

# Armidale

Regional Council

## ENGINEERING DESIGN CODE SPECIFICATION DQS

## QUALITY ASSURANCE REQUIREMENTS FOR DESIGN



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## QUALITY ASSURANCE REQUIREMENTS FOR ENGINEERING DESIGN

### DQS.01 SCOPE

1. This design specification sets out the process for quality assurance of designs required by Council for development consents and Council works. The requirements are applicable to all design work whether undertaken by Council staff, the Developer, the Project Manager, Consultant or a sub-consultant.

*Quality Assurance*

2. The specification refers to Engineering Design processes. Requirements which refer to the Concept Design of developments are generally covered in Council's Subdivision Code or relevant DCP. The requirements of the Subdivision Code/DCP are a prerequisite to the quality requirements for Engineering Design provided in this specification (DQS).

*Prerequisite*

3. The specification refers also to engineering design processes for developments that do not involve subdivision.

### DQS.02 OBJECTIVES

1. This specification aims to set standards and document requirements for the execution and recording of design processes in order that the infrastructure associated with any development is designed to be fit for service and of a standard reasonably maintainable when it is accepted by Council as a community asset.

*Maintenance*

2. It is also an objective that these qualities are readily demonstrable by clear records of key design processes and that data relevant to the upkeep of the assets is available to Council's management.

*Records*

### DQS.03 REFERENCE AND SOURCE DOCUMENTS

#### (a) Council Specifications

All Specifications for Design and Construction  
Council's Codes and Policies

It is recommended that consultants and developers consult with council for current versions of these documents

#### (b) Australian Standards

AS/NZS 3905	Guide to quality system Standards AS/NZS 9001, AS/NZS 9002 and AS/NZS 9003..
AS/NZS ISO 9000	Quality management and quality assurance Standards – Generic guidelines for the application of ISO 9001 ISO 9002 and ISO 9003
AS/NZS ISO 9001	Quality management systems

#### (c) Other

Section 90 (EP&A ACT)  
Local Government Act (1919) Subdivisions Pt XII  
Local Government Act (1993)  
Technical Publications used as Engineering Standards (AR&R)  
Interim Policies and Guidelines

**DQS.04 CERTIFICATION**

1. The Developer shall present all engineering drawings to Council for assessment and approval. Each set of drawings shall be accompanied by a Certification Report which must be signed by the Developer's Engineer or Licenced Surveyor. The Certification Report will comprise the certificate and check lists set out in Annexure DQS-A.

*Certification Report*

2. Certification Reports shall be required with preliminary drawings and shall require resubmission with updates when final drawings are submitted. Certification is not required with sketch plans or concept drawings.

*Certification of Preliminary Drawings*

3. The Certification Report shall indicate on check lists any aspects of design which do not meet requirements or tolerances set out in Council's Design and Construction Specifications and Subdivision Codes/DCPs.

4. All final design plans shall be dated and signed by the appropriately qualified Designer and must be certified by a professional Civil/Structural Engineer or Licenced Surveyor.

*Plans signed and dated*

**DQS.05 MINIMUM DRAFTING REQUIREMENTS**

1. Design drawings shall be definitive and clearly set out so as to present the design concepts in such a way that the project can be understood, specified for construction and satisfactorily built and shall be prepared using current digital design drafting processes.

*Digital Design*

2. All design drawings should be clearly numbered by the designer with separate sheets numbered as part of a set. All drawing sheets shall have an allocated space in the bottom right hand corner for an assigned number provided by Council (18 characters).

*Drawing Numbers*

3. The information shown on the drawings shall be logically collected on discrete sheets to avoid illogical and onerous effort in cross referencing between sheets in order to find information. Sheets of drawings should not be overcrowded with information and while coloured line styles are encouraged to differentiate services, they should not rely completely on colour printing or colour wash to impart information. Drawings should be on A1 or A3 size sheets and be suitable for copying to A3 paper size without loss of clarity. A3 sheets full sized at A3 are the preferable sheet size for all drawing sets.

*Logical Drawing Sheets*

*A3 Preferred Size*

4. Annexure DQS-B provides guidelines for grouping information in design drawings.

**DQS.06 DESIGNER'S QUALIFICATIONS**

1. A Civil Engineer deemed to be suitably experienced by Council and qualified to enable acceptance as a member of the Institution of Engineers, Australia or a Registered Surveyor deemed to be suitably experienced by Council shall be accepted as qualified to submit drawings for roadworks, drainage works, water supply, sewerage works (excluding pumping stations), canal works (excluding flood control structures and bridges).

*Engineer Surveyor*

2. A Civil Engineer qualified as detailed above shall be accepted as qualified to submit plans for bridges, retaining walls, miscellaneous structures, buildings, pumping stations and flood control structures.

*Structural Design by Engineer*

2. A Civil Engineer or registered surveyor who undertakes works detailed in DQS.06 shall be required to hold a minimum of \$5 million professional indemnity insurance, including insurance runout provisions, in all design works to be submitted to Council and/or PCA. Reference to PI insurance should also be made in clause EA of the guidelines in this document.

*PI Insurance*

**DQS.07 RECORDS**

1. The Designer shall retain appropriate design records in a format such that they can be understood readily by design staff with no prior knowledge of the particular design. The records shall take the form of a detailed design report which describes the methodology of design and the assumptions made and explanation of reasons for any deviations from accepted design methods or standards. The report shall be submitted with the design drawings.

*Design Report*

2. Calculations which can readily be re-done need not be kept once the construction maintenance period of the project has expired.

*Calculation  
Record  
Retention*

3. A design file shall be maintained by the Subdivider or his consultant containing records of calculations, approvals and decisions, geotechnical data and other design data which could be relevant in reviewing aspects of the design or planning future maintenance responsibilities.

*Design File to  
be kept*

4. Particular requirements apply to hydrological and hydraulic design data. (Refer to Council's Stormwater Drainage Design Specification).

*Hydrologic  
Design*

5. Copies of records shall be made available to Council on request and without charge to Council and shall preferably be submitted in electronic/digital format.

**DQS.08 AUDIT**

1. Council shall have the right of audit of all processes and documents related to the project design. The Developer and the Developer's Consultant shall provide Council's Officers all reasonable assistance in inspecting records of designs submitted to Council for acceptance.

*Assistance*

2. In order to provide for such audit, access to the premises of the Developer or the Developer's Consultant will be provided to Council on a 24 hour notice basis.

*Access*

ANNEXURE DQS-A

**COUNCIL  
DESIGN CERTIFICATION REPORT**

**Project Title:** \_\_\_\_\_

**DA/CC No:** \_\_\_\_\_

**Consultant's Drawing No:** \_\_\_\_\_

**Name of Consultant:** \_\_\_\_\_

**Name and Address of Developer:** \_\_\_\_\_

\_\_\_\_\_

I certify that the subject drawings represent a design for which the attached design check lists provide a valid record.

I certify that this design has been carried out in accordance with current standards of good industry practice and in accordance with Council's Design Specifications and relevant DCPs and specific instructions received with the exception of departures cited in the attached design check lists for Council's advice.

I certify that this Design will not significantly impact on the environmental factors of the area as interpreted under Part V of the Environmental Planning and Assessment Act.

I certify that this Design is in strict compliance with the development consent conditions and where a variance to the consent is found, written confirmation has been received from Council approving of the variance prior to the lodgement of Design Plans (this includes designs for staged construction).

I certify that all structural elements of the Design have been designed by a competent qualified practicing Civil or Structural Engineer. A separate Design Certification of the structural elements referencing the relevant Australian Standards shall be provided by the Structural Engineer.

Contact Phone: \_\_\_\_\_

\_\_\_\_\_ Design Engineer/Surveyor Date

Contact Postal Address: \_\_\_\_\_

\_\_\_\_\_ Qualifications

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**Design Check List 1      BASE PLOT OF EXISTING FEATURES**

	<b>Check Completed By</b> <i>(initials)</i>	<b>Date</b>	<b>Not Applicable</b> <i>(tick)</i>
1.1 Initial Plot verified by site inspection for existing drainage.	_____	____ / ____ / ____	<input type="checkbox"/>
1.2 Initial Plot verified by site inspection for existing property descriptions, boundaries and accesses.	_____	____ / ____ / ____	<input type="checkbox"/>
1.3 Initial Plot of contours verified as representative of site terrain.	_____	____ / ____ / ____	<input type="checkbox"/>
1.4 Trees and significant environmental features affected by development are clearly indicated and annotated.	_____	____ / ____ / ____	<input type="checkbox"/>
1.5 Features significant to heritage considerations within the development boundaries are clearly indicated and annotated.	_____	____ / ____ / ____	<input type="checkbox"/>
1.6 Existing public and private property likely to be affected by these Designs are clearly indicated and annotated.	_____	____ / ____ / ____	<input type="checkbox"/>
1.7 Survey and benchmarks clearly indicated and annotated.	_____	____ / ____ / ____	<input type="checkbox"/>

DEPARTURES FROM COUNCIL OR STATE ROAD AUTHORITY NORMAL REQUIREMENTS OR SPECIAL FEATURES TO BE NOTED:

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**Design Check List 2      HORIZONTAL ROAD ALIGNMENT**

		<b>Check Completed By (initials)</b>	<b>Date</b>	<b>Not Applicable (tick)</b>
2.1	Alignment compatible with design speed. Design speed and other design standards shall be stated on the drawings.	_____	____ / ____ / ____	<input type="checkbox"/>
2.2	Alignment is adequate in relation to clearance of roadside hazards.	_____	____ / ____ / ____	<input type="checkbox"/>
2.3	Driver and Pedestrian sight distance is adequate.	_____	____ / ____ / ____	<input type="checkbox"/>
2.4	Conflict with existing services is minimised.	_____	____ / ____ / ____	<input type="checkbox"/>
2.5	Road widths and lanes meet Councils requirements and design traffic requirements.	_____	____ / ____ / ____	<input type="checkbox"/>
2.6	Alignment of bridges suits road alignment.	_____	____ / ____ / ____	<input type="checkbox"/>
2.7	Pedestrian, bicycle and parking requirements are met.	_____	____ / ____ / ____	<input type="checkbox"/>
2.8	Provision for large vehicles such as buses, garbage trucks and emergency vehicles is adequate.	_____	____ / ____ / ____	<input type="checkbox"/>
2.9	Intersection Layouts meet turning requirements of design traffic including emergency vehicles.	_____	____ / ____ / ____	<input type="checkbox"/>
2.10	Pavement width tapers and merges are adequate.	_____	____ / ____ / ____	<input type="checkbox"/>
2.11	Pedestrians and prams are catered for in accordance with appropriate Australian Standards.	_____	____ / ____ / ____	<input type="checkbox"/>
2.12	Conflict with existing Public Utility services has been identified and resolved.	_____	____ / ____ / ____	<input type="checkbox"/>
2.13	Horizontal road alignment has been provided in accordance with any Conditions of Development Consent.	_____	____ / ____ / ____	<input type="checkbox"/>
2.14	Horizontal road alignment setout data is clearly defined and tabulated.	_____	____ / ____ / ____	<input type="checkbox"/>



**Design Check List 3      VERTICAL ROAD ALIGNMENT**

		<b>Check Completed By (initials)</b>	<b>Date</b>	<b>Not Applicable (tick)</b>
3.1	Grades meet maximum and minimum requirements.	_____	/ /	<input type="checkbox"/>
3.2	Vertical clearances to bridges and services meet standards.	_____	/ /	<input type="checkbox"/>
3.3	Vertical sight distance is adequate for drivers and pedestrians.	_____	/ /	<input type="checkbox"/>
3.4	Cover to drainage structures or services is adequate and service locations are shown on the drawings on the longitudinal sections.	_____	/ /	<input type="checkbox"/>
3.5	Vertical alignment is adequate for disposal of surface drainage from properties and from road.	_____	/ /	<input type="checkbox"/>
3.6	Grades less than 12 percent or alternate scour treatments provided.	_____	/ /	<input type="checkbox"/>
3.7	Vertical alignment is compatible with property access.	_____	/ /	<input type="checkbox"/>
3.8	The gradient on an intersecting road is not significantly greater than the cross slope of the through pavement and no greater than 4% at give way and stop signs.	_____	/ /	<input type="checkbox"/>
3.9	Sight distance is acceptable for all accesses to roundabouts.	_____	/ /	<input type="checkbox"/>
3.10	Alignment coordination with horizontal alignment is in accordance with the design guides as referenced in the AUS-SPEC specifications.	_____	/ /	<input type="checkbox"/>
3.11	Conflict with existing Public Utility services has been identified and resolved with appropriate clearances between services in accordance with Council standards.	_____	/ /	<input type="checkbox"/>
3.12	Vertical road alignment setout data is clearly defined on the longitudinal sections.	_____	/ /	<input type="checkbox"/>



**Design Check List 4 ROAD CROSS SECTIONS**

	<b>Check Completed By</b> <i>(initials)</i>	<b>Date</b>	<b>Not Applicable</b> <i>(tick)</i>
4.1 Typical Cross Sections have complete dimensions.	_____	____ / ____ / ____	<input type="checkbox"/>
4.2 Typical Cross Sections have kerb & gutter, road safety barrier and surface drainage indicated.	_____	____ / ____ / ____	<input type="checkbox"/>
4.3 Batter slopes are indicated and batter treatment is indicated where appropriate.	_____	____ / ____ / ____	<input type="checkbox"/>
4.4 Property boundaries, service allocations and location of known existing underground services and pathway treatments are indicated.	_____	____ / ____ / ____	<input type="checkbox"/>
4.5 Sufficient Cross Sections are shown to define all variations and width transitions.	_____	____ / ____ / ____	<input type="checkbox"/>
4.6 Cross sections are of sufficient width to fully assess impact of road level on adjoining property	_____	____ / ____ / ____	<input type="checkbox"/>
4.7 Stability of embankment slopes, batters and retaining walls has been verified as satisfactory.	_____	____ / ____ / ____	<input type="checkbox"/>
4.8 Cross section reference level conforms with vertical road alignment.	_____	____ / ____ / ____	<input type="checkbox"/>

DEPARTURES FROM COUNCIL OR STATE ROAD AUTHORITY NORMAL REQUIREMENTS OR SPECIAL FEATURES TO BE NOTED:

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**Design Check List 5 ROAD AND INTERALLOTMENT DRAINAGE**

		<b>Check Completed By (initials)</b>	<b>Date</b>	<b>Not Applicable (tick)</b>
5.1	Drawings indicate existing catchment boundaries and surface drainage.	_____	____ / ____ / ____	<input type="checkbox"/>
5.2	Hydrological data is the most current available.	_____	____ / ____ / ____	<input type="checkbox"/>
5.3	Hydrologic and Hydraulic design calculations are complete and fully recorded and included in submission to Council for audit.	_____	____ / ____ / ____	<input type="checkbox"/>
5.4	Underground drainage and structures do not conflict with services.	_____	____ / ____ / ____	<input type="checkbox"/>
5.5	The designed drainage lines are compatible with existing incoming lines and outgoing lines both geometrically and hydraulically.	_____	____ / ____ / ____	<input type="checkbox"/>
5.6	The length of line, type of pipe, size, class and bedding requirements are indicated for each drainage line on the schedule of drainage elements.	_____	____ / ____ / ____	<input type="checkbox"/>
5.7	Height of fill over drainage lines is within allowable limits.	_____	____ / ____ / ____	<input type="checkbox"/>
5.8	Drainage is provided for local depressions eg median areas or areas adjacent to fills.	_____	____ / ____ / ____	<input type="checkbox"/>
5.9	The effect of headwater and back-up water on private property has been assessed.	_____	____ / ____ / ____	<input type="checkbox"/>
5.10	Subsurface drainage has been provided when required and clearly located by line and level, with details provided.	_____	____ / ____ / ____	<input type="checkbox"/>
5.11	The need for batter drains has been considered for fills and cuttings.	_____	____ / ____ / ____	<input type="checkbox"/>
5.12	The height and energy level of downstream drainage has been considered.	_____	____ / ____ / ____	<input type="checkbox"/>
5.13	Drainage structures and flow paths are located so as to ensure safe vehicular and pedestrian transit.	_____	____ / ____ / ____	<input type="checkbox"/>
5.14	Drainage structure number, setout, type and pipe details indicated on the drainage plans and schedule of drainage elements.	_____	____ / ____ / ____	<input type="checkbox"/>

		<b>Check Completed By</b> <i>(initials)</i>	<b>Date</b>	<b>Not Applicable</b> <i>(tick)</i>
5.15	Emergency overland flow paths designed to accommodate the 1 in 100 year ARI are located so as to minimise impact on private property.	_____	/ /	<input type="checkbox"/>
5.16	Road drainage has been provided in accordance with any Conditions of Development Consent.	_____	/ /	<input type="checkbox"/>
5.17	Stormwater and interallotment drains have been designed in accordance with Council's Specification and/or Australian Rainfall and Runoff (Edition 1987).	_____	/ /	<input type="checkbox"/>
5.18	Appropriate land stabilisation and velocity controls have been implemented to pipe systems, open channels and embankments.	_____	/ /	<input type="checkbox"/>
5.19	For allotments affected by flood controls, the floor height controls are to be compatible with road and drainage levels.	_____	/ /	<input type="checkbox"/>
5.20	Legal discharge points exist for all drainage catered for by this design.	_____	/ /	<input type="checkbox"/>
5.21	The chosen water quality management devices comply with Council's requirements.	_____	/ /	<input type="checkbox"/>
5.22	Underground stormwater networks have been designed for minor storm flows as described in AR&R. Residential design to 10 Year ARI, commercial/industrial design to 20 Year ARI and rural catchment design to 5 year ARI.	_____	/ /	<input type="checkbox"/>

DEPARTURES FROM COUNCIL OR STATE ROAD AUTHORITY NORMAL REQUIREMENTS OR SPECIAL FEATURES TO BE NOTED:

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**Design Check List 6      SIGNS AND MARKINGS**

	<b>Check Completed By (initials)</b>	<b>Date</b>	<b>Not Applicable (tick)</b>
6.1 Sign types, sizes, locations and support structure details are shown on the drawings in accordance with AS1742 (All parts) and RMS delineation guide.	_____	_ / _ / _____	<input type="checkbox"/>
6.2 Pavement line marking and pavement marking "type and set out" is indicated on the drawings to meet the requirements of AS 1742.2 and RMS delineation guide.	_____	_ / _ / _____	<input type="checkbox"/>
6.3 Signs and line marking have been designed in accordance with any special Conditions of Development Consent and RMS delineation guide.	_____	_ / _ / _____	<input type="checkbox"/>
6.4 Suitable roadside furniture has been included. (ie: guideposts, guardrails, etc.)	_____	_ / _ / _____	<input type="checkbox"/>

DEPARTURES FROM COUNCIL OR STATE ROAD AUTHORITY NORMAL REQUIREMENTS OR SPECIAL FEATURES TO BE NOTED:

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**Design Check List 7      PAVEMENT DESIGN**

		<b>Check Completed By (initials)</b>	<b>Date</b>	<b>Not Applicable (tick)</b>
7.1	The pavement design and surface treatment is shown clearly on the drawings and any variations are indicated on appropriate cross sections.	_____	_ / _ / _	<input type="checkbox"/>
7.2	The pavement design complies with the Pavement Design Specification. (Refer to section D2)	_____	_ / _ / _	<input type="checkbox"/>
7.3	Pavement Design is in accordance with any Conditions of Development Consent.	_____	_ / _ / _	<input type="checkbox"/>
7.4	Geotechnical data has been reviewed by a Council design engineer or development engineer as adequate and is held on the design file.	_____	_ / _ / _	<input type="checkbox"/>

DEPARTURES FROM COUNCIL OR STATE ROAD AUTHORITY NORMAL REQUIREMENTS OR SPECIAL FEATURES TO BE NOTED:

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**Design Check List 8 BRIDGE/MAJOR CULVERT DESIGN**

	<b>Check Completed By (initials)</b>	<b>Date</b>	<b>Not Applicable (tick)</b>
8.1 The design has been performed by a competent practicing Civil or Structural Engineer.	_____	____ / ____ / ____	<input type="checkbox"/>
8.2 Geotechnical data is assessed as adequate and is held on the design file.	_____	____ / ____ / ____	<input type="checkbox"/>
8.3 The type and functional dimensions of the bridges meet AUSTRROADS Bridge Design Codes 1992, AS 3600 (1988), AS 1684 (1992), AS 1170 (1989), AS 4100 (1990).	_____	____ / ____ / ____	<input type="checkbox"/>
8.4 The type and class of all materials are indicated on the drawings.	_____	____ / ____ / ____	<input type="checkbox"/>
8.5 Records of all significant design calculations are available for audit.	_____	____ / ____ / ____	<input type="checkbox"/>
8.6 The design complies with any Conditions of Development Consent.	_____	____ / ____ / ____	<input type="checkbox"/>

DEPARTURES FROM COUNCIL OR STATE ROAD AUTHORITY NORMAL REQUIREMENTS OR SPECIAL FEATURES TO BE NOTED:

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**ANNEXURE DQS-B****SUBMISSION OF DESIGN DOCUMENTATION & DRAWINGS**

Reference should also be made to Guidelines for Development and Subdivision of Land – Section E1 and Geometric Road Design (Urban & Rural) – Section D1.06.

Design drawings shall include but shall not be limited to:

- Earthworks,
- Roadworks,
- Stormwater drainage (including inter-allotment drainage),
- Water reticulation,
- Sewerage reticulation,
- Structures
- Sediment and Erosion Control and,
- Other works associated with the development project

Separate layout plans may be required as part of a submission, Combined services plans require the agreement and approval of Council.

Services that are not being detailed may be shown on plans as background information but must be depicted clearly and accurately on the plans.

Generally, drawings must be prepared professionally and show adequate and clear detail of the development proposed and the infrastructure required to service the development, subject to development type, complexity and Council direction:

**B1 GENERAL**

- Approval reference (development consent, construction certificate, Local Government Act, Water Management Act or Roads Act as applicable)
- Existing contour plan
- Extent of work and staging plan
- Locality Plan
- North Point
- Scales
- Index of drawings
- Survey datum used
- Set-out survey details unless machine control is to be used

**B2 EARTHWORKS, ROADWORKS AND STORMWATER DRAINAGE**

Refer to the 'Handbook of Stormwater Drainage Design – Appendix C' for detailed guidance on the requirements for stormwater design.

- Earthworks Plan
- Roadworks and Drainage Plan
- Road Longitudinal Sections
- Road Cross-Sections (minimum spacing 20m or as agreed)

- Typical Road Cross Sections showing formation width, seal width, pavement (design) configuration, batter slopes, kerb and gutter types
- Bridges and Culvert Structures (where applicable)
- Intersection Details (set-out, finished contours, kerb grading)
- Drainage Longitudinal Section and HGL
- Hydraulic calculations and Catchment Plan
- Inter-allotment Drainage Details (including easements)
- Landscape Plan (as required)
- Structure types and details
- Pavement design in accordance with subgrade testing and design traffic ESAs

### **B3 SEDIMENT AND EROSION CONTROL PLANS**

Refer to the Landcom 'Blue Book' and Council DCP for guidance on the preparation of Erosion and Sediment Control Plans

- Layout Plan
- Maintenance schedule

### **B4 WATER RETICULATION**

- Water Reticulation Plan
- Pipe details (size, type, class)
- Water main alignments
- Water main connection details
- Fittings locations (valves, hydrants etc.)
- Longitudinal sections for 300mm diameter mains and above
- Pump station details
- Reservoir details
- Live connection requirements and associated details
- Conduits and property services
- Easement locations and details
- Service clash details (clearance, protection works etc.)

### **B5 SEWERAGE RETICULATION**

- Sewer Reticulation Plan
- Pipe details (size, type, class)
- Sewer main alignments
- Manhole locations,
- Manhole numbers and Line numbers shall be provided by Council
- House connection junction type and level
- Longitudinal sections of each line including structure type, drop and lid type
- Sewer pump station details
- Live connection requirements and associated details
- Equivalent populations, flow and design capacity
- Easement location and details

## **B6 ROAD BRIDGE AND MAJOR CULVERT STRUCTURES**

- Borehole locations and logs with design parameters;
- Design flood events (AEP or ARI)
- Outlet velocity
- Design levels
- Existing ground / flow path profile
- Excavation
- Scour protection (inlet / outlet, pier, abutment etc.)
- Design loading (traffic, bearing, dead load etc.)
- Hydraulic grading details and pipe capacities
- Exposure classification
- Replacement / repair procedures (as required)

## **B7 ELECTRICAL RETICULATION AND STREET LIGHTING**

- Street lighting and electrical reticulation plan
- Street lighting category
- Light pole / column details
- Lantern types
- Street lighting positioning zones compliance (AS/NZ 1158)
- Demonstrate that services (including pillars) do not conflict with other services / infrastructure and considers the roadway clear zone
- Service / conduit clash details
- Substation easements defined (i.e. not to be placed on Council land or road reserves)

## **B8 CONSTRUCTION & TRAFFIC MANAGEMENT PLANS / DOCUMENTATION**

- Traffic management plans to be in accordance with the current version of the RMS 'Traffic Control at Worksites' manual
- Construction management plans to be in accordance with the requirements of Workplace Health and Safety legislation, traffic management principles and engineering construction 'best practice' methods

## **B9 TELECOMMUNICATIONS**

- Telecommunication plan
- Location of pits
- Location of FDH cabinets (NBN)
- Demonstrate that services (including FDH cabinets) do not conflict with other services and infrastructure