

| Item | Section | Title | Amend / New / Removal | Description | Additional Information: | Recommendation | Outcome |
|------|---------|--------------------------|---|--|-------------------------|----------------|---------|
| 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 " | Often hydraulic reports are submitted that are out of date and do not reflect the boundary conditions or existing pipework because changes have occurred over time with both internal and external pipework arrangement of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 | DONE |
| 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 | DONE |
| 3 | AP1.22 | AP1.22 Add new list item | Add "k. location of utilities" | | | Recommended | DONE |
| 4 | AP1.23 | AP1.23 Add new list item | Add "h. location of utilities" | | | Recommended | DONE |
| 5 | AP1.27 | AP1.27 Item e | Amend k to read "Location, size and material of existing sewers" | | | Recommended | DONE |
| 6 | AP1.27 | AP1.27 Add new item | Add "kk. Set back between pump station and habital dwelling" | | | Recommended | DONE |
| 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 | DONE |
| 8 | AP1.29 | AP1.29 Item f | Amend f to read "Location, size and material of existing sewers" | | | Recommended | DONE |

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| 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 | Minor change | Recommended - Council Specific | DONE |
| 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. | #6223210 | Recommended - Council Specific | DONE |
| 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. | Minor change | Recommended - Council Specific | DONE |
| 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. | Minor change | Recommended - Council Specific | DONE |
| 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. | Minor change | Recommended - Council Specific | DONE |
| 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. | Minor change | Recommended - Council Specific | DONE |
| 15 | Council Specific | CRC Specific Drawing Various | No dogs on playground equipment sign | | | Recommended - Council Specific | DONE |
| 16 | Council Specific | CRC Specific Drawing Various | Wheelie Bin Lid Restrictor | | | Recommended - Council Specific | DONE |

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| 17 | Council Specific | CRC Specific Drawing Various | CBD Bin Cabinet | | | Recommended - Council Specific | DONE |
| 18 | Council Specific | CRC Specific Drawing Various | CRC Water Fountain | | | Recommended - Council Specific | DONE |
| 19 | Council Specific | Standard Drawing | CRC Preferred Typical Bicycle Treatment for Single Lane Roundabouts | | | Recommended - Council Specific | DONE |
| 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 Townsvilles <i>Standard Drawing Sewerage SD-421 Sewerage Pump Stations Package Fibre reinforced Plastic</i> . | | | Recommended - Council Specific | DONE |
| 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 whats stated in D6.07 clause 8. | | Recommended - Council Specific | DONE |
| 22 | CP1.17 | CRC Specific - Construction Procedures CP1.17 Application forPrivate Works | Include the following text " CRC only undertakes private works for water infrastructure. CRC does not undertake any private works for sewerage infrastructure ". | To provide clarification to be consistent with CRC practices. | | Recommended - Council Specific | DONE |
| 23 | D6.16 | CRC Specific - Design Guideline - D6 Water Reticulation D7.16 General | Include following text " Refer to CRC Design Guideline for Water Pump Stations ". | CRC has developed Design Guidelines for water Pump Stations, Sewage Pump Stations and Switchboards | | Recommended - Council Specific | DONE |
| 24 | D6.17 | CRC Specific - Design Guideline - D6 Water Reticulation D7.17 Telemetry Systems | Include following text " Refer to CRC Design Guideline for Switchboards ". | CRC has developed Design Guidelines for water Pump Stations, Sewage Pump Stations and Switchboards | | Recommended - Council Specific | DONE |
| 25 | D7.16 | CRC Specific - Design Guideline - D7 Sewerage System D7.16 General | Include following text " Refer to CRC Design Guideline for Sewerage Pump Stations ". | CRC has developed Design Guidelines for water Pump Stations, Sewage Pump Stations and Switchboards | | Recommended - Council Specific | DONE |

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| 26 | D7.17 | CRC Specific - Design Guideline - D7 Sewerage System D7.17 Pump Stations | Include following text "Refer to CRC Design Guideline for Sewage Pump Stations". | CRC has developed Design Guidelines for water Pump Stations, Sewage Pump Stations and Switchboards | | Recommended - Council Specific | DONE |
| 27 | D7.18 | CRC Specific - Design Guideline - D7 Sewerage System D7.18 Pump Stations | Include following text "Refer to CRC Design Guideline for Sewage Pump Stations". | CRC has developed Design Guidelines for water Pump Stations, Sewage Pump Stations and Switchboards | | Recommended - Council Specific | DONE |
| 28 | D7.26 | CRC Specific - Design Guideline - D7 Sewerage System D7.26 Telemetry Systems | Include following text "Refer to CRC Design Guideline for Switchboards". | CRC has developed Design Guidelines for water Pump Stations, Sewage Pump Stations and Switchboards | | Recommended - Council Specific | DONE |
| 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 | See # 6210789 | Recommended - Council Specific | DONE |
| 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 | See # 6210791 | Recommended - Council Specific | DONE |
| 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 | See # 6210792 | Recommended - Council Specific | DONE |

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| 32 | CP1 | - Appendix A Stormwater drainage | Remove backfilling of stormwater as a hold point. | | LIVE-#5559625-FW FNQROC review 0 Adam Gowlet re hold points | Not Recommended as although more expedient during construction, councils bear the consequential risk of incorrectly laid pipes. | DONE |
| 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 | Minor change | Recommended | DONE |
| 34 | CP1 | CP1.25 Clause 4 | Add new item to list " I. 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 | Minor change | Recommended | DONE |
| 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. | Minor change | Amend the wording to "at receiving councils discretion" | DONE |
| 36 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist | Under section Testing on page 10 add new item " 1. Verify that Factory Acceptance Testing of the switchboard was completed " | Related to previous item 5 | Minor change | Recommended | DONE |
| 37 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 7 | Under section Management 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 | Minor change | Recommended | DONE |
| 38 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 7 | Under section Concrete on page 7 amend item 1. to read " 300mm " not 150mm | consistent with requirements set out in section D7.17 clause 10 | Minor change | Recommended | DONE |

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| 39 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 10 | Under section Testing on page 10 add new item "1. Verify that Factory Acceptance Testing of the switchboard was completed" | Related to previous item 5 | Minor change | Recommended | DONE |
| 40 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 11 | Under section Electrical Equipment 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 | Minor change | Recommended | DONE |
| 41 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 15 | Under section Management 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 | Minor change | Recommended | DONE |
| 42 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18 | Under section Testing on page 18 add new item "1. Verify that Factory Acceptance Testing of the switchboard was completed" | Related to previous item 5 | Minor change | Recommended | DONE |
| 43 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18 | Under section Testing on page 18 add new item "2. Verify that pump tests passed" | Make consistent with SPS Checklist | Minor change | Recommended | DONE |
| 44 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18 | Under section Testing on page 18 add new item "3. Verify that rising main has been tested" | Make consistent with SPS Checklist | Minor change | Recommended | DONE |

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| 45 | CP1 | Appendix I, Sewerage and Water Pump Station Commissioning Checklist Page 18 | Under section Mechanical Equipment add: Refer to receiving council for specific requirements | Make form complete | Minor change | Recommend amended wording: 'to be supplied by receiving council' | DONE |
| 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. | Major change | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |

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| 48 | CP1 | Appendix P, As-constructed, Clause 19 Page 27 | Fix formatting of c. water . Compulsory attributes is sub heading to be removed from list. | Correction | Format Correction | Recommended | DONE |
| 49 | CP1 | Appendix P, As-constructed, Clause 19 Item d Sewer Pipes Page 31 | Under vii Lining - Pipe lining material add " viii. Lining - Lining installation date " | | Minor change | Recommended | DONE |
| 50 | CP1 | Appendix P, As-constructed, Clause 19 Page 32 | Under Desirable Attributes renumber list removing blank item | Correction | Format Correction | Recommended | DONE |
| 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 | DONE |
| 52 | CP1 | Appendix P | Survey Datum - Updated Links: https://www.icsm.gov.au/sites/default/files/2017-05/sp1v1-7.pdf http://www.icsm.gov.au/datum/gda2020-and-gda94-technical-manuals https://www.dnrm.qld.gov.au/?a=105601 | Subject to further review Issue 9 | | Recommended | DONE |
| 53 | CP1 | Appendix P 12. Water Reticulation | Item 1: Updated Layers for linework and additional category(Pipe Text leader line) | See document | as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 54 | CP1 | Appendix P 12. Water Reticulation | Item 7: Amended Layer type/name (AC Water Pipe) | See document | as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 55 | CP1 | Appendix P 12. Water Reticulation | 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. | Additional wording to the condition | as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 56 | CP1 | Appendix P 13. Sewerage Reticulation | Item 1: Updated Layers for linework and additional category(Sewer Main leader line) | See document | as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 57 | CP1 | Appendix P 13. Sewerage Reticulation | Item 1: Amended Layer type/name (AC Sewer #Pipe) | See document | as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 58 | CP1 | Appendix P 13. Sewerage Reticulation | 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. | Additional wording to the condition | Not Recommended as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |

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| 59 | CP1 | Appendix P 15. Stormwater Drainage Reticulation | Item 1: Updated Layers for linework and additional categories | See document | Not Recommended as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 60 | CP1 | Appendix P 15. Stormwater Drainage Reticulation | 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. | | Not Recommended as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 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 as region wide - CRC Specific Appendix P | Recommended as a 'CRC Specific Appendix P' | DONE |
| 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 | See#5942501 | Not Recommended as whilst this picks up defects that are immediately apparent at WA, it does not pick up defects that develop during the WA period, for example differential settlement and ponding within the pipe. On this basis, the recommendation would significantly increase councils risk. | DONE |
| 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. | Minor change | Recommended | DONE |

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| 64 | CP1 | CP1.17 | Include superscript "CRC" had heading as CRC only undertakes private works for water infrastructure | To provide clarification. | Clarification | Recommended - Council Specific | DONE |
| 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: https://drive.google.com/file/d/1wNjTZysopCcZkRDFDmFTd2uQKZs2QF/view?usp=sharing | | ensure development manual wording identifies heirachy of documents is correct - FNQROC RDM takes precedence on road widths etc. This has been verified and is currently in place. | DONE |
| 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 | https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx | | Recommended | DONE |
| 67 | D1.03 | Reference Documents | Remove Complete Streets - New doc available "IPWEA - Street Design Manual" | Draft copy available: https://drive.google.com/file/d/1wNjTZysopCcZkRDFDmFTd2uQKZs2QF/view?usp=sharing | | | DONE |
| 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 | DONE |
| 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 docs - Either this or Queensland Streets – maybe not both. Request Removal. | | Recommended | DONE |
| 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, on the basis of amending of point 2, stipulating cross falls must be(exceptions to be confirmed with council) | DONE |

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| 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) 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 | | Recommended | DONE |
| 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. AUSTROADS Guide to Traffic Management - Part 8 – Local Area Traffic Management(pg76) 2. https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Manual-of-uniform-traffic-control-devices.aspx | | Refer to austroads standards only. And subject to appropriate linemarking treatment being applied | DONE |
| 73 | D1.16 | Bus Stops | Request change to reference standard - Superseded document | AUSTROADS Guide to Traffic Engineering Practice has changed to AUSTROADS Guide to Road Design, | Superseded by AUSTROADS – Guide to Road Design (Pt 4 – Intersections and | Recommended | DONE |
| 74 | D1.19 | Point 12 - Footpath Grades | Delete: The maximum gradient shall be 16 per cent with a maximum crossfall of 2.5 per cent. New: Where the pathway is parallel with a road with a grade greater than 16 per cent footpath gradient shall match that of the road. | To remove any ambiguity in relation to compliance with the Disability Discrimination Act | See Doc 5725649 | Recommended | DONE |
| 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 | DONE |

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| 76 | D1.25 D1.26 | Tramlines | Remove fencing title as all comments relate to tramlines | | | Recommended | DONE |
| 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 | Recommended | DONE |
| 78 | D2.13 | Retaining Walls | Request wording amendment to comply withAS4678 and an increase in design life for the same purpose | Request wording amendment to comply withAS4678 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. | DONE |
| 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 | DONE |
| 80 | D3.03 D3.10 | Recycled Materials in Pavements/Asphalt | Request the allowance of recycled materials(glass) to be used in asphalt pavments. 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 pavments. To be as per TMR Technical Specification, MRTS35 Recycled Material Blends for Pavements | DM#: 5868543 https://www.tmr.qld.gov.au/-/media/busind/techstdpubs/Specifications-and-drawings/Specifications/5-Pavements-Subgrade-and-Surfacing/MRTS35.p | Recommended | DONE |
| 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 | DONE |

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| 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 - as it unnecessarily increases the cost of development work(Not all councils are remediating to this standard either). 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 | DONE |
| 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 | DONE |
| 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 AUSTROADS 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 'Flexible pavements shall be designed in accordance with AUSTROADS publications part 2: Pavement Structural Design' of the Austroads Guide to Pavement Technology (AGPT02)' | 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 | DONE |
| 85 | D3.15 | | Amended details in accordance with amendments made in the underlying document(MRTS30) . Asphalt (Deleted 40mm) 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 (Deleted 30mm) 35 – (Deleted 40mm) 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). | Reccomended. Ensure aligns withTMR spec stone size/layer thickness. | DONE |

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| 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 | DONE |
| 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 | DONE |
| 88 | D4.14 | Telemetry Systems | | | | Recommended | DONE |
| 89 | D5 | Stormwater Quality Management | State Planning Policy 2017 - Water Quality State Interest 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 | #3721077 - State Planning Polict 2017 - Water Quality State Interest- HLW workshop key recommendation - development manual review HLW TO PROVIDE REVISED SQM GUIDELINES | Reccomended. | DONE |
| 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 | DONE |
| 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 | DONE |

| Item | Section | Title | Amend / New / Removal | Description | Additional Information: | Recommendation | Outcome |
|------|---------|---------------------------------|---|--|---|----------------|---------|
| 92 | D5.04 | Reference Documents | <p>Request removal of the reference document: Institution of Engineers - Soil Erosion and Sediment Control, Engineering Guidelines for Queensland Construction Sites, Institution of Engineers Australia (Queensland).</p> <p>Request inclusion of the following reference documents: Water by Design (Healthy Land and Water) (refer waterbydesign.com.au/resources for the latest version)</p> <ul style="list-style-type: none"> - 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 <p>IECA</p> <ul style="list-style-type: none"> - Erosion and Sediment Control Guideline | Update provided by subject matter expert | | Recommended | DONE |
| 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 | DONE |
| 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) | Protection and Biodiversity Conservation Act 1999 refers, and defers to state | Recommended | DONE |
| 95 | D5.08 | Acceptable Design Solutions | Amendment to wording to comply with SPP - 2. As mandated by the State Planning Policy, water quality (deleted: interception) improvement 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, 80% of total suspended sediment , 60% of total phosphorus, and 40% of nitrogen and shall be configured to prevent re-injection of captured contaminants. | | | Recommended | DONE |
| 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 | DONE |

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| 97 | D5.08 | Acceptable Design Solutions | 3. (Deleted: All in-line and end-of line interception devices shall be of) Where proprietary products (i.e. GPTs) are specified , (Deleted: design and construction and) they will 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. (Refer to SQIDEP for further information) - | Requesting the removal of GPT's being the exclusive solution | Specific Reference deleted | Recommended | DONE |
| 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 . Preference is for those solutions that can be serviced with the use of a vacuum truck. | Request for additional wording to minimise maintenance requirements (removing the need to have a lift truck on site.) | | Recommended | DONE |
| 99 | D5.08 | Acceptable Design Solutions | 10. A concrete access and hardstand area adjacent to the (Removed: Gross Pollutant Trap (GPT)) SQID must be provided to allow maintenance vehicles to (Removed: park clear of the roadway) carry out maintenance safely and effectively. | Removing GPT exclusivity | | Recommended - By exception, access treatment to be confirmed by council. | DONE |
| 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), infrastructure, environment and receiving waters | Minor additional information requested | | Recommended | DONE |
| 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: 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) | Amended co comply with State Planning Policy | | Recommended | DONE |

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| 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. 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. | | | Recommended | DONE |
| 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 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 • IECA Erosion and Sediment Control Guideline • Best Practice Erosion and Sediment Control (BPESC) documents https://www.austieca.com.au/publications/best-practice-erosion-and-sediment-control-bpesc-document | As guided by consultant/subject matter expert | | Recommended | DONE |
| 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) | As noted | See #5980862 | Addressed through another submission | DONE |
| 105 | D6 | Appendix A Title page | Update version to Version 1.0 Aug 2019 from 2015 | Update reference | | Recommended | DONE |
| 106 | D6 | Appendix A Addendum | ***CRC to provide updated list**** | | | Updated and Recommended | DONE |

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|------|-----------------|--|---|--|---|---|---------|
| 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 | DONE |
| 108 | D6 - Appendix A | Pipeline Materials | Series 1 PE100 – (Deleted: SDR11) SDR13.6 MIN PN (Deleted 16) 20 (or Chlorine resistant pipe) | Change to specification for pipe due to chlorine attack in high temp areas | See Document 6070452 for background. Technical discussion between councils required as temperature/severity changes throughout region. | Reccomended subject to the following change: 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. | DONE |
| 109 | D6.01 | D6.01 Scope Clause 3 2nd Dot Point | Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019) | Update reference | | Recommended | DONE |
| 110 | D6.01 | D6.01 Scope Clause 3 2nd Dot Point | Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019) | Update reference | | Recommended | DONE |
| 111 | D6.01 | D6.01 Scope Clause 5 | Reword and insert new text as follows ".....shall take precedence over the CTM Water Alliance Design and Construction Codes , Water Services Association of Australia Codes and the relevant..." | Amendment | | Recommended | DONE |
| 112 | D6.04 | D6.04 Reference Documents | Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019) | Update reference | | Recommended | DONE |
| 113 | D6.04 | D6.04 Reference Documents | Amend version of WSA 03 to "2011" | Update reference | | Recommended | DONE |

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| 114 | D6.04 | D6.04 Reference Documents | Include CRC Guidelines for Water and Sewage SPS's and switchboards in reference Documents. "Cairns Regional Council Design Guideline Switchboards Design Guideline Water Pump Stations" | Update reference | | Recommended - Council Specific | DONE |
| 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 | DONE |
| 116 | D6.07 | D6.07 Design Criteria Title | CRC specific superscript | | | Recommended | DONE |
| 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) | DONE |
| 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 nolonger required. It conflicts with CRC current practices for road crossings. | | Recommended - Council Specific | DONE |
| 119 | D6.07 | D6.07 Design Criteria Clause 8 Road Crossings | List item 2. Amend "....under industrial roads, collector-access roads or higher..." | CRC Operations is installing DICL on most road crossings now due signifacntly increased robustness with only marginal cost increase over PVC | | Include comment that DSC and MSC accepts PVC | DONE |
| 120 | D6.09 | D6.09 Rural and Rural Residential Developments Clause 9 | Reference to be amended "....Appendix A4-6 A 5.8" | In appendix clause 5.8 is about Rider Mains | | Recommended | DONE |
| 121 | D6.10 | D6.10 Reticulation Network Clause 2 | Replace WSA Code with "CTM Code" | Update reference | | Recommended | DONE |
| 122 | (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 | DONE |
| 123 | D6.13 | D6.13 Valves after clause 8 | New clause 9 as follows "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" | | | Recommended | DONE |
| 124 | D6.16 | D6.16 Pump Stations | include "CRC" superscript at heading. | In the CRC Specific Requirements, CRC will reference design guidelines for Water Pump Stations and Switchboards. | | Recommended | DONE |

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|------|---------------|---|--|--|---|--|---------|
| 125 | D6.16 | D6.16 Pump Stations New Clause after 8 | Insert new clause "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". | Recommended by Asset management. Details to be at descetion of local Council. | | Recommended | DONE |
| 126 | D6.17 | D6.17 Telemetry Systems | include "CRC" superscript at heading. | In the CRC Specific Requirements, CRC will reference design guidelines for Water Pump Stations and Switchboards. | | Recommended | DONE |
| 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 the WSAA Water Supply Code WSA 03-2011 | | | Recommended. | DONE |
| 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 chlorine attack in high temp areas | See Document 6070452 for background. Technical discussion between councils required as temperature/severity changes throughout region. | Reccomended, subject to 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. | DONE |
| 129 | D6 | Appendix A Addendum to CTM Water Service Design and Construction Code | CRC to supply revised addendum for CTM Code 2019 | | Minor change | Updated and Reccomended | DONE |
| 130 | D6 | Appendix B Addendum to Sewerage Code of Australia WSA 02- 2002 | CRC to supply revised addendum for WSA Sewerage Code 2014 | | Minor change | Updated and Reccomended | DONE |
| 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 "Stainless Steel" | Recommended by Waste Operations | Minor change | Recommended | DONE |

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| 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 | DONE |
| 133 | D7.04 | D7.04 Reference Documents | Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019) | Update reference | Minor change | Recommended | DONE |
| 134 | D7.04 | D7.04 Reference Documents | Amend version of WSA 02 to "2014" | Update reference | Minor change | Recommended | DONE |
| 135 | D7.04 | D7.04 Reference Documents | Amend version of WSA 05 to "2013" | Update reference | Minor change | Recommended | DONE |
| 136 | D7.04 | D7.04 Reference Documents | Include CRC Guidelines for Water and Sewage SPS's and switchboards in reference Documents. "Cairns Regional Council Design Guideline Switchboards Design Guideline Sewage Pumping Stations" | Update reference | Minor change | Recommended | DONE |
| 137 | D7.08 | D7.08 Design Criteria Clause 5 item a | CTM Table 4.8 **Check** | Update reference | Minor change | Updated and Recommended | DONE |
| 138 | D7.08 | D7.08 Design Criteria Clause 3 Table 7.4 Minimum Grades for Gravity Sewers | Consider whether to remove pipe sizes $\geq 300\text{mm}$ given the code does not apply to trunk sizes | Development manual applies to non-trunk | Minor change | Recommended | DONE |
| 139 | D7.08 | D7.08 Design Criteria Clause 4 Table 7.5 Gravity Sewer Flows in EDC | Consider whether to remove pipe sizes $\geq 300\text{mm}$ given the code does not apply to trunk sizes | Development manual applies to non-trunk | Minor change | Recommended | DONE |
| 140 | D7.09 | D7.09 Sewer Alignment Clause 4 | Replace reference from WSA 02-2002 4.4 to CTM Table 3.1 | Update reference | Minor change | Recommended | DONE |
| 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 100mm" | | Grammar change | Recommended | DONE |
| 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" | | Grammar change | Recommended | DONE |

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| 143 | D7.10 | D7.10 Manholes Insert new Clause | New clause "7. Manhole covers are to be above the 1% AEP flood level unless otherwise approved by the Council". | 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. | Minor change | Recommemended, subject to 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. | DONE |
| 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 | Delete duplication | Recommended | DONE |
| 145 | D7.12 | D7.12 Dedication of Land, Easements,.... Clause 2 a Pipelines | Add new item to list under a. "viii All sewers in Community Purpose Land i.e. state reserve" | 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 | Minor change | Recommended | DONE |
| 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.. | Minor change | Recommended | DONE |
| 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 | DONE |
| 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. | Minor change | Recommended | DONE |
| 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 on the basis of it being a departure from a Nationally recognised standard, with insufficient technical supporting documentation. | DONE |

| Item | Section | Title | Amend / New / Removal | Description | Additional Information: | Recommendation | Outcome |
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| 150 | D7.15 | D7.15 On-site Sewerage Facilities | ***Check with Paul Bates** | | | Deleted | Deleted |
| 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. | Clarification | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |
| 153 | D7.16 | D7.16 General | Numbering is to be updated as previous section is 7.16 | | Correction | Recommended | DONE |
| 154 | D7.16 | D7.16 General | Amend title as follows "Pump stations and Pressure Rising Mains" | "Rising" main is the correct terminology | Minor change | Recommended | DONE |
| 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. | Major change | Recommended - Council Specific | DONE |
| 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 | Minor change | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |
| 158 | D7.17 | D7.17 Pump Stations | ***Check against op works conditions *** | | | Updated and Recommended | DONE |
| 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. | Format Correction | Recommended | DONE |
| 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 | Minor change | Recommended | DONE |

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| 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 | Minor change | Recommended | DONE |
| 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 descetion of local Council. | Minor change | Recommended | DONE |
| 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. | Major change | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |
| 165 | D7.19 | D7.19 Pressure Mains | Change Title to "Rising Mains" | Correction to terminology | Minor change | Recommended | DONE |
| 166 | D7.19 | D7.19 Pressure Mains | Change "Pressure Mains" to "Rising Mains" elsewhere in the section. | Correction to terminology | Minor change | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |
| 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 deleaniate 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. | Minor change | Recommended | DONE |

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| 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 submitters internal departments** | | Minor change | Not supported, Requested by specific council, where consensus could not be reached on outcome within the council. Request that the type of (macerating) pump be specified in lieu of a diameter change. No further advice was received or proposed by the council, hence no change was made. | Deleted |
| 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 | Minor change | Recommended | DONE |
| 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 . | Minor change | Recommended but add wording "where not a single dwelling." | DONE |
| 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. | Minor change | Recommended | DONE |
| 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. | Major change | Recommended | DONE |
| 174 | D8.03 | Reference Documents | Udate for NBN Co Developer document | https://www.nbnco.com.au/content/dam/nbnco/documents/installing-pit-and-conduit-infrastructure.pdf | | Recommended | DONE |

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| 175 | D8.07 | Table 8.1 Lighting Categories | Put existing commentary into manual | Existing commentary to be put into manual | | Recommended | DONE |
| 176 | D8.07 | Road Lighting | Amendment to wording: 1. All road lighting designs shall be prepared by electricity provider approved (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 | DONE |
| 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 | DONE |
| 178 | D8.07 | Road Lighting | All installation works shall be in accordance with the Electric | To ensure approved contractors are undertaking electrical work. Requirement of Ergon. | | Recommended | DONE |
| 179 | D8.07 | Road Lighting | Amended wording to provide clearer delineation of roles: 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. | Amended wording to provide clearer delineation of roles. | The design and installation of lighting schemes on declared (state) roads are subject to the requirements and approval of the Department of Main | Recommended | DONE |
| 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: 4. All major and minor road lighting luminaires (Except Nostagia) are to be an aeroscreen fixture installed with a zero Degree upcast. | See DM5: 4812242 | Recommended | DONE |

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| 181 | D8.07 | Road Lighting | Added 18. Foundation footing for minor road lighting must be constructed in accordance with electrical energy providers specification. (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 | DONE |
| 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 - amended notes and cross sections to reflect this comment | DONE |
| 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 | DONE |
| 184 | D9.02 | Reference Documents | Update to AS1158 to reflect current document | | | Recommended | DONE |
| 185 | S1.06 | General | Updated references to sections of AS3798 to current document. | https://infostore.saiglobal.com/en-au/Standards/AS-3798-2007-304347/ | | Recommended | DONE |
| 186 | DWGS - S1000 | Kerb and Channel | Inclusion of an asphalt overlay provision on the kerb. Marked up as per DTMR drawing | | | Recommended | DONE |
| 187 | S2.02 | Reference Documents | Updated reference for AS1742 from Queensland Department of Transport and Main Roads publication, to Australian Standards | Harmonisation/Crossover to the AS version currently being undertaken. | | Recommended | DONE |
| 188 | S2.04 | Asphaltic concrete surfacing | Removed 'Commentary Available' | | | Recommended | DONE |

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| 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 | DONE |
| 190 | S2.23 | Road Furniture and Pavement Marking | Updated reference for AS1742 from Queensland Department of Transport and Main Roads publication, to Australian Standards | Harmonisation/Crossover to the AS version currently being undertaken. | | Recommended | DONE |
| 191 | S3.02 | Reference Documents | Updated Concrete Masonry Association of Australia Specification References T44 to PA03, T45 to PA02, T46 to PA01, ***and changed throughout document | Updated Document references | | Recommended | DONE |
| 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 | DONE |
| 193 | S4.02 | Reference Documents | Updated AS 1761 to AS2041 - Buried corrugated metal structures, helically formed sinusoidal pipes | Updated Document references | obal.com/en-au/Standards/AS-NZS-2041-4-2010-1420421/ | Recommended | DONE |
| 194 | S4.02 | Reference Documents | Updated AS 1650 to AS4680 - Hot dipped galvanised coatings on ferrous articles | Updated Document references | obal.com/en-au/standards/as-nzs-4680-2006-r2017--385621/ | Recommended | DONE |
| 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 | DONE |
| 196 | S4.02 | Reference Documents | AS 3600 included as directly referenced in document. | Updated Document references | | Recommended | DONE |
| 197 | S4.02 | Reference Documents | Wording adjusted to reflect title - AS 3725 Design for installation of Buried Concrete Pipes | Updated Document references | | Recommended | DONE |

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| 198 | S4.02 | Reference Documents | MRTS03 amended to reflect naming adjustments made by TMR | Updated Document references | Convention https://www.tmr.qld.gov.au/business-industry/Technical-standards-publications/Specifications/3-Roadworks-Drainage-Culverts-and-Geotechnical#MRTS03 | Recommended | DONE |
| 199 | S4.02 | Reference Documents | MRTS04 included as referenced in document | Updated Document references | | Recommended | DONE |
| 200 | S4.02 | Reference Documents | WSA05-2006 adjusted as document has been updated | Updated Document references | n.au/shop/product/5646 | Recommended. | DONE |
| 201 | S4.02 | Reference Documents | Updated titling: American Association of State Highway and Transportation | Updated Document references | https://standards.globalspec.com/std/100 | Delete - no update | DONE |
| 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 | https://standards.globalspec.com/std/10031170/aashto-m-197 | Delete - no update | DONE |
| 203 | S4.03.4 | Steel Reinforced Concrete Pipes | Delete Clause S4.03.4 as exposure classifications are covered in AS4058 referenced in Cl S4.03.1 | Remove clause and move to adoption of product Australian Standard. | AS4058 details allowable concentrations of impurities including sulfate and | Recommended | DONE |
| 204 | S4.05.2 | Reinforced Concrete Box Culverts | Delete Clause S4.05.2 | Remove clause and move to adoption of product Australian Standard. | classifications are appropriate specification are detailed in AS1597.1 and AS1597.2 | Recommended | DONE |
| 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. | Recommended subject to: Removal of FRP reference in title and addition of BLACKMAX Type products, and installations to be as per manufacturer standard. | DONE |
| 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 MRTS04 for drainage structures. | 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 | DONE |

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| 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. | | Recommended, subject to adjustment to 'as per Australian Standard bedding' | DONE |
| 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. | Recommended, subject to inclusion of wording around RPEQ considering this as an appropriate solution in the circumstance. | DONE |
| 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 | DONE |
| 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. Add: All manhole installations must have 1.5m clearance available on three sides to facilitate confined space access. | Amended to reflect current requirements and practices | | Recommended | DONE |
| 211 | S5 | Appendix A Title page | Title page to refer to "CTM Water Alliance Design and Construction Code, Version 1.0 Aug 2019 " | Update to current CTM code version | Correction | Recommended | DONE |
| 212 | S5 | Appendix A | ****CRC to provide updated list**** | Update to current CTM code version | Correction | Recommended | NOT DONE |
| 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. | DONE |
| 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. | DONE |
| 215 | S5.01 | S5.01 Scope Clause 4 | Replace referencde to WSA code with CTM Water Alliance Design and Construction Code | Update reference | Minor change | Recommended | DONE |
| 216 | S5.01 | S5.01 Scope Clause 5 | Replace referencde to WSA code with CTM Water Alliance Design and Construction Code | Update reference | Minor change | Recommended | DONE |

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| 217 | S5.02 | S5.02 Reference Documents | Add new standard "AS 5488 Classification of Subsurface Utility Information" | Update reference list | Minor change | Recommended | DONE |
| 218 | S5.02 | S5.02 Reference Documents | Amend version of CTM Water Alliance Design and Construction Code to Version 1.0 Aug 2019 | Update reference | Minor change | Recommended | DONE |
| 219 | S5.02 | Reference Documents | Inclusion of AS 4441 Oriented PVC (PVC-O) pipes for pressure applications | | | Recommended | DONE |
| 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 | | Recommended - Deleted | DONE |
| 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 | | Recommended | DONE |
| 222 | S5.19 | S5.19 Bedding Clause 3 | Amend wording " For Cairns Regional Council, With exception of Cairns Regional Council, Detector tape / marker wire shall be....." | | Minor change | Recommended | DONE |
| 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. | Minor change | Recommended - Generic wording Used. | DONE |
| 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. | Minor change | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |
| 226 | S6 | Appendix A Title page | Update version to Version 1.0 Aug 2019 from 2015 | Update reference | Minor change | Recommended | DONE |
| 227 | S6 | Appendix A Drawing Addendum | ***CRC to provide updated list**** | Update reference | Minor change | Recommended | Updated |

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| 228 | S6 | Appendix B Title page | Update version to "WSA 04-2014" from 2005 | Update reference | Minor change | Recommended | DONE |
| 229 | S6 | Appendix A Drawing Addendum | Update version in title to "WSA 04-2014" from 2005 | Update reference | Minor change | Recommended | DONE |
| 230 | S6 | Appendix A Drawing Addendum | ***CRC to provide updated list**** | Update reference | Minor change | Recommended | Updated |
| 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 | Minor change | Recommended | DONE |
| 232 | S6.02 | S6.02 Reference Documents | Add new standard "AS 5488 Classification of Subsurface Utility Information" | Update reference list | Minor change | Recommended | DONE |
| 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 | Minor change | Recommended | Updated |
| 234 | S6.02 | S6.02 Reference Documents | Amend version of WSA 02 to "2014" | Update reference | Minor change | Recommended | DONE |
| 235 | S6.02 | S6.02 Reference Documents | Amend version of WSA 05 to "2013" | Update reference | Minor change | Recommended | DONE |
| 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 | Minor change | Recommended | DONE |
| 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 | | Recommended | DONE |
| 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 | | Recommended | DONE |

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| 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 Aliminate 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. | Minor change | Recommended | DONE |
| 240 | S6.08+ | After S6.08 Add new clause | New clause S6.09 PE Manholes **CRC to provide wording**** | | Minor change | Deleted | Deleted |
| 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. | Minor change | Recommended | DONE |
| 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" | | Minor change | Recommended (removed 'exactly') | DONE |
| 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). | Minor change | Recommended | DONE |
| 244 | S6.23 | S6.23 Pump Stations | Include superscript "CRC" at heading to inform that CRC has CRC specific requirements. | | Minor change | Recommended - Council Specific | DONE |

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| 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 DICL pipes for sewerage use (in accordance with FNQROC) with calcium aluminate lining for use at sewage pump stations and aerial crossings. | Minor change | Recommended | DONE |
| 246 | S6.28 | S6.28 Pressure (Rising) Mains | Replace all instances of "pressure" with "rising" | Correction to terminology | Minor change | Recommended | DONE |
| 247 | S6.29 | S6.29 CCTV Inspection of Sewers Subclause 3 a | The reference to include year WSA 05 - 2013 | Correction | Minor change | Recommended | DONE |
| 248 | S6.29 | S6.29 CCTV Inspection of Sewers Subclause 3 c | Request for specific video file types | | | Deleted | Deleted |
| 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 | DONE |
| 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 | DONE |
| 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 | DONE |
| 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 | DONE |

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| 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 'acidity' - in high temperature environments | | Delete - PVC not PE. | DONE |
| 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 | DONE |
| 255 | DRWG - S1000 | Kerb & Channel drawing | Edge Restraint dimension - " 200 min " text to be changed to 300mm | Requires discussion from group | make square | Recommended | DONE |
| 256 | DRWG - S1000 | Kerb & Channel drawing | Change note text for 5. to be changed for better clarify 'Saw Cut' | | | Recommended | DONE |
| 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 | DONE |
| 258 | DRWG - S1015 | Access Crossover | New Note: Refer to S2005 when hydrants are located in driveways | | | Recommended | DONE |
| 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 | DONE |
| 260 | DRWG - S1040 | Location of signs section | Request New Notes: Loop roads are to have two signs on the same pole in opposing directions. | | | Recommended | DONE |
| 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 | DONE |
| 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' | Recommended, Subject to change in wording to 'cast in situ, with precast to be used by exception, subject to council approval' | DONE |
| 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 | DONE |

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| 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 | DONE |
| 265 | STD DRWG - S2015 | Thrust block detail | Drawing to be reinstated. | | | Recommended - amendment to condition 4 - for valves greater than 100dia | DONE |
| 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) | DONE |
| 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 | Additional note: | Recommended: Add note wording to be saw cut detail to be as per council requirement | DONE |
| 268 | STD DWGS | PWD Bubbler Std Drawing | PWD/Mobility Access Water Bubbler Strandard Drawing | | See # 6210752 | Not Recommended - CRC Specific | DONE |
| 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" need spelling correction - minor other amendments **Amended Drawing to be provided** | Amendments as recommended by waste Operations | Minor change | spelling mistake (gauge cock) - Requirement to specify stainless steel grade (316 or 416) | DONE |
| 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. | Remains not recommended as it is duplication | DONE |
| 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 | DONE |

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| 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 TGSIs are indicated(FNQROC requirement is for CBD and environs/minor collectors and above) | See DM#5937027 DM#5937028 | Recommended | DONE |
| 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 | Corrected | DONE |
| 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 | DONE |
| 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 | DONE |
| 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 unit s. | Request to include one - piece precast units - Utilised by QDTMR and other councils | Recommended | DONE |
| 277 | DWGS - S1065 | Stormwater Manholes | Include a note on the option of Precast. | Contractors utilise precast chambers and conversion slabs. | and Conversion Slabs | Recommended | DONE |
| 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 | DONE |
| 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 | DONE |
| 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 | DONE |
| 281 | 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 | DONE |

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| 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. | 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 | Recommended | DONE |
| 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. | Minor change | Recommended - Drawing Updated | DONE |
| 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. | Minor change | Recommended - Drawing Updated | DONE |
| 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. | Minor change | Recommended - Drawing Updated | DELETED - DUPLICATE OF 2010 |
| 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. | Minor change | Recommended - Drawing Updated | DONE |
| 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. | Minor change | Recommended - Drawing Updated | DONE |

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|------|------------------|---|--|--|---|--|---------|
| 288 | STD DWGS - S3000 | Sewerage Manholes | Add note: Precast Manholes manufactured in accordance with AS4198 and | A diagram illustrating precast could be added. | Aligns with existing FNQROC specification Clause S6.08 | Recommended, on the basis of including wording of section S6.21, points 4 and 5. | DONE |
| 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. | Minor change | Recommended | DONE |
| 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. | Minor change | Recommended | DONE |
| 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 | DONE |
| 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. | Minor change | Recommended | DONE |
| 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 | DONE |
| 294 | STD DWGS - S4110 | Traffic Islands/Medians | Addition of the wording from the Dev manual: 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 | | | Recommended - Drawing Updated | DONE |
| 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** | 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 | Recommended - Drawing Updated | DONE |

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| 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 3D poly lines and all blocks are to have embedded z value (level value). | | Recommended - Council Specific | Recommended - Council Specific | DONE |
| 296 | CP1 | Appendix P Item 12 Note 4 | 4. Water mains and irrigation pipes are to be one continuous 2D (MSC: 3D) Polyline, broken only at pipe junctions and valves. | | Recommended - Council Specific | Recommended - Council Specific | DONE |
| 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 | Recommended - Council Specific | DONE |
| 297 | CP1 | Appendix P Item 13 Note 3 | 3. Sewer pipes are to be one continuous 2D(MSC: 3D) polyline between manholes/valves/pump or lift stations. | | Recommended - Council Specific | Recommended - Council Specific | DONE |
| 298 | CP1 | Appendix P Item 15 Note 4 | 4. Catch Drain polylines are to be a 2D(MSC:3D) polyline and based on the centre of the constructed drain. | | Recommended - Council Specific | Recommended - Council Specific | DONE |
| 299 | D4.09 | Pipes and Box Culverts | Include the use of Blackmax type pipe: a. Where specifically approved for use by Council, | | | Recommended | DONE |
| 300 | 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 | DONE |
| 301 | S2.02 | Reference Documents | Addition of MRTS35 Recycled Material Blends for Pavements | | Approved under Design Guidelines during council review | Recommended | DONE |
| 302 | S2.03 | Pavement Materials | Removed Grading column as the referred standard has since been updated to remove gradings(and includes the rock type reference directly) | | | Recommended - Removed | Updated |
| 303 | S2.03 | Pavement Materials | Removed Grading column as the referred standard has since been updated to remove gradings(and includes the rock type reference directly) | | Approved under Design Guidelines during council review | Recommended | Updated |

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| 304 | AP1 | AP1.28 Sewerage Reticulation plan and long section | p. Details of pumping stations including location, inlet/outlet levels, overflow details (location and invert levels) , cut-off levels, electrical switchboard layout and water supply, size of pumping plant. | additional detail required | | Recommended | DONE |
| 305 | D4.03 | Reference Documents | Australian Standards <input type="checkbox"/> AS 5065 Polyethylene and polypropylene pipes and fittings for drainage and sewerage applications" <input type="checkbox"/> AS 2566 Buried flexible pipelines Installation | | | Recommended - Included | DONE |
| 306 | S5 | Appendix B | ****CRC to provide updated list**** | | Correction | Recommended | Updated |
| 307 | Council Specific | CRC Specific Drawing Water New Drawing S9022 - CRC District Water Meter | CRC Specific Drawing Water New Drawing S9022 - CRC District Water Meter | | Minor change | Recommended - Council Specific | DONE |
| 308 | DWGS - S2011 | Steel Marker Posts | Delete - Duplicated data of S2010 | | | Recommended - Duplicate removed | DONE |

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| 309 | D6-Appendix A | Addendum to CTM | Request for inclusion of a number of general points | <p>Part A – General Principles 1.5 Document Hierarchy</p> <p>The CTM code is a reference code to the FNQROC.</p> <p>2.5 Lowest Lifecycle Costing Parameters are to be confirmed by the local authority.</p> <p>Part B Water – Version</p> <p>Part B – Water Supply Network Infrastructure 4.1 Design Criteria</p> <p>Refer to design criteria in FNQROC D6 Design Manual for Water Reticulation</p> <p>5 Demand and Flow Projections Refer to design criteria in FNQROC D6 Design Manual for Water Reticulation</p> <p>6 Water Supply Network Infrastructure Considerations Refer to design criteria in FNQROC D6 Design Manual for Water Reticulation</p> <p>7.2 Drinking Water Quality Modelling To be confirmed by the local</p> | | Received post closure of submissions | To be considered under submission 9 |
| 310 | D6-Appendix A | Addendum to CTM | Request for deletion of item 10.1.4 Inspection and test plans | | | Received post closure of submissions | To be considered under submission 9 |
| 311 | D6-Appendix A | Addendum to CTM | Request for inclusion of a number of general points | <p>5.4.2.2 Locations in Footpaths Refer to Table D6.2 Standard Alignments in FNQROC D6 Design Manual for Water Reticulation. ...</p> <p>5.11.8 Property Service Meters Refer to Drawing S2038 in FNQROC</p> | | Received post closure of submissions | To be considered under submission 9 |

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| 312 | | | | <p>Amendment Include amendment to item iv as follows...."iv. Any proposal to utilise boosted pumping directly from the mains must be supported by evidential justification that a 'break tank' is not able to be provided and a hydraulic analysis undertaken by a competent RPEQ confirming that the main is adequately protected from very low pressures (ground water intrusion and implosion) and excessive transient water pressures associated with pump and valve operation (water hammer). "</p> | <p>LIVE-#6269911-WWI-RNQROC Review 2019 - Email from Ben Millar RE FNQROC - On-lot fire pump direct connection</p> | <p>Recieved post closure of submissions</p> | <p>To be considered under submission 9</p> |
| 313 | D7- Appendix A | Addendum to CTM | Request for inclusion of a number of general points | <p>Part A - General Principles 1.5 Document Hierarchy The CTM code is a reference code to the FNQROC. 2.5 Lowest Lifecycle Costing Parameters are to be confirmed by the local authority. Part C – Sewerage Network Infrastructure 10.1 Design Criteria Refer to design criteria in FNQROC D7 Design Manual for Sewerage System. 11 Flow Projections Refer to design criteria in FNQROC D7 Design Manual for Sewerage System. 13.1 Gravity Sewers Note that the CTM Code contains design information for smart sewer systems such as Nusewers and RIGSS and these types of systems are considered as unconventional infrastructure in the FNQROC.</p> | | <p>Recieved post closure of submissions</p> | <p>To be considered under submission 9</p> |

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| 314 | D6-Appendix A | Addendum to CTM | Request for inclusion of a number of general points | 4.3.4 Public and private property Refer to D7.09 for sewer alignments within public and private property. 4.3.4 Maintenance structures spacing The maximum spacing between two consecutive maintenance structures is 100m. | | Recieved post closure of submissions | To be considered under submission 9 |
| 315 | STD DWGS - S1005 | Footpath width | Remove note 6. | As per industry discussion. Addressed through planning process(for higher order roads). Higher standards may be applied as a result of Council specific cycling and walking strategies | | Recommended | DONE |
| 316 | D1.19 | Pathways | Delete Table D1.3, note 3 | As per consultation session | | Recommended | Supported |
| 318 | DP1 | Development Principles | Inclusion of existing requirment to comply with Disability Discrimination Act and associated Australian Standards | As per consultation session outcomes | | | Existing legislative |
| 319 | D9 | Landscaping Manual | Additions made throughout to support CRC LG Specific Landscaping Requirments | As per consultation session outcomes | | | Recommendation Report |
| 320 | CRC LG Specific - | Landscaping Manual | Additions made throughout to support CRC LG Specific Landscaping Requirments | As per consultation session outcomes | | | Recommendation Report |