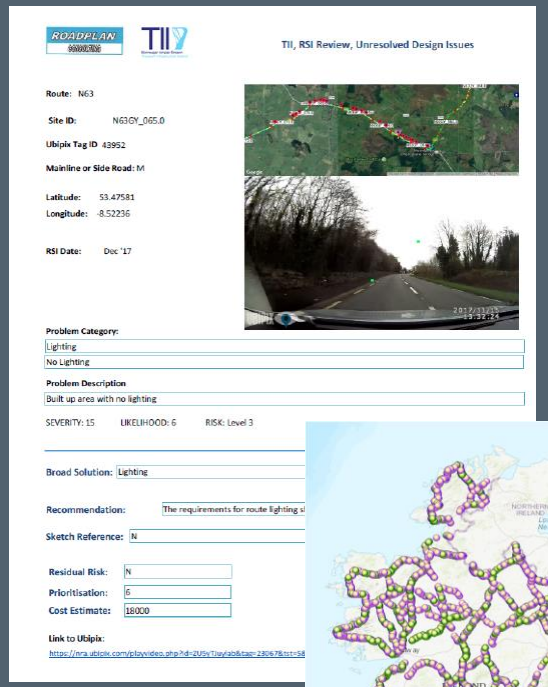
- Appendix-B_Sample-Feasibility-and-Options-Report-for-Road-Safety-Improvement-Scheme.docx
- Appendix-C_Summary-Close-Out-Sheet-for-Road-Safety-Improvement-Schemes.docx

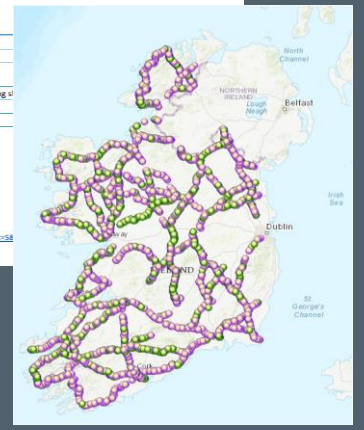
Resources Available











TII Safety Framework Technical Advisor Services

Frequently Asked Question/Issues

- **TYPE C** Routine Road Safety Inspection Schemes (RSIs-simple *i.e. no Design needed*) – do they need Feasibility and Options developed?

- **Other Road Improvements ?** Schemes identified by Local Authorities that demonstrates a safety benefit in accordance with GE STY 01037.

- **It's a Safety Scheme ?** Why are the Project Management and Project Appraisal applicable?

- **Technical Advisors ?** Can Technical Advisors be appointed to prepare a feasibility and Option Report and then further stages?

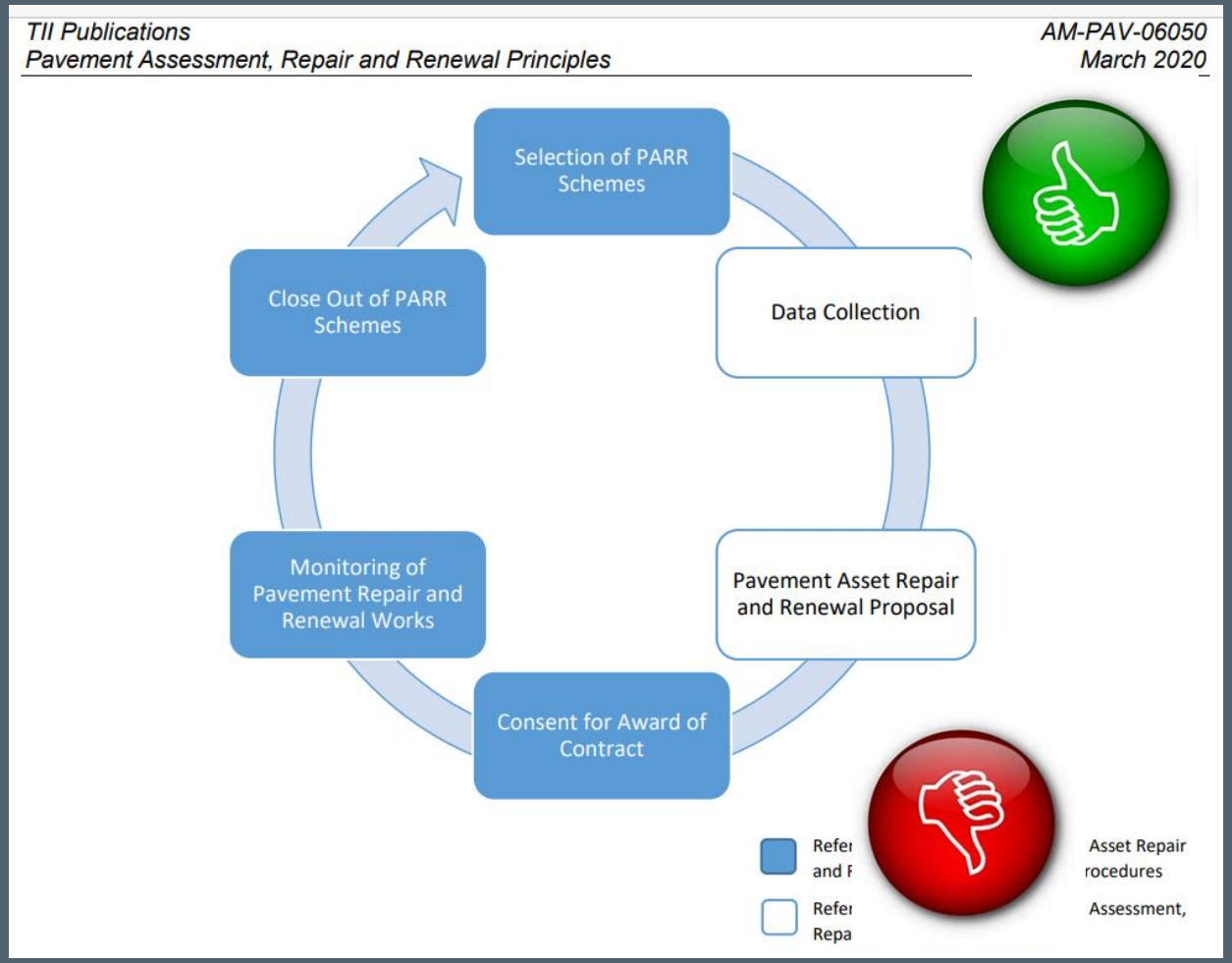
Delivery with a PARR Scheme

Pavement Schemes ?

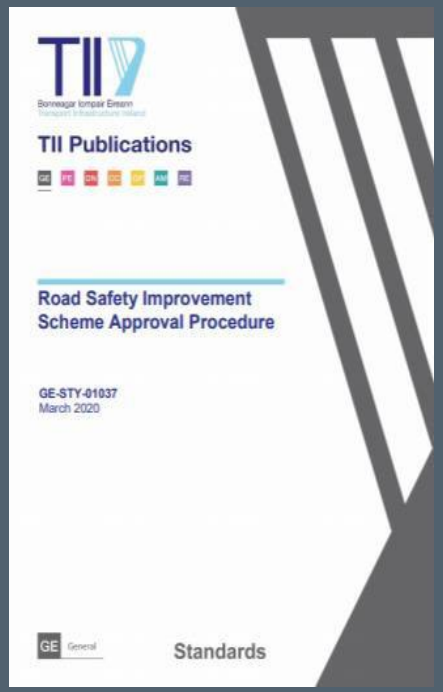
(GE STY 01037 + AM-PAV-06050)

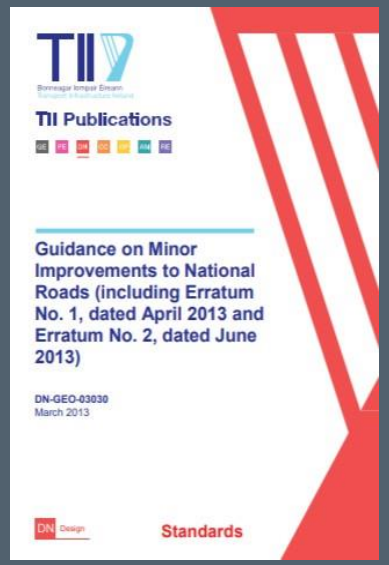
- Can be combined successfully with an RSIS

- Problem arises when RSIS approval sought
too added too late



Preparing a Preliminary Design Report?





Preliminary Design Report

Submitted to TII via TII Departures Portal for agreement in a timely fashion (*e.g. two months where possible*)

Feasibility & Options Stage
Phase 0 -2

Planning & Design
Phase 3

Detailed Design

Construction

Planning (incl. Part 8)

- Preliminary Design Reports – DN GEO 03030
- Updates

DN-GEO-03030 Minor Improvements on National Roads

- NRA TA 85/11 first published in November 2011
- DN-GEO-03030 - Guidance on Minor Improvements to National Roads updated in April 2013 June 2013
- New update to be published soon

This Standard provides guidance on the procedures to be followed during the Design Phase of the following types of schemes on the national road network.

- Road Safety Improvement Schemes that have already been approved at Feasibility and Options Stage – GE STY 01037 + DN GEO 03030

- Urban Renewal Schemes (DMURS designed schemes)

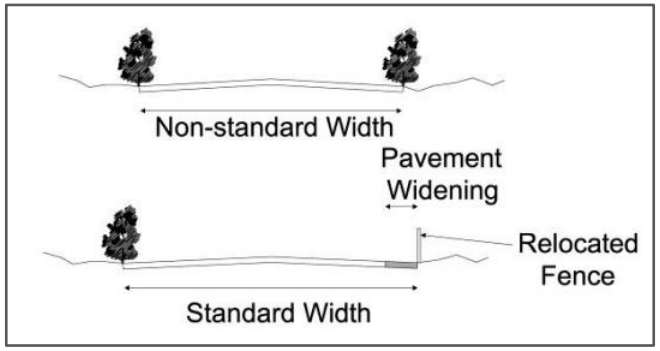
- Road Safety Improvement aspects of Pavement Asset Repair and Renewal Schemes.

- Local Improvement Schemes

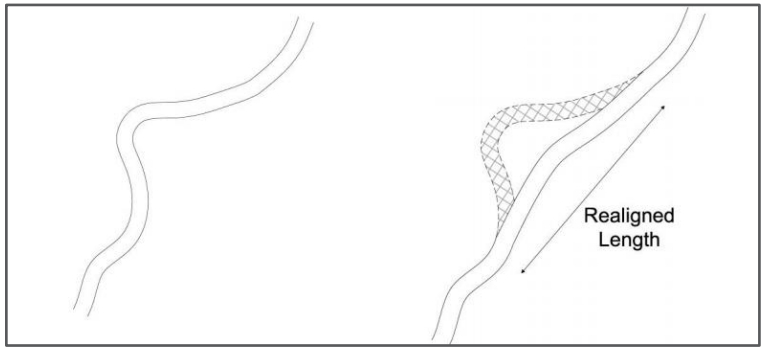
  - Local Authority general improvement schemes which have not been identified as Road Safety Improvement Schemes
  - Schemes led or funded or partly funded by other agencies
  - Development led schemes
  - Community schemes

DN-GEO-03030 Minor Improvements on National Roads

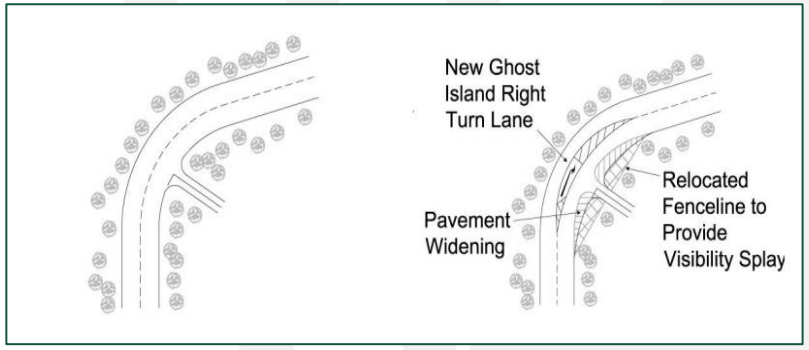
Examples



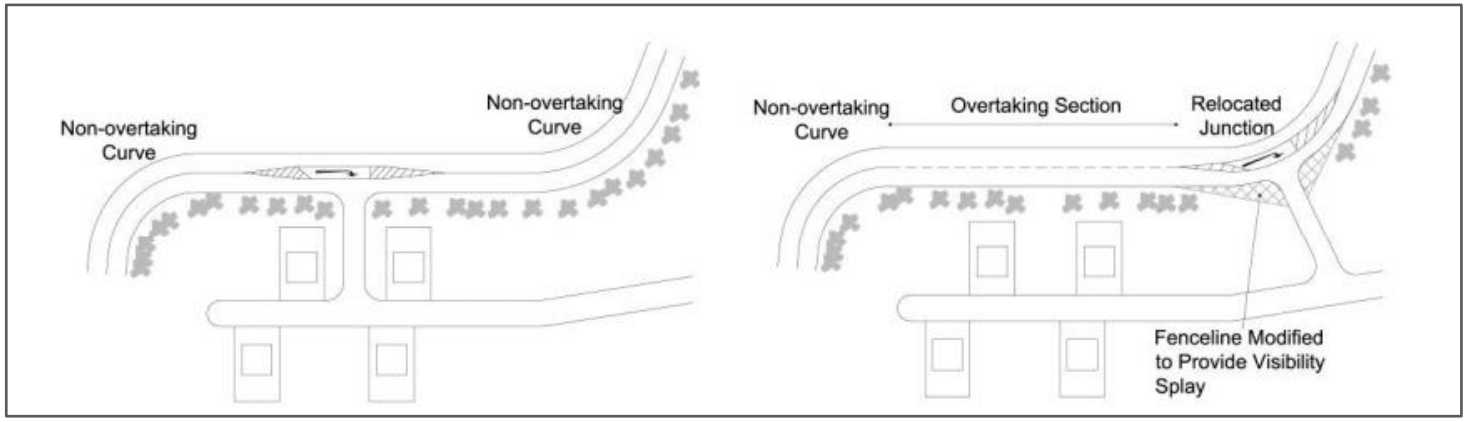
Widening of Cross Section



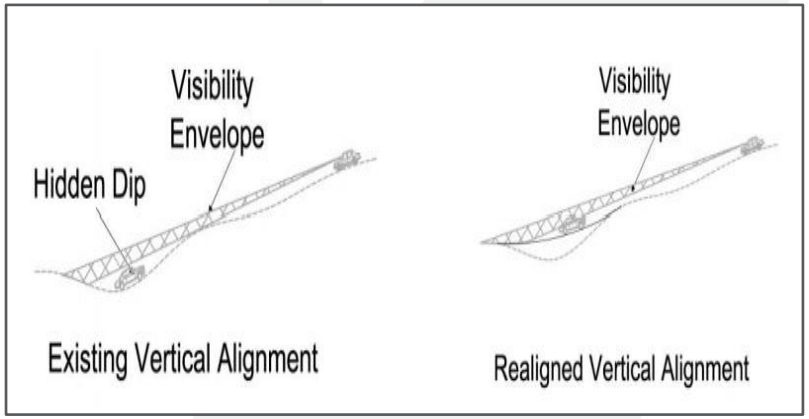
Realignment of Poor Alignment



Junction Improvements



Introduction of Overtaking Section



Removal of Hidden Dip

DN-GEO-03030 Minor Improvements on National Roads

- The main aim of this Standard is to ensure that Design Reports for RSISs, Local Improvement Schemes and Urban Renewal Schemes are developed with a suitable level of detail to facilitate TII review via the TII departures database provided through the TII portal

- Design Reports must be submitted for acceptance via the TII Departures Portal.

- A Stage 1, Stage 2 or a Combined Stage 1&2 Road safety Audit should be carried out depending on the complexity and level of detail provided & the signed feedback form should be included as an Appendix in the Design Report

- Quality Audits as described in Section 5.4.2 and Advice Note 4 of DMURS shall be carried out for schemes designed in accordance with DMURS.

- Sample Design Report Templates will be made available on the download section of the TII Website

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Transport Infrastructure Ireland

Thank You