

Wayleave Requirements – Network Asset Management Business Procedure

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1 Description

This procedure details the process, steps, requirements, and accountabilities for when a wayleave application is required for a third-party to conduct works on or use Aurizon Network land including under or over Aurizon Network infrastructure. The purpose of this document is to outline high level the requirements for wayleave applications, assessment, commercial arrangements, planning and access coordination and post-wayleave requirements.

2 Scope

This procedure is an enterprise-wide document, which means it applies to all instances in Aurizon where any third-party requests to conduct works on or use Aurizon Network land including under or over Aurizon Network infrastructure. This procedure may not apply to Aurizon driven capital and renewal projects.

3 Requirements

3.1 Applying for a Wayleave

Where an application for a wayleave has been submitted for approval to Aurizon Network for assessment, each submission pending the wayleave type may include, however is not limited to:

- The Access to Aurizon Property and/or Wayleave Form (Form 001) completed and signed.
- A purchase order for the Application Fee based on the Access type required.
- An aerial map marked up to identify proposed access points and the worksite area.
- RPEQ certified design including issued for construction technical drawings (plan and section mandatory — must show all existing services) and Safety in Design Risk Register.
- High Level Construction Methodology (where construction works will be performed).
- Catan profile (applicable to overhead electrical wayleaves) — calculated at maximum temperature (temperature must be clearly specified).
- Full list of vehicles, plant and equipment to be used (must include height, width, length and weight specifications and details on how it will be used).
- Safe work method statement(s) (must be site specific — refer Appendix 1 Rail Infrastructure Safety Considerations).
- A construction environmental management plan.

3.2 Requirements of Standard for Applying for a Wayleave

Works requested through the wayleave application process will be assessed in accordance to the following standards:

- AZN.NA.PRO.04.615.063 Wayleave Requirements.
- SAF-SPC-5178-ELE-NET Working in the Electrified Area.
- 14-STD-005-COM Personal Protective Equipment.
- HWD-00396 Drug and Alcohol Management Standard.
- SAF/STD/0001/SWK/NET Rail Corridor Safety Standard.

- SAF-STD-0176-COM-NET People Plant Separation.
- SAF-STD-0090-TEL-NET Access to Antenna Support Structures.

On a case-by-case basis, Applications will be reviewed for additional standards, procedures, or specifications relevant to the works or use requested by the applicant.

3.3 Technical Assessment

3.3.1 Design Requirements

The wayleave application shall be in sufficient detail to identify the location and spatial relationship to Aurizon Network's infrastructure and operating envelope for technical assessment.

Design documentation submitted with the application must comply with the minimum design criteria specified in Aurizon Standard drawing AUR-S-9999-0925 to 0927 depending on the type of application.

For major developments where sufficient details are not known, preliminary information may be required to enable Aurizon Network to approve the development in principle prior to the detailed application being made. Applications that receive in principle approval will require an additional wayleave application to be made when sufficient details of the works or use are known.

As the Rail Infrastructure Manager (RIM), it is Aurizon Network's responsibility to ensure the safety and integrity of its rail corridor. Where third-party owned infrastructure will remain on

Aurizon Network land, consideration must be given during the design phase and before, during and post construction that the infrastructure:

- does not create any additional safety hazards to people
- does not create any additional safety hazards to Aurizon's infrastructure
- either maintains the existing level of or creates a superior level of rail corridor security and safety.

3.3.2 Non-Standard Design

Applications not in accordance with Aurizon standard requirements will require further review by the relevant engineering discipline on a case-by-case basis.

When the standard requirements stated within this document cannot be satisfied, the applicant shall complete the Variation to Standard Practice (VSP) form (SAF/FRM/6002/COM/NET) which shall include an appropriate justification, including a risk assessment, and any site investigation results to support the case. This form needs to be approved by the relevant Aurizon Network Discipline Area Authorising Officer before Aurizon can grant a technical approval letter. The VSP process may take up to six (6) weeks to determine an outcome and may result in additional funding being required.

3.3.3 Processing

Aurizon Network will undertake a formal technical assessment of the wayleave application to ensure appropriate safety, operational, technical, and legal requirements are in place. Assessment outcomes are generally provided within four to six weeks from the date upon receiving the application (including all supporting documentation). Upon completion of the assessment, a technical approval letter will be issued detailing the application outcome and any conditions that may apply.

Aurizon Network may conduct a preliminary meeting with the applicant to determine:

- Discussions about the methods of work.
- The likely impact on train operations and Aurizon Network infrastructure.
- A programme of any trackside safety and where applicable electrical safety requirements.
- The setting of a date for the commencement of work noting that no work shall commence on site until possession has been granted and approved by Aurizon Network.

3.3.4 Application Outcome and Commercial Arrangements

All approved applications, together with terms and conditions required by the representative stakeholders, shall be agreed to in writing between Aurizon Network and the applicant in the form of a technical approval letter and if required, a relevant commercial arrangement prior to the commencement of works or use.

This is required to minimise Aurizon Network's risk if in the future, damage occurs due to non-compliance with any terms and conditions, or if Aurizon Network carries out modifications to its infrastructure, operating envelope and/or mode of operation.

3.4 Planning and Access Coordination

The works or use associated with the Wayleave application will be assessed for the appropriate access opportunity and safety resources required. This will include assessing works or use to align with an appropriate closure, electrical isolation and for all required safety resources to be allocated prior to commencing the wayleave works or use.

For access that aligns with an Aurizon planned track closure or an Overhead Line Equipment (OHLE) outage, a minimum of 16 weeks' notice is required from the date of application receipt. For access that does not require alignment to a closure or OHLE outage, a minimum of 8 weeks' notice is required. Applications associated with complex or major works will be assessed on a case-by-case basis.

Timeframes provided are indicative only and may be subject to longer processing times.

3.5 Post-Wayleave Requirements

In instances where third-party infrastructure will remain on Aurizon Network land, the applicant will be required to fulfil post-construction requirements of maintaining the infrastructure. The maintenance requirements will be governed by the relevant commercial arrangement issued upon successful application of the wayleave.

Upon completion of a Wayleave where infrastructure has been constructed, the applicant will be required to provide Aurizon Network with Registered Professional Engineer of Queensland (RPEQ) certified As Constructed drawings in PDF Format.

3.6 Wayleave Requirements for Underground Crossings (Under Track)

Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum bore diameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
Directional Drilling	Top of pipe minimum 3m below formation and ground level inside the corridor.	350mm or change by derogation agreement.	Usual HDPE pipe (conduit) sizes outside diameter; 63mm, 110mm, 125mm, 140mm. Maximum pipe size up to 250mm or by agreement.	Design loading of the pipe to be 300LA Railway loading (as per AS5100), including the type of pipeline (Non-Flammable or Flammable). [White for telecommunications. Orange for power].	The pipe is the mechanical protection for the cable and cement grout around pipe. Increased depth of service to decrease risk from interference during future rail works. For non-metallic cables (optical fibres) a detectible marker tape or locating transponders installed.	Requirements of AS/NZS 3000 and AS/CAS009 to be satisfied with regard to electrical cable protection.	Refer to Standard Drawing AUR-S-9999-0925 for details	Refer to Standard Drawing AUR-S-9999-0925 for details	Refer to Standard Drawing AUR-S-9999-0925 for details	External Service Owners: High voltage cables, low voltage electrical cables, telecommunications cables, water incl. private pipeline crossing, sewerage, fuel and gas pipelines. Cost for installation of underground pipeline for Private landowner to be confirmed.
Pipe Jacking	Top of pipe minimum 3m below formation and ground level	By Agreement	By Agreement		The pipe offers mechanical protection for the cable. Cementous grout injected between the space between the outside of the enveloping pipe and the bored hole. Increased depth of service to decrease risk from interference during future rail works. For non-metallic cables (optical fibres) a detectible marker tape or locating transponders installed.					
Trenching	N/A across railway track				Inclusion on Protection Slab with Electrical Warning tapes as per Standard.					

NOTE: Refer to Standard Drawing AUR-S-9999-0925 for guidance.



3.7 Wayleave Requirements for Underground/At-Grade Crossings and Installations (Within Rail Corridor)

Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum borediameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
Directional drilling	Top of pipe minimum 3m below formation and ground level inside the corridor.	350mm or change by derogation agreement.	Usual HDPE pipe (conduit) sizes outside diameter; 63mm, 110mm, 125mm, 140mm. Maximum pipe size up to 250mm or by agreement.	Design loading of the pipe to be 300LA Railway loading or Road vehicle loading as required (as per AS5100), including the type of pipeline (Non-Flammable or Flammable). [White for telecommunications. Orange for power].	The pipe is the mechanical protection for the cable and cement grout around pipe. Increased depth of service to decrease risk from interference during future rail works.	Requirements of AS/NZS 3000 and AS/CAS009 to be satisfied with regard to electrical cable protection.	Refer to Standard Drawing AUR-S-9999-0926 for details	Refer to Standard Drawing AUR-S-9999-0926 for details	Refer to Standard Drawing AUR-S-9999-0926 for details.	External Service Owners: High voltage cables, low voltage electrical cables and telecommunications cables, water, sewerage, fuel and gas pipelines.
Pipe Jacking	Top of pipe minimum 3m below formation and ground level	By agreement	By agreement		For nonmetallic cables (optical fibres) a detectible marker tape or locating transponders installed.					
					The pipe offers the mechanical protection for the cable. Protection slab; 150mm thick, reinforced, extending 300mm either side of the pipes, no					



Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum borediameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
Trenching	N/A (incl. water pipeline application for Private properties through culvert structures) except for Tower Application.	N/A	Usual uPVC HD/ HDPE pipes (conduit) sizes; 50mm, 63mm, 80mm, 100mm, 125mm, 150mm or by agreement.	Design loading of the pipe to be 300LA Railway loading or Road vehicle loading as required (as per AS5100), including the type of pipeline (Non-Flammable or Flammable). [White for telecommunications. Orange for power]. Direct bury to be reviewed incase-by-case basis.	less than 300mm from the top of pipes. Warning tape at 300mm below ground and 50% depth of cover. Where multiple services are co-located in a trench, extent of Warning tape shall cover the whole width of excavation/ trench with multiple tapes. Flowable grout around groups of conduits. Increased depth of service to decrease risk from interference during future rail works.	Requirements of AS/NZS 3000 and AS/CAS009 to be satisfied with regard to electrical cable protection.	Refer to Standard Drawing AUR-S-9999-0926 for details	Refer to Standard Drawing AUR-S-9999-0926 for details	Refer to Standard Drawing AUR-S-9999-0926 for details	External Service Owners: High voltage cables, low voltage electrical cables and telecommunications cables No flammable and combustible services allowed.
NOTE: Refer to Standard Drawing AUR-S-9999-0926 for guidance.										
								Stormwater run-off and drainage are directed to a lawful point of discharge in accordance with section 1.4 of the Road drainage		



Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum borediameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
Stormwater Management								Adermanual, Department of Transport and Main Roads, 2015 and Section 3 of Queensland urban drainage manual, Department of Energy and Water Supply, 2013 and shall avoid adverse impacts on the existing Aurizon corridor/ drainage structures. Aurizon recommend that 2D analysis (Tuflow or similar) is undertaken as a suitable approach to undertake impact assessment and submitted to Aurizon for acceptance/approval.	-	Development application around Aurizon corridor.
								Wind loading AS1170.0 and AS1170.2 - design life 25yrs; Importance level=2; SLS = 1 in 25yrs Structural design - AS3600 and AS4100 including fatigue assessment (AASHTO)		



Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum borediameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
Advertising Signs								Demonstration - Impact Assessment on Train drivers sight distance, Structural clearance from track, Aurizon Access and surrounding drainage Site Assessment for Vehicular Impact and Collision Protection - "Slip-base" design in clear zone area or protected by Crash Barrier. Bonding requirement of Signage structure within 3m of OHLE equipment. Electrical and Lighting design (Red, Amber, Green lights not to be used) Orientation of Signage to be facing away from Aurizon corridor Reflective paints not to be used (Class 2 Std. Traffic sign preferred) TMR/ Local Council	RPEQ Certified design including Lifting pad as required with Risk Assessment. "AS-CONSTRUCTED" certification post installation and connection. Avoid sign in the rail corridor where possible.	Billboard Signs



Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum borediameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
								guidelines to be followed for Signage requirements on Highway/ Motorway/ Roadway as appropriate.		
Transfer Facility and Wayside Equipment's								1. Clearance to Structure Gauge (AUR-S-9999-2650 and 2651)	1. Modification to existing structure to be certified by RPEQ Structural/Civil Engineer.	
Weighbridge								1. Design approval on case-by-case basis.	1. Drilling holes in the rail shall comply with Aurizon Asset Notice TC027 2. AEI readers to be outside structure gauge and shall be removable.	
Dragline Crossing								1. Clearance to Structure Gauge (AUR-S-9999-2650 and 2651) 2. Geotechnical Investigation and settlement calculation	-	



Application Type/ Type of Crossing/ Installation method	Minimum Depth below ground level/ formation level	Maximum borediameter	Maximum pipe diameter	Pipe (Conduit) type/ material	Future Excavation / protection	Electrical Protection	Installation Condition	Criteria of Utility Crossing below existing Aurizon tracks	Other Requirements	Application type of Installations
								certified by RPEQ Engineer (Geotech.) Temporary Independent structure - certified by RPEQ Engineer (Civil/Structural)		
Temporary Access (to Corridor or Level Crossing)								1. Nature of work/ usage 2. Types of vehicles and no. of vehicles used per day (axle load distribution if not std vehicle) Duration of access requirement	1. Include Risk assessment in consideration with Aurizon using the access road. Compliance with Access Protocol/ Agreement	
Blasting works								1. Asset Protection Plan (APP) to include all railway infrastructure affected within the blasting area and determine impact from staged construction.	1. APP to be signed by RPEQ engineer (Mining)	



3.8 Wayleave Requirements for Overhead Electric Lines

Type of Electricity Entity / Applicant Overhead Electric Line	Minimum Clearance Above Aurizon Ground (m)	Minimum Clearance in Aurizon Non-Electrified Areas Above Rail Level (m)	Minimum Clearance in Electrified Areas Above Aurizon OH Traction Wiring (m)	Crossing Span Above Aurizon Tracks	Crossing Span Supports
Stay wire and Control Cable	5.5	6.7	3.0	<p>Angle of crossing between stay wire/electric line and Aurizon track shall be 90 degrees +/- 45 degrees.</p> <p>Splices shall not be used in conductors crossing Aurizon tracks.</p> <p>Electrical Bridges connecting a span across Aurizon tracks to adjacent spans shall not be clamped directly to the conductors of the crossing span where these conductors are in tension.</p> <p>The length of the span crossing Aurizon tracks shall be kept to the minimum reasonably required to satisfy the conditions specified in this schedule.</p>	<p>Supports shall be located so that in the event of failure, they cannot fall within four (4) metres of Aurizon track.</p> <p>Insulators supporting the span crossing Aurizon tracks shall be designed to secure such span without slippage through the clamp, except that attachments are designed to provide a controlled slip e.g. Four Bolt Strain Clamp, Helical Dead End.</p> <p>Pin insulators shall not be used on any conductors in tension crossing Aurizon tracks.</p> <p>Coach screws shall not be used on any conductors crossing Aurizon tracks.</p>
LV Conductors Up to 1000V	5.5	7.6	Underground		
HV Conductors Over 1000V Up to 33kV	5.5	7.6	3.0		
HV Conductors Over 33kV Up to 66kV	6.7	8.5	3.0		
HV Conductors Over 66kV Up to 132kV	6.7	8.5	4.6		
HV Conductors Over 132kV Up to 275kV	7.5	9.4	5.5		



3.9 Wayleave Requirements for Overhead Structures

Type of Overhead Structure	Minimum Clearance Above Aurizon Rail Level (m)	Minimum Horizontal Clearance from Aurizon track centreline to Overhead Structure pier/ abutment/stairs (m)	Protection Screening requirement	Traction bonding requirement	Electrical separation requirement	Structural Requirements	Other Requirements
Road Bridge/ Structure < 40m along track	7.9	No access road: 3.5 + Drain Width With access road: 7.5 + Drain Width	Electrification screens are required over electrified track and must extend at least 3 metres horizontally either side of conductors and 1.8 metres vertically above the highest foothold. Electrification screens are also required on retaining walls, wing walls and other significant embankments within 3metres horizontally of OH wires.	Refer to HV Electric Traction System Specification-Earthing and Bonding SAF-SPC-5159-ELE-NET	If any metallic electrification screen is bonded to traction earth and is connected or separated by a distance less than 2.5 metres to a metal fence, a non-conductive panel at least 2.5 metres wide or a suitable insulating barrier shall be provided.	Refer to Aurizon Civil Specifications AZN.NA.SPC.12.6135.059 - FOR DESIGN OF BUILDINGS OVER OR NEAR RAILWAY	Drainage along the Overhead Crossing, outlet to be outside Aurizon corridor.
Road Bridge/ Structure ≥ 40m along track	9.0	No access road: 4.5 + Drain Width With access road: 8.5 + Drain Width	Electrification screens are required over electrified track and must extend at least 3metres horizontally either side of conductors and 1.8metres vertically above the highest foothold. Electrification screens are also required on retaining walls, wing walls and other significant embankments within 3metres horizontally of OH wires.	For further clarification, refer to Aurizon Manager Network Electrical Asset Management and Engineering for advice.		AZN. NA.SPC.12.6135.061 - FOR DESIGN OF FOOTBRIDGES AZN.NA.SPC.12.6135.063 - FOR PROTECTION SCREENS	Drip protector over the OHLE wire if there is a risk of water overflow to tracks.
		No access road:	Electrification screens are required over electrified track and must extend at least 3 metres horizontally either side of			AZN.NA.SPC.12.6135.064 - COLLISION PROTECTION OF SUPPORTING ELEMENTS ADJACENT TO RAILWAYS	



Type of Overhead Structure	Minimum Clearance Above Aurizon Rail Level (m)	Minimum Horizontal Clearance from Aurizon track centreline to Overhead Structure pier/ abutment/stairs (m)	Protection Screening requirement	Traction bonding requirement	Electrical separation requirement	Structural Requirements	Other Requirements
Footbridge	7.9	3.5 + Drain Width With access road: 7.5 + Drain Width	conductors and 1.8 metres vertically above the highest foothold. Electrification screens are also required on stairs and ramps within 3 metres horizontally of overhead wires.				
Conveyor	7.9	No access road: 3.5 + Drain Width With access road: 7.5 + Drain Width	Solid screens under the conveyor, vertical protection screens on both edges and wind hoop (cover) are required for full extent of the rail corridor or extend 3 metres either side of Overhead wires if Aurizon does not own the land.				
Overhead Gantry/ Pipeline crossings	7.9	No access road: 3.5 + Drain Width With access road: 7.5 + Drain Width	Protection screens are required on or near Aurizon corridor boundary		For pipeline crossing, if the pipe is metallic and is bonded to traction earth, a minimum of 2.5 metres of non-conductive piping shall be inserted in the metallic piping as near as practical to the Aurizon boundary.		

NOTE: Ref er to Standard Drawing AUR-S-9999-0927 for guidance.



4 Responsibilities and Accountabilities

The Head of Network Assets Management is responsible for authorising the use and publication of this document.

The Manager Network Asset Data and Assurance has the responsibility and authority for—

- i. determining the requirements of this document
- ii. ensuring the requirements of this document are safe, technically accurate and comply with the mandatory requirements prescribed by all relevant authorities
- iii. ensuring this document meets current industry standards and is suitable for use in Aurizon Network's railway environment
- iv. ensuring that this document is reviewed periodically to maintain its currency.

Asset Management Staff, Engineering Staff, and Asset Maintenance Staff are responsible for—

- i. using the principles of this document when planning or carrying out any related works; and ensuring that they have the latest version of this document before undertaking any works.

5 Reference Documents

Document No.	Document Title	Document Type
SAF/STD/0114/INF/NET	Authority to Travel (ATT) and Train Route Acceptance (TRA) Requirements	Standard
SAF/STD/0145/INF/NET	Interface Standards - Rolling Stock and Rail Infrastructure	Standard
SAF/STD/0071/SWK/NET	Operational Route Manual	Standard
SAF/FRM/6002/COM/NET	Variation to Standard Practice Form	Form
SAF/STD/0180/COM/NET	Governance and Management of Aurizon Network's Safety Management System	Standard

6 Revision History

Version No.	Section No.	Issued	Description of Change	Preparer (P) / Reviewer (R)
1.0	All	14/12/2018	First publication.	Garrie Napier (P) / Drew Hellyer (R)
2.0	All	23/10/2020	Replaces all previous publications of Version 1.0 New version history commenced.	Tommy Ripps (P) / Drew Hellyer (R)
3.0	All	3/06/2022	Replaces all previous publications of Version 2.0 New version history commenced.	Lidia Mitchell (P) / Monica Rackley (R)
4.0	All	04/03/2024	Full document review. Replaces all previous publications of 3.0 New version history commenced.	Callan Aylmer (P) / Emma-Kate Clyburn (R)



7 Definitions

Term	Definition
Aurizon Network Discipline Area Authorising Officer	Authorising Officers have the allocated authority and responsibility for their respective discipline areas within the Aurizon Network SMS to authorise Variations to Standard Practices.
Wayleave	A wayleave is required for a third party to conduct works on or use Aurizon Network land including under or over Aurizon Network infrastructure.
Variation to Standard Practice	Where there is a genuine business need or advantage to deviate (without compromising safety) from the minimum requirements prescribed in Aurizon Network's Safety Management System, an application for a Variation to a Standard Practice (VSP) may be requested.

