

Australian Standard™

**Road and traffic engineering—
Glossary of terms**



Standards Australia

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PREFACE

This Standard was prepared by Standards Australia Committees CE-004, Transport Planning and Operation, and CE-010, Terms Used in Road Engineering, to supersede the suite of Standards AS 1348, *Road and traffic engineering—Glossary of terms* (Part 1: *Road design and construction*, Part 2: *Traffic management*, Part 3: *Transport operation*, and Part 4: *Transport planning*).

The objective of this Standard is to provide an alphabetical list of terms used in road and traffic engineering.

Terms associated with road engineering are illustrated in Appendix A.

The meaning of the terms in this Standard are specific to Road and Traffic Engineering. Other meanings in common usage can apply.

CONTENTS

	<i>Page</i>
TERMS AND DEFINITIONS.....	3
APPENDIX A.....	171

STANDARDS AUSTRALIA

Australian Standard
Road and traffic engineering—
Glossary of terms

Term	Definition
A	
train	A combination comprising a prime mover, a semitrailer, and a trailer (other than a semitrailer).
AADT	<i>See</i> annual average daily traffic
abrasion attrition	The wearing away of a solid surface by mechanical action.
abrasion test	A test of the resistance to abrasion offered by a material under specified conditions. (<i>See also</i> Los Angeles (abrasion) value)
abrasive blast cleaning	A method of cleaning or etching a surface by means of a hard granular material directed from a nozzle at high velocity.
absorption	The entry of fluid into a solid by virtue of the porosity of the latter.
absorption (bituminous binder)	The penetration of binder into an aggregate or base.
absorption capacity (traffic engineering)	The maximum rate at which a traffic stream can absorb additional vehicles.
abutment	An end support of a bridge or similar structure.
accelerated loading facility (ALF)	A mobile loading frame that can apply power-driven rolling wheel loads to sections of pavement in a manner that simulates the characteristics of traffic, which is used to study the response of the pavement to this loading.
acceleration lane	A speed-change lane used for increasing speed.
accelerator	A chemical additive that increases the rate of attainment of strength of a Portland cement concrete mix.
access	The driveway by which vehicles and/or pedestrians enter and/or leave property adjacent to a road.
access control	<ol style="list-style-type: none"> 1 To prevent vehicles and people crossing property lines by means of barriers or regulations. 2 Arranging matters so that vehicles and people have access at predetermined locations.
access time	<i>See</i> travel time
access way	A private road or local street serving very low traffic volumes, whose design need not be dominated by traffic considerations. (<i>See also</i> driveway)

Term	Definition
accessibility index	Value obtained as a function of an accessibility measure constrained to a specified range of values.
accessibility measure	A measure of the ease with which activities can be reached from a location using a particular transport system. NOTE: The appropriate form of measure will depend on its intended use. In particular, activities that ‘can be reached’ might be taken as all-supplied activities or only those actually chosen, that is revealed choices. For example, the sum of the number of activities that can be reached from a location, weighted according to the impedance of travelling between the location and each activity.
accident site	An area that includes the site of an incident and the approach and departure distances of at least 100 m.
accommodation ramp approach ramp	A short sloping road leading to works, wharves, etc.
acid number	The quantity of alkali, expressed in milligrams, of potassium hydroxide, which is required to neutralize all acidic constituents present in 2 g of sample.
acid sulphate soils	Acidic soil layers that have been formed as a result of exposure of pyrite (iron sulphide) in soil to oxygen; when water passes through such soils, acidic water is produced.
acidic aggregate	Aggregate having a silica content of more than 65% and showing free quartz crystals.
acidic soil	A soil having a pH value less than 7.0. (<i>See also</i> alkaline soil)
active (earth) pressure	The residual lateral pressure exerted by soil or similar material after its internal strength is fully mobilized in self support.
active adhesion	The capacity of a binder to form a bond with an aggregate either in the presence or absence of water.
ACV	<i>See</i> aggregate crushing value
added filler	Mineral matter, suitable for use in asphalt, at least 75% of which is finer than 75 µm and all of which is finer than 600 µm, which is added to the combined aggregate of an asphalt mix NOTE: Typical materials used as added filler are hydrated lime, flyash, cement, cement works flue dust, ground limestone and rock dust other than that which occurs as a natural component of the combined aggregate.
additive	A substance added in small amounts for the purpose of aiding in the manufacture or handling of a product, or modifying the end properties.
add-mix	Asphalt, or graded aggregate, added and mixed with heated reclaimed asphalt pavement (RAP) during hot in-place recycling.
adhesion	The action by means of which a fluid or plastic substance (e.g. bituminous binder) sticks to the surface of a solid body (e.g. aggregate).
adhesion agent anti-stripping agent	A substance used for the purpose of improving the adhesion between a bituminous binder and aggregate. NOTE: The term generally refers to adhesion in the presence of water.

Term	Definition
adjustable suspension	Suspension capable of providing adjustment of the trim height of a vehicle by virtue of special design features built into the suspension system other than the trim height differences that may be caused by load variations.
admixture	A product added in small quantities to modify the normal properties of a mixture.
admixture (concrete)	A material, other than coarse or fine aggregate, cement or water, added in small quantities during the manufacture of concrete, to modify one or more of its properties.
adsorption	The attachment of a substance to the surface of a solid by virtue of forces arising from molecular attraction.
adsorption (bituminous binder)	The attachment of a bituminous binder to the surface of an aggregate or soil by molecular forces.
ADT	<i>See</i> average daily traffic
ADT count	The number of vehicle/axle counts measured at a specific count station for a nominated period.
ADT station	A traffic-measuring device installed at a specific location.
advance direction sign	A sign placed on an approach to, and in advance of, an intersection, junction or interchange, indicating the direction of routes and destinations beyond the intersection, junction or interchange.
advance warning signs	A range of signs used to alert traffic of a hazard on, or adjacent to, the road ahead.
advance warning vehicle	A vehicle used at the tail of mobile works to provide advance warning of the works to following traffic, to divert traffic around the work area and to enable the driver to alert workers ahead of any impending danger; also referred to as a tail vehicle
advisory speed	The recommended maximum speed at which a section of roadway should be negotiated for comfort and safety.
aerial photographic run	A series of sequential overlapping aerial photographs along a given line.
afflux	The rise in water level on the upstream side of a constriction in a stream or channel relative to the water level on the downstream side.
age hardened	A decrease in the penetration and/or increase in viscosity of bituminous binder caused by loss of volatiles and oxidation of the binder due to exposure to weather over a period of time. (<i>See also</i> oxidized binder)
aggregate	A material composed of discrete mineral particles of specified size or size distribution, produced from sand, gravel, rock or metallurgical slag, using one or more of the following processes: selective extraction, screening, blasting, or crushing.
aggregate breakdown	The disintegration of an aggregate under environmental and/or trafficking conditions.

Term	Definition
aggregate crushing test	A test of the resistance offered by an aggregate, as distinct from a single particle, to crushing under specified conditions.
aggregate crushing value (ACV)	An indication of the resistance to crushing of an aggregate.
aggregate mixing bitumen emulsion	A bitumen emulsion normally used for making cold mix that is to be stockpiled.
aggregate mixing grade emulsion	A bitumen emulsion, suitable for mixing with aggregate, normally used for making cold mix that is to be stockpiled.
aggregate model	<i>See</i> model
aggregate particles (sealing)	<i>See</i> aggregate, chips
aggregate retention	Long-term cohesion and retention of aggregate after adhesion is established.
aggregate spread rate	The rate of application of sealing aggregate, expressed in square metres per cubic metre (m^2/m^3), of aggregate applied to the loose bulk density in the truck.
aggregate trailer mass	GTM (gross trailer mass) plus the mass imposed onto the drawing vehicle when the combination vehicle is resting on a horizontal surface.
agitator (concrete)	An item of plant or equipment that maintains the plastic concrete in the mixed state. NOTE: Consistent with common usage, this term is also used (for convenience) in lieu of 'mobile batch mixer'.
AGO	<i>See</i> automotive gas oil
AGO diesel fuel	<i>See</i> flux oil
agricultural pipe drain	<i>See</i> subsoil drain
AHD	<i>See</i> Australian height datum
AHDD	<i>See</i> Australian height datum derived
air voids	<i>See</i> voids
air-entraining agent	An admixture that causes minute bubbles of air to be incorporated in a mixture to improve its workability and/or frost resistance.
air-entraining agent (concrete)	An admixture that causes minute bubbles of air to be incorporated in a concrete mix thereby improving its workability and frost resistance.
airlift axle	<i>See</i> retractable axle
airstrip	An area reserved for the landing and taking-off of aircraft.
airstrip unserviceable marker	A white cross placed on the ground next to wind-sock, to advise pilots that the airstrip is unserviceable.
ALD	<i>See</i> average least dimension
ALF	<i>See</i> accelerated loading facility
alighting	The act of leaving a public transport vehicle (other than a ferry).
alignment	The horizontal or vertical geometric form of the centre-line of the carriageway. (<i>See also</i> property line)

Term	Definition
alignment coordination	A road design technique that considers the relationship of the horizontal and vertical alignments and its influence on safety and the three-dimensional aspect of the finished carriageway.
alkali-aggregate reactivity (reaction)	A chemical reaction in concrete between alkalis from Portland cement or other sources and certain constituents of some aggregates. NOTE: Under certain conditions, deleterious expansion of the concrete may occur.
alkaline soil	A soil having a pH value greater than 7.0. (<i>See also</i> acidic soil)
alligator cracking	<i>See</i> crocodile cracking
all-or-nothing assignment	Process of allocating the total number of trips between two zones to the path or route with the minimum travel impedance.
all-red interval	A period of time for the clearance of traffic within the controlled area, during which red aspects and no others are illuminated.
all-red period	<i>See</i> all-red interval
ambient noise level	The normal or existing level of environmental noise at a given location, which is a composite of noise from all sources near and far.
amenity	That element in the layout and operation of town and country, which makes for a comfortable and pleasant life rather than a mere existence. It relates also to the preservation of such characteristics of a neighbourhood, which make it pleasing in appearance to both the passerby as well as to the residents and those across the road.
ana branch	A branch of a stream, which leaves and later re-enters the stream.
analysis area	An area or any group of zones that are combined for the purpose of making an analysis
anchor block	<i>See</i> end block
anchor bolt holding-down bolt	A bolt anchored in masonry, concrete or rock with its threaded section projecting to secure structural members.
anchor plate	A plate at the unthreaded end of the anchor bolt.
anchor slab (concrete)	A base slab that lies over an anchor.
anchorage	A device used to anchor prestressing tendons to the structural member accepting prestress. (<i>See also</i> dead man)
angle of repose	The angle with the horizontal, which the sloping face of a bank of loose material assumes.
angle of skew	The angular departure of a particular alignment from a reference alignment, usually measured in terms of the smaller angle.
anionic bitumen emulsion	A type of bitumen emulsion in which the suspended particles are negatively charged. (<i>See also</i> bitumen emulsion)
anisotropic	Having properties that vary in different directions.
annual average daily traffic (AADT)	The total yearly two way traffic volume divided by 365, expressed as vehicles per day.

Term	Definition
anti-lock brake system	Portion of a service brake system that automatically controls the degree of rotational wheel slip relative to the road at one or more road wheels of the vehicle during braking.
antistrip	The coating of an aggregate with a substitute to improve the subsequent adhesion of bituminous material thereto. (See also precoating)
anti-stripping agent	<i>See</i> adhesion agent
apparent particle density	<i>See</i> density <i>and</i> bulk particle density
application rate	The amount of material (usually binder) applied to a given area of road surface; binder application rate is expressed as litres per square metre, usually at 15° C, while aggregate application rate is expressed as square metres per cubic metre.
approach angle	Smallest angle, from the side view of a vehicle, formed by the level surface on which the vehicle is standing and a line tangent to the radius arc of the static-loaded front tyre and touching the underside of the vehicle forward of the front tyre.
approach nose	The end of an island, median or separator, or area between diverging carriageways, that faces approaching traffic.
approach ramp	<i>See</i> accommodation ramp
approach section(s) (concrete)	Pavement located within 15 m of bridge(s) (or other structures) where the concrete base is discontinuous, or within a specified distance (generally 15 m) of contract limits.
approach speed	The speed of traffic approaching the work site measured in km/h. It is usually estimated from a measurement of the 85th percentile speed or from the speed limit applying to the road. The symbol 'V' is used together with an appropriate factor to indicate the distance in metres between associated signs and for tapers on the standard traffic control plans (TCPs).
APRG	AUSTROADS Pavement Reference Group.
apron	<ol style="list-style-type: none"> 1 A layer of concrete, stone, timber or other durable material placed at the entrance or outlet of a hydraulic structure (such as a culvert) in the bed of a channel or watercourse, to protect the structure against scour. 2 Parking area for aircraft.
aquaplaning	A condition occurring on a wet road when the tyres of a moving vehicle lose contact with the road surface and ride on a film of water.
arch bridge	A bridge, the deck of which is supported by a curved structural member in compression which transfers the loads to the abutments or piers.
area traffic control	A system providing coordinated control of traffic signals over an urban area by means of a master controller.
armourcoat	The incorporation of a crushed rock or a small size aggregate into the top of a soft base to tighten up and strengthen the surface.