

Temporary Traffic Management



CIF WEBINAR

11TH SEPT 2019

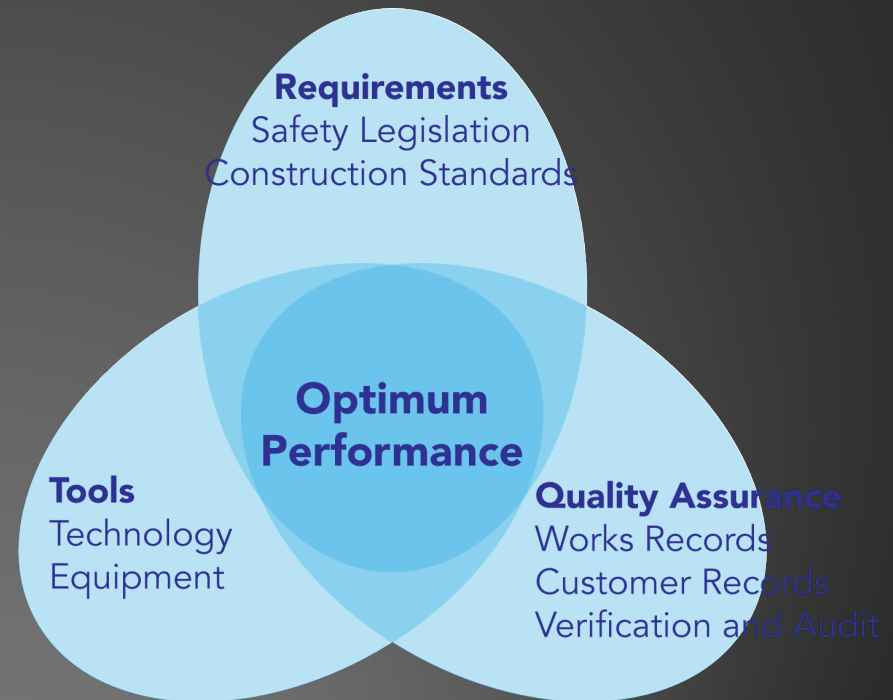
 **Tobar Segais**
From vision to solution 



Tobar Segais

From vision to solution

- Irish company of professionals with over 20 years experience at construction, operational, local authority, strategic, and national level.
- We are specialists in public works design, construction, operations and maintenance.



Webinar Outline

- Standards
- Type C Roadworks
- Plan Requirements
- Urban Roads
- Rural Roads
- Motorways
- Training

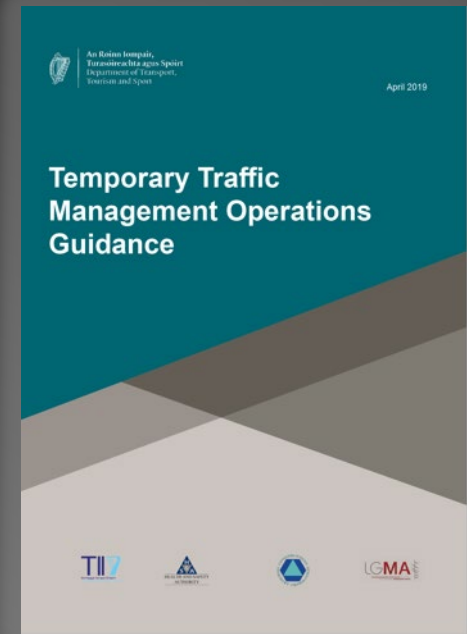
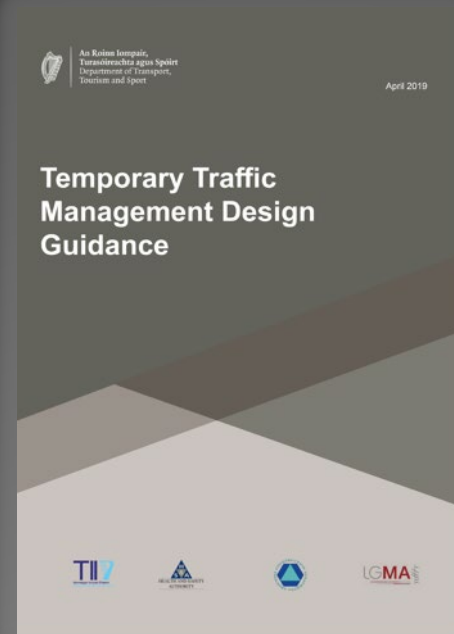
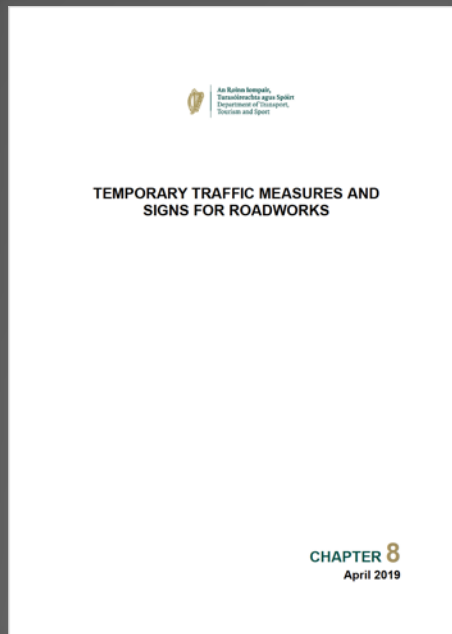


Changes

1. Updates to standards and introduction of guidance documents
2. Updated Construction Skills Certification Scheme(CSCS)
3. Clarification of Traffic Management Designer role and competence
4. Clarification of Traffic Management Auditor requirements and competence




Requirements and Standards






- Provides details of TTM to be used on all public roads
 - Site layouts and sign symbols
 - When to use each sign
 - The rules for positioning the signs and site layout
 - The management controls for working on roads

Road Level

Location	Level		Speed	Carriageway Type	
	Main	Sub			
	Urban	Level 1	i		Single 
			ii		
			iii		
			iv		
	Rural	Level 2	i		Single 
			ii		
	Dual and Motorway	Level 3	i		Dual/ Motorway 
			ii	 	

Roadworks Types

TTM Type	Duration 	Traffic 	Visibility 	Description
Type A	> 12 hours	All	All	Full time TTM
Type B	≤ 12 hours	≤ Capacity	All	<ul style="list-style-type: none"> ➤ Normally 1-2 vehicles ➤ Maintenance/ Repair
Type C	≤ 15 mins	≤ Capacity	Good	<ul style="list-style-type: none"> ➤ Discrete locations ➤ Not creating traffic hazard
Semi-Static Operation	≤ 15 mins stops	≤ Capacity	Good	<ul style="list-style-type: none"> ➤ Continuously moving ➤ Short stops
Mobile Lane Closure	≤ 15 mins stops	≤ Capacity	Good	<ul style="list-style-type: none"> ➤ Continuously moving ➤ Short stops

Type C Roadworks



1. Once off, discrete location
2. ≤ 15 mins
3. Traffic \leq Capacity
4. Site Assessment




Step 1 Parking works vehicle

- Off the carriageway
- Parking bay
- If on live lane, legally parked
 - Not on double yellow line, or
 - Not where parking not allowed, or
 - Not within 5m of junction, or
 - Not where continuous white line, or
 - Not obstructing entrance, without consent
 - Not on a footway

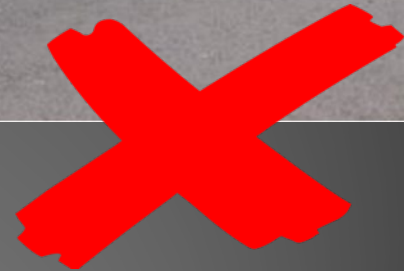
Step 2 If parking on live lane

Speed	Visibility
	25m
	35m
	50m
	60m
	90m
	120m

Step 3 Road worker

- \leq 
 - Not in live lane, or
 - Protected by Fend
-  
 - Not within 1.5m of live lane, or
 - On footway, or
 - Protected by Fend


Type C Roadworks



Standard TTM Layouts


- Routine short works
- Approved standard TTM layouts
 - Circumstances and Conditions when to use
 - Selection process based on site and works
 - Maximum time for site operations
 - Minimum visibility requirements
 - Maximum traffic volumes
- Standard operating procedures for installing and removing
- Site Specific Record
- Site specific Risk Assessment/ Safe System of Work Plan (SSWP)

Rural Single (Level 2 Roads)
Stop and Go Operation



Introduction

A Stop and Go operation is suitable for **Level 2 roads** with a speed limit up to **100km/h**. The TTOS should ensure that the Garda have been notified in advance of the operation. It is regulated by TTM operatives. The works site should be limited to a maximum length of 500m. A **single TTM operator** can be used for works **up to 200m** provided **two automatic signs** are used for lengths in **excess of 100m**. Automated Stop / Go boards are useful for works where only a single TTM operator is available. **Tapers are at 45° with cones at 1m centres**. **Traffic counts** are carried out over **3 minutes** prior to installation. Traffic volumes are monitored throughout the works.



Roadworks Type	Speed (km/h)	No. Signs / Cumulative Distance (m)	Sign Visibility (m)	Longitudinal Safety Zone (m)	Lateral Safety Zone (m)	Max Cone / Lamp Spacing (m)
Level 2 @ A	80	4 / 480	90	45	1.2	12 / 24
Level 2 @ B	80	3 / 360	90	45	1.2	12 / 24
Level 2 @ A	100	4 / 800	120	60	1.2	12 / 24
Level 2 @ B	100	3 / 600	120	60	1.2	12 / 24

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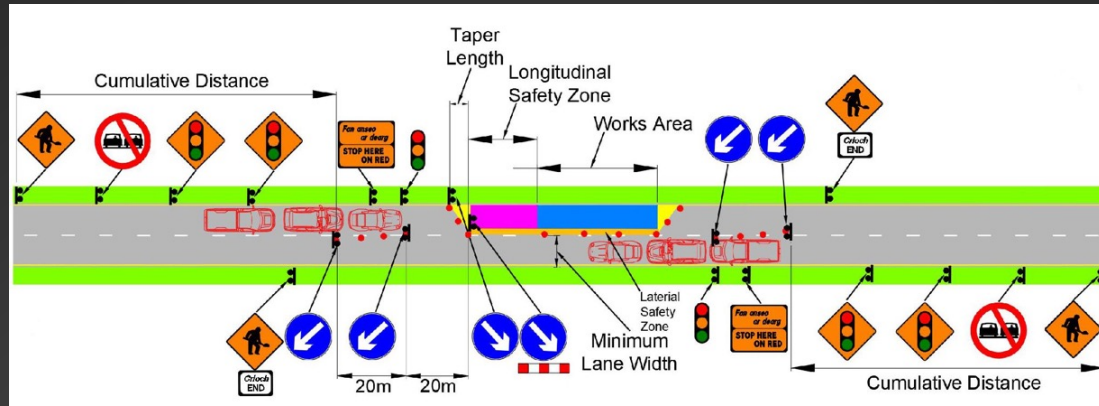
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Site Specific Plan



- Longer-term or more complex works
- Prepared for the site by Designer
 - Based on site risk assessment done by Designer
- Contents
 - Site layout, lengths and widths, junctions etc
 - For each phase of traffic management
 - Minimum visibility requirements
 - Operation timings and traffic counts
 - Phases of traffic management
 - Method statement for installing, changing phases, and removing

New Levels



30 km/h: 1(i)]

50 km/h: 1(iii)

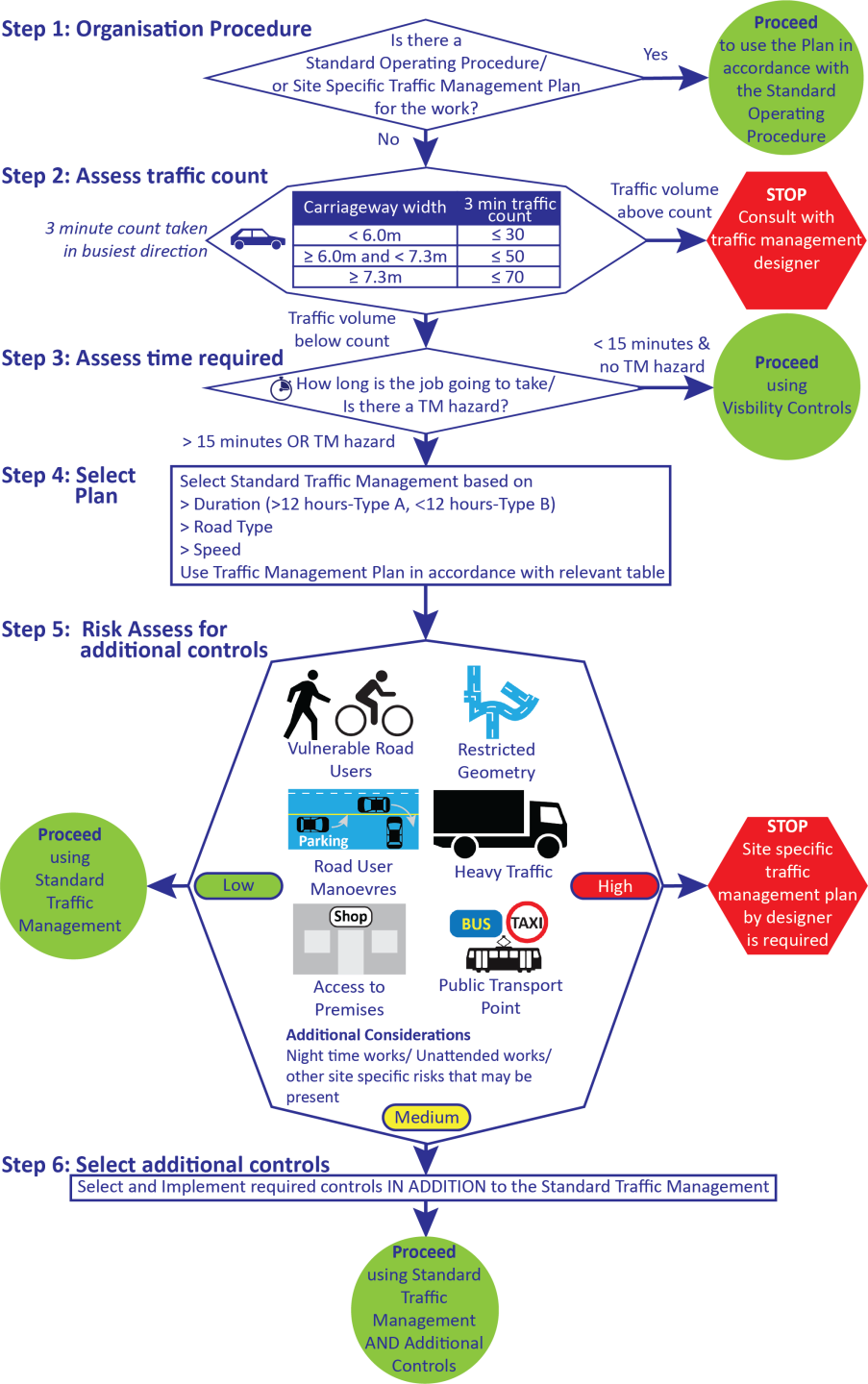
60 km/h: 1(iv)

80 km/h: 2(i)




100 km/h: 2(ii)

	Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B	Type A	Type B
Sign Size	450mm		600mm		600mm		600mm		750mm	
Visibility	25m		50m		60m		90m		120m	
Number	2	1	2		3	2	4	3	4	3
Distance	20m	10m	40m		60m	40m	480m	360m	800m	600m
Cone Spacing										
<i>Tapers</i>	1m		3m		3m		3m		3m	
<i>Longitudinal</i>	3m		3m		6m		12m		12m	
Safety Zone										
<i>Longitudinal</i>	0.5m		5m		15m		45m		60m	
<i>Lateral</i>	0.5m		0.5m		0.5m		1.2m		1.2m	

Urban Roads

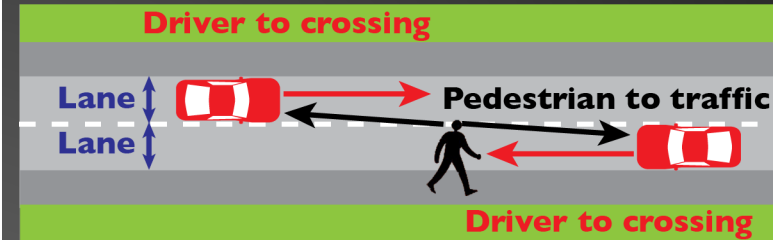


Diverting Pedestrians




Speed	Visibility	
	Pedestrian to traffic	Driver to Crossing
	30m/lane	25m
	45m/lane	45m
	60m/lane	60m



Where route is not obvious, or instructing pedestrians to cross

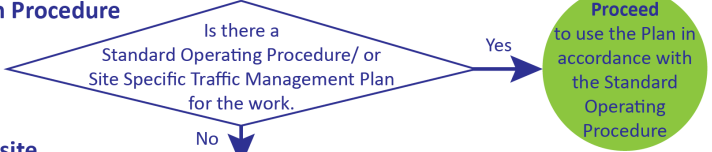


Temporary Pedestrian Crossing
WK 082

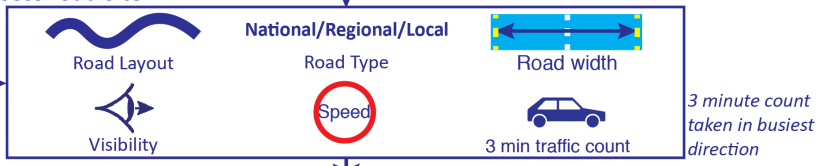
- Used to warn driver of unexpected crossing point
- Use if putting in a formal crossing
- Use if required visibility to crossing cannot be achieved.
 -  = 25m
 -  = 45m
 -  = 60m

Rural Roads

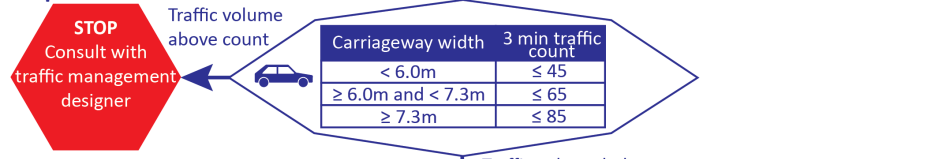
Step 1: Organisation Procedure



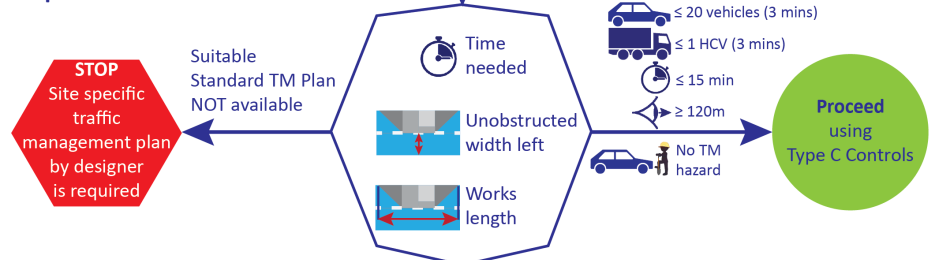
Step 2: Assess road site



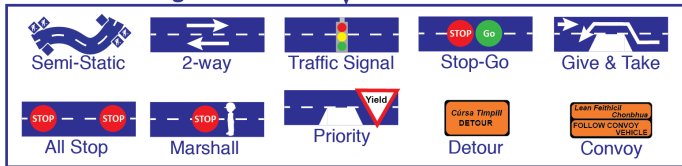
Step 3: Assess traffic count



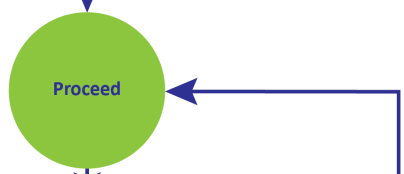
Step 4: Assess work to be undertaken



Step 5: Select traffic management



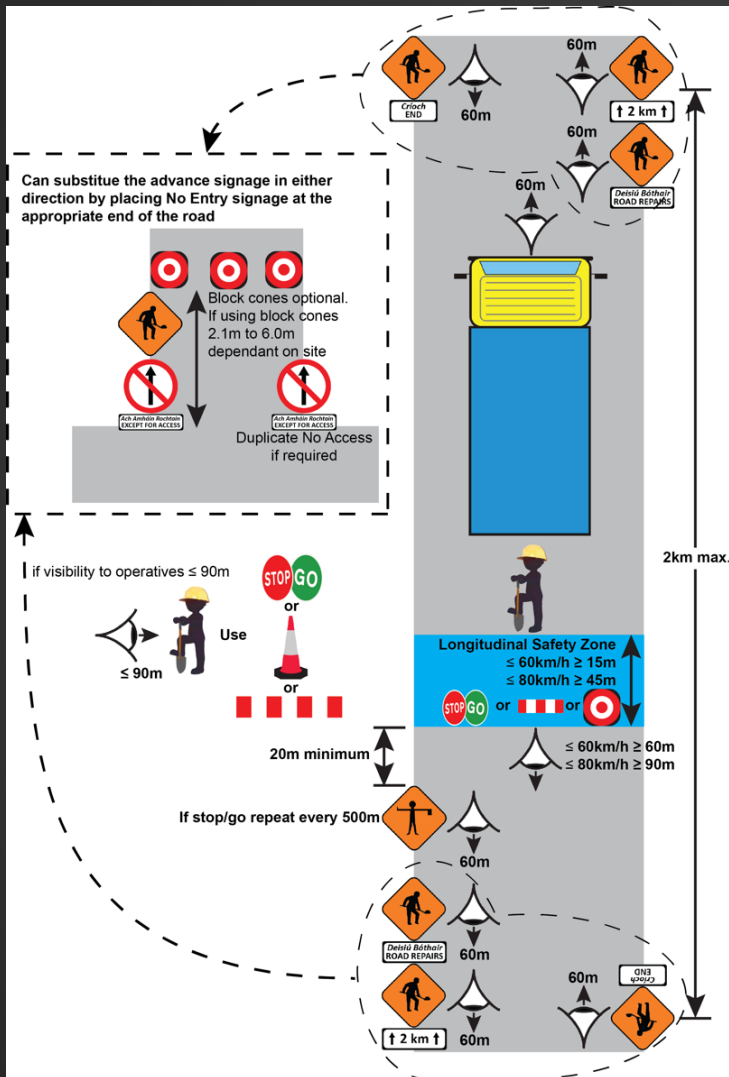
Step 6: Implement traffic management



Step 7: Monitor



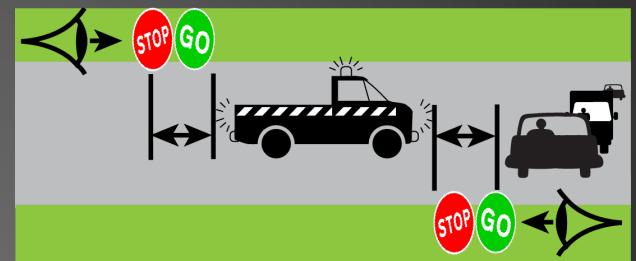
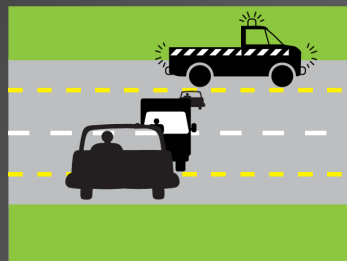
Minor Roads



Speed	Max veh/3min	Sign visibility	Visibility to works vehicle	Visibility to operative	Insufficient visibility to operatives	
					Advance stop	Stop visibility
60 km/h	15	60	60	90	15	60
80 km/h					45	90

Semi Static Operations

Speed	Advance warning signs visibility	Hard Shoulder works	Give and Take		Stop/Go		
		Veh/ 3min	Veh/ 3min	Advance visibility to works	Veh/ 3min	Stop/Go Operator distance from works	Advance visibility to Stop/Go
80 km/h	90m			160m		45m	90m
100 km/h	120m	130	20	215m	50	60m	120m



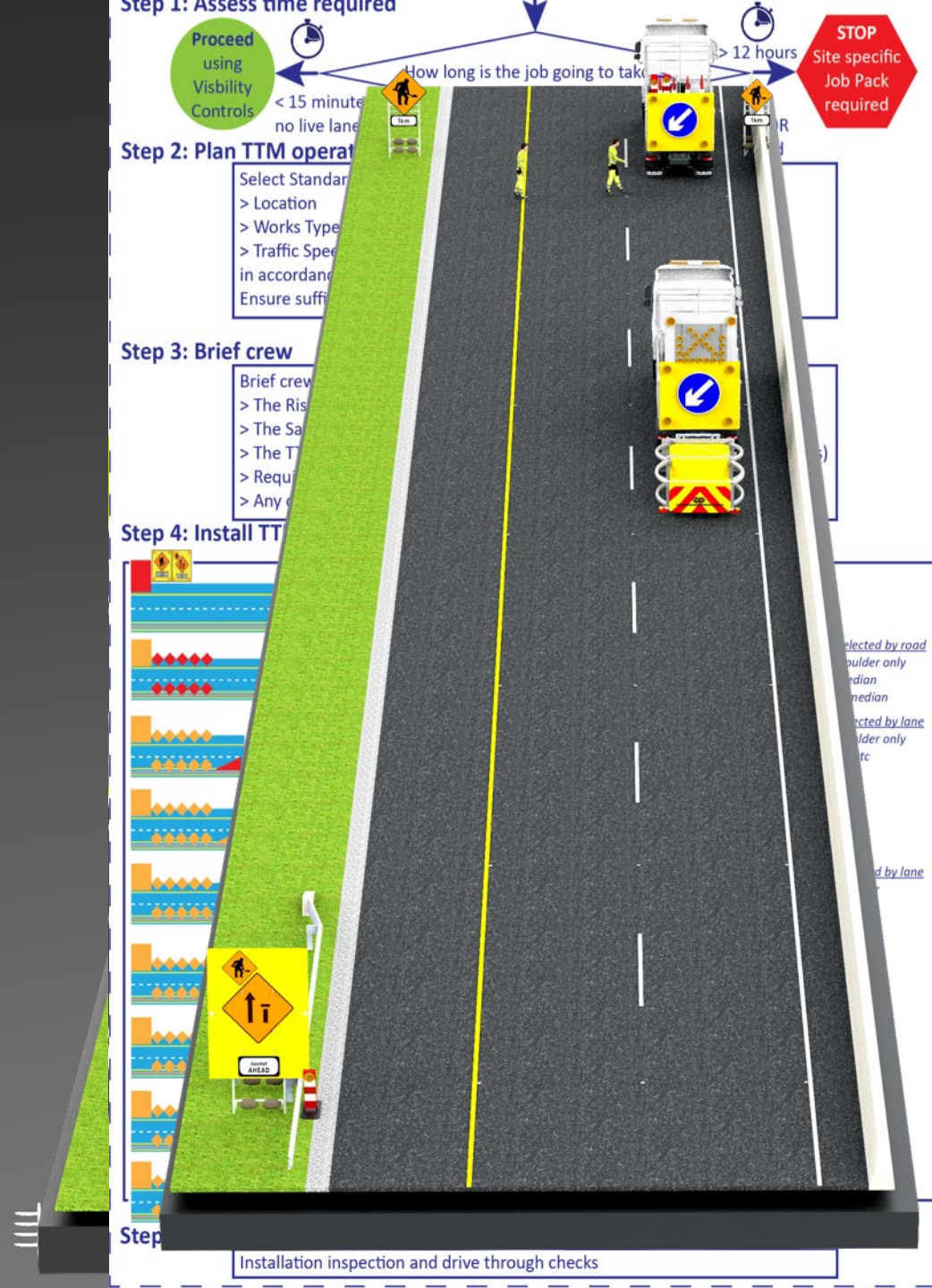
- Give and Take maximum length = 50m
- Stop/Go maximum length = 300m
- Traffic count is in both direction

- Stop/Go uses Flagman Sign
- Repeat every 500m (max)



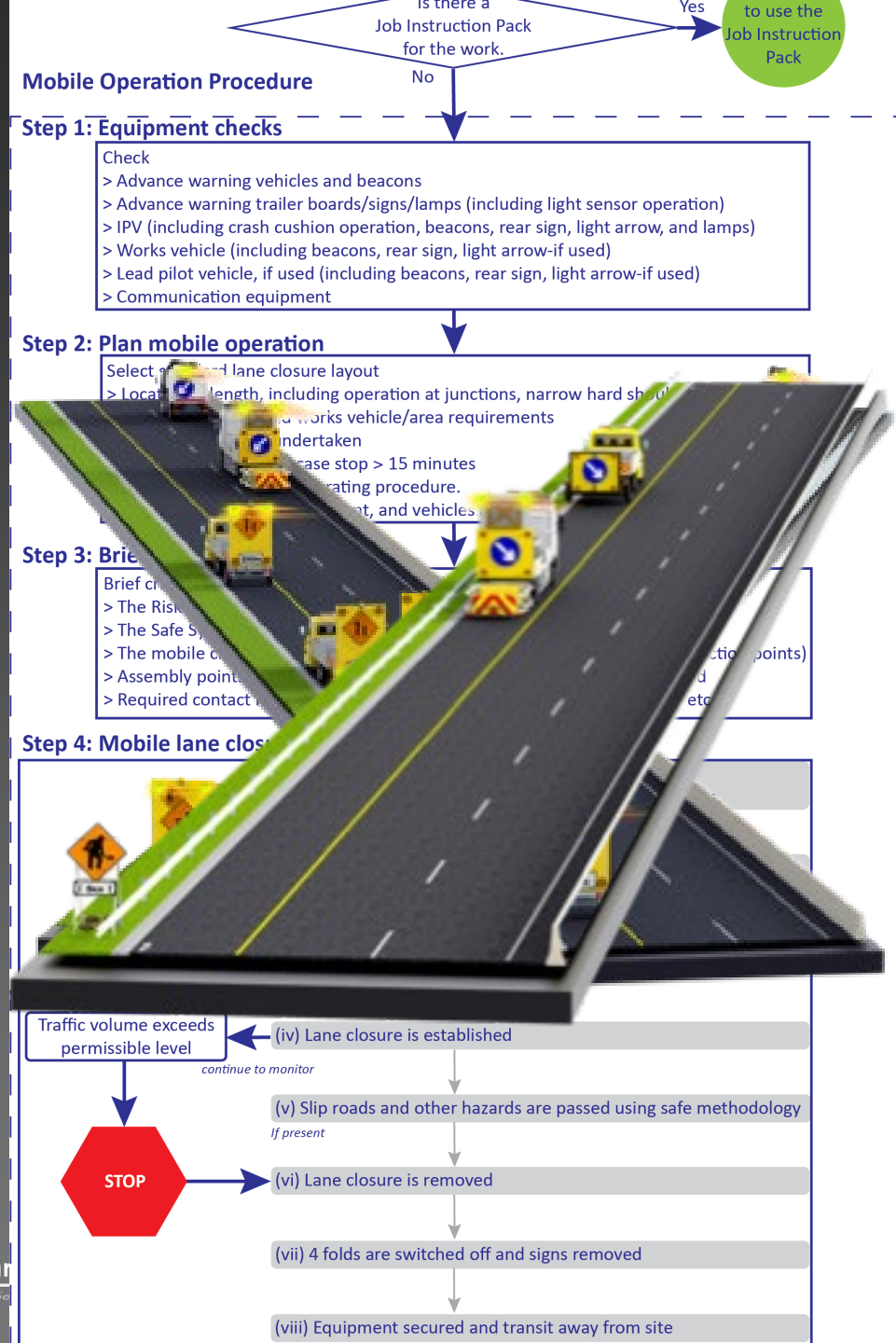
Static Traffic Management

- Planning
- Methodology
- Narrow Medians
- Lead in Tapers
- Facing Walls
- Splitters
- Hard Shoulders



Mobile Closures

- Planning/ Equipment
- Methodology
 - Communication
- Hazard Negotiation
 - Blockages
 - Junctions



Competence Designer



Competence TTOS

The TTOS is NOT a designer



Audit

1. NRA HD 16

2. Primarily for road user

3. Trained auditor

- ▶ Engineer/ Safety professional
- ▶ 7 years postgraduate & 5 in design/construction
- ▶ Certified auditing course

4. NOT a designer

- ▶ Identify problems

Who	What
TII	TII Projects
Local Authority	LA Projects
Statutory Undertaker	SU Projects

Works Duration	% of sites	Frequency
> 1 year	100%	Quarterly
6 months - 1 year	100%	Twice annually
1 month - 6 months	50%	Single
12 hours - 1 month	10%	Single
< 12 hours	(contract)	Random
	< 3 mon	1
	3-6	2
	> 6	4

Training Courses

- CSCS Signing, Lighting & Guarding at Roadworks
- CSCS Health and Safety at Roadworks
- Planning & Design of Temporary Traffic Management
- Traffic Management Design on Level 3 Roads
- Traffic Management Operations on Level 3 Roads
 - Static Operative
 - Mobile Operative
 - IPV Driver
 - Supervisor
- Stop/ Go Board Operator
- Traffic Signal Operator
- Traffic Management Inspection and Audit

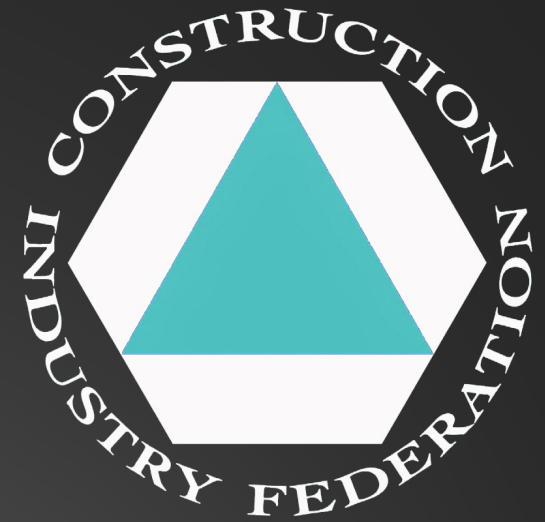




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TRAFFIC SIGNS.IE

An Roinn Iompair, Turasóireachta agus Spóirt
Department of Transport, Tourism and Sport

Welcome

Welcome to the home of the Traffic Signs Manual for Ireland as published by the Department of Transport, Tourism and Sport.

This website contains current and previous versions of the Traffic Signs Manual, Traffic Signs Advice Notes, Circulars, Working Drawings (for the design and manufacture of signs for use on Irish roads) and guidance on the control of traffic at road works.

Latest News

- TRAFFIC SIGNS MANUAL
- Temporary Traffic Management Design Guidance
- Temporary Traffic Management Operations Guidance

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