

# TfNSW QA SPECIFICATION M208

## ROAD OPENINGS AND RESTORATION (LOW RISK)

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## REVISION REGISTER

<b>Ed / Rev</b>	<b>Clause Number</b>	<b>Description of Revision</b>	<b>Authorised By</b>	<b>Date</b>
Ed 1/Rev 0		New specification	GM, IC	29.05.08
Ed 1/Rev 1	Global	References to "Roads and Maritime Services" or "RMS" changed to "Transport for NSW" or "TfNSW" respectively.	DCS	22.06.20



# **TfNSW QA SPECIFICATION M208**

## **ROAD OPENINGS AND RESTORATION (LOW RISK)**

### **GUIDE NOTES**

(Not Part of Contract Document)

The following notes are intended to provide guidance to TfNSW personnel on the application of the Specification and preparation of the Annexures. They do not form part of the Specification or of the Contract [or Agreement].

#### **USING TfNSW M208**

TfNSW M208 has been developed for use by third parties undertaking Low Risk road opening work within an existing trafficked pavement on a State Road for the purpose of buried public utilities, services or drainage.

M208 may also be used for road opening work carried out by or for TfNSW, with appropriate amendment to “third party” administrative provisions (e.g. “Proponent” becomes “TfNSW”).

M208 should not be used for any excavation or pavement restoration work other than for road openings (e.g. concrete slab replacement, heavy patching or pavement reconstruction).

This specification should be read in conjunction with the issued ROAD OPENING APPROVAL and ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES) for the road opening.

#### **EDITION 1**

This is a new Specification. Further improvement and upgrading based on field experience is expected. Comments and suggestions should be forwarded to the Manager, Contracts Quality, Infrastructure Contracts Branch, Major Infrastructure.

#### **OUTLINE OF M208**

##### **Format and Appropriate Use of M208**

TfNSW M208 is an abbreviated and simplified version of TfNSW M209 intended for use in Low Risk category works (Risk Categories are defined in Table 2). M208 only contains the necessary technical requirements for excavation, backfill and temporary pavement restoration.

Due to the simplifications introduced, M208 has considerable content of a prescriptive nature to address key risks. It contains minimal cross-referencing to other TfNSW specifications (other than to M209 which is a fully detailed version of M208). It assumes little knowledge of TfNSW requirements and documentation.

For emergency work or time-critical work, some requirements in M208 may need to be simplified by TfNSW, based on a site-specific risk assessment and expert advice. Any changes to the Specification requirements must be agreed with TfNSW at the INITIAL SITE MEETING.

## **Assumed Scenario for Low Risk Road Opening Work in M208**

Road opening work is typically carried out on urban roads under highly contained conditions (e.g. residential areas, high traffic and pedestrian flows, very tight clearances to traffic, lane closures necessary, close to buildings). It is necessary to obtain a ROAD OPENING APPROVAL and a ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES) for such work. Lane closures may be difficult to obtain and may be of relatively short duration. Night work is often necessary.

M208 and M209 are designed for the above conditions and address the unique risks of road opening work (e.g. road safety requirements, safe lateral clearances from traffic during excavation).

Permanent pavement restoration (carried out by TfNSW - see below) is a major component of the work. The pavement restoration may extend well beyond the trench excavation. Restoration of other assets may be significant (e.g. kerbs, accesses, damage to property).

## **CLAUSE 1 GENERAL**

### **Responsibilities of Proponent and TfNSW and WARRANTY PERIOD**

Clause 1.6 of M208 specifies an apportionment of responsibilities for restoration and maintenance work between the Proponent and TfNSW. These responsibilities will be agreed at the INITIAL SITE MEETING and specified in Annexure A.

Permanent pavement restoration will always be carried out by TfNSW in accordance with the detailed requirements of TfNSW M209 at cost to the Proponent.

Owing to the risk of settlement of poorly compacted or restored road openings or damage to the buried utility, M208 requires maintenance of the road opening restoration (by TfNSW, at Proponent's cost) during the WARRANTY PERIOD (refer Clauses 1, 2 and 5).

The cost recovery arrangements for work by TfNSW (by deduction from the PERFORMANCE BOND) are explained in Clauses 1.7 and 4.5.

## **CLAUSE 2 PLANNING**

### **TfNSW Management of Road Opening Applications**

TfNSW Regions need to have the necessary arrangements in place to handle road opening work.

The process described in Clause 2.1, Table 1 and the flowchart at Figure GN.1 below show the general process for obtaining Approvals and Licences and the main preconstruction activities prior to commencing work on site. As noted in Clause 2.1.5, this process does not provide the details of the Region-specific or utility-specific arrangements. In these situations the process and flowchart would need to be amended accordingly.

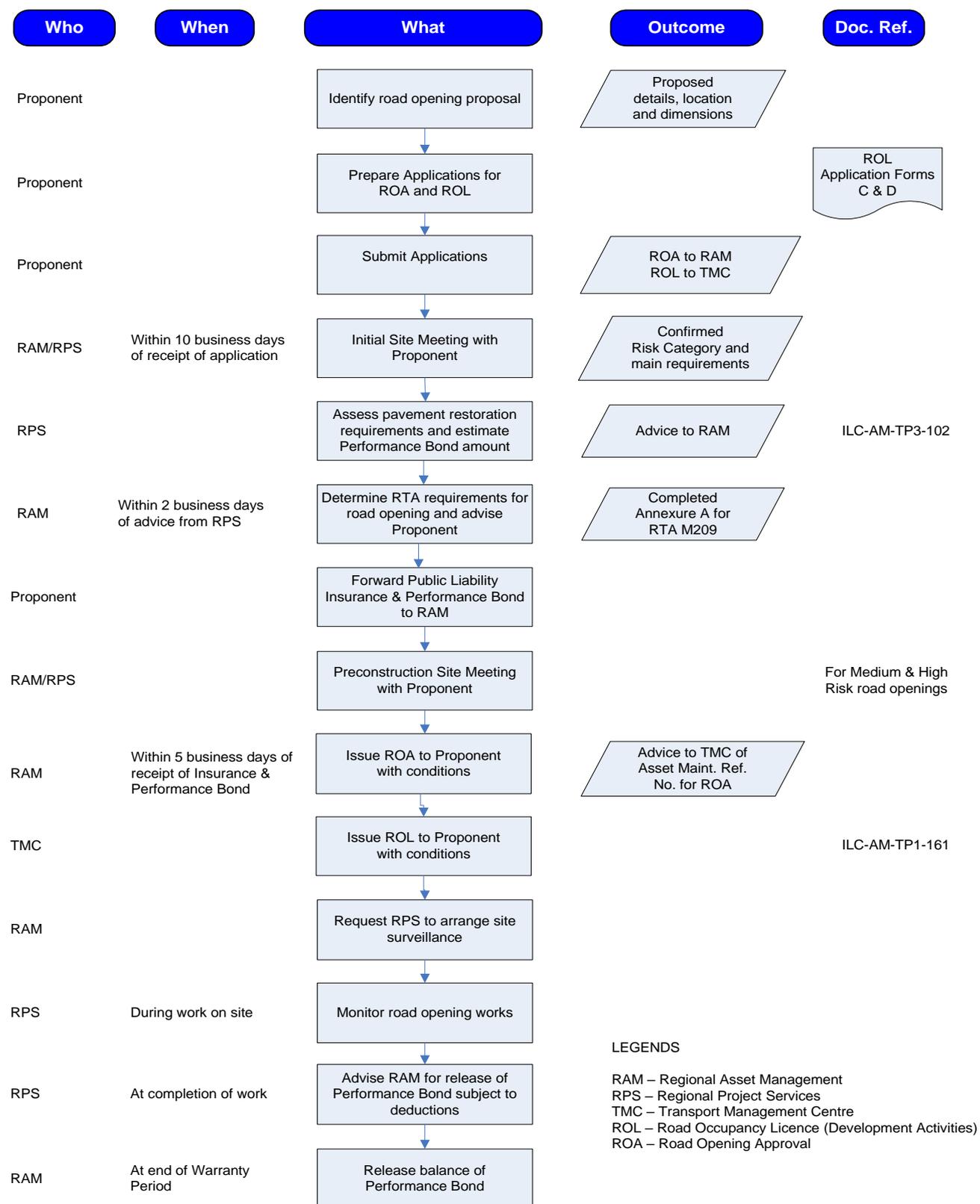
The Proponent should submit maps and drawings showing the location of the road opening.

### **Risk Category**

M208 uses a risk-based approach to road openings, which affects the level of TfNSW management and the technical requirements. Low/Medium/High Risk categories are specified.

Use Table 2 as the guideline on how to assess the Risk Category. The key issue is the need for shoring. Use Table 3 to determine the need for shoring, together with a site-specific risk assessment for shoring requirements. Where shoring is required, the Risk Category becomes Medium or High, and M209 must be used.

## ROAD OPENING MANAGEMENT FLOWCHART



**Figure GN.1 Flowchart for TfNSW management of road openings by external organisations**

NOTE: This process may vary for Region-specific arrangements, MOU work or development-related road openings.

## **Pre-Construction Activities by Proponent**

The onus is on the Proponent to:

- (a) Ensure and certify that its works proposal meets all relevant requirements. At the INITIAL SITE MEETING, TfNSW will only clarify and confirm the requirements, including the limits of pavement restoration; and
- (b) Comply with all OHS&R, environmental and any other statutory requirements associated with the works. TfNSW will not carry out reviews of the Proponent's documentation in this regard. However, for "critical" construction activities (as specified in Annexure A.2), the Proponent should provide details of work methods to TfNSW before commencing work on site.

## **INITIAL SITE MEETING**

This is the only site meeting for Low Risk road openings (which also serves as the equivalent of the PRECONSTRUCTION SITE MEETING in TfNSW M209). The issues, outcomes and requirements agreed at the meeting should be well documented by TfNSW for future reference.

## **Completing Annexure A**

In its Approval and Licence Applications, the Proponent should propose particulars of the Work based on the requirements of M208.

After considering these Applications and after the INITIAL SITE MEETING, Annexure A should be completed by the TfNSW Regional Asset Management Section, based on the information provided by the Proponent and the details agreed and confirmed at the INITIAL SITE MEETING. This includes the confirmed Risk Category.

Table GN.1 below contains guidelines for TfNSW personnel on how to complete Annexure A.

## **Road Safety and Stage Construction Requirements**

Clause 4.1.2 integrates the traffic management considerations and worker safety requirements for the Work Area, to allow the road opening work to be staged in daily shifts and to reduce risks.

Road opening work is often critical, including emergency situations and restoring essential services. Such work cannot be avoided due to the greater community risk. Furthermore, the older services that generate much road opening work are typically sub-optimally located under very busy roads.

The traffic and pedestrian control requirements in Clause 4.1.2 are the minimum requirements that must apply to make such onerous work achievable with an adequate level of safety. These requirements are based on the TfNSW Traffic Control at Worksites (TCWS) Manual, on the assumption of "Short Term" work. To satisfy this "Short Term" assumption the road opening work must be completed in accordance with Clause 4.1.2.

## **Excavation and Shoring Issues**

For Low Risk road openings, it is assumed that no shoring will be provided. Therefore, M208 does not address the stability of excavations, other than assessing the potential need for shoring (Table 3). However, excavated material must not be stockpiled adjacent to the trench (Clause 4.2.3.3).

## **Temporary Pavement Restoration**

The requirements for temporary pavement restoration (as defined in Annexure M.4) must be agreed with TfNSW at the INITIAL SITE MEETING. Some of the temporary pavement restoration may form part of the permanent pavement restoration. Site-specific issues (e.g. compatibility with adjoining pavement) and the capabilities of the Proponent should be taken into account when specifying the temporary pavement restoration.

The use of freshly mixed sand cement material up to the level of the temporary wearing surface is mandated for Low Risk and time-critical road openings, due to its ease and reliability of compaction. This minimises the need for rework at the time of the permanent pavement restoration.

Clause reference(s)	Description	Requirements
1.1, 5.3 and 5.8	WARRANTY PERIOD	Usually 6 months, or 12 months where permanent restoration is the Proponent's responsibility.
2.2.4	PUBLIC LIABILITY INSURANCE	Generally \$20 million for any one occurrence. If another amount is chosen, then ensure the DEED OF INDEMNITY is consistent.
2.2.5 and Annexure L	DEED OF INDEMNITY	Always required, unless the Proponent holds: <ul style="list-style-type: none"> <li>▪ an existing Memorandum of Understanding (MOU) with TfNSW; or</li> <li>▪ an existing DEED OF INDEMNITY with TfNSW for related development work that covers the road opening work.</li> </ul>
2.2.6, 5.6 to 5.8	PERFORMANCE BOND	Always required, unless the Proponent holds: <ul style="list-style-type: none"> <li>▪ an existing Memorandum of Understanding [MOU] with TfNSW; or</li> <li>▪ an existing PERFORMANCE BOND with TfNSW for related development work that covers the road opening work.</li> </ul> <p>Amount: Generally, not less than the estimated value of permanent pavement restoration. Where a TfNSW prequalified civil contractor is engaged, the value of the PERFORMANCE BOND should be reduced by 50%.</p>
2.2.11	Advance notice to surrounding premises	Required: Generally required for work adjacent to business premises, residential premises and for night work, or any work extending past 8.00 pm.  Details: Indicate form of notification (e.g. advertisement, letter box drops). Generally, the notice must be provided at least 5 BUSINESS DAYS prior to proposed commencement of Work.
5.8	FINAL INSPECTION and return of PERFORMANCE BOND	TfNSW Contact person: This is usually the TfNSW Nominated Representative. Include contact details if someone else.

**Table GN.1 Guidelines for TfNSW personnel completing Annexure A**





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## FOREWORD

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### REVISIONS TO EDITION 1

This document has been revised from Specification TfNSW M208 Edition 1 Revision 0.

All revisions to the previous version (other than minor editorial and project specific changes) are indicated by a vertical line in the margin as shown here, except when it is a new edition and the text has been extensively rewritten.

### PROJECT SPECIFIC CHANGES

Any project specific changes have been indicated in the following manner:-

- (a) Text which is additional to the base document and which is included in the Specification is shown in bold italics e.g. *Additional Text*.
- (b) Text which has been deleted from the base document and which is not included in the Specification is shown struck out e.g. ~~Deleted Text~~.

### CLAUSE REFERENCE FORMAT

References internal to this Specification (Examples)	References external to this Specification (Examples)
■ Clause 3.2 (typical clause reference)	■ M745 Clause 3.2 (corresponding external reference) ■ TfNSW 3021 Clause 3.2
■ Annexure B (typical Annexure reference)	■ M745 Annexure B (ditto)
■ Annexure B.3 (the third section within Annexure B)	■ M745 Annexure B.3 (ditto)
■ Table 1 (the first Table within Specification)	■ M745 Table 1 (ditto)
■ Figure 4 (the fourth Figure within Specification)	■ M745 Figure 4 (ditto)
■ Table E.1 (the first Table within Annexure E)	■ M745 Figure E.1 (ditto)

	■ TfNSW M745 / TfNSW G10 (entire specification)
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# ROAD OPENINGS AND RESTORATION (LOW RISK)

*These requirements apply to Low Risk road openings (refer Table 2) within road pavements (including medians and footpaths) where the road opening is excavated and backfilled on the same working day.*

*For Medium and High Risk road openings, TfNSW Specification M209 must be used.*

*For further details of the technical requirements for road openings, refer to TfNSW Specification M209.*

## 1 GENERAL

- 1.1 The Work to be executed under this Specification involves the excavation, backfill and temporary restoration of road openings located within, or adjacent to, an existing trafficked pavement that are for the purpose of buried public utilities, services or drainage. **Scope**
- Road opening work includes:
- .1 Maintenance of the excavation (including any shoring, road plates, barriers and signs) during the works.
  - .2 Maintenance of the temporary pavement restoration (or permanent restoration if carried out by the Proponent) during the WARRANTY PERIOD.
  - .3 Repair and restore any assets, property or environmental features damaged or affected by the road opening work.
- TfNSW will undertake certain parts of the work at cost to the Proponent such as maintenance (refer Clause 1.6).
- 1.2 Details of the Work and any additional TfNSW requirements associated with the road opening are described in ANNEXURE A. **Details of Work**
- The extent of the pavement restoration required will be determined by TfNSW and may extend beyond the limits of the excavation.
- 1.3 This specification is to be read in conjunction with the following approvals issued for the Work: **Comply with approval conditions**
- .1 ROAD OPENING APPROVAL.
  - .2 ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES)

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## Road Openings and Restoration (Low Risk)

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| 1.4 | All excavation work must comply with: <ul style="list-style-type: none"><li>■ Workcover NSW Excavation Code of Practice;</li><li>■ All other relevant statutory requirements; and</li><li>■ TfNSW Traffic Control at Worksites Manual.</li></ul>   | <b>Risk Management for excavation and shoring</b>            |
| 1.5 | Except as provided in Clause 1.6, all work including restoration will be at Your (i.e. the Proponent's) cost and at no cost to TfNSW.  | <b>No cost to TfNSW</b>                                      |
| 1.6 | Responsibilities for restoration and maintenance work must be as agreed with TfNSW at the INITIAL SITE MEETING.<br><br>The Proponent is responsible for backfilling, temporary pavement restoration, and reinstatement or restoration of property or other public or private assets that are disturbed or damaged by the Work.<br><br>Permanent pavement restoration, maintenance of the temporary pavement restoration up to time of permanent restoration, and reinstatement of damaged or disturbed traffic signals, traffic facilities or pavement delineation will always be undertaken by TfNSW at the Proponent's cost. | <b>Responsibilities for restoration and maintenance work</b> |
| 1.7 | Where work or surveillance is undertaken by TfNSW at the Proponent's cost, the amount due will be invoiced by TfNSW and TfNSW must receive full payment prior to authorising release of the PERFORMANCE BOND (refer Clause 5).   | <b>Cost recovery by TfNSW</b>                                |
| 1.8 | Refer to ANNEXURE M for the reference documents, terms, abbreviations and technical definitions used in this Specification.  | <b>References, terms and definitions</b>                     |

## 2 PLANNING

### 2.1 APPLICATIONS FOR ROAD OPENING APPROVAL / ROAD OCCUPANCY LICENCE

- 2.1.1 The Proponent must obtain, fill out and submit the following information to the TfNSW Regional Asset Management Section at least 10 BUSINESS DAYS prior to the intended date of commencement of site work: **Submit application for ROAD OPENING APPROVAL**
- .1 Application for a ROAD OPENING APPROVAL:
    - Road Occupancy Licence (ROL) Checklist – Form C
    - Road Occupancy Licence Application (Development Activities) - Form D
    - Both Forms C and D to be completed except for the TfNSW Asset Maintenance Reference Number
  - .2 Proposed details of road opening (refer Annexure A.1), including a sketch of the proposed layout, consistent with details provided in the completed Forms C and D.
  - .3 Details of PUBLIC LIABILITY INSURANCE, PERFORMANCE BOND, DEED OF INDEMNITY (where specified in Annexure A.2), consistent with requirements of Clause 2.2:
    - TfNSW will specify details in Annexure A.2 based on Items (1) and (2) of the Applications submitted above.
- 2.1.2 The Proponent must submit to the TfNSW Transport Management Centre an Application for ROAD OCCUPANCY LICENCE APPLICATION (DEVELOPMENT ACTIVITIES), being a copy of the completed Forms C and D (i.e. same as submitted for the ROAD OPENING APPROVAL) at least 10 BUSINESS DAYS prior to the intended date of commencement of site work. **Concurrent submission of Application for ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES)**
- This should be submitted concurrently with the Application for ROAD OPENING APPROVAL.
- 2.1.3 Refer to Table 1 for details of where to obtain the Application Forms and where to submit each Application. **Contact and submission details**
- 2.1.4 Each Application must provide all necessary details of the proposed work. Details include the proposed scope, location, layout, LATERAL CLEARANCE, trench dimensions, cover depth, stage construction and timings for the road opening. **Provide all necessary details of work**

**Table 1 TfNSW Contacts for Submission of Approval and Licence Applications**

Detail	ROAD OPENING APPROVAL	ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES)
Source	Submit the same completed Form C and Form D as submitted for the ROAD OCCUPANCY LICENCE	<a href="http://www.rms.nsw.gov.au/publicationsstatisticsforms/downloads/45062800.pdf">http://www.rms.nsw.gov.au/publicationsstatisticsforms/downloads/45062800.pdf</a> [Form C] <a href="http://www.rms.nsw.gov.au/publicationsstatisticsforms/dow">http://www.rms.nsw.gov.au/publicationsstatisticsforms/dow</a>



2.1.8	<p><b>Process Held:</b> Commencement of road opening work on site.</p> <p><b>Submission:</b> After submitting the Approval and Licence Applications, the Proponent must attend an INITIAL SITE MEETING with the TfNSW Nominated Representative (time and place advised by TfNSW).</p> <p>At this INITIAL SITE MEETING, after considering all site issues, TfNSW will review and confirm:</p> <ol style="list-style-type: none"><li>.1 The submitted Applications (Proponent must provide copies).</li><li>.2 The scope, location, trench dimensions and cover depth of the road opening.</li><li>.3 The Risk Category.</li><li>.4 The responsibilities for restoration and maintenance.</li><li>.5 The extent and type of temporary pavement restoration.</li><li>.6 The limits of permanent pavement restoration.</li><li>.7 Construction requirements, including designated stockpile sites and any modified requirements for time-critical work.</li></ol>	<p><b>HOLD POINT</b></p> <p><b>INITIAL SITE MEETING with TfNSW</b></p> <p><b>(NOTE: This also serves as the PRECONSTRUCTION SITE MEETING in TfNSW M209)</b></p>
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## 2.2 GENERAL PRECONSTRUCTION REQUIREMENTS

2.2.1	Immediately after the INITIAL SITE MEETING, submit a completed Form R “Direction to Restrict (Speed) Application” to the TfNSW Transport Management Centre for approval (refer Table 1).	<b>Submit Speed Restriction Application</b>
2.2.2	Where specified in Annexure A.2, comply with any special requirements of TfNSW for the Work.	<b>TfNSW’s special requirements</b>
2.2.3	You must warrant in writing to TfNSW that You have the people, equipment and materials to properly and timely perform the Work.	<b>Warranty on capacity</b>
2.2.4	<p>You or Your agents must hold PUBLIC LIABILITY INSURANCE:</p> <ol style="list-style-type: none"><li>.1 In the amount specified in Annexure A.2;</li><li>.2 That provides coverage for road opening type of work; and</li><li>.3 Extended to cover the interests of Transport for NSW, or its agent, and the local Council.</li><li>.4 That provides coverage until the expiration of the WARRANTY PERIOD specified in Annexure A.2.</li></ol> <p>You must provide evidence of insurances to TfNSW prior to commencement of work and whenever requested to do so.</p>	<b>PUBLIC LIABILITY INSURANCE</b>
2.2.5	Where specified in Annexure A.2, You must provide a DEED OF INDEMNITY in the form of ANNEXURE L to TfNSW prior to commencement of work.	<b>DEED OF INDEMNITY</b>

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- 2.2.6 Where specified in Annexure A.2, You or Your agents must lodge a **PERFORMANCE BOND** with TfNSW prior to commencing work:
- .1 In favour of Transport for NSW;
  - .2 In the form of an original unconditional Bank Guarantee, with no end date; and
  - .3 In the amount advised by TfNSW at the INITIAL SITE MEETING once the details of work and risks are known.
- TfNSW will retain the PERFORMANCE BOND until the end of the WARRANTY PERIOD specified in Annexure A.2 (refer Clause 5).
- 2.2.7 Prior to commencement of excavation works, You must:
- .1 Contact ‘Dial Before You Dig’ on telephone 1100 (free call) to ensure identification of all buried public utilities at the site.
  - .2 Where buried public utilities are identified, liaise with the relevant public utility owners to identify the exact location of their buried services and to determine any potential effects of the Works on their assets.
  - .3 Liaise with TfNSW and the local Council regarding drainage systems or traffic facilities loops under the road and determine any potential effects of the Works on these assets.
- You must accommodate and meet all reasonable requirements of the public utility owners, TfNSW and local Council.
- 2.2.8 Where specified in Annexure A.2, provide details of Your proposed work methods for critical construction activities. Work methods must comply with and take into account:
- .1 Relevant Workcover NSW and other statutory requirements (refer Clause 1.4);
  - .2 The TfNSW Traffic Control at Worksites Manual (TCWS);
  - .3 The approved TCP for the work (refer Clause 2.2.9).
- 2.2.9 Prepare a site-specific TRAFFIC CONTROL PLAN (TCP) according to the TCWS prior to starting Works.
- The TCP must include all necessary signage and comply with:
- .1 All relevant requirements of the issued ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES); and
  - .2 The road safety and stage construction requirements for road opening work (refer Clause 4.1.2).
- 2.2.10 Consult and liaise with the local Council if the Works affect any Council asset, e.g. footpaths.
- Consult other road users such as bus companies and taxi operators if the Works require the temporary relocation of a bus or taxi stop.

- 2.2.11 Where specified in Annexure A.2, provide advance notification of the Works to adjacent premises. **Advance notice to adjacent premises**
- 2.2.12 Where work at night or weekends is specified, obtain the separate approval of the NSW Department of Environment and Climate Change (DECC) and Council to work at night or weekends. **Night time and weekend work**

## 2.3 RISK CATEGORY

- 2.3.1 The technical requirements for the road opening depend on the Risk Category. Use the relevant technical reference and meet the other requirements specified in Table 2 for the Risk Category. **Requirements appropriate for Risk Category**
- 2.3.2 Select the Risk Category according to Table 2. This depends on the indicative shoring requirements (refer Table 3) and a site-specific risk assessment, using the best available information. **Determination of Risk Category**
- TfNSW will review and determine the Risk Category at the INITIAL SITE MEETING and document the confirmed Risk Category in Annexure A.2. TfNSW reserves the right to review the Risk Category upon commencement of excavation or at any other time.
- 2.3.3 Where Table 3 indicates that shoring is not required, this is always subject to the NSW Workcover requirement for a site-specific risk assessment at the time of actual excavation, which may determine that shoring is required because of actual excavation conditions. **Site-specific risk assessment**

**Table 2 – Risk Category for Road Opening**

<b>Risk Category</b>	<b>Conditions</b>	<b>Requirements and technical reference</b>
1. Low Risk	Where no MAJOR RISK FACTORS (see 3. High Risk) are present and <b>ALL</b> of the following conditions apply: <ul style="list-style-type: none"> <li>▪ Shoring of the excavation is not required (according to Table 3 and/or the site-specific risk assessment); and</li> <li>▪ Trench depth does not exceed 1.3 m; and</li> <li>▪ Trench width does not exceed 1.2 m; and</li> <li>▪ Area of excavation does not exceed 6 m<sup>2</sup> at one time, unless otherwise approved by TfNSW; and</li> <li>▪ No road plates are used.</li> </ul>	Comply with this document TfNSW M208. Each stage of the road opening must be excavated and backfilled on the same working day. The traffic LATERAL CLEARANCE must exceed that specified in Table 3 for the trench depth. <i>NOTE:</i> <i>The Risk Category will become “Medium” where shoring of the excavation is required according to either Table 3 or the site-specific risk assessment, even if the trench depth does not exceed 1.3 m.</i>
2. Medium Risk	Where no MAJOR RISK FACTORS (see 3. High Risk) are present and <b>ONE OR MORE</b> of the conditions for 1. Low Risk are not satisfied.	Comply with the detailed requirements of TfNSW M209.
3. High Risk	Where MAJOR RISK FACTORS are present (see Annexure M.3); including a GENUINE EMERGENCY.	Comply with the detailed requirements of TfNSW M209.

**Table 3 Guidelines for Assessing the Need for Shoring of Road Opening Excavations****NOTE: THIS TABLE IS FOR GUIDANCE ONLY AND MUST ONLY BE USED IN CONJUNCTION WITH A SITE-SPECIFIC RISK ASSESSMENT OF ACTUAL TRENCH CONDITIONS AT TIME OF EXCAVATION**

Trench Depth (mm)	Indicative Shoring Requirements <sup>1</sup> (includes site-specific shoring design)
Less than 400	Not required. Traffic LATERAL CLEARANCE > 0.5 m
400 - 500	Required unless traffic LATERAL CLEARANCE > 0.6 m
500 – 600	Required unless traffic LATERAL CLEARANCE > 0.8 m
600 – 700	Required unless traffic LATERAL CLEARANCE > 1.0 m
700 – 800	Required unless traffic LATERAL CLEARANCE > 1.2 m
800 – 900	Required unless traffic LATERAL CLEARANCE > 1.4 m
900 - 1000	Required unless traffic LATERAL CLEARANCE > 1.6 m
1000 - 1100	Required unless traffic LATERAL CLEARANCE > 1.8 m
1100 – 1200	Required unless traffic LATERAL CLEARANCE > 2.0 m
1200 - 1300	Required unless traffic LATERAL CLEARANCE > 2.2 m
More than 1300	Comply with the detailed requirements of TfNSW M209.

**NOTES:**

- Table 3 indicates the need for shoring in proximity to traffic to provide for traffic safety, assuming unfavourable excavation conditions. If in doubt, consult a Structural Engineer to confirm the shoring and traffic separation design requirements.
- Maintain the traffic LATERAL CLEARANCE limit shown in Table 3 throughout the work.

## 3 RESOURCES

### 3.1 PERSONNEL

- 3.1.1 You must use a Competent Person for assessing and monitoring the excavation (Workcover NSW requirement). **Competent Person**

### 3.2 MATERIALS FOR BACKFILL

- 3.2.1 Backfill materials used below, around and immediately above a buried utility or service (including the protective layer) must comply with the requirements of the utility or service owner. **Bottom backfill layers, including protective layer**
- 3.2.2 Unless otherwise approved by TfNSW, backfill material used above the protection layer of a buried utility or service must be freshly mixed sand cement mix subbase conforming to Clause 3.3. **Backfill above the protective layer**

### 3.3 MATERIALS FOR TEMPORARY PAVEMENT RESTORATION

3.3.1 Subbase material for use in backfill and temporary pavement restoration must be a freshly mixed sand cement mix: **Subbase material**

- .1 With a mix proportion of 8:1 sand to cement; and
- .2 With a moisture content of approximately 8% to suit compaction; and
- .3 Mixed at a batch plant and delivered by an agitator to site.

Obtain subbase material from a supplier who has satisfactorily produced material to TfNSW requirements within the last 12 months.

3.3.2 Asphalt used in the temporary wearing course must be dense graded asphalt with 14 mm nominal aggregate size (AC14). **Asphalt**

Obtain asphalt from a supplier who has satisfactorily produced AC14 asphalt to TfNSW requirements within the last 12 months.

### 3.4 MATERIALS FOR RESTORATION OF OTHER ASSETS

3.4.1 Concrete for structures (e.g. kerb, gutter, gully pits, driveways) must be a 32 MPa mix (for reinforced concrete) or 20 MPa mix (for unreinforced concrete). **Concrete**

3.4.2 Materials for restoration of other assets must meet the requirements of the relevant Council, road authority, property or service owner. **Other assets**

## 4 EXECUTION

### 4.1 GENERAL

4.1.1	<b>Process Held:</b> Commencement of road opening work on site.	<b>HOLD POINT</b>
	<b>Submission Details:</b> At least 2 BUSINESS DAYS prior to starting work on site, notify the TfNSW Nominated Representative of the confirmed date and time for commencement of works and submit documentation that verifies that TfNSW has issued <b>all four of the:</b>	
	<ul style="list-style-type: none"><li>.1 ROAD OPENING APPROVAL;</li><li>.2 ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES);</li><li>.3 Speed Restriction Approval (DTR); and</li><li>.4 Approved TCP for the work</li></ul>	
	The commencement date must comply with the approved ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES).	
	<b>Release of Hold Point:</b> TfNSW will review the submission and may direct further work prior to authorising release of Hold Point.	
4.1.2	Unless otherwise approved by TfNSW, the stage construction of the road opening must ensure that:	<b>Road safety and stage construction requirements</b>
	<ul style="list-style-type: none"><li>.1 Each new section of excavation is opened up and backfilled to be traffickable (i.e. after temporary pavement restoration) within 1 working day;</li><li>.2 Lane closures at any one time are minimised;</li><li>.3 The length of excavated road opening does not exceed 5 linear m at any one time;</li><li>.4 The minimum traffic LATERAL CLEARANCE from the edge of the road opening to the edge of the nearest trafficked lane exceeds that specified in Table 3 for the trench depth;</li><li>.5 The speed of passing traffic is restricted to 40 km/hr or less, using methods according to the TCWS;</li><li>.6 Delineation is provided between the trafficked lane and the excavated road opening using cones or bollards. Do not use containment fences that impose loads on the edge of the trench (e.g. water-filled plastic barriers).</li><li>.7 Secure, lightweight pedestrian barricades are provided to enclose all sections of open excavation within the footpath or road reserve, to ensure the safety of pedestrians.</li><li>.8 A Workers (symbolic) (T1-5) sign is exhibited ahead of the work.</li></ul>	

- 4.1.3 In order to prevent future damage from roadworks, the cover depth of new buried utilities or services within the trafficked pavement must be not less than that specified in Table 4, unless otherwise approved by TfNSW. The cover depth and requirements for utility protection must be agreed with TfNSW at the INITIAL SITE MEETING.

**Cover depth of new buried utilities and services**

The cover depth is measured from the top of the utility (including any protective sleeving, but disregarding concrete encasement) to the pavement Finished Surface Level (FSL). The minimum cover depth to the top of the concrete encasement is 0.5 m in all cases.

**Table 4 Cover Depth of New Buried Utilities or Services**

Application	State Roads (TfNSW control)			Regional and Local roads (Council control)	Footpath
	New main (unprotected)	New main (protected)	New lateral to existing main		
Minimum Cover Depth	1.2 m	1.0 m	Depth of existing main; or 0.5 m top of encasement (whichever is greater)	As per SOC Guide	As per SOC Guide
Protection Requirements	Nil	Sleeved within concrete encasement	Sleeved within concrete encasement		

- 4.1.4 Comply at all times with every requirement of the issued ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES) and the approved Speed Restriction Application (DTR), for example:

**Comply with ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES) and approved Speed Restriction Application**

- Specified conditions for lane closures
- Any restricted hours of work or night work requirements.
- All relevant records (e.g. dates of speed zones).

- 4.1.5 Manage traffic in accordance with:

**Traffic management and night work**

- .1 The issued ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES).
- .2 The approved TCP for the Work.

During night work, ensure adequate reflective signposting and lighting is provided in accordance with the TCP.

- 4.1.6 Ensure the safety of all members of the public who may be affected by the execution of the Work (e.g. road users, pedestrians, residents, local workers and businesses). Provide safe access, detour arrangements and ramps for pedestrians.

**Ensure public safety**

This includes, without limitation, providing all safety devices, traffic control, barricades, signs, warnings, and training of Your workers that are necessary for the protection of people and property.

Comply with relevant requirements of Clause 4.1.2 and the TCWS.

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## Road Openings and Restoration (Low Risk)

- 4.1.7 Stop work as necessary where risks to public health or safety exist. **Stop works and eliminate hazards**
- Take prompt corrective action to eliminate existing, identified and predictable hazards.
- 4.1.8 Carry out the Work in a timely and expeditious manner to minimise and, where possible, prevent nuisance or inconvenience to anyone who may be affected by the performance of the Work. **Prevent nuisance or inconvenience**
- Where access to private property is affected, liaise with the owner or tenant and make every effort to maintain access at all times.
- Where disturbance to existing property services is unavoidable, maintain temporary service arrangements at all times.
- 4.1.9 Prevent any loss or damage or disturbance to any property, assets, services and the environment, except for unavoidable impacts that: **Prevent damage**
- .1 Are limited to the minimum extent necessary for the performance of the Work in accordance with good engineering practice; and
  - .2 Are identified and agreed at the planning stage; and
  - .3 Are approved by TfNSW and affected property owners;
  - .4 Are planned for reinstatement according to Clause 4.5.
- Ensure that Your compaction methods do not cause damage or disturb buried utilities or services.
- Do not remove or disturb any permanent survey marks, boundary markers or milestones located within the road reserve.
- 4.1.10 Promptly make good any damage to property or the environment caused by performance of the Work. Repair and restore damaged assets in accordance with this Specification. **Make good damage**
- 4.1.11 Keep the trafficked pavement adjacent to the road opening clean and safe for traffic at all times, including sweeping if necessary. **Keep adjacent roadway clean and avoid spillage and tracking**
- Your vehicles or plant leaving the Work Area must not spill material or track mud onto the public road, footpath or road reserve.
- 4.1.12 You are responsible for the appropriate and legal disposal of all surplus spoil material, removed material and waste that result from the Work and related road cleaning activities. All such material will become Your property unless otherwise specified. **Disposal of spoil material and waste**
- 4.1.13 Refer to TfNSW Specification M209 *Road Opening and Restoration* for further clarifications and detailed technical requirements for road openings. Copies may be obtained from the TfNSW website or from the local TfNSW Regional Office (refer Table 1). **Refer to TfNSW M209 for detailed technical requirements**

## 4.2 EXCAVATION OF ROAD OPENING

### 4.2.1 General

4.2.1.1	Under no circumstances is excavation to commence before You have completed the preconstruction check for buried utilities and services (refer Clause 2.2.7).	<b>Restriction on commencement of excavation</b>
4.2.1.2	Prior to any excavation below the pavement layer using mechanical equipment, You must physically check the precise location and depth of any buried utilities or services that are identified in vicinity of the road opening, using:  .1 Careful hand excavation or potholing techniques; and .2 Accredited services locators or appropriately trained personnel, where feasible.	<b>Physical check for identified buried utilities</b>
4.2.1.3	Carry out excavation work according to the risk management requirements for excavation (refer Clause 1.4).	<b>Key requirements</b>
4.2.1.4	Avoid excavation work during rain or when rain is imminent.	<b>Rain</b>
4.2.1.5	Regularly inspect the excavation to ensure that conditions have not deteriorated and become unfavourable.	<b>Inspect ion</b>

### 4.2.2 Cut out and remove existing pavement layer

4.2.2.1	Prior to excavation of the road opening, saw cut (where necessary), break out and remove the existing pavement layer(s), according to:  .1 The limits of the road opening trench excavation agreed at the INITIAL SITE MEETING. .2 The minimum width necessary to excavate the trench. .3 The saw cutting requirements specified by TfNSW at the INITIAL SITE MEETING.  Mark out the limits of the trench excavation on site.	<b>Remove existing pavement layer(s) for trench excavation</b>
4.2.2.2	Do not break out concrete pavement slabs and asphalt courses in a manner that will cause damage to, displace or undermine adjacent concrete slabs or kerb and gutter	<b>Precautions during removal of existing concrete pavement</b>

### 4.2.3 Construction Requirements

4.2.3.1	Do not use blasting unless expressly approved by TfNSW.	<b>No blasting</b>
4.2.3.2	Where natural seepage zones or subsoil drains are intercepted and the excavation makes water, maintain effective temporary drainage. If necessary, the excavation must be kept pumped out.	<b>Drainage of excavation during works</b>

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## Road Openings and Restoration (Low Risk)

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- 4.2.3.3 Use the designated stockpile sites agreed with TfNSW at the INITIAL SITE MEETING for stockpiling excavated material. **Stockpiling of excavated material**

Do not stockpile excavated material adjacent to the trench (i.e. no closer than the traffic LATERAL CLEARANCE specified in Table 3 for the trench depth).

- 4.2.3.4 At each stage of excavation: **Condition of completed excavation**
- .1 The completed sides of the excavation must be straight, vertical and neatly trimmed. Ends of trenched excavations must be square to the line of trench.
  - .2 All loose waste material must be removed.

### 4.3 BACKFILLING OF EXCAVATION

- 4.3.1 Backfilling of each new section of excavation must be completed within the same working day. **Backfill immediately**

- 4.3.2 Where natural seepage zones or subsoil drains are affected by the excavation or the placement of impermeable sand cement mix backfill, their continuity must be restored by replacing damaged subsoil drains and by including a 100 mm thick layer of permeable sand or gravel before backfilling. **Restore permanent subsoil drainage**

Where excavation occurs in impermeable material (e.g. clay), ensure that a moisture trap is not created that could weaken the road pavement. Install effective subsoil drainage as necessary.

- 4.3.3 Before commencement of backfilling: **Install and restore buried utilities**
- .1 Install new buried utilities and services to the satisfaction of the utility or service owner(s), including protective sleeving.
  - .2 Restore all existing stormwater pipes, subsoil drainage pipes, and other buried utilities and services to the satisfaction of the relevant utility or service owner(s).
  - .3 Where concrete bedding or concrete encasement of a buried utility or service is required, ensure that the concrete has achieved its required early design strength.

- 4.3.4 For bottom backfill layers around a buried utility or service or drainage pipe (including the protective layer and replacement of any unsuitable material at the excavation base), backfilling must comply with the requirements of the utility or service or pipe owner. **Bottom backfill layers, including protective layer**

- 4.3.5 For backfill above the protective layer of a buried utility or service or pipe, place and compact the backfill material (i.e. freshly mixed sand cement mix conforming to Clause 3.2) using at least 3 passes with a vibrating plate compactor, in layers not exceeding 150 mm compacted thickness. **Backfill above the protective layer**

- 4.3.6 Backfill material must have adequate moisture content to achieve the specified compaction. Adjust and control the moisture content as necessary. Prevent over-wetting or excessive drying of material that would cause loss of material density and strength. Moisture must be uniformly distributed within each layer at the time of compaction. **Moisture content of backfill**

## 4.4 TEMPORARY PAVEMENT RESTORATION

- 4.4.1 To enable prompt re-opening of the Work Area to traffic after completion of backfilling, provide a temporary restoration of the road pavement that includes the following courses: **Scope**

- .1 Subbase Course (conforming to this Clause 4.4).
- .2 Asphalt Course (refer TfNSW M209 Clause 4.9), if required.

The temporary pavement restoration may be partly or fully replaced during the permanent pavement restoration.

- 4.4.2 The requirements for temporary pavement restoration (e.g. course thickness and type) must be agreed with TfNSW at the INITIAL SITE MEETING. **Details of work**

The course thicknesses need not match the corresponding course thicknesses of the adjoining pavement or the permanent restoration.

Where an asphalt course is not required, apply a sprayed bituminous seal to the finished subbase course.

- 4.4.3 You must only use freshly mixed sand cement mix subbase material conforming to Clause 3.3. **Subbase material**

- 4.4.4 Each layer of subbase material must be placed and uniformly compacted before the next layer is commenced. Compacted thickness of each layer must not exceed 100 mm. The full depth of the material must be compacted over the entire area of placement. **Place and compact subbase**

Compact each layer using at least 3 passes with a vibrating plate compactor. Moisture must be uniformly distributed within each layer at the time of compaction.

- 4.4.5 Where there is no existing asphalt course on the adjoining pavement or an asphalt course is not required, apply a sprayed bituminous seal in lieu of the asphalt course. **Wearing surface**

- |   |  |
|---|--|
| 4.4.6 Do not re-open the temporary pavement restoration work to traffic unless:     | <b>Restriction on re-opening work to traffic</b> |
| .1 The restoration matches the adjoining pavement Finished Surface Level (FSL); and |  |
| .2 The surface is even and safe for use by traffic.                                 |  |

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## Road Openings and Restoration (Low Risk)

### 4.5 PERMANENT RESTORATION OF ROAD PAVEMENT AND OTHER ASSETS

- 4.5.1 Permanent restoration of the road pavement and reinstatement of other road and TfNSW assets will be undertaken by TfNSW and all costs relating to this work will be recovered from the Proponent according to Clause 1.7.

**Permanent restoration of pavement and damaged road assets**

TfNSW will carry out the permanent pavement restoration according to the detailed requirements of TfNSW M209.

- 4.5.2 Restoration of any other services, public or private assets or property that are disturbed or damaged by the Work (e.g. buried public utilities and services) must be carried out by the Proponent at the Proponent's cost and at no cost to TfNSW (refer Clauses 1.5 and 1.6).

**Restoration of other assets or property**

The Proponent must repair, reinstate or otherwise restore as near as practicable to their pre-existing condition all such disturbed or damaged assets.

“Other public or private assets” is deemed to include but not be limited to: existing shrubs, gardens, retaining walls, fences, signs, shelters and all other structures.

- 4.5.3 The extent and details of the permanent pavement restoration and restoration of other TfNSW assets will be:
- .1 Determined by TfNSW.
  - .2 Confirmed in advance at the INITIAL SITE MEETING.
  - .3 Reviewed by TfNSW if there is any additional damage to the road pavement than foreseen at the INITIAL SITE MEETING.

**Restoration details**

- 4.5.4 Where loops for traffic signals or traffic facilities, or pavement delineation (e.g. line marking, pavement markers), are disturbed or damaged during the Work, the Proponent must:

**Reinstatement of loops for traffic signals or traffic facilities and pavement delineation**

- .1 Immediately notify the TfNSW Transport Management Centre (TMC) when loops for traffic signals or traffic facilities have been disturbed or damaged.
- .2 Provide alternative signposting and/or temporary measures for pavement delineation as necessary.

The Proponent must liaise with TfNSW regarding the permanent reinstatement of loops for traffic signals or traffic facilities and pavement delineation. Permanent reinstatement will be carried out by TfNSW at the Proponent's cost according to Clause 1.6.

## 5 CONFORMITY

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|-----|---|--|
| 5.1 | Supplied materials found to be unsuitable must not be used in the Work.   | <b>Supply of materials</b>                 |
| 5.2 | You are not required to provide test results to verify construction conformity of the Work.   | <b>Conformity testing and verification</b> |
| 5.3 | The DATE OF COMPLETION for commencement of the WARRANTY PERIOD is as defined in Annexure M.3.   | <b>DATE OF COMPLETION</b>                  |
| 5.4 | You must warrant that the Work as completed will be free from defects in workmanship and materials during the WARRANTY PERIOD.  | <b>Warranty on completed work</b>          |
| 5.5 | <p>You must prepare a set of WORKS AS EXECUTED DRAWINGS that:</p> <ul style="list-style-type: none"><li>.1 Provide work-as-constructed details of the buried utility or service, including the cover depth below the pavement Finished Surface Level (FSL);</li><li>.2 Represent the final position, layout and dimensions of the backfilled road opening;</li><li>.3 Provide details of the permanent restoration (where carried out by the Proponent).</li></ul> <p>Within 20 BUSINESS DAYS after completing the Work, submit a copy of the WORKS AS EXECUTED DRAWINGS to the utility owner.</p>  | <b>WORKS AS EXECUTED DRAWINGS</b>          |
| 5.6 | <p>Where defects in the Work carried out by You (e.g. buried utility or service, backfill and temporary restoration) become evident during the WARRANTY PERIOD:</p> <ul style="list-style-type: none"><li>.1 You must re-excavate the defective section of road opening, repair the defects, and again backfill and carry out a temporary restoration of the defective section, at Your cost.</li><li>.2 TfNSW will undertake the permanent pavement restoration of the defective section of road opening at Your cost, by deduction from the PERFORMANCE BOND.</li></ul> <p>Alternatively, TfNSW reserves the right to undertake all necessary rectification work at the Proponent's cost, by deduction from the PERFORMANCE BOND.</p> | <b>Repair of defective work</b>            |
| 5.7 | <p>If the Work is commenced and for any reason is not able to be completed within a reasonable time or is unfinished, the PERFORMANCE BOND may be called upon.</p> <p>The PERFORMANCE BOND will be used to either complete the Work, or if the amount of funds does not permit completion, take the Work to a stage where it is rendered safe for the public and traffic.</p>   | <b>Incomplete works</b>                    |
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## Road Openings and Restoration (Low Risk)

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5.8	At the end of the WARRANTY PERIOD, You must contact TfNSW to organise a joint FINAL INSPECTION at the site.	<b>FINAL INSPECTION and return of PERFORMANCE BOND</b>
	TfNSW will, on Your written request, return the PERFORMANCE BOND, or balance thereof, subject to any deductions which have occurred during the Work:	
	<ul style="list-style-type: none"><li>.1 To rectify Your non-conforming or incomplete work; or</li><li>.2 For any other work carried out by TfNSW at Your cost and invoiced, but unpaid by You (refer Clause 1.7).</li></ul>	

**ANNEXURE A — DETAILS OF WORK****A.1 APPLICATIONS FOR LICENCES AND PROPOSED DETAILS**

ROAD OPENING APPROVAL	Application Submitted?: Yes / No *
ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES)	Application Submitted?: Yes / No *
Name of Proponent (e.g. contractor for utility owner or developer) (as per Form D)	
Owner of utility or developer for purpose of road opening	
Proposed Location (as per Form D)	
Proposed Scope and Layout of Road Opening	
Proposed Overall Length	
Proposed trench dimensions (Depth / Width)	
Details of proposed buried utility (Type / Diameter)	
Proposed minimum Cover Depth to proposed buried utility	(related to pavement Finished Surface Level)
<b>Notes:</b> (*)	Strike out options that do not apply

**A.2 SCHEDULE OF PRESCRIBED REQUIREMENTS**

Clause reference(s)	Description	Requirements
<b>1. Technical Requirements</b>		
2.1.8 and 2.3.2 and Table 2	Low Risk Category confirmed?	Yes / No * If No, TfNSW M209 must be used.
2.1.8 and 4.1.3	Confirmed Cover Depth of buried utility	
2.1.8 and Table 2	Confirmed trench dimensions (Depth / Width)	
2.2.8	Details of work method(s) for critical activities	Required: Yes / No *
2.2.2	TfNSW's special requirements (in addition to those provided in the Licences)	Required: Yes / No * Details:
<b>2. Contractual/ Administrative Requirements (advised by TfNSW)</b>		
2.1.7	TfNSW Asset Maintenance Reference No.	
2.1.6	TfNSW Nominated Representative	
1.1, 5.3 and 5.8	WARRANTY PERIOD	
2.2.4	PUBLIC LIABILITY INSURANCE	Required: Yes / No *      Amount: \$
2.2.6, 5.6 to 5.8	PERFORMANCE BOND	Required: Yes / No *      Amount: \$
2.2.5 and Annexure B	DEED OF INDEMNITY	Required: Yes / No *
2.2.11	Advance notice to surrounding premises	Required: Yes / No *      Details:
5.8	FINAL INSPECTION and return of PERFORMANCE BOND	TfNSW Contact person:
<b>Notes:</b> (*)	Strike out options that do not apply	

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Road Openings and Restoration (Low Risk)

## **ANNEXURE B — MEASUREMENT AND PAYMENT — (NOT USED)**

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## **ANNEXURE C — SCHEDULE OF HOLD POINTS**

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Reference	Type	Process(es) Held or Witnessed	Submission Details
Clause 2.1.8	HOLD POINT	Commencement of road opening work on site [INITIAL SITE MEETING]	At INITIAL SITE MEETING provide copies of Applications for: <ul style="list-style-type: none"><li>▪ ROAD OPENING APPROVAL</li><li>▪ ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES)</li></ul>
Clause 4.1.1	HOLD POINT	Commencement of road opening work on site	At least 2 BUSINESS DAYS prior to starting work on site, notify the TfNSW Nominated Representative of the confirmed date and time for commencement and submit documentation that verifies that TfNSW has issued <b>all four of</b> the: <ul style="list-style-type: none"><li>▪ ROAD OPENING APPROVAL;</li><li>▪ ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES);</li><li>▪ Speed Restriction Approval (DTR) ; and</li><li>▪ Approved TCP for the work.</li></ul>

## **ANNEXURE D TO K — (NOT USED)**

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## ANNEXURE L — DEED OF INDEMNITY

**THIS DEED** made the ..... day of .....

**BETWEEN:** ..... ACN .....  
of .....  
in the state of ..... (hereinafter called “the PROPONENT”)

**AND:** **TRANSPORT FOR NSW** (hereinafter called “TfNSW”)

**WHEREAS:**

A. The PROPONENT proposes to undertake ... on the land known as ...  
hereinafter called “the WORKS”

**NOW THIS DEED WITNESSED:**

1. The PROPONENT hereby indemnifies TfNSW and its officers, employees, contractors and agents from and against all actions, claims, costs, expenses and damages (the ‘Claims’) in respect of loss or damage to property or personal injury to any person resulting from the WORKS whether arising out of or by reason of anything done or omitted intentionally or negligently by the PROPONENT or by any agent to the PROPONENT.
2. The PROPONENT’S liability to indemnify TfNSW and its officers, employees, contractors and agents under clause 1. will be reduced proportionally to the extent that a negligent or wilful act or omission of TfNSW or its officers, employees, contractors and agents has contributed to the Claims.
3. The PROPONENT must take out or ensure to be taken out public liability insurance for an amount of twenty million dollars (\$20,000,000) for any one occurrence which names TfNSW, the PROPONENT and any contractor or subcontractor of TfNSW or the PROPONENT in respect of the WORKS.
4. The PROPONENT undertakes to complete all works in accordance with TfNSW conditions of approval including approved drawings and specifications.
5. The PROPONENT undertakes to rectify all defects (excluding fair wear and tear) arising during the WARRANTY PERIOD at no cost to TfNSW.
6. The provisions of this deed apply from the commencement of the WORKS until the end of the WARRANTY PERIOD which is 6 months / 12 months from the DATE OF COMPLETION as determined by TfNSW. [*Strike out option that does not apply*].

**IN WITNESS THEREOF** the parties hereunto set their hands and seals on the day and year first hereinbefore written.

**THE COMMON SEAL** of )  
)  
) .....

In the presence of:

.....

**EXECUTED BY TRANSPORT FOR NSW**

.....

## ANNEXURE M — REFERENCED DOCUMENTS AND DEFINITIONS

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### M.1 REFERENCE DOCUMENTS

#### M.1.1 Australian Standards

- AS/NZS 4360 Risk Management

#### M.1.2 Workcover NSW Document

- Excavation Code of Practice

#### M.1.3 Other Documents

- SOC Guide NSW Streets Opening Conference: Guide to Codes and Practices for Streets Opening

#### M.1.4 TfNSW Specifications

- TfNSW Q4M Quality System – Type 4 (SIMC)
- TfNSW M209 Road Openings and Restoration

#### M.1.5 TfNSW References

- TCWS TfNSW Traffic Control at Worksites Manual

### M.2 ABBREVIATIONS

DTR	Direction to Restrict (Speed) Application (refer Clause 2.2.1)
FSL	Finished Surface Level of a road pavement
MOU	Memorandum of Understanding between the Proponent and TfNSW (e.g. for a public utility).
TfNSW	Means Transport for NSW constituted under the Transport Administration Act 1988.
TCP	See TRAFFIC CONTROL PLAN
TMC	TfNSW Transport Management Centre

### M.3 DEFINED TERMS

- BUSINESS DAY Any day other than a Saturday, Sunday or public holiday or 27, 28, 29, 30 or 31 December.
- Competent Person A person who has acquired through training, qualification or experience, or a combination of them, the knowledge and skills to carry out a particular task (refer Occupational Health and Safety Regulation 2001).
- DATE OF COMPLETION The date when:
  - All excavation, backfill and temporary restoration of the road opening is completed and safe for use by traffic; or
  - Where permanent restoration is carried out by the Proponent, the permanent restoration is completed.

## Road Openings and Restoration

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■ DEED OF INDEMNITY	Means the completed form included in Annexure B.
■ FINAL INSPECTION	Joint inspection mandated at end of the WARRANTY PERIOD (refer Clause 5.8).
■ Finished Surface Level (FSL)	The surveyed design or existing level of the finished surface of the road pavement.
■ GENUINE EMERGENCY	<p>Urgent work where time does not permit the following:</p> <ul style="list-style-type: none"><li>■ The application for, or issue of, the ROAD OPENING APPROVAL and ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES).</li><li>■ Detailed planning for the road opening</li></ul> <p>Such work is deemed to be High Risk.</p> <p>The following types of works are examples of genuine emergency works:</p> <ul style="list-style-type: none"><li>■ Sewer, water or gas main burst</li><li>■ Road subsidence</li></ul>
■ HOLD POINT	A point beyond which a work process must not proceed without TfNSW's express written authorisation (refer TfNSW Q4M).
■ INITIAL SITE MEETING	The joint meeting on site between the Proponent and the TfNSW Nominated Representative immediately after the Proponent has submitted the Applications for the ROAD OPENING APPROVAL and the ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES) to consider all site-specific details and issues. It occurs before commencement of work on site.
■ LATERAL CLEARANCE	<p>The safe clearance, measured at right angles to the direction of traffic, from the edge of an open excavation for a road opening to the nearest delineated edge of the trafficked lane.</p> <p>Where the open excavation has been backfilled under the trafficked lanes, the LATERAL CLEARANCE is measured from the edge of compacted backfill to the nearest delineated edge of the nearest trafficked lane.</p>
■ MAJOR RISK FACTORS	<p>Risk factors, additional to excavation and shoring risks, that contribute to elevate the overall risk level of the road opening to High Risk.</p> <p>Typical major risk factors (as listed in TfNSW M209 Table 2) include:</p> <ul style="list-style-type: none"><li>■ In a GENUINE EMERGENCY (see Annexure M.3)</li><li>■ Very large trench width (i.e. exceeds 2.1 m), depth or length</li><li>■ Road openings parallel, or at small skew, to direction of traffic</li><li>■ High risk traffic situations</li><li>■ Hazardous excavation conditions (e.g. groundwater, excessive ground vibrations)</li><li>■ Buried utilities which could cause a significant hazard, if disturbed (e.g. high voltage power)</li><li>■ Adjacent buildings or structures within the zone of influence, especially those aligned parallel to the excavation</li><li>■ Long duration openings</li></ul>
■ PERFORMANCE BOND	As defined in Clause 2.2.6. The amount of PERFORMANCE BOND required is set out in Annexure A.2. The Proponent may nominate an agent to lodge on their behalf. This PERFORMANCE BOND must be unconditional and not have an end date.
■ Proponent	The party undertaking the road opening work, including its agents (i.e. employees, contractors, subcontractors and professional consultants). This is not necessarily the utility or asset owner.

# M208

## Road Openings and Restoration (Low Risk)

- PUBLIC LIABILITY INSURANCE  
The insurance must name TfNSW, the Proponent and any contractor, or subcontractor of TfNSW or the Proponent as per the DEED OF INDEMNITY. This risk should be insured from the date of physical commencement of the Work and remain in force until the expiration of the WARRANTY PERIOD. The amount of the insurance required is set out in Annexure A.2.
- Risk Category  
The evaluated risk for the road opening work according to Table 2. The Risk Category reflects the complexity, hazards and associated risk factors for the road opening work. The specified measures or criteria for executing the works will depend on the Risk Category (e. g. level of structural design and inspection). Refer to AS/NZS 4360 for guidance on risk evaluation.
- ROAD OCCUPANCY LICENCE (DEVELOPMENT ACTIVITIES)  
A licence issued by TfNSW (Transport Management Centre) for the road occupancy aspects of the road opening.  
Specifies occupancy of road space and lane closures, including the operational dates and times. Approved dates and timings in the Licence are not necessarily the same as those originally requested.
- ROAD OPENING APPROVAL  
A Licence issued by TfNSW (Asset Maintenance) for the technical aspects of the road opening.  
The issued Licence specifies details of excavation, layout, staged construction, WARRANTY PERIOD etc. and any associated TfNSW conditions for the road opening. Details specified in the Approval are not necessarily the same as those originally requested.
- TfNSW Asset Maintenance Reference Number  
An identification number issued by TfNSW for the particular road opening work as part of the issued ROAD OPENING APPROVAL. The reference number is provided in Annexure A.2 and should be used for all correspondence with TfNSW.
- TfNSW Nominated Representative  
The person nominated in Annexure A.2 as TfNSW's representative for the purpose of ensuring the Proponent's compliance with this Specification. Normally from the TfNSW Regional Asset Management Section. Unless otherwise specified, the first point of contact with TfNSW is the TfNSW Nominated Representative.
- Specification  
Means TfNSW M208.
- TRAFFIC CONTROL PLAN (TCP)  
The TCP is a detailed plan, in accordance with AS 1742.3 and the TfNSW Traffic Control at Work Sites Manual, which recognises safety for the general public as well as employees on the worksite. This plan must also recognise the designated traffic speed for the road and physical constraints such as road curvature, visibility and structures.  
  
The TCP must include but is not limited to:
  - .1 Location and layout of: traffic control devices (e.g. cones, signs, barrier boards, bollards)
  - .2 Lane widths and LATERAL CLEARANCE from traffic to Work Area
  - .3 Site access provisions and pedestrian access
- WARRANTY PERIOD  
The period set out in Annexure A.2 starting from the DATE OF COMPLETION.
- Work Area  
The specific area on the road or within the road reserve where the road opening work is being carried out. The Work Area includes areas where trucks and machines engaged in the work assemble and manoeuvre (refer TCWS).
- Work  
The physical work involving carriageway modification such as excavation performed by the Proponent within the State Road reserve and all incidental on-site acts in any way related to such activities. The Work generally results from the need to install a buried utility or service such as a water pipe or a large diameter gas main or underground electric cable.

## Road Openings and Restoration

- WORKS AS EXECUTED DRAWINGS Drawings recording details of the road opening and any buried services following completion of the Work.
- You Means the Proponent, including subcontractors, employees and agents of the Proponent.

### M.4 DEFINITIONS

Term	Alternative Term	Definitions
■ Backfill		Temporary or permanent filling of a road opening excavation, to make it suitable for use by traffic. In the case of temporary backfill, filling of the road opening excavation until the permanent restoration is required.
■ Cover Depth		The vertical distance between the top surface of a utility or service (that is buried or will be buried), including any protective sleeving ducts, and the Finished Surface Level of the road pavement or footpath, measured on the lower side of the trench.  Within a trafficked pavement, the cover depth of new utilities must not exceed the depth specified in Table 4, unless otherwise approved by TfNSW.
■ Depth	Trench Depth	The vertical distance between the base of the trench and the Finished Surface Level of the road pavement or footpath, measured on the higher side of the trench.
■ Open Excavation		For the purpose of this Specification, a road opening excavation that has not been backfilled.
■ Road Opening	Trench	A trench, shallow excavation or hole dug within an existing trafficked pavement or immediately adjacent to an existing trafficked pavement for the purpose of buried public utilities, services or drainage. The road opening must be at least 100 mm deeper than the existing pavement.  The road opening is deemed to exist from the time of first excavation until the permanent restoration is complete, notwithstanding that it may be backfilled and temporarily restored.
■ Shoring		The use of timber, steel or other structural material for the purpose of providing effective and adequate temporary support to maintain the stability of the walls of an excavation (refer Workcover NSW Excavation Code of Practice).
■ Temporary pavement restoration		The extent of pavement restoration necessary to promptly restore each section of backfilled road opening to traffic. For the permanent pavement restoration, the temporary pavement restoration may be partly or fully re-excavated and replaced with the final pavement courses. The extent of such rework will depend on site-specific issues (e.g. compatibility with adjoining pavement) and will be confirmed by TfNSW at the INITIAL SITE MEETING.
■ Trench		An excavation having a depth that exceeds its width, measured at the bottom (refer Workcover NSW Excavation Code of Practice).
■ Unsuitable Material		Excavated material from the road opening which TfNSW deems to be unsuitable for backfilling or pavement support.
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