Works Access Permit

Registration Number: **E910687**

Utility Reference: **Global - Non Excavation**

poriruacity

1. Details of Proposed Work

Activity: Chambers Access, Asset Inspections/Maintenance, Drainage Works, Manhole Maintenance, Meter Maintenance, Survey, Other (Specify Detail)
Address: 16 Cobham Court, Porirua City Centre, Porirua, 5022
Location in road: Carriageway, Footpath, Berm, Nature Strip
WAP valid period: 01 January 2023 to 31 December 2023

2. The Parties

Porirua City Council being a body corporate in accordance with the Local Government Act 2002 ('the Corridor Manager;')

Wellington Water Alliance being an approved Utility Operator in accordance with submitting a request for access in accordance with that act;

Wellington Water Alliance being the agent of the Utility Operator submitting this request on behalf of the Utility Operator and in accordance with the Utility Operator's statutory rights ('the Applicant').

3. Attachments

Attachment 1 being the Schedule of Reasonable Conditions.

Attachment 2 being plan TMP showing the agreed service location.

4. Background

(a) The Utility Operator wishes to carry out the works stated on CAR Number E910687 and thereafter maintain the utility services established in the corridor;

(b) The Corridor Manager is required to provide a written consent in accordance with its governing legislation and to provide a schedule of reasonable conditions, if required, by the utility legislation under which the request for access has been made; and

(c) In accordance with the Code: Utilities' Access to the Transport Corridors and on behalf of the Corridor Manager, I give my written consent for access to the corridor at the agreed location and attach my schedule of reasonable conditions:

(d) In the case of State highways this Works Access Permit serves as the approvals required under sections 51 and 78 of the Government Roading Powers Act.

Signed **Date** 31/01/2023

Phil Gollings acting pursuant to delegated authority.

FOR Corridor Manager APPROVAL USE ONLY

Time Spent Processing:

☐	Approved Contractor	☐	Route Plan Submitted	☑	TMP Submitted	☐	Stockpiling Arrangements

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council

31 January 2023

CONDITIONS

General Conditions

1. The Utility Operator must:

(a) carry out all Work in Transport Corridors in accordance with the Code and KiwiRail's Specifications for Working in Railway Corridors;

(b) undertake all Works in compliance with the Acts of Parliament and mandated codes of practice that relate to their industry and the type of Work described within the plans and methodology submitted;

(c) install assets more or less in the location shown on the attached plans, and agree the exact location and position with the Road Corridor Manager before Work commences;

(d) locate any Utility Structures in the Road Corridor in the agreed position shown on the drawings and clear of the Carriageway, Road Corridor furniture and kerbs, drains, manholes, etc. Utility Structures agreed to be within the trafficable part of the Road are to be flush with the surface and designed to withstand full heavy Traffic loading (NZTA's HN-HO-72 Traffic Loading);

(e) provide a full description of the construction methodology, reinstatement, resurfacing and compaction and agree this with the Road Corridor Manager prior to Work commencing;

(f) make the Works available at all times for inspection by any person representing the Road Corridor Manager;

(g) if requested, pay the reasonable costs of the Road Corridor Manager in connection with the processing of this notice and for the monitoring and auditing of the Works; (See NZ Transport Agency Cost Structure under Clause 23)

(h) keep a full copy of the Works Access Permit/ Permit to Enter and Reasonable Conditions on the Work Site at all times during the Works;

(i) undertake remedial action on non-conforming Work within the timeframe set by the Road Corridor Manager, where reasonable and practicable;

(j) gain all the necessary consents, approvals and permits from the relevant statutory and regulatory authorities at its own cost;

(k) keep plans of the installed Work and make them available to the Railway Corridor Manager (in all cases) and Road Corridor Manager (on request);

(l) compensate the Road Corridor Manager for any damage or costs incurred to the Road Corridor due to the Work or for costs resulting from the removal of abandoned installations, Utility Structures, components and equipment that belong to the Utility Operator;

(m) repair all Road Corridor assets damaged as a result of the Works, should the Road Corridor Manager determine these are necessary prior to the end of the Warranty period;

(n) restore to their original condition any surface or Utility Structure that was damaged or removed as a result of the Works;

(o) control the surface water channels so as to cause minimal interference to existing flows;

(p) fully restore the surface water channels at the completion of the Works;

(q) notify the Road Corridor Manager of any maintenance Work it proposes to undertake within the two-year Warranty period;

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
Page 1 Of 3
31 January 2023

(r) have in place an approved TMP for Roads and Motorways at least two days prior to Work commencing on the Work Site;

(s) provide the Road Corridor Manager with two Working Days' notice before commencement of Work on the Work Site;

(t) ensure that the Work is carried out under the control of a warranted supervisor as required by the Code of Practice for Temporary Traffic Management and ensure that there are sufficient people on site specifically to control the flow of Traffic through the site in accordance with the TMP;

(u) comply with instructions from an officer of the NZ Police Traffic Safety Branch or a duly authorised agent of the Road Corridor Manager in respect of Traffic management and safety;

(v) complete Works in the Road Corridor in one continuous operation (suspension of Works over five continuous days requires the prior written permission of the Road Corridor Manager);

(w) protect and maintain all Road Corridor signs, markers, signals, barriers and associated marking and replace them to the appropriate industry standard where they have been damaged by the Works;

(x) complete and submit a Works Completion Notice form when the Works are complete; and

(y) stop Work as necessary to meet the requirements of section 42 of the Heritage New Zealand Pouhere Taonga Act 2014.

2. Work must not take place on or near a State highway during and one day either side of a public holiday or public holiday weekend.

3. Where otherwise required due to Traffic volumes or specific residential or Central Business District requirements, the hours of Work must be as specified in the Local Conditions and Special Conditions.

4. The Warranty period starts from the date the Road Corridor Manager has given signed acceptance that the Work is complete or otherwise as provided in Section 4.7.1.7 of the Code.

5. Unless the Works stated in the WAP have started on the Work Site, the agreement relating to the Works will only remain valid for six months from the date of approval on the Works Access Permit.

6. The Road Corridor Manager must manage all applications relating to Road Corridor access in accordance with the timeframes and processes in the Code.

7. The Corridor Manager may:

(a) assess the suitability of any action proposed by the Utility Operator during the Warranty period and impose Reasonable Conditions that will maintain the integrity of the Road assets;

(b) arrange for remedial Work to be done and recover the costs incurred from the Utility Operator, if the Utility Operator fails to take action within the agreed timeframe; and

(c) instruct the Utility Operator to stop Work and leave the Work Site (having made the site safe) if the Works are not complying with the relevant Reasonable Conditions including any plans, relevant conditions or specifications contained in the Code, or permission requirements.

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
Page 2 Of 3
31 January 2023

8. In granting this WAP, no vested right is created.

9. This WAP is not transferable without the written permission of the Road Corridor Manager.

Local Conditions

CAR Number: E910687

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council

31 January 2023

CAR HCC Full Scope of Works Utility

Utility

Company	Wellington Water
Contract Manager	Tim Harty
Phone	021 451 104
Email	Tim.harty@wellingtonwater.co.nz

Contractor

Company	Wellington Water alliance
Contract Manager	Valitha Roos
Phone	021 510 923
Email	Valitha.roos@wellingtonwater.co.nz

Sub Contractor

Company	
Name	
Phone	
Email	

Type of Work (Tick)					**Minor – Non Excavation**	x
Location Road (Tick)	Carriageway	x	Footpath	x	Berm	x

Work Location

Physical Address	Various Locations / Streets within Porirua Region

Work Programme

Start Date	01/01/2023	Completion Date	31/12/2023
Duration of Work	24/7	Day / Night	365

Hours of work

Start Time		Finish Time	

Description of Activity

Non excavation works not needing site specific:

Note: All project works or other work not covered under the Generic Tmp / Tmd will need site specific.

Confirmation is required from RCA to see if Generic covers main arterial roads or suburban shopping areas.

Only approved contractors listed on Tmp are covered under Global Car.

ALL CONTRACTORS ARE TO NOTIFY THE RCA PRIOR TO CARRY OUT THEIR WORK ACTIVITY.

All work carried out may involve having 1 to 2man onsite including sub-contractors.

This work will cover inspections / maintenance / locates that can be completed on the same day.

1. Locating council assets.
2. Investigate any leaks to determine what may be required to carry out any repairs.
3. Poor water quality needing to flush hydrants.
4. Operation of hydrants and valves on the same day.
5. Hydrant painting carried out annually.
6. Flow meter testing, need to access chamber to carry out test.
7. Leak detection surveys carried out by approved contractors AD Riley and Detection Services to locate leaks.
8. Utility asset mark outs.
9. 3 Water asset mark outs.
10. Meter reading - check if any issues with meters and carry out final readings.
11. CCTV inspections.

12. Checking condition of Wastewater / Stormwater assets.
13. Smoke / Dye testing on Wastewater / Stormwater assets to identify inflow sources, defects and cross connections, this work can take between 2 – 4 hours and will cover set locations in each suburb.
14. Installation and maintenance of monitoring equipment into manholes to measure flow and overflows from the Wastewater network.
15. Lifting manhole covers to check assets running clear.
16. Clearing Wastewater / Stormwater blockages.
17. Regular hydrant flushing takes approx. 15 mins until run clear cleaning the lines
18. Regular fortnightly / monthly flushing for the 3 waters that can be completed within 3 to 6 hours.
19. Culvert / intake clearing removing debris / trash that may impede the flow of water.
20. Annual pit cleaning to prevent blockages and potential overflows, duration will take no longer than 1.5 hours between 1am to 5.30am.
    No work will be carried out on main arterial roads between 6am to 9am.

Crews and Sub contractors must adhere to the following:

- Ensure proper traffic and pedestrian management is in place.
- Set up correct Tmd to suit the work site.
- Safety induction is carried out as per RCP process
- Ensure safety is adhere to at all times.
- Ensure all efforts are made to minimise disruption to residents, business and pedestrians.
- Make sure relevant documents are onsite.
- Provide photos showing a wide street view of location.
- Photos of Work carried out.
- Clear notes of what work was carried out.
- Site is packed up and left clean and tidy.
- No car will need to be logged in Submitica when carrying out inspection work on same day.

Work Vehicles onsite at various stages of work but not limited to:

Standard work crew:

1 to 2 service vehicles equipped with beacons onsite along with any small plant and equipment to carry out inspections. Crews to set up own Tmd.

Service crews are equipped to set up the following Tmd's only.
Traffic management will be required if you do not carry correct signage.

CC1	F2.1
CC2	F2.2
CC3	F2.5
CC4	F2.6
CC5	F2.7
CC7	J2.16A
CC8	F4.10
CC9	ATMS07
CC10	
CC11	
CC12	

Sub-contractors are to follow the Tmd criteria above, or if you do not have correct signage to set up own Tmd. Any Tmd not listed above will require external traffic management.

Extended crew when needed:

- Traffic management vehicles if unable to set up own traffic.
- Hydro Vac Truck / Digger / Jet Flusher maybe utilised.

Site Specific TMP required depending on the work activities and impact.
Works include sewer blocks on the wastewater network that require entry from a manhole at an intersection and/or in the live lane.
This also includes works on the Stormwater network that may have an impact on traffic and project work taking more than 1 day.

ANY STATE HIGHWAY WORKS WILL BE AT THE DISCRETION OF CAPITAL JOURNEYS TMC
All WORKS APPROVED BY CAPITAL JOURNEYS TMC MUST THEN BE NOTIFIED TO THE TRAFFIC OPERATIONS CENTRE (TOC) PRIOR TO COMMENCEMENT AND POST WORK WORKS ARE TO BE PLACED ON THE WEEKLY ROAD WORKS REPORT
ALL COMPLETED WORKS MUST COMPLY TO WAP CONDITIONS AND ARE TO BE REINSTATED ACCORDING TO NZTA STANDARDS

Quantities of proposed Work (use meters, items, hours and minutes to indicate);

Length of trenching		Number of Cabinets/pedestals effected	
Length of Horizontal/Vertical Drilling		Number of Structures effected (fully explain in description of work)	
Number of holes		Number of assets removed	
Number of Chamber/s effected		Duration of Road / Lane Closure (circle) Hours / Days	
Number of Poles/Posts/Piles effected		Duration of Footpath diversion (circle) Hours / Days	
Number of Car parks/bus stop/taxi stands affected for more than two hours		Duration of property access restricted (circle) Hours / Days	

Health and Safety Policy

Our Purpose

Creating excellence in regional water services for healthy communities

Our Vision

Our people, suppliers and affected parties go home healthy and safe

Our Beliefs

- Health and safety is our top priority
- We look after ourselves; everyone takes personal responsibility for their own health and safety
- We look out for each other, suppliers and the public; we make sure everyone is safe
- Wellington Water takes a methodical approach to health and safety; we continuously review our systems to ensure they are up-to-date and ensure that health and safety is foremost in infrastructure planning and design
- We're committed to health and safety at all times; nobody walks past an unsafe activity or work site - we make it safe

Our Commitments

Leadership

- We make sure our people work in a safe environment
- We make sure our work sites are safe for suppliers, neighbours and the general public
- We empower our people to manage health and safety in all situations and to stop unsafe acts as they happen; we make sure there's a safe working environment before work continues
- We proactively identify and manage hazards and ensure safe behaviour
- We support the safe and early return to work of any of our people who are injured or sick, and support and follow up on anyone who is injured on a Wellington Water site
- We recognise staff and suppliers who practice excellence in health and safety

Systems

- We make sure our people have the training, skills and resources to work safely
- We ensure infrastructure managed by Wellington Water is designed, constructed, operated and maintained safely, and will remain safe for our people, suppliers and the community
- We accurately record, investigate and report incidents and learn from them
- We monitor our health and safety performance and that of our suppliers as a basis for continuous improvement and identifying new and safer ways of working

Working with others

- Our suppliers are required to commit to our vision of our people and suppliers going home healthy and safe
- We make sure all suppliers working on behalf of Wellington Water have high quality health and safety systems in place
- We comply with and exceed all relevant legislation, regulations, codes of practice and industry standards
- We interpret health and safety broadly and work with all stakeholders to achieve our health and safety vision

COLIN CRAMPTON
CHIEF EXECUTIVE

Living Safely Policy

People at the heart of everything we do

Living safely is how we go about every aspect of our lives; all day, every day. It is more than work, it is about integrating our work, home and interests, our desire to get the best out of life, and to be the best we can. It is recognising our strengths and weaknesses, and making positive choices that benefit our wellbeing and way of life, including those of others in the communities in which we live and work.

We will:

- Demonstrate our commitment through active and visible leadership
- Abide by a simple safety management system that encourages health and safety ownership by each and every individual
- Incorporate health and safety into the way we design, plan and do our work
- Work collaboratively with our subcontractors to meet the required health and safety standards
- Enhance our health and safety skills and behaviours through training and development
- Foster a culture of reporting, learning and sharing
- Be empowered to maintain a safe and healthy workplace
- Promote a positive health and wellbeing mindset
- Meet or exceed relevant standards and legal requirements
- Set measurable objectives and targets to ensure continual improvement

C W Bruyn
Managing Director

ROAD SPACE BOOKING

Address:				
Contractor:				
Dates & Times (attended):	**From:**		**To:**	
Dates & Times (unattended):	**From:**		**To:**	
Generic TMP used:				
Diagram (s) used:				
CAR #				

Work Activity and Reasons TTM to remain in place:

Contractor Name:	
Contractors Signature:	
TMC Approval:	

Please attach photos of site active site set up (these photos are to include both ends of the site (inclusive of any side roads), pedestrian/cycle management and the working area.

Wellington Water

Trainee:		**Department:**	
Assessment Date:		**Location:**	
Assessor:		**Operator Experience:**	
Resources:	eSTOP Operations and Service Manual, eSTOP Training Videos		
Rating:	1 = Needs Training; 2 = Able to work under supervision; 3 = Competent; 4 = Able to train others		

OPERATIONAL: To be filled in by Assessor
Assess trainee's demonstrated operational competency in the following:

Key Requirement	**Skill Rating** (Circle)	**Comments**
Install Tripod leg, adjust correctly (height and vertical adjustment) and ballast	1 2 3 4	
Install battery pole and lantern	1 2 3 4	
Adjust Red light indicator correctly	1 2 3 4	
Secures battery in place and connects to lantern (ensuring power is off 1st)	1 2 3 4	
Can power on the lantern correctly	1 2 3 4	
Switches on the Hand Remote Controller (HRC)	1 2 3 4	
Able to clear pre-existing pairs (unpair lanterns)	1 2 3 4	
Correctly pair HRC's to both lanterns (single pair), demonstrates pairing successful	1 2 3 4	
Correctly pair HRC to both lanterns (double pair), demonstrates pairing successful	1 2 3 4	
Perform eSTOP (lantern LED) light test	1 2 3 4	
Correctly sync and activate eSTOP and HRC to control traffic	1 2 3 4	
Align and secure lantern and battery poles	1 2 3 4	
Runs through 3 or 4 cycles for each lantern	1 2 3 4	
Put lanterns into flashing amber mode	1 2 3 4	
Correctly power off and disassemble eSTOP system and stored correctly in provided bags for transport	1 2 3 4	
Able to re-charge HRC	1 2 3 4	
Able to re-charge eSTOP batteries	1 2 3 4	

TECHNICAL KNOWLEDGE:
Operator must demonstrate technical understanding of the following:

Key Requirement	**Operator Response**
Understands when HRC is in "Test Mode" and "Operation Mode"	
Can interpret a "Blue" Status LED	

Can interpret a “Green” Status LED	
Can interpret a “Yellow/Amber” Status LED	
Can interpret a “Blue” Fault LED	
Can interpret a “Green” Fault LED	
Can interpret a “Yellow/Amber” Fault LED	
Can interpret a “Purple” Fault LED	
Can interpret a “Red” Fault LED	
Can interpret the Lantern LED’s	
Describes the fail-safes built into the eSTOP	
Demonstrates understanding of difference between “single” pair and “double” pair and how the fail safes are affected for each	
Understands operation time of HRC and main battery	
Able to perform a soft reset of HRC	
Able to perform a soft reset of eSTOP lantern	
Able to check HRC battery status and interpret battery level	
Able to check main battery status and interpret battery level	
Can troubleshoot non-functional lantern and check fuse	
Describes maximum range of HRC to lantern and describes factors affecting this	
Describes what happens in the event of a comms failure between HRC and lantern during operation	
Can describe Traffic Management requirements to use eSTOPs on the road ie documentation and site layout	
Understands under what conditions the eSTOPs can be controlled with one vs two operators	
Understand minimum requirements for eSTOP operators	

EVALUATION: To be filled in by Assessor

OVERALL RATING	**1 2 3 4**	**Training Required?**	**Yes**	**No**
Comments (e.g. specify if any additional training required or areas of concern)				

Operator I feel I am able to operate this machine safely and competently. If I require any refresher or further training I will advise my Supervisor or Department Manager.

Signature: _____ **Date:** _____

Assessor I hereby verify the above assessment is correct, and I am competent and qualified to undertake this assessment.

Signature: _____ **Date:** _____

RCA consent (eg CAR/WAP) and/or RCA contract reference	

TRAFFIC MANAGEMENT PLAN (TMP) – FULL FORM

Use this form for complex activities. Refer to the NZ Transport Agency's Traffic control devices manual, part 8 Code of practice for temporary traffic management (CoPTTM), section E, appendix A for a guide on how to complete each field.

Organisations /TMP reference	**TMP reference:** ATMS 2022-632	**Contractor (Working space):** **As per attached list**	**Principal** *(Client)*: **Wellington Water**		
		Contractor (TTM): **As per attached list**	**RCA:** **Porirua City Council**		
Location details and road characteristics	**Road names and Suburb**		**House no./RPs From and to**	**Road level**	**Speed Limit**
	Various within the Porirua City Region		Various	01	30/40/50/60 /70/80km/h
Traffic details (main route)	**AADT**		**Peak flows**		
	Various			Start	End
			AM	5:30am	9:00am
			PM	4:00pm	7:00pm

Description of work activity

Non excavation works not needing site specific:

Only approved contractors listed on Tmp are covered under Global Car.

ALL CONTRACTORS ARE TO NOTIFY THE RCA PRIOR TO CARRY OUT THEIR WORK ACTIVITY.

- All work carried out may involve having 1 to 2man onsite including sub-contractors.

This work will cover inspections / maintenance / locates that can be completed on the same day.

1. Locating council assets.
2. Poor water quality needing to flush hydrants.
3. Operation of hydrants and valves on the same day.
4. Hydrant flow testing and painting.
5. Leak detection to locate leaks on the 3 waters network.
6. Leak detection surveys.
7. Mark outs.
8. Meter reading.
9. CCTV inspections that will be completed on the same day.
10. Checking condition of Wastewater / Stormwater assets.
11. Smoke / Dye testing on Wastewater / Stormwater assets to identify inflow sources, defects and cross connections, this work can take between 2 – 4 hours and will cover set locations in each suburb.
12. Installation and maintenance of monitoring equipment into manholes to measure flow and overflows from the Wastewater network.
13. Lifting manhole covers to check assets running clear.
14. Clearing Wastewater / Stormwater blockages.
15. Regular fortnightly / monthly flushing for the 3 waters that can be completed within 3 to 6 hours.
16. Culvert / intake clearing.
17. Annual pit cleaning.

Crews and Sub contractors must adhere to the following:

- Ensure proper traffic and pedestrian management is in place.
- Set up correct Tmd to suit the work site.
- Safety induction is carried out as per RCP process
- Ensure safety is adhere to at all times.
- Ensure all efforts are made to minimise disruption to residents, business and pedestrians.
- Make sure relevant documents are onsite.
- Provide photos showing a wide street view of location.
- Photos of Work carried out.
- Clear notes of what work was carried out.
- Site is packed up and left clean and tidy.

Work Vehicles onsite at various stages of work but not limited to:

- 1 to 2 service vehicles equipped with beacons onsite along with any small plant and equipment to complete the work.
- Hydro Vac Truck / Digger / Jet Flusher maybe utilised.
- Traffic management vehicles if unable to set up own traffic.

RCA consent (eg CAR/WAP) and/or RCA contract reference	

Planned work programme							
Start date	01/01/2023	**Time**	See Below	**End date**	31/12/2023	**Time**	See Below

Consider significant stages, for example:

- road closures
- detours
- no activity periods.

Residential Roads

Installation: 7:00am – 7:30am or whenever site is installed.

Site Active: 7:30am – 17:30pm

Site Removal: 17:30pm – 18:00pm

NIGHTWORKS ARE NOT PERMITTED IN RESIDENTIAL AREAS

Main Road

Installation: 9:00am -9:30am or whenever site is installed

Site Active: 9:30am – 15:30pm

Site Removal: 15:30pm – 16:00pm

Installation: 19:00pm – 19:30pm or whenever site is installed

Site Active: 19:30pm – 5:00am

Site Removal: 5:00am – 5:30am

This TMP is to cover 1 day attended non - excavation works.

Road Space Booking MUST include:

- Location/Address
- Dates/Times of works – attended
- TMP & Diagram(s) used
- Reasons for works/TTM remaining in place, longer than 1 day
- Photos of the active site set up (these photos are to include both ends of the site (inclusive of any side roads), pedestrian/cycle management and the working area.

Based on the photos provided, if the incorrect TTM has been installed (and/or considered dangerous) and/or outside of the approved TMP requirements, a Notice of Non-conformance may be considered

A site specific TMP is required for/when:

- *The generic TMD does not suit/fit the site*
- *A road closure or one way system (partial road closure)*
- *Removal of mobility parking*
- *Unattended sites required*

Plans F2.16 and F2/4 must be approved by TMC.

Any changes to the approved TMP must be documented on the Onsite Record.

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Rotorua City Council
31 January 2023

Parking Restrictions:

Parking restrictions will be installed where required 12-24hrs prior to works commencing. Parking restriction signage is to show actual work times and dates.

INFORMATION ONLY :– vehicles may require towing.

Porirua City Council to be contacted : 04 237 5089

Kerb Side Collection:

Kerb side collection occurs Monday to Friday. Works to halt when kerb side collection vehicle is working in the area or onsite personnel to assist with the collection.

- A risk assessment is to be applied prior to selecting/installing TMDs.
- Checking-process-for-GTMPs checklist form (attached) is to be completed prior to using the GTMP.

- A risk assessment is to be applied prior to selecting/installing TMDs.
- Checking-process-for-GTMPs checklist form (attached) is to be completed prior to using the GTMP.

Inspection activities must be completed as detailed in the approved TMP.			
Type of road	**On shoulder or roadside – no time limit**	**On live lane – up to 5 minutes**	**Over 5 minutes**
Low volume (less than 500vpd) category A or B road environment	**Spotter optional – can be one person activity** Onsite control must be by either a practising STMS of any category, a practising TMO or an Inspector *and in the interim until the warrants are phased out, an STMS of any level or a TC-Inspector.*		**Inspection not permitted.** **Must use a mobile, semi-static, or static closure.**
Category A	**Spotter optional – can be one person activity**	**Spotter required – minimum two person activity**	
	Onsite control must be by either practising STMS of any category, practising TMO or Inspector *(and in the interim until the warrants are phased out):*		
	Road level	*Onsite control*	
	Level 1 road	*TC, TC-Inspector or STMS*	
	Level 2 road	*L2/3 STMS, STMS-NP, or TC-Inspector*	
Category B	**Spotter optional – can be one person activity**	**Spotter required – minimum two person activity**	
	Onsite control must be by either a practising STMS of any category, a practising TMO or an Inspector *and in the interim until the warrants are phased out:*		
	Road level	**Onsite control**	
	Level 1 road	TC, TC-Inspector or STMS	
	Level 2 road (shoulder, roadside or on the lane with speed 60km/h or less)	L2/3 STMS, STMS-NP or TC-Inspector	
	Level 2 road (on the lane with speed 70km/h or more)	L2/3 STMS or STMS-NP	
Category C	**Spotter optional – can be one person activity:** Onsite control must be by either a practising STMS (C) or an Inspector *(and in the interim until the warrants are phased out, a L2/3 STMS, STMS-NP, or TC-Inspector).*	**Inspection not permitted.** **Must use a mobile, semi-static, or static closure.**	

WAKA KOTAHI TTM NOTICE: IMPLEMENTATION OF STAGE 1 OF TRAINING & COMPETENCY MODEL // 93

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Rotorua City Council
31 January 2023

	General rules (apply to all the above) Inspectors must move to avoid traffic. They must not expect traffic to move or slow down to avoid them. There must be CSD to the inspector when on the live lane. On busy roads where traffic volumes and speed affect access to the live lane, peak periods should be avoided or a higher level of TTM considered. Crossing a level LV, 1 or 2 road does not constitute being on a live lane but crossing a level 3 road does, unless a pedestrian crossing facility is being used. **Vehicle** Advance warning in the form of an inspection vehicle fitted with one and preferably two amber flashing beacons and a rear-mounted sign indicating the type of activity taking place must be positioned in advance of the inspection site. A vehicle is not required on a level LV or level 1 road with a permanent speed of less than 65km/h if the inspector remains on a footpath. On roads with a permanent speed of less than 65km/h an amber flashing beacon is not required on the vehicle if the inspector or non-invasive works is on an unsealed shoulder (or further away from the carriageway - including a footpath). **Spotter** A spotter is not required for inspections and non-invasive works on level LV roads. Unless otherwise approved by the RCA, all inspections on the live lane of level 1 and level 2 roads require a spotter. The RCA may provide a list of level 1 roads, times and/or activities suitable for inspection by a single inspector (eg where no level LV roads have been declared by the RCA) Where an unaccompanied inspector is not able to maintain adequate attention (eg due to work tasks or poor visibility), a spotter will be required or another type of traffic management operation used.
Alternative dates if activity delayed	N/A – works will be carried out within the times/dates as listed.

Road aspects affected *(delete either Yes or No to show which aspects are affected)*					
Pedestrians affected?	Potentially	**Property access affected?**	Potentially	**Traffic lanes affected?**	Potentially
Cyclists affected?	Potentially	**Restricted parking affected?**	Potentially	**Delays or queuing likely?**	Potentially

Proposed traffic management methods

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Rotorua City Council
31 January 2023

Installation *(includes parking of plant and materials storage)*	• STMS to contact Metlink (0800 801 700) for any works on a bus route or impacting bus stops 30 mins prior to installation. • STMS to contact WTOC (0800 869 286) for any works affecting or close to traffic signals 30 mins prior to installation. Once on site, the TMP will be implemented as follows: • Identify public safety and site safety hazards and how they will be addressed and place on the hazard document for 'toolbox' briefing • STMS to check the TMP is appropriate to the worksite. • All vehicles are to have correct signage and flashing beacons. They also need to have continuous and appropriate communication with the STMS and each other on an agreed channel at all times • Work vehicles required on site will be parked within the site or parked legally nearby. • Mobile Operations or inspection activities may be required to turn on/off water valves. ***Layout Procedure*** Installation of the site will be done under a level 1 mobile closure with appropriate work vehicles and crew. 1. A site drive through will be conducted first to confirm layout, conditions and environment are all appropriate for works to proceed. 2. Vehicle positioning will be as far to the left as practical and the installation vehicle will be stationary at the installation of each sign, with activity occurring only on the non-traffic side of the vehicle. 3. Advanced warning signage will be installed first on the left, followed by progressive signage installation in a 'loop' fashion around the site area. 4. Once ALL signage for the site has been installed delineation and direction signage will be installed in the following order; a. Longitudinal Delineation (Along the lane) b. Tapers (Shifting) & RD6 signage c. Tapers (Merging) & RD6 signage Once all delineation is installed and prior to personnel, vehicle, plant and machinery populating the worksite, a drive through check must be performed by the STMS to ensure the site has been set up as per the selected TMDs, this should include the checking of worksite layout distances.

Attended (day)	• An STMS or delegated TC/TMO must be onsite at all times. • TC/STMS to assist pedestrians/cyclists/driveways and any resident/business driveways. • For Stop/Stop and Stop/Go setups, cyclists will be sent prior to any vehicles. • STMS/TC will complete 2 hourly site checks and document on the onsite record. **Works near Signals:** • Any affected signal loops must be notified to WTOC during the pre-installation call to allow them to adjust signal management. **Works near Pedestrian Crossings:** • TC's to guide pedestrians through/around the closure. **Works near a Bus Stop:** **Bus stop integrated into MTC Stop Point** • TC's on stop/go are to stop each bus and assist with loading & unloading of passengers as required. • Bus stop signage is to direct pedestrians towards the stop point **Bus stop relocated away from site** • Bus stop signage is be placed to show patrons where the relocation is. • Temporary bus stop signage is to be used • Parking restrictions are to be in place at the relocated bus stop **Works near a School:** School will be notified of emergency works. Works will be minimized where possible at school drop off or pick up times.
Attended (night)	• An STMS or delegated TC/TMO must be onsite at all times. • TC/STMS to assist pedestrians/cyclists/driveways and any resident/business driveways. • For Stop/Stop and Stop/Go setups, cyclists will be sent prior to any vehicles. • STMS/TC will complete 2 hourly site checks and document on the onsite record. • Additional lighting may be required/supplied. • Noise will be kept to a minimum where possible. **Works near Signals:** • Any affected signal loops must be notified to WTOC during the pre-installation call to allow them to adjust signal management. **Works near Pedestrian Crossings:** • TC's to guide pedestrians through/around the closure. **Works near a Bus Stop:** **Bus stop integrated into MTC Stop Point** • TC's on stop/go are to stop each bus and assist with loading & unloading of passengers as required. • Bus stop signage is to direct pedestrians towards the stop point **Bus stop relocated away from site** • Bus stop signage is be placed to show patrons where the relocation is. • Temporary bus stop signage is to be used • Parking restrictions are to be in place at the relocated bus stop
Unattended (day)	• An unattended site is not required for non-excavation works.
Unattended (night)	• An unattended site is not required for non-excavation works.
Detour route	A detour route is not required or approved in the TMP

	~~Does detour route go into another RCA's roading network? No~~ ~~*If Yes, has confirmation of acceptance been requested from that RCA?* No~~ ~~***Note:** Confirmation of acceptance from affected RCA must be submitted prior to occupying the site.*~~
Removal	STMS to contact Metlink (0800 801 700) upon site removal STMS to contact WTOC (0800 869 286) upon site removal. Work plant / vehicles to be removed from site before closure is removed Removal of the site will be done under a level 1 mobile closure with appropriate work vehicles and crew. 1. Workspace delineation to be removed first (by either removing to the kerb for later collection or directly onto a stationary working vehicle) 2. Centreline delineation may now be removed using the same method as installation 3. Once all delineation is removed – sign removal may commence in a clockwise 'loop' fashion (leaving advanced warning signage in place till last) 4. A full site check being conducted prior to site departure. The STMS will carry out the final check before leaving the site.

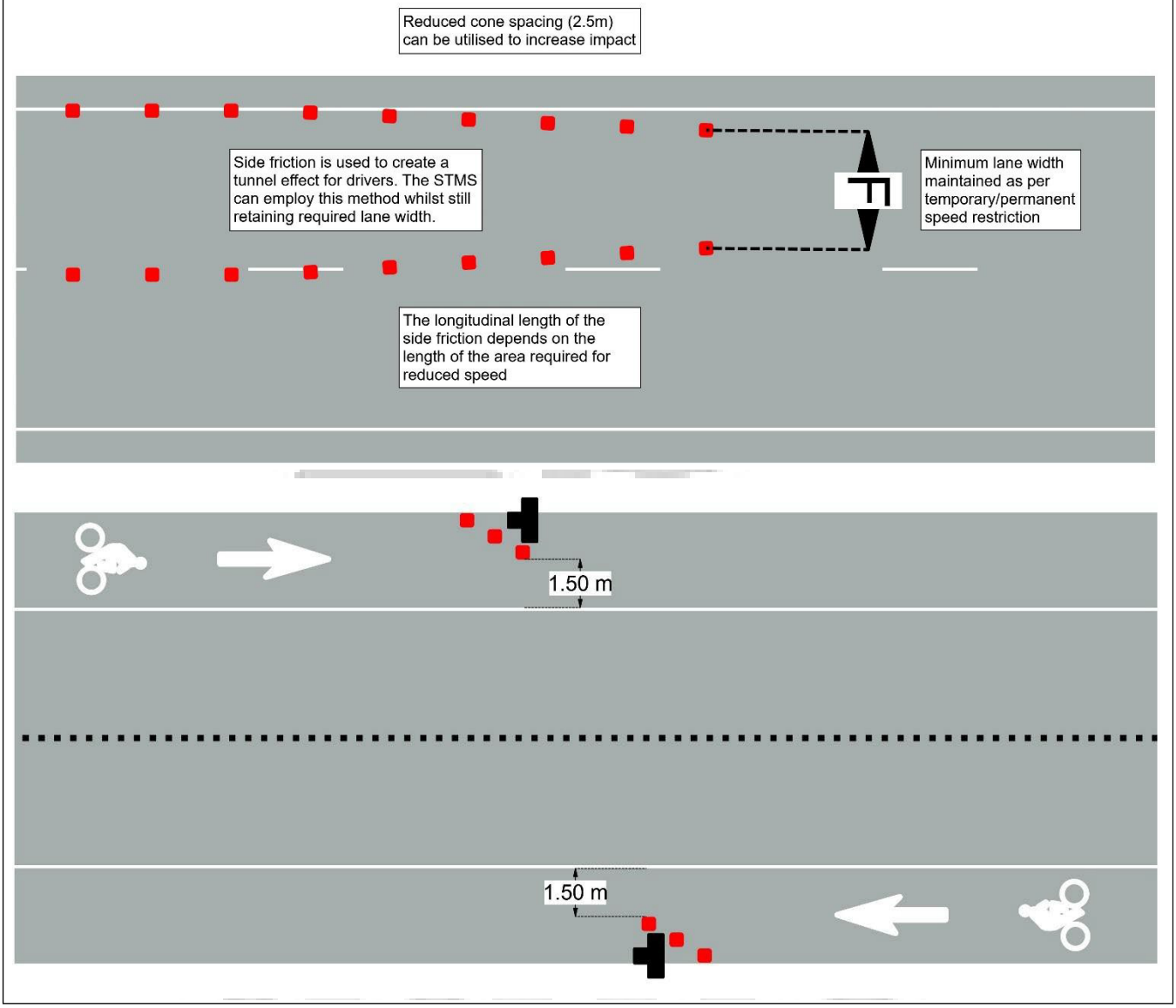
Proposed TSLs *(see TSL decision matrix for guidance)*

	TSL details as required Approval of Temporary Speed Limits (TSL) are in terms of Section 6 of Land Transport Rule: Setting of Speed Limits 2017, Rule 54001/2017 *(List speed, length and location)*	**Times** *(From and to)*	**Dates** *(Start and finish)*	**Diagram ref. no.s** *(Layout drawings or traffic management diagrams)*
Attended day/night	A temporary maximum speed limit is hereby fixed for motor vehicles travelling over the length of ____ situated between_____(house no./RP) and ____ (house no./RP) on_____(street or road name) STMS to document on the Onsite Record daily.	7am – 6pm Or 9am – 4pm Or 7pm – 5:30am	01/01/2023 - 31/12/2023	**F2.11, F2.12, F2.13, ATMS02, F2.14, ATMS04, F2.22, F2.15, F2.16, F2.17, F2.18, F2.19, F2.20, F2.21, F2.30, F2.31, F2.8, F2.9, ATMS03, J2.19a, J2.20a, J2.20b, J2.20c, J2.20d, J2.20e,**
Unattended day/night	~~A temporary maximum speed limit is hereby fixed for motor vehicles travelling over the length of ____ situated between_____(house no./RP) and ____ (house no./RP) on_____(street or road name)~~	N/A	N/A	**N/A**
TSL duration	Will the TSL be required for longer than 12 months? ***If yes**, attach the completed checklist from section I-18: Guidance on TMP Monitoring Processes for TSLs to this TMP.*			No

Positive traffic management measures

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Rotorua City Council
31 January 2023

- Side friction delineation installed from TSL to the start of the taper.
- Additional cones may be placed on centerlines, edgelines or shoulders to increase site safety and reduce vehicle speed.
- Use of paddles and TSL
- Cone offset delineation – where cones are placed either side of the lane(s), the cones on one side are placed longitudinally offset from the other by half a cone spacing.



Contingency plans		
Generic contingencies for: • major incidents • incidents • pre planed detours. *Remove any options which do not apply to your job*	**Major Incident** A major incident is described as: • Fatality or notifiable injury - real or potential • Significant property damage, or • Emergency services (police, fire, etc) require access or control of the site.	**Actions** The STMS must immediately conduct the following: • stop all activity and traffic movement • secure the site to prevent (further) injury or damage • contact the appropriate emergency authorities • render first aid if competent and able to do so • notify the RCA representative and / or the engineer • under the guidance of the officer in charge of the site, reduce effects of TTM on the road or remove the activity if safe to do so • re-establish TTM and traffic movements when advised by emergency authorities that it is safe to do so • Comply with any obligation to notify WorkSafe.
	Incident An incident is described as: • excessive delays - real or potential • minor or non-inquiry accident that has the potential to affect traffic flow • structural failure of the road.	**Actions** The STMS must immediately conduct the following: • stop all activity and traffic movement if required • secure the site to prevent the prospect of injury or further damage • notify the RCA representative and / or the engineer • STMS to implement a plan to safely remove TTM and to establish normal traffic flow if safe to do so • re-establish TTM and traffic movements when it is safe to do so and when traffic volumes have reduced.
	~~**Detour**~~ ~~If because of the on-site activity it will not be possible to remove or reduce the effects of TTM once it is established a detour route must be designed. This is likely for:~~ • ~~excessive delays when using an alternating flow design for TTM~~ • ~~redirecting one direction of flow and / or~~ • ~~total road closure and redirection of traffic until such time that traffic volumes reduce and tailbacks have been cleared.~~ ~~The risks in the type of work being undertaken, the risks inherent in the detour, the probable duration of closure and availability and suitability of detour routes need to be considered.~~ ~~The detour and route must be designed including:~~ • ~~pre- approval form the RCA's whose roads will be used or affected by the detour route~~ • ~~ensure that TTM equipment for the detour - signs etc are on site and pre installed.~~	~~**Actions**~~ ~~When it is necessary to implement the pre-planned detour the STMS must immediately undertake the following:~~ • ~~Notify the RCA and / or the engineer when the detour is to be established~~ • ~~Drive through the detour in both directions to check that it is stable and safe~~ • ~~Remove the detour as soon as it practicable and safe to do so and the traffic volumes have reduced and tailbacks have cleared~~ • ~~Notify the RCA and / or the engineer when the detour has been disestablished and normal traffic flows have resumed.~~

	Note also the requirements for no interference at an accident scene: In the event of an accident involving serious harm the STMS must ensure that nothing, including TTM equipment, is removed or disturbed and any wreckage article or thing must not be disturbed or interfered with, except to: • save a life of, prevent harm to or relieve the suffering of any person, or • make the site safe or to minimise the risk of a further accident; or • maintain the access of the general public to an essential service or utility, or • prevent serious damage to or serious loss of property, or • follow the direction of a constable acting in his or her duties or act with the permission of an inspector.
Other contingencies to be identified by the applicant *(i.e. steel plates to quickly cover excavations)*	This will be determined on a case-by-case basis. Where achievable works will stop until emergency or delays have been cleared. Should signals or e-STOPs fail – Manual Traffic Control is to be installed immediately (refer to F2.14 & F2.22).

Authorisations				
Parking restriction(s) alteration authority	**Will controlled street parking be affected?**	Yes (potentially)	**Has approval been granted?**	N/A
	Site Specific TMP will be submitted if mobility parking is affected.			
Authorisation to work at permanent traffic signal sites	**Will portable traffic signals be used or permanent traffic signals be changed?**	Yes (potentially)	**Has approval been granted?**	No
	WTOC to be notified 30 mins prior to site installation and upon removal.			
Road closure authorisation(s)	**Will full carriageway closure continue for more than 5 minutes (or other RCA stipulated time)?**	No	**Has approval been granted?**	No
	N/A			
Bus stop relocation(s) – closure(s)	**Will bus stop(s) be obstructed by the activity?**	Yes (potentially)	**Has approval been granted?**	No
	Metlink will be notified 30 mins prior to installation and upon removal.			
Authorisation to use portable traffic signals	**Make, model and description/number**	**eSTOP Portable Traffic Signals:** model# • 627 - 1, 627 - 2 • 628 - 1, 628 - 2 • 629 - 1, 629 - 2 • 630 - 1, 630 - 2 • 631 - 1, 631 - 2		
	NZTA compliant?	Yes		

EED			
Is an EED applicable?	EED is not required	**EED attached?**	EED is not required

Delay calculations/trial plan to determine potential extent of delays

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Rotorua City Council
31 January 2023

e-STOP & Stop Go Closures:

Delays of up to 5 minutes can be expected due to the nature of the TTM implemented. The STMS is to take measures to ensure delays remain under 5 minutes at all times, and queues do not extend past the advance warning signage.

If delays are occurring or excessive queueing is apparent, the STMS is to implement one of the following contingency plans;

1) Traffic Metering

   Send only a specific amount of vehicles per side instead of clearing the entire queue

2) Pause works and open site

   Make the site safe, remove plant and vehicles from the carriageway and open the tapers

3) Prioritise high flow route

   Send vehicles from the approach with the highest flow first. Hold side street traffic for slightly longer if required.

4) Install additional signage

   Install T2A/T234 "Warning – Hidden Queue" signage up to 2xB from the initial advance warning signage for additional advance warning

STMS will continuously monitor for delays – TMC will be notified of any excessive delays.

Public notification plan	
A letter drop to residents and businesses is to be completed 5 working days prior to works commencing. WTOC notification for any works which are in close proximity to traffic signals and/or for a communications plan on permanent VMS within Porirua City region.	
Public notification plan attached?	No

On-site monitoring plan	
Attended *(day and/or night)*	An STMS or delegated TC/TMO will be on site at all times. 2 Hourly Site Checks to be documented on the on-site record. STMS/TC to monitor and assist pedestrians, cyclists and driveways when needed.
Unattended *(day and/or night)*	An unattended site is not required for non-excavation works.

Method for recording daily site TTM activity *(eg CoPTTM on-site record)*

- Hazard ID sheet
- CoPTTM on-site record.
- Checking process for Generic TMPs form to be completed prior to set up of a worksite when using this TMP.

Site safety measures

- All visitors/contractors to be inducted and hazard ID completed
- PPE gear to be worn by all on site
- Toolbox meeting to be held prior to work commencing.
- Arm bars to be installed around the work area.
- STMS/TC to monitor and assist pedestrians, cyclists and driveway access at all times when required.
- Pedestrian ramps to be installed when required.

Temporary safety barrier system	**Will a temporary safety barrier system be used at this worksite?**	No	**If yes, has the temporary safety barrier system been designed by an installation designer and independently reviewed as being fit for purpose?**	N/A
	Statement from temporary safety barrier installation designer attached		N/A	

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

Other information

LEVEL 1 LAYOUT DISTANCES TABLE

Permanent speed limit or RCA-designated operating speed (km/h)		≤50	60	70	80	90	100
Traffic signs							
A	Sign visibility distance (m)	50	60	70	80	90	100
B	Warning distance (m)	50 or 30*	80	105	120	135	150
C	Sign spacing (m)	25 or 15*	40	50	60	70	75
Safety zones							
D	Longitudinal (m)	10 or 5*	15	30	45	55	60
E	Lateral (m)	1	1	1	1	1	1
Tapers							
G	Taper length (m)#	30	50	70	80	90	100
K	Distance between tapers (m)	40	50	70	80	90	100
Delineation devices							
Cone spacing in taper (m)		2.5	2.5	5	5	5	5
Cone spacing: Working space (m)		5	5	10	10	10	10

* Larger minimum distances apply on all state highways and also on all multi-lane roads. The smaller minimum distances may be applied on other roads to accommodate road environment constraints.

\# On non-state highways with speeds 50km/h or less, a **10m taper** (with cones at 1m centres) may be used when there are road environment constraints (eg intersections and commercial accesses).

On all roads where shoulder width is less than 2.5m and the activity does not affect the live lane, a **10m shoulder taper** is permitted (with at least 5 cones at no greater than 2.5m centres).

A **taper of 30m** (with cones at 2.5m centres) **must** be used where manual traffic control (stop/go), portable traffic signals or priority give way are employed.

Lane widths

Speed (km/h)		30	40	50	60	70	80	90	100
F	Lane width (m)	2.75	2.75	3.0	3.0	3.25	3.25	3.5	3.5

Except for delineation device spacings, which are maximum values, the distances specified in the above tables are minimum values.

Attached Diagrams

Pedestrian Management

1. ATMS05 – Pedestrian Escort (1st Choice)
2. F2.1 – Pedestrian Diversion (berm) (2nd Choice)
3. F2.2 – Pedestrian Diversion (berm) (3rd Choice)
4. F2.3 – Pedestrian Diversion (carriageway) (4th Choice)
5. F2.4 – Footpath Closed (5th Choice) Requires TMC approval

Works on berm/shoulders/Lane Width Reduction

6. CC1 – Works on berm or footpath
7. CC2 – Traffic not crossing road centre
8. CC3 - Works on berm or footpath – vehicle parked on berm
9. CC4 – Footpath diverted onto shoulder or parking lane
10. CC5 – Footpath
11. F2.5 – Works on berm
12. F2.6 – Works on parking lane
13. F2.7 – Shoulder Closure
14. F2.11 – Lane Width Reduction
15. F2.12 – Lane Width Reduction (median)

Inspection Activities

16. F4.10 – Inspection Activity
17. ATMS07 – Inspection Activity – Centre of Road

Lane Closures/Diversions/e-STOP/MTC/Traffic Lights/Centre Of Road

18. F2.13 – Two Lane Diversion
19. ATMS02 -2 Way e-STOP
20. F2.14 – 2 Way MTC
21. ATMS04 – e-STOP with MTC
22. F2.22 – 3-4 Way MTC
23. F2.15 – Stop Stop
24. F2.16 – Priority Give Way Requires TMC approval
25. F2.17 – Traffic Lights
26. F2.18 – Works in centre of road
27. F2.19 – Intersection
28. F2.20 – Intersection
29. F2.21 – Works in middle of intersection
30. F2.30 – Left Lane Closure (1 way, 2 lane)
31. F2.31 – Right Lane Closure (1 way, 2 lane)

Mobile Operations/Semi Statics

32. F4.1 – Mobile Operation – 5m from edgeline
33. F4.2 – Mobile Operation – within 5m of edgeline
34. F4.3 – Mobile Operation – with pilot
35. F4.4 – Mobile Operation – work vehicle in lane
36. ATMS06 – Semi Static (right or left lane)
37. Mobile Closure – L1 – Install & Removal

Cycle Lanes

38. F2.8 – Cycle Lane Diversion
39. F2.9 – Cycle Lane Diversion
40. ATMS03 – Cycle Lane e-STOP

Section J diagrams

41. J2.16a
42. J2.19a
43. J2.20a
44. J2.20b
45. J2.20c
46. J2.20d
47. J2.20e

RCA consent (eg CAR/WAP) and/or RCA contract reference	

Contact details						
	Company / Council	**Name**	**24/7 contact number**	**CoPTTM ID**	**Qualification**	**Expiry date**
Principle	Wellington Water	Tim Harty	021 451 104	-	-	-
TMC	Porirua City Council	Phil Gollings	021 474917	-	-	-
Engineers' representative	Wellington Water	Valitha Roos	021 510 923	-	-	-
Service Delivery Manager	Wellington Water	Steve Watt	021 507 440	-	-	-
Contractor Interim Contacts	ATMS	Paul Rudman	021 529 729	-	-	-
	Citycare	Wayne Kelland	027 263 8731	-	-	-
	Citycare	Mark Thompson	027 542 6244	-	-	-
	Citycare	Paul Coles	03 941 7225	-	-	-
	Dawson Waste Services Ltd	Jan Godfrey	04 528 9909	-	-	-
	Davies Waste Solutions	Evan Davies	027 283 8831			
	RS Cabling	Nathan Rose	027 275 4317	-	-	-
	SAP Contractors	Glenn Churches	027 272 1666	-	-	-
	SAP Contractors	Jonathon Manava	027 216 6651	-	-	-
	Silver Lining Contracting Ltd	Renee Wilkie	021 0828 0647	-	-	-
	Greenstone	Whai Williams	027 4430 791	-	-	-
	Cubic Metre	Taupau Peni	021 345 379	-	-	-
	Cubic Metre	Andrew McWhirter	021 345 79			
	Kahu Contractors	Harold Paul	021 027 37643	-	-	-
	Jet black Asphalt	Neville Playford	027 208 9309	-	-	-
	GP Friel	Dave Phillipson	022 657 2402	-	-	-
	Detection Services	Tim Armstrong	027 4576 113	-	-	-
	Detection Services	Ross Beckett	04 915 0530	-	-	-
	E Carson & Sons	Eddie Carson	027 442 4343	-	-	-
	AD Riley & Co Ltd	Chris Parkinson	021 305 637	-	-	-
	P & N Siteworks	Peter Lindsey	027 2358 363	-	-	-
	Central Plumbing (Wellington) Ltd	Anthony Eden	022 6385 704	-	-	-
	WAL Gordon Plumbing	Wal Gordon	027 2114 007	-	-	-
	Cardno NZ Ltd	Jane Nichols	021 199 5917	-	-	-
	Intergroup	Wayne Carling	027 239 7187	-	-	-
	Intergroup	Kerrod Foaese	021 133 5973	-	-	-
	G P Friel Ltd	Dave Philipson	022 657 2402	-	-	-
	Southeys Group	Leonard Vertigans	027 275 4315	-	-	-
	S & R Asphalts Ltd	Scott Hay	027 440 2405	-	-	-
	Multi Civil Contractors Limited	Cody Pepere	027 322 6483	-	-	-
	Hydrotech Group	Neil Cherry	021 730 502	-	-	-
	Hydrotech Group	Paul Reynolds	021 730 486	-	-	-
	Quik-Shot Trading as AES	Eddy Warda	022 018 0705	-	-	-
	HCC Trade Waste Team	Pakau Tanirau	027 2441 6376	-	-	-

	HCC Trade Waste Team	David Fahey	027 642 3345	-	-	-
	Drain Doctors	Ian Pauley	04 566 9252	-	-	-
	Wellington Pipelines	James Fruean	027 499 9223	-	-	-
	PTS	Bux Manuseuga	027 836 5243	-	-	-
	Mottmac	Patrick Wharewera-Jones	027 746 8395	-	-	-
	Mottmac	Matthew Cooper	021 688 013	-	-	-
	Vac U Digga	Kathy Fandham	021 246 3615			
	Ace Drain Unblockers	Rudolf Roppl	027 249 7492			
	Concrete Cutting NZ	Aldon Solomon	021 737 674			
	Contract Sealing	Chris Curtis	027 487 3726			
	Concrete Solutions Ltd	Cameron Dearlove	021 744 317			
	Construction Contracts Limited (CCL)	Steve Scrimshaw	(04) 567 9777			
	E N Ramsbottom Ltd	Michelle Hoffman	027 471 6246			
	Horokiwi Paving Limited	Peter Green	027 443 2206			
	McCormack Group	Willy McCormack	027 449 3985			
	PCL Contracting Ltd	Luke Lee	027 210 2079			
	Podium Concrete	Bradley Roberts	(04) 237 9595			
	Pope & Gray	Jeremy Gray	027 466 5538			
	Precision Concrete Pumping & Spraying Limited	Steve Graham	027 233 1794			
	Rob's Concrete Cutting	Robert Betty	021 631 957			
	Shane McGrath Contracting	Shane McGrath	027 493 8911			
	Solid Art Concrete	Nui Ririnui	022 126 2130			
	TQ Concrete Placers Ltd	Tom Paki	027 404 2032			
TTM Interim Contacts	ATMS	Vena Lam Sam	021 767 165	39930	(ABC)-NP R L2/3 P	22/09/24
	ATMS	Martyn Sauaiga	027 348 9478	72781	L 2/3 NP	30/07/23
	PTS	Bux Manuseuga	027 836 5243	-	-	-
	Wellington Water	Steve Watt	021 507 440	-	-	-
	Citycare	Wayne Kelland	027 263 8731	-	-	-
	Citycare	Mark Thompson	027 542 6244	-	-	-
	SAP Contractors	Glenn Churches	027 272 1666	-	-	-
	SAP Contractors	Jonathon Manava	027 216 6651	-	-	-
	Silver Lining	Bill Wilkie	021 082 20647	-	-	-
	Greenstone	Whai Williams	04 566 0890	-	-	-
	Cubic Metre	Taupau Peni	021 345 379	-	-	-
	Jet black Asphalt	Neville Playford	027 2089309	-	-	-
	Cardno NZ Ltd	Jane Nichols	021 199 5917	-	-	-
	RS Cabling	Nathan Rose	027 275 4317	-	-	-
	HCC Trade Waste Team	Pakau Tanirau	027 2441 6376	-	-	-

	HCC Trade Waste Team	David Fahey	027 642 3345	-	-	-
	P & N Siteworks	Peter Lindsey	027 2358 3637	-	-	-
	Central Plumbing (Wellington) Ltd	Anthony Eden	022 6385 704	-	-	-
	Detection Services	Tim Armstrong	027 4576 113	-	-	-
	Quik-Shot Trading as AES	Eddy Warda	022 018 0705	-	-	-
	Hydrotech Group	Neil Cherry	021 730 502	-	-	-
	Hydrotech Group	Paul Reynolds	021 730 486	-	-	-
	Intergroup	Wayne Carling	027 239 7187	-	-	-
	Intergroup	Kerrod Foaese	021 133 5973	-	-	-
	Shepherd Traffic Management Solutions	Richard Shepherd	029 777 9099	-	-	-
	Men At Work	Kurt Puryer-Smith Todd Lynch Ratu Kapaiwai	027 274 2369 027 282 0998 027 514 9675			
	TPlans Limited	Tayla Varcoe	021 717 592			
	Traffic Safe	Julie Hitchock	027 450 6565			
	Traffic Management NZ Ltd	Ian Satherley	021 400 023			
Others as required	WTOC		0800 869 286	-	-	-
	Metlink Contact Centre		0800 801 700	-	-	-
	Porirua City Council Corridor Access Officer	Felise Tavo	027 803 0470	-	-	-

TMP preparation							
Preparation	Dylan Green	19/12/2022	DGreen	68522	L 2/3 NP	-	17/03/2023

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

RCA consent (eg CAR/WAP) and/or RCA contract reference	

	Name (STMS qualified)	Date	Signature	ID no.	Qualification	TTMP	Expiry date

** additional column added to indicate the attended (or confirmed booking) date of the named designer on the NZTA Temporary Traffic Management Planners (TTMP) workshop as required by the NZTA technical note, issued 9 December 2019*

This TMP meets CoPTTM requirements				Number of diagrams attached	47	
TMP returned for correction *(if required)*						
	Name	*Date*	*Signature*	*ID no.*	*Qualification*	*Expiry date*
Engineer/TMC to complete following section when approval or acceptance required						
Temporary safety barrier system	**The attached temporary road safety barrier design has been independently reviewed as being fit for purpose**				Not required	
TMP Approved						
	Name	*Date*	*Signature*	*ID no.*	*Qualification*	*Expiry date*
Acceptance by TMC *(only required if TMP approved by engineer)*						
	Name	*Date*	*Signature*	*ID no.*	*Qualification*	*Expiry date*

Qualifier for engineer or TMC approval

Approval of this TMP authorises the use of any regulatory signs included in the TMP or attached traffic management diagrams.

This TMP is approved on the following basis:

1. To the best of the approving engineer's/TMC's judgment this TMP conforms to the requirements of CoPTTM.
2. This plan is approved on the basis that the activity, the location and the road environment have been correctly represented by the applicant. Any inaccuracy in the portrayal of this information is the responsibility of the applicant.
3. The TMP provides so far as is reasonably practicable, a safe and fit for purpose TTM system.
4. The STMS for the activity is reminded that it is the STMS's duty to postpone, cancel or modify operations due to the adverse traffic, weather or other conditions that affect the safety of this site.

Notification to TMC prior to occupying worksite/Notification completed			
Type of notification to TMC required		**Notification completed**	Date Time

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Rotorua City Council
31 January 2023

TMP or generic plan reference	

ON-SITE RECORD MOBILE OPERATIONS *(On-site record must be completed and retained with the applied TMP for 12 months)*	**Today's date**	

STMS in charge of TTM

Name	*NZTA warrant*	*TTM ID Number*	*NZTA warrant expiry date*	*STMS signature*	*Time*

In charge STMS pre-start check

Mandatory Items to be checked as fit for purpose	**High-visibility garments are fit for purpose, in an acceptable condition and worn correctly?**	**Vehicle Xenon (or LED)/Beacons are fit for purpose?**	**LAS/RD6/AWVMS/VMS/ Horizontal arrow boards are fit for purpose?**	**TMAs are fit for purpose**	**Two-way radios available, operating OK and batteries are fully charged**	**Correct signs for work operation are fitted to all vehicles and are fit for purpose**
Time the check was completed:		**In charge STMS signature:**				

Operation record *(To be completed for all inspection worksites/runs, mobile runs, semi-static sites)*

Affected Road Environment Details			**Work Activity Timing**	
Affected Road name(s)	**Worksite start point**	**Worksite end point**	**Start**	**End**

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

TMP or generic plan reference	

Checks *(must be completed and documented at least every 30 minutes)*

Mobile closure

Time	Distances between vehicles maintained	Lateral positioning of vehicles maintained	LAS/RD6/AWVMS/VMS/Horizontal arrowboards continue to operate correctly	Road clear and available for planned work?	Static equipment maintained?	Safety zones maintained?	Working space adequate and maintained?

Comments relating to any changes and or improvements to the approved TTM/TMP

Time of comment	Detail

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

WAKA KOTAHI NZ TRANSPORT AGENCY

TMP or generic plan reference	

ON-SITE RECORD On-site record must be retained with TMP for 12 months.	Today's date	

Location details	Road names(s):	House number/RPs:	Suburb:

Working space

Person responsible for working space		
	Name	*Signature*

Where the STMS/TC is responsible for both the working space and TTM they sign above and in the appropriate TTM box below

TTM

STMS in charge of TTM					
	Name	*TTM ID Number*	*Warrant expiry date*	*Signature*	*Time*
Worksite handover accepted by replacement STMS					
	Name	*ID Number*	*Warrant expiry date*	*Signature*	*Time*
	Tick to confirm handover briefing completed				

Delegation

Worksite control accepted by TC/STMS-NP					
	Name	*ID Number*	*Warrant expiry date*	*Signature*	*Time*
	Tick to confirm briefing completed				

Temporary speed limit

Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
	TSL installed				
	TSL remains in place				
From: To:	TSL removed				

Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
	TSL installed				
	TSL remains in place				
From: To:	TSL removed				

Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
	TSL installed				
	TSL remains in place				
From: To:	TSL removed				

Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
	TSL installed				
	TSL remains in place				
From: To:	TSL removed				

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

TMP or generic plan reference	

Worksite monitoring

TTM to be monitored and 2 hourly inspections documented below.

Items to be inspected	TTM set-up	2 hourly check	2 hourly check	2 hourly check	2 hourly check	2 hourly check	TTM removal
High-visibility garment worn by all?							
Signs positioned as per TMP?							
Conflicting signs covered?							
Correct delineation as per TMP?							
Lane widths appropriate?							
Appropriate positive TTM used?							
Footpath standards met?							
Cycle lane standards met?							
Traffic flows OK?							
Adequate property access?							
Barrier deflection area is clear? *(Refer to Barrier design statement)*							
Add others as required							
Time inspection completed:							
Signature:							

Comments:

Time	Adjustment made and reason for change

Checking process for generic TMPs

This form, or a similar company record, must be completed prior to set up of a worksite where a generic TMP is used.

Location details

Road name(s)		**House number/RP(s)**		**Suburb**	
Road name(s)		**House number/RP(s)**			

Generic TMP reference no.		**TMD no(s).**		***Note:*** *The checking process must include all the TMDs to be used*

Category	Points to consider	Y	N	Comment/Mitigation
Road level	Is this at the correct road level?			
Shape	Are the following catered for in the generic TMP? • Intersections • Vertical Curves (hills) • Horizontal Curves (corners) • Sufficient advance warning			
Direction and protection	Check that there is: • sufficient length to place the planned direction and protection • sufficient road width to place the planned direction and protection ie minimum lane width is 2.75m • adequate sight distance on both sides • sufficient room to accommodate required positive traffic control			
Proposed speed restrictions	Is a TSL required? Refer to the TSL decision matrix in CoPTTM (section E Appendix B)			
Plant and equipment	Will your plant and equipment fit within the designated working space?			
Personal safety	Are all workers able to carry out their work within the designated working space? If not are they covered by the rules for inspections?			
Layout diagrams	Is diagram(s) detailed in the generic TMP? Does the diagram(s) match the written section of the TMP?			
RCA notification	Has the RCA been notified?			

Completed by:

STMS/TC in charge of worksite (All names to be entered before site set-up)					
	Name	*Signature*	*Date*	*Qualification*	*ID number*
	Name	*Signature*	*Date*	*Qualification*	*ID number*

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2022

ROAD SPACE BOOKING

Address:				
Contractor:				
Dates & Times (attended):	**From:**		**To:**	
Dates & Times (unattended):	**From:**		**To:**	
Generic TMP used:				
Diagram (s) used:				
CAR #				

Work Activity and Reasons TTM to remain in place:

Contractor Name:	
Contractors Signature:	
TMC Approval:	

Please attach photos of site active site set up (these photos are to include both ends of the site (inclusive of any side roads), pedestrian/cycle management and the working area.

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council

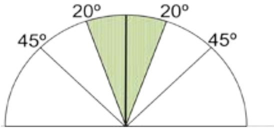
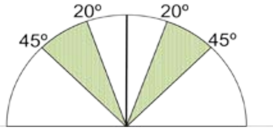
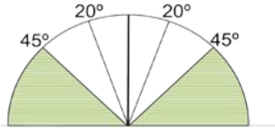
31 January 2023

Wellington Water

TEMPORARY SPEED LIMIT (TSL) DECISION MATRIX WORKSHEET

INSTRUCTIONS
Select the appropriate road condition description for each of the four factors, and in the right hand circle list the chosen TSL for that road condition. Transfer lowest TSL to the bottom circle.

Appendix B

	EXCELLENT	AVERAGE	BELOW AVERAGE	POOR	Possible Temporary Speed Limit
	110 100 90	80 70	60 50	40 30 20	
1. Minimum Lane Width					
	3.5m	3.25m	3.00m	2.75m	30
2. Pavement / Surface Condition					
	The shoulder and lane is clear of loose or greasy material and the traveled way is smooth	The road is close to normal condition except for a few minor defects (eg small pot holes or a few pieces of loose aggregate) **70km/h** where new seal has been swept but not marked	Defects and / or loose material on the lane (eg unattended reseals) **50km/h** for protection of a new seal	There are major defects and / or significant loose material on the lane (eg recently milled surface , large stones, steel plates)	50
3. Visibility and Alignment					
	There is greater than 140m visibility to the first cone in taper, **and** the worksite has not imposed a change in alignment	There is less than 140m visibility to the first cone in taper, **or** vehicles are deflected by 20 degrees or less from the original direction of travel  Deflected by less than 20º	There is less than 60m visibility to the first cone in taper, **or** vehicles are deflected by 20-45 degrees from the original direction of travel  Deflected by 20º to 45º	There is less than 30m visibility to the first cone in taper, **or** vehicles are deflected by more than 45 degrees from the original direction of travel  Deflected more than 45º	50
4. Site Clutter					
	Low site clutter, clear vehicle lanes, cycle lanes and footpaths	Some site clutter either plant or materials, vehicle lanes, cycle lanes and footpaths are lightly trafficked	Considerable site clutter requires additional management to guide vehicles though the site. Some queues of road users	Has numerous driver distractions including construction traffic. Cycle lanes or footpaths are closed. **30km/h** for portable traffic signals, MTC operations or where traffic has to traverse the actual active working space (either in a delineated single lane or where traffic is not separated from the working space)	50

Is the lowest speed 80km/h or less and at least 10km/h below the permanent speed?

Yes → **Use this Temporary Speed Limit**

No → **No Temporary Speed Limit Required**

30

Click here to reset

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

Methodology:
PEDESTRIAN PROVISION

Detail:
FOOTPATH CLOSED - PEDESTRIANS ESCORTED

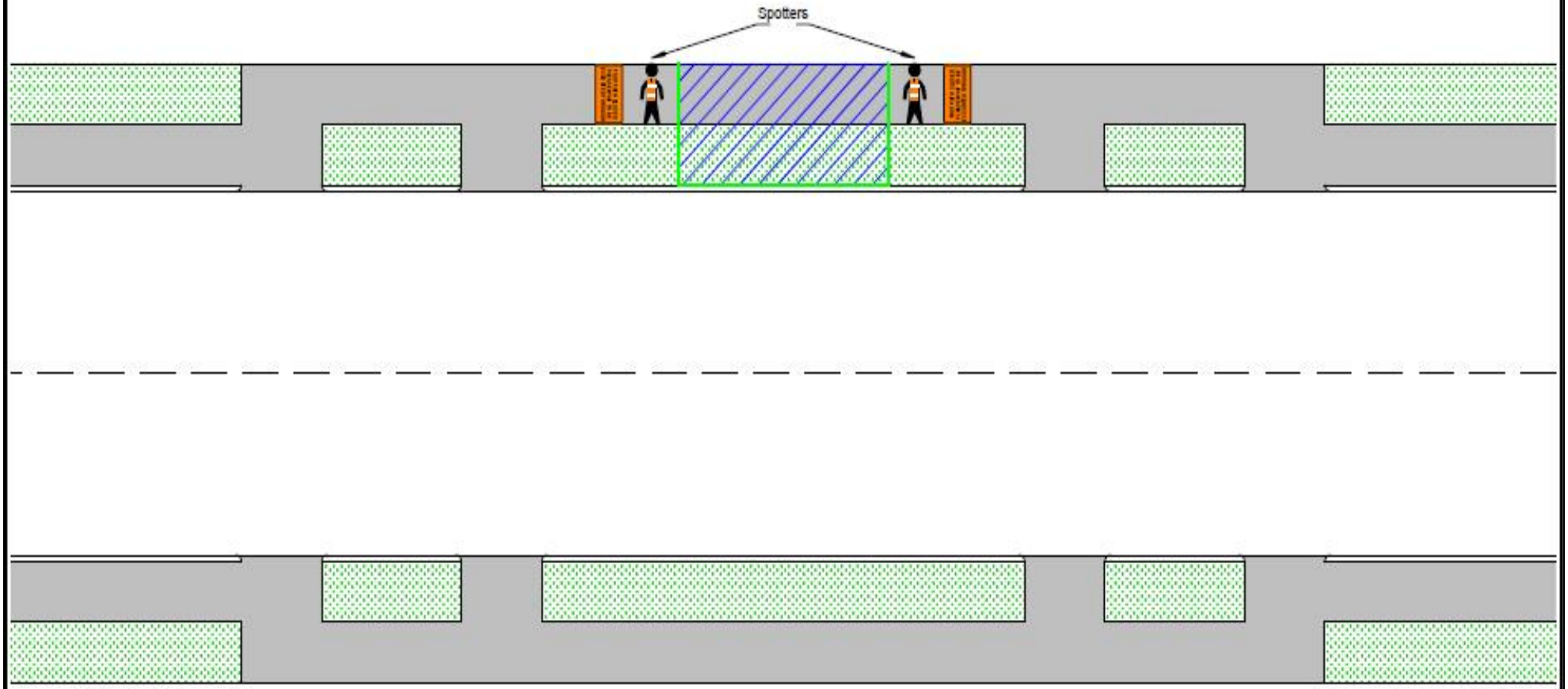
Restrictions:

ROAD LEVEL: ALL

SPEED LIMIT: ALL

ATMS05

STMS to consider if additional safety measures are appropriate to protect hazards / guide pedestrians past the site e.g. safety fencing / cone bars. This is particularly important around excavations. In some instances requirements may change between attended and unattended sites.



FOOTPATH CLOSED PLEASE WAIT TO BE ESCORTED THROUGH

Notes:

– One spotter can be used over short distances where they can suitably control pedestrians through the working space i.e. 20m.

– This plan can ONLY be used during attended times.

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council

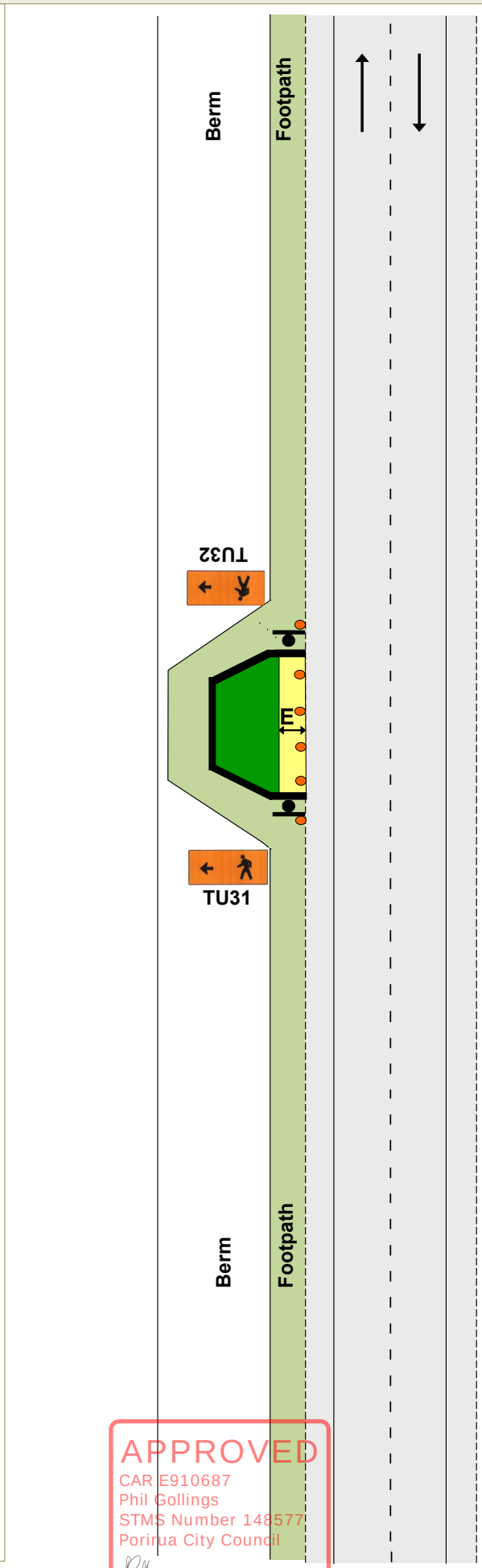
31 January 2023

FOOTPATH
Footpath diverted onto berm behind working space
First preference

F2.1
Level 1

Notes

1. Minimum pedestrian footpath widths:
   - Residential/Rural/Suburban Centre - 1.2m
   - CBD - 2m
2. Where the length of the temporary footpath exceeds 20m, these widths may have to be increased so footpath users do not have to wait to pass
3. Temporary footpath surfaces must be suitable for footpath users
4. Use safety fence to enclose the working space, or at **attended** worksites, cones connected with cone bars can be used to enclose the working space but only for a short period of time
   Note: Cone bars are not recommended where heavy equipment (eg a digger) is being used. A safety fence is preferred in these cases
5. This TMD must be used in conjunction with appropriate TTM for any work carried out on the shoulder or in the live lane

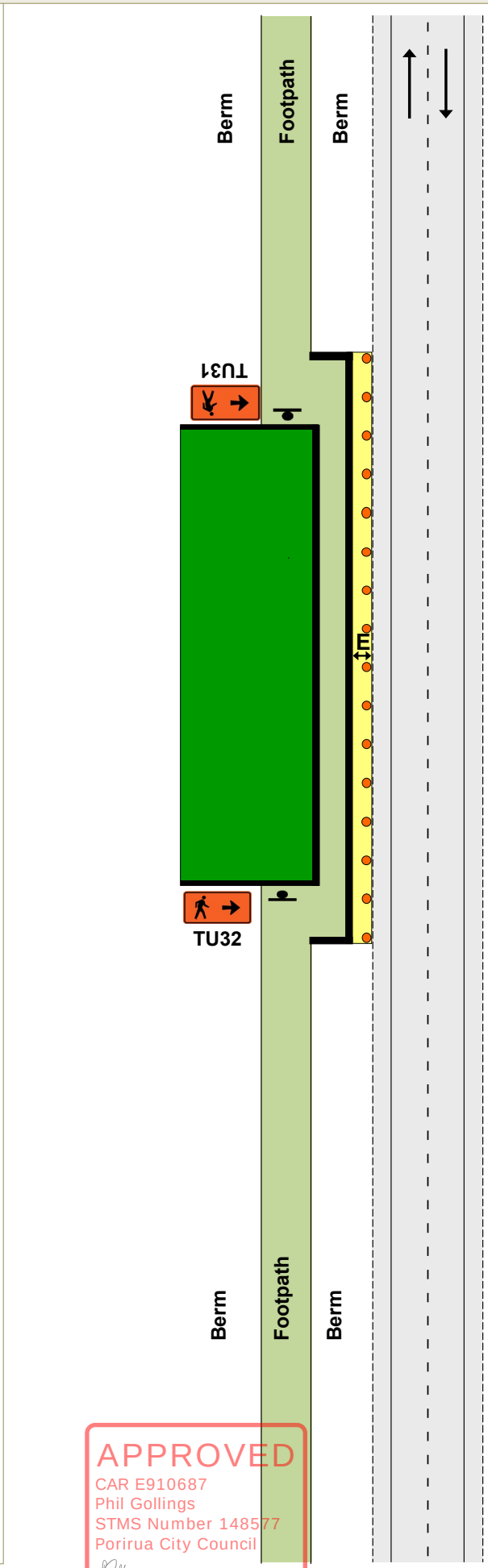


FOOTPATH
Footpath diverted onto berm between working space and carriageway
Second preference

F2.2
Level 1

Notes

1. Minimum pedestrian footpath widths:
   - Residential/Rural/Suburban Centre - 1.2m
   - CBD - 2m
2. Where the length of the temporary footpath exceeds 20m, these widths may have to be increased so footpath users do not have to wait to pass
3. Temporary footpath surfaces must be suitable for footpath users
4. Use safety fence to enclose the working space, or at **attended** worksites, cones connected with cone bars can be used to enclose the working space but only for a short period of time
   Note: Cone bars are not recommended where heavy equipment (eg a digger) is being used. A safety fence is preferred in these cases
5. Use barrier or safety fence to delineate the traffic side of the footpath, or at **attended** worksites cones connected with cone bars can be used to delineate the traffic side of the footpath for a short period of time (not for use on state highways)
6. There must be a lateral safety zone between the traffic side of the footpath and the live lane:
   - **0.5m** for barrier
   - **1m** for safety fence or cone bars
7. This TMD must be used in conjunction with appropriate TTM for any work carried out on the shoulder or in the live lane



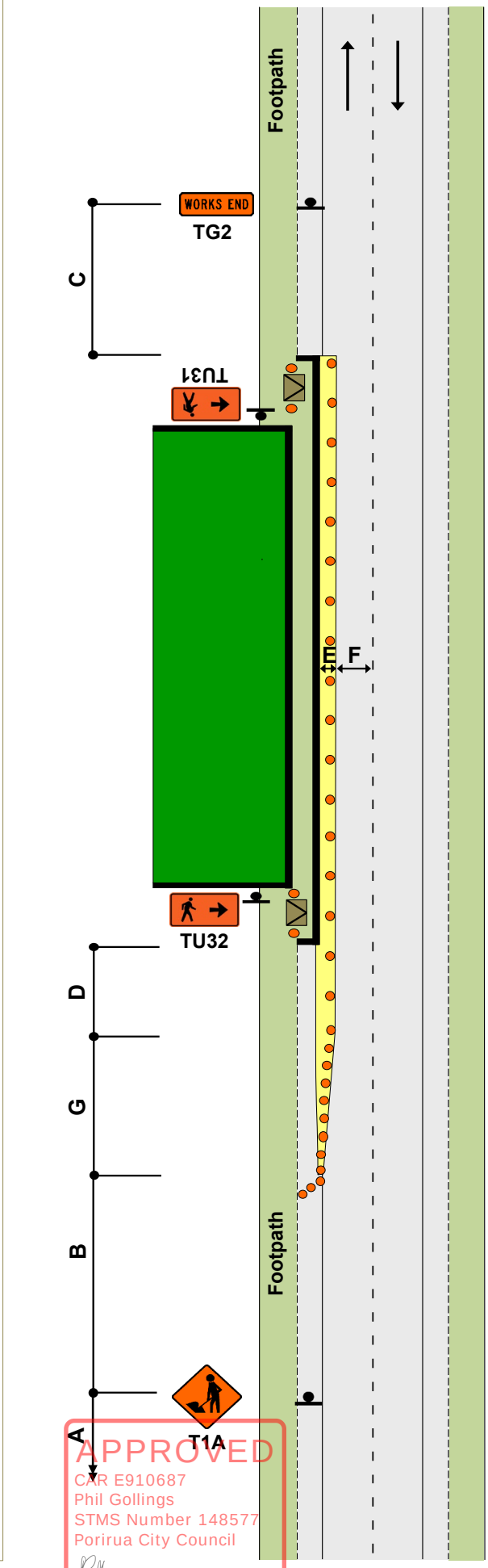
APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

FOOTPATH
Footpath diverted onto carriageway
Third preference

F2.3
Level 1

Notes

1. Minimum pedestrian footpath widths:
   - Residential/Rural/Suburban Centre - 1.2m
   - CBD - 2m
2. Where the length of the temporary footpath exceeds 20m, these widths may have to be increased so footpath users do not have to wait to pass
3. Use safety fence to enclose the working space, or at **attended** worksites, cones connected with cone bars can be used to enclose the working space but only for a short period of time
   Note: Cone bars are not recommended where heavy equipment (eg a digger) is being used. A safety fence is preferred in these cases
4. Use barrier or safety fence to delineate the traffic side of the footpath, or at **attended** worksites cones connected with cone bars can be used to delineate the traffic side of the footpath for a short period of time (not for use on state highways)
5. There must be a lateral safety zone between the traffic side of the footpath and the live lane:
   - **0.5m** for barrier
   - **1m** for safety fence or cone bars
6. Use kerb ramps to assist mobility vehicles, pushchairs, etc
7. At night-time, corners of safety fence may be illuminated with flashing amber warning lights
8. This TMD must be used in conjunction with appropriate TTM for any work carried out on the shoulder or in the live lane



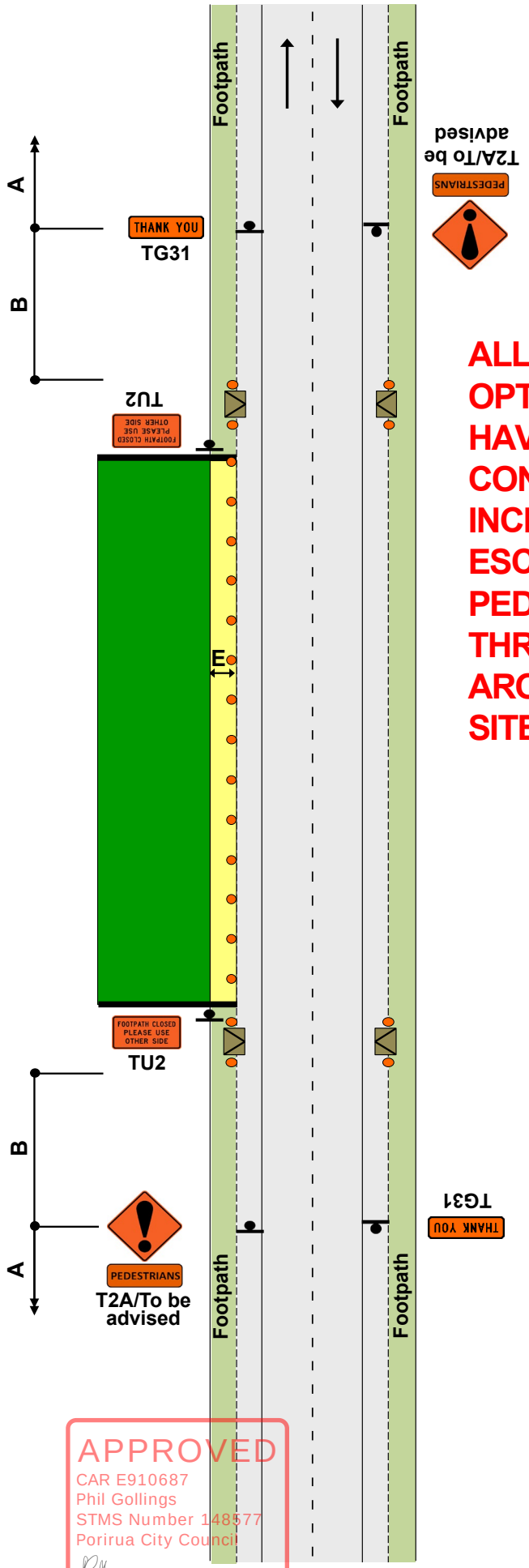
TMC APPROVAL REQUIRED

FOOTPATH
Footpath closed - permanent speed less than 65km/h
Fourth preference

F2.4
Level 1

Notes

1. Use T2A and PEDESTRIANS supplementary plate to alert road users to the potential of footpath users crossing the carriageway
2. Use safety fence at each end of working space
3. Use kerb ramps
4. Use another TMD as well, where working space/safety zone encroaches on live lane
5. This TMD must be used in conjunction with appropriate TTM for any work carried out on the shoulder or in the live lane



ALL OTHER OPTIONS TO HAVE BEEN CONSIDERED INCLUSING ESCORTING PEDESTRIANS THROUGH/ AROUND THE SITE

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

TMP or generic plan reference	

1. CC1 Work on berm or footpath - light vehicle parked in carriageway

Static operations

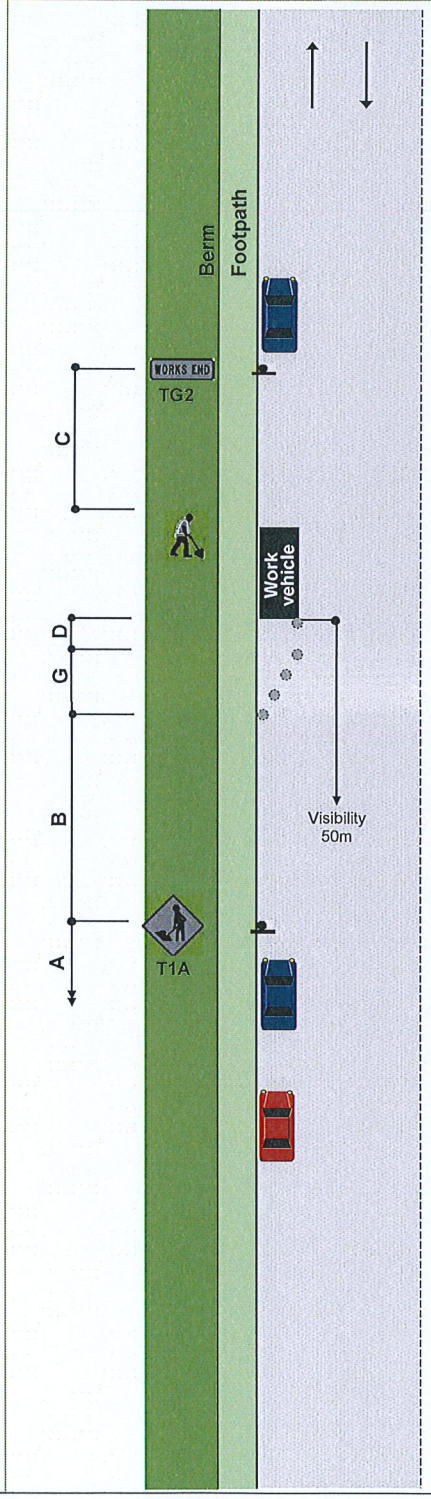
SHOULDER AND ROADSIDE ACTIVITIES
Work on berm and/or footpath - light vehicle parked in carriageway
Permanent speed less than 65km/h

CC1

Notes

1. Any vehicle that can be operated with a Class 1 Licence which is used to transport personnel and equipment to and from site, and:
   - is not used during the actual worksite activity, or
   - is used during the worksite activity (i.e. power leads from vehicle to excavated area, spoil / base course to and from excavation area, SW and WW minor maintenance activities)

   may be considered a parked vehicle
2. Any vehicle that requires a (as a minimum) Class 2 or WRT Licence to operate must not be used in this situation
3. If accessing work vehicle from the rear, add taper and longitudinal safety zone. These are not required if the work vehicle is protected by a line of parked cars
4. Rear visibility of 50m must be maintained at all times from the rear of the work vehicle. Therefore this TMD cannot be used within 50m of an intersection, corner or brow of a hill
5. Use of a T1A and TG2 is optional
6. Any impact on pedestrians will be addressed by applying an appropriate pedestrian TMD
7. This layout may only be used during daylight hours



APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

TMP or generic plan reference	

2. CC2 Traffic not crossing road centre - heavy vehicle parked in carriageway

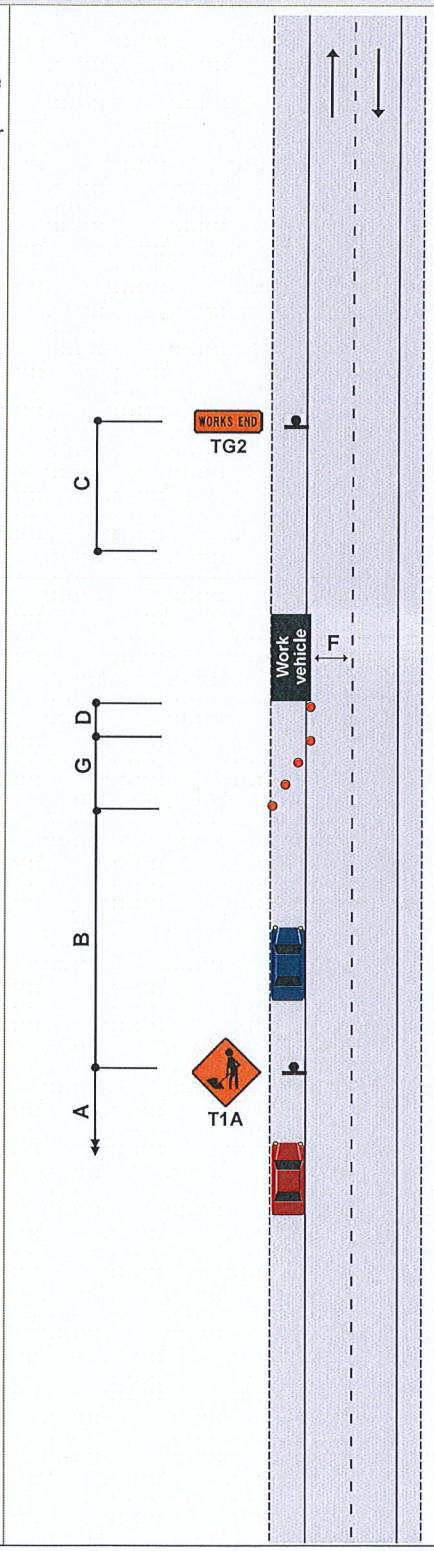
Static operations

TWO-WAY TWO-LANE ROAD
Traffic not crossing road centre - heavy vehicle parked in carriageway
Permanent speed less than 65km/h

CC2

Notes

1. A heavy vehicle is defined as any vehicle that requires (as a minimum) a Class 2 or WRT Licence to operate
2. To prevent traffic having to otherwise cross the centre line (and to maintain F), the 1m lateral safety zone and cones along the side of the work vehicle are not required
3. If work vehicle can be parked (or partially parked) on the berm, then this is the preferred option
4. Driver is to exit and enter the vehicle when the way is clear
5. Taper not required if traffic side of work vehicle is inside a line of parked cars (i.e. work vehicle is protected by the line of parked cars)
6. If traffic is required to cross the centreline then either TMD F2.13, F2.14, F2.16 or F2.17 will be used



TMP or generic plan reference	

CC3 Work on berm and/or footpath - work vehicle parked on berm

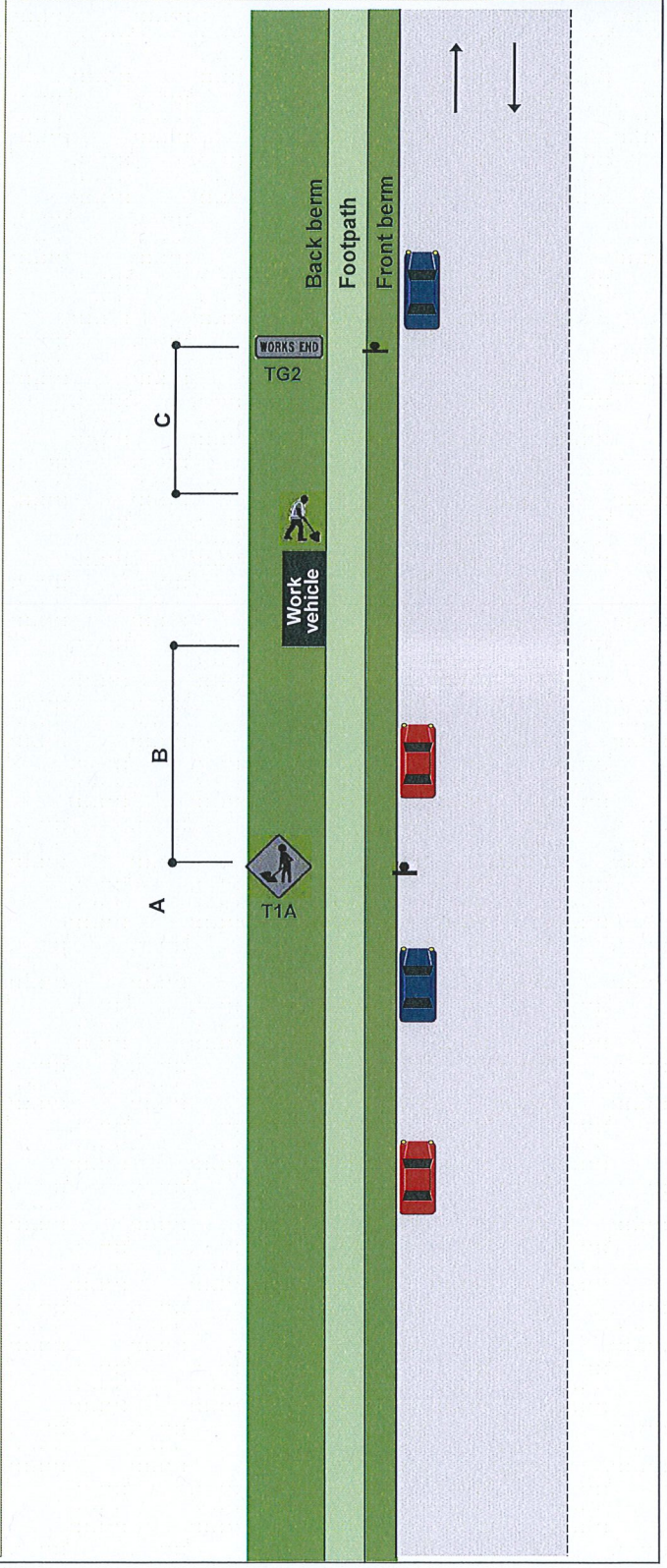
Static operations

SHOULDER AND ROADSIDE ACTIVITIES
Work on berm and/or footpath - work vehicle parked on berm
Permanent speed less than 65km/h

CC3

Notes

1. Where contraflow or alternating flow is required if the work vehicle is parked in the carriageway, then the vehicle may instead be parked outside of the carriageway on the front or back berm if the ground surface is firm (not muddy)
2. The vehicle will be parked so that it does not obstruct the normal or safe entry to, or exit from, or movement of other vehicles, or pedestrians within the road reserve
3. Use of a T1A and TG2 is optional
4. Any pedestrian management required will be completed as per TMD F2.1, F2.2, F2.3, CC4 or CC5
5. A safety fence is required around any excavations, falling hazards (e.g. open manhole) or mechanical equipment.
6. Any berm areas affected by the parking of the work vehicle will be reinstated by Wellington Water / City Care with topsoil and grass to the same level as the adjoining berm



TMP or generic plan reference	

3. CC4 Footpath diverted onto shoulder or parking lane

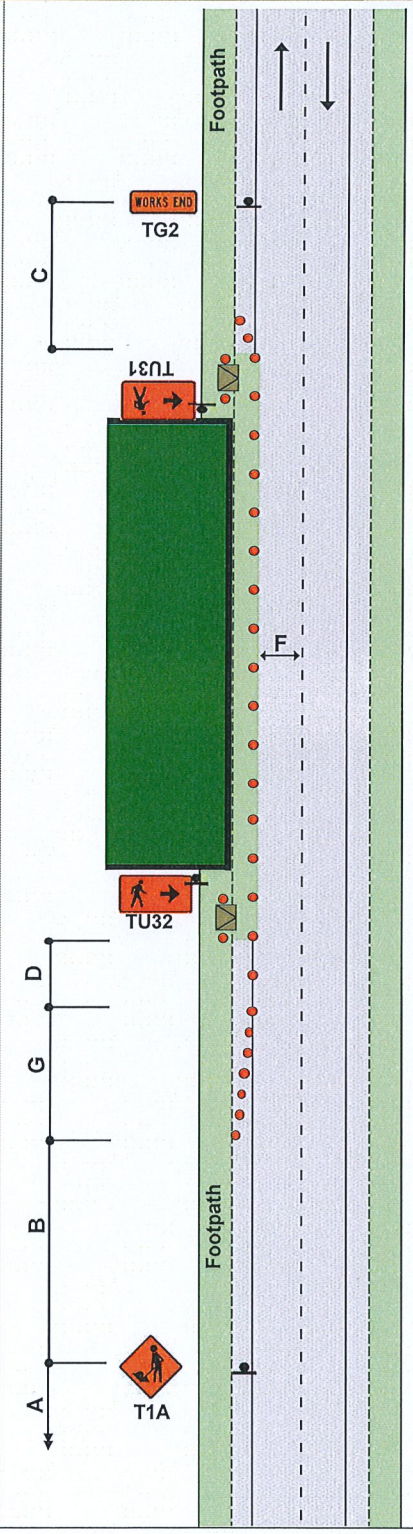
Static operations

FOOTPATH
Footpath diverted onto shoulder or parking lane

CC4

Notes

1. Minimum pedestrian footpath widths:
   - residential / rural - 0.9m
   - suburban centre - 1.2m
   - CBD - 2m
2. Where the length of the temporary footpath exceeds 20m, these widths may have to be increased so footpath users do not have to wait to pass
3. For all attended sites, cones can be used to delineate the edge of the working space and traffic side of the tempory walkway
4. The 1m lateral safety zone between the traffic side of the footpath and the live lane will not be required if the:
   - pedestrian diversion is into a shoulder (including parking lane) of carriageway (and not enroaching into the live lane),or
   - the temporary footpath encroaches into carriageway, but there is good alignment of traffic (taper) past temporary walkway, and
   - site is not on a Main Road (as classified by WCC), a Major or Minor Distributor (as classified by HCC) or a Primary Arterial (as classified by UHCC)
6. Use kerb ramps (or available driveways) to assist mobility vehicles, pushchairs etc
7. A safety fence is required around any excavations, falling hazards (e.g. open manhole) or mechanical equipment
8. This TMD must be used in conjunction with appropriate TTM for any work carried out on the shoulder or in the live lane



TMP or generic plan reference	

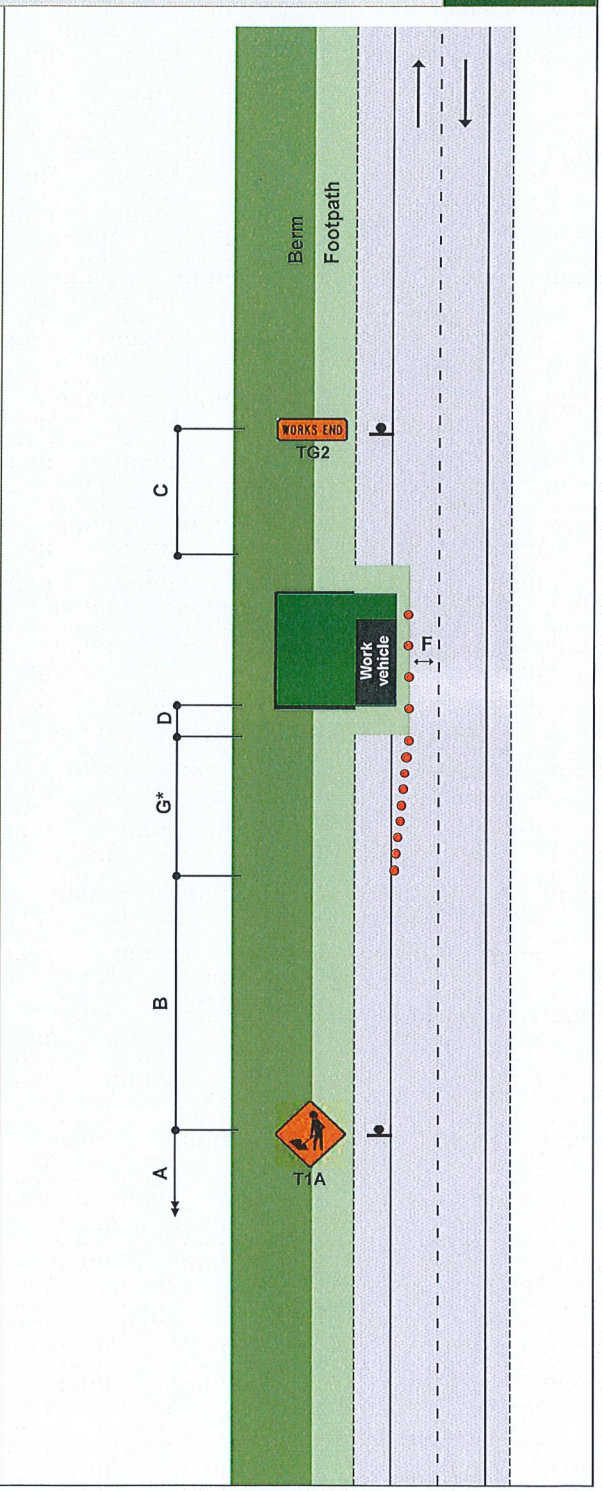
CC5 Footpath controller guiding pedestrians past the working space

Static operations

FOOTPATH
Footpath controller used to guide pedestrians safely past the working space
Not to be used on a Main Road as classified by WCC

CC5

1. To be used where foot traffic is low (no more than 15 people per hour - 1 person every 4 minutes)
2. No footpath directional signs required
3. Footpath controller must stop work and guide pedetrians past the working space (providing assistance as required)
4. Depending on the volume of foot traffic, an extra person may be required to act as Footpath controller
5. For all attended sites, cones can be used to delineate the edge of the working space and traffic side of the tempory walkway
6. The 1m lateral safety zone between the traffic side of the footpath and the live lane will not be required if the:
   - pedestrian diversion is into a shoulder (including parking lane) of carriageway (and not enroaching into the live lane),or
   - the temporary footpath encroaches into carriageway, but there is good alignment of traffic (taper) past temporary walkway, and
   - is not on a Main Road (as classified by WCC), a Major or Minor Distributor (as classified by HCC) or a Primary Arterial (as classified by UHCC)
6. Use kerb ramps (or available driveways) to assist mobility vehicles, pushchairs etc
7. A safety fence is required around any excavations, falling hazards (e.g. open manhole) or mechanical equipment
8. This TMD may be used in conjunction with other forms of pedestrian management
9. This TMD must be used in conjunction with appropriate TTM for any work carried out on the shoulder or in the live lane



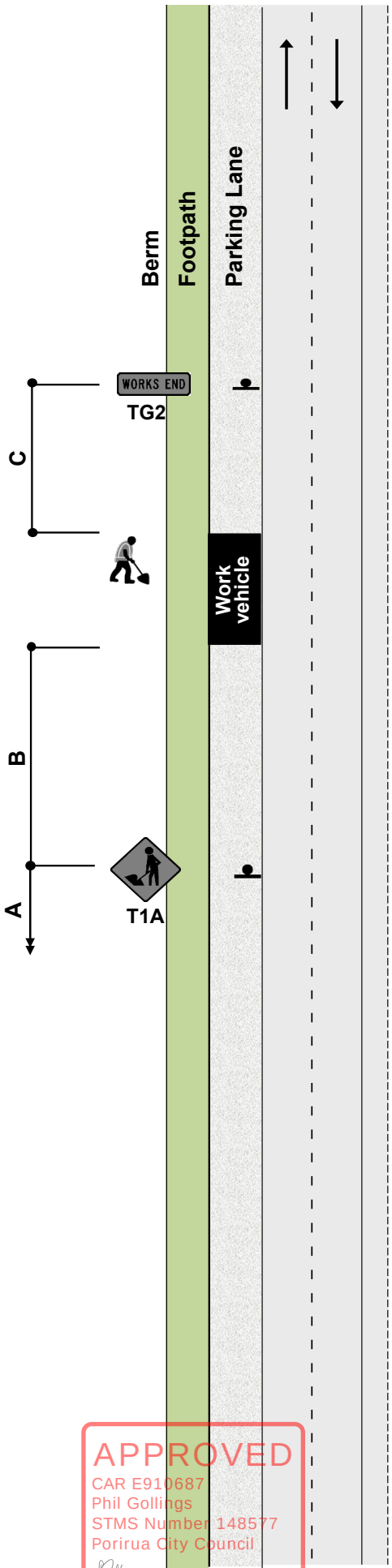
APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

SHOULDER AND ROADSIDE ACTIVITIES
Work on berm and/or footpath
Permanent speed less than 65km/h

F2.5
Level 1

Notes

1. Where work is carried out on the berm or footpath and a work vehicle is parked in a legal parallel car park, provided the vehicle is only accessed from the off traffic side, advance warning T1A road works and TG2 WORKS END are optional
2. Traffic management must be provided where footpath users or cyclists are affected
3. This layout may only be used during daylight hours
4. Large plant and machinery must not be used in this situation, a more substantial closure is required

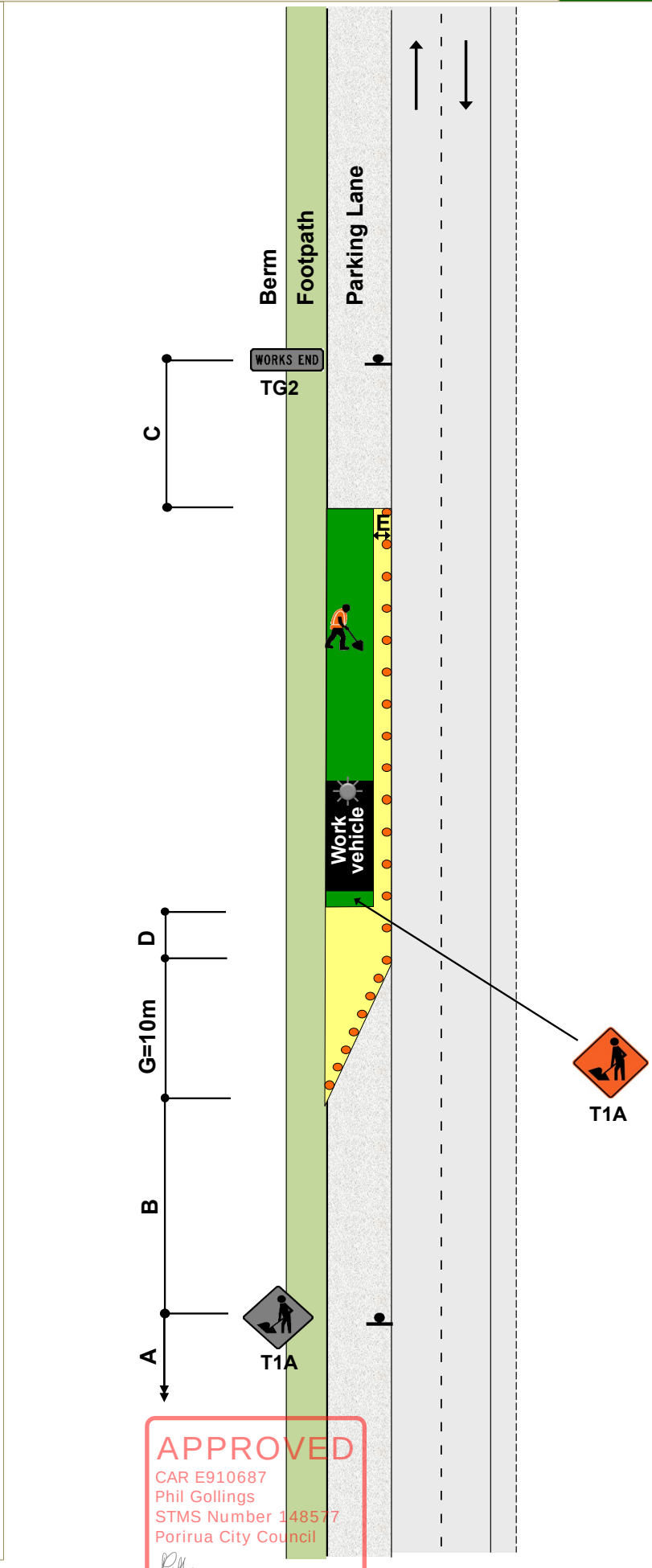


SHOULDER AND ROADSIDE ACTIVITIES
Work in parking lane
Permanent speed less than 65km/h

F2.6
Level 1

Notes

1. Where work is carried out in the legal parking lane (a place where a vehicle would normally park with a footpath and/or kerb and channel alongside), the following minimum standard of TTM must be provided:
   - a 10m taper in front of the work vehicle
   - cones alongside the work vehicle and the working space
   - a longitudinal safety zone
   - a 1m lateral safety zone along the working space
   - a T1A (or other appropriate advance warning sign) mounted on the back of the work vehicle
2. T1A road works and TG2 WORKS END signs are optional
3. The work vehicle must be no larger than a light truck and may have an amber flashing beacon
4. Traffic management must be provided where footpath users or cyclists are affected
5. This layout may only be used during daylight hours
6. Large plant and machinery must not be used in this situation, a more substantial closure is required



APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

SHOULDER AND ROADSIDE ACTIVITIES
Shoulder closure

F2.7
Level 1

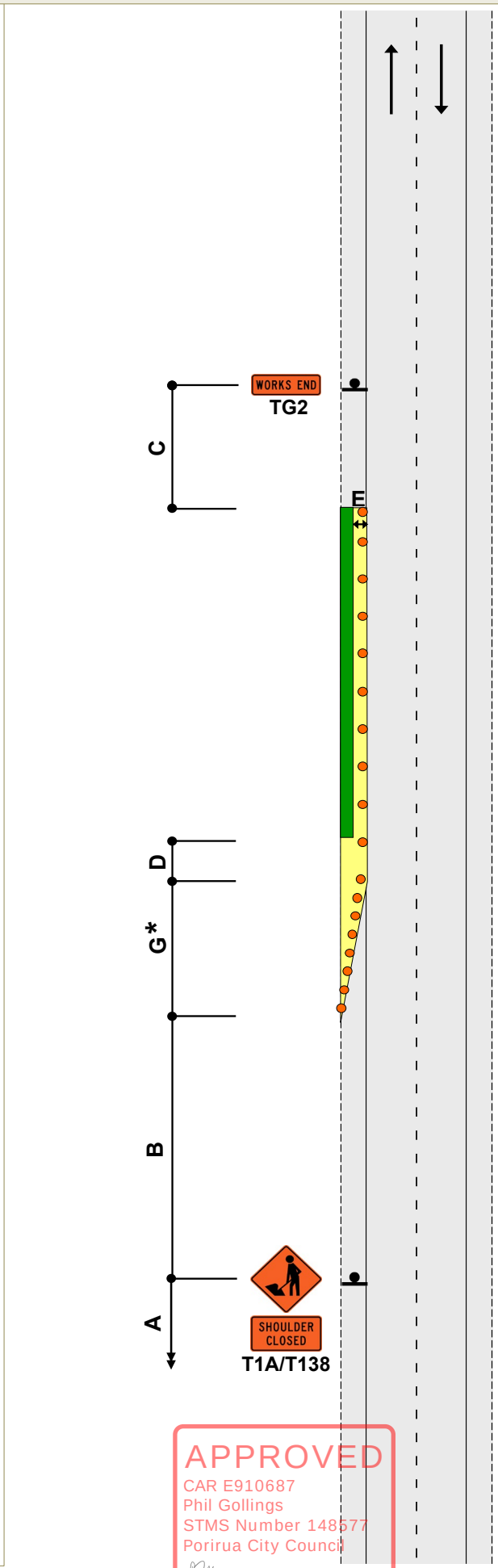
Notes

1. A 10m taper is allowed where shoulder width is less than 2.5m
2. *For shoulders exceeding 2.5m width, apply the following calculation; calculation of taper length for lateral shift of less than 3.5m is:

$$\frac{W \times G}{3.5}$$

W = Width of shoulder

G = Taper length in metres from the level 1 layout distance table



Static operations

TWO-WAY TWO-LANE ROAD
Traffic not crossing road centre

F2.11
Level 1

Notes

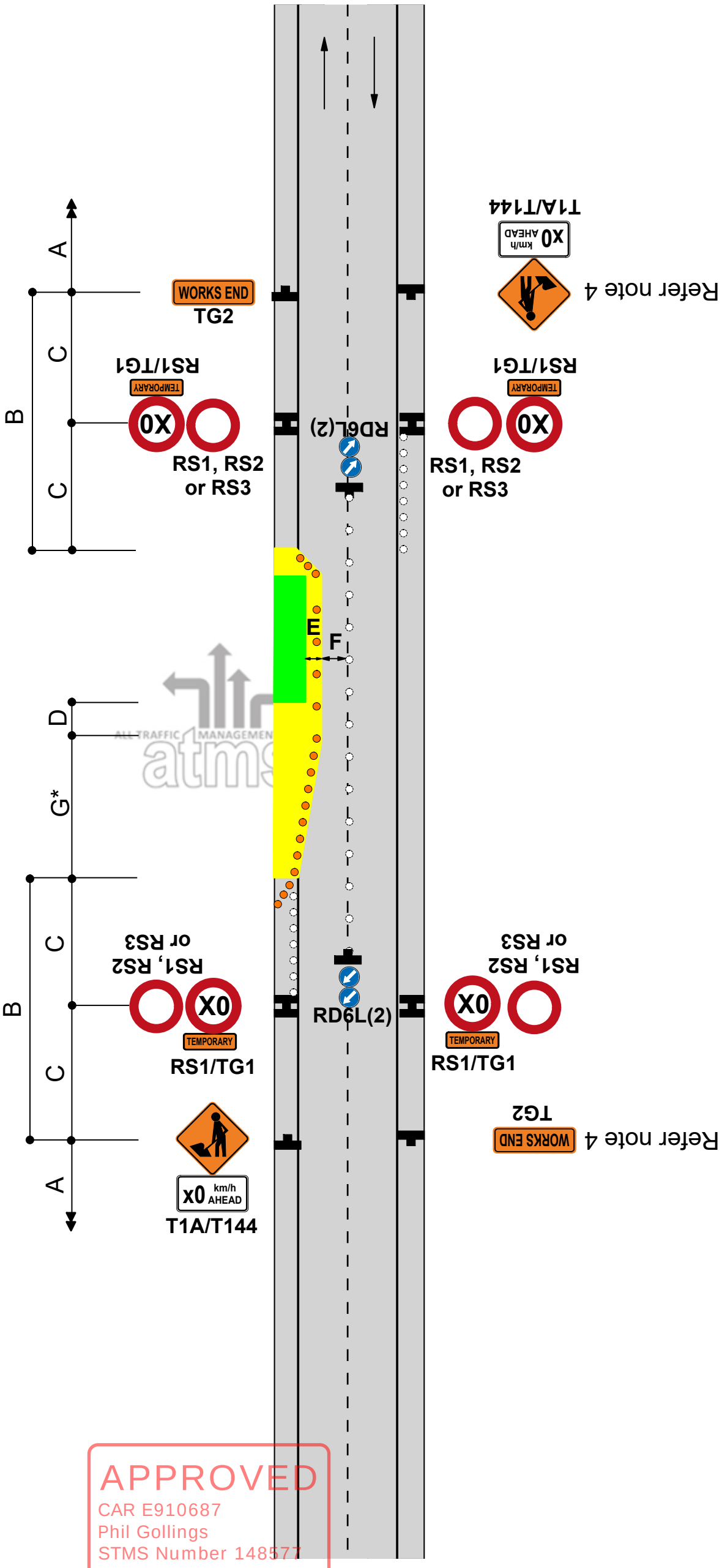
1. *Calculation of taper length for lateral shift of less than 3.5m is:
   W x G
   3.5
   W = Width of lateral shift
   G = Taper length in metres from the level 1 layout distance table

2. If traffic likely to cross the centreline, place cones on the centreline with RD6L signs at each end

3. Use TSLs if required by TSL decision matrix

4. If TSLs not required, the T1A and TG2 signs on the right hand side of the road are also not required

5. The T144 X0km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD
Traffic not crossing road centre
Signs on median

F2.12
Level 1

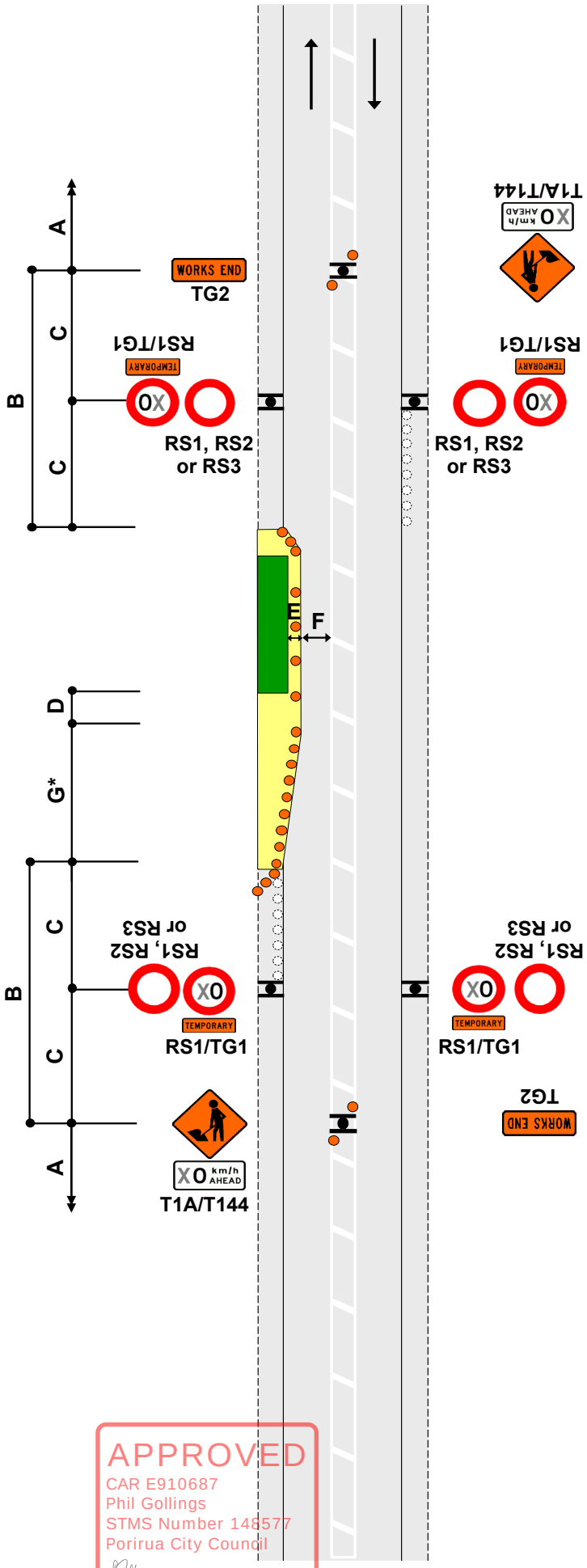
Notes

1. Use this diagram if signs will not be visible on left-hand side of road, or if it is safer to place signs on median and this will not interfere with turning traffic movements
2. Where a median exists which is more than 2m wide, the signs may be positioned on the median. Signs must be placed back-to-back unless on a solid median
3. Where there is a solid median, signs are not required in the opposing direction
4. *Calculation of taper length for lateral shift of less than 3.5m is:

   $\frac{W \times G}{3.5}$

   W = Width of lateral shift

   G = Taper length in metres from the level 1 layout distance table
5. Use TSLs if required by TSL decision matrix
6. The T144 X0km/h AHEAD sign is optional

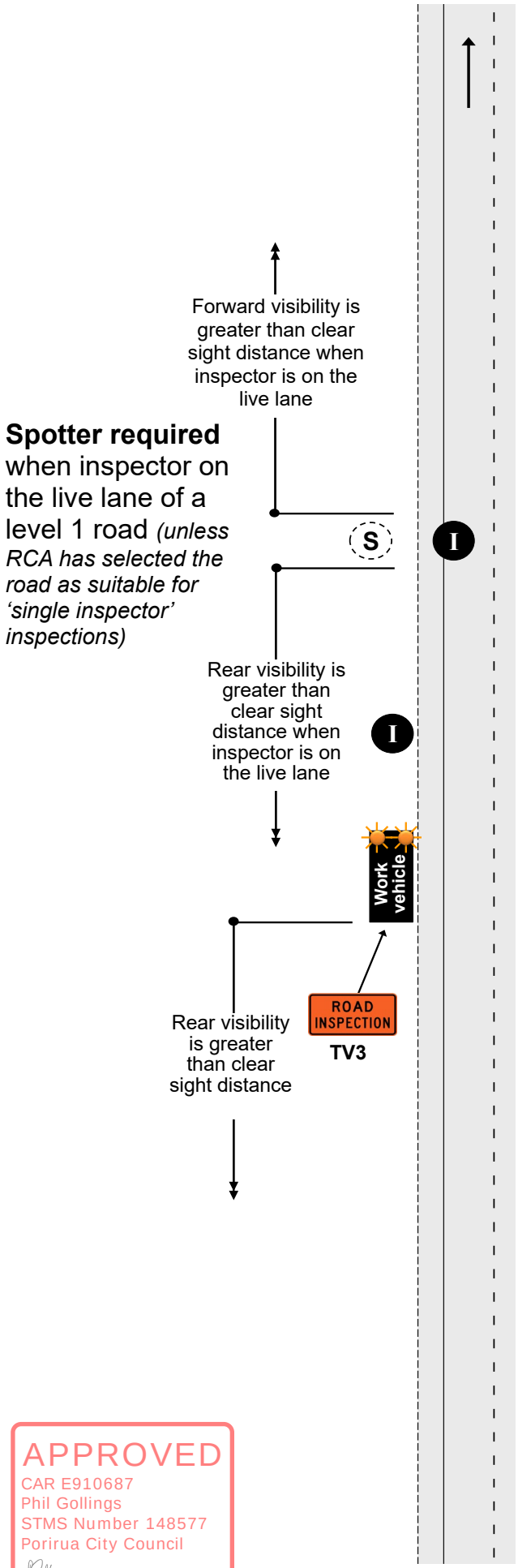


INSPECTION ACTIVITIES AND NON-INVASIVE WORKS
On shoulder and on the live lane
This TMD may also be applied on level LV roads

F4.10
Level 1

Notes

1. Inspectors must move from live lanes to avoid traffic. They must not expect traffic to drive slowly or drive around them
2. On level LV and level 1 roads, a person completing an inspection or non-invasive works cannot be on a live lane for more than 5 minutes
3. Unless otherwise approved by the RCA, all inspections on the live lane of level 1 roads require a spotter. The RCA may provide a list of roads, times and/or activities suitable for inspection by a single inspector
4. There must be CSD to the inspector when on the live lane.If this cannot be achieved, a spotter must be placed in a position where CSD can be attained and verbal instructions be given to the inspector. If this is not possible, a static or mobile operation is required.
5. A spotter is not required for inspections and non-invasive works on level LV roads or working off the live lane of a level 1 road
6. Where an unaccompanied inspector is not able to maintain adequate attention (eg due to work tasks or poor visibility), a spotter will be required or another type of traffic management operation used
7. For inspection activities that are carried out by a TC on level LV and level 1 roads the STMS must be immediately contactable but does not have to be within 30 minutes travel time of the worksite
8. An unaccompanied inspector may walk across a level LV or level 1 road
9. A vehicle is not required on a level LV or level 1 road with a permanent speed of less than 65km/h if the inspector remains on a footpath
10. On roads with a permanent speed of less than 65km/h an amber flashing beacon is not required on the vehicle if the inspector or non-invasive works is on an unsealed shoulder (or further away from the carriageway - including a footpath)



APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

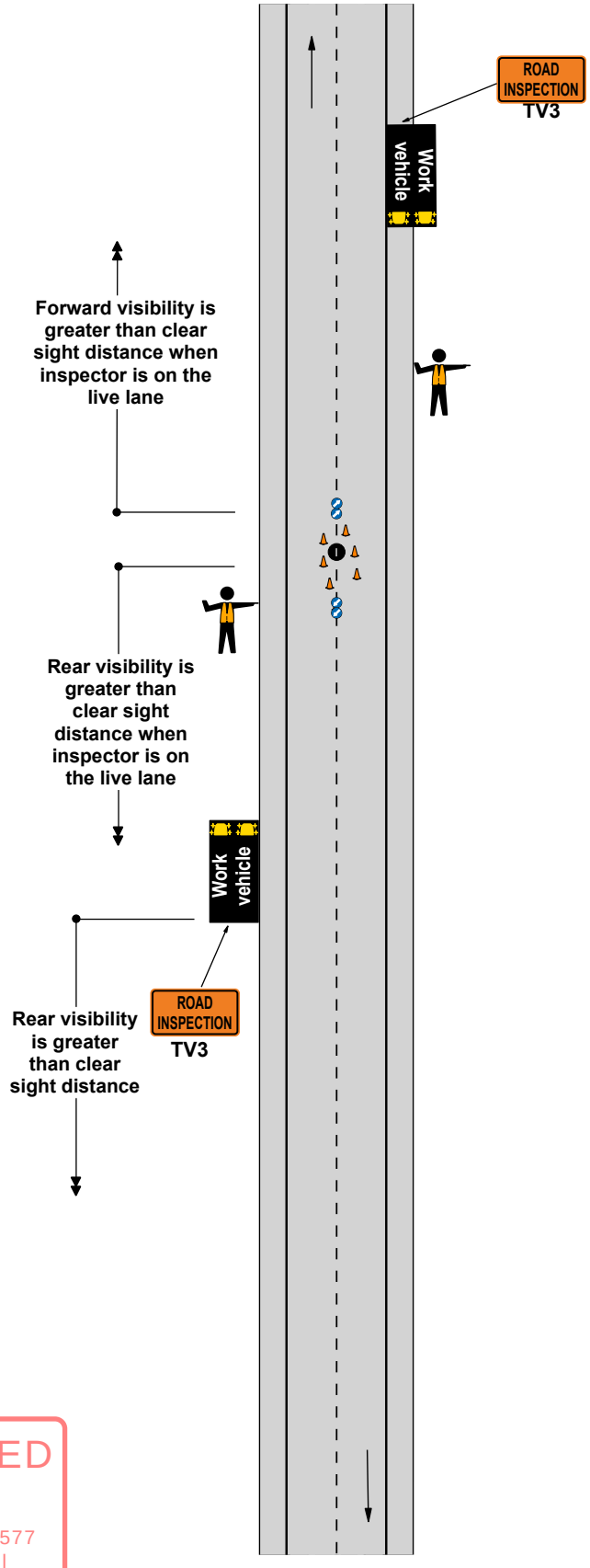
Mobile operations

INSPECTION ACTIVITIES AND NON-INVASIVE WORKS
Inspection Activity - Centre Of Road
This TMD may also be applied on level LV roads

ATMS07
Level 1

Notes

1. Inspectors must move from live lanes to avoid traffic. They must not expect traffic to drive slowly or drive around them
2. On level LV and level 1 roads, a person completing an inspection or non-invasive works cannot be on a live lane for more than 5 minutes
3. Unless otherwise approved by the RCA, all inspections on the live lane of level 1 roads require a spotter. The RCA may provide a list of roads, times and/or activities suitable for inspection by a single inspector
4. There must be CSD to the inspector when on the live lane.If this cannot be achieved, a spotter must be placed in a position where CSD can be attained and verbal instructions be given to the inspector. If this is not possible, a static or mobile operation is required.
5. Where an unaccompanied inspector is not able to maintain adequate attention (eg due to work tasks or poor visibility), a spotter will be required or another type of traffic management operation used
6. For inspection activities that are carried out by a TC on level LV and level 1 roads the STMS must be immediately contactable but does not have to be within 30 minutes travel time of the worksite
7. Inspectors MUST use 2 vehicles placed on either side of road shoulder. Inspector & spotter will use footpath to carry cones and cross when way is clear. Cones will be placed (min of 4 each direction) for protection. Spotter must not engage in work activities.



APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council

31 January 2023

Static operations

TWO-WAY TWO-LANE ROAD
Traffic crossing road centre
Two lane diversion

F2.13
Level 1

Notes

1. Cones are required on edge of the temporary lane opposite closure if road is not well defined

2. Return taper at end of closure may be shortened

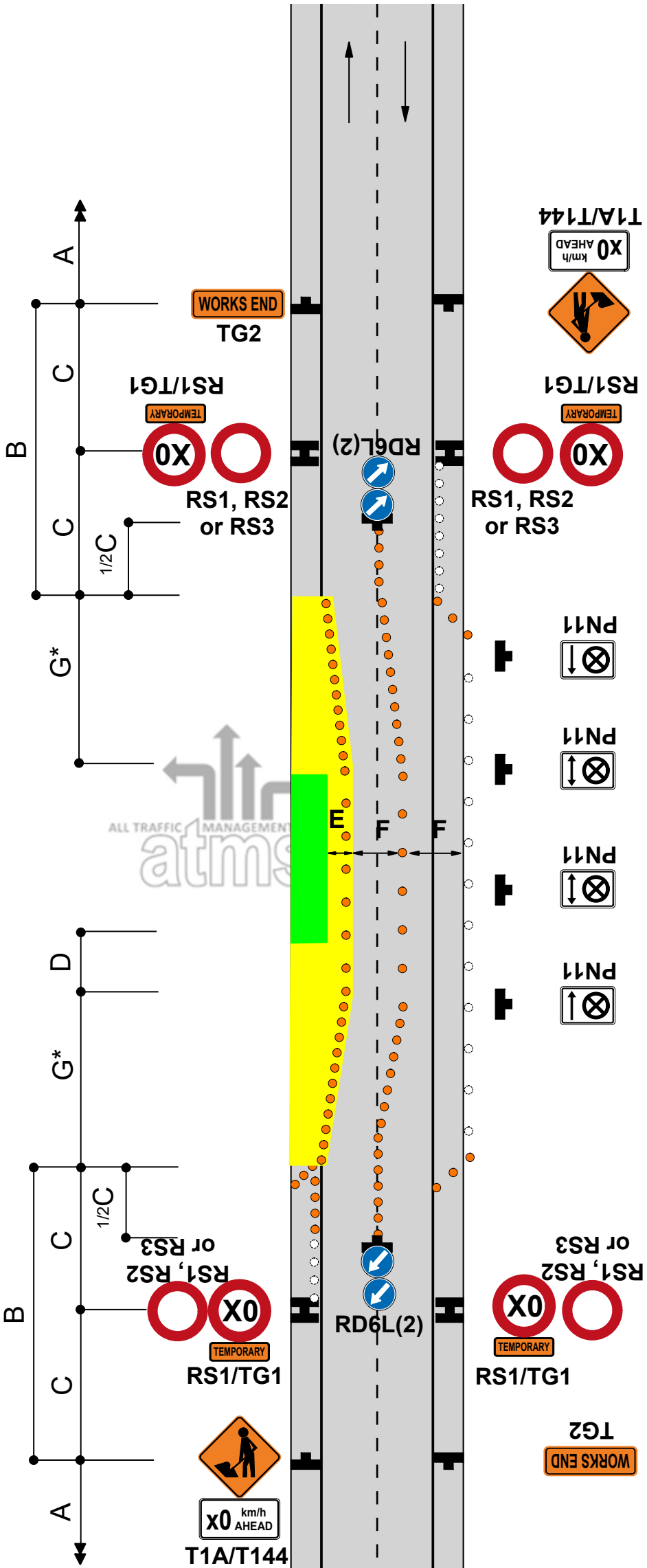
3. *Calculation of taper length for lateral shift of less than 3.5m is:
   W x G
   3.5
   W = Width of lateral shift
   G = Taper length in metres from the level 1 layout distance table

4. To allow heavy vehicles to manoeuvre, cones in the channel must be offset by at least 10m where the direction changes. Refer C8.2.12

5. Use PN11 No Stopping signs, if necessary

6. Use TSLs if required by TSL decision matrix

7. The T144 X0km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD
Single-lane alternating flow
Portable e-STOP

ATMS02
Level 1

Notes

1.Provide details of make and model of portable traffic signals in the TMP

2.Use PN11 no stopping signs, if necessary as per the approved TMP

3.Install temporary RP61/RP62 signs

4.Minimum 5 cones in cone threshold.

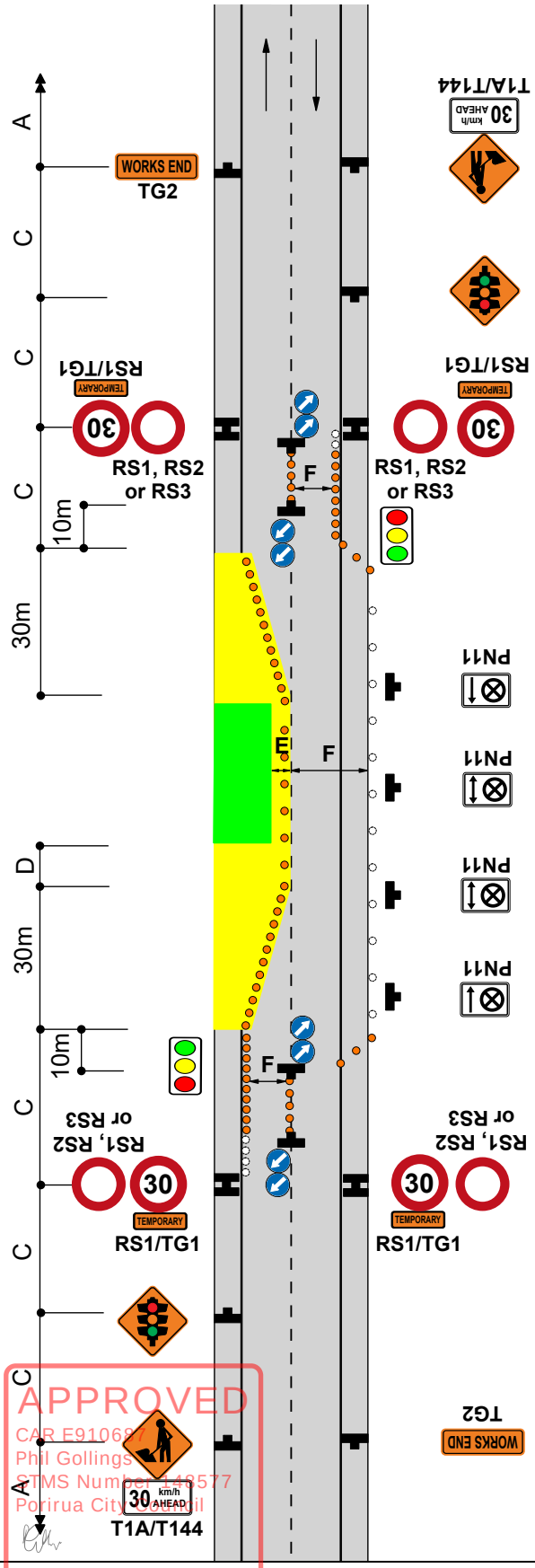
5. Extend or place extra advance warning signs towards on-coming traffic beyond any expected traffic queues

6.CONTINGENCY PLAN:
F2.14 to be implemented should issues arise with e-STOP/ adverse weather conditions or where stop go is unsuitable.
ex; Short term stoppages is defined as “stopping traffic for a short period of time within a static site, at inconsistent intervals to assist with the entry/exit of vehicles or small tasks required to be undertaken in the live lane”.

7. In circumstances where for safety reasons, the use of stop/go operations is deemed more appropriate, a site specific safe work method statement must be prepared.

8.The T144 30km/h AHEAD sign is optional on roads under 65km/h

9. e-STOP can only be used on an attended site. e-STOPs must be manned at all times.



APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

Static operations

TWO-WAY TWO-LANE ROAD
Single-lane alternating flow
Manual traffic control (STOP/GO or STOP/SLOW)

F2.14
Level 1

Notes

1. Extend or place extra advance warning signs towards on-coming traffic beyond any expected traffic queues

2. A 30m return taper at the end of the closure is mandatory

3. Cones are required on edge of the temporary lane opposite closure if road is not well defined

4. To allow heavy vehicles to manoeuvre, cones in the channel must be offset by at least 10m where the direction changes. Refer C8.2.12

5. Use PN11 no stopping signs, if necessary

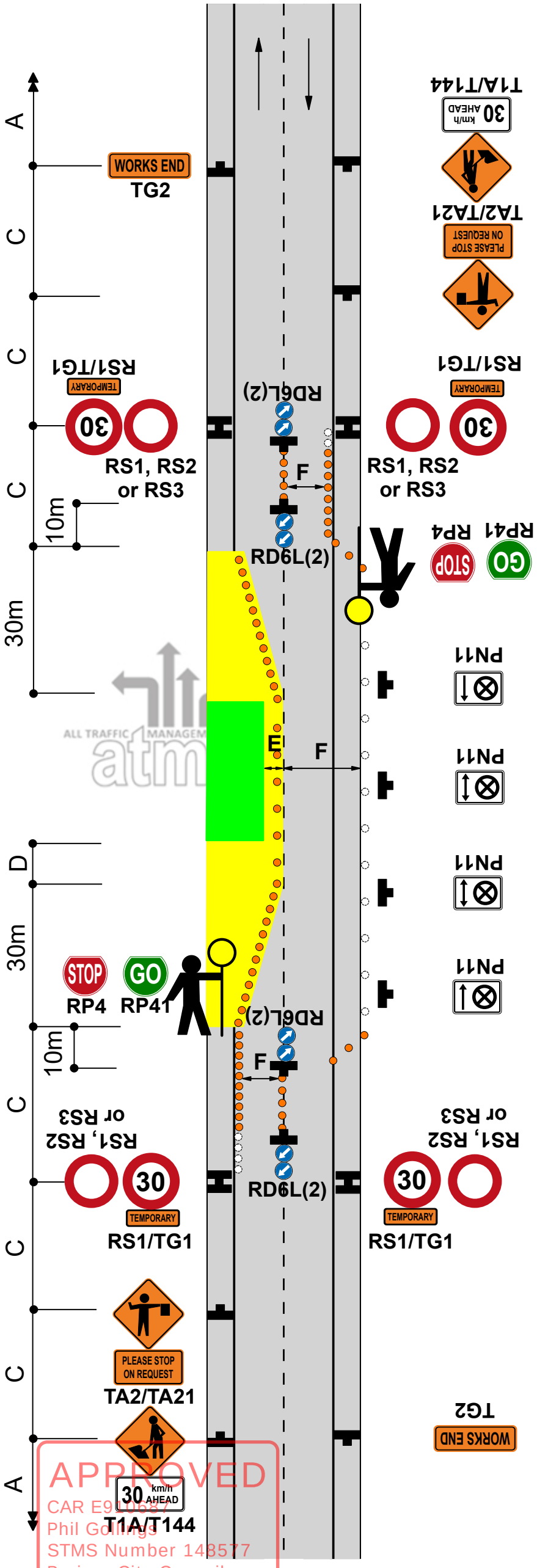
6. MTC with RP4/RP41 STOP/GO or RP4/RP42 STOP/SLOW paddle on road shoulder located between 1st and 2nd cone in the cone threshold closest to the working space

7. Minimum 5 cones in cone threshold at:
   - 2.5m centres - less than 65km/h
   - 5m centres - more than 65km/h

8. Refer to C10.2.3 MTC essentials for further information

9. Delays cannot exceed the time approved by the RCA (normally 5 to 10 minutes)

10. The T144 30km/h AHEAD sign is optional



Static operations

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Closure at an intersection
Portable e-STOP - with MTC on side roads

ATMS04
Level 1

Notes

1. This plan can be used at a 3 way intersection by removing one of the approaches. If you require a temporary traffic light/MTC set up, which is greater than a four way, you will require a site specific TMP.

2. Signs and layout shown in the box at the bottom of the diagram is to be repeated on each approach.

3. Provide details of make and model of portable traffic signals in the TMP

4. Use PN11 no stopping signs, if necessary as per the approved TMP

5. Install temporary RP61/RP62 signs

6. Minimum 5 cones in cone threshold.

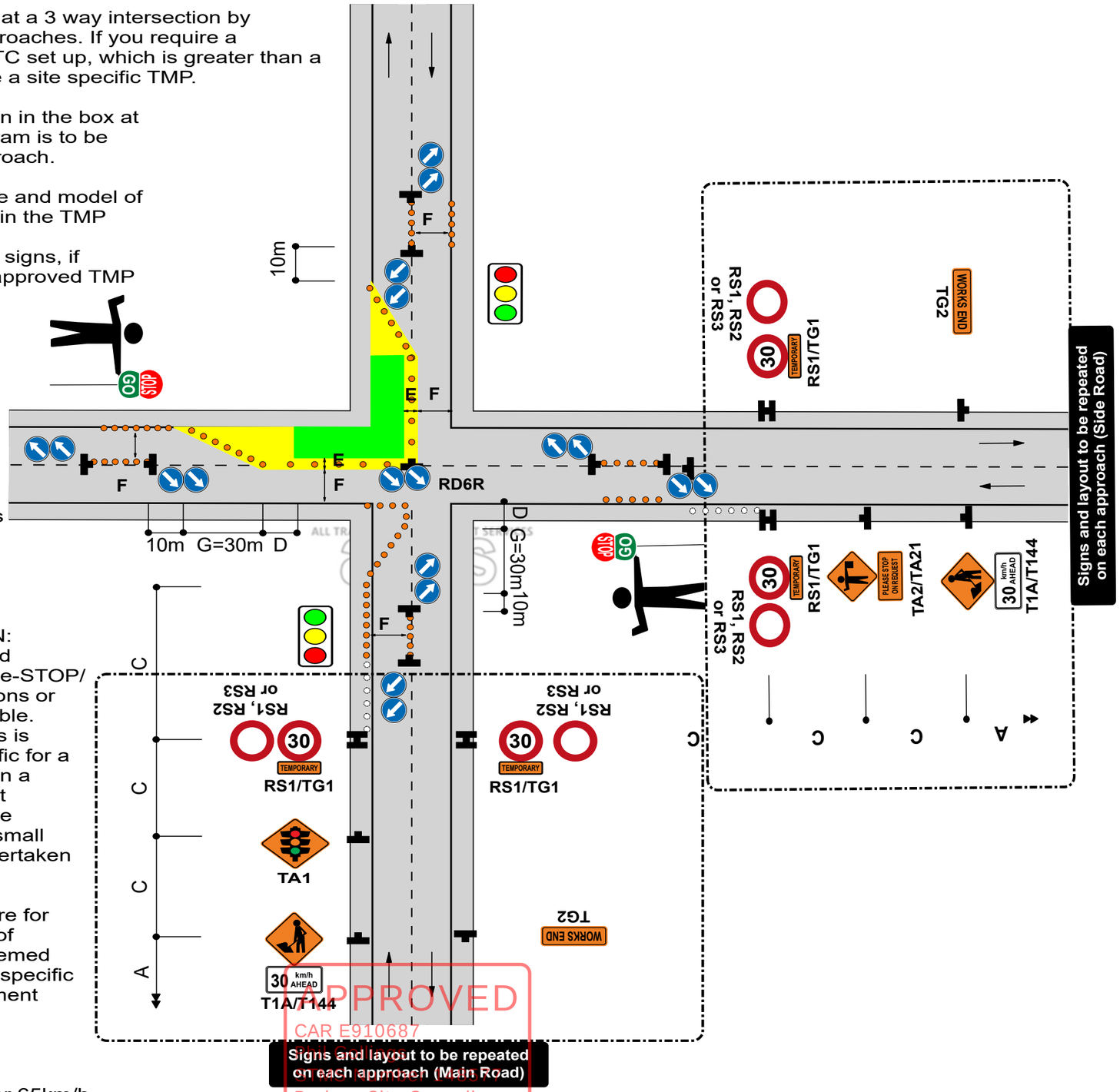
7. Extend or place extra advance warning signs towards on-coming traffic beyond any expected traffic queues

8. CONTINGENCY PLAN:
F2.22 to be implemented should issues arise with e-STOP/ adverse weather conditions or where stop go is unsuitable.
ex; Short term stoppages is defined as “stopping traffic for a short period of time within a static site, at inconsistent intervals to assist with the entry/exit of vehicles or small tasks required to be undertaken in the live lane”.

9. In circumstances where for safety reasons, the use of stop/go operations is deemed more appropriate, a site specific safe work method statement must be prepared.

10. The T144 30km/h AHEAD sign is optional on roads under 65km/h

11. e-STOP can only be used on an attended site. e-STOPs must be manned at all times.



Static operations

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Closure at corner of an intersection
Manual traffic control (Stop/Go or Stop/Slow)

F2.22
Level 1

Notes

1. This diagram may be used at a T intersection by removing any one of the roads

2. Signs and layout shown in the box at the bottom of the diagram is to be repeated on each approach

3. A 30m return taper at the end of the closure is mandatory

4. Use PN11 no stopping signs, if necessary

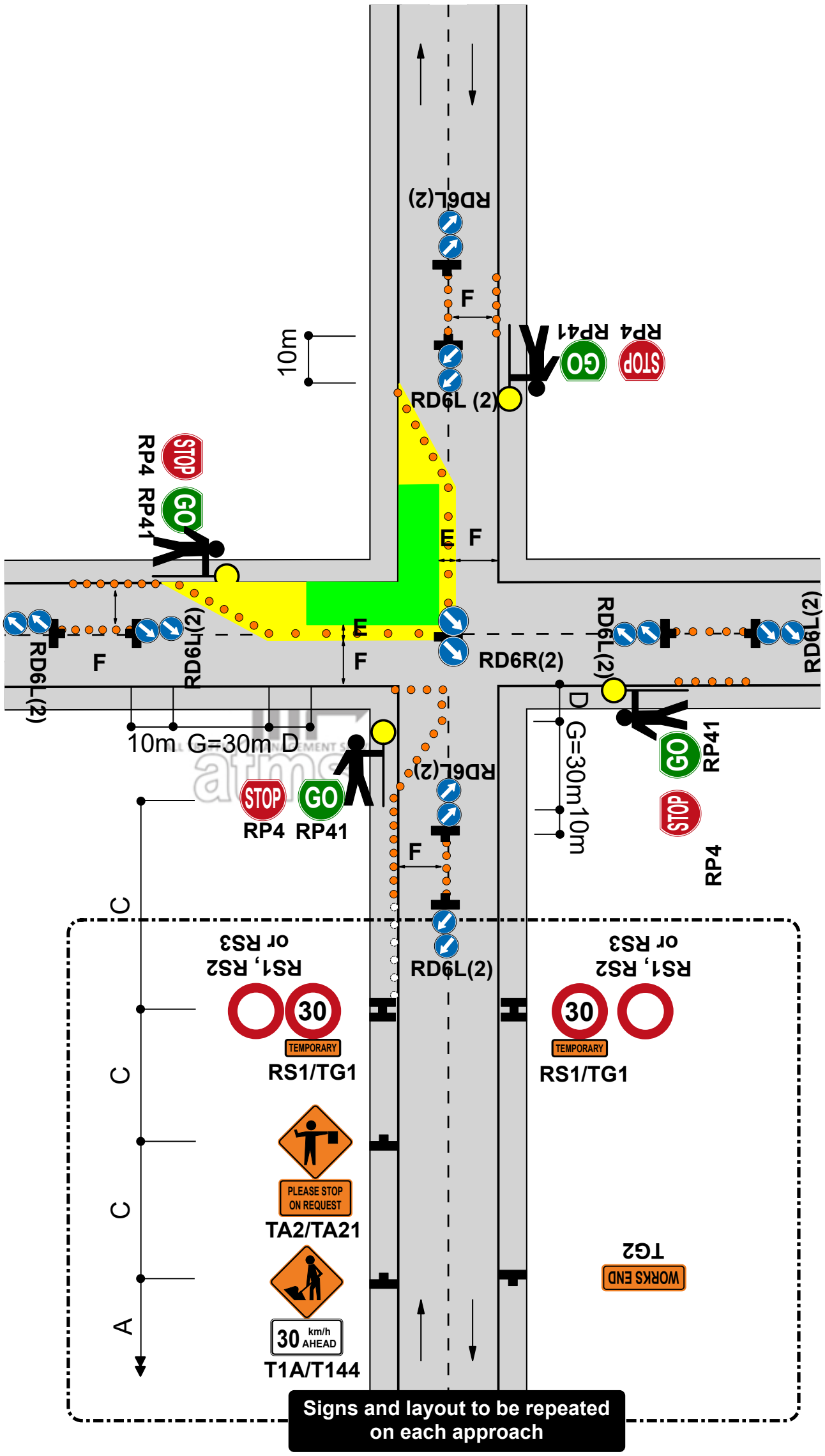
5. MTC with RP4/RP41 STOP/GO or RP4/RP42 STOP/SLOW paddle on road shoulder located between 1st and 2nd cone in the cone threshold closest to the working space

6. Minimum 5 cones in cone threshold at:
   - 2.5m centres - less than 65km/h
   - 5m centres - more than 65km/h

7. Refer to C10.2.3 MTC essentials for further information

8. On roads with a permanent speed limit of 100km/h, cones are required from the TSL to the taper if the speed is reduced by more than 30km/h

9. The T144 30km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD
All traffic stopped temporarily
Manual traffic control (STOP/GO or STOP/SLOW)

F2.15
Level 1

Notes

1. Closure period not to exceed the limit set or approved by the RCA

2. Extend advance warning signs towards on-coming traffic beyond any expected traffic queues

3. MTC with RP4/RP41 STOP/GO or RP4/RP42 STOP/SLOW paddle on road shoulder located between 1st and 2nd cone in the cone threshold closest to the working space

4. Minimum 5 cones in cone threshold at:
   - 2.5m centres - less than 65km/h
   - 5m centres - more than 65km/h

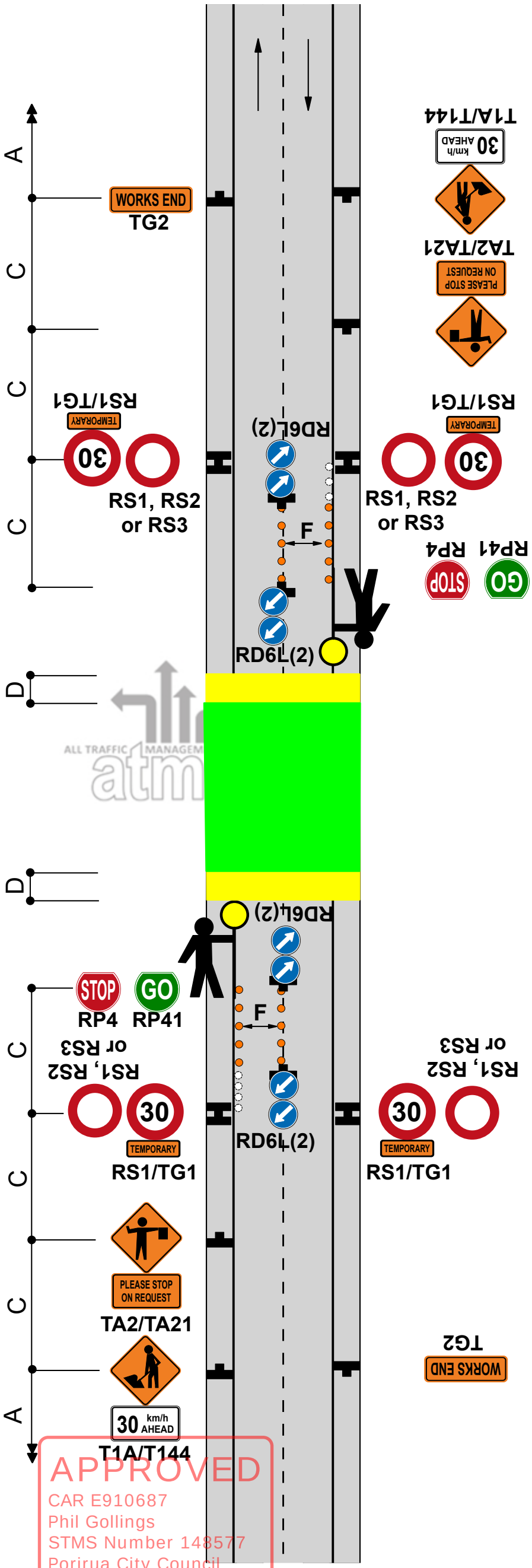
5. MTCs must show same message to oncoming traffic (eg STOP/STOP or GO/GO)

6. Refer to C10.2.3 MTC essentials for further information

7. When road users are passing the working space in alternating flow, all construction equipment must be stopped on same side of the road if there is no separation from the live lane

8. Where damage is likely to occur to passing traffic eg during sealing, traffic must be stopped in both directions

9. The T144 X0km/h AHEAD sign is optional



Static operations

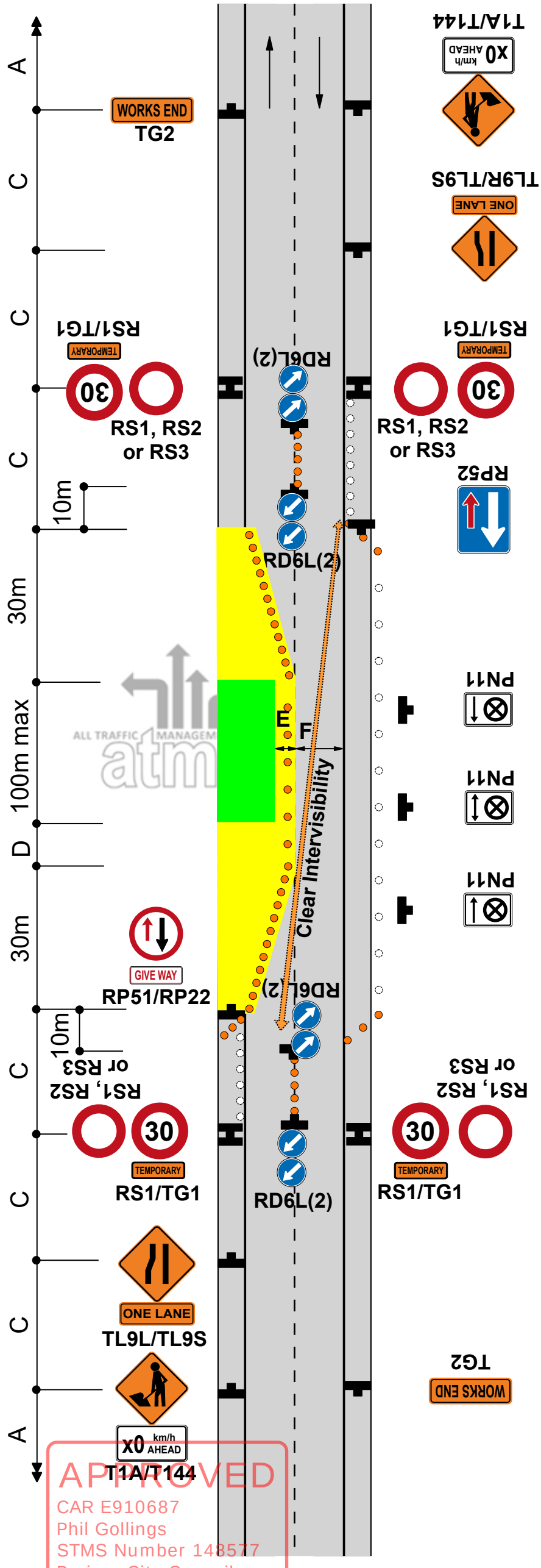
TMC APPROVAL REQUIRED

TWO-WAY TWO-LANE ROAD
Single-lane (traffic volume less than 1000vpd - 80vph)
Give way control

F2.16
Level 1

Notes

1. The RP51/RP22 and RP52 controls must be placed in the following priority order:
   - downhill traffic must give way to uphill traffic
   - traffic that has to cross into the opposing lane gives way, however where visibility for this vehicle is marginal the contractor may require the other vehicle with better visibility to give way
2. Intervisibility is required as indicated on diagram. This means that a vehicle at one sign is able to see whether the way ahead is clear
3. A 30m return taper at the end of the closure is mandatory
4. Use PN11 No Stopping signs, if necessary
5. Cones are required on edge of the temporary lane opposite closure if road is not well defined
6. The T144 X0km/h AHEAD sign is optional



Static operations

TWO-WAY TWO-LANE ROAD
Single-lane alternating flow
Portable traffic signals

F2.17
Level 1

Notes

1. Provide details of make and model of portable traffic signals in the TMP

2. Install temporary limit lines (must be able to be removed upon completion) or use RP61/RP62 signs

3. Approved temporary speed humps may also be used. Consider use of MTC while speed humps are installed

4. A 30m return taper at the end of the closure is mandatory

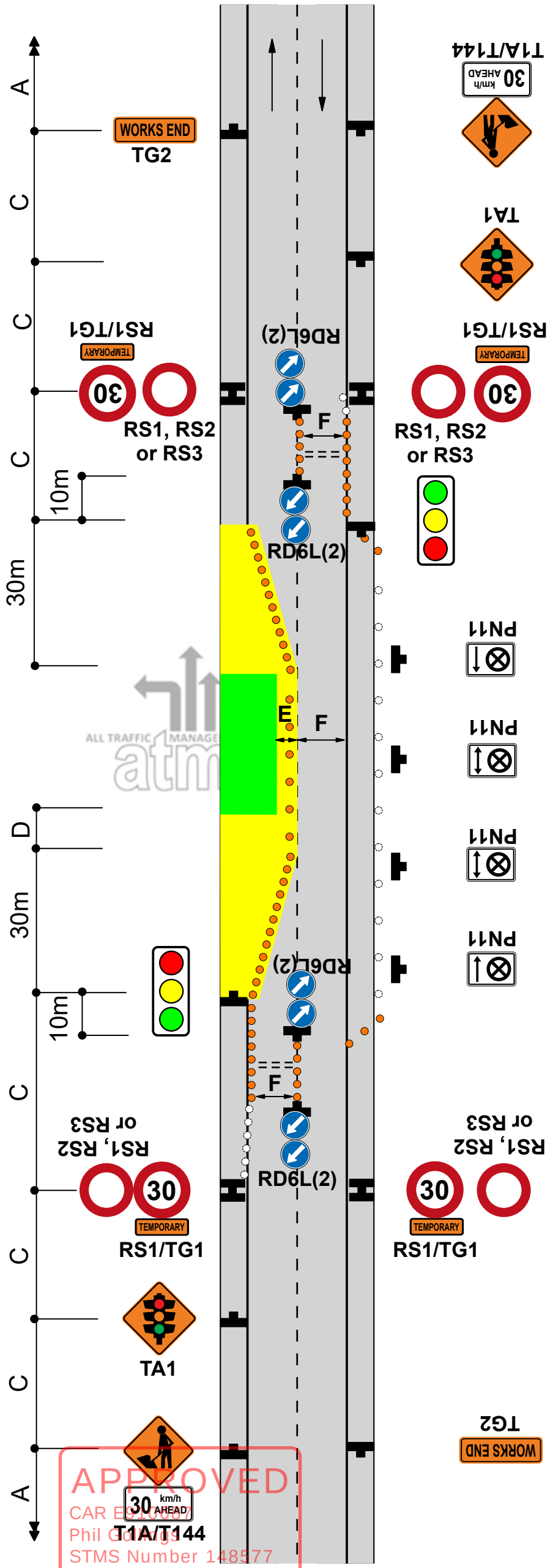
5. Cones are required on edge of the temporary lane opposite closure if road is not well defined

6. Extend or place extra advance warning signs towards on-coming traffic beyond any expected traffic queues

7. Use PN11 No Stopping signs, if necessary

8. Minimum 5 cones in cone threshold at:
   - 2.5m centres - less than 65km/h
   - 5m centres - more than 65km/h

9. The T144 30km/h AHEAD sign is optional



Static operations

TWO-WAY TWO-LANE ROAD
Work in centre of road

F2.18
Level 1

Notes

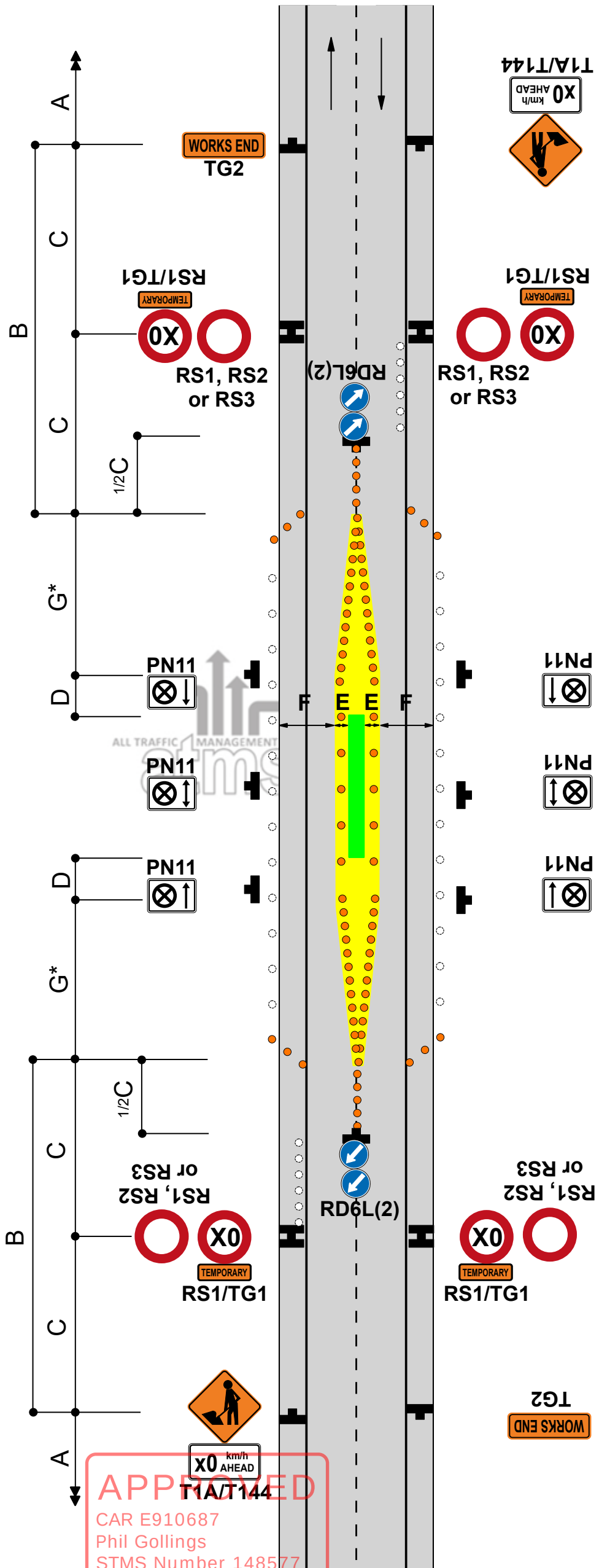
1. Cones are required on edge of the temporary lane opposite closure if road is not well defined

2. *Calculation of taper length for lateral shift of less than 3.5m is:
   W x G
   3.5
   W = Width of lateral shift
   G = Taper length in metres from the level 1 layout distance table

3. Use PN11 no stopping signs, if necessary

4. Use TSLs if required by TSL decision matrix

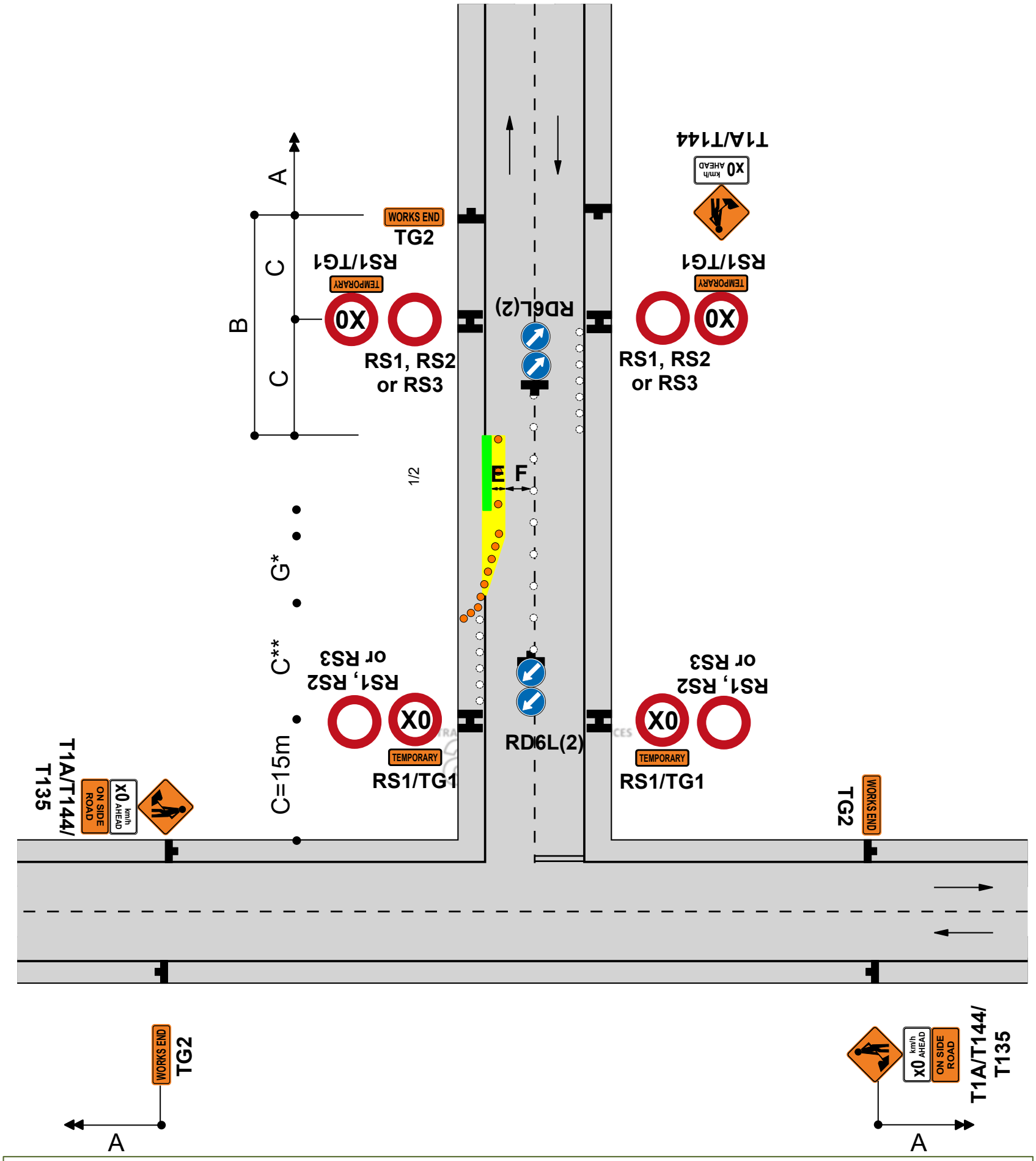
5. The T144 X0km/h AHEAD sign is optional



Static operations

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Road works on side road after intersection - TSL on side road
Traffic not crossing road centre

F2.19
Level 1



Notes

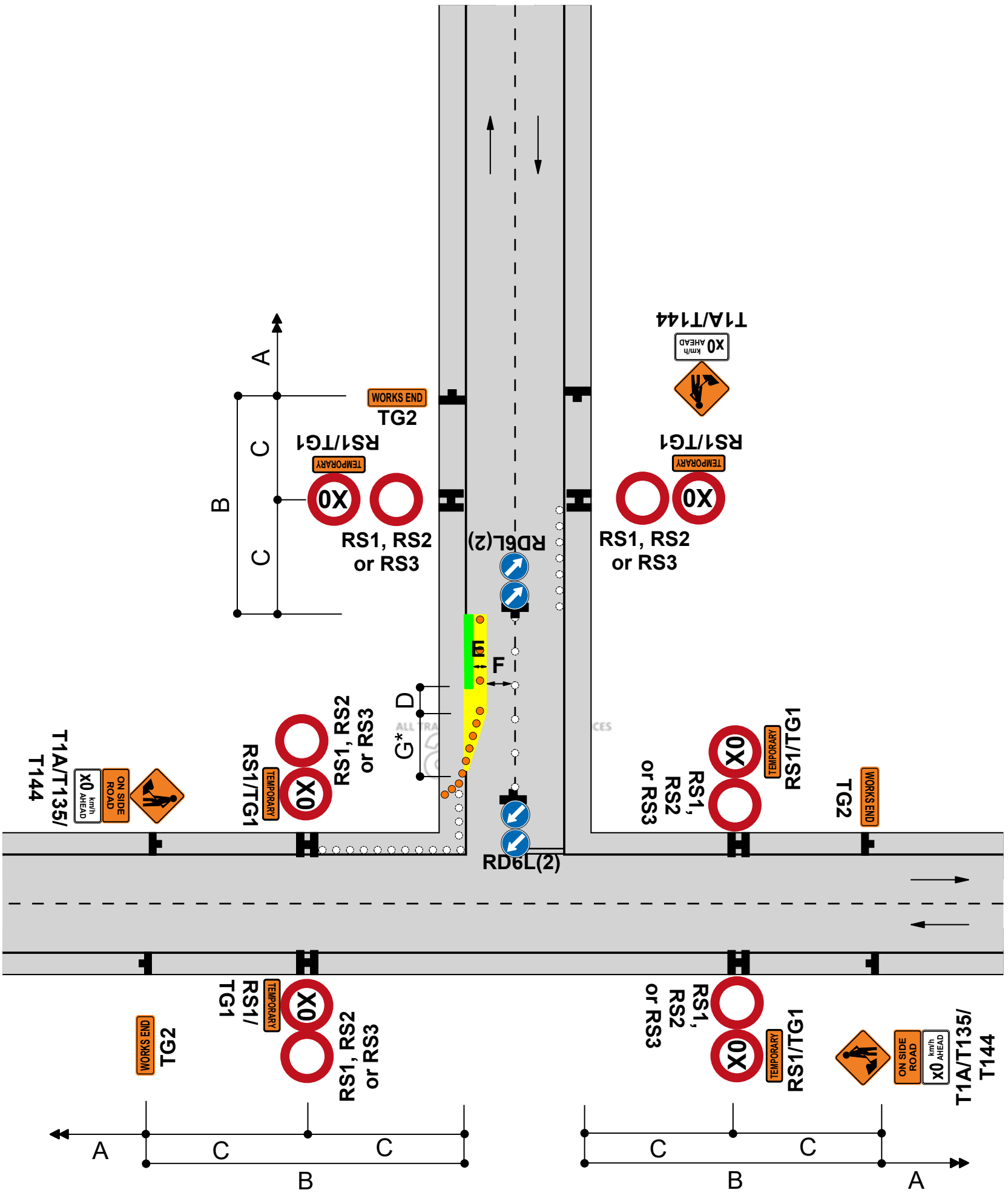
1. Sign spacing of TSL at the intersection can be reduced as per the table shown below
2. Where minimum dimensions cannot be achieved TMD F2.20 is to be used
3. Advance warning signs on main road must be at least the warning distance away from first cone in taper
4. *Calculation of taper length for lateral shift of less than 3.5m is:
   W x G W = Width of lateral shift
   3.5 G = Taper length in metres from the level 1 layout distance table
5. If traffic likely to cross the centreline, place cones on the centreline with RD6L signs at each end
6. Use TSLs as required by TSL decision matrix
7. The T144 30km/h AHEAD sign is optiona

Speed (PSL)	Intersection to TSL	C** TSL to taper	Total
<50km/h	15m	15m	30m
60km/h	15m	25m	40m
>70km/h	15m	40m	55m

Static operations

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Road works on side road after intersection - TSL on main road
Traffic not crossing road centre

F2.20
Level 1



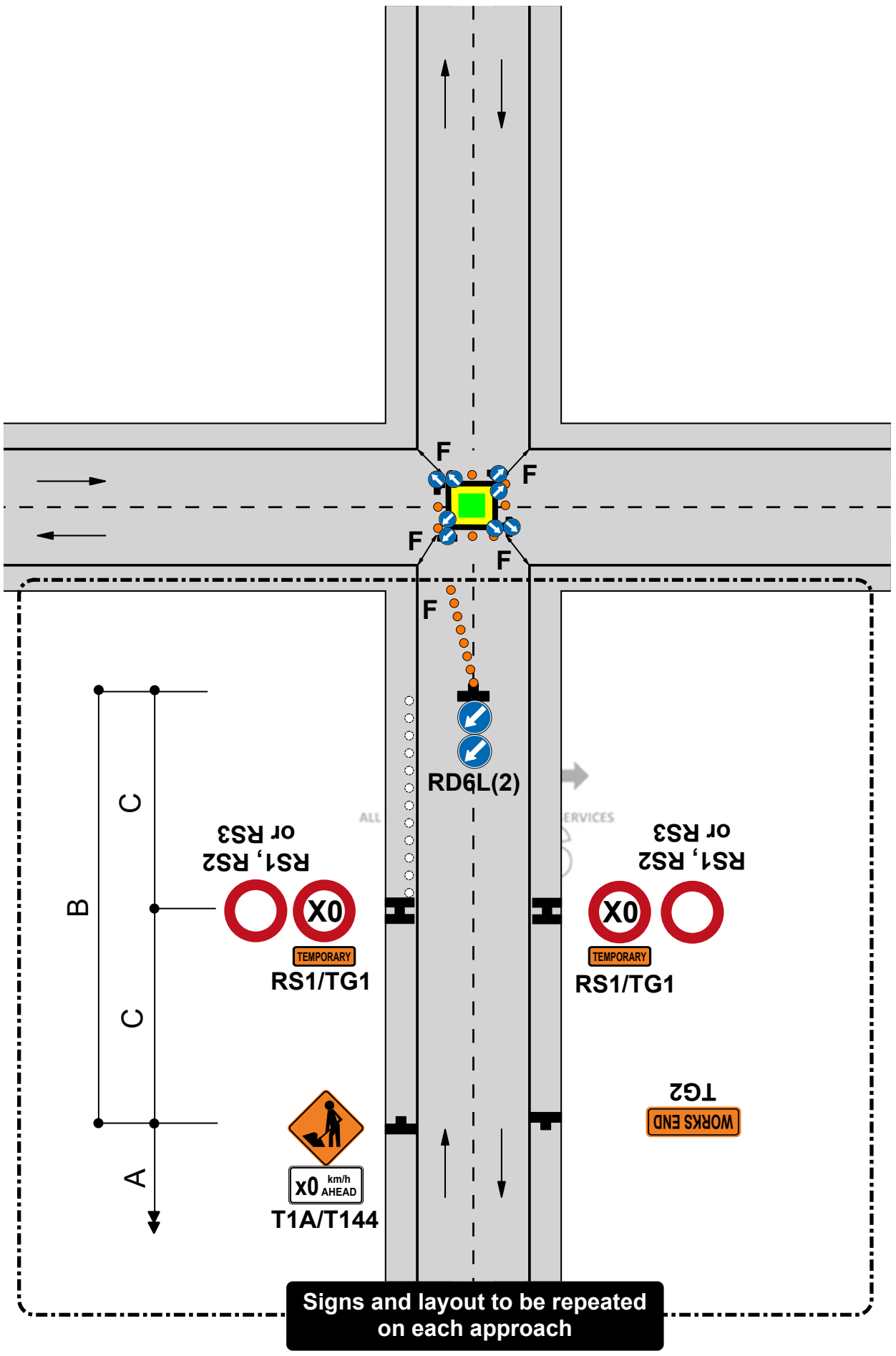
Notes

1.*Calculation of taper length for lateral shift of less than 3.5m is:
W x G W = Width of lateral shift
3.5 G = Taper length in metres from the level 1 layout distance table
2.If traffic likely to cross the centreline, place cones on the centreline with RD6L signs at each end
3.Use TSLs as required by TSL decision matrix
4.The T144 X0km/h AHEAD sign is optional

Static operations

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Work in middle of intersection

F2.21
Level 1



Notes

1. This diagram may be used at a T intersection by removing any one of the roads
2. Signs and layout shown in the box at the bottom of the diagram is to be repeated on each approach
3. RD6L signs are not required at an existing roundabout
4. Cone tapers are optional at existing roundabouts
5. Lane widths, F, may need to be increased to allow for turning movements of larger vehicles
6. Use TSLs if required by TSL decision matrix
7. The T144 X0km/h AHEAD sign is optional

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

Static operations

ONE-WAY TWO-LANE DIVIDED OR TWO-LANE ROAD
Left-lane closure

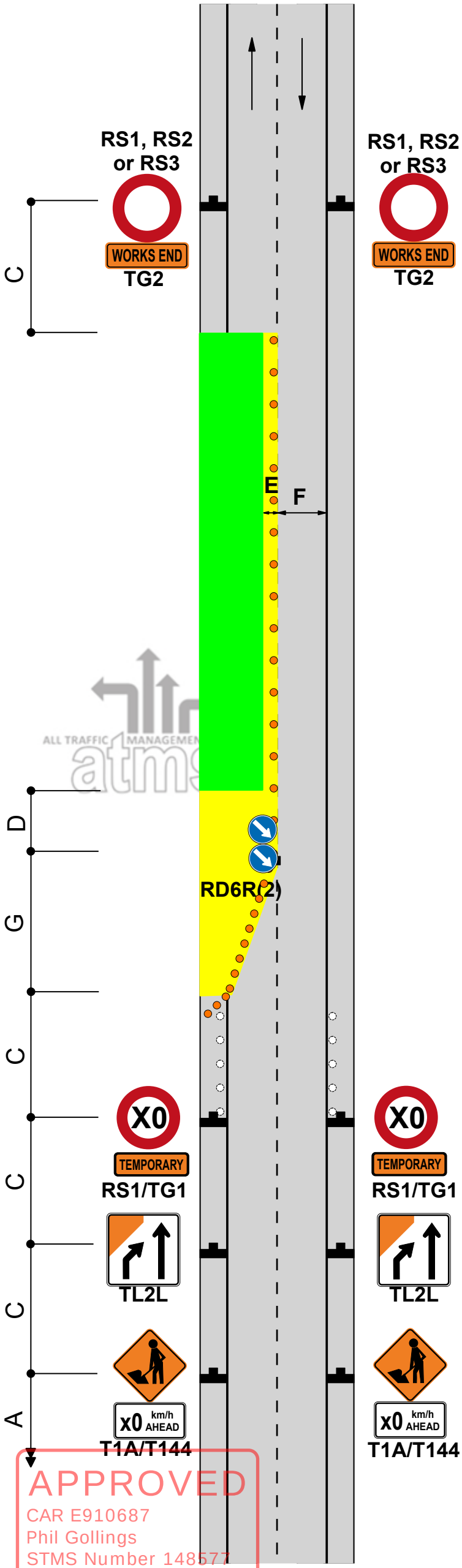
F2.30
Level 1

Notes

1. Use TSLs if required by TSL decision matrix

2. On roads with a permanent speed limit of 100km/h, cones are required from the TSL to the taper if the speed is reduced by more than 30km/h

3. The T144 X0km/h AHEAD sign is optional



Static operations

ONE-WAY TWO-LANE DIVIDED OR TWO-LANE ROAD
Right-lane closure

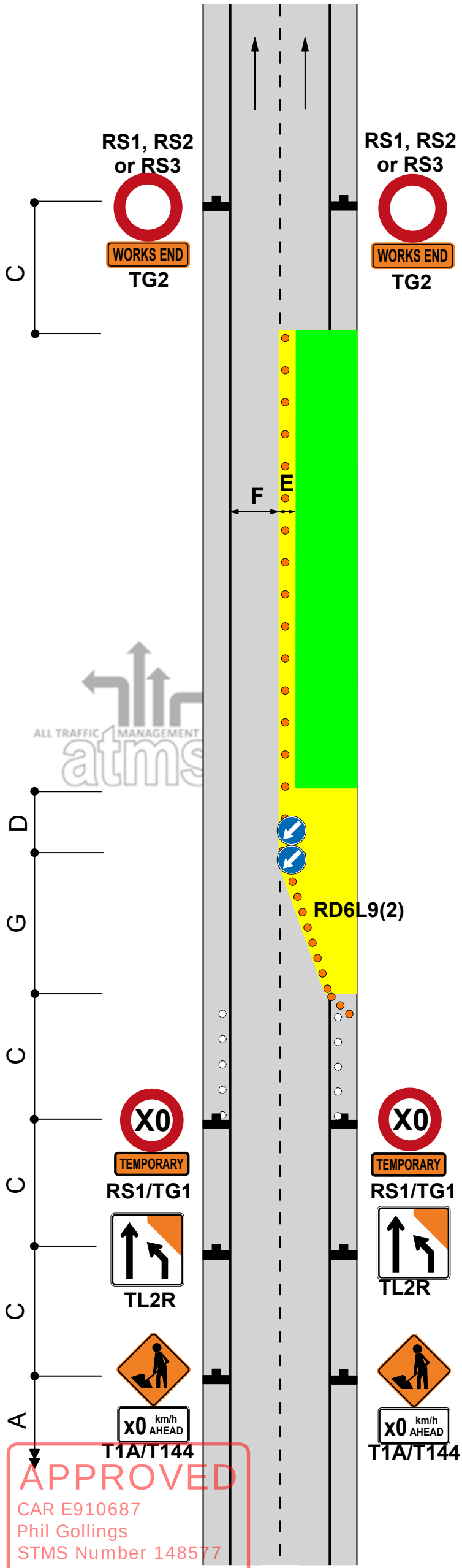
F2.31
Level 1

Notes

1. Use TSLs if required by TSL decision matrix

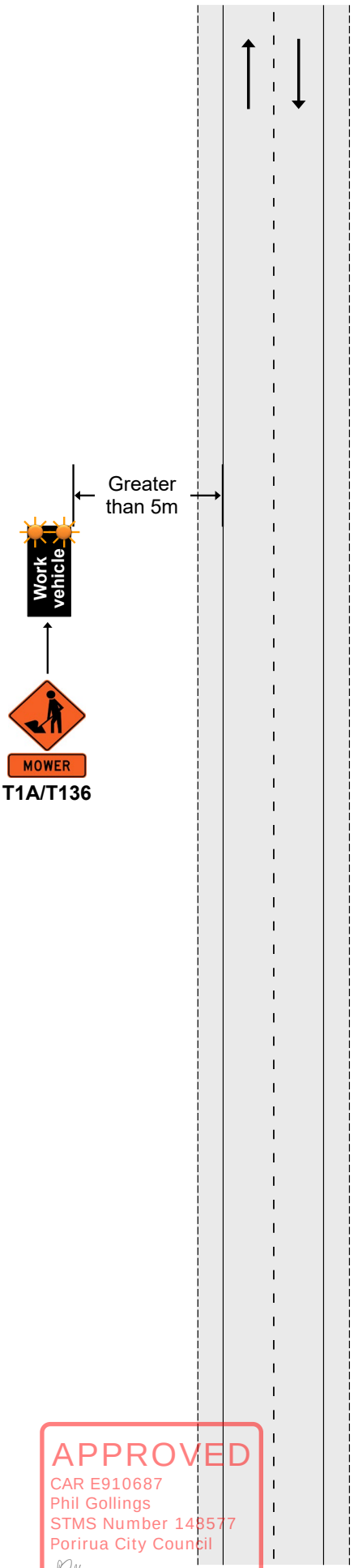
2. On roads with a permanent speed limit of 100km/h, cones are required from the TSL to the taper if the speed is reduced by more than 30km/h

3. The T144 X0km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD
Work vehicle is more than five (5) metres from the edgeline
Any speed

F4.1
Level 1



T1A/T136

Mobile operations

TWO-WAY TWO-LANE ROAD
Work vehicle is within five (5) metres of the edgeline
CSD to work vehicle - not required under 65km/h, required over 65km/h

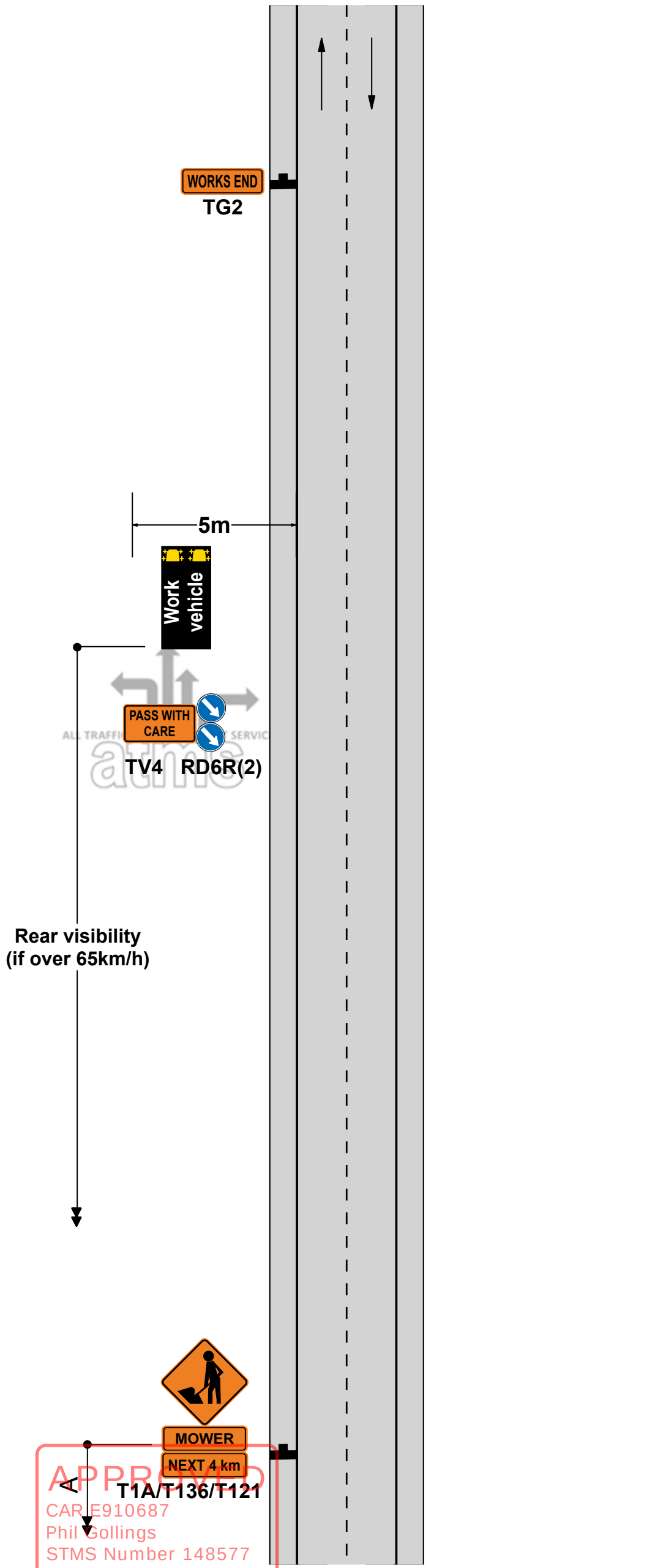
F4.2
Level 1

Notes

1. If permanent speed is under 65km/h, rear visibility to the work vehicle is not required

2. If permanent speed is over 65km/h, rear visibility to the work vehicle is required

3. A tail pilot vehicle equipped with T1A advance warning sign, appropriate supplementary plate and RD6R may replace the static signs if the permanent speed is under 65km/h (see TMD F4.3)

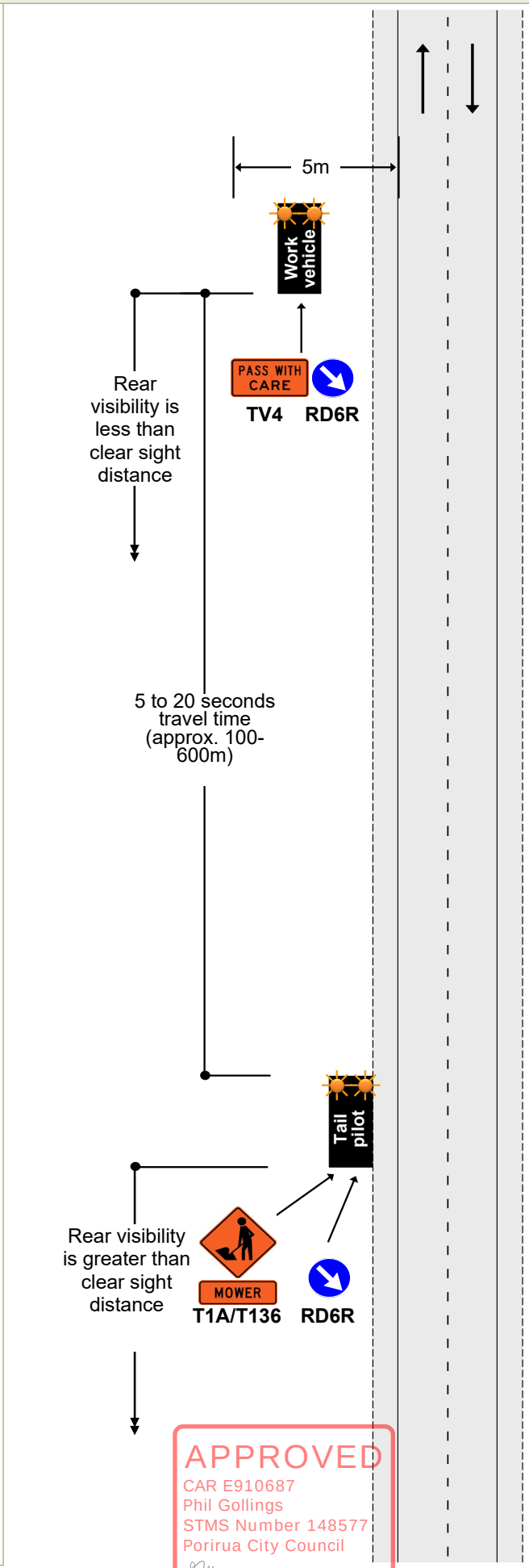


TWO-WAY TWO-LANE ROAD
Work vehicle is within five (5) metres of the edgeline
Speed limit over 65km/h - the rear visibility is less than CSD

F4.3
Level 1

Notes

1. This TMD can replace TMD F4.2 when permanent speed is under 65km/h. In these situations, static signs are not required



APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council
31 January 2023

Mobile operations

TWO-WAY TWO-LANE ROAD
Work vehicle is in a lane
Permanent speed under 65km/h

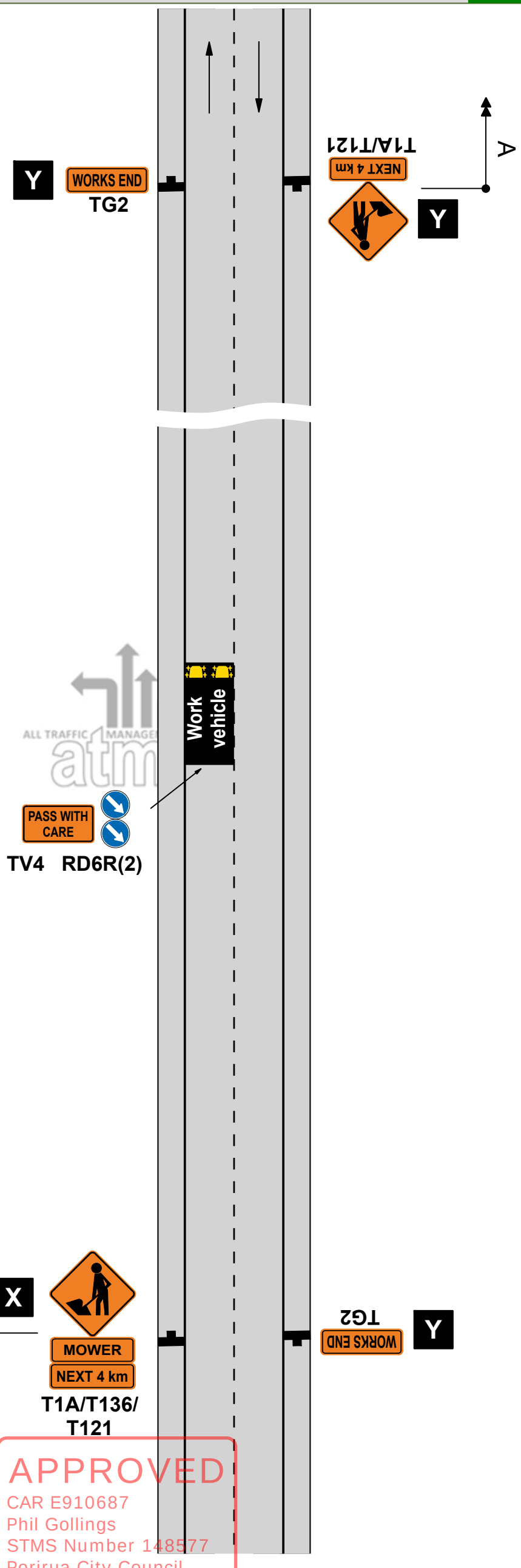
F4.4
Level 1

Notes

1. Advance warning sign X may be replaced by tail pilot equipped with T1A advance warning sign and appropriate supplementary plate

2. In this case, signs marked with Y do not need to be erected

3. If using static advance warning signs and the operation is on the lane, then static advance warning signs must also be placed on any intersecting roads



Mobile operations

ONE-WAY TWO-LANE DIVIDED OR TWO-LANE ROAD
Part or all of a lane occupied
Semi-static closure - work for up to 1 hour

ATMS06
Level 1

Notes

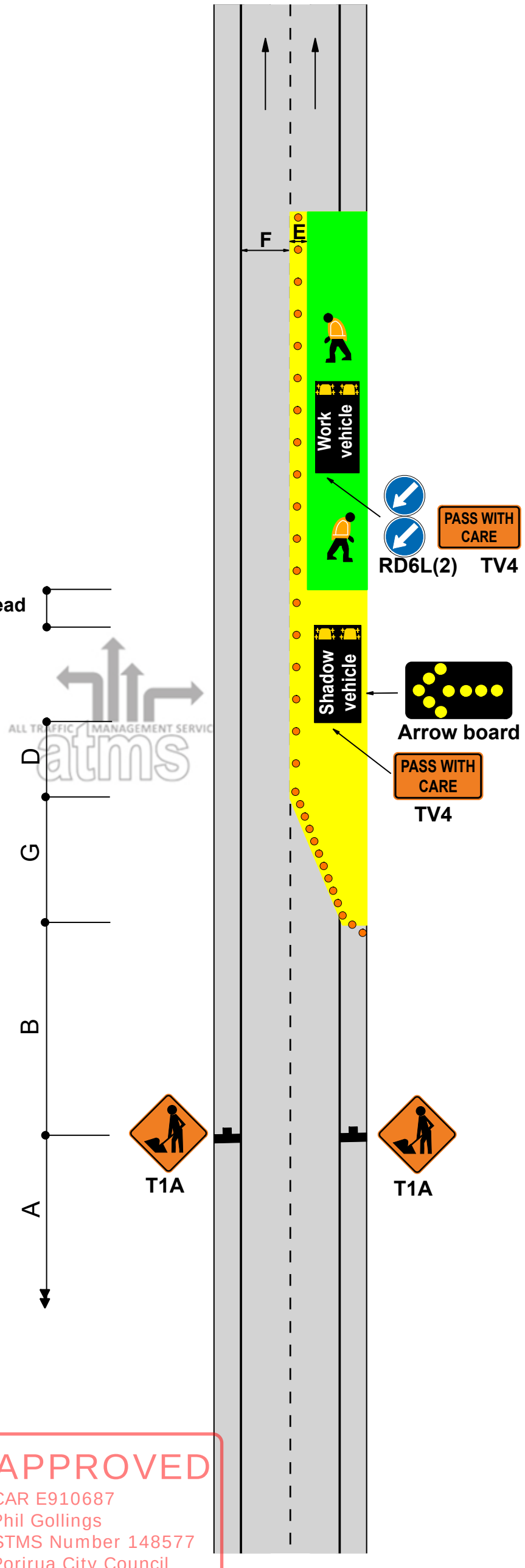
1. Only use this TMD when activity can be completed within 1 hour (excluding set up and removal of worksite)

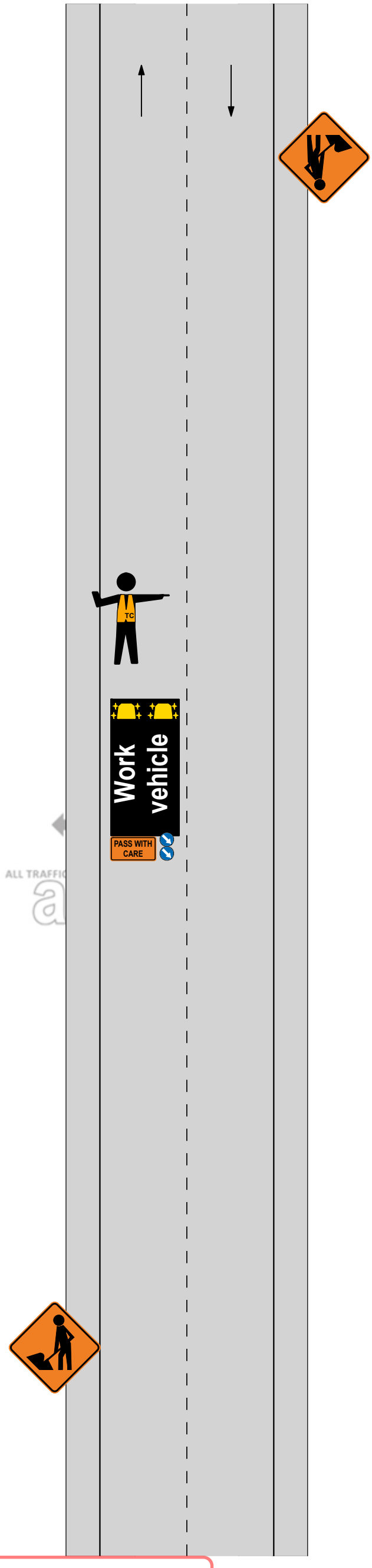
2. The T1A advance warning signs may be replaced by a tail pilot vehicle with a T1A sign, appropriate supplementary plate and a RD6R/L

3. If shadow vehicle is fitted with a TMA, the longitudinal safety zone (D) is not required

4. If using static advance warning signs and the operation is on the lane, then static advance warning signs must also be placed on any intersecting roads.

5. This site can be used on the opposite (left) lane also.





Closure: Level 1 Mobile Closure

Level: 1

TMP Ref: Mobile L1 - TTM Install/Removal

APPROVED
CAR E910687
Phil Gollings
STMS Number 148577
Porirua City Council

31 January 2023

ALL TRAFFIC MANAGEMENT SERVICES atms

CYCLE LANE
Traffic not crossing road centre
Diverted cycle lane

F2.8
Level 1

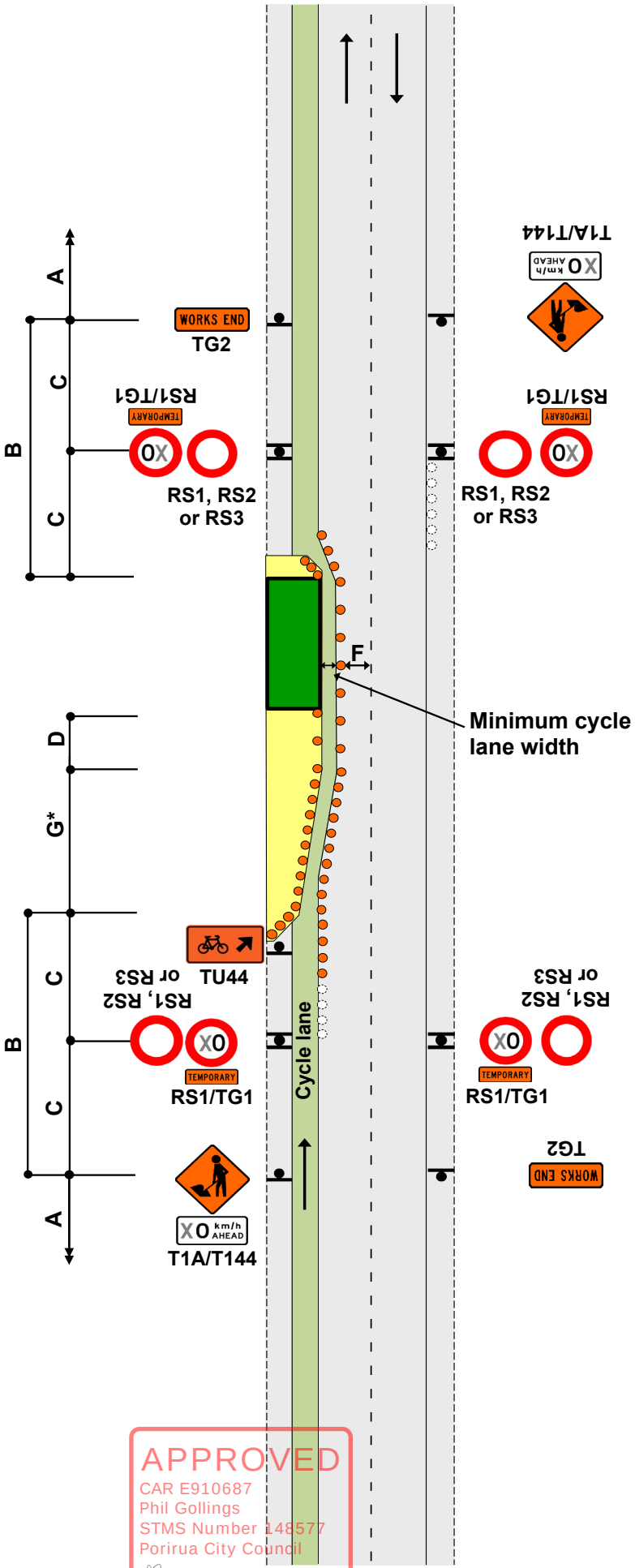
Notes

1. Minimum cycle lane width must be:
   - 1m - 50km/h or less
   - 1.5m - 60km/h or more
2. A minimum cycle lane width of 1.5m is required if the temporary cycle lane is uphill
3. *Calculation of taper length for lateral shift of less than 3.5m is:

   $$\frac{W \times G}{3.5}$$

   W = Width of lateral shift

   G = Taper length in metres from the level 1 layout distance table
4. Use TSLs if required by TSL decision matrix
5. The T144 X0km/h AHEAD sign is optional



Static operations

CYCLE LANE
Traffic crossing road centre
Diverted cycle lane - coned lane control

F2.9
Level 1

Notes

1. Minimum cycle lane width must be:
   - 1m - 50km/h or less
   - 1.5m - 60km/h or more

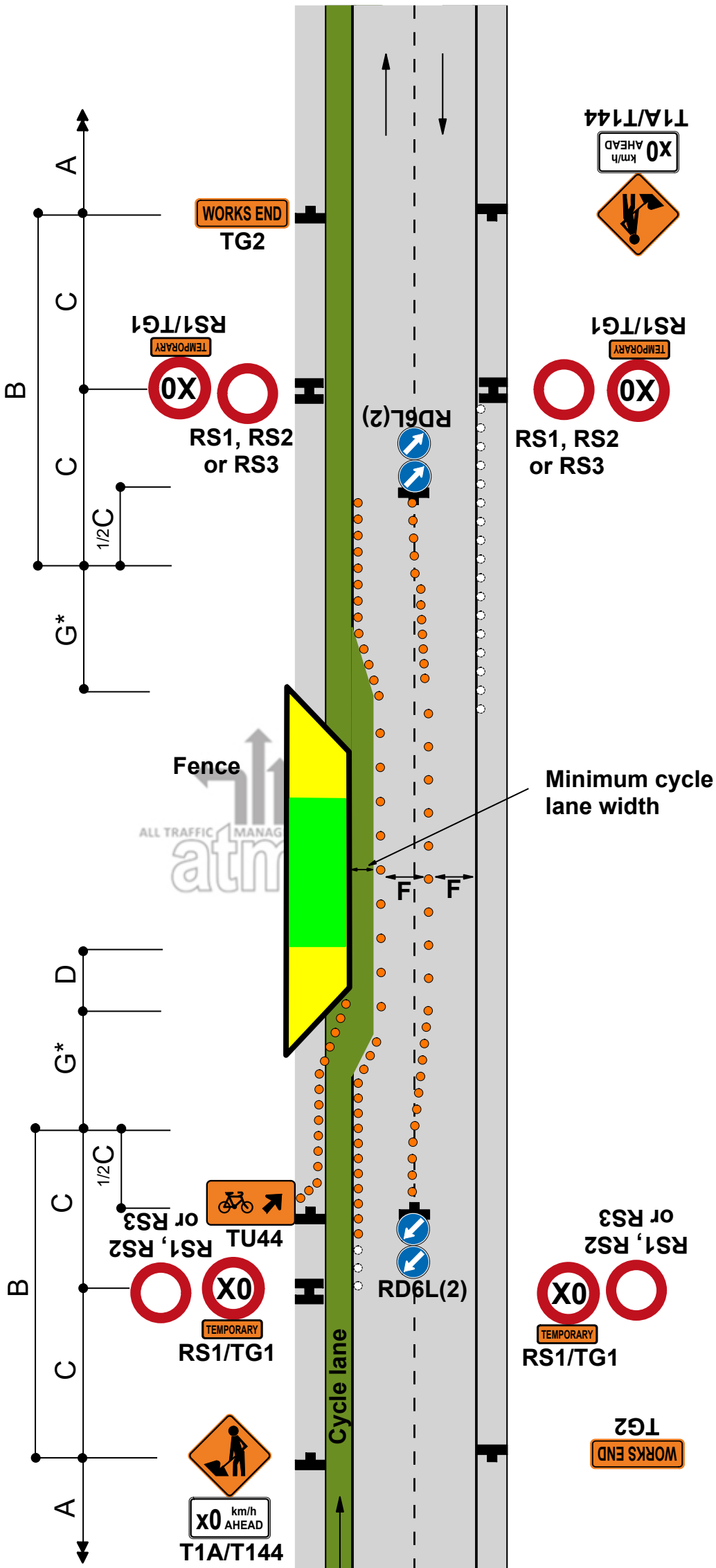
2. A minimum cycle lane width of 1.5m is required if the temporary cycle lane is uphill

3. *Calculation of taper length for lateral shift of less than 3.5m is:
   W x G
   3.5
   W = Width of lateral shift
   G = Taper length in metres from the level 1 layout distance table

4. To allow heavy vehicles to manoeuvre, cones in the channel must be offset by at least 10m where the direction changes. Refer C8.2.12

5. Use TSLs if required by TSL decision matrix

6. The T144 X0km/h AHEAD sign is optional



Static operations

CYCLE LANE
Cycle lane closed
Poratable e-STOP

ATMS03
Level 1

Notes

1. Merge of cycle lane with live lane must be delineated with cones at 1.0m centres for at least 10m

2. The T144 30km/h AHEAD sign is optional on roads under 65km/h

3. Signs and layout shown in the box at the bottom of the diagram is to be repeated on each approach that requires cycle lane signage. ATMS01 or ATMS02 to be used on all non cycle lane approaches.

3. Provide details of make and model of portable traffic signals in the TMP

4. Use PN11 no stopping signs, if necessary as per the approved TMP

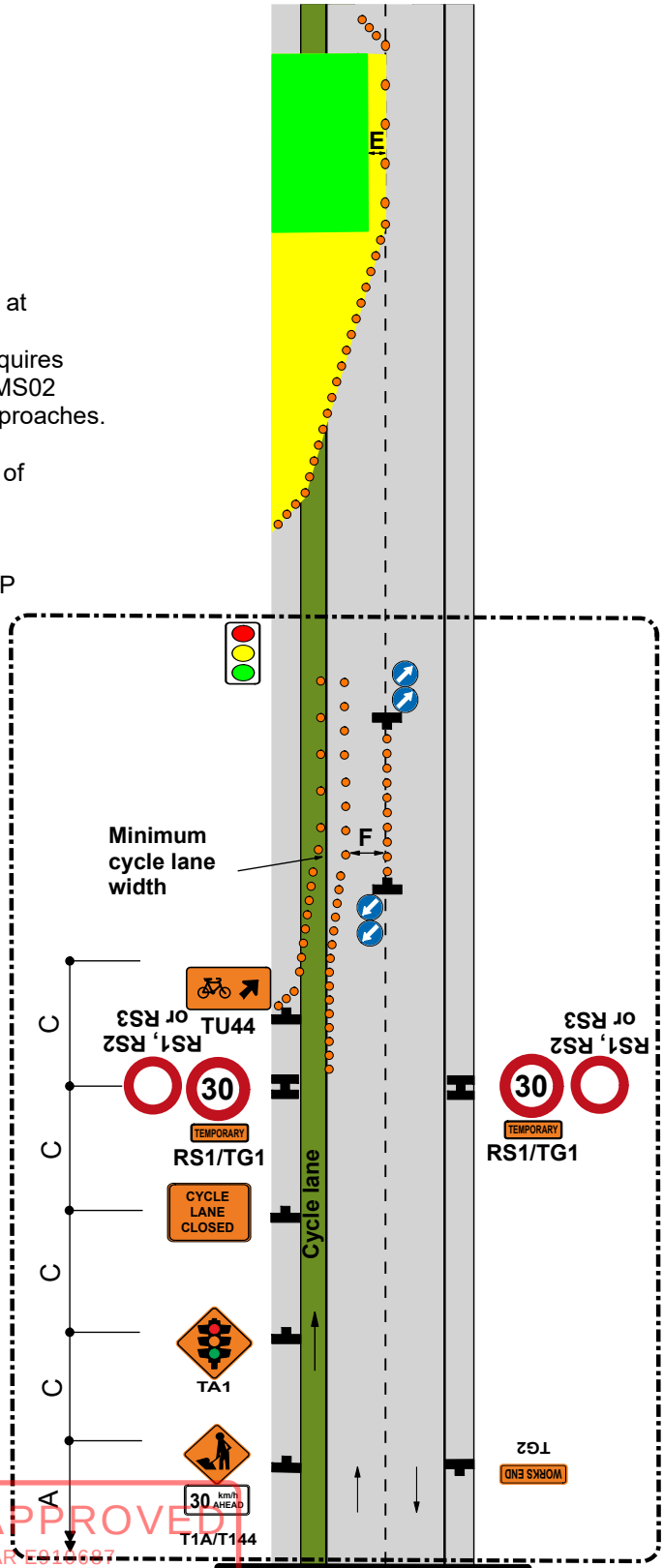
5. Install temporary RP61/RP62 signs.

7. Extend or place extra advance warning signs towards on-coming traffic beyond any expected traffic queues.

8. CONTINGENCY PLAN:
F2.14 or F2.22 to be implemented should issues arise with e-STOP/ adverse weather conditions or where stop go is unsuitable.
ex; Short term stoppages is defined as “stopping traffic for a short period of time within a static site, at inconsistent intervals to assist with the entry/exit of vehicles or small tasks required to be undertaken in the live lane”.

9. In circumstances where for safety reasons, the use of stop/go operations is deemed more appropriate, a site specific safe work method statement must be prepared.

10. e-STOP can only be used on an attended site. e-STOPs must be manned at all times.



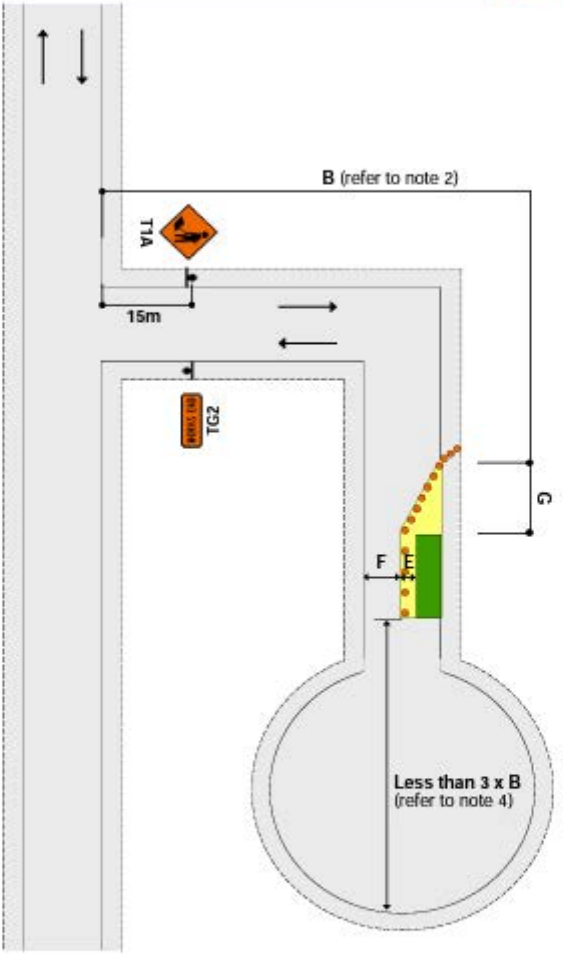
Signs and layout to be repeated on each cycle lane approach
Follow ATMS01 & ATMS02 for non cycle lane approaches.

APPROVED
CAR E010087
Phil Gollings
STMS Number 148577
Porirua City Council

31 January 2023

TWO-WAY TWO-LANE ROAD
Short no exit road

J2.16a
Level 1

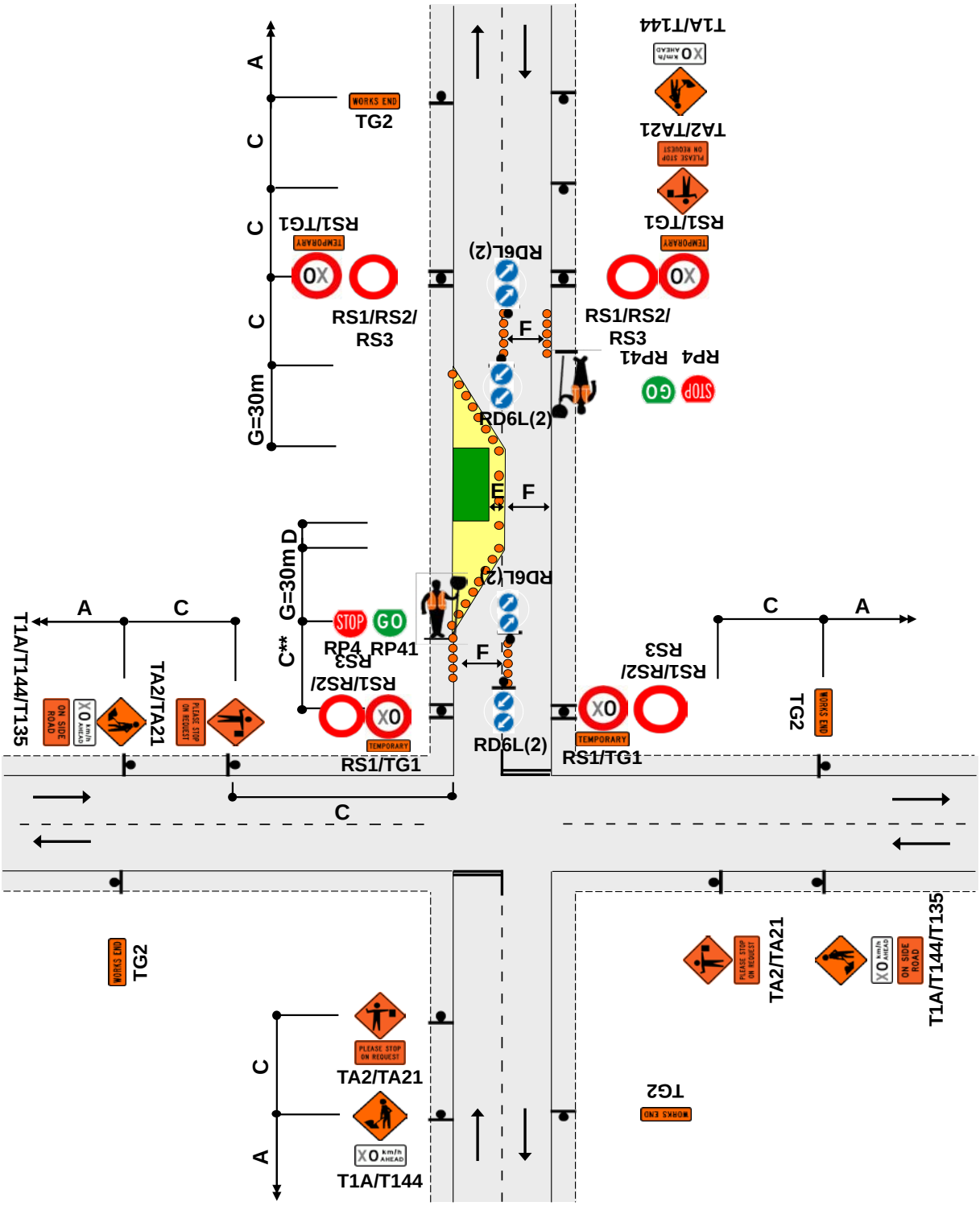


Notes

1. T1A sign to be placed at least 15m from the intersection
2. Where less than B, T1A/T135 and TG2 signs required on main road
3. Working space to be less than 100m
4. Signage is not required past the worksite where there is less than 3 x B from the end of the working space to the end of the road

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Major obstruction close to intersection
Allows shorter sign spacings and MTC operation

J2.19a
Level 1



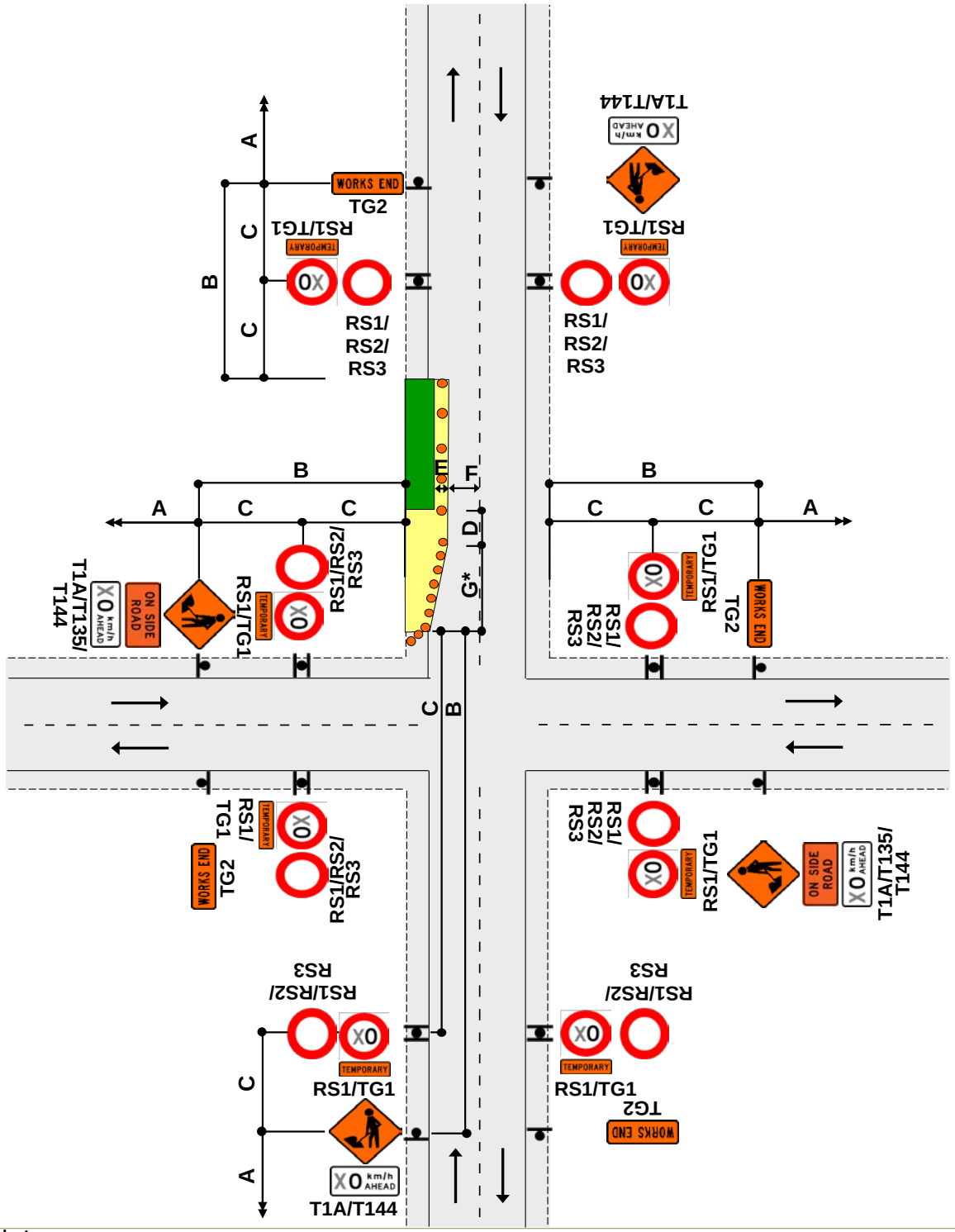
Notes

1. Sign spacing of TSL at the intersection can be reduced as per the table shown
2. This diagram may be used at a T intersection by removing any one of the roads
3. MTC at intersection to be in charge of MTC operation
4. Use TSLs as required by TSL decision matrix
5. The T144 30km/h AHEAD sign is optional

C**	DISTANCE		
Speed (PSL)	Intersection to TSL	TSL to taper	Total
<50km/h	15m	15m	30m
60km/h	15m	25m	40m
>70km/h	15m	40m	55m

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
After intersection - Traffic not crossing road centre

J2.20a
Level 1

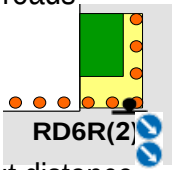


Notes

1. This diagram may be used at a T intersection by removing any one of the roads
2. Taper length may be reduced by adding a RD6R sign
3. *Calculation of taper length for lateral shift of less than 3.5m is:

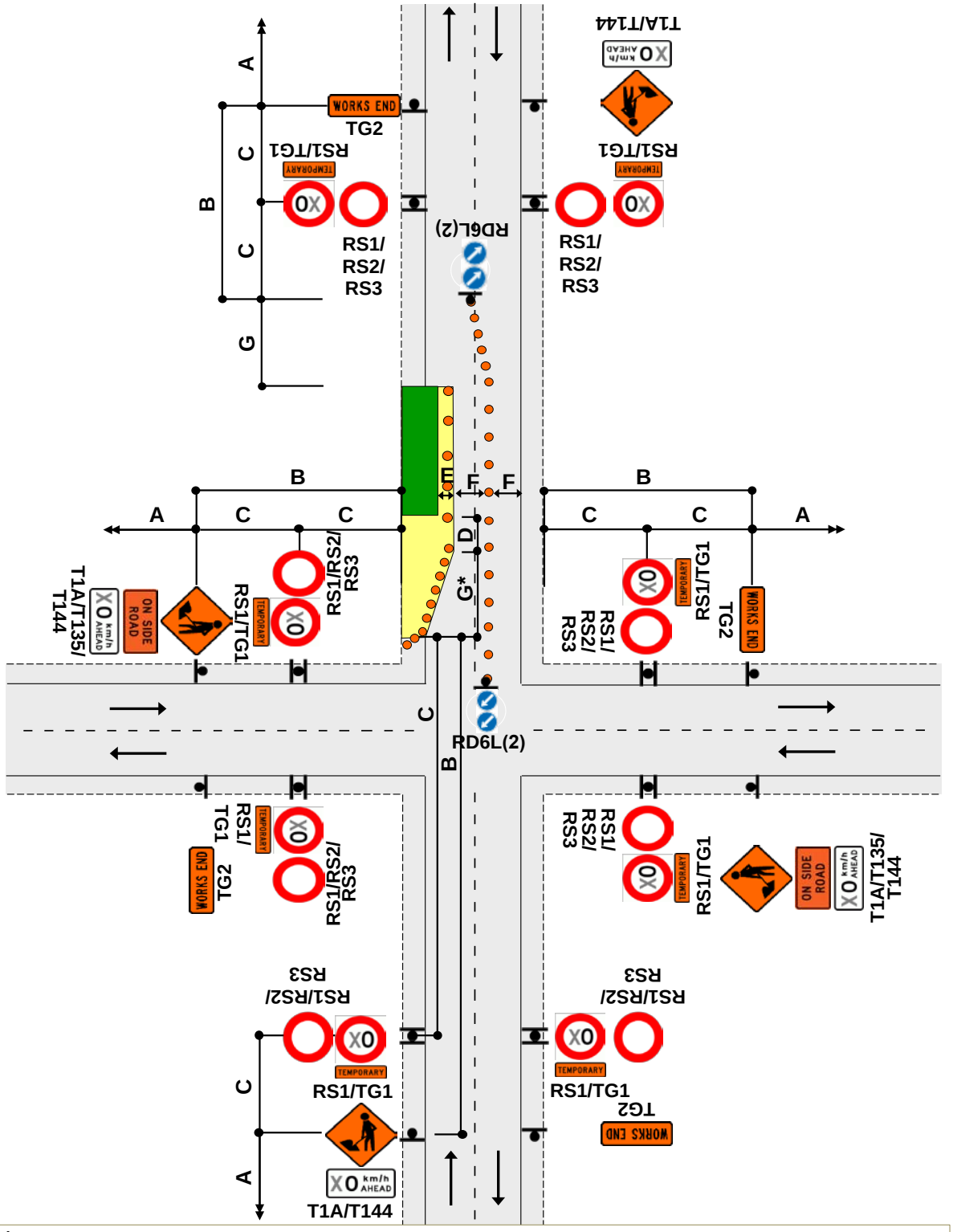
$$\frac{W \times G}{3.5}$$

4. W = Width of Shoulder G = Taper length in metres from the level 1 layout distance table
5. Use TSLs if required by TSL decision matrix
6. The T144 X0km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD - Intersection or roundabout
After intersection - Traffic crossing road centre

J2.20b
Level 1

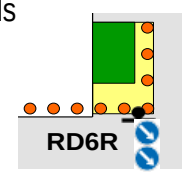


Notes

1. This diagram may be used at a T intersection by removing any one of the roads
2. Taper length may be reduced by adding a RD6R sign
3. *Calculation of taper length for lateral shift of less than 3.5m is:

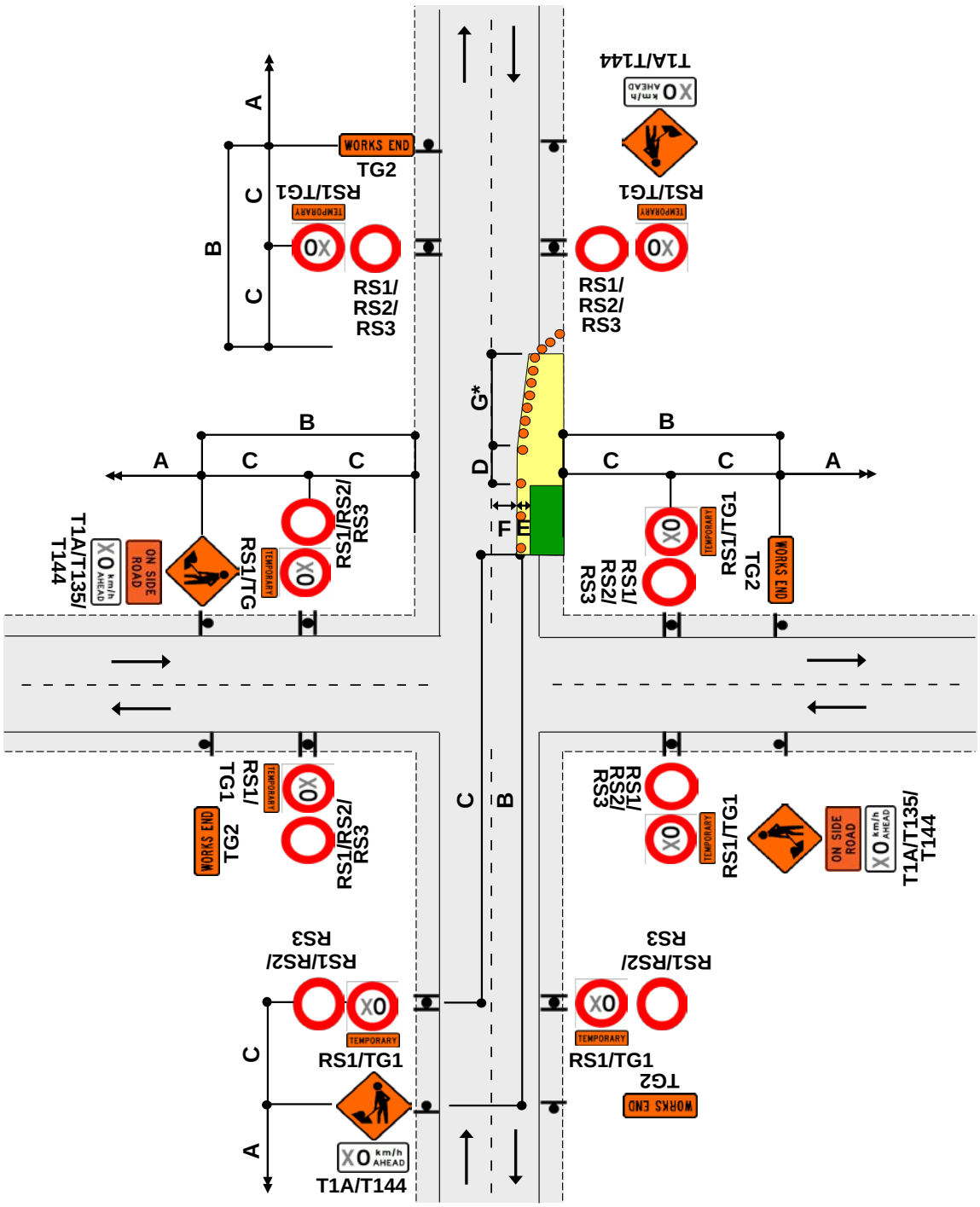
   $$\frac{W \times G}{3.5}$$

   W = Width of Shoulder G = Taper length in metres from the level 1 layout distance table
4. Use TSLs if required by TSL decision matrix
5. The T144 X0km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Before intersection - Traffic not crossing road centre

J2.20c
Level 1

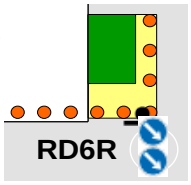


Notes

1. This diagram may be used at a T intersection by removing any one of the roads
2. Taper length may be reduced by adding a RD6R sign
3. *Calculation of taper length for lateral shift of less than 3.5m is:

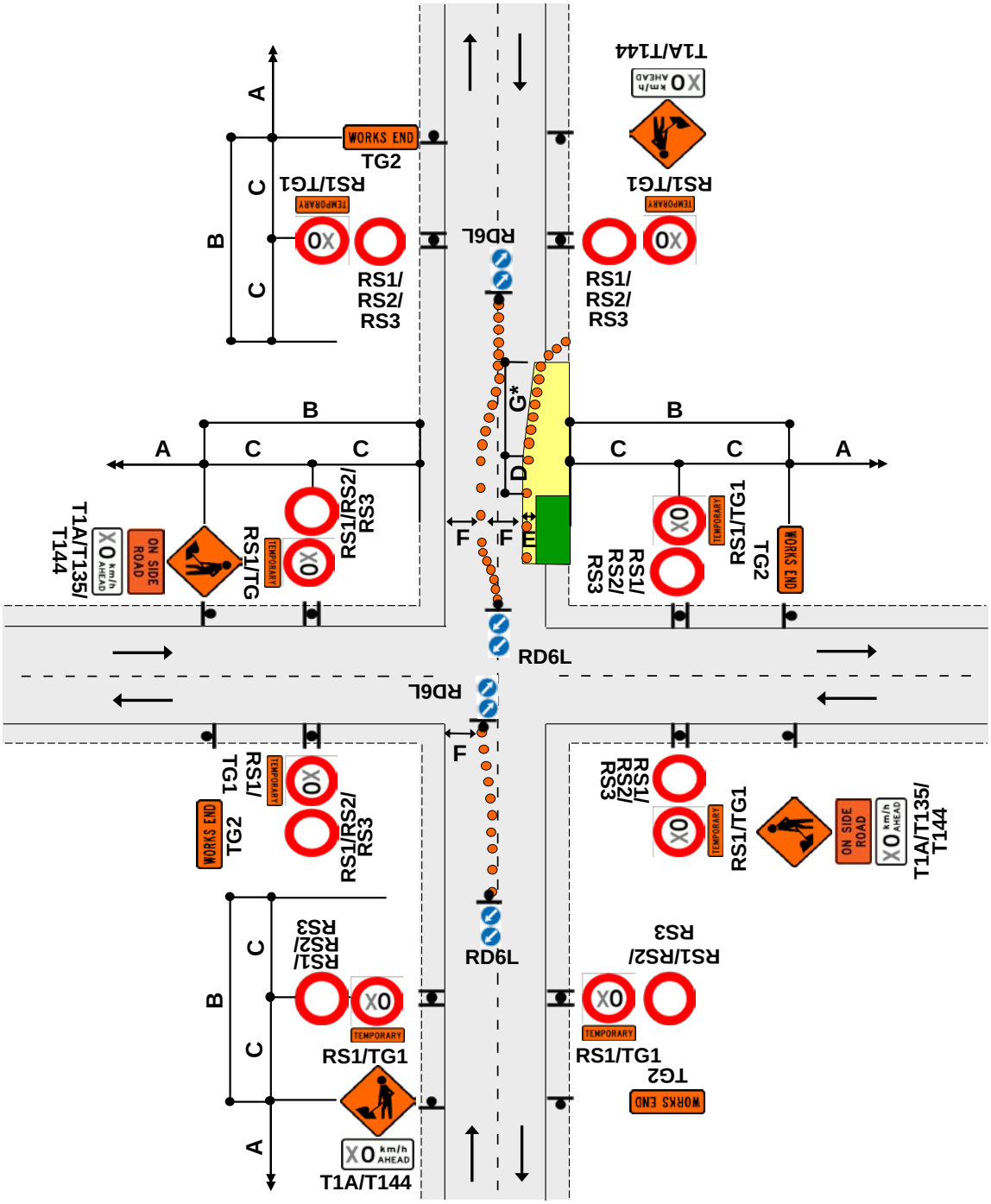
   $$\frac{W \times G}{3.5}$$

   W = Width of Shoulder G = Taper length in metres from the level 1 layout distance table
4. Use TSLs if required by TSL decision matrix
5. The T144 X0km/h AHEAD sign is optional



TWO-WAY TWO-LANE ROAD - Intersection or roundabout
Before intersection - Traffic crossing road centre

J2.20d
Level 1



Notes

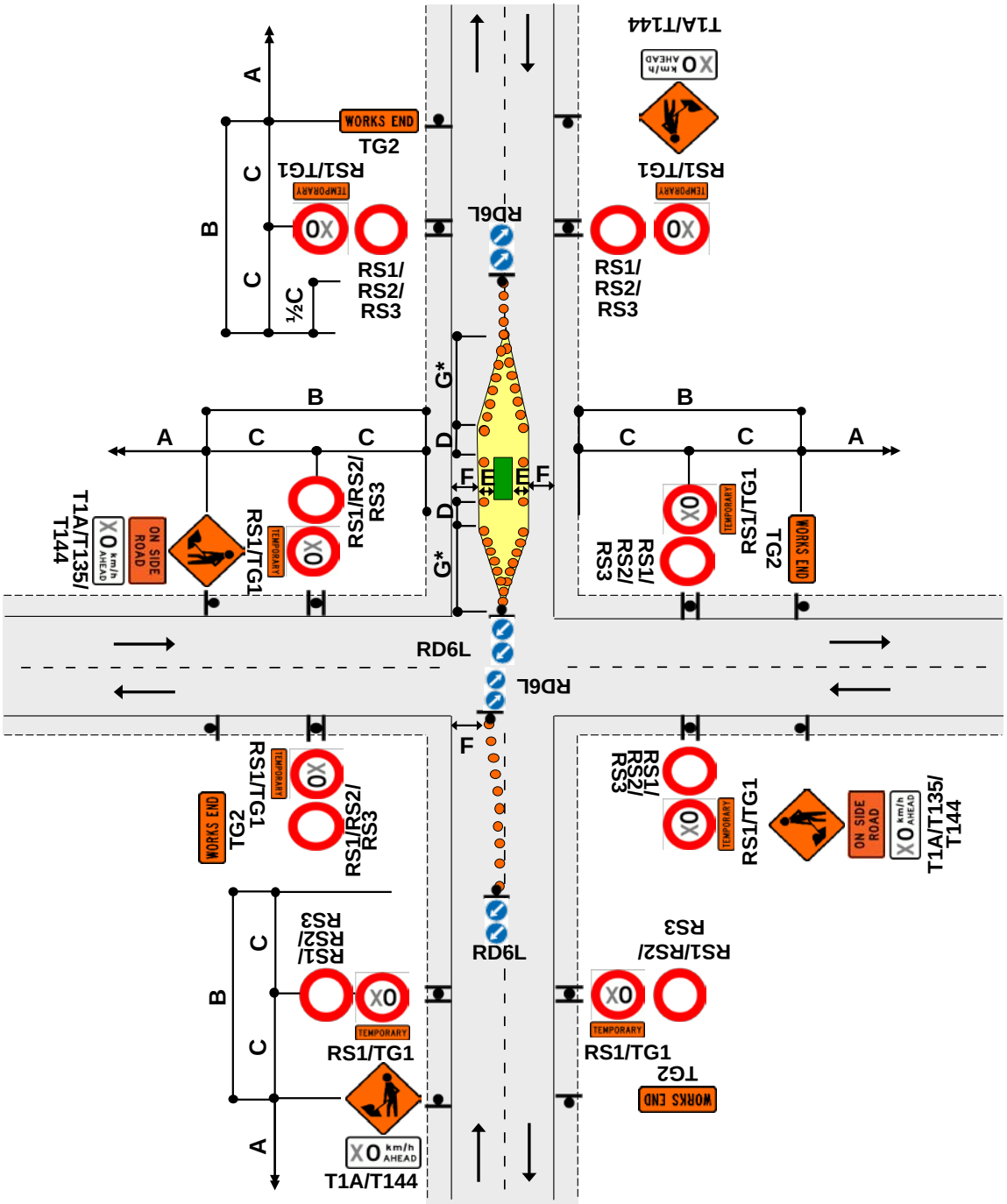
1. This diagram may be used at a T intersection by removing any one of the roads
2. *Calculation of taper length for lateral shift of less than 3.5m is:

   $$\frac{W \times G}{3.5}$$

   W = Width of lane G = Taper length in metres from the level 1 layout distance table
3. Install shifting taper to move road users into the new alignment
4. Use TSLs if required by TSL decision matrix
5. The T144 X0km/h AHEAD sign is optional

TWO-WAY TWO-LANE ROAD - Intersection or roundabout
On median near intersection

J2.20e
Level 1



Notes

1. This diagram may be used at a T intersection by removing any one of the roads
2. *Calculation of taper length for lateral shift of less than 3.5m is:

   $$\frac{W \times G}{3.5}$$

   W = Width of lane G = Taper length in metres from the level 1 layout distance table
3. Install shifting taper to move road users into the new alignment
4. Use TSLs if required by TSL decision matrix
5. The T144 X0km/h AHEAD sign is optional