

## **5.4. PROPOSED AMENDMENT TO THE FAR NORTH QUEENSLAND REGIONAL ORGANISATION OF COUNCILS DEVELOPMENT MANUAL PLANNING SCHEME POLICY**

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### **RECOMMENDATION**

**That Council resolves to:**

- 1. Amend the Far North Queensland Regional Organisation of Councils Development Manual Planning Scheme Policy in accordance with Section 22 of the *Planning Act 2016* and *Chapter 3 Minister's Rules for Making and Amending a Planning Scheme Policy*;**
- 2. Proceed to public consultation of the proposed amendments as required under *Chapter 3 Minister's Rules for Making and Amending a Planning Scheme Policy*.**

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### **EXECUTIVE SUMMARY**

Far North Queensland Regional Organisation of Councils (FNQROC) has recently undertaken a review of the Regional Development Manual (the manual). The manual provides a comprehensive set of guidelines for carrying out various civil engineering works within the local government areas of: Cairns, Cassowary Coast, Cook, Douglas, Mareeba, and Tablelands.

The purpose of these latest amendments (referred to as Issue 8), are to ensure the manual continues to be functional and up to date and to provide a consistent set of standards to which all can refer.

This latest proposed revision (Issue 8) includes all recommended amendments from submissions received by the member Council Officer.

### **BACKGROUND**

Douglas Shire Council adopted the FNQROC Development Manual (Issue 7) as a Planning Scheme Policy at its council meeting and the policy took effect from 22 January 2018. The Development Manual Planning Scheme Policy (number 6) supports the Planning Scheme.

The FNQROC Development Manual was prepared to ensure a consistent set of standards across the region. The manual is a living document that needs to be continually reviewed to ensure it remains contemporary and reflects the needs of the users.

Under Chapter 3 Minister's rules for making and amending a planning scheme policy (PSP), Council must resolve to amend the Planning Scheme Policy as the first step in the amendment process, and then proceed to public consultation.

The current Douglas Shire Planning Scheme includes the Planning Scheme Policy - SC6.5 FNQROC Regional Development Manual, which reflects version 7 of the document.

## COMMENT

Representatives from each of the local governments continually work together to review and make amendments to the manual. This is an ongoing process to ensure the manual is contemporary and reflects the needs of the users.

An explanatory statement and summary of the proposed amendments is attached to this report. To reduce the bulk / size of this report it was deemed impractical to include a copy of all proposed amendments as an attachment to this report.

A table summarising the actions and responsibilities through this project is as follows:

**Table 1.**

Action	Due Date	Responsibility
Send marked up development manual and proforma report to councils for Councils to resolve to amend the policy	16 December 2019	FNQROC
Council motion to amend the development manual	21 January 2020	Councils
Advertise the proposed amended policy through: - Cairns Post - Tablelander - Mossman/Port Douglas Gazette - Innisfail Advocate - Tully News - FNQROC Website Send e-subscriber advice to industry (note – all on mailing list have been moved to Development Manual Subscriber)	31 January 2020	FNQROC
Workshop with Industry on Proposed changes 6 March 2020	6 March 2020	FNQROC Councils Industry
Submissions to FNQROC on the amended manual due 31 March 2020	31 March 2020	Councils Industry
Send submissions on the amended manual to councils in preparation for next meeting	6 April 2020	FNQROC
Councils to review submissions prior to meeting 13 October 2017	6 April 2020 - 20 April 2020	Councils
Meeting to review and make recommendation on the submissions	20 April 2020	FNQROC Councils
Send list of submissions and recommendations with final development manual and report to councils for adoption	4 May 2020	FNQROC
Councils to adopt manual and advertise effective date	May/June 2020	Councils

As noted above, public consultation is currently planned to commence on Friday 31 January 2020 and conclude on 31 March 2020. During this time, two workshops will be undertaken with industry to explain the proposed changes.

The FNQROC Regional Strategic Infrastructure Coordinator has managed the review process and will coordinate the advertising and response to any submissions. A further report on any submissions received will be presented in the 4 May recommendations to councils, for consideration and incorporation to their reports to Council meetings thereafter, following the public consultation process and subsequent review of submissions received.

## PROPOSAL

That Council resolves to:

1. Amend the Far North Queensland Regional Organisation of Councils Development Manual Planning Scheme Policy in accordance with Section 22 of the *Planning Act 2016* and *Chapter 3 Minister's Rules for Making and Amending a Planning Scheme Policy*;
2. Proceed to public consultation of the proposed amendments as required under *Chapter 3 Minister's Rules for Making and Amending a Planning Scheme Policy*.

## FINANCIAL/RESOURCE IMPLICATIONS

If the FNQROC Development Manual is not continually reviewed and updated it will eventually become obsolete, will not provide a consistent set of relevant standards and infrastructure may be constructed to a different standard. This will lead to long term financial issues for Council as repairs or rebuilds to sub-standard infrastructure may be required.

## RISK MANAGEMENT IMPLICATIONS

Continually updating the manual will enable Council to control the standard of infrastructure constructed as part of development and ensure 'donated assets' are fit for purpose, meet whole of life cost principles and will not burden future generations.

The Regional Development Manual is a Planning Scheme Policy and amendments must follow Chapter 3 Minister's rules for making and amending a planning scheme policy (PSP). This includes a minimum 20-day consultation period and review and response to any submissions received during the consultation period. By following this process, Council reduces the risk of being challenged in the future on the process undertaken when implementing Issue 8 of the FNQROC Development manual.

## SUSTAINABILITY IMPLICATIONS

**Economic:** Provision of well planned, integrated and timely infrastructure is a core matter to be considered in the preparation of a planning scheme and in achieving financial, environmental and social sustainability.

**Environmental:** Well planned, integrated and timely infrastructure based on well established development manual provisions will ensure compliance with federal, state and local government environmental legislation which will preserve and enhance the natural environment.

**Social:** Well planned, integrated and timely infrastructure based on well established development manual provisions will ensure a consistent approach to development across the region which reflects the community's expectations and enhance community capital.

## CORPORATE/OPERATIONAL PLAN, POLICY REFERENCE

This report has been prepared in accordance with the following:

### Corporate Plan 2019-2024 Initiatives:

#### Theme 3 - Leading Environmental Stewardship

Our visitors and residents deeply value the unparalleled environment in which we live. We recognise our responsibility in protecting and preserving our natural world for generations to come. We understand the strong link between the environment and the economy: they are interdependent. Douglas Shire will be at the forefront of environmental protection by developing strategies, setting policies, and working with all stakeholders to become the envy of and to inspire locations across Australia and the World.

*Goal 1 - We will protect our sensitive environment and plan for the impact of climate change.*

#### Theme 4 - Inclusive Engagement, Planning and Partnerships

In delivering for our communities, economy and environment, Douglas Shire will ensure open and transparent engagement and communication. We will develop robust strategic plans and we will partner with our community and key stakeholders.

*Goal 1 - We will implement transparent decision making through inclusive community engagement and communication.*

#### Theme 5 - Robust Governance and Efficient Service Delivery

Strong governance and financial management are the foundations of the way in which Council will conduct its business and implement the initiatives of the Corporate Plan.

*Goal 3 - We will make sound financial decisions by ensuring robust strategic planning, financial management and reporting.*

## COUNCIL'S ROLE

Council can play a number of different roles in certain circumstances and it is important to be clear about which role is appropriate for a specific purpose or circumstance. The implementation of actions will be a collective effort and Council's involvement will vary from information only through to full responsibility for delivery.

The following areas outline where Council has a clear responsibility to act:

<b>Builder/Owner</b>	Council makes a significant investment every year in the infrastructure that underpins the Shire through its capital works program. Council will manage its assets with appropriate frameworks and deliver its projects through robust project management.
<b>Regulator</b>	Council has a number of statutory obligations detailed in numerous regulations and legislative Acts. Council also makes local laws to ensure that the Shire is well governed. In fulfilling its role as regulator, Council will utilise an outcomes based approach that balances the needs of the community with social and natural justice.

**Service Provider** Council provides many services to the community from roads and waste services to libraries and recreational facilities. Services evolve over time and it is the Council's mission to ensure that these services are appropriate, delivered efficiently, and designed with the customer at the centre.

## CONSULTATION

**Internal:** Council Officers from the Infrastructure, Sustainable Communities and Water & Wastewater Groups have reviewed the document.

**External:** Council Officers across the region have been involved in and contributed to the review of the FNQROC Development Manual.

## COMMUNITY ENGAGEMENT

In accordance with Chapter 3 Minister's rules for making and amending a planning scheme policy (PSP), the proposed amendments must be advertised for a minimum of 20 days during which the community and industry groups may make comment.

The public consultation period is currently planned to commence on Friday 31 January 2020 and conclude on 31 March 2020. During this time, two workshops will also be undertaken with the development industry to explain the changes.

The complete process includes the following:

- Submissions by Industry and member Councils to alter the manual were reviewed and incorporated into the amended manual through the following working group meetings:
  - 03 September 2019;
  - 01 November 2019;
  - 09 November 2019; and
  - 29 November 2019.
- Councils only Workshops were held:
  - 28 November 2019; and
  - 29 November 2019.
- Council motion to amend the development manual will be finalized at the end of January 2020.
- Proposed amendments to policy to be advertised with a public notice included in the Cairns Post and regional newspapers.
- Regional workshop with Industry to collectively review and discuss the proposed changes to be held during March 2020.
- Industry submissions to FNQROC on the amended manual, due 31 March.
- Meeting for Councils to review and make recommendations on the submissions, 20 April.

- FNQROC send list of submissions and recommendations with final development manual and report to councils for adoption on 4 May.
- Councils to adopt manual and advertise effective date by end of June 2020.

## **ATTACHMENTS**

1. FNQROC Development Manual - Issue 8 - DRAFT - Register of Requested Changes - [5.4.1 - 19 pages]

Item	Section	Title	Amend / New / Removal	Description	Action
1	AP1	AP1.08 Clause 11 Amend m	Add following sentence to m "In staged developments the hydraulic reports for both water and sewerage is to be updated for each stage. "	Often hydraulic reports are submitted that are out of date and do not reflect the boundary conditions or existing pipework because changes have occurred over time with both internal and external pipework arrangement of the development.	Recommended
2	AP1	New Section after AP1.14	Insert new section "AP1.15 Co-ordinate Datum" "Refer to section 1 of Appendix P in CP1" ****Check with Matt Emmerson***	Recommended by Council's GIS Team. This is not a current issue however it will be an issue once the new national datum (GDA2020) is adopted and as it will replace current national datum (GDA94). This may not be until sometime in late 2018, 2019 or 2020. There will be plenty of overlap between datums as we transition from GDA94 to GDA2020 so we'll likely be accepting and providing data in both GDA94 and GDA2020 for a period of time. Once GDA2020 is adopted all references to GDA94 will need to be removed from FNQROC and replaced with GDA2020 or possibly something along the lines of 'current national datum'. This change is for horizontal X and Y coordinates only and does not affect AHD.	Recommended
3	AP1.22	AP1.22 Add new list item	Add "k. location of utilities"		Recommended
4	AP1.23	AP1.23 Add new list item	Add "h. location of utilities"		Recommended
5	AP1.27	AP1.27 Item e	Amend k to read "Location, size and material of existing sewers"		Recommended
6	AP1.27	AP1.27 Add new item	Add "kk. Set back between pump station and habital dwelling"		Recommended
7	AP1.28	AP1.28 Item 2	Correct grammar in first line "This concept plan shall be submitted prior to providing with the detailed design and should include the following"		Recommended
8	AP1.29	AP1.29 Item f	Amend f to read "Location, size and material of existing sewers"		Recommended
9	Council Specific	CRC Specific Water New Drawing "Above ground PRV Installation"	**Drawing to be provided** Refer to #5586147 for example.	This installation has been used on several recent developments	Recommended - Council Specific
10	Council Specific	CRC Specific Water New Drawing "Scour valve and dissipation manhole"	New CRC Specific drawing. Refer #6223210 **Drawing to be provided**	This scour arrangement is what CRC currently prefers and has been required on a number of recent projects.	Recommended - Council Specific
11	Council Specific	CRC Specific Sewerage New Drawing "Scour valve arrangement"	New CRC Specific drawing. Refer #5791236 **Drawing to be provided**	This scour arrangement is what CRC currently prefers and has been required on a number of recent projects.	Recommended - Council Specific
12	Council Specific	CRC Specific Sewerage New Drawing "Manual Air Release"	New CRC Specific drawing. Refer #6169880 **Drawing to be provided**	This manual air valve arrangement is what CRC currently prefers and has been required on a number of recent projects.	Recommended - Council Specific
13	Council Specific	CRC Specific Sewerage New Drawing "Emergency bypass arrangement"	New CRC Specific drawing. Refer #5791235 **Drawing to be provided**	This emergency bypass arrangement is what CRC currently prefers and has been required on a number of recent projects.	Recommended - Council Specific
14	Council Specific	CRC Specific Drawing Sewerage New Drawing S3035 - CRC Pump Station Overflow Pit	Amend drawing to include isolation valve. **Amended Drawing to be provided**	Noted on amendment register. **Check with waste operations.	Recommended - Council Specific
15	Council Specific	CRC Specific Drawing Various	No dogs on playground equipment sign		Recommended - Council Specific
16	Council Specific	CRC Specific Drawing Various	Wheeler Bin Lid Restrictor		Recommended - Council Specific
17	Council Specific	CRC Specific Drawing Various	CBD Bin Cabinet		Recommended - Council Specific
18	Council Specific	CRC Specific Drawing Various	CRC Water Fountain		Recommended - Council Specific

20	Council Specific	MSC Council Specific D7.17 S6.23 & Appendix B  Sewerage Pump Station Package FRP	MSC want to remove reference to Std Dwg S3020 and replace it with one similar to Townsville's <i>Standard Drawing Sewerage SD-421 Sewerage Pump Stations Package Fibre reinforced Plastic</i> .		Recommended - Council Specific
21	D6.07	CRC Specific - D6.07 Design Criteria Additional Clause 8.4	Delete this clause.	CRC requires all road crossings to be minimum 100DN which is what's stated in D6.07 clause 8.	Recommended - Council Specific
22	CP1.17	CRC Specific - Construction Procedures CP1.17 Application for ....Private Works	Include the following text " <b>CRC only undertakes private works for water infrastructure. CRC does not undertake any private works for sewerage infrastructure</b> ".	To provide clarification to be consistent with CRC practices.	Recommended - Council Specific
23	D6.16	CRC Specific - Design Guideline - D6 Water Reticulation D7.16 General	Include following text " <b>Refer to CRC Design Guideline for Water Pump Stations</b> ".	CRC has developed Design Guidelines for water Pump Stations, Sewerage Pump Stations and Switchboards	Recommended - Council Specific
24	D6.17	CRC Specific - Design Guideline - D6 Water Reticulation D7.17 Telemetry Systems	Include following text " <b>Refer to CRC Design Guideline for Switchboards</b> ".	CRC has developed Design Guidelines for water Pump Stations, Sewerage Pump Stations and Switchboards	Recommended - Council Specific
25	D7.16	CRC Specific - Design Guideline - D7 Sewerage System D7.16 General	Include following text " <b>Refer to CRC Design Guideline for Sewerage Pump Stations</b> ".	CRC has developed Design Guidelines for water Pump Stations, Sewerage Pump Stations and Switchboards	Recommended - Council Specific
26	D7.17	CRC Specific - Design Guideline - D7 Sewerage System D7.17 Pump Stations	Include following text " <b>Refer to CRC Design Guideline for Sewerage Pump Stations</b> ".	CRC has developed Design Guidelines for water Pump Stations, Sewerage Pump Stations and Switchboards	Recommended - Council Specific
27	D7.18	CRC Specific - Design Guideline - D7 Sewerage System D7.18 Pump Stations	Include following text " <b>Refer to CRC Design Guideline for Sewerage Pump Stations</b> ".	CRC has developed Design Guidelines for water Pump Stations, Sewerage Pump Stations and Switchboards	Recommended - Council Specific
28	D7.26	CRC Specific - Design Guideline - D7 Sewerage System D7.26 Telemetry Systems	Include following text " <b>Refer to CRC Design Guideline for Switchboards</b> ".	CRC has developed Design Guidelines for water Pump Stations, Sewerage Pump Stations and Switchboards	Recommended - Council Specific
29	Council Specific	Tablelands Regional Council - Specific Drawings - Issue - 2017 TRC Valve Box Installation	Amendments to TRC standard drawing S2000	Removal of reference to 50NB valves	Recommended - Council Specific
30	Council Specific	Tablelands Regional Council - Specific Drawings - Issue - 2017 TRC Watermain Connection Details Including Typical Cul-De-Sac Arrangement	Amendments to TRC standard drawing S2020	To bring inline with Council's standard and to simplify	Recommended - Council Specific
31	Council Specific	Tablelands Regional Council - Specific Drawings - Issue - 2017 TRC Domestic Water Service Connection Details	Amendments to TRC standard drawing S2060	To bring inline with Council's standard and to simplify	Recommended - Council Specific
19	Council Specific	Standard Drawing	CRC Preferred Typical Bicycle Treatment for Single Lane Roundabouts		Recommended - Council Specific
295	CP1	Appendix P Item 4 Drafting Requirements	MSC Specific Submission. To Denote MSC Superscript in the TITLE, and to implement a corresponding MSC specific requirement: All lines are to be <b>3D</b> poly lines and all blocks are to have <b>embedded z</b> value (level value).		Recommended - Council Specific
296	CP1	Appendix P Item 12 Note 4	4. Water mains and irrigation pipes are to be one continuous 2D ( <b>MSC: 3D</b> ) Polyline, broken only at pipe junctions and valves.		Recommended - Council Specific
297	CP1	Appendix P Item 13 Note 3	3. Sewer pipes are to be one continuous 2D( <b>MSC: 3D</b> ) polyline between manholes/valves/pump or lift stations.		Recommended - Council Specific
298	CP1	Appendix P Item 15 Note 4	4. Catch Drain polylines are to be a 2D( <b>MSC:3D</b> ) polyline and based on the centre of the constructed drain.		Recommended - Council Specific



33	CP1	CP1.23 Clause 1	Amend second sentence "Operating and Maintenance Manuals shall include spare parts lists, P&I Diagram, electrical documentation,...."	The inclusion of P&I Plans (Process and Instrumentation plans has been something our electricians have been requesting	Recommended
34	CP1	CP1.25 Clause 4	Add new item to list "1. Copy of Process and Instrumentation Diagram (P&ID)."	The inclusion of P&I Plans (Process and Instrumentation plans has been something our electricians have been requesting	Recommended
35	CP1	Appendix A, Pump Stations and Valve Chambers Electrical and SCADA	Change "Witness Point" to "Hold Point, Witness factory acceptance testing of switchboards prior to delivery to site"	Reflects what is actually happening. CRC requires the factory acceptance testing to be witnessed by Council.	to be at receiving councils discretion
36	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist	Under section <b>Testing</b> on page 10 add new item "1. Verify that Factory Acceptance Testing of the switchboard was completed"	Related to previous item 5	Recommended
37	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 7	Under section <b>Management</b> on page 7 add new item Amend text to include "P&ID" as follows".....(as constructed details, operating manuals, P&ID, test results etc"	Related to previous item 3 and 4	Recommended
38	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 7	Under section <b>Concrete</b> on page 7 amend item 1. to read "300mm" not 150mm	consistent with requirements set out in section D7.17 clause 10	Recommended
39	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 10	Under section <b>Testing</b> on page 10 add new item "1. Verify that Factory Acceptance Testing of the switchboard was completed"	Related to previous item 5	Recommended
40	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 11	Under section <b>Electrical Equipment</b> on page 11 add new item "6. Verify that the Process and Instrumentation Diagram is in switchboard cabinet"	Related to previous item 3 and 4	Recommended
41	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 15	Under section <b>Management</b> on page 15 add new item Amend text to include "P&ID" as follows".....(as constructed details, operating manuals, P&ID, test results etc"	Related to previous item 3 and 4	Recommended
42	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18	Under section <b>Testing</b> on page 18 add new item "1. Verify that Factory Acceptance Testing of the switchboard was completed"	Related to previous item 5	Recommended
43	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18	Under section <b>Testing</b> on page 18 add new item "2. Verify that pump tests passed"	Make consistent with SPS Checklist	Recommended
44	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18	Under section <b>Testing</b> on page 18 add new item "3. Verify that rising main has been tested"	Make consistent with SPS Checklist	Recommended
45	CP1	Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18	Under section <b>Mechanical Equipment</b> add: <b>Refer to receiving council for specific requirements</b>	Make form complete	To be supplied by 29th December - or to 'to be supplied by receiving council'

46	CP1	Appendix P, As-constructed, Item 3.	in 3. "As Constructed" Drawings as point g. g) If MGA co-ordinates have been used, "As Constructed" drawings can be submitted in MGA Zone 55 (GDA94) or MGA Zone 55 (GDA2020). The datum used should be clearly noted on drawing details."	Recommended by Council's GIS Team. This is not a current issue however it will be an issue once the new national datum (GDA2020) is adopted and as it will replace current national datum (GDA94). This may not be until sometime in late 2018, 2019 or 2020. There will be plenty of overlap between datums as we transition from GDA94 to GDA2020 so we'll likely be accepting and providing data in both GDA94 and GDA2020 for a period of time. Once GDA2020 is adopted all references to GDA94 will need to be removed from FNQROC and replaced with GDA2020 or possibly something along the lines of 'current national datum'. This change is for horizontal X and Y coordinates only and does not affect AHD.	Recommended
47	CP1	Appendix P, As-constructed, Clause 14 Sewerage Pump Stations Item 3 Details to be shown on the as-constructed drawing	Add new items to the list of information to be shown on the as-constructed drawing: "RL at Top of Sewer Pump Station Invert Level of Pressure Main Invert Level of each Gravity Main Invert Level of Overflow Pipe RL of High Level Alarm RL of Standby Start RL of Pump Duty Start RL of Pump Stop RL of Low Level Alarm RL of Pump Station floor Pump Station Internal Diameter"	Recommended by GIS Team. This information will facilitate reviewing the as-built against the design and be available to design and operational personnel.	Recommended
48	CP1	Appendix P, As-constructed, Clause 19 Page 27	Fix formatting of <b>c. water</b> . Compulsory attributes is sub heading to be removed from list.	Correction	Recommended
49	CP1	Appendix P, As-constructed, Clause 19 Item d <b>Sewer Pipes</b> Page 31	Under <b>vii Lining - Pipe lining material</b> add " <b>viii. Lining - Lining installation date</b> "		Recommended
50	CP1	Appendix P, As-constructed, Clause 19 Page 32	Under <b>Desirable Attributes</b> renumber list removing blank item	Correction	Recommended
32	CP1	- Appendix A Stormwater drainage	Remove backfilling of stormwater as a hold point.	<a href="#">LIVE-#5559625-FW_FNQROC review 0 Adam Gowlet re hold points</a>	Not Recommended
51	CP1	Appendix A	HOLD POINT - Where CBR tests dictate an alternative pavement design, the council approval of a revised pavement design shall form a hold point.	Request for a HOLD Point (for both the consulting engineer and council's approval of alternative design) where pavement design is changed due to poor soil conditions	Recommended
53	CP1	Appendix P 12. Water Reticulation	Item 1: Updated Layers for linework and additional category(Pipe Text leader line)	See document	Not Recommended - CRC Specific Appendix P
54	CP1	Appendix P 12. Water Reticulation	Item 7: Amended Layer type/name (AC Water Pipe)	See document	Not Recommended - CRC Specific Appendix P
55	CP1	Appendix P 12. Water Reticulation	<b>New Condition 2. Each text box is to be inserted at the centre point of the associated line. Text blocks are dynamic and can be moved after insertion.</b>	Additional wording to the condition	Not Recommended - CRC Specific Appendix P
56	CP1	Appendix P 13. Sewerage Reticulation	Item 1: Updated Layers for linework and additional category(Sewer Main leader line)	See document	Not Recommended - CRC Specific Appendix P
57	CP1	Appendix P 13. Sewerage Reticulation	Item 1: Amended Layer type/name (AC Sewer #Pipe)	See document	Not Recommended - CRC Specific Appendix P
58	CP1	Appendix P 13. Sewerage Reticulation	<b>3. Pipe text boxes to be inserted at the centre point of the associated line. Text blocks are dynamic and can be moved after insertion. Sewer pipes are to be one continuous 2D polyline between manholes/valves/pump or lift stations.</b>	Additional wording to the condition	Not Recommended - CRC Specific Appendix P
52	CP1	Appendix P	Survey Datum - Updated Links: <a href="https://www.icsm.gov.au/sites/default/files/2017-05/sp1v1-7.pdf">https://www.icsm.gov.au/sites/default/files/2017-05/sp1v1-7.pdf</a> <a href="http://www.icsm.gov.au/datum/gda2020-and-gda94-technical-manuals">http://www.icsm.gov.au/datum/gda2020-and-gda94-technical-manuals</a> <a href="https://www.dnrm.qld.gov.au/?a=105601">https://www.dnrm.qld.gov.au/?a=105601</a>	Subject to further review Issue 9	Recommended
59	CP1	Appendix P 15. Stormwater Drainage Reticulation	Item 1: Updated Layers for linework and additional categories	See document	Not Recommended - CRC Specific Appendix P
60	CP1	Appendix P 15. Stormwater Drainage Reticulation	<b>New Condition 2. Each text box is to be inserted at the centre point of the associated line. Text blocks are dynamic and can be moved after insertion.</b>		Not Recommended - CRC Specific Appendix P

62	CP1	Appendix H Final Works Acceptance - Sewerage Reticulation	Remove that items as listed for checking and simply require that any defects noted from the works acceptance inspection have been closed out with supporting evidence. This will drive rectification works to occur immediately following the WA inspection prior to the lots being titled and sold.	Sewer lines are run within lots. Post works acceptance, the lots are sold and at time of FWA, there are residences constructed. Neither Consultants or contractors have the right to enter the property to undertake inspection of defects. These items listed are the same as what was required years before manholes were deemed confined spaces(not all have confined space permits). Current practice is to undertake a CCTV review of the line at WA. Defects are noted and contractor provided a time period to rectify. This would typically occur prior to title issue/sale. After the lot is sold, the contractor cannot return to re-run CCTV. It is understood that councils have the right to access private property to inspect sewers. If a final check on the sewer is now required(CCTV is addressing problems earlier than previous methods) then that check should be undertaken by council	Not Recommended
63	CP1	CP1.10 Clause 5	Amend clause 5 to read 20 days (increased from 5 days) and add following " insert from condition wording.."	To improve planning and scheduling of connection work and to avoid costs that maybe incurred by Council for late changes of the connection date.	Recommended
64	CP1	CP1.17	Include superscript "CRC" had heading as CRC only undertakes private works for water infrastructure	To provide clarification.	Recommended - Council Specific
61	CP1	Appendix P 15. Stormwater Drainage Reticulation	New Condition: 6. Each individual culvert is to have an associated Culvert Text box and leader line.		Not Recommended - CRC Specific Appendix P
65	D1.01	Reference Documents	Request removal of Queensland Streets reference throughout document as it has been replaced by the upcoming: IPWEA to release Street Design Manual – Walkable Neighbourhoods: Request to change reference to: "IPWEA - Street Design Manual"	Draft copy available: <a href="https://drive.google.com/file/d/1wNjTZysopCcZkRDFDDmftd2uQKZs2QF/view?usp=sharing">https://drive.google.com/file/d/1wNjTZysopCcZkRDFDDmftd2uQKZs2QF/view?usp=sharing</a>	ensure Devm mmanual wording identifies heirachy of documents is correct - FNQ takes precedence on road widths etc.
66	D1.03	Reference Documents	Remove MUTCD reference - Has been superseded by AS1742 - TMR has 1-2 Minor exceptions to AS1742 - which are listed on the website	<a href="https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx">https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx</a>	Recommended
67	D1.03	Reference Documents	Remove Complete Streets - New doc available "IPWEA - Street Design Manual"	Draft copy available: <a href="https://drive.google.com/file/d/1wNjTZysopCcZkRDFDDmftd2uQKZs2QF/view?usp=sharing">https://drive.google.com/file/d/1wNjTZysopCcZkRDFDDmftd2uQKZs2QF/view?usp=sharing</a>	Recommended
68	D1.03	Reference Documents	Remove - Guide to the Geometric Design of Rural Roads, Guide Policy for the Geometric Design of Major Urban Roads as both are covered/included in the 'guide to road design, which is listed.		Recommended
69	D1.03	Reference Documents	Remove "Joint Venture for More Affordable Housing, Australian Model Code for Residential Development. (AMCORD)'	Very similar in content to Queensland Streets, with more planning input. Never used this in the context of the development manual, is it still relevant*? *Both are similar level mid tier street planning	Recommended
296	D1.05 D1.06	Table D1.1	The addition of CCRC for specific road hierachy classification for Access Street, Access Place, Low Density Residential and Residential Street.		Recommended - Council Specific
70	D1.09	Crossfalls	Suggest deletion of '1. Carriageway crossfalls for streets shall conform to the requirements of 'Queensland Streets'.	Crossfalls are stipulated in the item below it	Recommended d, on the basis of amending of point 2, stipulating cross falls must be(exceptions to be confirmed with council)
71	D1.10	Carrigeway Widths	Alternate wording to provide better definition. Request change from 'with only minor delays in the peak period' to 'with >90% of AADT flowing without delay'	Alternative wording: with >90% of AADT flowing without delay. (See TMR RPDM CH5 , pg5.17(LOS-A)  <a href="https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Road-planning-and-design/Road-planning-and-design-manual/Current-document/RPDM_Chapter5.pdf?la=en">https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Road-planning-and-design/Road-planning-and-design-manual/Current-document/RPDM_Chapter5.pdf?la=en</a>	Recommended

72	D1.15	Speed bumps	Request change to a more detailed specification	Suggestion that this be brought into line with TMR/BCC/AUSTROADS standard for platform humps. Bump height = 100 mm. Maximum ramp grade = 1:15. Unit Length: >= 2m for Non Bus Routes (see 1) Unit Length: 6m for Bus Routes (See 2) 1. AUSTRROADS Guide to Traffic Management - Part 8 - Local Area Traffic Management(pg76) 2. <a href="https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx">https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx</a>	Refer to austroads standards only. And subject to appropriate linemarking treatment being applied
73	D1.16	Bus Stops	Request change to reference standard - Superseded document	Superseded by AUSTRROADS – Guide to Road Design (Pt 4 – Intersections and Crossings (pg46))	Recommended
74	D1.19	Point 12 - Footpath Grades	<del>Delete: The maximum gradient shall be 16 per cent with a maximum crossfall of 2.5 per cent.</del> New: <b>Where the pathway is parallel with a road with a grade greater than 16 per cent footpath gradient shall match that of the road.</b>	To remove any ambiguity in relation to compliance with the Disability Discrimination Act	Recommended
75	D1.22	Signs and Road Markings	Department of Main Roads 'Manual of Uniform Traffic Control Devices' (MUTCD) has been superseded. Request to change throughout document to AS1742 Manual of Uniform Traffic Control Devices, throughout document		Recommended
76	D1.25 D1.26	Tramlines	Remove fencing title as all comments relate to tramlines		Recommended
77	D1.27	Table D1.4 Rural Road Elements	New Note. In Douglas Shire Council, the seal and pavement width will be min 5,5m with a shoulder width of 0,75m unless otherwise approved by council.	Less Edge breaks	Recommended - Council Specific
78	D2.13	Retaining Walls	Request wording amendment to comply with AS4678 and an increase in design life for the same purpose	Request wording amendment to comply with AS4678 and an increase in design life for the same purpose. See #6193320	Recommended - but consider the removal of design life (this is stipulated in the standard above)
79	D3.03	Reference Documents	Update to DTMR Documents to include MRTS30 and MRTS35 and AGPT02	Queensland Government Department of Transport and Main Road's Specification 'MRTS30 Asphalt Pavements' Queensland Government Department of Transport and Main Road's Specification 'MRTS35 Recycled Material Blends for Pavements' Austroads Part 2: Pavement Structural Design' of the Austroads Guide to Pavement Technology (AGPT02)	Recommended
80	D3.03 D3.10	Recycled Materials in Pavements/Asphalt	Request the allowance of recycled materials (glass) to be used in asphalt pavements. To be as per TMR Technical Specification, MRTS35 Recycled Material Blends for Pavements	Request the allowance of recycled materials (glass) to be used in asphalt pavements. To be as per TMR Technical Specification, MRTS35 Recycled Material Blends for Pavements See minutes: DM#: 5868543  <a href="https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Specifications-and-drawings/Specifications/5-Pavements-Subgrade-and-Surfacing/MRTS35.pdf?la=en">https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Specifications-and-drawings/Specifications/5-Pavements-Subgrade-and-Surfacing/MRTS35.pdf?la=en</a>	Recommended
81	D3.05	Design Traffic	Item 2 - Update reference from DTMR pavement design manual to pavement structural design of Austroads guide to Pavement technology - AGPT02	TMR document has been consolidated to AGPT02	Recommended
82	D3.06 D3.09	Pavement and Seal (Asphalt) minimum thickness	Request for the following pavement design changes: a. Asphalt thickness must be a minimum 35mm as per MRTS 30 b. Pavement design must be submitted to the satisfaction of Council as a hold point. c. Pavement design should be for the minimum CBR for lengths of 500m (i.e 500m section)	a. To bring into line with the current standards being used by CRC internally. Proposal for full region, if not, to be CRC specific.  See DM#5784507	a & b not supported - Add comment that this is by exception to MRTS30 - On the basis of cost effectiveness. ALSO - Change requirements RURAL/RESIDENTIAL - to be council confirmed c - Supported
83	D3.10	Recycled Aggregates	Request introduction of a recycled aggregates (and or/reglass) into roads standards	As demand creator for recycled products (and a reduction in waste going to landfill/under the Waste Levy) See minutes: DM#: 5868543	Recommended. Subject to it complying with specifications as per Dev manual

84	D3.11	Flexible pavements	Amend wording of Section from 1. Flexible pavements with a design traffic up to 5 x 105 ESA's shall be designed in accordance with AUSTRROADS publications "Flexible pavement with a design traffic above 5 x 105 ESA's shall be designed in accordance with Queensland Government Department of Transport and Main Roads Pavement Design Manual, to <b>Flexible pavements shall be designed in accordance with AUSTRROADS publications part 2: Pavement Structural Design' of the Austroads Guide to Pavement Technology (AGPT02)</b> '	As noted, TMR pavement manual consolidated to Part 2: Pavement Structural Design' of the Austroads Guide to Pavement Technology (AGPT02). New reference document has design scop up to 1x10^8 ESA, so no separate references needed.	Recommended
85	D3.15		Amended details in accordance with amendments made in the underlying document(MRTS30) . Asphalt ( <del>Deleted 40mm</del> ) 50mm or thicker is required to be a dense graded asphalt (DG14) in accordance with Queensland Government Department of Transport and Main Road's "Standard Specifications 'MRTS30 Asphalt Pavements, Asphalt of ( <del>Deleted 30mm</del> ) 35 – ( <del>Deleted 40mm</del> ) 50 mm thickness must be a dense graded asphalt (DG10) in accordance with the Main Roads Standard specifications for Roadworks..	Has been adjusted to suit what is in the Main Roads Technical Standard– See MRTS30. Table 8.6.1 (pg 40).	Recommended
86	D4.03	Reference Documents	Department of natural resources reference changed to Institute of Public Works Engineering Australasia - Queensland Urban Drainage Manual	QUDM Document housing	Recommended
87	D4.09	Pipe - FRC	Request Feedback from the group regarding the inclusion of FRC pipes in FNQROC RDM	Interested to get some feedback from developers/councils on the use of these, as historically my experience has been that they are quite susceptible to failure as a result of poor installation. If the case is that they are not being utilized across the region, perhaps we are better off not specifying them	Recommended
88	D4.14	Telemetry Systems	Note no longer required: 2. It should be noted that where amalgamated Councils have varying telemetry systems, left over from pre-amalgamation Councils, pump station telemetry systems and requirements may vary within that Council and requirements must therefore be reconfirmed as a part of the design		Recommended
89	D5	Stormwater Quality Management	State Planning Policy 2017 - Water Quality State Intrest introduced	Implementation of a specific threshold (50mg/L Total suspended solids, or less, and a pH of 6.5-8.5) introduced. Review of D5 in light of new SPP recommended	Recommended
90	D5.02	Objectives	Addition of 2 objectives: (a) Assessment and mitigation of risks to waterway health and public safety (g) Adoption of appropriate stormwater treatment in line with the Water Quality Design Objectives (State Planning Policy)		Recommended
91	D5.03	Terminology	Addition of a definition: 4.5. WSUD Water Sensitive Urban Design is method for sustainably managing water resources including integrating SQIDs into development and management of waterway health. D5.04 REFERENCE AND SOURCE DOCUMENTS		Recommended
92	D5.04	Reference Documents	<b>Request removal of the reference document:</b> Institution of Engineers - Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, Institution of Engineers Australia (Queensland). <b>Request inclusion of the following reference documents:</b> Water by Design (Healthy Land and Water) (refer waterbydesign.com.au/resources for the latest version) - MUSIC Modelling Guideline - Bioretention Technical Design Guideline - Wetland Technical Design Guideline - WSUD Construction and Establishment Guideline - WSUD Asset Management and Handover Guideline - Waterbody Management Guidelines - Stormwater Harvesting Guidelines <b>IECA</b> - Erosion and Sediment Control Guideline	Update provided by subject matter expert	Recommended
93	D5.07	Site based water quality issues	Inclusion of a Nitrogen pollutant threshold(40%), as stipulated in the State Planning Policy (Appendix B)		Recommended
94	D5.07	Site based water quality issues	Item 4. Additional examples given: bioretention basins, constructed wetlands, water wise street trees, swales, Item 5: example given(MUSIC Modelling)	LR to follow up alternative legislative requirements(ie, federal law to identify alternative)	Recommended
95	D5.08	Acceptable Design Solutions	Amendment to wording to comply with SPP - 2. <b>As mandated by the State Planning Policy, water quality(deleted: interception) improvement</b> devices or a combination of interception devices and treatments are required to remove at least 90% of total suspended solids (litter) of size greater than 3.0mm as well as sand, <b>80% of total suspended sediment</b> , 60% of total phosphorus, and 40% of nitrogen and shall be configured to prevent re-injection of captured contaminants.		Recommended

96	D5.08	Acceptable Design Solutions	Additional Condition:3. Vegetated Stormwater Treatment (e.g. bioretention, swales and constructed wetlands) will be specified in most cases and should be designed and constructed in accordance with the Water by Design technical guidelines as listed previously	Reworded to: 3. Where approved by Council, Vegetated Stormwater Treatment (e.g. bioretention, swales and constructed wetlands) should be designed and constructed in accordance with the Water by Design technical and design guideline documents listed in reference documentation.	Recommended
97	D5.08	Acceptable Design Solutions	3. (Deleted: All in-line and end-of line interception devices shall be of) <b>Where proprietary products (i.e. GPTs) are specified</b> , (Deleted: design and construction and) <b>they will</b> require a manufacturer's performance guarantee as to removal of foreign matter from stormwater and structural adequacy of the unit. The use of proprietary Wet Well Gross Pollutant Traps (GPT's) will not be accepted as a means of treating dissolved nitrogen and phosphorus. <b>(Refer to SQIDEP for further information) -</b>	Requesting the removal of GPT's being the exclusive solution	Recommended
98	D5.08	Acceptable Design Solutions	7. Interception devices shall be fitted with a basket/s or other collection facilities, which shall be sized and configured to enable removal with a maximum wet, full weight of the collection facility is to be not greater than 2 tonnes. <b>Preference is for those solutions that can be serviced with the use of a vacuum truck.</b>	Request for additional wording to minimise maintenance requirements(removing the need to have a lift truck on site. )	Recommended
99	D5.08	Acceptable Design Solutions	10. A concrete access and hardstand area adjacent to the (Removed: Gross Pollutant Trap (GPT)) <b>SQID</b> must be provided to allow maintenance vehicles to (Removed: park clear of the roadway) <b>carry out maintenance safely and effectively.</b>	Removing GPT exclusivity	Recommended - By exception, access treatment to be confirmed by council.
100	D5.10	Erosion and Sediment Control Strategy	Minor additional information requested: 3.b (b. Detail the major erosion and sediment control measures necessary to provide protection to downstream land owner(s), <b>infrastructure, environment</b> and receiving waters	Minor additional information requested	Recommended
101	D5.10	Erosion and Sediment Control Strategy	Deleted: I. Design stormwater for sediment basin sizing is 80th percentile over a five day event. Added: <b>As mandated by the State Planning Policy, all exposed areas greater than 2500 m2 must be provided with sediment controls which are designed, implemented and maintained to a standard which would achieve at least 80% of the average annual runoff volume of the contributing catchment treated (i.e. 80% hydrologic effectiveness) to 50mg/L Total Suspended Solids (TSS) or less, and pH in the range (6.5–8.5) (Qld State Planning Policy Appendix 2, Table A)</b>	Amended co comply with State Planning Policy	Recommended
102	D5.11	Acceptable Design Solutions	Additional wording to condition: 3. If the site is disturbed (ie. rehabilitation works are not complete) during the period of prolonged or high rainfall (wet season) it is likely to be more vulnerable to the risk of erosion and a more rigorous inspection, clean out and maintenance regime will be required than for a site which is disturbed during the drier months. <b>In particular, whenever possible schedule the land clearing and bulk earthworks to avoid the wet season (December to March) and stage land clearing works to minimise the area of exposed land.</b>		Recommended
104	D6	Inclusion of reference to 'Thrust Blocks' in Design guideline	Add Reference to thrust blocks and drawing reference to Design Guideline - SEQ WAT standard drawings (1205-1 and 1206-1)	See #5980862	Addressed through another submission
105	D6	Appendix A Title page	Update version to <b>Version 1.0 Aug 2019</b> from 2015	Update reference	Recommended
106	D6	Appendix A Addendum	<b>***CRC to provide updated list***</b>		RH to submit prior 29th December
103	D5.12	Design Guidance	Following additional guideline documents /resources added: Institution of Engineers • Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, Institution of Engineers Australia (Queensland). Department of Natural Resources (jointly with Brisbane City Council & IMEAQ). • Queensland Urban Drainage Manual, Volumes 1 & 2. Brisbane City Council • Water Quality Management Guidelines Water by Design (Healthy Land and Water) (refer <a href="http://waterbydesign.com.au/resources">waterbydesign.com.au/resources</a> for the latest version) • MUSIC Modelling Guideline • Bioretention Technical Design Guideline • Wetland Technical Design Guideline • WSUD Construction and Establishment Guideline • WSUD Asset Management and Handover Guideline • Waterbody Management Guidelines • Stormwater Harvesting Guidelines • IECA Erosion and Sediment Control Guideline • Best Practice Erosion and Sediment Control (BPESC) documents <a href="https://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document">https://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document</a>	As guided by consultant/subject matter expert	Recommended

108	D6 - Appendix A	Pipeline Materials	Series 1 PE100 – (Deleted: SDR11) <b>SDR13.6 MIN PN</b> (Deleted 16) <b>20</b> (or Chlorine resistant pipe)	See Document 6070452 for background.  Technical discussion between councils required as temperature/severity changes throughout region.	2. Subject to consultation of ambient temperature and residual chlorine loading with council, all loop mains shall be SDR 11, Class 16 , with additional note for: Subject to the oxidative reductive potential of the water being determined and an appropriate determination on of class of pipe being specified by the designing engineer.
109	D6.01	D6.01 Scope Clause 3 2nd Dot Point	Amend version of <b>CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019)</b>	Update reference	Recommended
110	D6.01	D6.01 Scope Clause 3 2nd Dot Point	Amend version of <b>CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019)</b>	Update reference	Recommended
111	D6.01	D6.01 Scope Clause 5	Reword and insert new text as follows ".....shall take precedence over the <b>CTM Water Alliance Design and Construction Codes</b> , Water Services Association of Australia Codes and the relevant..."	Amendment	Recommended
112	D6.04	D6.04 Reference Documents	Amend version of <b>CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019)</b>	Update reference	Recommended
113	D6.04	D6.04 Reference Documents	Amend version of <b>WSA 03 to "2011"</b>	Update reference	Recommended
114	D6.04	D6.04 Reference Documents	Include CRC Guidelines for Water and Sewage SPS's and switchboards in reference Documents. <b>"Cairns Regional Council Design Guideline Switchboards Design Guideline Water Pump Stations"</b>	Update reference	Recommended - Council Specific
115	D6.05	D6.05 General Clause 5	Add sentence to end " Plans in the report are to also show residual pressures and pressures under various fire flow scenarios".		Recommended
116	D6.07	D6.07 Design Criteria Title	CRC specific superscript		Recommended
117	D6.07	D6.07 Design Criteria Clause 3	Add new category and column to table - see #6219915	See document	LR to find and include definition of 'small community' - See QFRS (or find the map that defines this)
118	D6.07	D6.07 Design Criteria Clause 8 Road Crossings	Delete the CRC superscript at this clause. The wording in the CRC specific clause is nominated for deletion.	CRC specific text no longer required. It conflicts with CRC current practices for road crossings.	Recommended - Council Specific
119	D6.07	D6.07 Design Criteria Clause 8 Road Crossings	List item 2. Amend "...under industrial roads, eolteeter <b>access</b> roads or higher..."	CRC Operations is installing DICL on most road crossings now due signafctnly increased robustness with only marginal cost increase over PVC	Include comment that DSC and MSC accepts PVC
120	D6.09	D6.09 Rural and Rural Residential Developments Clause 9	Reference to be amended "....Appendix A4-6 <b>A 5.8"</b>	In appendix clause 5.8 is about Rider Mains	Recommended
121	D6.10	D6.10 Reticulation Network Clause 2	Replace WSA Code with " <b>CTM Code</b> "	Update reference	Recommended
122	D6.10 (Table D6.2 Standard Alignments)	TRC Reticulation Network	Alter the alignment from 2.5m to 2.8m in urban only	To avoid main being under concrete footpaths. See # 6210772	Recommended - Council Specific
123	D6.13	D6.13 Valves after clause 8	New clause 9 as follows " <b>9. Pressure reducing valves or other types of control valves are to have the set points identified on the drawings and in the hydraulic analysis report"</b>		Recommended
124	D6.16	D6.16 Pump Stations	include " <b>CRC</b> " superscript at heading.	In the CRC Specific Requirements, CRC will reference design guidelines for Water Pump Stations and Switchboards.	Recommended
125	D6.16	D6.16 Pump Stations New Clause after 8	Insert new clause " <b>9. Asset identification plates (tagging) are to be attached to equipment i.e. switchboards, wet wells, pumps, flowmeter, generator, pipes and valves etc. Confirm asset tagging requirements with the Local Authority"</b> .	Recommended by Asset management. Details to be at descetion of local Council.	Recommended
126	D6.17	D6.17 Telemetry Systems	include " <b>CRC</b> " superscript at heading.	In the CRC Specific Requirements, CRC will reference design guidelines for Water Pump Stations and Switchboards.	Recommended
127	D6.19	DUAL WATER SUPPLY SYSTEM	Updates to point 1 and 2. Amendment to update reference: Deleted(WSAA Dual Water Supply Systems Supplement) to <b>the WSAA Water Supply Code WSA 03-2011</b>		Recommended - to be checked by someone with access

128	D6-Appendix A	5.9 Amendments	Inclusion of a new note: 3)Subject to the oxidative reductive potential of the water being determined and an appropriate determination on of class of pipe being specified by the designing engineer.	Change to specification for pipe due to degradation in high temp areas See Document 6070452 for background.  Technical discussion between councils required as temperature/severity changes throughout region.	Reword to: Subject to the oxidative reductive potential of the water being determined and an appropriate determination on of class of pipe being specified by the designing engineer.
129	D6	Appendix A Addendum to CTM Water Service Design and Construction Code	CRC to supply revised addendum for CTM Code 2019		RH to submit prior 29th December
130	D6	Appendix B Addendum to Sewerage Code of Australia WSA 02-2002	CRC to supply revised addendum for WSA Sewerage Code 2014		RH to submit prior 29th December
131	D7	Appendix C Addendum to Sewerage Pumping Code of Australia WSA 04-2003 Clause 25.1 Pump Lifting Chains	Dot points 2, 3, 4 and 5. Change "Galvanised" to " <b>Stainless Steel</b> "	Recommended by Waste Operations	Recommended
132	D7.02	Reference documents	Existing reference: SEQ Water Supply and Sewerage Design and Construction Code. (www.seqcode.com.au ) • NuSewers Design and Construction Specification – NuSewers Edition V.6 New Reference: South East Queensland Water Supply and Sewerage Design and Construction Code	Update to reference	Recommended
133	D7.04	D7.04 Reference Documents	Amend version of <b>CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019</b>	Update reference	Recommended
134	D7.04	D7.04 Reference Documents	Amend version of <b>WSA 02 to "2014"</b>	Update reference	Recommended
135	D7.04	D7.04 Reference Documents	Amend version of <b>WSA 05 to "2013"</b>	Update reference	Recommended
136	D7.04	D7.04 Reference Documents	Include CRC Guidelines for Water and Sewage SPS's and switchboards in reference Documents. <b>"Cairns Regional Council Design Guideline Switchboards Design Guideline Sewage Pumping Stations"</b>	Update reference	Recommended
137	D7.08	D7.08 Design Criteria Clause 5 item a	<b>CTM Table 4.8 **Check**</b>	Update reference	RH to submit prior 29th December
138	D7.08	D7.08 Design Criteria Clause 3 Table 7.4 Minimum Grades for Gravity Sewers	Consider whether to remove pipe sizes >= 300mm given the code does not apply to trunk sizes	Development manual applies to non-trunk	Recommended
139	D7.08	D7.08 Design Criteria Clause 4 Table 7.5 Gravity Sewer Flows in EDC	Consider whether to remove pipe sizes >= 300mm given the code does not apply to trunk sizes	Development manual applies to non-trunk	Recommended
140	D7.09	D7.09 Sewer Alignment Clause 4	Replace reference from WSA 02-2002 4.4 to <b>CTM Table 3.1</b>	Update reference	Recommended
141	D7.10	D7.10 Manholes Clause 2	Reword to correct grammar "Manholes shall not be constructed across property boundaries. Minimum clearance from the edge of the manhole to the property boundary shall be 100m"		Recommended
142	D7.10	D7.10 Manholes Clause 3	Reword to correct grammar "...the standard alignment to a side or rear boundary, provide the flat area on three sides"		Recommended
143	D7.10	D7.10 Manholes Insert new Clause	New clause " <b>7. Manhole covers are to be above the 1% AEP flood level unless otherwise approved by the Council</b> ".	This is to minimize any infiltration into the sewerage system. It will encourage consideration be given to the alignment of the sewer on land that is in a flood zone.	Reword to: Where practical, manholes are to be above the 1% AEP flood level. In the event this is not possible, bolt down manhole covers are to be used.
144	D7.11	D7.11 Covers and Surrounds	Delete all of this Clause D7.11 because it is exact duplication of Clause S6.22 in specification.	This is a duplication	Recommended
145	D7.12	D7.12 Dedication of Land, Easements,.... Clause 2 a Pipelines	Add new item to list under a. " <b>viii All sewers in Community Purpose Land i.e. state reserve</b> "	CRC has been conditioning this requirement on DA's. Infrastructure within state reserve requires easement tenure to avoid future liabilities should the state seek compensation in the future where our infrastructure places an encumbrance on the land	Recommended



146	D7.13	D7.13 Creek Crossings	Reword 1. as follows "Where a sewer crossing of a water course is proposed, the sewer is to have 1.5m cover. All sewer creek crossings are to be in DiCL. If the cover is less than 1.5m the sewer is to be concrete encased using CLSM type concrete. If the cover is less than 1.5m then the sewer is to be in DiCL and concrete encased Concrete. Regardless of the cover, if the water course is considered unstable and susceptible to erosion, the sewer should be in DiCL and concrete encased."	CRC prefers all creek crossings in DiCL. DiCL is considered more cost effective due to the marginal cost increase over PVC while providing a more robust solution..	Recommended
147	D7.14	D7.14 Property Connections Item 7	For discussion....Amend as follows "Combined Property Drains are not permitted in any development works, unless otherwise approved."	Recommended by Michael Crookes. Discuss with plumbing about frequency.	not supported
148	D7.14	D7.14 Property Connections Item 7	Add sentence to end of item 7 "The route to the manhole through the building from the external entrance to where the manhole is located is to be a minimum of 3m wide by 2.4m high to facilitate access."	This requirement is to ensure that a sufficient access zone to the manhole is achieved through the building.	Recommended
149	D7.15	On Site Effluent Disposal - Flow Rate	It is noted that the standard requirement/flow rate for reticulated mains is 270L/person/day. The on site requirement is 200L/person/day.	It is noted that the standard requirement/flow rate for reticulated mains is 270L/person/day. The on site requirement is 200L/person/day. This has caused significant issues in large on site effluent treatment systems. It is suggested that they be made equal. See DM#5901969	not supported
150	D7.15	D7.15 On-site Sewerage Facilities	***Check with Paul Bates**		Delete
151	D7.16	D7.16 Building Over or Near Sewerage Infrastructure Cause 1 item g	Amend g. as follows "Residential dwellings including any livable areas associated with any form of accommodation type or commercial buildings with internal wall systems are not permitted to be located over sewerage infrastructure. Those parts of a residential dwelling or commercial building that are considered ancillary to the dwelling such as decks, garages and the like will be considered subject to compliance with this section."	Expand the number of examples based on lessons learned since section come into force.	Recommended
152	D7.16	D7.16 Building Over or Near Sewerage Infrastructure Cause 2 item d.	Amend d. 2nd sentence as follows ".....When a building encroachment occurs the easement document is to include a special clause making the property owner responsible for the demolition/removal and reinstatement costs of the building in the event Council has to demolish any part of the building to gain access to the sewer."	Include potential demolition and removal costs that Council would incur to gain access to the sewer.	Recommended
153	D7.16	D7.16 General	Numbering is to be updated as previous section is 7.16		Recommended
154	D7.16	D7.16 General	Amend title as follows "Pump stations and Pressure Rising Mains"	"Rising" main is the correct terminology	Recommended
155	D7.16	D7.16 General	Include superscript "CRC" beside heading to note that CRC has Council Specific Requirements	In the CRC Specific Requirements, CRC will reference design guidelines for Sewage Pump Stations and Switchboards.	Recommended - Council Specific
156	D7.16	D7.16 General Clause 7	Replace wording as follows "Wet well washers are required in all pump stations except in CRC and COOK pump stations."	Make wording clearer	Recommended
157	D7.17	D7.17 Pump Stations Clause 1	Add new item to list "i. Access hatch workshop drawing"	The inclusion of the access hatch workshop drawing will enable operational staff to determine if the design is consistent with their requirements for WH&S.	Recommended
158	D7.17	D7.17 Pump Stations	***Check against op works conditions ***		Delete
159	D7.17	D7.17 Pump Stations Clause 8.	Amend 8. as follows, take the last sentence and make new list item "The requirements of fencing of pump stations is to be confirmed with Council at the time of Operational Works application".	Seems logical to make a separate matter.	Recommended
160	D7.17	D7.14 Pump Stations Clause 14	Add following sentence to end of clause "Unless otherwise advised by council, the generator is to be sized to run both duty pumps"	Recommended by CRC waste operations	Recommended
161	D7.17	D7.17 Pump Stations New Clause	New Clause 17 "Access hatches are to have fall protection.....insert condition wording"	Required for WH&S and to minimize modifications after WA	Recommended
162	D7.17	D7.17 Pump Stations New Clause after 16	Insert new clause "18. Asset identification plates (tagging) are to be attached to equipment i.e. switchboards, wet wells, pumps, flowmeter, generator, pipes and valves etc. Confirm asset tagging requirements with the Local Authority".	Recommended by Asset management. Details to be at descretion of local Council.	Recommended
163	D7.18	D7.18 Sewage Pumping Systems	Include superscript "CRC" beside heading to note that CRC has Council Specific Requirements	In the CRC Specific Requirements, CRC will reference design guidelines for Sewage Pump Stations and Switchboards.	Recommended
164	D7.18	D7.18 Sewage Pumping Systems Table 7.14 Amend Item 7 Top Water Level	Amend wording as follows " Must be set no higher than 300mm below invert level of the inlet sewer. The drop pipe is to terminate at least 50mm above the TWL."	Clarification recommended by project delivery to ensure inlet pipe fully drains.	Recommended
165	D7.19	D7.19 Pressure Mains	Change Title to "Rising Mains"	Correction to terminology	Recommended
166	D7.19	D7.19 Pressure Mains	Change "Pressure Mains" to "Rising Mains" elsewhere in the section.	Correction to terminology	Recommended
167	D7.19	D7.19 Pressure Mains Clause 4	Replace wording as follows "All discharge manholes are to have a protective liner as approved by the local authority and installed in accordance with Manufacturers requirements"	The liners referenced in the current wording of the clause are no longer preferred.	Recommended

168	D7.20	D7.20 General Clause 2	Suggest rewording this clause to "Where the gravity sewer system cannot service or control a development site, Council may approve a private sewage pumping station on the site that would discharge into a manhole preferable within the site or as near as practicable to the site. The section of rising main in public land will be donated to Council as Council's infrastructure and a boundary kit is to be installed at the site boundary to delineate between Council and private owned infrastructure. A private rising main is not acceptable within a Council controlled road reserve".	The suggested rewording is to emphasise the preference to minimize the length of rising main that Council's are responsible for and to install a boundary kit at the boundary to identify the limit of ownership.	Recommended
169	D7.20	D7.20 General New Clause after Clause 2	Insert following wording "3. The minimum rising main diameter that is within the road reserve and transferred to Council ownership is to be 90mm OD". ***Check with plumbing, ben**		not supported - CRC to supply pump type to be specified
170	D7.20 D7.21 D7.22 D7.24	D7.20, D7.21, D7.22, 7.24	Change "pressure" main to "rising" main at all instances	Correction to terminology	Recommended
171	D7.23	D7.23 Private Pump Station Sizing and Operation Clause 4	Insert following wording at end of Clause 4 " Provide contact details of the property owner/manager and any maintenance contractor the owner has an agreement with in the event Council is notified of a red light/alarm. ". ***Check with plumbing, ben**	This clause has been recommended by waste operations to enable the owners be contacted in the event of alarm .	Recommended but add wording "where not a single dwelling."
172	D7.23	D7.23 Private Pump Station Sizing and Operation New clause	Insert following wording "5. Where not a single dwelling, an Emergency Response Plan (ERP) is to be prepared and included in the Operation and Maintenance Manual held on site and with the property owner. The property owner is responsible for maintenance of the private pump station and shall have a maintenance agreement in place with a suitably qualified contractor at the commencement of operation. Details of the ERP and maintenance agreement is to be supplied for council records at works completion. "	This clause has been recommended for inclusion to address the issue of Council being requested to deal with blockages or other operational issues with private pump station such as those at body corporates.	Recommended
173	D7.26	D7.26 Telemetry Systems	Include superscript "CRC" beside heading to note that CRC has Council Specific Requirements	In the CRC Specific Requirements, CRC will reference design guidelines for Sewage Pump Stations and Switchboards.	Recommended
107	D6.08	D6.08 DEDICATION OF LAND, EASEMENTS & PERMITS TO ENTER	Addition of point g. All water mains in Community Purpose Land i.e. state reserve	Requesting easements in state land for water mains.	Recommended
174	D8.03	Reference Documents	Update for NBN Co Developer document	<a href="https://www.nbnco.com.au/content/dam/nbnco/documents/installing-pit-and-conduit-infrastructure.pdf">https://www.nbnco.com.au/content/dam/nbnco/documents/installing-pit-and-conduit-infrastructure.pdf</a>	Recommended
175	D8.07	Table 8.1 Lighting Categories	Put existing commentary into manual	Existing commentary to be put into manual	Recommended
176	D8.07	Road Lighting	Amendment to wording: 1. All road lighting designs shall be prepared by <b>electricity provider approved</b> (Deleted: an approved Engineering Consultant) Registered Professional Engineer Queensland and shall be included in the design submission for acceptance by Council. (Cairns Regional Council lighting design are submissions to be made under the Public Body Lighting Scheme Approval) .	amended to align better with Ergon energy approved consultants/design requirements	Recommended
177	D8.07	Road Lighting	Addition to wording: 3.2. All light columns, luminaires and lamps are to be specified from the Electricity Authority's Lighting Construction Manual and Underground Construction Manual. Council's required luminaires are listed in Table D8.1 for the relevant road hierarchy.	Consolidating 2 conditions.	Recommended
178	D8.07	Road Lighting	All installation works shall be in accordance with the Electricity	To ensure approved contractors are undertaking electrical work. Requirement of Ergon.	Recommended
179	D8.07	Road Lighting	Amended wording to provide clearer delineation of roles: <b>5.4. The design and installation of lighting schemes on declared (state) roads are subject to the requirements and approval of the Department of Main Roads.</b>	Correct wording to: The design and installation of lighting schemes on declared (state) roads are subject to the requirements and approval of the Department of Main Roads.	Recommended
180	D8.07	Road Lighting	Condition 8 Updated reference standard from 'supplementary to current AS1158 - Lighting for Roads and Public Spaces - Lighting of Pedestrian crossings.	Updated Luminaire type and lamp type options. Please see full document for details. Additional note added: <b>4. All major and minor road lighting luminaires (Except Nostagia) are to be an aeroscreen fixture installed with a zero Degree upcast.</b>  See DM5: 4812242	Recommended
181	D8.07	Road Lighting	<b>Added 18. Foundation footing for minor road lighting must be constructed in accordance with electrical energy providers specification.</b> (Deleted: Foundation footing for minor road lighting must be cast in situ, a precast concrete foundation is not permitted without prior approval of council.)	Condition amended to consider pre-cast options, subject to energy providers specification:	Recommended

182	D8.07	Road Lighting	20.17. The edge of a new driveway (inclusive of access aprons) shall be no closer than 1.0m to any power pole or street light pole.	Amended wording :To remove conflicts of pole/driveway.'	Recommended - subject to additional wording 'power pole, street light pole or electrical junction box'  DRAWING - S1015 - AMEND NOTES AND CROSS SECTIONS TO REFLECT THIS
183	D8.07	Road Lighting	Added:18. Central high mast lighting is the preferred arrangement at roundabouts with a diameter greater than 6m.  Deleted: The preferred lighting arrangement for roundabouts with a central island diameter of 6m or greater is a centrally located short arm high mast lighting column.	Amended roundabout wording to simplify	Recommended
184	D9.02	Reference Documents	Update to AS1158 to reflect current document		Recommended
185	S1.06	General	Updated references to sections of AS3798 to current document.	<a href="https://infostore.saiglobal.com/en-au/Standards/AS-3798-2007-304347/">https://infostore.saiglobal.com/en-au/Standards/AS-3798-2007-304347/</a>	Recommended
187	S2.02	Reference Documents	Updated reference for AS1742 from Queensland Department of Transport and Main Roads publication, to <b>Australian Standards</b>	Harmonisation/Crossover to the AS version currently being undertaken.	Recommended
188	S2.04	Asphaltic concrete surfacing	Removed 'Commentary Available'		Recommended
189	S2.04	Asphaltic concrete surfacing	Removal of : 1. For surfacing on pavements with depth 30mm, the material quality requirements, material quality compliance testing requirements and all other matters pertaining to Asphaltic Concrete road pavement surfacing shall conform to the requirements as specified in the "Asphalt Specification for Subdivision Pavements", published by the Australian Asphalt Pavement Association (Queensland Branch).		30mm was retained. No replacement required
190	S2.23	Road Furniture and Pavement Marking	Updated reference for AS1742 from Queensland Department of Transport and Main Roads publication, to <b>Australian Standards</b>	Harmonisation/Crossover to the AS version currently being undertaken.	Recommended
191	S3.02	Reference Documents	Updated Concrete Masonry Association of Australia Specification References T44 to PA03, T45 to PA02, T46 to PA01, <b>***and changed throughout document</b>	Updated Document references	Recommended
192	S3.02	Reference Documents	Deleted: Clay Brick and Paver Institute Specifications - Clay paving Design and Construction Added: Think Brick - Clay Paving Manual - Construction Guidelines for Clay Masonry ***and updated references throughout manual	Updated Document references	Recommended
193	S4.02	Reference Documents	Updated AS 1761 to AS2041 - Buried corrugated metal structures, helically formed sinusoidal pipes	Updated Document references <a href="https://infostore.saiglobal.com/en-au/Standards/AS-NZS-2041-4-2010-1420421/">https://infostore.saiglobal.com/en-au/Standards/AS-NZS-2041-4-2010-1420421/</a>	Recommended
194	S4.02	Reference Documents	Updated AS 1650 to AS4680 - Hot dipped galvanised coatings on ferrous articles	Updated Document references <a href="https://infostore.saiglobal.com/en-au/standards/as-nzs-4680-2006-r2017--385621/">https://infostore.saiglobal.com/en-au/standards/as-nzs-4680-2006-r2017--385621/</a>	Recommended
195	S4.02	Reference Documents	Removed: AS 2423 Galvanised Wire Fencing Products.	AS have withdrawn this document, and document is not directly referenced in the the body of the specification.	Recommended
196	S4.02	Reference Documents	AS 3600 included as directly referenced in document.	Updated Document references	Recommended
197	S4.02	Reference Documents	Wording adjusted to reflect title - AS 3725 Design for installation of Buried Concrete Pipes	Updated Document references	Recommended
198	S4.02	Reference Documents	MRTS03 amended to reflect naming adjustments made by TMR	Updated Document references Amended Naming Convention  <a href="https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Specifications/3-Roadworks-Drainage-Culverts-and-Geotechnical#MRTS03">https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Specifications/3-Roadworks-Drainage-Culverts-and-Geotechnical#MRTS03</a>	Recommended
199	S4.02	Reference Documents	MRTS04 included as referenced in document	Updated Document references	Recommended
200	S4.02	Reference Documents	WSA05-2006 adjusted as document has been updated	Updated Document references <a href="https://www.wsaa.asn.au/shop/product/5646">https://www.wsaa.asn.au/shop/product/5646</a>	Recommended - but confirm with water group at the next meeting (Note)
201	S4.02	Reference Documents	Updated titling: American Association of State Highway and Transportation Officials (AASHTO) - M197-82 Aluminium Alloy Sheets for Culverts and Underdrains. American Association of State Highway and Transportation Officials (AASHTO) - M196-84 Corrugated Aluminium Alloy Culverts and Underdrains.	Updated Document references <a href="https://standards.globalspec.com/std/10031170/aashto-m-197">https://standards.globalspec.com/std/10031170/aashto-m-197</a>	Delete - no update
202	S4.02	Reference Documents	American Association of State Highway and Transportation Officials (AASHTO) - M196-84 Corrugated Aluminium Alloy Culverts and Underdrains.	Updated Document references <a href="https://standards.globalspec.com/std/10031170/aashto-m-197">https://standards.globalspec.com/std/10031170/aashto-m-197</a>	Delete - no update

203	S4.03.4	Steel Reinforced Concrete Pipes	Delete Clause S4.03.4 as exposure classifications are covered in AS4058 referenced in CI S4.03.1	Remove clause and move to adoption of product Australian Standard. Appendix E of AS4058 details allowable concentrations of impurities including sulfate and chlorides.	Recommended
204	S4.05.2	Reinforced Concrete Box Culverts	Delete Clause S4.05.2	Remove clause and move to adoption of product Australian Standard. Exposure classifications are appropriate specification are detailed in AS1597.1 and AS1597.2	Recommended
205	S4.07	Bedding Materials	Amend Clause to adopt grading limits as detailed in Table 6 of AS3725.	Grading for bedding material is provided in AS3725 and correlate to the bedding factors adopted for design in the standard. Adopting a different grading may result in insufficient bedding strength.	remove FRP reference in title. ADD SECTION ON BLACKMAX TYPE PRODUCT/And installations to be as per manufacturer standard.
206	S4.07	Bedding Materials	2. The bedding material to be used in conjunction with box culverts should conform to the grading specified in the Main Roads Standard Specification <b>MRTS04 for drainage structures.</b>	Wording has been amended to reflect amendments within the MRTS's, which now sits under the General earthworks section – see MRTS04 – 19.2.6 (doc pg 51)	Recommended
207	S4.13	Backfill Material - Item 1	Change wording to: 1. Backfill material shall be as per the Australian Standard relevant to the pipe type being used.	Request revision of condition or wording to include current construction technique of flooding graded sand.	Adjust to as per Australian standard bedding (check if there are different standards for bedding concrete pipes v blackmax etc0
208	S4.21	Drainage Structures	Add clause for Precast Gullies, Manholes and Field Inlets. Precast Gullies Manholes and Field Inlets shall be RPEQ Design Certified by manufacturer.	Precast structures are utilised by contractors and approved by councils and QDTMR, by adding the clause it covers their appropriate specification. Aligns with use in subdivision and in QDTMR projects.	put in wording around RPEQ considering this as an appropriate solution in the circumstance.
209	S4.21	Drainage Structures	Delete References to step irons as these are no longer used.  3. Concrete benching shall be shaped as specified and shall have smooth, even surfaces and neat edges. (Deleted: Step irons shall be installed horizontal, vertically in line, and shall project uniformly from the walls, where the depth of the structure is greater than 1.5m.)	Amended to reflect current requirements and practices	Recommended
211	S5	Appendix A Title page	Title page to refer to "CTM Water Alliance Design and Construction Code, <b>Version 1.0 Aug 2019</b> "	Update to current CTM code version	Recommended
212	S5	Appendix A	<b>****CRC to provide updated list****</b>	Update to current CTM code version	Recommended
210	S4.21	Drainage Structures	Delete Step iron reference. Delete Condition. 4. Where step irons are not cast-in-place, they shall be epoxy mortared into drilled holes. The joints between the step irons and the walls shall be completely filled so that the step irons are held rigid and the joints are watertight. <b>Add: All manhole installations must have 1.5m clearance available on three sides to facilitate confined space access.</b>	Amended to reflect current requirements and practices	Recommended
213	S5 - Appendix A	Correction of drawing reference	Amend reference from S2015 to SEQ WAT standard drawings (1205-1 and 1206-1) in document body	As noted. See #5980862	Not supported - Drawing S2015 reinstated.
215	S5.01	S5.01 Scope Clause 4	Replace referencde to WSA code with <b>CTM Water Alliance Design and Construction Code</b>	Update reference	Recommended
216	S5.01	S5.01 Scope Clause 5	Replace referencde to WSA code with <b>CTM Water Alliance Design and Construction Code</b>	Update reference	Recommended
217	S5.02	S5.02 Reference Documents	Add new standard " <b>AS 5488 Classification of Subsurface Utility Information</b> "	Update reference list	Recommended
218	S5.02	S5.02 Reference Documents	<b>Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019)</b>	Update reference	Recommended
214	S5 - Appendix A	Correction of worded reference	Appendix A of S5 indicates to substitute the SEQ WAT standard drawings (1205-1 and 1206-1) related to thrust blocks with S2015 which is not included in Issue 7	Include reference to (1205-1 and 1206-1) in next revision. See #5980862	Not supported - Drawing S2015 reinstated.
219	S5.02	Reference Documents	Inclusion of AS 4441 Oriented PVC (PVC-O) pipes for pressure applications		water and waste next meeting
220	S5.02	Reference Documents	Deleted: WSA03-2002 - Dual Water Supply Systems - Supplement to the water supply code to Added: WSA 03 - 2011- Water Supply Code of Australia	Updated Reference Documents	Deferred - Water and waste next meeting
222	S5.19	S5.19 Bedding Clause 3	<b>Amend wording "For Cairns Regional Council, With exception of Cairns Regional Council, Detector tape / marker wire shall be....."</b>		Recommended

223	S5.21	S5.21 Connection to Existing	New numbered item "2. The proposed date of any water connection work is to be submitted to and agreed with CRC Water and Waste as early as possible and at least 1 month in advance. The scheduled date of the connection work is to then be confirmed by the Contractor exactly 1 month prior to the date. Any change to the date within two weeks of the scheduled date will result in the contractor being responsible for any additional costs incurred by Council to change to the new date.	This new clause will enable service providers to program works more effectively.	Recommended - Generic wording Used.
224	S5.25	S5.25 Thrust Blocks	New numbered item "5. Where thrust blocks are cast to flanged fittings the concrete is to be kept sufficiently clear of the bolts so that they can be bolted and unbolted."	This new clause seeks to avoid flanged fittings from being encased in a blob concrete.	Recommended
225	S5.26	S5.26 Water Service Connections	CRC Specific "Connections to live mains or mains that will be donated to Council for either subdivision connections, water connections or connections for irrigation are to be undertaken by CRC."	CRC undertakes all connections. The wording also seeks to avoid contractors from installing connections prior to handover.	Recommended
226	S6	Appendix A Title page	Update version to Version 1.0 Aug 2019 from 2015	Update reference	Recommended
227	S6	Appendix A Drawing Addendum	***CRC to provide updated list***	Update reference	Recommended
228	S6	Appendix B Title page	Update version to "WSA 04-2014" from 2005	Update reference	Recommended
229	S6	Appendix A Drawing Addendum	Update version in title to "WSA 04-2014" from 2005	Update reference	Recommended
230	S6	Appendix A Drawing Addendum	***CRC to provide updated list***	Update reference	Recommended
231	S6.01	S6.01 Clause 4	Amend as follows "Aspects of modification or clarification of the codes are detailed in Appendix A and B of Design Manual - D7"	Correction	Recommended
232	S6.02	S6.02 Reference Documents	Add new standard "AS 5488 Classification of Subsurface Utility Information"	Update reference list	Recommended
233	S6.02	S6.02 Reference Documents	Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019)	Update reference	Recommended
234	S6.02	S6.02 Reference Documents	Amend version of WSA 02 to "2014"	Update reference	Recommended
235	S6.02	S6.02 Reference Documents	Amend version of WSA 05 to "2013"	Update reference	Recommended
236	S6.02	S6.02 Reference Documents	Include CRC Guidelines for Water and Sewage SPS's and switchboards under Reference Documents. "Cairns Regional Council Design Guideline Switchboards Design Guideline Sewage Pumping Stations"	Update reference	Recommended
221	S5.05	Polyethylene Pipe	Addition to wording: 2. PE pipes to be minimum PE100 PN16. As noted in D6 – Appendix A(3.8). Designing engineer is to consider the oxidative reductive potential of the water and an appropriate determination pipe class is to be specified.	Updated Reference Documents	Deferred - Water and waste next meeting
237	S6.02	Reference Documents	Update to Title of AS 1260 as per Australian Standard update: AS/NZS 1260 - PVC-U pipes and fittings for drain, waste and vent applications	Updated Reference Documents	water and waste next meeting
239	S6.05	S6.05 Ductile Iron Clause 1	Amend wording of Clause 1 as follows "Ductile Iron pipes shall be manufactured and cement lined in accordance with AS2280 by an Australian Standards quality endorsed company. DI pipes with normal cement lining shall not be used for gravity sewers, which should be Calcium Aluminate lined. Pipes shall be lined with calcium aluminate cement for sewerage applications. For sections of pressure rising mains sewers that are permanently wet, DI pipes with normal cement lining may be used subject to Council approval. Sections of pressure (rising) rising mains subject to alternate wetting and drying shall have calcium aluminate lining. Where calcium aluminate lining is not available, fusion bonded epoxy lining should be used."	Recommended by Project Delivery. Flanged fittings are apparently no longer available in DICL with calcium aluminate lining - i.e. for sewerage applications. Feedback from manufacturers is that to manufacture flanged pipes, the spigots and sockets are cut off and flanges are fitted. There have been too many failures of the lining in this instance that they have ceased this practice. The alternative is flanged pipe with fusion bonded epoxy lining.	Recommended
240	S6.08+	After S6.08 Add new clause	New clause S6.09 PE Manholes **CRC to provide wording***		RH to submit prior 29th December
241	S6.09	S6.09 Manhole Covers	Amend dot point 2 "Parks, verges etc" New dot point "3. Roads, Carparks etc - Class D"	For clarity, spigot/socket pipes with calcium aluminate lining are still manufactured to specific lengths.	Recommended
242	S6.17	S6.17 Connection to Existing	New numbered item "The proposed date of any sewerage connection work is to be submitted to and agreed with CRC Water and Waste as early as possible and at least 1 month in advance. The scheduled date of the connection work is to then be confirmed by the Contractor 1 month prior to the date. Any change to the date within two weeks of the scheduled date will result in the contractor being responsible for any additional costs incurred by Council to change to the new date.CRC to insert notice requirement wording from conditions"		Recommended (removed 'EXACTLY!')
243	S6.20	S6.20 Pressure (Rising) Mains	Replace all instances of "pressure" with "rising"	Attached is an amended WSAA code from Power and Water Corporation (NT), i.e. a place with similar climatic conditions and H2S problems, where flanged pipes and fittings at pump stations are DIFBL (i.e. Ductile Iron Fusion Bonded Lining).	Recommended

244	S6.23	S6.23 Pump Stations	Include superscript "CRC" at heading to inform that CRC has CRC specific requirements.		Recommended - Council Specific
245	S6.26	S6.26 Testing of Manholes	The heading should read "Testing of manholes"	We have recently been having issues with designers specifying flanged D1CL pipes for sewerage use (in accordance with FNQROC) with calcium aluminate lining for use at sewage pump stations and aerial crossings.	Recommended
246	S6.28	S6.28 Pressure (Rising) Mains	Replace all instances of "pressure" with "rising"	Correction to terminology	Recommended
247	S6.29	S6.29 CCTV Inspection of Sewers Subclause 3 a	The reference to include year WSA 05 - 2013	Correction	Recommended
248	S6.29	S6.29 CCTV Inspection of Sewers Subclause 3 c	***check with Plumbing and Matt about video file types***		RH to submit prior 29th December
238	S6.02	Reference Documents	Update to Title of AS 3996 as per Australian Standard update: AS/NZS 3996 - Access covers and grates	Updated Reference Documents	water and waste next meeting
249	S7.02	Reference Documents	Update AS1553 to AS 4855 Welding consumables - Covered electrodes for manual metal arc welding of non-alloy and fine grain steels ***** Also updated throughout document	Superseded document	Recommended
250	S7.02	Reference Documents	Update AS2203 to AS/ISO 17632 Welding consumables - Tubular cored electrodes for gas shielded and non- gas shielded metal arc welding of non-alloy and fine grain steels ***** Also updated throughout document	Superseded document	Recommended
252	S8.02	Reference Documents	Update AS3785 to AS3879 Solvent cements and priming fluids for PVC (PVC-U and PVC-M) and ABS and ASA pipes and fittings ***** Also updated throughout document	Superseded document	Recommended
251	S7.02	Reference Documents	Update AS2717.1 to AS/NZS 14341 Welding consumables - Wire electrodes and weld deposits for gas shielded metal arc welding of non alloy and fine grain steels ***** Also updated throughout document	Superseded document	Recommended
253	S8.10	Irrigation pipework	1. All below ground pipework shall be high chlorine resistance unplasticised Poly-vinyl Chloride (uPVC) unless otherwise approved. All pipes shall be Class 12 minimum with Class 18 fittings.	Addition of high chlorine resistance pipework due to heat/chlorine 'acity' - in high temperature environments	delete - PVC not PE.
254	STD DRWG - NEW	CBD Pathway treatment	New drawing to illustrate cbd footpath treatment of gothic charm/ghost gum colour palette, tactiles, banding to align with building features, stencilling guidelines, imprinted picture guideline, binenclosure, bubbler, parking meters	Make council specific	Recommended - Council Specific
255	STD DRWG - S1000	Kerb & Channel drawing	Edge Restraint dimension - "200 min" text to be changed to 300mm	Requires discussion from group	Recommended
256	STD DRWG - S1000	Kerb & Channel drawing	Change note text for 5. to be changed for better clarify 'Saw Cut'		Recommended
257	STD DRWG - S1005	Typical Road Cross Sections - Low Density Residential section	Change title to align with planning scheme. Low density residential replaced with "Rural residential Road"		Recommended
258	STD DRWG - S1015	Access Crossover	New Note: Refer to S2005 when hydrants are located in driveways		Recommended
259	STD DRWG - S1015	Access Crossover	Additional Sectional View (as per markup) which shows how driveway interacts with the crossing and the grades required for compliance. (Note: C/S to be amended to reflect FNQROC Grades - See D1 and D2)		Recommended - subject to amended grades
260	STD DRWG - S1040	Location of signs section	Request New Notes: Loop roads are to have two signs on the same pole in opposing directions.		Recommended
261	STD DRWG - S1040	Location of signs section	Request New Notes: Where not adjusted by note 5, signs are to be located on the opposite side of the street as the T intersection. Street name plate post on T insection on the opposite side of the street, double plates for loop roads on same post in either direction		Recommended
262	STD DRWG - S1045	Notes	Amend notes to change TMR standard drawings from 1316 & 1318 to 12XX series of drawings. Note to read: 2. Refer Main Roads Standard Drawing 1250 & 1260 for installation of precast culverts and reinforced concrete bases. Remove note 3.	correct -typo in note 8. Correct the DENSO tape reference to 'manufacturers recommendation'	change wording to cast in situ, with precast to be used by exception, subject to council approval
263	STD DRWG - S1110	Typical driveway layout cross section	Add note: All grates within driveway/roadway are to be class D for vehicle traffic.		Recommended
265	STD DRWG - S2015	Thrust block detail	Drawing to be reinstated.		Recommended - amendment to condition 4 - for valves greater than 100dia

266	STD DRWG - S2038	Standard 20mm water connection	all 200mm reference to be changed to 300mm	Bringing it into alignment with existing specifications	Recommended - Amend wording of note 5 to read - Offsets are to be as per FNQROC Development manual D5.XX , Nominally xxxx(insert remainder of condition)
264	STD DRWG - S2005	Notes	Amend note 11/ to include a new note to refer to S1015 when hydrants in driveways. Note to read: Where located in paved areas, use expansion joint material to allow for removal of surround for maintenance without breakage - Refer S1015 for driveway detail. Refer S1035 for pathway/bikeway detail.		Recommended
267	STD DRWG - S4110	Contraction Joint detail	Amend galv mesh location to be on bottom of centrally placed mesh	As per other contraction joint detail	Add note wording to be saw cut detail to be as per council requirement
269	STD DWGS - S3020 S3025	Standard Drawing S3020 & S3025 Sewerage Pump Station cast in-situ & Typical Sewerage Pump Station	Amend drawing to include following amendments: - Change title replace "Sewerage" with "sewage" - Note 11 change to "stainless steel" - References to "gauge cock" changed to "AU Cock" - minor other amendments  **Amended Drawing to be provided**	Amendments as recommended by waste Operations	spelling mistake (gauge cock) - Requirement to specify stainless steel grade (316 or 416)
268	STD DWGS	PWD Bubbler Std Drawing	PWD/Mobility Access Water Bubbler Standard Drawing	See # 6210752	Not Recommended - CRC Specific
270	STD DWGS - NEW	Sound Attenuation Fence	Need a drawing outlining sound attenuation fencing for council roads outlining the positions (alignments) and requirements for fencing	Not recommended - TMR have a drawing for this.	Not Recommended
271	STD DWGS - S1000F	Provision for asphalt overlay height in kerb	Amendment to drawing - Provision for asphalt overlay height in kerb - See TMR SD1033	When councils asphalt overlay, it changes the relative height of the kerb(ie. instead of the asphalt meeting the lip of the semi mountable, it goes up into the diagonal portion. Introduction of a standard to prevent that. See email/TMR drawing. See #5991008	Recommended
272	STD DWGS - S1016	Kerb Ramps	Request that drawings be amended to reflect the layout on the TMR drawing (KRG1)	Better articulates placement on the curves. Note that TGS's are indicated(FNQROC requirement is for CBD and environs/minor collectors and above). DM#5937027 DM#5937028	Recommended
273	STD DWGS - S1046	Excavation, Bedding and Backfilling of Concrete Pipes	300mm dimension for "Under Existing Pavements" not sitting in the right place. Remove.	See attachment for relevant Standard Drawing Number. See # 6197681. remove dimensions. ALSO - In table(MAXIMUM TRENCH WIDTH) - change maximum width 'E' to 'B'	Recommended
274	STD DWGS - S1050	Grated Kerb Inlet Pit Pipe DIA ≤ 600mm	Section B note to be change to reference a different number in Notes. "Subsoil tail (refer note 8)." needs to be amended to reference "note 7"	See attachment for relevant Standard Drawing Number. See # 6197681	Recommended
275	STD DWGS - S1055	Grated Kerb Inlet Pit Pipe DIA > 600mm	Section B note to be change to reference a different number in Notes. "Subsoil tail (refer note 10). Allow subsoil to drain." needs to be amended to reference "note 9"	See attachment for relevant Standard Drawing Number. See # 6197681	Recommended
276	STD DWGS - S1060	Grated Kerb Inlet	Include Precast One Piece Kerb Inlets	One piece kerb inlets that combine lintel, gully and grate in one piece units. Discussion required - Request to include one - piece precast units - Utilised by QDTMR and other councils	Recommended
277	STD DWGS - S1065	Stormwater Manholes	Include a note on the option of Precast.	Contractors utilise precast chambers and conversion slabs.	Recommended
278	STD DWGS - S1070	Field Inlet Pits	Include note on Precast alternative. Precast Field Inlet Pits shall be RPEQ Design Certified by manufacturer.	Precast structures are utilised by contractors and approved by councils and QDTMR, by adding the clause it covers their appropriate specification. Aligns with use in subdivision and in QDTMR projects.	Recommended
279	STD DWGS - S1085	Concrete Pipe Headwall Wingwalls and Apron	Multiple Pipes has a dimension that is floating around "T1". Needs to be moved down as part of the details for Section A	See attachment for relevant Standard Drawing Number. See # 6197681	Recommended
280	STD DWGS - S1085	Concrete Pipe Headwall	Include note on Precast alternative. Precast Headwalls are an acceptable alternative and shall be RPEQ Design Certified by manufacturer.	Precast structures are utilised by contractors and approved by councils and QDTMR, by adding the clause it covers their appropriate specification. Aligns with use in subdivision and in QDTMR projects.	Recommended
281	STD DWGS - S1105	Rural Allotment Accesses	Rotate the guideposts for the culvert to suit the travel direction of the access	See attachment for relevant Standard Drawing Number. See # 6197681	Recommended
283	STD DWGS - S2000	Standard Drawing S2000 Valve and Hydrants	Amend drawing to provide material dimensions and material type and grades for strapping of valves to the thrust block. Refer #5906262  **Amended Drawing to be provided**	Dimensions and materials not shown on the drawing. Have been requested previously by Contractor/consultants to advise Council's preference.	RH to submit prior 29th December

284	STD DWGS - S2010	Standard Drawing S2010 Kerb/Road Markers	Amend drawing to include Marker Plate detail for Vacuum Pods "VP". **Amended Drawing to be provided**	The marker plate would identify the location of vacuum pods. Applicable to vacuum sewer system.	Recommended - RH to submit
285	STD DWGS - S2011	Standard Drawing S2011 Steel Marker Posts	Amend drawing to include Marker Plate detail for Vacuum Pods "VP". **Amended Drawing to be provided**	The marker plate would identify the location of vacuum pods. Applicable to vacuum sewer system.	Recommended - RH to submit
286	STD DWGS - S2015	Standard Drawing S2015 Rev C	Reinstate drawing from version 6 2014.	It is believed that the drawing may have been mistakenly removed and replaced with CTM/SEQ thrust block drawing. However the CTM/SEQ drawing list in Appendix A of the water specification refers to S2015 instead of the CTM/SEQ thrust block drawing.	Recommended
287	STD DWGS - S2050	Standard Drawing S2050 Standard arrangement of >80mm water and fire installations	Reference to check valve as per #5870552 **Amended Drawing to be provided**	New Notes: Testable single check valve on the drawing, and new note: 4. Testable Single Check Valve is to be installed by Council. Initial and Annual Testing and Maintenance of this valve is the responsibility of the property owner.	Recommended
288	STD DWGS - S3000	Sewerage Manholes	Add note: Precast Manholes manufactured in accordance with AS4198 and	Aligns with existing FNQROC specification Clause S6.08	Recommended, on the basis of including wording of section S6.21, points 4 and 5.
289	STD DWGS - S3000	Standard Drawing S3000 Sewerage Manholes	Amend drawing to include following amendments: - Note 14 about lining to be reworded "internal lining to discharge manhole to be a product approved by Council." - On detail of discharge manhole remove reference to DICL.	The lining systems noted on the drawing are not obsolete. Prefer not to nominate a brand as these may change. The drop pipe on the manhole does not need to be DICL.	Recommended
290	STD DWGS - S3020	Standard Drawing S3020	Amend drawing to make the guiderails Stainless Steel not galvanised. Refer #5974223 **Amended Drawing to be provided**	At present FNQROC seems to specify galvanised guiderails for pumps in pump stations. Of late we have started specifying Stainless Steel guiderails on some of our projects, and changed from galvanised to SS during construction of others.	Recommended
282	STD DWGS - S1105	Rural Allotment Access		Request amendment to wording: Where cover to RC pipes is less than 260mm pipe shall have 100mm concrete ENCASEMENT or bridging slab as per S1015. See # 6197681. Note 4 refers to a 100mm concrete surround where RC pipe has less than 260mm. Is the 100mm concrete surround meant to actually surround the RC Pipe or is it meant to be more of a bridging slab.	Recommended
292	STD DWGS - S9000	Standard Drawing S9000 Aerial Pipe Crossings	Include width and thickness of the steel protection grill straps Remove reference to height "1800mm" ****To be advised****	Details of the grill design are not provided on the drawing. Note that S9001 shows details.	Recommended
291	STD DWGS - S4210	Street Tree Planting	Reintroduction (see S4210- Rev A) of comment pointing to root barrier '2000 long x 600 deep root control barrier 300mm behind kerb or inside face of subsurface drainage trench'	Removed in 2006 through dev manual process, request is to reintroduce. See DM#5763725	Recommended
294	STD DWGS - S3005	Standard Drawing S3005 Property Connection Branches	Amend drawing to include following amendments: - Remove detail of Type A PCB - Removal of Type E1A **Check with plumbing**  **Amended Drawing to be provided**	CRC does not recommend use of type A PCB's due to possibility of connecting to the riser. CRC waste operations is not supportive of Type E1A PCB's due to risk of loading vertically on the sewer. **To be discussed with plumbing**	Request to remove type E1A not supported Remove all type A( sections (Type A (and it's section above), Type A1, Type A2) Remove comment (depth >1.5m) below Type E in bottom right hand corner
293	STD DWGS - S1050	Grated Kerb Inlet	Include Precast One Piece Kerb Inlets	One piece kerb inlets that combine lintel, gully and grate in one piece units. Utilised by QDTMR and other council	Recommended
294	STD DWGS - S4110	Traffic Islands/Medians	Addition of the wording from the Dev manual: <b>Traffic islands or medians of less than 2m width to be hard surfaced in concrete with a patterned or broomed finish incorporating a coloured pigment in accordance with Council's requirements. This colour shall be terracotta unless otherwise approved by Council</b>		Recommended
AP1	AP1	AP1.28 Sewerage Reticulation plan and long section	p. Details of pumping stations including location, inlet/outlet levels, <b>overflow details (location and invert levels)</b> , cut-off levels, electrical switchboard layout and water supply, size of pumping plant.	additional detail required	Recommended



	D4.09	Pipes and Box Culverts	Include the use of Blackmax type pipe: a. Where specifically approved for use by Council,		Supported
	D4.03	Reference Documents	Australian Standards AS 5065 Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications" AS 2566 Buried flexible pipelines Installation		Supported
186	STD DWGS - S1000	Kerb and Channel	Inclusion of an asphalt overlay provision on the kerb. Marked up as per DTMR drawing		Recommended
	S4.04		Request the introduction of S4.06 POLYPROPYLENE STORMWATER PIPES 1. The use of polypropylene stormwater pipes must be at the express permission of the receiving Council. All pipework and fittings must conform in all respects to AS 5065 and installation must be in accordance with AS 2566. S4.05 REINFORCED CONCRETE BOX CULVERTS (RCBC)		Recommended. Request for inclusion made at Council Consultation meeting
	S5	Appendix B	****CRC to provide updated list****		Recommended
	Council Specific	CRC Specific Drawing Water New Drawing S9022 - CRC District Water Meter	CRC Specific Drawing Water New Drawing S9022 - CRC District Water Meter		Recommended - Council Specific
	STD DWGS - S2011	Steel Marker Posts	Delete - Duplicated data of S2010		Review