



Proposal Form – Standards Development Projects

Version: 4.5
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Please click [here](#) for guidance on the proposal submission process.

Proposal title	Proposed revision of AS/NZS 3725 (2007) <i>Design for Installation of Buried Concrete Pipes</i>
Your name	
Preferred contact number	
Email address	
Name of employer	
Job title or position	
Postal address	
Suburb	
State	
Postal code	
Web address	

If you are submitting on behalf of an organisation that is different than your current employer, please fill out the information below.	
Nominating organisation	
Primary contact name	
Primary contact position	
Primary contact email	
Primary contact phone	

Section 1: Scope

1A: Provide details of the proposed documents				
#	Title (e.g. Masonry cement)	Project type (e.g. revision, amendment ¹ or new ²)	Designation (e.g. AS 1316:2003) ³	Product type (e.g. AS, AS Int, SA TS, etc...) ⁴
1	Design for Installation of Buried Concrete Pipes	Revision	AS/NZS 3725	AS
2	Design for Installation of Buried Concrete Pipes - Commentary	Revision	AS/NZS 3725 Supp 1	Supplement
3				
4				
5				
6				

¹ An amendment is usually only possible for small changes to recently created documents. See Section 4 of Standardisation Guide [SG-003: Standards and Other Publications](#) for more details.

² If you are proposing to create a new document, please provide a suggested Title.

³ Use the [Standards Australia Webstore](#) to obtain the full designation and name of existing documents.

⁴ Standards Australia mainly develops Australian Standards (AS) but it also develops the following Product types: Australian Interim Standard (AS Int), Australian Technical Specification (SA TS), Australian Technical Report (SA TR), Handbook (SA HB), Miscellaneous Publication (SA MP), Supplement (Normative), Supplement (Informative), Australian Standard Certified Reference Material (ASCRM). For guidance, see Standardisation Guide [SG-003: Standards and Other Publications](#).

1B: Write a clear and concise statement of the nature of the issue to be addressed by your proposal.

Describe who is affected e.g. businesses, community organisations or individuals affected by the problem. What are the consequences of no action?

It is proposed to revise AS/NZS 3725 to prevent premature failure of pipes by improving design and installation practices. This will be achieved by:

- a) enhancing consistency both within the document and between AS/NZS 3725 and other related design codes and manufacturing codes.
- b) clarifying the design methodology and how different design situations are addressed
- c) incorporating requirements for quality control for installation.
- d) Address the errors in the existing standard.

Designers will benefit by having a clear repeatable methodology reducing the chances of errors and misunderstandings. Asset owners will benefit by having fewer pipe failures caused by poor installation or under-strength pipes leading to a reduced asset life. Contractors and pipe suppliers will benefit by increased clarity of expectations and fewer disputes and a pipe installation method that is more reliable and less chance of pipe failure soon after installation saving time and money with costly rework on construction projects.

1C: Write a clear and concise proposed scope that will outline how to address the identified issue(s). Unless this is a proposal for a new document, this should not be a scope of the document, but a scope of the work which you propose to undertake.

Include what is going to be changed from the status quo and summarise the specific intent of the change.

If you wish to include proposed revisions as tracked changes in the Standard, or an outline of a new Standard, please summarise the scope and note the attachment here, and include the document as an appendix to this form.

The issues identified and the scope of the work to be undertaken for the proposed revision of AS/NZS 3725 (2007) include the following:

- a) Ensure the numerous cross-referencing errors are corrected
- b) Update reference documents
- c) Consider moving aspects of commentary that are required for consideration (e.g. Cl 6.5.3.2.1 – dynamic load allowances) to primary document rather than being tucked away in an appendix.
- d) Section 3 – many of the referenced documents have been updated since 2007. Their relevance, and the impact of any changes will be reviewed and incorporated.
- e) Section 4 – Consider review of definitions including removal of specification (e.g. minimum clearances) from definitions list/figures.
- f) Consider insertion of new normative section early in the document providing overview of design methodology (how to apply subsequent sections)
- g) Section 6.1 – Consider inclusion of section and acknowledgement of jacking forces
- h) Section 6.3 – Consider introducing a numerical method for determining co-efficient. This allows faster, repeatable and automated calculations. Further consider effect of trench shields which is currently in commentary but not in the standard noting that ASTM C1479 may provide some guidance.
- i) Section 6.3.2 – Consider including provision for induced trench condition and provide details for appropriate design installation and construction.
- j) Section 6.3.3.5 – Consider provision for scenarios requiring larger settlement ratios (e.g. rigid foundations)
- k) Section 6.5.2 – Consider Expansion of section to describe how construction loads cases are to be chosen and assessed and review of Tables B1 to B4
- l) Section 6.5.3/6.5.4/6.5.5 – Specify standard options (e.g. SM1600) for load cases and how custom load cases should be handled. Provide more clarity on which loadings are applicable for which road types and make sure any reductions for example in suburban streets are reasonable logical and represent best value for money.
- m) Section 6.5.3.2/6.5.4.2 – Consider adoption of AS 5100.2 (and NZ equivalent) load distribution for consistency (AUSTROADS Preference) and clarity noting also that need to consider influence of bedding factors for live load up to 1.5 and dead load 2 to 4 which may make current load distribution more consistent with AS5100.2 noting that these factors are not consistent with UK and US practice which should also be reviewed. Also find reference 20 from Appendix CA (Nechvoglod/ Forster) and review.
- n) Section 6.5 – Include consideration of orientation of pipe in relation to traffic
- o) Section 7 – Review how internal water loads are to be considered
- p) Section 8 – Acknowledge that testing frequencies and acceptance criteria need to be specified by Asset Owner, and provide recommendations.
- q) Section 9 – Restructure to delineate intended audience: Designers (bedding factors) or Contractors (installation requirements).
- r) Section 9.1.2 – Consider Inclusion of bedding factors for Controlled Low Strength Material (CLSM)
- s) Section 9.2.3.1 Clarify requirements for “trench walls or surrounding embankments” for HS installations (this may require an amendment to Figure 13) Check out requirement that central section of bedding shall be uncompacted and check out ASTM C1479 on this also. Review trench and embankment conditions for support type and bedding factors in relation to material availability,

compactability and constructability, including normative section on use of CLSM and self-compacting materials. Consider the design to allow consideration of high quality bedding materials and low load class of pipe and conversely low quality bedding materials and higher load classes of pipe given that high quality bedding materials are not always available. Consideration of recycled materials as bedding materials to be included.

- t) Section 9.2.3.2 – Review grading limits and impact of non-conformity British Standard 9295:2020 Section A.22 to be consulted.
- u) Section 10.2 – Consider Inclusion of method for converting proof load to pipe class in this standard.
- v) Include new section or appendix summarising what Designer should communicate (that is, match outputs of AS/NZS 3725 with inputs of AS/NZS 4058 and AS 4139
- w) Consider transferring determination of exposure classifications (environment) from AS/NZS 4058 to AS/NZS 3725, since this would be the responsibility of the Designer not the Manufacturer and ensure criteria for these are consistent with current accepted practice for a 100 year design life and include more detail and requirements on exposure to salt water both inland and in a marine environment and in environments where PASS/ASS soils are present.
- x) Appendix A – Review CLSM provisions and make consistent with product currently supplied in the market and be normative (current language uses "typically", "should be", "normally").
- y) Appendix B – Label as 'informative'. Current language is "this appendix provides guidance". Alternatively consider revision of this appendix and make it normative.
- z) Appendix B3.1.1 – Update to correct information and ensure consistency with AS 5100.2
- aa) Table B1 – Review appropriateness of compaction equipment and support conditions listed
- bb) Tables B2-B4 – Consider removing tables / updating tables and or adding some explanatory notes. Some values are incorrect and they encourage designers to take short cuts without understanding all the necessary steps.
- cc) Update commentary to reflect changes in primary document, correct descriptions in AS 5100.2 load cases, and consider updated edition of Spangler and Handy reference (now entitled *Geotechnical Engineering*).
- dd) Minimise the number of requirements where the customer is required to make a choice as much as practical. Where requirements remain for the customer to make choice, include an Appendix which clearly states the requirements and the need for the customer to make that choice.
- ee) Update the supplement to be consistent with the new main standard document as required once the main document is largely complete including consideration of new technical and reference material available.
- ff) Consider expanding the standard to provide more guidance on installation and evaluating the conformance of installation practices and materials.
- gg) Review of acceptance criteria for defects in installed pipelines via CCTV inspections for example.
- hh) Embankment Conditions - Review options applicable for support type and Bedding Factors appropriate for material gradings, compactability and constructability
- ii) Trench Conditions (narrow) - Review options applicable for support type and Bedding Factors appropriate for material gradings, compactability and constructability. Include clearer transition of wide trench to embankment condition. Include flowable fill as an appropriate option for narrow trench applications and propose design requirements and bedding factors
- jj) Bedding Materials – increase the scope allowed with appropriate compaction requirements and testing. Include the ability to use self compacting materials
- kk) Consider moving design requirements to control migration of fines in bedding materials (or natural ground) from the Commentary into the body of the Standard
- ll) Consider renaming the standard to Align with AS2566 possibly "Buried Concrete Pipe Design" and consider provide clarity that it does not cover flexible or semi rigid pipes. Make sure a specific installation section is included in the standard.
- mm) Consider including a loop that alerts the need to the contractor to consult the designer if the

installation conditions are changed for example.

1D: Are you proposing an adoption of an International Standard (i.e. ISO or IEC)?	
If so answer the following: ⁵	
Is it a Modified or Identical Adoption? Note: if Identical please use the Proposal Form – Identical Adoption	N/A
What is the designation? e.g. ISO 10303.212-2004	

⁵ Use the [Standards Australia Webstore](#) to obtain the full designation and name of existing documents.

1E: Is the existing document referenced in Australian State, Territory or Commonwealth legislation or regulatory framework? For joint documents, also consider New Zealand legislation. ⁶	
Yes (List all legislation or regulation that refer to the existing document. ⁷) Note: For National Construction Code (NCC) and WaterMark proposals, the Australian Building Codes Board (ABCB) needs to be consulted prior to submission.	N/A (Standards to check)
No (Go to 1F)	

⁶ To search for Standards in Australasian legislation, use our search function [here](#), under 'Standards and the Law'.

⁷ Use the full formal designation for the relevant legislation, e.g. Explosives Regulation 2013 (NSW). If more than four items of legislation are affected, provide a list as an attachment to this proposal form.

Note: All relevant regulatory authorities must be consulted in the stakeholder consultation.

1F: Is there an ISO/IEC document that also covers the issues in question?	
Yes (Go to 1G)	
No (Go to 1H)	NO

1G: If there is an existing International Standard that covers the scope of this proposal, is it being adopted?	
Yes (Go to 1H)	
No (Please clarify this position explaining why the existing International Standard is not being adopted)	No While there are some other standards available around the world that cover this topic they are not specifically tailored to Australian conditions and the type of pipes that are manufactured in Australia. However it is expected that the committee may review some of the documents in the development of this standard.

1H: Will the proposed document include any conformity assessment requirements? ⁸	
Yes	
No	NO

⁸ See Standardisation Guide [SG-006: Rules for the structure and drafting of Australian Standards](#). Note that conformity assessment requirements are rarely permitted in a Standard. If you selected “yes,” please discuss with the relevant [Stakeholder Engagement Manager](#) prior to submission.

Section 2: Net benefit

2A: What will be the impact of the proposed project in the below categories? Explain this in terms of a positive or negative impact on the following “Net Benefit” criteria.⁹
Public health and safety (max 200 words)
While pipe concrete pipe failures impacting public safety are rare the revised Standard will potentially benefit public safety, by reducing the overall risk of pipe failures due to under-design of the pipe installation, or poor installation practices. Pipe failures (depending on the size of the pipe) under roads can eventually lead to pavement failure or sudden collapse of the pavement in a similar situation to sink holes suddenly developing.
Social and community impact (max 200 words)
By reducing the risk of pipes cracking and sometimes failing during installation, this revised Standard will prevent delays to the completion of road infrastructure projects due to unscheduled and un planned pipe replacement, repair, inspection and reduce disputes in relation to defective pipes at the end of construction projects representing a net overall saving of public money and net benefit to the community. The overall design life of the installed pipeline should also increase saving public money.
Environmental impact (max 200 words)
Nil.
Competition (max 200 words)
Nil.
Economic impact (max 200 words)
The revised Standard may result in the specification of pipes with slightly higher load classes, at a small increase cost increase for the supply of the pipe. This will be offset by the significant reductions in repairs needed in newly laid pipes, saving significant delays in completion of construction projects. In addition subsequent increase in pipe service life expectancy will also be realised leading to considerable long term economic net benefits.
The standard may also lead to savings by allowing utilisation of lower quality bedding materials and perhaps consideration of recycled materials for this purpose leading to further potential savings.

⁹ Add specific facts and examples if possible. Refer to the [Guide to Net Benefit](#). Not all categories may be affected, in which case, leave these blank.

Section 3: Evidence of support — Stakeholder support

3A: Describe the process taken to gain stakeholder support for your proposal (max 100 words)

Have discussed the proposal with my nominating organisation (Austroads), have canvassed the current committee for this standard which includes a range of specifiers, and manufacturers and have to date received no negative feedback. Have received feedback from Rocla (Karen Thompson) and Independent Civil Solutions (John Bower).

Have circulated a draft of this proposal with the responsible committee in parallel with submission to Standards given the critical nature of the timing requirement for this proposal. Have included feedback from the committee and Standards Australia in this proposal.

3B: Identify the Australian stakeholder organisations that you have consulted with.

Evidence of stakeholder support MUST be provided in a letter (on company letterhead) or email (company email only).

At least two New Zealand-based stakeholders must be included for projects relating to joint AS/NZS Standards. Include those that do, and those that do not, support the proposal.

Key stakeholder groups	Organisation Name	Contact name	Position	Letter or email evidence is attached: Y/N	Interested in membership of standards committee: Y/N
<i>Research and academic organisations</i>					
<i>Manufacturer associations</i>					
<i>Testing bodies</i>					
<i>Certification and auditing bodies</i>					
<i>Supplier associations</i>					
<i>User and purchaser associations</i>					
<i>Employer and industry associations</i>					
<i>Professional and technical bodies</i>					
<i>Unions and employee associations</i>					
<i>Consumer and community groups</i>					
<i>Government and regulatory agencies</i>					
<i>Independent experts</i>					

<i>New Zealand stakeholders</i>					
<i>Other</i>					

Section 4: Declaration

Please check that your proposal is complete and all fields have been filled out. Read and complete the declaration, then forward this proposal and any attached documents to Standards Australia at mail@standards.org.au. The named proponent is deemed to have approved the information contained within this proposal and this declaration.

This declaration is a mandatory requirement and proposals will not be considered without it.

I consent to Standards Australia making information relating to Standards development projects public, including information contained within a proposal form I have submitted in part or in full. In the event that Standards Australia publishes proposals on its website, proponent details at page 1 and stakeholder contact details provided at Section 3 will not be included. However, with prior agreement, my contact details may be provided to interested parties wishing to contribute or comment on the proposal or the proposed project.

The information provided in this application is complete, true and accurate to the best of my knowledge. I believe the proposed document will result in Net Benefit¹⁰ to Australia. I have consulted with, and have the support of, national organisations with a relevant interest in this project.

Name of proponent	
Date of declaration	20/10/2020

¹⁰ As defined in the [Guide to Net Benefit](#)

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See the Standards Australia [Privacy Policy](#) for more information.

Section 5: Instructions and notices

To submit this proposal for Standards Australia consideration:

1. You must complete every section of this form and then submit your initial proposal draft to a [Stakeholder Engagement Manager](#). Use simple, non-technical and concise language and do not use jargon of any kind. For additional information, visit the "[Submitting a Proposal](#)" page on our website.
2. The Stakeholder Engagement Manager will conduct the preliminary review of this form and then guide you as to the next steps.
3. Final submissions, along with evidence of stakeholder support, have to be provided electronically to Standards Australia (mail@standards.org.au). Please note: you should circulate your proposal to stakeholders and collect evidence of support before submitting this form to mail@standards.org.au.

If you have any trouble with the form, you can contact us on (02) 9237 6170, 1800 035 822, or email us at mail@standards.org.au.

For identical adoptions of International Standards please complete the [Proposal Form – Identical Adoptions](#).