



AUSTRALIAN RAIL TRACK CORPORATION LTD

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Engineering Standard – NSW

Category
Services

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General Requirements for Airspace Developments

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The technical content of this document has been approved by the relevant ARTC engineering authority and has also been endorsed by the ARTC Safety Committee.

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About This Standard

This standard sets out the requirements that must be met by any air space development over railway lines in the Australian Rail Track Corporation Network.

Document History

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List of Amendments –

ISSUE	DATE	CLAUSE	DESCRIPTION
1.1	31/08/2004		Reformatting to ARTC Standard
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1. General

The following requirements must be met by any air space development over Railway Lines. Notwithstanding these specific points, all aspects of the structure over and beside the tracks must be to the satisfaction of the Australian Rail Track Corporation.

Any Development must satisfy all Local Government, State, and Federal Authority requirements without any concession for being on Railway Land.

Planning and arrangements for track possessions and electric traction power outage must be on a long-term basis requiring up to twelve months notice.

Where any aspect of the site or structure may have heritage implications, the Developer is to ensure that all statutory obligations are met as required under the Heritage Act 1977 (amended 1987) and the Environmental Planning and Assessment Act 1979. The proposed Development is to be submitted to the ARTC General Manager ISP or nominated representative for comment.

Where the existing access by the rail authorities or the public between a station and the adjacent public streets is proposed to be changed, the Developer must obtain written approval for the suitability and capacity of passageways, steps, escalators, etc.

2. Site Considerations

Approved arrangements must be made for access of commuters and workers to island platforms, and for workers' areas between tracks.

Access to Australian Rail Track Corporation facilities must be maintained as specified for the particular site.

Developers have an obligation to fully investigate ground conditions and any peculiarities of the site.

The Australian Rail Track Corporation accepts no liability for generation of noise and vibration by normal railway operations (including track maintenance), or for its transmission into buildings or structures built over or adjacent to the track area. All aspects of noise must be investigated including reverberation in any enclosed railway airspace.

Subject to agreement by relevant rail authorities, development proposals may provide for complete or substantial removal of existing buildings and/or structures from the platforms and affected areas in the interest of better access and column locations. If such a course of action is proposed then the cost of temporary and ultimate relocation of the displaced activities to the satisfaction of the affected authorities shall be borne by the Developer.

The proposed Development must make full provision for supporting, relocating, and accommodating all existing and foreseeable future services (Australian Rail Track Corporation and Public Utility) to and on the site.

3. Clearances to Railway Tracks

Provision must be made for any future railway track advised by Australian Rail Track Corporation.

Vertical clearance between ultimate approved rail level and underside of structure, and lateral clearance beside tracks, are to be as specified in the Transit Space Standards BDS 12.

On platforms, the clear space between track centreline and any supporting structure is to be as required in the Transit Space Standards BDS 12.

No part of the Development shall intrude inside clearance lines without specific Australian Rail Track Corporation approval.

Developments over tracks must avoid columns between tracks where possible.

Notwithstanding the above, columns, walls and other structures are to be located according to drawings approved by Australian Rail Track Corporation.

Construction clearances are to be maintained in accordance with safe working requirements.

4. Design and Construction Conditions

Design of the Development Structure is to be such that the number of elements that are likely to be struck by a derailed train is minimised.

The protection of columns is to be as specified in BDS 06.

Platform ends must be vertical if a column or other supporting structure is located on, and within 20 metres of, the leading end. Existing platforms are to be modified to suit, at the Developer's cost.

All visible surfaces of station-level buildings, structures, columns, etc., provided or upgraded as part of the Development are to be architecturally designed and treated to produce a modern public amenity of pleasing appearance at no cost to Australian Rail Track Corporation.

The decking over the track shall be of reinforced or pre-stressed concrete construction and there must be no exposed pipe or service component of the building visible from below.

The portion of the structure adjacent to and over the tracks is to be fire rated to the satisfaction of Australian Rail Track Corporation, and is to be capable of isolating the track and platform area from fire in the superstructure.

Gas pipes are not allowed on the underside of the decking in new structures.

Gas, water, drainage, sewerage, mechanical, telephone, data, or electrical services for the Development shall be housed in service ducts and brought down to ground level, preferably at the street boundary.

Plans of such services showing their construction and locations are to be submitted

to Australian Rail Track Corporation for approval before any work on their installation is commenced.

The Development structure is to be constructed in such a way that the structural integrity of the platform and concourse levels is retained in the event that significant damage occurs to the structure above.

The structure is to be designed so that it can be demolished to the level of the “deck” or “roof” over the railway tracks, platforms, and access ways, without disturbance to rail operations or commuters.

The Developer is required to obtain Australian Rail Track Corporation approval for the method by which the “deck” or “roof” over the railway tracks and platforms may be constructed or demolished.

The structure is to be constructed in a way that prevents, under any foreseeable circumstances, objects or materials being thrown, dropped, or falling due to accident, onto a track or platform from any portion of the structure.

The Developer, prior to being given final approval to commence construction, must enter into a legal agreement with the Australian Rail Track Corporation to indemnify the Australian Rail Track Corporation against all loss or damage to Australian Rail Track Corporation property and all claims from anybody as a result of the Development.

All Australian Rail Track Corporation property must be fully protected during construction and all site work including clearances must conform to the safe working requirements.

5. Work Regulations

All work carried out on railway property shall comply with Australian Rail Track Corporation published standards.

6. Provision of Services to Facilities of the Rail Authorities

The cost of providing, operating, and maintaining all services in premises of the rail authorities located within the Development is to be met by the Developer.

The cost of providing or altering all services to the rail authorities’ facilities under the Development structure is to be the responsibility of the Developer.

All rail authorities’ premises covered by the Development are to be illuminated to adequate levels as required by Australian Standards. Additional lighting may be required because of “tunnel” effects.

All Australian Rail Track Corporation premises affected by the Development are to be suitably ventilated and/or air conditioned to comply with A. S. 1668 and appropriate Local Council Health Code requirements.

Where a public entrance between a railway station and an adjacent public street is through the Development, an emergency lighting circuit connected to the Australian Rail Track Corporation supply is to be provided to light the access if the supply to the Development fails.

To limit the transfer of stray traction currents from the electrified tracks to surrounding area, it will be necessary for all metallic service pipes installed in the Development to be insulated electrically from the street mains by insulating joints or other approved means, and for the electrical installation of the building to be so designed that the above provisions would not be short circuited by the connection of the neutral conductor. All plans and specifications for the installation shall be forwarded for Australian Rail Track Corporation's approval before commencing the work. Australian Rail Track Corporation will, however, not accept any liability whatsoever for the transfer of any stray current to the Development structure.

The Developer is to make provision for the attachment of overhead wiring supports and safety screens, particulars of which will be supplied by Australian Rail Track Corporation.

The electricity supply required for the Development shall be obtained by the Developer from the Local Supply Authority. In general, this may entail a substation dedicated to the Development, with isolating transformers separating the electrical installation within the Development from the Local Authority's mains.