


# Works Access Permit

Worksite Details				
The Parties	<b>RCA</b> Auckland Transport	<b>Client</b> Chorus	<b>The Applicant</b> VISIONSTREAM PTY LIMITED	
Worksite	<b>Name</b> VISIONSTREAM GENERIC	<b>Client Reference</b> VISIONSTREAM GENERIC	<b>Address</b> 1 Barr Road, Mahurangi West, Warkworth 0983	
	<b>Worksite ID</b> AT-W32361	<b>Worksite Revision</b> 3.1	<b>Worksite Status</b> issued	
	<b>Work Window</b> 01 Aug 2017 31 Jul 2018	<b>Time of Day</b> 07:00 - 19:00	<b>Estimated Duration</b> 365 days	

## The Parties

Auckland Transport being a body corporate in accordance with the Local Government Act 2002 ('the Corridor Manager');

Chorus being an approved Utility Operator in accordance with the submitting a request for access in accordance with that Act;

VISIONSTREAM PTY LIMITED 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').

## Background

- The Utility Operator wishes to carry out the works stated on CAR Number AT-W32361 and thereafter maintain the utility services established in the corridor;
- 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
- 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:

This approval constitutes Auckland Transport's requiring authority consent under section 178(2) and, where required, section 176(1)(b) of the Resource Management Act 1991.

Signed

Daniel Simons acting pursuant to delegated authority.

## Contacts & Affected Parties

Type	Company	Name	Email	Mobile	Phone
Principal Client Contact	Chorus	Nick Miskelly	<a href="mailto:nick.miskelly@chorus.co.nz">nick.miskelly@chorus.co.nz</a>	0277064601	
Applicant	VISIONSTREAM PTY LIMITED	John Tyler	<a href="mailto:john.tyler@visionstream.co.nz">john.tyler@visionstream.co.nz</a>	027 836 1129	09 352 1226
Bill Payer	Chorus	Linda Fitch	<a href="mailto:linda.fitch@chorus.co.nz">linda.fitch@chorus.co.nz</a>	0272088227	03 9667542

## Worksite Work

Type	Location	Max Depth	Min Depth	Description
Open Trenching	Carriageway, Footpath, Berm			Generics for August 1st 2017 to July 31st 2018. For use on various LV and LV1 roads with-in Auckland Transport's jurisdiction. Minor inter-day work (usually 1-2 days). This will include Aerial provisioning, build,maintenance, provisioning and emergency works. Please see Proforma for full work details and exclusions.

## Traffic Management Plans



TMP Number	Start Date	End Date	Number of Layouts	Layout Designer(s)
AT-T8840	01 Aug 2017	31 Jul 2018	1	John Tyler

## Worksite Documentation

### Other Info

See attached documents:

- Document.pdf

## AT 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;
- 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;
- 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 10 of the Historic Places Act 1993.

- 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.
- 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.
- 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.

## **Custom Conditions**


- - Monthly reporting must be provided to AT covering any work carried out under these generics.
- - Any other approved site operating at the same location will take priority over work covered by this generic (unless its of an emergency nature). You must either work in or return once completed.

## Traffic Management Plan (TMP)

Organisations	<b>Contractor</b> VISIONSTREAM PTY LIMITED	<b>Principal</b> VISIONSTREAM PTY LIMITED	<b>RCA</b> Auckland Transport	
TMP Details	<b>TMP ID</b> AT-T8840	<b>Revision</b> 3.1	<b>TMP Status</b> Accepted	
Worksite	<b>Name</b> VISIONSTREAM GENERIC	<b>Reference</b> VISIONSTREAM GENERIC	<b>Address</b> 1 Barr Road, Mahurangi West, Warkworth 0983	
	<b>Worksite ID</b> AT-W32361	<b>Worksite Revision</b> 3.1	<b>Worksite Status</b> issued	

## Layouts

Layout 33577

Description	LV & Level 1 AT and VPL Generic TMPs	
Date Range	01 Aug 2017 to 31 Jul 2018	
Continuous Deployment	No	
Traffic Control In	07:00	
Site Cleared	19:00	
First Sign In		
Pickup		
Days	Sun, Mon, Tue, Wed, Thu, Fri, Sat	
Impact Category	Contraflow	
Does this layout need to be advertised?	No	
Layout Designer	John Tyler 66025	
Lane Closures		
Signage Required		
Traffic Impacts	Capacity Reduction Cyclists Affected Pedestrians Affected Property Access Affected Parking Removed Shoulder Closure	





TMP or generic plan 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: <b>VPL Generics</b>	Contractor (Working space):   Level 5, 8 Hereford St, Freeman's Bay, Auckland PO Box 5100, Wellesley Street, Auckland 1141  Ph: 09 352 1000 Fax: 09 352 1083  Web: <a href="http://www.visionstream.co.nz">www.visionstream.co.nz</a>	Principal (Client):   Level 18 Chorus House 66 Wyndham Street, Auckland PO Box 6640 Wellesley St Auckland Ph: 0800 600 100  Web: <a href="mailto:info@chorus.co.nz">info@chorus.co.nz</a>		
		Contractor (TTM):	RCA: 		
Suburb	Auckland (Various)				
Location details and road characteristics	Road names	House no./RPs (from and to)	Road level	Permanent speed	
	Various Roads under the control of Auckland Transport		LV & L1	Various	
Traffic details (main route)	AADT		Peak flows 07:00-09:00 & 15:00-17:00		
Description of work activity					
<p>Minor inter-day work (usually one to two days). This will include Aerial provisioning, build, maintenance, emergency works and provisioning.</p> <p>Aerial provisioning: To maintain and provision aerial network. Stop/go plans are to be used for aerial road crossings only and will be utilised for a maximum of 5 minutes. Various semi static closures to safely undertake Aerial Hauling of fibre cable via existing poles, along and across the carriageway.</p> <p>Emergency: Initial response to situations where customers have lost service to the network, this could be a single customer or multiple customers through fixed line or mobile infrastructure.</p> <p>Maintenance: where a customer or multiple customers difficulty with their service but not a total loss. May also include the replacement of hazardous or unsuitable poles, final reinstatement of emergency works and fault corrections.</p> <p>May include small excavations up to 4m2 or 10 linear metres of trenching. Works usually 1-2 days.</p> <p>Provisioning: works to provide service due to a customer request- commonly result in hand excavation around the pillar, or hand digging at the top of an ROW. Can also include small hand excavations at the customer boundary or at a location where existing plant (pipe, conduit) is blocked or broken. This includes the opening of manholes and pits.</p> <p>Minor build: works to provide service due to a provisioning request. This could be a blocked duct or a repositioning of the lateral. May also include the installation of ducts and pits.</p> <p>Works would not be larger than 4m2 or 10 linear metres of trenching (usually one to two days). Exclusions:</p> <ul style="list-style-type: none"> <li>• Build- UFB</li> <li>• Minor build works involving a civil component larger than 4m2 or 10 linear metres of trenching</li> <li>• Any works that require a Road Closure</li> <li>• Work requiring a Stop/Go closure. This excludes Aerial road crossings as per the above</li> <li>• Any work in the carriageway</li> </ul>					

TMP or generic plan reference

Planned work programme							
Start date	01/08/2017	Time	As below	End date	31/07/2018	Time	As below
<b>Consider significant stages</b> , for example: <ul style="list-style-type: none"> <li>road closures</li> <li>detours</li> <li>no activity periods.</li> </ul>	<p>If traffic builds to beyond an acceptable level the work will halt until traffic clears before recommencing work.</p> <p>Work Hours as follow:            LV1 Road: 07:00 – 19:00            LV1 Road: 19:00 – 05:00 (Night Work Hours)            LV1 Road: 07:00–19:00 (Weekend Hours)</p> <p>Night works where civil tasks are to be undertaken will be within the hours of 1900 – 2200 to adhere to noise restrictions. Activity after this period to have a minimal noise level.</p> <p>TTM will be deployed on one side of the carriageway at time to minimise the risk of bottle necking.</p> <p>TTM Closures will be localized to area where works are in progress, allowing for the safest possible management of traffic.</p> <p>The residents/Businesses are contacted the day before and the day of the intended works so that the contractors can work around their needs. If residents cannot be contacted, their plans change or an emergency arises and they need to access to or from their property. Work is stopped, the Work truck moved if required and then access/egress is facilitated.</p> <ul style="list-style-type: none"> <li>All TTM to be deployed as per CoPTTM</li> <li>All TTM will have the appropriate Pedestrian Management and all Pedestrians to be managed thought/around the work areas.</li> </ul> <p>In case of an emergency, work is stopped and the work Area is to be cleared to allow access to emergency vehicles.</p> <p>Residents/Businesses that need emergency access must first be cleared by the STMS. STMS on site with contactors at all times to inform them of possible incoming vehicular/ pedestrian traffic as advised by TC's</p> <p><u>As Per CoPTTM</u></p> <p>C8.1.2.1 Shoulder closure on level LV &amp; level 1 roads with speed limits of less than 65km/h            On level LV &amp; level 1 roads with speed limits of less than 65km/h, activity may be carried out as follows:</p> <p><u>C8.1.3</u></p> <ul style="list-style-type: none"> <li>Activity on the berm or footpath does not require advance warning, however, traffic management must be provided where pedestrians or cyclists are affected</li> <li>Advance warning T1A/B (TW-1) and works end TG2 (TW16) are optional if:               <ul style="list-style-type: none"> <li>the work vehicle (light truck or smaller) is parked in a legal parallel car park, and</li> <li>vehicle is only accessed from the off traffic side</li> </ul> </li> <li>Large plant and machinery must not be used in this situation; a more substantial closure is required.</li> </ul>						
Alternative dates if activity delayed	N/A						
Road aspects affected (delete either Yes or No to show which aspects are affected)							
Pedestrians affected?	Yes	Property access affected?	Yes	Traffic lanes affected?	Yes		
Cyclists affected?	Yes	Restricted parking affected?	Yes	Delays or queuing likely?	No		

TMP or generic plan reference				
<b>Proposed traffic management methods</b>				
<b>Installation</b> (includes parking of plant and materials storage)	<p>TTM to be installed via placement from the footpath or via a mobile operation. Advanced warning signage to be placed first and ending with the works end signage. Delineation devices such as cones and barriers to be placed once all signage has been installed.</p> <p>Chosen Closure to be recorded along with the install times on a copy of the On-Site Record Sheet by STMS.</p> <p>LV1 Road is to be set up by LV1 STMS.</p>			
<b>Attended (day)</b>	<p>Site will be monitored by a qualified STMS with the assistance of TC's.</p> <p>All Site checked to be documented on On-Site Record Sheet and any alteration or issues noted by the STMS</p>			
<b>Attended (night)</b>				
<b>Unattended (day)</b>	N/A			
<b>Unattended (night)</b>	N/A			
<b>Detour route</b>	<p>Does detour route go into another RCA's roading network? N/A (delete either Yes or No)</p> <p>If Yes, has confirmation of acceptance been requested from that RCA? N/A (delete either Yes or No)</p> <p><b>Note:</b> Confirmation of acceptance from affected RCA must be submitted prior to occupying the site.</p>			
<b>Removal</b>	<p>Removal of TTM to be in reverse of installation. Delineation devices to be removed/amended first via a mobile operation, followed by all signage if not appropriate to any unattended layouts required.</p> <p>Closure removal to be documented on On-Site Record Sheet by STMS.</p>			
<b>Proposed TSLs (see TSL decision matrix for guidance)</b>				
	<b>TSL details as required</b> Approval of Temporary Speed Limits (TSL) are in terms of Section 5 of Land Transport Rule: Setting of Speed Limits 2003, Rule 54001 (List speed, length and location)	<b>Times</b> (From and to)	<b>Dates</b> (Start and finish)	<b>Diagram ref. no.s</b> (Layout drawings or traffic management diagrams)
<b>Attended day/night</b>	A temporary maximum speed limit of km/h is hereby fixed for motor vehicles travelling over the length of m situated between (House no./RP) and (House no./RP) on (street or road name)	<p>LV1 Road: 07:00 – 19:00</p> <p>LV1 Road: 07:00–19:00 (Weekend Hours)</p>	<p>01/08/2017 To 31/07/2018</p>	<p>ATF2-9 / ATF2-10 / ATF2-11 / ATF2-19 / ATJ2-20a / ATJ2-20b / ATJ2-20c / ATZ1-14 / ATZ1-15</p>
<b>Unattended day/night</b>	N/A			
<b>TSL duration</b>	<p>Will the TSL be required for longer than six months?</p> <p><b>If yes, attach the completed checklist from section I-18: Guidance on TMP Monitoring Processes for TSLs to this TMP.</b></p>			No

### Positive traffic management measures

With the use of signs and cones we plan to Advise and Direct the public through the work site in a timely manner away from hazards ensuring the safety of public and worker.

They may be implemented to control vehicle speeds through the worksite, assist pedestrians, or cyclist, etc... These will always be implemented in accordance with the 'Code of Practice'.

\*The below is included as a guide to the STMS, the TMP(s) should be followed at all times, unless, site safety is compromised, or if the site conditions have changed since the approval of the TMP(s)\*

#### Lane Restrictions.

At times, the lane width may need to be reduced to the minimum, as shown in the table below, so as to maximize work and safety zones, but, the maximum width, in accordance with the appropriate speed restriction application, will be maintained.

<u>Restricted Speed</u>	<u>Minimum Lane Width.</u>
30km/hr	2.75m
50km/hr	3.00m
70km/hr	3.25m

#### Delineation.

Additional 900mm reflectorised cones may need to be placed on the shoulder and/or centre line, prior to initial or shifting tapers, so to better control vehicle speeds, before entering the work zone.

#### Pedestrians.

When and where appropriate, pedestrian signs will be used to show the safest path for the public to follow. At all times, TC staff is to be on "look out" pedestrian, so as to help them navigate the work area. Special attention will be made to the elderly or impaired pedestrians.

**"Linemen" supplementary signs will be used where we have people working overhead on poles.**






### Contingency plans

Generic contingencies for:	Major Incident	Actions
<ul style="list-style-type: none"> <li>major incidents</li> <li>incidents</li> <li>pre planned detours.</li> </ul> <p><i>Remove any options which do not apply to your job</i></p>	<p>A major incident is described as:</p> <ul style="list-style-type: none"> <li>Fatality or notifiable injury - real or potential</li> <li>Significant property damage, or</li> <li>Emergency services (police, fire, etc) require access or control of the site.</li> </ul>	<p>The STMS must immediately conduct the following:</p> <ul style="list-style-type: none"> <li>stop all activity and traffic movement</li> <li>secure the site to prevent (further) injury or damage</li> <li>contact the appropriate emergency authorities</li> <li>render first aid if competent and able to do so</li> <li>notify the RCA representative and / or the engineer</li> <li>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</li> <li>re-establish TTM and traffic movements when advised by emergency authorities that it is safe to do so</li> <li>Comply with any obligation to notify WorkSafe.</li> </ul>

TMP or generic plan reference				
	<b>Incident</b> An incident is described as: <ul style="list-style-type: none"> <li>excessive delays - real or potential</li> <li>minor or non-inquiry accident that has the potential to affect traffic flow</li> <li>structural failure of the road.</li> </ul>	<b>Actions</b> The STMS must immediately conduct the following: <ul style="list-style-type: none"> <li>stop all activity and traffic movement if required</li> <li>secure the site to prevent the prospect of injury or further damage</li> <li>notify the RCA representative and / or the engineer</li> <li>STMS to implement a plan to safely remove TTM and to establish normal traffic flow if safe to do so</li> <li>re-establish TTM and traffic movements when it is safe to do so and when traffic volumes have reduced.</li> </ul>		
	<b>Note also the requirements for no interference at an accident scene:</b> 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: <ul style="list-style-type: none"> <li>save a life of, prevent harm to or relieve the suffering of any person, or</li> <li>make the site safe or to minimise the risk of a further accident; or</li> <li>maintain the access of the general public to an essential service or utility, or</li> <li>prevent serious damage to or serious loss of property, or</li> <li>follow the direction of a constable acting in his or her duties or act with the permission of an inspector.</li> </ul>			
<b>Other contingencies to be identified by the applicant</b> <i>(i.e. steel plates to quickly cover excavations)</i>	In the event that any of the following circumstances occur, due to the activity on this site, the STMS will suspend works if; <ul style="list-style-type: none"> <li>Delays exceed 5 minutes.</li> <li>In the event of an accident. (At this time the STMS will follow the instructions provided at the time of training, and when instructed by emergency services).</li> <li>Weather conditions are/will adversely affect quality, or safety.</li> <li>To allow passage of emergency vehicles.</li> <li>That dust nuisance's compromise safety and/or visibility.</li> </ul> The STMS deems any working practices to be unsafe to site staff and/or road users. <b>Work can recommence only after the all clear has been given by the STMS</b>			
<b>Authorisations</b>				
<b>Parking restriction(s) alteration authority</b>	Will controlled street parking be affected?	No	Has approval been granted?	N/A
	As per closure drawings attached, unrestricted parking spaces within the closure will be coned out to allow work vehicles access to the work site			
<b>Authorisation to work at permanent traffic signal sites</b>	Will portable traffic signals be used or permanent traffic signals be changed?	No	Has approval been granted?	N/A
	None foreseen, but if changes are required, STMS will communicate with ATOC/SCATS			
<b>Road closure authorisation(s)</b>	Will full carriageway closure continue for more than 5 minutes (or other RCA stipulated time)?	No	Has approval been granted?	N/A
	N/A			
<b>Bus stop relocation(s) – closure(s)</b>	Will bus stop(s) be obstructed by the activity?	No	Has approval been granted?	N/A
	Any impact on Bus Services to be approved by Auckland Transport's PT Operations – Disruptions department, prior to work start. Contact Stuart McAlpine on 021 307 447.			
<b>Authorisation to use portable traffic signals</b>	Make, model and description/number			
	NZTA compliant?	N/A (delete either Yes or No)		

TMP or generic plan reference	
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EED			
Is an EED applicable?	No (delete either Yes or No)	EED attached?	N/A
Delay calculations/trial plan to determine potential extent of delays			
N/A			
Public notification plan			
Public notification will be provided as and when required prior to commencement of works in the area.			
Public notification plan attached?	No (delete either Yes or No)		
On-site monitoring plan			
Attended (day and/or night)	STMS to be onsite at all times and noting on the On-Site Record sheet site checks at least every 2 hour the site condition.		
Unattended (day and/or night)	N/A		
Method for recording daily site TTM activity (eg CoPTTM on-site record)			
<ul style="list-style-type: none"> <li>All recording of Staff briefing and Site Checks to be recorded as per CoPTTM on the On-Site Record Sheet &amp; Hazard ID Sheet</li> <li>Forms must be filled in by the site STMS or under their instruction a STMS qualified, delegated person.</li> <li>Any amendments to the TMP must be noted on the TMP, on the STMS Check Sheet &amp; on Hazard ID by the STMS.</li> </ul>			
Site safety measures			
<ul style="list-style-type: none"> <li>The minimum standard of PPE equipment for all staff on site is and NZTA compliant high visibility garment and safety shoes that comply with safety policy.</li> <li>Times on TMP must be adhered too, if this not possible contact must be made by the STMS to the RCA prior to any works taking place, if the site is running late and will not be able to be cleared by the required time a phone call to the RCA must be made in advance of the "last sign up" time on this TMP.</li> <li>Temporary Warning Signage to be installed as per TMP.</li> <li>Delineated tapers ensuring coned safety zones &amp; distances are as per COPTTM, if these are not possible for any reason they must be marked on the TMP by the STMS.</li> </ul>			
Other information			
Site specific layout diagrams			
Number	Title		
ATF1-1	SHOULDER AND BERM - LOW VOLUME		
ATF2-1	FOOTPATH - LEVEL 1 - FOOTPATH DIVERTED ONTO THE BERM BEHIND WORK SPACE		
ATF2-2	FOOTPATH - LEVEL 1 - FOOTPATH DIVERTED ONTO THE BERM BETWEEN WORKING SPACE & CARRIAGEWAY		
ATF2-5	SHOULDER AND ROADSIDE ACTIVITIES - LEVEL 1 - WORK ON BERM AND FOOTPATH		
ATF2-9	CYCLE LANE - LEVEL 1 - DIVERTED TRAFFIC LANE - CONED LANE CONTROL		
ATF2-10	CYCLE LANE - LEVEL 1 - LANE CLOSED		
ATF2-11	TWO-WAY TWO-LANE ROAD - LEVEL 1		
ATF2-19	TWO-WAY TWO-LANE ROAD - LEVEL 1 (INTERSECTION OR ROUNDABOUT)		

TMP or generic plan reference						
ATJ-16a	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1					
ATJ2-20a	TWO-WAY TWO-LANE ROAD - LEVEL 1 (INTERSECTION OR ROUNDABOUT)					
ATJ2-20b	TWO-WAY TWO-LANE ROAD - LEVEL 1 (INTERSECTION OR ROUNDABOUT)					
ATJ2-20c	TWO-WAY TWO-LANE ROAD - LEVEL 1 (INTERSECTION OR ROUNDABOUT)					
ATZ1-10	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - SHOULDER - AT INTERSECTION (T-INTERSECTION)					
ATZ1-11	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - SHOULDER AND FOOTPATH- AT INTERSECTION (T-INTERSECTION)					
ATZ1-12	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - SHOULDER AND FOOTPATH- AT INTERSECTION (T-INTERSECTION)					
ATZ1-13	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - SHOULDER AND FOOTPATH- AT INTERSECTION (T-INTERSECTION)					
ATZ1-14	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - STOP/ GO AT INTERSECTION (AND STRAIGHT T-INTERSECTION)					
ATZ1-15	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - CONTRAFLOW - AT INTERSECTION					
ATZ1-16	TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 - SHOULDER - AT INTERSECTION					
Contact details						
	Name	24/7 contact number	CoPTTM ID	Qualification	Expiry date	
Principal	 Level 18 Chorus House 66 Wyndham Street, Auckland PO Box 6640 <b>Wellesley St Auckland</b>	0800 600 100				
TMC	 					
Engineers' representative						
Contractor	 Level 5, 8 Hereford St, Freeman's Bay, Auckland <b>PO Box 5100, Wellesley Street, Auckland 1141</b>	<b>Joanne Okesene</b>  <b>+64 275 231 276</b>				
Sub-Contractor						
STMS						
TC						
Others as required						
TMP preparation						
Preparation	<b>John Tyler</b>	<b>26/07/2017</b>		<b>66025</b>	<b>LV2/3 NP</b>	<b>19/10/19</b>



TMP or generic plan reference						
	Name (STMS qualified)	Date	Signature	ID no.	Qualification	Expiry date
This TMP meets CoPTTM requirements				Number of diagrams attached		19
TMP returned for correction (if required)						
	Name	Date	Signature	ID no.	Qualification	Expiry date
<b>Engineer/TMC to complete following section when approval or acceptance required</b>						
Approved by TMC/engineer (delete one)						
	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
<b>Qualifier for engineer or TMC approval</b>						
<p>Approval of this TMP authorises the use of any regulatory signs included in the TMP or attached traffic management diagrams.</p> <p>This TMP is approved on the following basis:</p> <ol style="list-style-type: none"> <li>1. To the best of the approving engineer's/TMC's judgment this TMP conforms to the requirements of CoPTTM.</li> <li>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.</li> <li>3. The TMP provides so far as is reasonably practicable, a safe and fit for purpose TTM system.</li> <li>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.</li> </ol>						
<b>Notification to TMC prior to occupying worksite/Notification completed</b>						
Type of notification to TMC required		Notification completed	Date	<input type="text"/>		
			Time	<input type="text"/>		

TMP or generic plan reference	
-------------------------------	--

<b>ON-SITE RECORD</b> 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):
From: To:	TSL installed				
	TSL remains in place				
	TSL removed				
Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:	TSL installed				
	TSL remains in place				
	TSL removed				
Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:	TSL installed				
	TSL remains in place				
	TSL removed				
Street/road name (RPs or street numbers):	TSL action	Date:	Time:	TSL speed:	Length of TSL (m):
From: To:	TSL installed				
	TSL remains in place				
	TSL removed				

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?							
<i>Add others as required</i>							
<b>Time inspection completed:</b>							
<b>Signature:</b>							
<b>Comments:</b>							
<b>Time</b>	<b>Adjustment made and reason for change</b>						

## C2.5 LV & Level 1 worksite layout distances

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)	30 or 50*	80	105	120	135	150		
C	Sign Spacing (m)	15 or 25*	40	50	60	70	75		
Safety Zones									
D	Longitudinal (m)+ +(Not required on LV roads)	5 or 10*	15	30	45	55	60		
E	Lateral (m)+ +(Optional on LV roads)	1	1	1	1	1	1		
TAPER									
G	Taper Length (m)#	30	50	70	80	90	100		
G	LV Roads taper Length (m)#	25	30	35	40	45	50		
K	Distance between tapers (m)	40	50	70	80	90	100		
Delineations 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		
<p>* Larger minimum distances apply where there is more than one lane each way and on all state highways.</p> <p>+ On LV roads the longitudinal and lateral safety zones may be reduced, or eliminated, in order to retain a single lane width. Positive traffic control and an appropriate TSL are to be used.</p> <p># Where there are road environment constraint (including intersections and commercial accesses) a 10m taper with cones at 1m centres may be used for speeds 50 km/h and under. This does not apply on state highways or where portable traffic light signals, manual traffic controller (Stop/Go) or priority give way are used. On all roads tapers may be reduced to 30m where portable traffic signals, manual traffic controller (Stop/Go) or priority give way are employed.</p> <p>## LV roads: double the cone spacings alongside working space (eg5 = 10, 10 = 20).</p>									
Lane Widths									
(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.**

### LV or low risk roads

Working on roads designated as LV/low-risk roads (less than 250vpd – less than 20 vehicles per hour), with clear sight distance to the operation and an operating speed of less than 65km/h:

- Use an appropriate advance warning sign (Static installation) and amber flashing beacon(s) on working vehicle when on the shoulder.
- Consider stop/go or give way control of traffic when activity encroaches onto lane.

If the above requirements cannot be achieved, the operation must be modified to comply with the requirements of a higher risk rating.

## STATIC OPERATION

### SHOULDER AND BERM - LOW VOLUME

#### SHOULDER CLOSURE



ATF1-1

#### Notes

1. Cone spacing along side of working space on roads:

- over 65km/h = 20m
- under 65km/h = 10m

2. A 10m taper is allowed where shoulder width is less than 2.5m

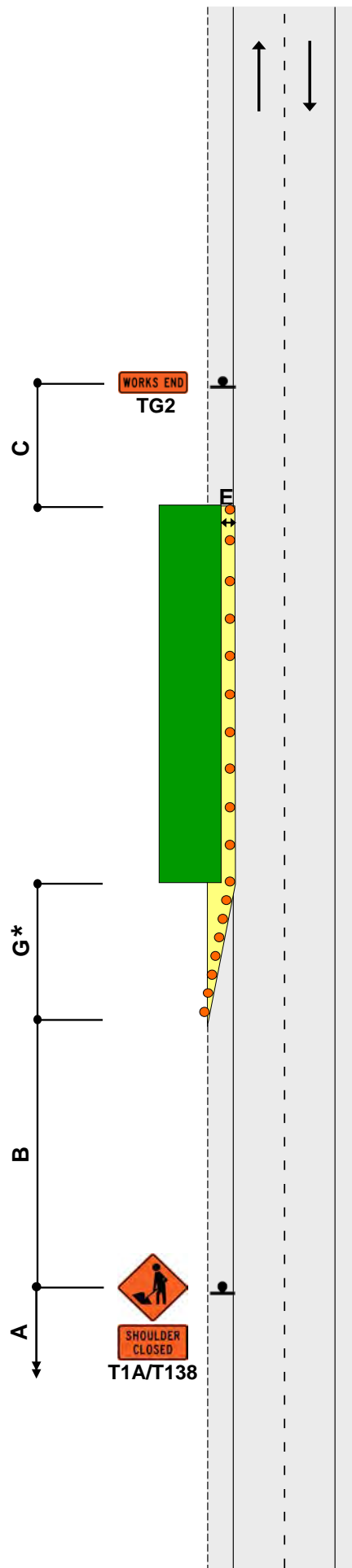
3. \*For shoulders exceeding 2.5m width, apply the following calculation; calculation of taper length for lateral shift of less than 3.5m is:

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

3.5

W = Width of shoulder

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



# FOOTPATH - LEVEL 1

## FOOTPATH DIVERTED ONTO THE BERM BEHIND WORK SPACE

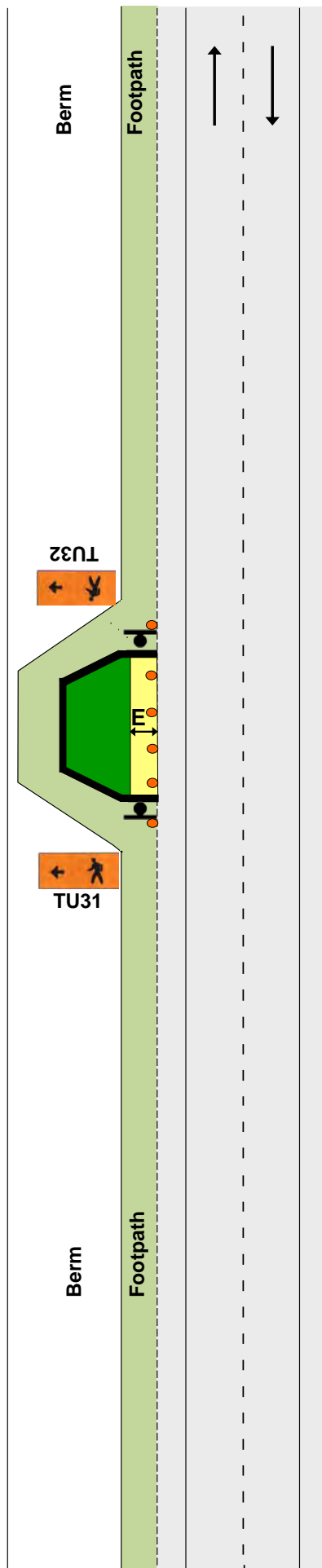
### FIRST PREFERENCE

#### 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. 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

Reference CoPTTM 4th Edition  
Section F Drawing F2.1



ATF2-1

# FOOTPATH - LEVEL 1

## FOOTPATH DIVERTED ONTO THE BERM BETWEEN WORKING SPACE AND CARRIAGEWAY

### SECOND PREFERENCE



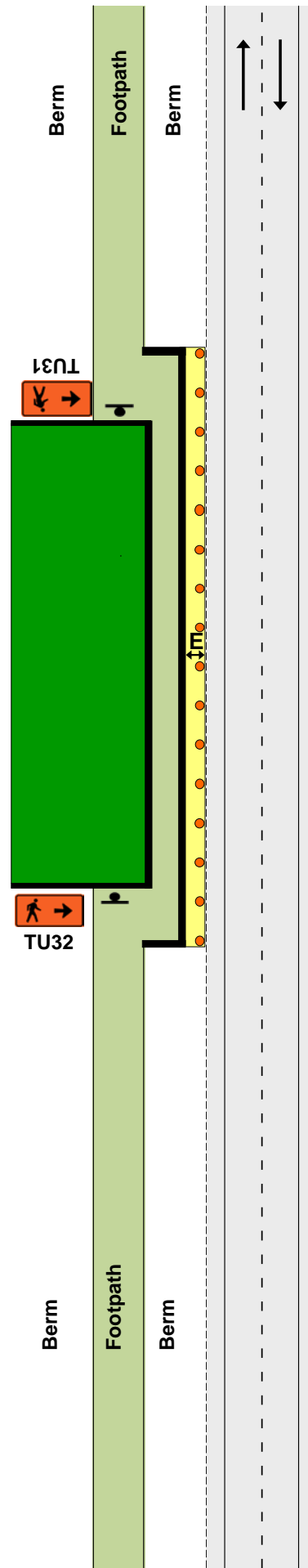
ATF2-2

#### 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. 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

Reference CoPTTM 4th Edition  
Section F Drawing F2.2



**SHOULDER AND ROADSIDE ACTIVITIES - LEVEL 1**

**WORK ON BERM AND FOOTPATH**

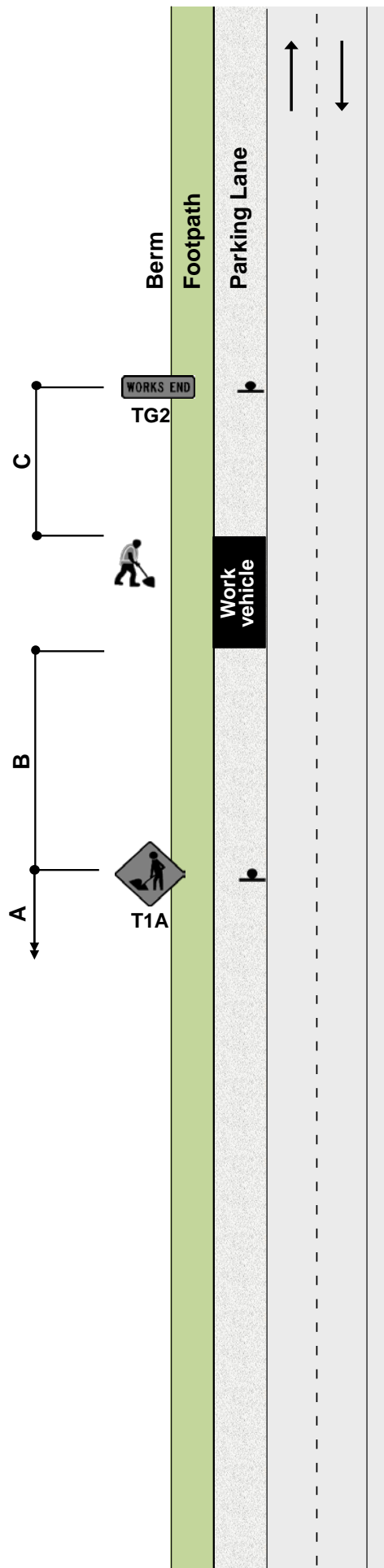
PERMANENT SPEED LESS THAN 65KM/H



ATF2-5

**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





# CYCLE LANE - LEVEL 1

## DIVERTED TRAFFIC LANE - CONED LANE CONTROL

### TRAFFIC CROSSING ROAD CENTRE



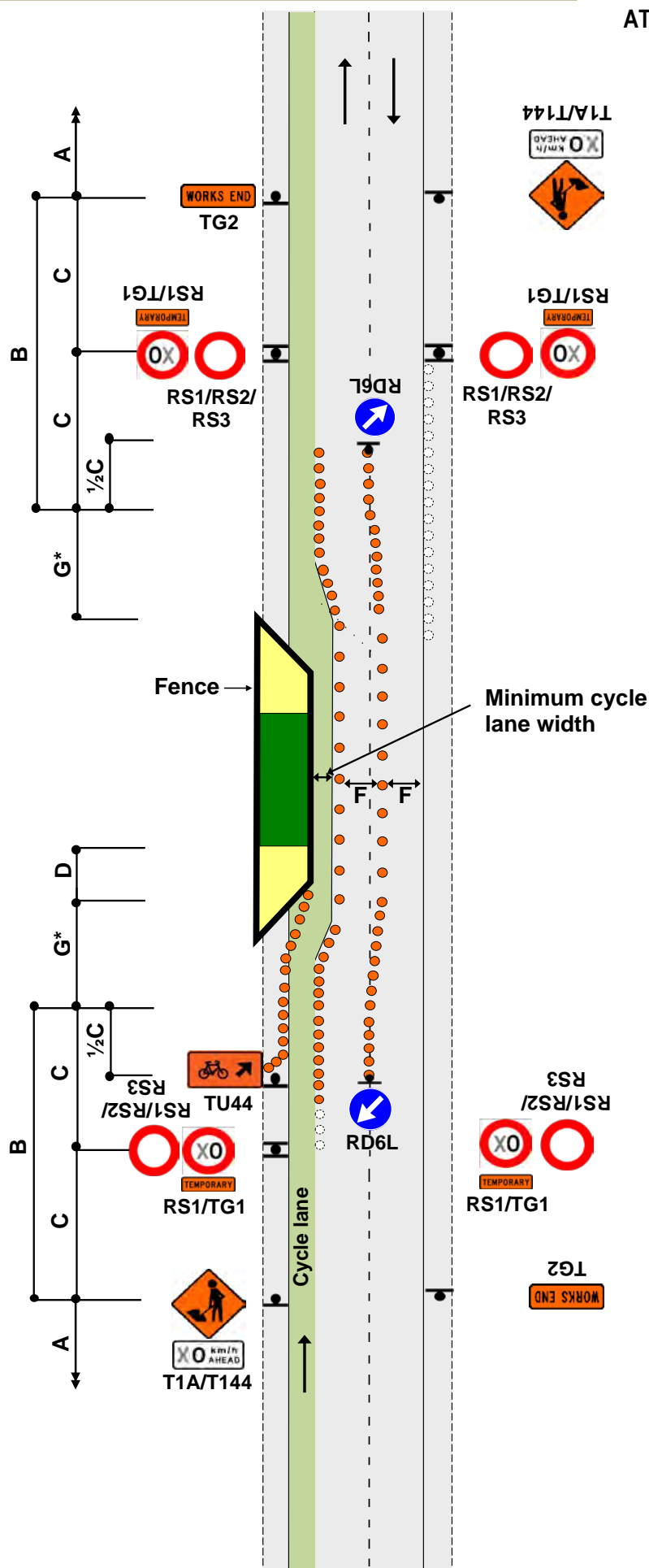
ATF2-9

#### 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. 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 OPERATION

### CYCLE LANE - LEVEL 1

#### LANE CLOSED

TRAFFIC NOT CROSSING ROAD CENTRE CYCLE LANE CLOSED



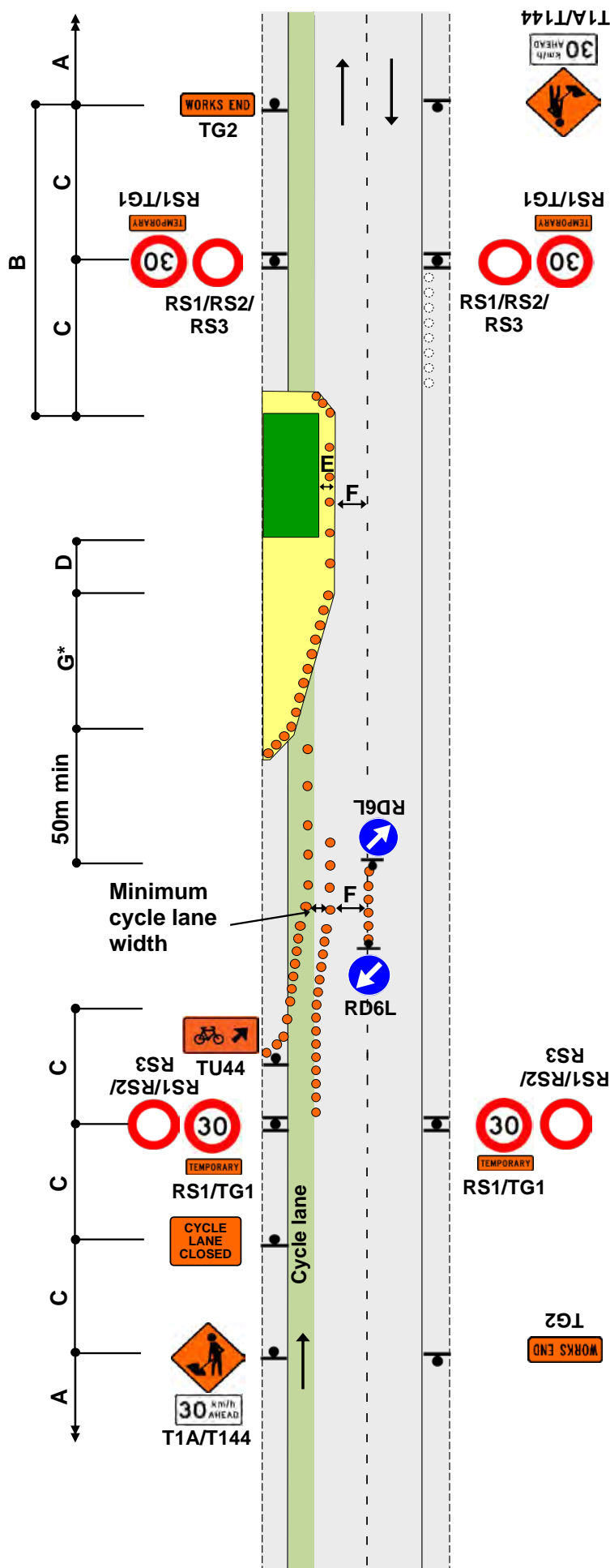
ATF2-10

#### Notes

1. Only use this TMD if there is insufficient width to fit a replacement cycle lane
2. Minimum cycle lane width must be:
  - 1m - 50km/h or less
  - 1.5m - 60km/h or more
3. A minimum cycle lane width of 1.5m is required if the temporary cycle lane is uphill
4. Merge of cycle lane with live lane must be delineated
5. \*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
6. The T144 30km/h AHEAD sign is optional



Reference CoPTTM 4th Edition  
Section F Drawing F2.10

TWO-WAY TWO-LANE ROAD - LEVEL 1

TRAFFIC NOT CROSSING ROAD CENTRE



ATF2-11

Notes

1.\*Calculation of taper length for lateral shift of less than 3.5m is:

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

3.5

W = Width of lateral shift

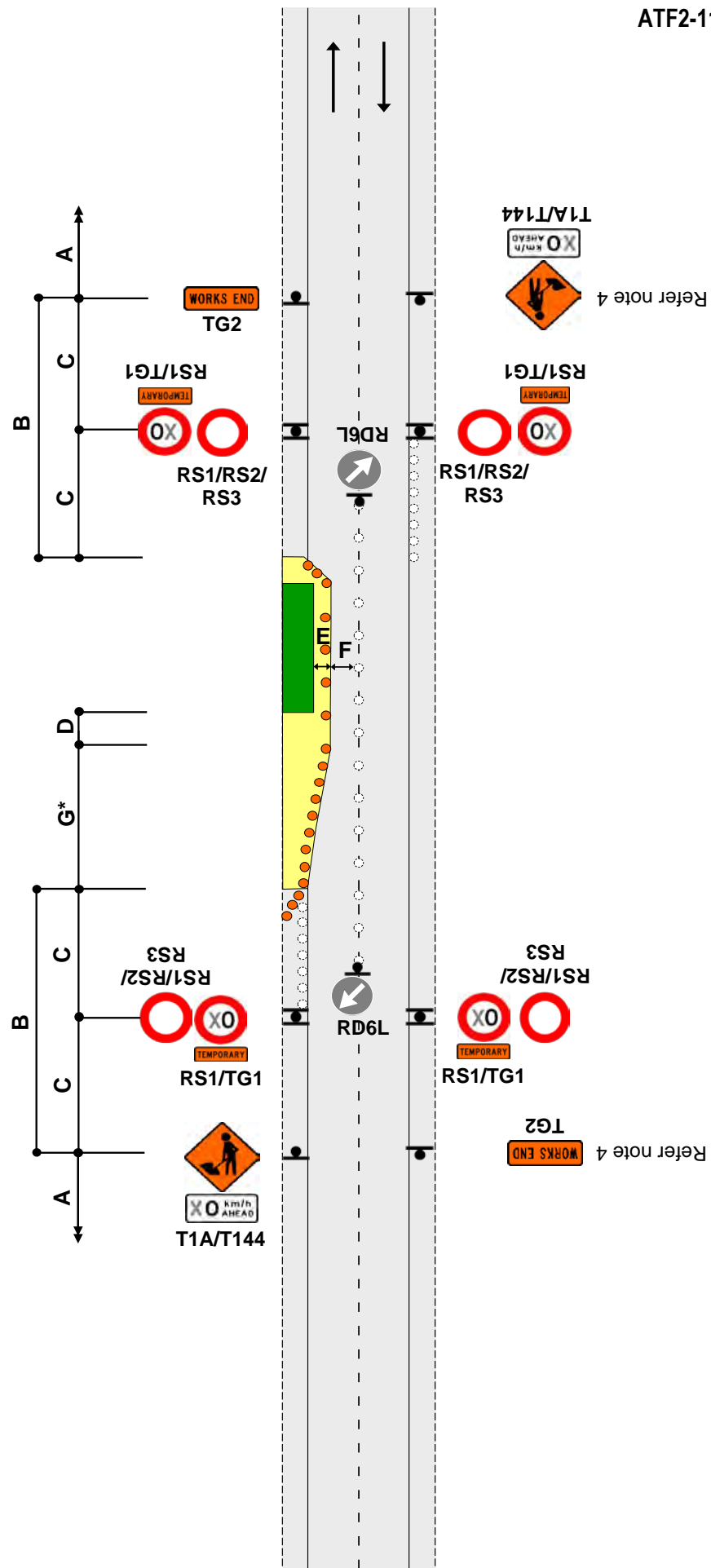
G = Taper length in metres from the level 1 layout distance table

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

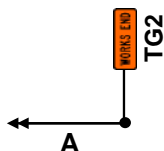
3.Use TSLs if required by TSL decision matrix

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 - LEVEL 1 (INTERSECTION OR ROUNDABOUT)**  
**ROAD WORKS ON SIDE ROAD AFTER INTERSECTION - TSL ON SIDE ROAD**  
**TRAFFIC NOT CROSSING ROAD CENTRE**



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:  

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

W = Width of lateral shift  
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 optional

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

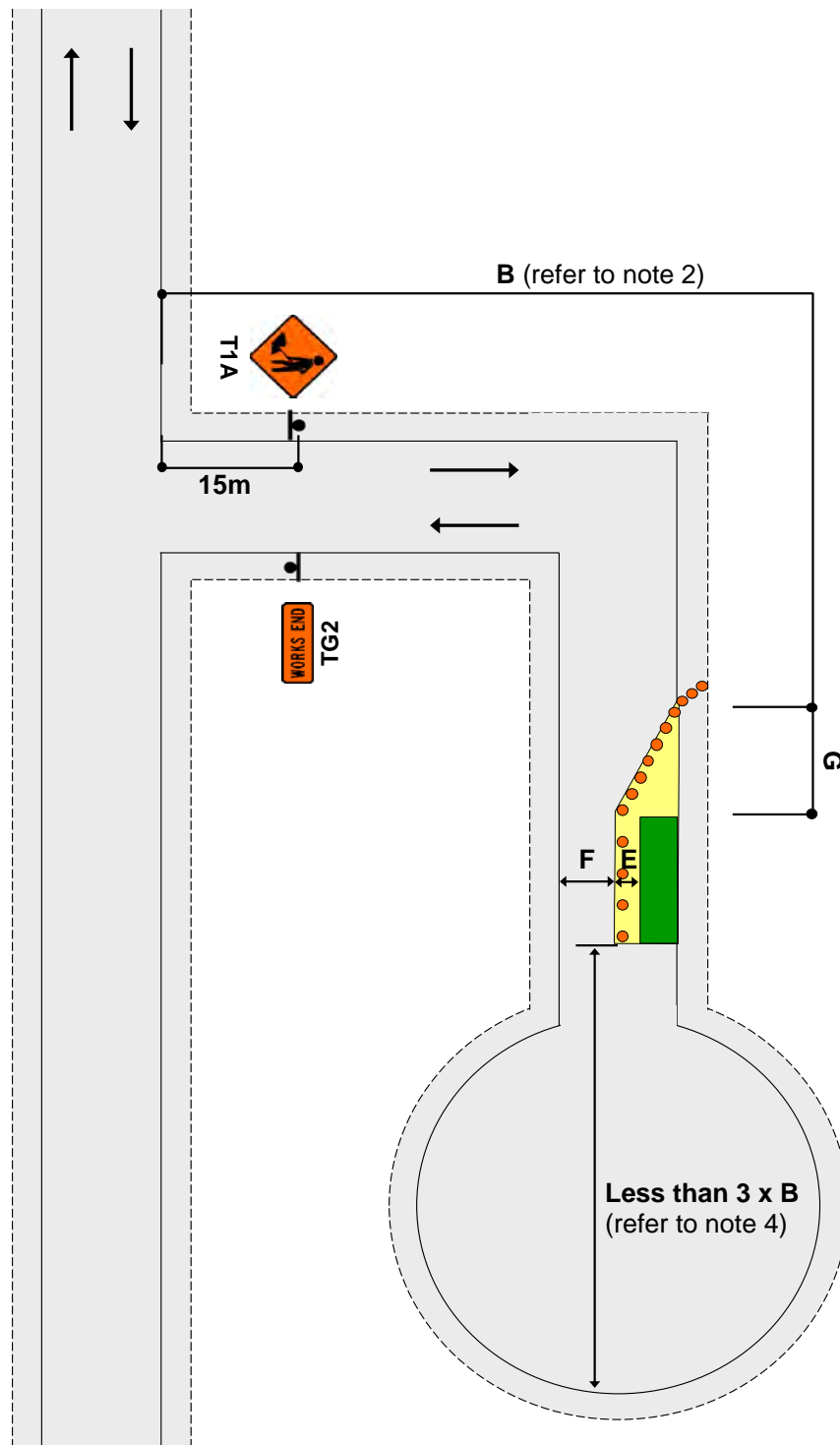
Auckland Transport Generic TMP

## STATIC OPERATION

TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1  
SHORT NO EXIT ROAD



ATJ2-16a



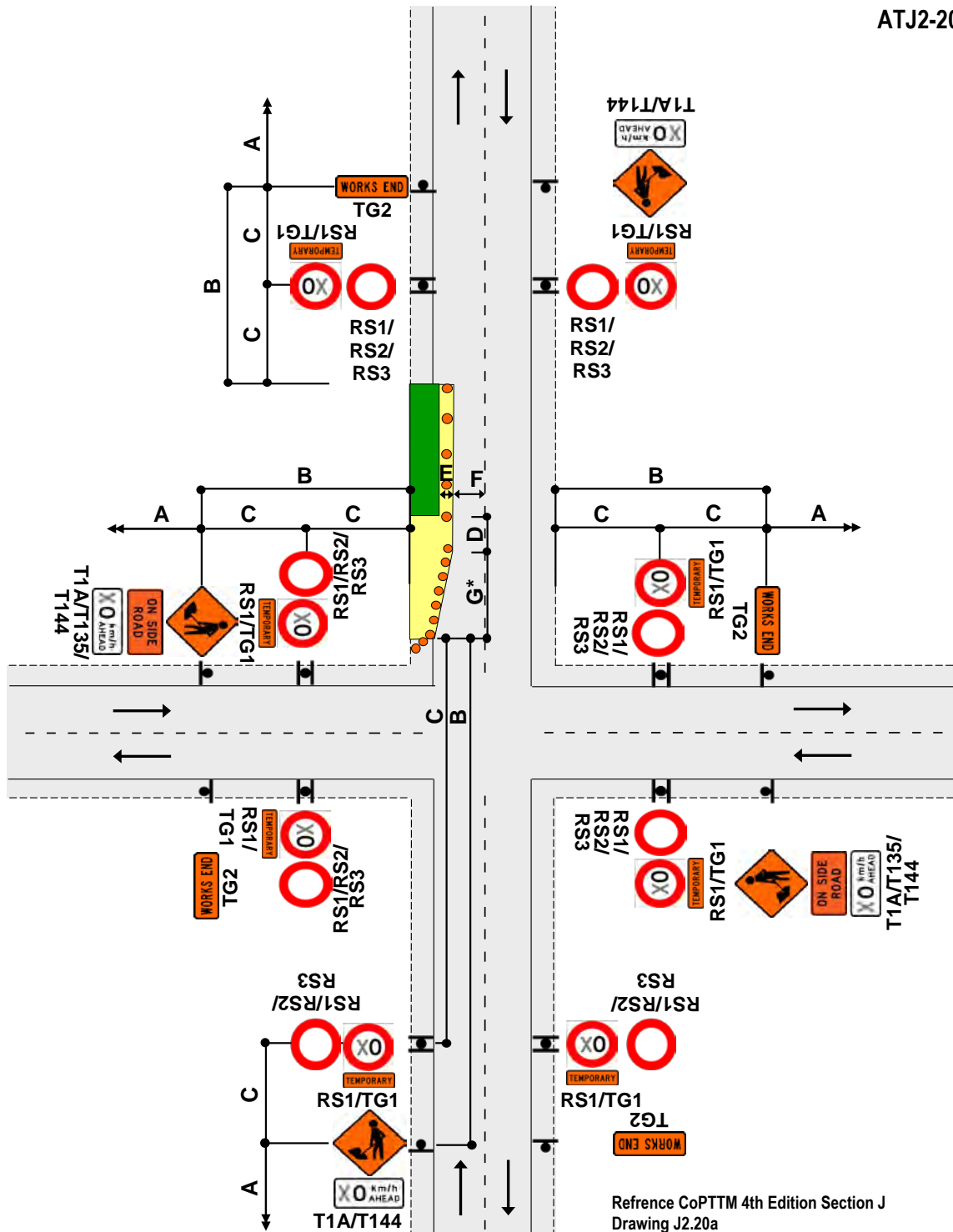
### Notes

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

Reference CoPTTM 4th Edition Section J Drawing J2.16a

## STATIC OPERATION

TWO-WAY TWO-LANE ROAD - LEVEL 1 (INTERSECTION OR ROUNDABOUT)  
AFTER INTERSECTION - TRAFFIC NOT CROSSING THE CENTRE



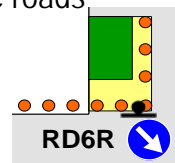
### Notes

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



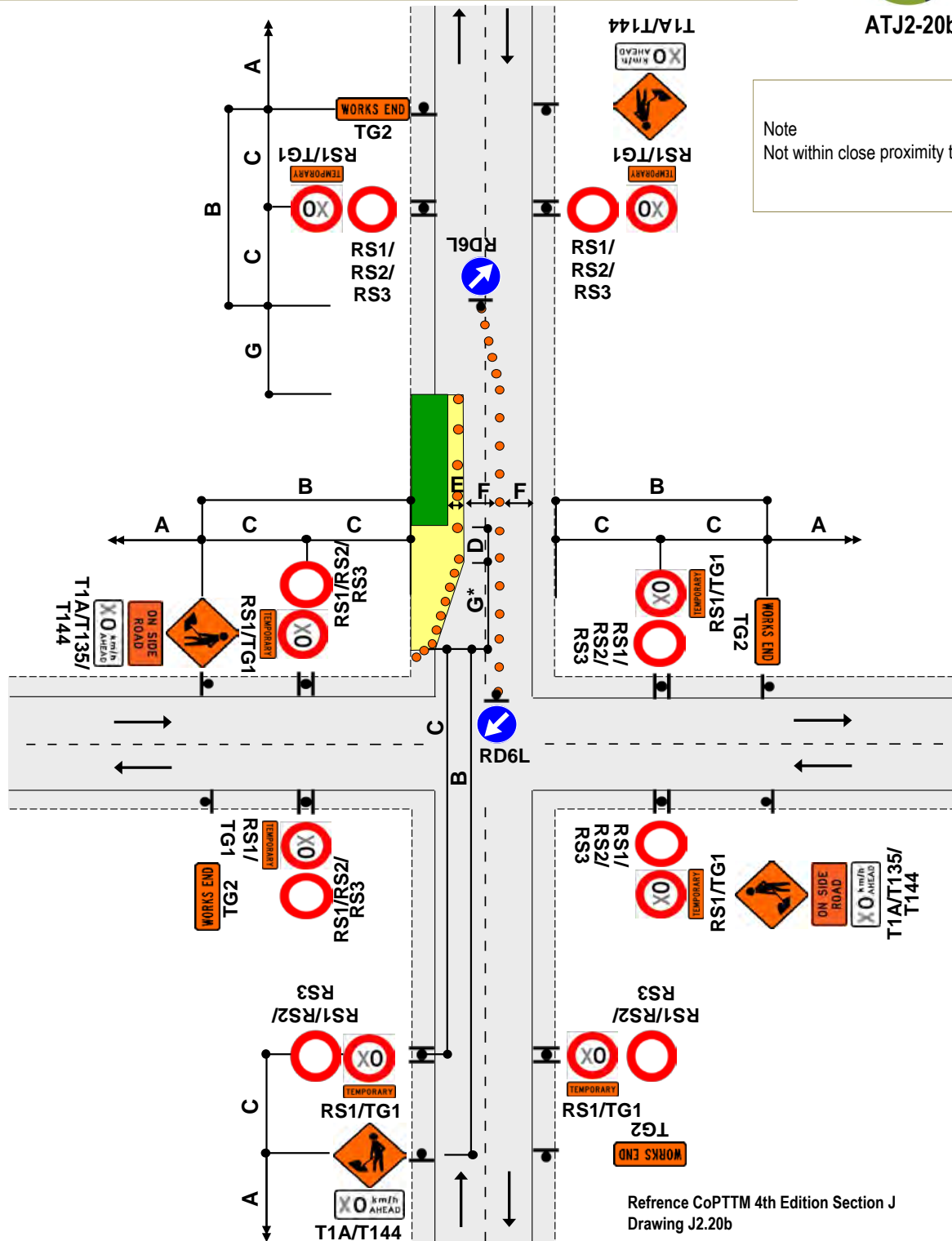
## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LEVEL 1 (INTERSECTION OR ROUNDABOUT)

#### AFTER INTERSECTION - TRAFFIC CROSSING ROAD CENTRE



ATJ2-20b



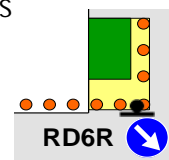
## Notes

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







## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1

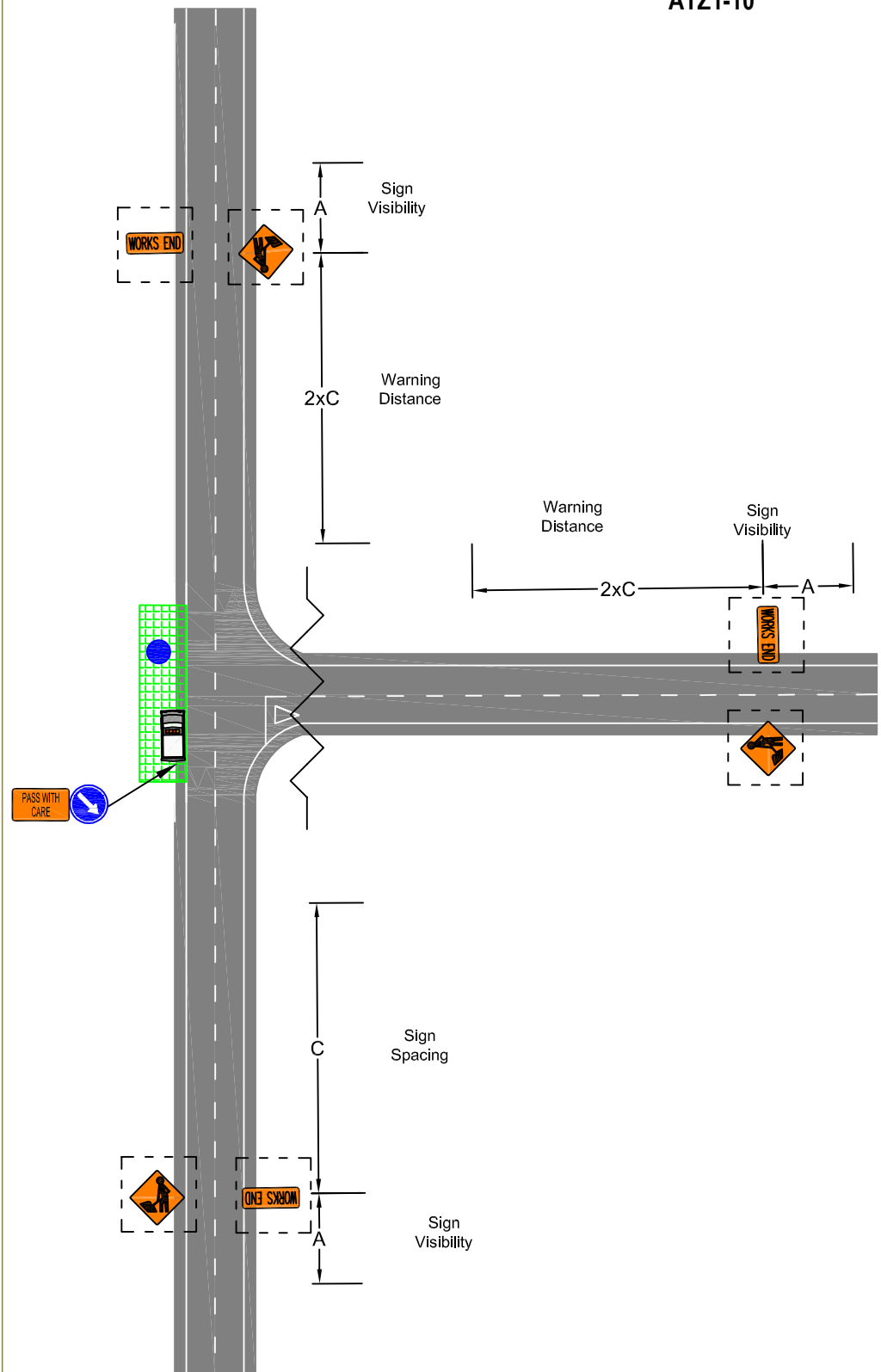
#### SHOULDER - AT INTERSECTION (T-INTERSECTION)

WORK VEHICLE ON SHOULDER OR BERM - LESS THAN 65KM/H



#### Notes

1. All works to be clear of the live lane at all times
2. All works to be completed within 1 hour (60 minutes) anything longer will require a static closure
3. Advance not required for works in the shoulder or berm
4. For all works where cyclists and/or pedestrians are affected temporary traffic management is required
5. T1A/B (TW-1) TG2 (work end) signs are not required when: the Work Vehicle (small truck) is parked in a legal parallel parking or the vehicle is accessed from the off traffic side
6. All Set out distance to be in accordance with CoPTTM
7. Non excavation works only



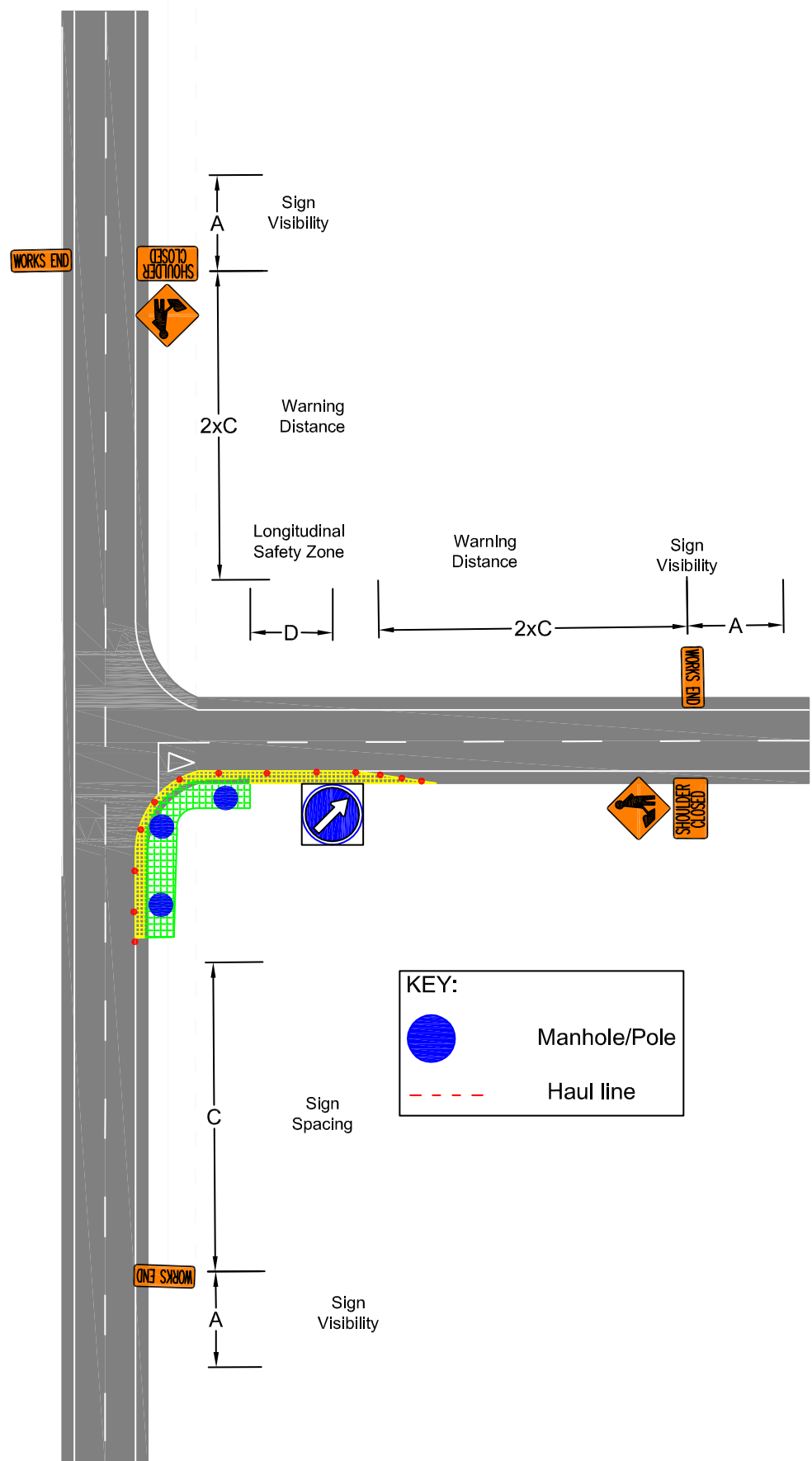
## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 SHOULDER AND FOOTPATH- AT INTERSECTION (T-INTERSECTION) WORK VEHICLE ON SHOULDER, BERM OR FOOTPATH - LESS THAN 65KM/H



#### Notes

1. All works to be clear of the live lane at all times
2. All works to be completed within 1 hour (60 minutes) anything longer will require a static closure
3. Advance not required for works in the shoulder or berm
4. For all works where cyclists and/ or pedestrians are affected temporary traffic management is required
5. T1A/B (TW-1) TG2 (work end) signs are not required when: the Work Vehicle (small truck) is parked in a legal parallel parking or the vehicle is accessed from the off traffic side
6. All Set out distance to be in accordance with CoPTTM
7. Non excavation works



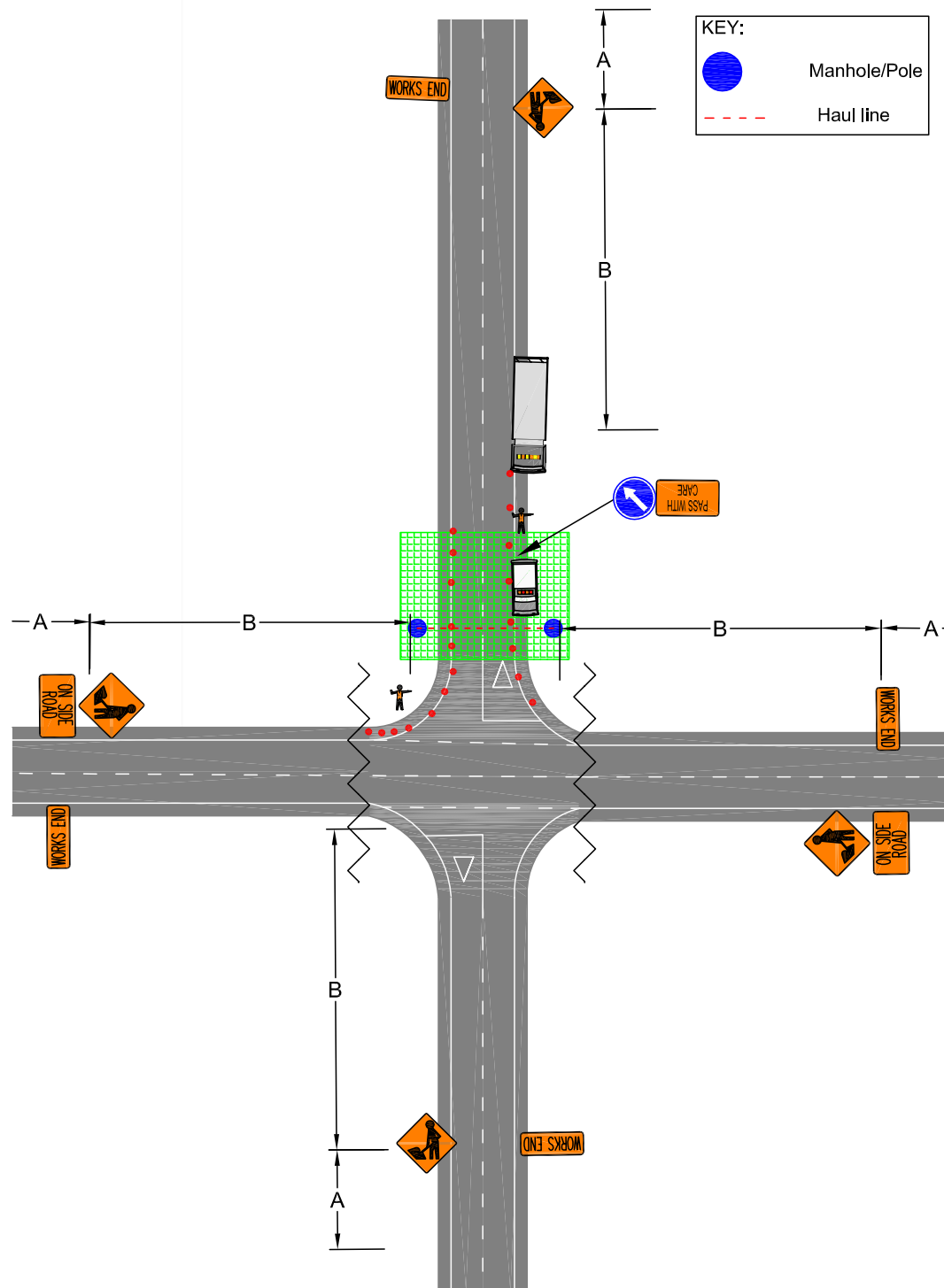
## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 SHOULDER AND FOOTPATH- AT INTERSECTION (T-INTERSECTION) WORK VEHICLE ON SHOULDER, BERM OR FOOTPATH



#### Notes

1. All works to be clear of the live lane at all times
2. All works to be completed within 1 hour (60 minutes) anything longer will require a static closure
3. Advance not required for works in the shoulder or berm
4. For all works where cyclists and/ or pedestrians are affected temporary traffic management is required
5. T1A/B (TW-1) TG2 (work end) signs are not required when: the Work Vehicle (small truck) is parked in a legal parallel parking or the vehicle is accessed from the off traffic side
6. All Set out distance to be in accordance with CoPTTM
7. Non excavation works



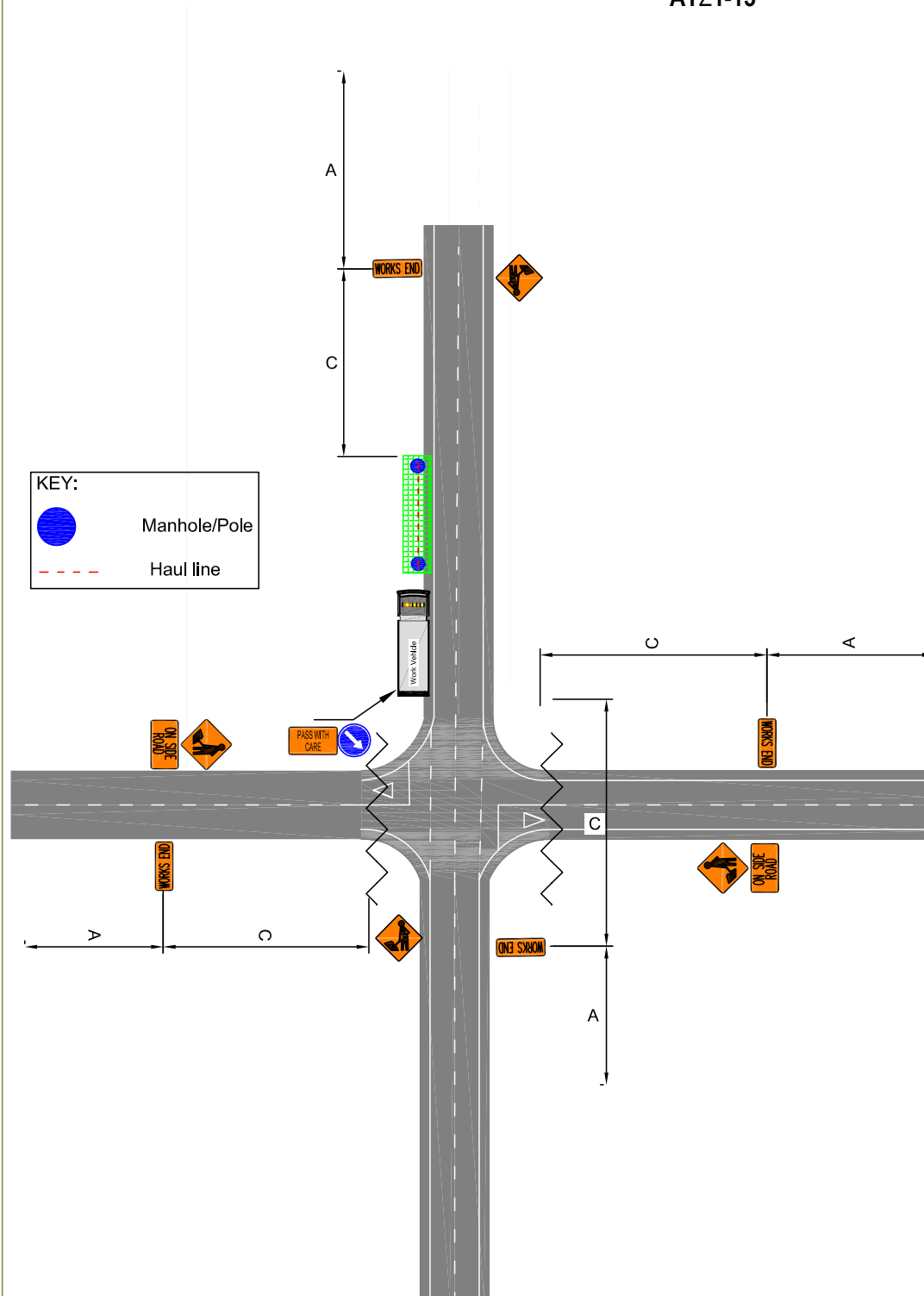
## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 SHOULDER AND FOOTPATH- AT INTERSECTION (T-INTERSECTION) WORK VEHICLE ON SHOULDER, BERM OR FOOTPATH



#### Notes

1. All works to be clear of the live lane at all times
2. All works to be completed within 1 hour (60 minutes) anything longer will require a static closure
3. Advance not required for works in the shoulder or berm
4. For all works where cyclists and/or pedestrians are affected temporary traffic management is required
5. T1A/B (TW-1) TG2 (work end) signs are not required when: the Work Vehicle (small truck) is parked in a legal parallel parking or the vehicle is accessed from the off traffic side
6. All Set out distance to be in accordance with CoPTTM
7. Non excavation works



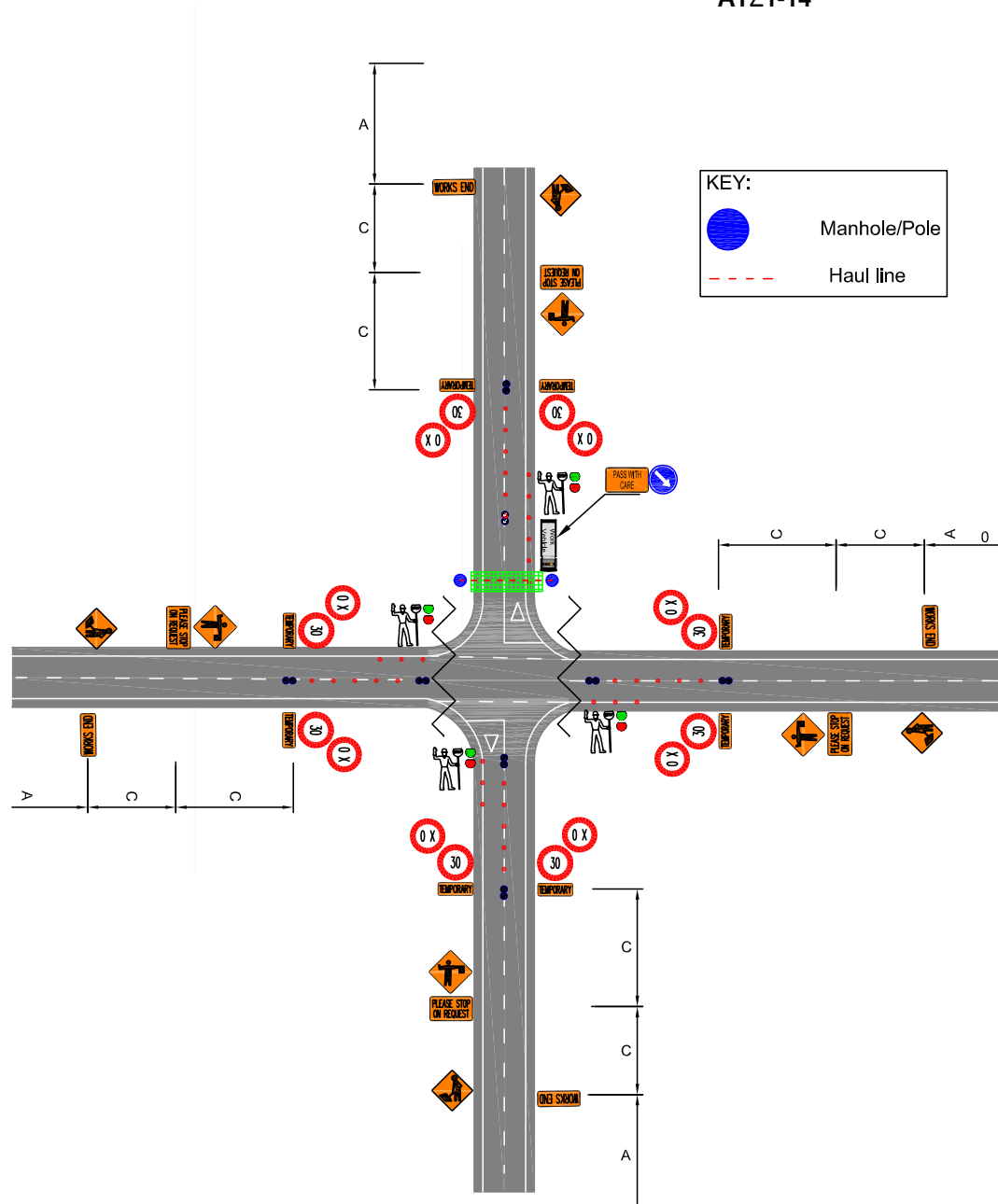
## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1 STOP/ GO AT INTERSECTION (AND STRAIGHT T-INTERSECTION) WORK VEHICLE ON SHOULDER, BERM OR FOOTPATH



#### Notes

1. All works to be clear of the live lane at all times
2. All works to be completed within 1 hour (60 minutes) anything longer will require a static closure
3. Advance not required for works in the shoulder or berm
4. For all works where cyclists and/ or pedestrians are affected temporary traffic management is required
5. T1A/B (TW-1) TG2 (work end) signs are not required when: the Work Vehicle (small truck) is parked in a legal parallel parking or the vehicle is accessed from the off traffic side
6. All Set out distance to be in accordance with CoPTTM
7. Non excavation works



## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1

#### CONTRAFLOW - AT INTERSECTION

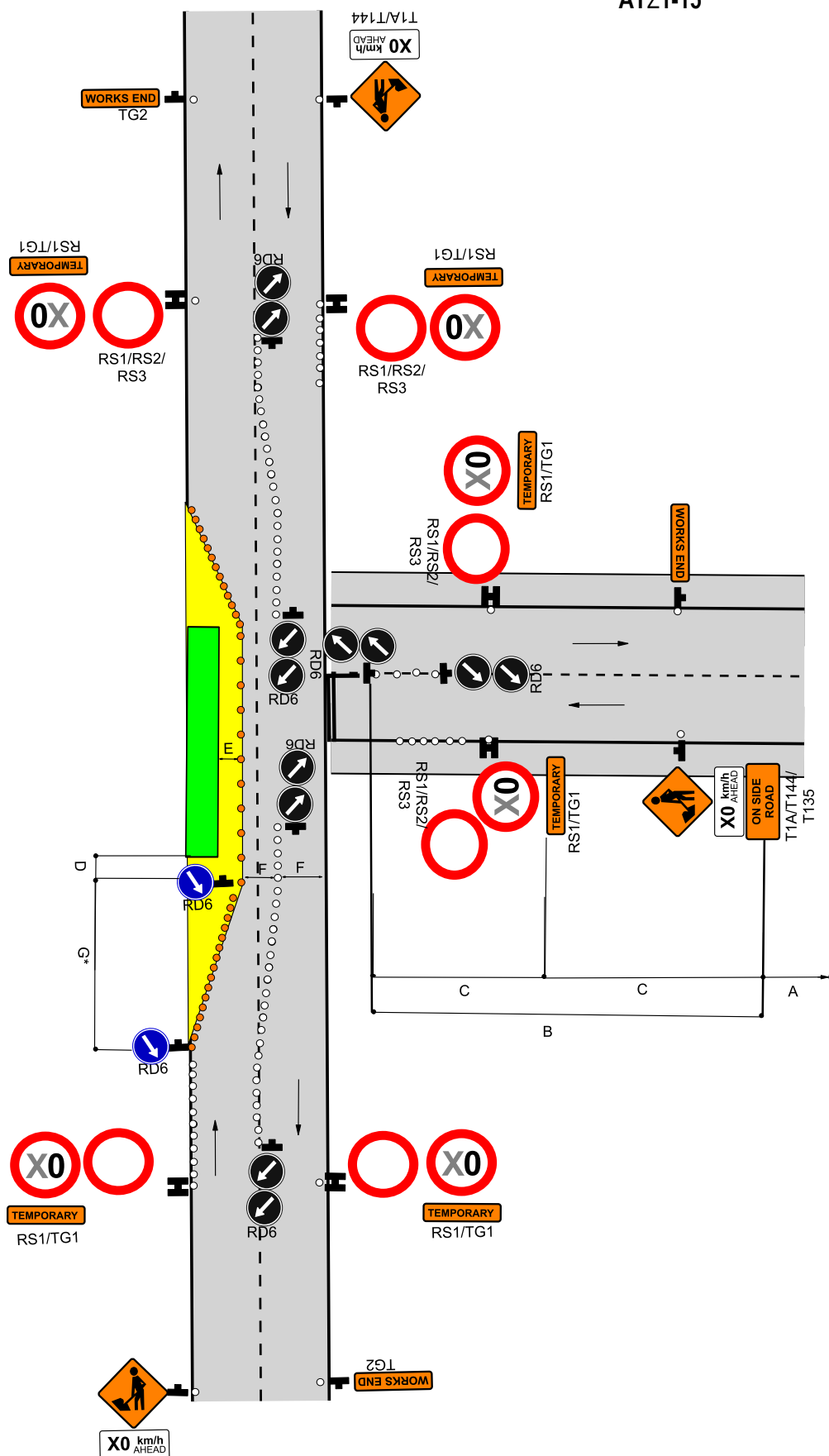
##### TRAFFIC CROSSING CENTRELINE



ATZ1-15

### Notes

1. A 30m return taper at the end of the closure is mandatory
2. PN11 "NO STOPPING" signs to be used if required
3. On roads with a permanent speed limit of 100km/h cones are to be placed along the edge line from the TSL to the taper when the speed is reduced by more than 30km/h
4. If traffic is required to cross the centreline, cones are to be placed on the centreline with RD6L signs at each leading end
5. T144 "30KM/H AHEAD" sign is optional
6. When using a TSL for the closure the TSL Matric CoPTTM must be used to install the correct TSL for the closure
7. Calculation of Taper Length for lateral shift or less than 3.5m is :  
 $W \times G = \text{Width of Lateral Shift}$   
 3.5  
 $G = \text{Taper length in meters from the Level 1 Layout Distance Table CoPTTM}$



## STATIC OPERATION

### TWO-WAY TWO-LANE ROAD - LOW VOLUME AND LEVEL 1

#### SHOULDER - AT INTERSECTION

TRAFFIC CROSSING CENTRELINE



ATZ1-16

#### Notes

1. Cone spacing along side of work space:  
20m from the centre of cone for Permanent speed limit of 65km/h or greater  
10m from the centre of cone for Permanent speed limit less than 65km/h

2. A 10m taper is allowed where the shoulder is less than 2.5m

3. For shoulders greater than 2.5m the following taper calculation to be applied. Calculation of Taper Length for lateral shift or less than 3.5m is :

$W \times G$  = Width of Lateral Shift 3.5

$G$  = Taper length in meters from the Level 1 Layout Distance Table CoPTTM

