Principal’s Requirements

LG314/690/19/061
Sewer Inspection, Location, Jet-Rodding and Patch Repair
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1. **Interpretation**

Unless implied to the contrary, all directions in this section onwards of this document are addressed to the Contractor. Except where the context otherwise requires, the following are applicable.


‘approved’, ‘directed’, ‘required’, ‘rejected’, and similar expressions means approved, directed, required, rejected, and the like, by the Principal’s Nominated Representative.

‘environmental laws’ means in respect of the land and buildings the subject of Contract and the use to be conducted by the Contractor pursuant to the contract, any law (whether Commonwealth, state or common law), orders, notices, consents, regulations, authorisations, approvals and permits or any authority relating to or dealing with the following:
- planning and land use
- the environment
- health
- any contaminant or hazardous substance or material
- the use, storage or transportation of a contaminant or hazardous substance
- the disposal, discharge or treatment of a contaminant or hazardous substance
- the spill or leakage of a contaminant or hazardous substance
- the treatment, containment or removal of a contaminant or hazardous substance
- the remediation of land.

‘give notice’, ‘submit’, ‘furnish’, and similar expressions means give notice, submit, furnish, and the like, to the Principal.

‘Principal’s Nominated Representative’ is the Council Contract Representative, as specified in the Contract Header or any other person from time to time appointed in writing by the Principal to be the Principal’s Nominated Representative and Notified as such in writing to the Contractor by the Principal.

‘responsible authority’ means a local government or any government (state or federal) department or other agency charged with the responsibility of administering or enforcing legislation.

‘Works Inspector’, ‘Principal’s Inspector’, ‘Job Inspector’ means a duly authorised person required to enter onto the work site to inspect and/or measure some aspect associated with or effected by the works on behalf of a government or statutory authority or Principal’s Nominated Representative approved organisation.

Where there is an inconsistency, ambiguity, or discrepancy between the required qualities or standards in different Parts of this document, the Contractor shall comply with the highest quality or standard or perform the more onerous obligation.

2. **Definitions**

<table>
<thead>
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<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>asphalt:</td>
<td>Bituminous Concrete (BC) and Asphaltic Concrete (AC). On occasions, Recycled Asphalt Pavilion (RAP) will be relevant</td>
</tr>
<tr>
<td>BCA:</td>
<td>Building Code of Australia.</td>
</tr>
<tr>
<td>CCTV:</td>
<td>Closed Circuit Television</td>
</tr>
<tr>
<td>Council Contract Representative (CCR):</td>
<td>means the Principal’s Nominated Representative specified in the Contract Header to exercise the functions of the Principal relating to the Contract.</td>
</tr>
<tr>
<td>Central Management Controller:</td>
<td>the computer hardware, including software for performing the functions required in this specification and other parts of the contract</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>------</td>
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</tr>
<tr>
<td>Concept (Design)</td>
<td>the representation of the first thoughts of a project, as conceived, with minimal thought having been given to practicality or costs</td>
</tr>
<tr>
<td>DA</td>
<td>Development Application/Approval</td>
</tr>
<tr>
<td>DDA</td>
<td>Digital Data Agreement</td>
</tr>
<tr>
<td>Delivery Milestone</td>
<td>the stage that the work has reached, such that payment for work done leading up to this stage may be made</td>
</tr>
<tr>
<td>DES</td>
<td>Department of Environment and Science</td>
</tr>
<tr>
<td>Detail (Design)</td>
<td>the further development of the preliminary design, aimed at resolving all practicality and cost issues (nominal accuracy of say ± 15%) so that tenders might be called for or construction might commence.</td>
</tr>
<tr>
<td>DNRME</td>
<td>Queensland Department of Natural Resources, Mines and Energy</td>
</tr>
<tr>
<td>DAF</td>
<td>Department of Agricultural and Fisheries</td>
</tr>
<tr>
<td>draft</td>
<td>the stage where a task has been completed and the results submitted for approval (not for checking or verification) by the Client or Principal, and where the originator is satisfied that it is a fair representation of the intended outcome</td>
</tr>
<tr>
<td>experienced</td>
<td>trained, competent, and having a minimum of 1000 hours of on-the-job current industry experience</td>
</tr>
<tr>
<td>Feasibility (Design)</td>
<td>the first stage of the development of the project concept, aimed at identifying and quantifying overall aspects of the proposed project – particularly resolving practicality and costing issues, with a nominal degree of accuracy of say ± 80%.</td>
</tr>
<tr>
<td>GIS</td>
<td>Geographic Information System, being a system for capturing, storing, analysing and managing data and associated attributes which are spatially referenced to the earth</td>
</tr>
<tr>
<td>GPS</td>
<td>Global Positioning System, being a global navigation satellite system that utilises satellites to transmit signals which enable a receiver to determine its location, speed and direction within a given area</td>
</tr>
<tr>
<td>Hold Point</td>
<td>the stage that the work has reached, such that it requires a review, comments, action or instruction from the Client/Principal's Nominated Representative prior to work continuing</td>
</tr>
<tr>
<td>IO</td>
<td>Inspection Opening on a customer's property to allow for access to City of Gold Coast's sewer branch line (Downstream) and the customers internal plumbing (Upstream)</td>
</tr>
<tr>
<td>LED</td>
<td>Light emitting diode</td>
</tr>
<tr>
<td>Light Rail Corridor</td>
<td>means the areas that contain the Gold Coast Light Rail (GCLR) system</td>
</tr>
<tr>
<td>maintenance</td>
<td>is the repair, replacement and upkeep of existing assets. Maintenance work keeps an asset functioning in its current operational state and does not enhance or change the initial design or function of the asset without extending its useful life</td>
</tr>
<tr>
<td>maintenance standards</td>
<td>The standards set for the maintenance service, usually contained in preventive maintenance schedules, operation and maintenance manuals, codes of practice, estimating criteria, statutory regulations and mandatory requirements, in accordance with maintenance quality objectives</td>
</tr>
<tr>
<td>MCU</td>
<td>Material Change of Use (rezoning)</td>
</tr>
</tbody>
</table>
Part A: General

| MCU/ROL: | a combined application, called a POD |
| MH: | Maintenance Hole |
| MUTCD: | TMR ‘Manual of Uniform Traffic Control Devices’ |
| NATA: | National Association of Testing Authorities |
| operator: | individual(s) who are licensed, trained and experienced in the operation of equipment to be used to perform the scope of work |
| OPW: | Operational Works (application/permit) |
| Preliminary (Design): | the further development of the feasibility stage, aimed at producing sufficient details of the project that major decisions can be made – and the uncertainty of practicality and costing issues can be reduced to say ± 50% nominally |
| preliminary: | the stage where a task has been partially or wholly completed, but the results have not been fully checked/verified, and the desired outcome has not been achieved or determined |
| Principal's Nominated Representative: | is the Council Contract Representative, as specified in the Contract Header or any other person from time to time appointed in writing by the Principal to be the Principal’s Nominated Representative and Notified as such in writing to the Contractor by the Principal. |
| qualified: | having undergone formal training |
| RPEQ: | Registered Professional Engineer of Queensland |
| SBR: | Standard Building Regulations |
| signage vehicle(s): | vehicles which have the capacity to carry traffic controlling devices |
| SDS: | Safety Data Sheet |
| SOP: | Safe Operating Procedure |
| SWMS: | Safe Work Method Statement |
| TCP: | Traffic Control Plan |
| TMP: | Traffic Management Plan |
| TMR: | Queensland Department of Transport and Main Roads |
| Traffic Controllers: | individual(s) who are trained, qualified and accredited in the controlling of vehicular and pedestrian traffic on public roads, and who are also capable of managing traffic around and through work sites |
| traffic control devices: | any traffic controlling devices, such as stop/slow signs, traffic cones, road signage, and equipment that are used for performing this contract |
| WHS: | Work Health and Safety |
| work site(s): | any fixed or moving work sites |

3. **Plant, equipment and materials**

Ensure that all items of plant, equipment, materials, machinery, vehicles and tools used in the performance of the works complies, and is maintained and serviced in accordance, with all laws, relevant Australian standards, and manufacturer’s specifications.

The Principal may prohibit the use of any item that in its opinion may cause danger, nuisance, environmental harm, or does not produce satisfactory results. This will not relieve the Contractor from the responsibility in
performing the works in accordance with the specifications. Do not use large tractors/slashers with a single cutting blade without the Principals Nominated Representative’s written acceptance.

Ensure that all maintenance records are kept with the relevant item, or at the Contractor’s business premises.

Allow the Principal to inspect any maintenance record of any item. When an inspection is required, the Principal will notify the Contractor in writing. Within one working day of receiving such request, make the requested records available at the Contractor’s business premises for inspection by the Principal.

Provide copies of SDS to the Principal, where applicable.

Any item (whether owned, hired, leased or supplied by the Contractor) which is used in the performance of the services will be considered to be the Contractor’s equipment for the purposes of this Contract.

4. Operators

Use operators who are trained in the safety requirements contained in the appropriate Australian standards. Ensure that only individuals with the appropriate licences necessary to operate an item of Contractor’s plant and equipment, operate that item.

Use all items in accordance with the manufacturers’ recommended specifications and purposes.

Ensure PPE is supplied to those persons actually performing the services as required by the Work Health and Safety Act 2011 (Qld).

Minimum qualifications to be held by the CCTV Operator and those supervising and carrying out the works are:

- NWPNET016 - Inspect sewer or stormwater line.
- Confined space entry competency.
- Working at heights competency.

Evidence of the statement of attainment for the operator will be required with each claim for payment.

5. Disposal of refuse

Further to Clause 17 of the Conditions of Contract, remove from the work site refuse (including food scraps and the like) resulting from work under the Contract. Handle refuse in a manner so as to confine the material completely and prevent any emission or spillage. Dispose of litter and debris at an appropriately licensed waste disposal facility.

Store all food scraps and the like in suitable containers with a close fitting lid. The container is to be vermin proof and resistant to disturbance by dogs, cats and birds.

6. Disposal of spoil

Unless otherwise specified, remove all spoil not required as part of the works from the Site. Pay all tipping fees at Council waste disposal facilities. These fees are not refundable.

7. Transport of materials

Convey soils, earth, sand, loose debris, and similar loose materials to or from the Site in a manner that will prevent dropping of materials on streets. Cover all loads with taut heavy-duty purpose fitted tarpaulins to ensure no loss of load or dust. Ensure that the wheels, tracks and body surfaces of all vehicles and plant leaving the site are free of mud, and that mud is not carried on to adjacent paved streets or other areas. This may require a wash bay on Site.

Be aware of legal obligations if moving restricted items from or within fire ant restricted areas. Refer https://www.daf.qld.gov.au/__data/assets/pdf_file/0007/167812/Fire_Ant_Biosecurity_Zone_Map_1_July_2016.pdf. This includes understanding the risks of spreading fire ants and developing strategies to address these

8. Traffic and pedestrian control

Where relevant, restrict any effects on movements of vehicles and pedestrians on public roads and footpaths to a minimum. Where any disruption is likely to occur, prepare and implement a traffic management plan prior to commencing the works. Refer the plan to the Principals Nominated Representative, where applicable, with respect to disruption to vehicular and pedestrian traffic and access to private property.

Where relevant, there must be a minimum of one Contractor at each worksite with MUTCD Traffic Management Implementation. Further to obligations to comply with Legislative Requirements within the Conditions of Contract the Contractor must, where relevant, implement the current versions of the following acts and regulations:


9. Road closure approval

Where the Works will impact on traffic flow, such as requiring a partial or full road closure, prepare a TMP with the proposed dates and times of operation. TMP must be prepared by a person currently qualified to provide Traffic Management Design.

Submit this to the Principals Nominated Representative where applicable for assessment and acceptance including the following information.

- The Contractor’s name, telephone number, and address.
- Type of closure (e.g. temporary or permanent to specific type of traffic).
- Address and details of the area affected (e.g. street name, suburb, cross streets etc).
- Date and start and finish times of closure.
- Details of closure (e.g. closure of a lane, half road, full road, footpath, parking or a combination of these).
- Description of work being undertaken including the TMP with details of closure (e.g. indicate part of the road to be closed, provision for pedestrians, affected bus stops/zones, affected schools/CBD areas/traffic signals).

Such acceptance will be in respect of the TMP (the impact of any closures on traffic conditions, and proposed provisions to lessen the effects for all road users); not the TCP or Traffic Guidance Scheme. Allow up to 10 working days for acceptance of the TMP.

Do not commence the Works which may impact the traffic flow until the acceptance of the TMP has been.

10. Inspection

If the specification requires notice of inspection to be given in respect of any part of the work under the Contract, do not place further work over that part of the work or allow it to be covered up or put out of view without the prior approval of the Principal. No claim for delay will arise from the giving of insufficient or unreasonably short notice in respect of inspections. The minimum notice required by the Principal to undertake an inspection is two working days.

11. Access to private property

If access to private property is required to carry out the works, provide four working days’ notice to the Principals Nominated Representative where applicable, and to residents affected by the work.

Make every effort to minimise obstruction to private property. Vehicular access may only be denied for a maximum of 12 hours. Provide temporary access if permanent access cannot be provided within this time.
Maintain safe and reasonable personal access to properties at all times.

12. **Contractor identification**

When working in public areas, all Contractor’s plant, equipment and vehicles must clearly display the company name and contact details. Employee’s uniforms must display the company name and logo.

Where issued, loss of an identification card will incur a replacement cost to be met by the Contractor by a deduction from payments due or otherwise.

13. **Customer service**

The Contractor must be presented in neat appropriate work wear, deal courteously with the public at all times and provide the following to any person who requests.

- The Contractor’s name, telephone number, and address.
- The name of a person who can be contacted at that telephone number.
- The Contractor’s procedure for lodging a claim regarding damage to property or personal injury.

14. **Communications**

Supply and maintain a method of communications between the office and site crews that is acceptable to the Principals Nominated Representative.

Provide mobile telephones or equivalent mode of communication for onsite communications with the Principals Nominated Representative.

Supply and maintain a current email address, which must be contactable by the Principals Nominated Representative where applicable, at all times.

15. **Standards**

Current Editions: An Australian or other standard applicable to the works will be the edition last published not later than one month prior to the closing date for tenders.

16. **Worker’s compensation insurance**

In cases where the Workers’ Compensation and Rehabilitation Act 2003 (Qld) does not require the Contractor to effect a policy of insurance (by virtue of all work being carried out by sub-contractor for any other reason), effect a minimum premium Queensland Workers’ Compensation Policy nevertheless.

17. **Storage on site**

Do not use roads, driveways, paths, hardstandings and the like forming part of the works for access or storage unless prior written approval has been given by the Principals Nominated Representative. Such approval will not be withheld unreasonably.

Store materials and equipment on site so as to prevent deterioration of materials and equipment, prevent damage to the site, and to minimise hazards to persons, materials and equipment. Keep storage areas neat and tidy.

18. **Access to site**

If access to the Site is required outside normal business hours and was not directed by the Principal’s Nominated Representative, provide reasonable notification to the Principal’s Nominated Representative who will provide a confirmation of approval for the required access.

The Contractor may be required to undertake Site specific inductions prior to being granted access to the Site if set out in Part B: Project Specific.
The inductions assist in informing potential hazards that may be encountered when undertaking the Works and outline specific safety requirements when on the Site.

19. **Contractor’s site area**

The Contractor’s access onto and around the site and the use of the site for temporary works and construction plant, including working and storage areas, locations of offices, workshops, sheds, roads, parking and the like, shall be restricted to those areas shown on the Drawings or approved by the Principal’s Nominated Representative and subject to such conditions as are stated in the contract or may be imposed by the Principal’s Nominated Representative.

20. **Access keys**

Access to the Principal’s Water and Waste operational sites and vehicle access to Council owned parks/access roads require the issuing of security keys by the Principal. Up to a $200 bond (per key) is payable and will be held in trust for the duration of this Contract. The bond will be refunded on return of the keys. Prior to commencement of work make application via the Principal’s Nominated Representative for an appropriate number of security keys to enable uninterrupted service throughout the contract term.

21. **Dimensions and levels**

Whilst every effort has been made to provide exact dimensions and levels where relevant, obtain or check all measurements before commencing work. Verify details of existing work before altering or adding to it. Report any discrepancies to the Principal’s Nominated Representative. If individual (spot) levels are shown on the drawings, these take precedence over contour lines and ground profile lines.

22. **Proprietary items**

The identification of a proprietary item shall not necessarily imply exclusive preference for the item so identified, but shall be deemed to indicate the required properties of the item. An alternative item with the required properties may be considered for acceptance at the Principal’s Nominated Representative’s discretion.

When submitting an alternative item for approval submit sufficient information to permit evaluation of the proposed alternatives including evidence that the performance is equal to or greater than that specified.

23. **Use of specifications from Queensland Department of Transport and Main Road**

When Standard Specifications from Queensland Department of Transport and Main Roads are included in these Principal’s Requirements delete references to ‘Conditions of Contract’ and replace with ‘General Conditions of Contract’; and

The Annexure(s) and Supplementary Specifications to Queensland TMR Standard Specifications do not form part of this specification unless specifically provided by the Principal in Part B: Project Specific.

24. **Energex electrical inspections – lighting and power supplies**

When underground electrical installation work for lighting and power supplies is undertaken by contractors, Energex requires that the work be inspected and approved.

- Complete ‘Form 2’, obtainable from Energex direct or via the internet (www.energex.com.au). Submit this form to Energex to arrange an inspection.
- Submit evidence of inspections and approvals to the Principal’s Nominated Representative before backfilling.
25. Certification of the design - Applicable

Where the Contract requires design to be carried out which would require the designer to be registered under the Queensland Professional Engineers Act, the following is applicable.

Ensure that the design of the Works is supervised at all relevant times by a designer who is a RPEQ, and experienced in work similar to the work under the Contract.

Provide RPEQ certification in a form acceptable to the Principal in respect of the adequacy and suitability of the design of the specified parts of the Works.

Be prepared to:

- Warrant that the designer shall in carrying out its obligations under this Contract perform the design services to a standard of care, skill, judgement and diligence commensurate with that which would be expected of an experienced professional engineer with expertise in the provision of similar services for projects of the nature of the work under the Contract, and
- indemnify the Principal for any damage, loss, cost, expense or liability (whether direct, indirect or consequential, present or future, fixed or unascertained, actual or contingent) arising out of a breach of obligations under this clause.

If the Contractor proposes to appoint an external consultant to act as designer rather than a suitably qualified employee of the Contractor, the following is applicable.

Obtain the Principal’s prior written approval of the nominated person.

Do not replace the nominated person without the Principal’s prior written approval.

Ensure that the terms of engagement include that the designer provides:

- a duly executed written deed of warranty and indemnity in favour of the Principal in a form acceptable to the Principal on the same terms as set out in this clause
- evidence to the Principal of the existence and currency of a policy of professional indemnity insurance with a limit of cover of not less than $2,000,000 unless otherwise stipulated in the Contract Header.
- accept liability for the acts and omissions of the external designer as if they were acts or omissions.
- accept any obligation under this Contract by virtue of an approval to subcontract design services.
- accept that no payment under this Contract will be made until you have complied with your obligations.
Part B: Project Specific

1. Scope of works
The Principal requires a suitably qualified, experienced and resourced Contractor to undertake and complete CCTV surveys, MH condition assessment, MH location, jet rodding, root cutting, standard condition assessments and internal patch repair of sewer main lines and branch drains.

Provide all materials, plant, equipment, labour and services and the performance of all operations necessary to undertake and complete standard condition assessments, location, jet rodding, root cutting, specialised condition assessment and patch repairs as issued by the Principal.

The works will be issued via a schedule of rates as follows;

Section 1: Reactive / Ad-hoc Works
- Jet Rodding and/or Cleaning
- Traditional Video Image CCTV Survey
- Traditional Video Image CCTV Survey and Cleaning
- Main Line Repair
- Branch Drain Repair and/or Junction Seals
- MH Location
- MH Condition Assessment
- MH GPS Data Capture
- Traffic Control
- Additional items

Section 2: Annual Packaged Works
- Gravity Sewer CCTV
- MH Condition Assessment
- MH Location
- Additional items

Provisional items: Innovative Survey Methods
- Innovative Digital Still Photography (Photogrammetry) CCTV Survey
- Innovative Digital Still Photography (Photogrammetry) MH Condition Assessment
- Laser and/or Sonar Profiling
- Additional Items

The quantity of the Contract Services to be carried out is dependent on the Principal’s budget, program and specific needs over the Contract period. The quantities in the schedules are indicative only.

The Principal reserves the right to request and accept quotations outside this Contract.

2. Site

2.1 Site Establishment and Clearing
In the event of clearing / grubbing of vegetation being involved in the works, reference in City of Gold Coast Standard Specification SS3 (http://www.goldcoast.qld.gov.au/gcplanningscheme_policies/policy_11.html#specs) which permits burning is now superseded by Local Law that prohibits burning. Do not lop the branches of any trees or shrubs, either located on a public road, public area or privately owned land except with the written approval of the Principal and then only in accordance with such conditions as stipulated by the Principal.

The Contractor shall be responsible for the storage of all materials and equipment, both on and off the site, so as to prevent damage and to minimize hazards to people, materials, equipment and the environment. Do not store materials, plant or equipment at any of the Principal’s facilities.
2.2 Location and limits

The location of sites for contract services to be performed can be anywhere within the responsibility area of the Principal. The location of sites are, but not limited to, as follows:

- High-density development areas.
- Commercial / industrial areas.
- Low-density or rural locations.
- In undeveloped road reserves where undeveloped road reserves are adjacent to private property, a four metre setback to allow for private lot access will be maintained.
- In developed road reserves as approved for each site by the Principal.
- Private Property may be accessed by power of entry as provided through Local Government Worker induction, in emergency situations, by easement or written authorisation from the land owner.
- Easements not more than the extent of the easement as dedicated.

The above limits may only be altered with the written approval of the Principal.

Do not enter onto the Principal’s workplace other than to undertake the works assigned by the Principal.

No major site excavation (>300mm) shall be undertaken without first advising the Principal. Submit details outlining the extent of any excavation required.

Details of each site of works shall be provided by the Principal.

Induction and supervision by the Contractor of anyone entering the worksite shall be in accordance with the legislative requirements.

3. Coordination with other works - Applicable

3.1 Work to be undertaken prior to the Contract Works

4.1 Digital Data Agreement:

The Contractor will be required to sign a DDA with the Principal prior to receiving any data in relation to the Contract.

The Principal will provide GIS layers for the Contractor to use in their GIS systems for locating MH’s in the field. Digital GIS-data layers in .gdb or .kml format provided for:

- Infrastructure Management
  - Sewer MHs
  - Sewer pipes Non Pressure
  - Sewer Pipes Pressure
- Road Hierarchy
- Property boundary cadastre information
- Labels
- Suburbs
- Aerial photography.

The provision of digital GIS data is contingent upon the Contractor signing the User Licence Digital Data Agreement (4.1.2 of the Principal’s Requirements). The Contractor is required to have the necessary software in order to view the provided GIS data. Hard copy maps will not be provided.

4.1.2 Licence

- The licensor, the Principal, ABN: 84 858 548 460, is the owner of the intellectual property rights including copyright of the data or has the right to make this data available under licence agreement.
Part B: Project Specific

- The licensor grants, the licensee (including its consultants, employees and agents), a non-exclusive, non-transferable licence to use the data subject to the conditions set out in the agreement.

4.1.3 Permitted use

- The use of the data provided in the agreement is restricted to the purpose as outlined in the relevant schedules.
- The licensee may utilise the data provided in this agreement only for the purpose as outlined in the relevant schedule to:
  - produce derived digital data, hardcopy products and non-editable images, or value added data
  - distribute hardcopy products and non-editable images (e.g. PDF files) based on or containing the data, provided they are distributed at no charge and revenue is not generated to offset any free distribution (e.g. advertising).

3.2 Work to be undertaken during the Contract Works

During the Works, the following activities by the Principal will be in progress. Allow for and coordinate activities through the Principals Nominated Representative to minimise conflict.

Upon acceptance of the work request, undertake the Works within the following time frames, as follows:

- Emergency work - within two hours of notification.
- Priority work - within 24 hours of notification.
- Normal works - within three days of notification.

Works are to commence within the stated time frames unless directed in writing by the Principal.

3.3 Work to be undertaken after Completion of the Contract Works

Notify the Principal in writing within two days of completion of each service or item of work. The original work request shall be clearly marked with the actual completion dates beside each site and returned by email to the Principal. This notification forms the basis for verification of the claim for payment and must be received before payment claims will be processed.

4. Ordering of work

4.1 Section 1: Ad hoc Reactive Work: Work requests

The Principal will issue a direction listing works required to be completed, including the following details:

- Date works to be completed by.
- Item code (from the schedule of rates).
- Site of works (address).
- Size, type and material of host main.
- Information supplied by the Principal.
- Name and contact of inspector / site representative.

Do not commence any works until the Principal confirms the acceptance of such works in writing.

Commence each service at a location and at the time and date directed by the Principal’s Nominated Representative and complete the service within the time frame specified.

Respond within 24 hours of receipt of any specific written directions of the Principal's Nominated Representative in relation to the performance of the work, except for a variation or a Request for Service where applicable.

4.2 Section 2: Annual Packaged Works

As per agreed annual program to be monitored and updated monthly.
5. **Working hours**

The hours of work referred to in the Contract Header are Monday to Friday between 7am and 4:30pm excluding public holidays. Should the Principals Nominated Representative, upon written application to do so, permit work to take place outside of these hours, comply with the Clause ‘General Environmental Duty’ as contained in the Environmental Protection Act 1994.

6. **Measurement and payment**

6.1 **Payment**

Refer Clause 22 of the Conditions of Contract.

6.2 **Measurement**

All work is to be reported back to the Principal with the appropriate template for either CCTV, or MH condition assessment (as specified in Part C) within two working days of completion of the work. For Section 2: Annual Programs of Work, in conjunction with Payment Claims lodged on the 26th of each month, provide all reports relating to the Payment Claim within two working days of issue of the claim.

6.3 **Key Performance Indicators**

For annual programmed work, the Contractor will provide an indicative program of works prior to commencement of the Contract. Progress toward this program will be monitored monthly to ensure adequate delivery of work. Any amendments to the agreed program must be agreed in writing. In the event that delivery of the agreed program falls behind the Principal reserves the right to intervene with the following actions:

- 10% behind schedule: In the event the contractor is 10% behind the program, the Principal will issue an improvement notice in writing.
- 20% behind schedule: Principal reserves the right to retain 10% of payment claims until such time that the program is caught up
- 30% behind schedule: Principal reserves the right to engage a third party Contractor to commence work to catch up the program at the Contractor’s expense.

6.4 **Accuracy of Information**

The information is made available to inform the Contractor of the Principal’s investigations and the Contractor must, in formulating working methods and programs, assess the information contained in the documents and make allowance for such assessments. Be fully responsible for verifying the accuracy of any information provided by the Principal.

The Principal does not represent that any information made available shows completely the existing site conditions as it may contain errors, omissions or be misleading.

7. **Contractors Staff and Supervision**

7.1 **Staff**

The Contractor or their sub-contractors / staff must:

- Exercise the degree of skill and diligence reasonably expected of an experienced professional Contractor performing services of a similar nature, in accordance with the ethics of the relevant trade.
- Hold all necessary current licenses, permits, authorisations, certificates and accreditations as required by law and the Principal in order to provide the contract service.
- Display the standards of experience, workmanship and behaviour entirely suitable for the provision and / or performance of the service and the requirements of this contract.
- Perform duties in a professional manner.
Part B: Project Specific

- Operate all equipment (vehicles, GPS, CCTV Units, hand tools etc.) in the approved and recommended manner as specified by the manufacturer, Client or Legislation.
- Exercise courtesy in all dealings with the public and Customers while carrying out the contract services or whilst wearing identification cards provided by the Principal.
- At all times, comply with the current requirements of state and local government legislation and regulations.

The Contractor and their staff must not:

- Enter into any dispute with the public or a Customer at any time or in any way cause undue nuisance.
- Engage in any discussion with the general public in relation to the Principal’s assets or activities outside of the services under the contract, including media reported items concerning the Principal.
- Hand out business cards or promote their business while carrying out the services under this contract or whilst wearing identification cards provided by the Principal.

All incidents are to be reported to the Principal for information within 24 hours and action as required.

The Principal reserves the right to direct the Contractor to discontinue using an employee or sub-contractor engaged by the Contractor for executing the Contract Services, if an employee or sub-contractor is acting in a manner that is deemed by the Principal to be:

- Misconduct.
- Negligence.
- Incompetence.
- Abuse.
- Not following the required standard stated in the contract.
- Non-compliance to a mandatory safety requirement.
- Undertake to replace such staff or Sub-contractor without any cost and / or time implication to the Principal.

7.2 Supervision by Contractor

Provide a competent and experienced Contract Manager for the duration of the Contract. Full details, including competencies, name and contact telephone numbers, of the Contract Manager shall be supplied in writing to the Principal prior to commencement of the Contract.

8. Work Health and Safety

8.1 Safe work

Ensure that all WHS requirements are met and all Contractor’s Personnel (including sub-contractors) are supervised at all times while performing the Maintenance Services. Ensure systems for monitoring of documented work practices (including sub-contractors documented work practices) are implemented and maintained throughout the course of the work. Prior to commencement of the Services, ensure all personnel (including sub-contractors) receive training in WHS and risk management specific to the Site and work activities.

Provide the below documents where applicable, to the Principal’s Nominated Representative prior to commencement of the Services and as requested during the course of the works:

- SWMS and/or safe systems of work incorporating Site specific hazards, risks and controls; further to Clause 38.4 of the Conditions of Contract, a designers safety report identifying hazards incorporated in any aspect of the design, including temporary works; and
- the Contractor’s Work Health and Safety Management Plan (WHSMP) relative to the Site and activities being undertaken, further to Clause 38.2(a) of the General Conditions of Contract the WHSMP must also include the following:
  - arrangements for consultation, cooperation and coordination
  - process for management of subcontractors
  - Personnel have appropriate licences and training
  - the safe use and storage of plant
Part B: Project Specific

- the development of a construction project traffic management plan
- obtaining and providing essential services information
- compliance with this clause.

8.2 Communication, consultation and coordination

Before commencing the Services and then on an ongoing basis, consult, cooperate and coordinate with:

- the Principal’s Nominated Representative;
- Personnel (including personnel employed by subcontractors) who are or are likely to be directly affected;
- relevant suppliers, Contractor’s and other third parties; and
- all other duty holders as defined within Work Health and Safety Law.

in relation to any WHS matters arising out of or in connection with works under the Contract.

8.3 Known Hazards

The known hazards and risks at/or in the vicinity of the Site identified by the Principal are listed below. Prior to the commencement of the Services identify all hazards and risks that are present.

- The physical working environment, for example the potential for electric shock, immersion or engulfment, fire or explosion, slips, trips and falls, people being struck by moving plant, exposure to noise, heat, cold, vibration, radiation, static electricity or a contaminated atmosphere.
- Biological hazards (substances which consist of, or which may contain micro-organisms or non-viable products of living matter, which can create a risk to health e.g. virus, bacteria. Examples – HIV, Hepatitis (A, B and C), Avian Influenza (Bird Flu), tetanus, typhoid fever, Q fever, Hendra Virus, dermatitis etc.).
- Animals including insects, snakes and spiders that bite or sting.
- UV radiation exposure longer than 15 minutes.
- Confined spaces (work that will be carried out in or near a confined space).
- Fall from heights (by a person from one level to another that is reasonably likely to cause injury to the person or any other person).
- Falling, flying objects or debris (e.g. demolition work or high rise construction).
- Hazardous atmospheres (e.g. land fill sites and confined spaces where gases, vapours or mist may be hazardous).
- Use, handling and storage of hazardous chemical/dangerous goods.
- Inadequate lighting (including work completed at night as well as inadequate task lighting, inadequate access and stair lighting and inadequate emergency lighting).
- Excessive noise for long periods (e.g. piledriver and jackhammer).
- Presence of hazardous airborne contaminants (e.g. gases and vapours or dusts like lead, silica or pesticides).
- Pressure equipment operation (including steam boilers and associated pipe work, pressurised hot-water boilers, air compressors, and equipment associated with surface preparation or abrasive blasting).
- Restricted walkways and working platforms (temporary structure specifically erected to support access or working platforms).
- Slips, trips and falls (e.g. unstable, wet, slippery surfaces, excavation, exposed reo bars and posts/pegs).
- The presence of asbestos.
- Under ground or overhead utilities (gas, water, electricity etc.).
- Violence and aggression (verbal/physical abuse from members of the general public).
- Work completed outside of normal operational hours (work extending or scheduled outside normal business hours that may lead to fatigue).
- Working in excavation or trenching.
- Working near water or liquid that poses a risk of drowning.
- Working on or adjacent to moving traffic.
- Work carried out on, in or adjacent to a road, or other traffic corridor that is in use by pedestrians and/or other traffic.
- Work in remote or isolated areas.
- Young/unskilled labour (use of day labour).
8.4 Contract Specific Risks

The Principal discloses the following, but not limited to, risks associated with the contract services. However, it will be the responsibility of the Contractor to perform a risk assessment of the hazards at each work site prior to commencing the contract services.

- There may be physical injury and microbiological contamination of persons coming into contact with the sewage if the works are not properly managed or controlled on site, or if personal hygiene procedures are not followed.
- There may be electric shock / burn injuries if the Contractor on site does not observe the organisational / statutory requirements for the works.
- There may be risk of asphyxiation or other serious injuries if the Contractor on site does not comply with ‘Safe Entry to Confined Spaces’ Regulations and adhere to standard operating procedures.
- There may be chemicals, gases, heat and dangers working near and / or adjacent to on site structures that may cause injury / harm to the contractor’s employees.
- The construction site may be contaminated and it is the Contractor’s responsibility to obtain such information.
- Contract services are located in an identified slip risk area and specific safety precautions must be undertaken.

8.5 Personal Protective Equipment

Further to Clause 38.7(j) of the General Conditions of Contract, ensure the following minimum PPE is provided and worn at all times:

- long sleeved high visibility shirt, or a long sleeved shirt with a high visibility vest
- full length trousers
- broad brimmed, bucket or legionaries style hat and/or safety helmet with broad brim.

Inclusive of any of the above requirements, during low light and night time works, fluorescent and/or reflective PPE must also be worn.

Further to Clause 38.7(f) of the General Conditions of Contract, ensure controls are implemented utilising a risk based approach for all work activities and where identified, additional/alternate PPE is provided and worn as required.

8.5.1 Water and Waste Facilities

In addition to the above, when working within any Water and Waste operational and construction Sites:

- safety helmet with broad brim
- ankle length lace up or zip up safety boots
- safety glasses
- gloves when conducting manual tasks.

8.6 Alcohol and Other Drugs

The Contractor’s personnel (including subcontractors), whilst engaged in the Services, must not be under the influence of any alcohol and/or other drugs (AOD).

All Personnel must maintain a Breath Alcohol Concentration (BrAC) reading of 0.000% and in respect of drugs including but not limited to opiates, THC, cocaine, amphetamine and benzodiazepines, maintain levels not in excess of those prescribed by AS 4760.

The Principal may arrange for random AOD testing at any time. The Contractor’s personnel must participate in testing through a random selection process.

The Contractor must:

- ensure all its personnel are aware that they must participate in a random AOD test when requested
- ensure that its personnel comply and participate in the random AOD test
ensure that its personnel cease work and leave the Site if:

- refusing to submit a sample for testing purposes;
- a non-negative drug test result is returned; or
- a positive alcohol test is returned.

Personnel may only return to the Site subject to the Contractor providing evidence of a confirmed negative test result.

8.7 Reporting and Incident Investigation

Provide WHS performance reports specific to the Site and Services monthly or as directed by the Principal’s Nominated Representative.

Further to clauses 38.7(m) and (n) of the General Conditions of Contract, notify the Principal’s Nominated Representative immediately after becoming aware of any of the following:

- a failure to comply with any requirement of this Clause;
- any accident, incident or near-miss incident;

The initial notification may be verbal or in writing, it must contain the full details of:

- the location and nature of the event;
- the nature and extent of any harm and any other impacts that have occurred or may occur;
- how the Contractor is managing the event; and
- any other information required by any Regulatory Authority.

If the initial notification is verbal, it must be followed by written notification within one business day.

Investigate the root cause of any accident, incident or near-hit incident as soon as practical and provide the results, any learning or recommendations and any progress reports on corrective actions taken to the Principal’s Nominated Representative.

Further to Clause 38.7(q) of the General Conditions of Contract, the Principal may by notice in writing to the Contractor, participate in or review any investigation the Contractor undertakes.

Failure to comply with this Clause, the Principal may by notice in writing to the Contractor conduct its own investigation in to any accident or incident in relation to the works.

9. Environmental protection

9.1 Environmental control

Comply with the provisions of all environmental protection provisions in this Contract, and with the requirements of any Legislative Requirements related to environmental protection.

Do not form new tracks, alter existing tracks, erect camps, remove trees or shrubs, cut fences, water, sewerage or power lines or any other such things without the written approval of the Principal.

Restrict dust caused by work under the contract to a minimum. Take all practical steps to minimise noise resulting from work performed under the Contract.

9.2 Status of Contractor in terms of Environmental Protection Act

For this Contract, the Contractor will be considered an agent of the Principal for the purposes of complying with the Environmental Protection Act 1994. Comply with the following:

- Before commencing work, and at no cost to the Principal, all personnel must attend an induction course held by the Principal. This course will cover environmental issues.
- All personnel to sign a register of attendance at the conclusion of the course indicating agreement to comply with the requirements and processes.
Part B: Project Specific

- All personnel to attend a ‘Work Specific’ Induction if the Principal’s Nominated Representative where applicable deems it necessary, at no cost to the Principal.
- All personnel to co-operate with the Principal’s environmental auditors monitors and inspectors.
- Be responsible for providing all personnel with appropriate gear at no cost to the Principal.
- Be responsible for identifying and making the information available to all personnel, all potentially hazardous likely to be encountered and all hazardous materials likely to be used in the performance of the work.

9.3 Environmentally Relevant Activity

Some of the work to be undertaken under this contract may be an Environmentally Relevant Activity under the Environmental Protection Act 1994, and is required to be undertaken under an environmental licence. Information about acquiring an environmental licence is available from the Department of Environment and Science. Obtain an environmental licence to undertake these items prior to commencement of work.

No work may commence until evidence of the appropriate environmental licence is presented to the Principal, either as part of the tender submission or after notification of the Principal’s intention to accept a tender.

9.4 Environmental performance conditions

Compliance with Environmental Laws

- In addition to any other clause of this contract requiring compliance with laws by the Contractor, comply with the requirements of all environmental laws relating to the works or provision of services.

Contractor to obtain all necessary authorities and approvals

- Prior to the commencement of works or provision of services, obtain all necessary environmental authorities, development approvals or any other licences, permits and approvals of any kind whatsoever in order that the works or provision of services can be lawfully commenced.

Notification of incidents and compliance with orders and directions

- Notify the relevant administering agency immediately of any non-compliance with any Environmental Authority or other Permit, Licence or Approval applying to the works or any environmental law or regulation relating to the works or the site on which the works are carried out.
- Notify the relevant administering agency immediately of any incident involving actual or potential serious or material environmental harm or environmental nuisance associated with the conduct of the works. Provide such details of the incident to the Principals Nominated Representative where applicable reasonably requires. In this clause ‘serious or material environmental harm’ and ‘environmental nuisance’ have the same meanings they have in the ‘Environmental Protection Act 1994’.
- Notify the Principals Nominated Representative where applicable immediately of any direction order or requirement being imposed on it by any agency responsible for administering environmental laws in respect of the works or any aspect of your conduct in respect of the works.

Environmental Management Plan

- Unless otherwise advised by the Principal, prepare prior to the commencement of works an Environmental Management Plan (EMP) or Environmental Management System. This EMP shall ensure any potential environmental impacts associated with the works or provision of services are identified and managed appropriately.

Indemnity - Environmental Harm

- Indemnify the Principal against all liability, loss arising from, and any costs, fines, charges or expenses incurred in connection with a breach by you of:
  - the conditions of any Environmental Authority or other Approval or Permit whatsoever pertaining to the works; or
  - any relevant Environmental Law
  - arising out of or as a consequence
  - or as a consequence of the carrying out by you of the work under this contract.

Principal may inquire about compliance; be prepared to:
Part B: Project Specific

- Answer any reasonable request by the Principal’s Nominated Representative where applicable concerning your compliance with any environmental authority, or other Approval, or any environmental legislation concerning the works; and
- Respond to any reasonable direction of the Principal’s Nominated Representative where applicable concerning compliance with any environmental authority or other approval concerning the works, in the case of you being an independent contractor working under the Principal’s Environmental Authority, or in the case of you being a Dependent Contractor.

Contractor is aware of approvals obtained by Principal

### 9.5 Protection of flora

Protect from and report damage to all trees and other plants which:

- are shown or specified to be retained
- are beyond the limits allowed to the Contractor
- need not be removed or damaged for construction operations.

Obtain the written approval of the Principal’s Nominated Representative, prior to removal of any tree or plant.

Do not disturb marine plants, as defined by and protected under the Fisheries Act 1994, without written approval from the Department of Agriculture and Fisheries.

Report significant occurrences of damage trees, shrubs and gardens to the Principal’s Nominated Representative within 24 hours and repair or replace any such damage at no cost to the Principal.

### 10. Waste tracking

Legislation requires all handlers (being generators, transporters, and receivers) of trackable waste, as defined in the Environmental Protection Regulation 2008, to record prescribed information about the waste.

Notwithstanding the above paragraph, if specified below as being applicable, record the prescribed information about the trackable wastes as detailed in Schedule 2 of the Regulation. Provide this information to the DES on the approved form, or in any other prescribed manner.

The DES’s approved form is available from all DES offices. Obtain approval from the Chief Executive of the DES before using any other method to record and report the trackable waste.

This Contract requires the submission of prescribed information to DES.

Some examples of trackable wastes are given below.

- Acidic solutions, or acids in solid form (e.g. battery acid, hydrochloric acid).
- Basic (alkaline) solutions, or bases (alkalis) in solid form (e.g. caustic soda, ammonia).
- Clinical and related wastes (e.g. sharps - exemptions apply for sharps collected in public areas).
- Organic solvents (e.g. white spirit, methyl ethyl ketone).
- Grease trap waste (e.g. interceptor waste).
- Lead and lead compounds (e.g. used lead/acid batteries).
- Mineral oils (e.g. waste oil, oil filters, brake fluid, oily rags).
- Oil and water mixtures or emulsions, or hydrocarbon and water mixtures or emulsions.
- Sewerage sludge and residues including nightsoil and septic tank sludge.
- Surface active agents (surfactants) containing principally constituents and which may contain metals and inorganic material
- Tyres.
- Waste from the manufacture, formulation or use of inks, dyes and pigments.
- Removal of asbestos.

The Contractor is to record and report all trackable wastes to DES requirements.

The following trackable wastes need to be recorded and reported to DES requirements.
11. Asbestos

Unless otherwise stated, if asbestos in any form is found on the site of the works, stop operations affected by the discovery immediately, make safe, seek direction from the Principal’s Nominated Representative, and await instructions.

12. As-constructed documentation

12.1 General

Further to Conditions of Contract regarding timeframes and acceptance of as-constructed documentation, undertake progressive recording of As-constructed documentation as follows:

- Retain a single set of approved for construction drawings as control drawings (provided by the Principal) onto which As-constructed documentation must be progressively recorded.
- These control drawings must be clearly stamped ‘as-constructed drawings – record’ in red colour. Keep an accurate and reliable record of As-constructed changes made throughout the duration of the Contract by regularly updating documentation using red colour.
- The As-constructed drawings must be stored in a secure location. The As-constructed drawings must be made available for review by the Principal at any time.

12.2 Format and content of As-constructed documentation


As-constructed documentation must meet the following minimum criteria:

- Show approved street names and correct lot numbers (current at the time of the works).
- Must be north facing.
- Show all significant variations from the contract drawings.
- Where the Contract contains the decommissioning of any of the Principal’s assets, these assets must be clearly marked on the as-constructed drawing by labelling the asset ‘Decommissioned’ and displaying a ‘strike out’ with cross(es) on the drawing.
- All drawings prepared in addition to the Principal’s supplied drawings, including but not limited to As-constructed documentation associated with or arising from changes, must be prepared using the same layout and format (i.e. titles, logos, drawing numbers, etc.) as that provided in the Principal’s supplied drawings and standard template drawings.
- Incorporate password lock or equivalent security measures preventing opening of the drawing file or files by the Principal will not be accepted.
- As-constructed drawings or information incorporating as-constructed survey data must be endorsed by an RPEQ.

12.3 Warranties and Manufacturer’s Guarantees - Applicable

Before applying for a Certificate of Practical Completion, provide the Principal with copies of all guarantees and/or manufacturers’ warranties or guarantees in respect of manufactured items of equipment or features. Ensure the warranties or guarantees give the name of the Principal as the warrantee, and that these are furnished by the warrantor direct to the Principal.

13. Interface with Gold Coast Rapid Transit - Applicable

The Contractor acknowledges that:

- Gold Coast Rapid Transit (GCRT) is a light rail system operating in the Gold Coast as a public-private partnership between the Principal, the State of Queensland, the Commonwealth of Australia and GoldLinQ Pty Ltd (GoldLinQ)
Part B: Project Specific

- GoldLinQ have contracted with KDR Gold Coast Pty Ltd (KDR) for the day to day operation and maintenance of the GCRT system
- they will ensure that any interface between the Contractor (in the course of providing the goods and/or services) and the GCRT is managed in accordance with the requirements of this clause.

The Contractor must inform itself completely in relation to any potential interface (Interface) with the GCRT that may arise as part of providing the goods and/or services. Interfaces include:

- any requirement to access or perform work on or near the land on which the GCRT operates
- any work that may disrupt or otherwise affect the GCRT, or GoldLinQ, KDR, its contractors or the Principal’s operations relating to the GCRT.

Where there is a potential Interface, the Contractor must complete a notification (Notification) in the form reasonably required by the Principal setting out:

- details of the Interface, including relevant locations, timing, risks, and a plan for dealing with the Interface including proposals for any actions required by the Principal, GoldLinQ or KDR
- any proposed changes to the goods and/or services to deal with the Interface
- any other information that may be relevant to the Interface.

The Contractor must provide the Notification to the Principal:

- where the Interface is capable of being identified prior to providing the Services, at least seven days prior to commencing work; or
- where the Interface is only capable of being identified during the provision of the Services, within 48 hours of becoming aware of the Interface.

The Contractor must not access or interact with the GCRT in the course of providing the Services unless it has provided the relevant Notification to the Principal (unless otherwise agreed in advance by the Principal).

The Contractor must update the Notification and provide it to the Principal within 48 hours after becoming aware of any material change to the Interface.

In the course of providing the Services involving an Interface, the Contractor must at its cost:

- comply with, and assist the Principal to comply with, all relevant legislation, standards, policies and protocols
- undertake any training or similar activities reasonably required by the Principal, GoldLinQ, KDR or its contractors in relation to the GCRT. Such activities may include but may not be limited to attending work health safety inductions, and participating in random drug and alcohol tests
- reasonably co-operate with GoldLinQ, KDR and its suppliers, contractors and consultants, including not interfering with, disrupting or hindering the work being carried out by them and
- comply with any direction from the Principal in relation to the Interface.

The Contractor warrants that:

- it has informed itself and notified the Principal of any potential Interfaces in accordance with this clause
- provision of the goods and/or services will not adversely affect the GCRT (unless otherwise approved in advance by the Principal).

The Contractor indemnifies the Principal against any claim by a third party (including the State of Queensland, the Commonwealth of Australia, GoldLinQ, KDR and its contractors) arising out of a breach of this clause.

The Contractor:

- understands that whilst working within the Light Rail Corridor the Contractor must maintain a Blood Alcohol Concentration (BAC) reading of 0.00% and in respect of drugs including but not limited to opiates, THC, cocaine, amphetamine and benzodiazepines, the Contractor must maintain levels not in excess of those prescribed by AS/NZS 4308 and AS 4760-2006
- may be required to participate in a random drug and alcohol test as required by KDR
- may be required to cease work and leave the work site within the Light Rail Corridor if the Contractor:
Part B: Project Specific

- refuses to submit a sample for testing purposes; or
- returns a Blood Alcohol Concentration (BAC) reading greater than 0.00%.

In this clause, Light Rail Corridor means the areas that contain the GCRT system.

The Contractor is not entitled to a variation in relation to any changes required to the goods and/or services as a result of complying with this clause.
Part C: Technical Specifications

1. Jet rodding, root cutting, CCTV surveys, condition assessments and patch repair works

The required activities associated with the Services include, but are not limited to, the following:

- Site establishment and disestablishment.
- Location of services.
- Location, exposure and accessing all required access chambers, traps, inspection openings, mains and dead ends.
- Jet rodding and root cutting, where required, within existing mains and/or branch lines to remove accumulated materials such as fats, grease, oils, silt, sediments, roots and any other loose materials as per WSAA Conduit Inspection Reporting Code of Australia.
- Cleaning including debris removal and disposal of waste / contaminants in compliance with the Principal’s and statutory requirements as per WSAA Conduit Inspection Reporting Code of Australia.
- Colour CCTV inspection of pipelines and MHs in traditional and innovative formats as per the WSAA Conduit Inspection Reporting Code of Australia.
- MH Condition Assessment as per the WSAA Conduit Inspection Reporting Code of Australia, and reported on the provided template (Part D Attachment B)
- Where requested, provision of detailed reports describing and illustrating the outcomes of investigations, including detailed condition assessment reports as per the WSAA Conduit Inspection Reporting Code of Australia.
- Resealing of access chambers where the access chambers have been modified or where the access chamber lid has been sealed into the frame with a Urethane or Mastic product as per WSAA Conduit Inspection Reporting Code of Australia.
- Resealing of access chamber lids that are bolted down with the original bolts or with new bolts provided by the Principal.
- Supply and installation of either internal local patch repair to rectify individually damaged pipes, joints, junctions or ancillary pipeline fittings.
- Supervision and coordination of the diversion of any associated sewer flow by the Principal.
- Maintaining services, particularly sewer connection, to householders throughout the Services.
- Communication with all stakeholders.
- Traffic control and public liaison.
- Customer liaison activities where required.
- Restoration of the sites.

Works issued under this Contract shall generally be for the CCTV survey of mains, location of MHs or clearing of roots through two avenues of work, being an annual program (Section 2), or ad-hoc work (Section 1) which is generally of not more than 10 MH to MH lengths of sewer pipelines per issue of works with the possibility of a single MH to MH length (nominally 70 metres) being a single issue of work.

2. Abandonment of works

Where Services cannot be undertaken as expected due to unforeseen circumstances revealed on site that are not the responsibility of the Contractor, then the Principal shall contact the Contractor with instructions on the abandonment or otherwise of the survey or associated site activities prior to leaving the site. The appropriate abandonment of works rate in the schedule of rates will apply.

The Contractor may be instructed by the Principal to standby pending a verbal direction from the Principal. The appropriate standby rate in the schedule or rates will apply.
Part C: Technical Specifications

3. Site conditions

The majority of pipelines included under the contract services are expected to comprise of gravity sewer mains, however activities involving pressure pipelines may also be included.

Sewer pipe materials that may be encountered in the works include:

- Asbestos Cement (AC).
- Unplasticised Polyvinyl Chloride (uPVC).
- Vitrified Clay (VC).
- Glass Reinforced Plastic (GRP).
- Polypropylene (PP).

Limited amounts of:

- Polyethylene (PE).
- Ductile Iron Cement Lined (DICL).
- Ductile Iron Epoxy Lined (DIEL).
- Polycrrete and Reinforced Concrete Plastic Lined.
- and very small amounts of Concrete sewer pipes.

3.1 Works within water storage reservoir, wastewater treatment plant or pumping station sites

It is a requirement that all persons successfully complete the relevant induction prior to being permitted to access to that site.

All of the Sites are fully operational facilities, and any works are to be performed in a manner such as to minimise any disruption or hindrance to current operational or maintenance activities.

Access to the site shall be permitted by arrangement with the Principal, after having successfully completed the relevant induction. A protocol for access to each of the Sites shall be determined and approved by the Principal prior to commencement of the contract services.

Prior to commencement of work, personnel, including subcontractors engaged, operators of vehicles undertaking delivery / pick-up or unloading / loading of goods and any person attending the site as visitors to the work area shall undergo an induction by the respective Plant Supervisor. The induction shall include the relevant sites emergency evacuation plan, safety requirements and site specific protocols. Maintain a list of personnel who have completed the induction and ensure that throughout the term of the contract any new personnel also undergo induction prior to entering and / or undertaking any activities on site. Updated copies of the list shall be submitted to the Principal on the first working day of each month.

All internal roadways within the Plants are to be kept clear and accessible at all times. Parking of vehicles or equipment within existing roadways shall only be permitted for short-term loading or unloading of equipment or facilities, and only with the prior approval of the Principal. All other vehicles, including vehicles used by personnel to commute to the site for meetings, site inspections, etc, shall be parked within the respective car parking area located in the vicinity of the Administration Building, or at other locations within the Site subject to written agreement of the Principal.

4. Site restoration and rectification

On completion of the Services, unless directed otherwise by the Principal be responsible for backfilling of the site following completion of the works and restoration of all surfaces or services affected as a result of the contract services.

Remove all equipment and personnel from the site and ensure the site is safe and returned to its original condition prior to handover.
Be responsible for any direct or indirect damages caused during execution of the Services. Rectify the direct and indirect damages to its original or better condition to the satisfaction of the Principal and the Customer prior to the completion of the work request. Should the Customer be dissatisfied with the rectification works, and an agreement for rectification cannot be made, the Principal shall make a judgement on the action to be taken based on photographic records kept by the Contractor. Where the Contractor fails to undertake the rectification services to the satisfaction of the Principal and the Customer within the agreed time period, the Principal may undertake the necessary action to complete the rectification works. If any foreign matter enters into the Principal’s water supply system, as a result of the services, the Contractor shall be fully responsible for all necessary rectification services and maintenance of the system without any cost or time implication to the contract.

5. Notification of residents, local businesses, property occupiers and Authorities

Liaise with the Principal in relation to the following public relations work prior to commencement of the contract services and / or prior to commencement of any specific activities likely to involve a disruption of service to Customers.

It is noted that liaison with customers is deemed to be a part of the normal CCTV and MH condition assessment process, however allowance has been made in the Schedule (Section 1, Item 2.012) for liaison activities related to customer access to properties for work on branch drains, as it is recognised that this level of liaison is more time consuming than business as usual practices.

5.1 Notification of Proposed Works Notice

All residents, local businesses and property occupiers in the vicinity of the works who will be, or have the potential to be, affected by the contract services, including being affected by the noise of the works, shall be notified by a Notification of Proposed Works Notice.

Through the Principal the form and content of the proposed notice shall be subject to the agreement of the Principal.

Details of the works and format of the proposed notice shall be forwarded in writing to the Principal not less than 14 days in advance of the intended date for commencement of the works. The draft notice shall as a minimum include details of the following:

- Outline and description of project works to be performed.
- Purpose and benefits of the work.
- Estimated dates and times for commencement and completion of the Works.
- Expected days and hours of work.
- Access requirements to the site of works if interfacing with public areas.
- Contact name and telephone number.

The proposed notice shall be finalised, together with agreement on the distribution area, number of copies and proposed distribution date, not less than 10 days prior to the commencement of work.

The Principal shall arrange for the production of letters on the Principal’s letterhead, and shall advise when the copies of the notice are available for pick-up and distribution.

Notices are required to be distributed to all affected properties and / or persons not less than seven days prior to the proposed commencement of the works referred to within the notice.

Within 24 hours of the completion of the distribution of the notices, submit to the Principal a statement confirming:

- the date and time of completion of the distribution of the notice
- the date or dates upon which the notices were distributed
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- the number of notices issued and distribution area
- any issues arising or comments received from members of the public during the process of the distribution of notices and processes proposed to improve distribution of any future notices.

Do not change the details within the notice, change the date of the proposed works on site, or alter any aspect of the works which are in contradiction to the details on the notice without the prior agreement of the Principal.

5.2 Notification of Expected Disruption to Service.

Pursuant to the requirements of Clause 5 of Technical Specification Part C, where the Principal has agreed to the proposal to undertake works involving a disruption to the provision of a service to the Principal's customers, all residents, local businesses and property occupiers who will be affected by the works shall be notified by a Shutdown Notice.

Through the Principal the form and content of the proposed notice shall be subject to the agreement of the Principal.

Details of the works and format of the proposed notice shall be forwarded in writing to the Principal not less than seven business days in advance of the intended date for commencement of the works. The draft notice shall as a minimum include details of the following:

- Description of work to be done.
- Expected date(s) and times for the work to be undertaken.
- Details of service expected to be disrupted, and duration of disruption.
- Access requirements to site if interfacing with public or private areas.
- Contractor's contact name and telephone number.

The proposed notice shall be finalised not less than five business days prior to the commencement of work, together with agreement on the distribution area, number of copies and proposed distribution date, prior to delivery of the notice.

The Principal shall arrange for the production of letters on the Principal's letterhead, and shall advise when the copies of the notice are available for pick-up, at least three days prior to the proposed notice distribution date.

Notices are required to be distributed not less than two days prior to the proposed commencement of the works referred to within the notice.

Within 24 hours of the completion of the distribution of the notices, submit to the Principal a statement confirming:

- The date and time of completion of the distribution of the notice.
- The date or dates upon which the notices were distributed.
- The number of notices issued and distribution area.
- Any issues arising during the process of the distribution of notices and processes proposed to improve distribution of any future notices.

Do not change the details within the notice, change the date of the proposed works on site, or alter any aspect of the works which are in contradiction to the details on the notice without the prior agreement of the Principal. Should the proposed works be rescheduled for any reason whatsoever, and the rescheduled date of works be agreed by the Principal, a new notice will be required and the process and associated timelines as described above shall be recommenced. Under such situations the Contractor shall not be entitled to any extension of time or associated direct or indirect costs as a variation to the contract.

6. Project Signboard

Subject to the requirements of each activity and / or project, and subject to the direction of the Principal, before commencement of the Services place signboards supplied by the Principal outside the work area visible to the public and without obstruction to the access of the public. Upon completion of the work, remove the signboards and return them to the Principal without any damage.
7. **CCTV Surveys**

The Principal requires the services of two types of CCTV Survey systems being Traditional Video Image CCTV Survey and Innovative Digital Still Photograph CCTV Survey.

7.1 **Traditional Video CCTV Survey System**

The requirements and outputs from a Traditional Video Image CCTV Survey system are as follows:

All CCTV inspections must be performed by personnel accredited for the work. Only CCTV operators with a Statement of Attainment in Unit NWP331B – *Inspect conduit and report on condition and features* incorporating the encoding and other requirements of the Water Service Association of Australia (WSAA) Conduit Inspection Reporting Code of Australia (WSA 05-2008 Version 2.2) shall be used on works undertaken under this Contract. Evidence of this attainment for each operator shall be submitted at the time of commencement and when a new operator commences working for the Contractor on the Contract.

All works, CCTV equipment and techniques including reports and DVD recordings shall comply with the WSAA Conduit Inspection Reporting Code of Australia (SIRC). All defects noted during the CCTV inspection must be recorded and shall comply with the WSAA Conduit Inspection Reporting Code of Australia.

A tilt / panning head camera must be used that, in conjunction with its lighting and transportation unit, is capable of inspecting pipes ranging from DN150 to DN2100mm. The tilt / panning function must be capable of allowing the camera lens to view into house connection branch junctions regardless of the direction of travel. Only colour CCTV equipment may be used that has an angle of view not less than 50°. The camera lens must be positioned centrally within 10 per cent of the mains diameter to reduce the risk of picture distortion and the lens must be positioned to look directly along the axis of the pipe when the camera is in motion. The CCTV survey must give a clear view of each internal cut-out at junctions and house connection branches looking along the laterals. Camera position shall be as per the latest version of the WSAA Conduit Inspection Reporting Code of Australia.

The camera and illumination system must provide an even distribution of light around the main without loss of contrast, flare-out of picture or shadowing of picture so that it provides, in colour, a clear, accurate and in-focus record of the pipe's internal condition along the main from the initial point of focus for a minimum length along the pipe of four times the vertical height of the main. The camera’s iris and light intensity must be able to be adjusted manually by remote control to get the best possible picture clarity and it must provide a focal range from 15mm to infinity.

All inspections must commence from the centre of the MH where the pipe starts and continue to the centre of the MH where the pipe ends.

The ‘start point’ for distance measurement (0.00m) must be the point at which the pipe passes through the wall of the MH chamber. It is not the centre of the MH chamber but the commencement point of the pipe that is the start point.

During playback of the footage there must be the distance measurement continually displayed showing the distance of the camera from the start point in the MH. The length displayed shall be accurate to ±0.5% or 0.25m, whichever is greater and as per the latest version of the WSAA Conduit Inspection Reporting Code of Australia the distance counter will be of similar accuracy either going forward or backward.

At the commencement of the survey the camera must be panned and tilted to provide as complete an image as possible of the MH chamber. This may require any natural light from an open MH to be temporarily blocked while this is being carried out. Any inspection not able to start in the MH must have a comment included on the video and report to explain why it was not physically possible to do so.

The camera must then closely inspect the MH / pipe interface prior to entering the pipe by panning and tilting the camera to capture detailed footage of this area.

Should a pipe be discovered in poor condition with a possible loss of structural integrity, the CCTV inspection shall include a 360° inspection of each joint with the camera stopped. This will most likely only be required on AC or VC mains however this requirement is not limited to these materials.
At the completion of the inspection, the camera must continue into the centre of the MH wherever possible, with tilting and panning of the camera to provide a complete image of the MH and the MH / pipe interface. Where this is not possible due to an obstruction or other cause, the camera shall be advanced as close as possible to the MH. As per the latest version of the WSAA Conduit Inspection Reporting Code of Australia

The Contractor may elect to continue a CCTV inspection through to the next section by passing through the MH, however the initial inspection must be completed and a new inspection started from the centre of the MH following the procedure documented. This is required regardless of whether the MH is a known MH or it is an unknown MH that has been found by the survey.

To allow for the maximum view into a house connection junction lateral, all DN150 to DN300 sewers shall be surveyed from the upstream MH to the downstream MH. For mains DN300 and greater, the inspection can be carried out in either direction to allow greater efficiencies in cost and time and lessen the impact on residents and traffic management. It is expected that the camera will provide a satisfactory view up a lateral connection, regardless of the direction of travel, in a main of DN300 or greater. The identified house connections (also referred to as Branch Lines) will also be made visible on the associated Wincan Reporting, and a total number of junctions per main will be recorded and reported back to the Principal.

The camera shall travel through the main at a speed that allows for the identification of all defects and features regardless of the condition or state of cleanliness of the main. The maximum allowable speed is as per the latest version of the WSAA Conduit Inspection Reporting Code of Australia.

The camera shall be stopped at all defects and features and panned / tilted to provide a clear view of the entire defect or feature. If the feature is a lateral connection, the camera should be longitudinally positioned to allow the furthest view up the connection as possible.

At each house connection branch, the camera shall be held stationary and the camera head shall be rotated such that the interior of the house connection service is inspected and any defects or blockages visible at the connection point, or along the connection to the limit of what can be seen from the main (generally the first bend), shall be recorded. The following issues with a property connection must be noted:

- **Broken bottom bends.** These are a reasonably common problem in the Gold Coast area with uPVC bends constructed during the early 1980's through to late 1990's (prior to the development and implementation of reinforced bends), especially with deep mains. In these cases the fitting will normally shear at the bend and the house drainage riser pipe will be forced downwards. Normally viewed from the main when looking up into the connection as a misalignment of the house drainage line at the bottom bend. It is acceptable to note these defects as suspected broken bottom bends, as confirmation prior to house drainage CCTV inspection is not always possible.

- **Infiltration.** Infiltration at the connection point to the main is reasonably common and may be accompanied by encrustation at that point. Suspected infiltration from beyond the visible area, generally observed as a constant clear flow, should also be noted.

- **Roots.** Roots may be visible as a mass causing a partial blockage of the connection, or growing down the connection towards the main. Any evidence of roots in a house drainage line shall be noted.

- **Blocked connections.** All connections partially or fully blocked shall be noted.

- **Faulty 'top hats' or missing 'top hats' on relined mains.** Mains that have been relined should have all connections from the main completed using a 'top hat', which is a section of liner that extends part of the way up the connection and bonds to the house drainage line to seal off possible entry points for roots or infiltration. Early relining activities often did not include this technology and all instances should be noted. Any 'top hat' defects observed shall also be noted.

Should the CCTV contractor discover an unknown MH during an inspection, the inspection shall be stopped at the centre of this new MH, a unique identifier should be assigned to this new MH and the log sheet header should be adjusted. The survey shall be recommenced with a new start point (0.00m) at the commencement point of the sewer pipe leaving this unknown MH with the survey then continuing to the original end point. Where an unknown MH is found, the Contractor shall attempt to locate the MH on the surface and provide location details to the Principal with the package of works. A guide on how to provide the details unknown MHs is supplied in Attachment A “MAINTENANCE HOLE – AS CONSTRUCTED – MAP-UP TEMPLATE”.
The Principal has introduced Smart sewerage concepts into their sewerage system. These sewerage system concepts are shown within the current edition of Council’s Land Development Guidelines and Standard Specifications and Drawings that can be viewed and downloaded from http://www.goldcoastcity.com.au or they are shown within the South East Queensland Sewerage Code that is available via the links at this Council web address.

Have a thorough knowledge of Reduced Infiltration Gravity Sewerage System (RIGSS) components such as maintenance shafts, rodding ends and in-line bends to ensure the suitability of their CCTV equipment for the works.

Where a collapsed sewer main is encountered and it is not possible to undertake the survey of the full length of a sewer, the survey shall be relocated at the point where the survey is no longer possible and the survey of the relevant sewer shall then be recommenced from the upstream MH. The survey shall be continued until the camera is as close as possible to the location where the survey from the downstream MH was ceased. The survey from the upstream MH shall immediately follow the survey from the downstream MH on the DVD file. The Principal shall be contacted for instructions on the non-completed survey.

Should a main be discovered that requires urgent intervention to restore functionality or to avoid an imminent collapse or a main that already has collapsed and is presenting a void in the conduit wall that has either infiltration or soil/embodiment material migration occurring, the Contractor shall report this immediately to the Principal on discovery.

Should a MH be discovered that requires urgent intervention to restore functionality due to structural collapse or from cover and frame damage or the MH is overflowing, the Contractor shall report this immediately to the Principal on discovery.

Steam or fog shall not be a reason for not completing the survey of a pipeline. The line shall be ventilated by the Contractor in the case of steam or fog in the pipeline, or the lens shall be cleaned in the case of fog on the lens with this cleaning to be through either removal, cleaning and recommencement of the survey or by ventilation of the pipeline and recommencement of the survey. In either case, the survey of the pipeline shall be recommenced and/or the ventilation of the sewer shall be carried out at the Contractor’s expense.

### 7.2 Innovative Video CCTV Survey System

The requirements and outputs from an Innovative Digital Still Photograph CCTV Survey system (Photogrammetry) that produces a Panoramic like presentation of the inside pipe face of a pipeline are as follows.

Refer to WSAA Conduit Inspection Reporting Code of Australia WSA 05-2013 Version 3.1 or superseded version.

Additional functionality such as freely available data analysis software in English that operates in two dimensions (2D) will be required as an integral and free to Council part of any Innovative Digital Still Photograph CCTV Survey system.

Where additional data analysis software capabilities exist, please provide appropriate details for Council’s consideration.

### 7.3 Camera Specifics

For a Traditional Video Image CCTV Survey system, the camera transportation unit and cable length shall allow for a minimum continuous inspection length of 200m from MH to MH. Conducting separate inspections from different directions to achieve this maximum distance is not acceptable unless specifically approved by the Principal prior to the works commencing.

Refer to WSAA Conduit Inspection Reporting Code of Australia WSA 05-2013 Version 3.1 or latest version. However, the Principal still specifies WSA 05-2008 Version 2.2 for scoring.

The camera manufacturer’s accredited agent shall provide the Contractor with a declaration annually and/or after any repairs or modifications, that the camera has been adjusted correctly for:
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- white balance for the lighting system used
- linearity
- focus distance / range
- video signal.

This declaration shall be included with the first package of works submitted for the camera(s) used in producing that package and after any repairs or modifications.

For an Innovative Digital Still Photograph CCTV Survey system that produces a Panoramic like presentation of the inside pipe face of the pipe, the nominal’s within Clause 7 above shall be complied with and the camera system manufacturer shall detail the required annual camera service checks and state the cameras annual compliance certification needs where applicable.

Be responsible for all costs relating to the recovery of or damage to equipment in the course of the contract services.

7.4 CCTV Survey and Pipeline Cleaning

Where directed by the Principal, combined activities of jet rodding and cleaning and CCTV survey may be undertaken concurrently on the same sewer line.

Cleaning includes debris or tree roots that prevent the passage of the CCTV camera through the sewer line, or slime or fat build up that prevents the surface of the sewer line being examined. However, the Principal may direct additional cleaning of sewer lines, either before or after the CCTV work, at the scheduled rate. This may stipulate water jetting, or a similar approved method, to remove all silt, grease, roots and loose material, to the satisfaction of the Principal. Allow for all types and equipment required for cleaning, including sub-contractors if necessary, in the schedule of rates for this item.

7.5 Pipe Material Care

When cleaning older mains and especially AC mains, avoid excess pressures that may damage or collapse the main. Use the minimum pressure required to remove any deposits and for any main that is regarded as vulnerable to damage or collapse, periodically inspect the main being cleaned to ensure that no damage is being caused.

When cleaning any GRP main, ensure that cleaning is carried out in accordance with the recommendations of the pipe manufacturer with regard to cleaning head placement within the main as any delimitation damage caused by inappropriate use or placement of the cleaning head within the pipe shall be repaired at the cost of the Contractor.

Where the cleaning appears to be having a detrimental effect on the main despite using minimal pressures and appropriate equipment, the activity should be terminated and the Principal shall be contacted for instructions on the non-completed work issue.

7.6 Debris Management

Remove any debris cleaned from the main at an appropriate MH using a cage with a maximum gap of 20mm. The design of the cage should allow for the capture of larger debris such as dislodged roots, bricks, etc. All removed material shall be treated as contaminated waste and disposed of in accordance with contaminated waste legislation.

Minor levels of silt or debris in the invert of the main not affecting the CCTV operation do not require cleaning. This must however be reported as part of the Inspection Report.

Mains with major levels of silt that precludes the completion of the CCTV inspection shall be reported to the Principal for direction. The generally accepted remediation for this situation would be cleaning and removal of spoil from the main.
7.7 Root Cutting

The requirement to undertake additional root cutting activities will be identified and subject to the direction of the Principal. All debris from the root cutting activities must be removed from the pipeline in accordance with Principal’s Requirements Clause 7.6 of Technical Specification Part C.

8. Alterations To Maintenance Holes and Maintenance Hole Status

Where alterations have been made to a MH or to its surrounds to facilitate the undertaking of works under this Contract, the Contractor shall restore the MH or its surrounds to the satisfaction of the Principal. Separate to any civil reconstruction of the MH cover slab and / or cover and frame surround involved in the works, where the MH lid was sealed into the frame with a Urethane or Mastic product such as Sikaflex, and this seal has been removed in accessing the pipeline, then after the works have been completed, the cover and frame shall be re-sealed with a similar sealant product approved by the Principal as follows:

- With a stiff brush, remove any excess debris, encrustation, loose corrosion from the MH cover and from the frame.
- Replace the MH cover.
- Once the MH cover is in place, apply a ring of Sikaflex, or approved equivalent around the outer edge of the MH cover so that any gap between the edge of the MH cover and the frame is sealed.
- The Urethane or Mastic product is not to be applied to the interior of the ring or neck, or to the underside of the MH cover.

Where the MH cover is bolted into the frame, after the works have been completed, the Contractor shall refit the MH lid with the original bolts or with new bolts provided by the Principal. The cost of such alterations and subsequent restoration must be included in the schedule of rates.

Mains and MHs may be located in sites where vehicle and personnel access may be restricted. This includes amongst other things:

- dense bushland areas
- low lying swampy or wetland areas
- located within residential and medium to high density residential and industrial land
- Additionally MHs may be raised several metres above the surrounding surface levels.

The Contractor will use the supplied GIS data to determine where these conditions may exist and plan the inspection accordingly. Works incomplete due to access restrictions will not be accepted.

9. Condition Assessment Sewer Main

For sewer surveys using Traditional Video Image CCTV Survey systems, when requested by the Principal undertake an assessment of the condition of the pipeline and prepare and submit a detailed condition assessment report for each pipeline to which the Principal’s direction applies.

All condition assessment must be performed by personnel accredited for the work. Only personnel certified with either the Australian Water Association (AWA) or the WSAA must be used on works undertaken under this contract.

All works and techniques including reports and DVD recordings must comply with the WSAA SIRC. All defects noted should be recorded and must comply with the WSAA Conduit Inspection Reporting Code of Australia. These defects and their associated score in Wincan must also be reported on the physical CCTV report inclusive of its defect score, See Attachment E for details. The Principal currently specifies WSA 05-2008 Version 2.2 as the scoring criteria. If the Principal opts to change the version of the code to be used, the Contractor will be notified by the Principal.

For surveys using Innovative Digital Still Photograph CCTV Survey systems, in addition to the Panoramic like visual presentation of the inside pipe face of the pipeline, a condition assessment report from Australian Water and Wastewater Association (AWWA) or WSAA certified personnel that is as near as possible to the above nominated WSAA Code requirements must be provided when requested by the Principal.
10. **Condition Assessment Branch Lines**

For branch line surveys using Traditional Video Image CCTV Survey systems (generally understood to be a push camera instead of a tractor camera), when requested by the Principal undertake an assessment of the condition of the pipeline and prepare and submit a detailed condition assessment report for each pipeline to which the Principal’s direction applies.

All condition assessment must be performed by personnel accredited for the work. Only personnel certified with either the AWWA or the WSAA must be used on works undertaken under this contract.

All works and techniques including reports and DVD recordings must comply with the WSAA SIRC. All defects noted should be recorded and must comply with the WSAA Conduit Inspection Reporting Code of Australia.

It is understood that inspection of branch lines requires additional customer liaison work than normal main CCTV, in turn it is expected that the contractor will undertake appropriate customer liaison to gain access to the property. Excessive customer liaison (second and third attempts to contact customers after issue of a written notice to the customer) will attract additional expense to the principal and is provided for in the schedule of rates (item 2.012 Section 1).

It is also understood that inspection of branch lines may be affected by availability of a suitable IO to access the branch line. Due to the uncertain nature of accessible IO's the schedule of rates has made provision for location of a buried IO (item 3.009 Section 1) as well as installation of an IO where one does not exist (Item 3.010 & 3.011 Section 1).

11. **Maintenance Hole Condition Assessment**

MH survey is to be undertaken in accordance with the Principal’s MH Condition Assessment Technical Specification included in Part D: Attachment B).

12. **Laser pipe profiling**

Pipelines nominated by the Principal must be inspected and assessed by laser profiling and a written report and supporting data prepared in a format to be determined by the Principal, including digital photographs. Upon completion of the report the Contractor must submit the report to the Principal not more than 14 days after the site inspection.

13. **Maintenance Hole Location**

Locate, expose and make accessible various sewer maintenance holes throughout the City. Various means are to be utilised to achieve this goal. They include but are not limited to;

- Ground Penetration Radar technology – In particular around location of buried maintenance holes.
- CCTV (sonde) location work – Tractor camera within mainline to determine exact location of buried maintenance hole or alternatively, utilise push camera with sonde technology to assess via any sewer house connection close to maintenance hole.
- Metal Detection equipment
- Probing with intrinsically safe mighty probes
- Manual digging
- Vacuum excavation works
- Potholing
- Visual inspections

MH ID’s must be provided in an excel spreadsheet with the contractor responsible for obtaining the software to enable a GIS search of MH’s using the provided GIS layers. GIS layers in .gdb format will be provided to contractors and can be organised to be picked up from the Project Inspector if contractor has not done so previously. Each MH is within ESRI mobile maps. Hard copy print outs of maps will not be provided.

Contractor is required to undertake a dilapidation survey in order to protect the contractor and Principal for liability due to damages caused by the works. Prior to commencement of work please take photos of the infrastructure/features/fences/buildings adjacent to the work zone including newly constructed infrastructure i.e.
stormwater culverts/gully pits. At the completion of works take another series of photos. This list of photos should be comprehensive and have a high level of detail in order to thoroughly survey the existing condition of surrounding features, before and after the works.

13.1 Overview – Locate buried and inaccessible Maintenance Holes

- Contractors to use as many means necessary to locate, expose and make accessible the maintenance hole cover and frame. This may require small vacuum excavation works to be undertaken.
- If practicable, contractor to leave maintenance hole cover exposed so future works can be undertaken. Please assess each one and determine if this is possible taking into account safety and site location. If it’s not practicable or safe, do not leave visible however, please document where it has been located and make appropriate comments for remediation in the MH condition assessment.
- Contractor to mark with purple paint and complete As-constructed information (Part D: Attachment A) with measurements from a fixed point drawn. As-constructed information is to be submitted with standard report if MH is unable to be exposed, or is significantly (greater than 2m) away from its indicated location.
- If MH is left exposed / visible, ensure it is safe.
- Contractor to then gather relevant spatial data for potential GIS updates within Council’s mapping network and standard GIS update process is to be followed (Part D: Attachment B). Photos of each maintenance hole to be taken also.
- Contractor to scope, as specified by the Principal for rectification/refurbishment measures if required.
- At the end of each Month (in line with payment claims), the contractor will provide all gathered information for review and updating of defects spreadsheet and contractor docket. This information will be reviewed to ensure submissions meet the requirements as noted in the MH Report Submission Instructions for a conforming deliverable.
- Contractor to make reasonable attempts (minimum 2 attempts) to engage customers for access to properties where buried MH’s are located.
- Contractors are not permitted to enter private property without resident consent. The Principal is required to leave calling cards for call backs to arrange property access for Contractor.

14. Branch Drain Relining

Branch Drain Relining/Patching is to be undertaken in accordance with the Principal’s Branch Drain Relining/Patching Technical Specification included in Part D: Attachment D.

15. Main Line Patch Repair

In addition to the items for completing a main line patch, a CCTV survey must be conducted prior to and after completing any main line patch and CCTV reports submitted to the Principal. Should a CCTV survey and clean be deemed necessary prior to the main line patch, this must be charged at the rates for the appropriate service in the schedule of rates.

Use techniques that do not compromise the integrity of the existing pipelines. Any damage to the sewers during the patching process must be rectified at the Contractor’s expense.

16. Jet Rodding

All jet rodding must be performed by personnel accredited for the work. The Contractor must have a thorough knowledge of RIGSS components such as maintenance shafts, rodding ends and in-line bends to ensure the suitability of their equipment for the works.

Work on cleaning pipelines must proceed in such a manner that all materials removed from the sewer during the cleaning process are conveyed to the downstream sewer provided that under no circumstances shall material removed from one sewer be allowed to settle and accumulate in a downstream sewer. Any debris that must be removed from the sewer lines must be disposed of at the Contractor’s expense in accordance with legislative requirements.
All sewers must be jet rodded from the upstream MH to the downstream MH where possible.

Works must be undertaken as follows:

- Set up jet rodder and attach suitable head for job type.
- Run down the sewer line and flush with high pressure water, not exceeding a maximum of 2000 PSI at 125 litres per minute. If unsuccessful, try from a different direction where possible.
- Make a couple of runs through the line to remove any debris.
- Where necessary, remove large debris from the access pit. Dispose of any contaminated debris in accordance with legislative requirements.
- Retrieve and clean equipment.

Be aware that the subject sewer may have been constructed using:

- Asbestos cement (AC) pipe materials which may be in an advanced state of deterioration.
- Fibreglass products (GRP/Hobas) that have critical controls on allowable pressure, blast heads and height etc to prevent delamination.

Use techniques that do not compromise the integrity of the existing sewer. Any damage caused to the sewer during the cleaning process must be rectified at the Contractor’s expense.

If the Principal considers the method used for cleaning sewers is having a deleterious effect on the sewers, the Principal shall instruct that cleaning work ceases immediately. No further cleaning of sewers by the initial method must be undertaken by the Contractor. Submit an alternative method of cleaning sewers to the Principal. Work on cleaning the sewers may only recommence when the Principal has approved of the alternative method. No extra payment shall be made for the alternative method of cleaning.

Where a collapsed sewer main is encountered and it is not possible to undertake the works as requested, the Principal must be contacted by the Contractor for instructions on the non-completed work issue. The Contractor may be instructed to Standby pending a Direction or Abandon the works.

### 17. Interruption And / Or Diversion Of Services

The Principal discloses that aspects of these works may impact on its ability to maintain required levels of service to the public and may impact adversely in respect to critical issues such as safety, environmental or other outcomes not acceptable to the Principal if not addressed adequately or if not appropriately coordinated with the Principal’s resources where they also need to be involved.

Accordingly, during the works, and further to the general information provided in the Contractors Environmental and Construction Management Plan for the works, the Principal requires the Contractor’s detailed disclosure of draft proposals for any stages of the works associated with or requiring interruptions and / or diversions of services.

Details of the draft proposals are to be provided to the Principal for information and coordination aspects to be addressed, and until the Principal advises that it has no objection to the proposal, then this is a nominated hold point for the relevant works. These nominated works then require the Principal’s direction permitting the works to proceed in accordance with the Principal endorsement of the Contractor’s proposal (as modified where necessary to meet the Principal’s project objectives). Note that it is the intention that in this process, the outcome of the proposal is defined by the Principal, and the responsibility for delivery, in areas of the site under the control of the Contractor, remains with the Contractor.

The following details as a minimum are to be provided by the Contactor for the specified works:

- A narrative of the work and how the work shall be carried out (and accompanied by a Gantt Chart Program depicting activity durations, activity dependencies and the critical path) with nominated staff roles and responsibilities (including any Principal roles), critical times nominated and a schedule of Labour, Materials, Plant and Sundries for each activity along with evidence of any possible preliminary work (eg. location and levels for existing services, materials sourcing, prefabrication etc) in order to minimise service interruptions to less than five hours.
- Proposals for community consultation arrangements for Contractor and Principal.
18. **Sewer Flow Control And Interruption And / Or Diversion Of Sewage Services**

Be responsible for localised flow control in the immediate area of the CCTV works to reduce the flow to the maximum allowable depth of 20 per cent for DN150 to DN225 sewers and 25 per cent for DN300 to DN600 sewers and 30 per cent for all larger sewers with the percentage of flow related to the pipe height of all sewer DN’s. This responsibility for localised flow control is the case whether a pump station shutdown is established or not.

Where the depth increases over the above nominal’s due to localise sewer main ponding and this additional depth cannot be rectified by further flow control, continue the inspection despite the increased flow depth. The condition assessment report must note the ponding start and end points and where any obstruction prevents the continuation of the inspection then the inspection should restart from the other direction and be continued to as close a point as possible to where the inspection was just stopped.

It is expected that the Contractor will make use of inflatable plugs or, in the case of small diameter mains, sand bags. Flow control measures outside this range will need to be approved by the Principal prior to installation.

Sewer services must continue to be provided to customers at all times during the inspections.

Be responsible for ensuring no sewage spills occur as a result of these localised flow control measures. Maintain a minimum of 1m freeboard in upstream MHs unless otherwise expressly approved in writing by the Principal (this is likely only to occur in MHs that are very shallow).

Care is required when planning localised flow control. The MH immediately upstream may not have the lowest surface level, with further MHs possibly well out of sight of the work area being potentially lower. These MHs should be identified and monitored during flow control activities. Sewage spills anywhere in the catchment caused by this localised flow control is not acceptable and the cost associated with any spillage arising from local flow control will be borne by the Contractor.

The Contractor is reminded that all flow control measures including sand bags and plugs must be removed prior to leaving the Site.

The Principal shall be responsible for controlling flows from upstream Sewerage Pumping Station shutdowns and any required diversion pumping or tankering and any other activity related to the Pump Stations control. The Principal’s staff will advise the Contractor of the expected procedure during the shutdown. To minimise the impacts of the works on residents and traffic and to reduce costs, where agreed to with the Contractor, the camera and / or any other repair equipment and any localised flow control plugs or sandbags will be intermittently removed to allow the Sewerage Pump Station to be intermittently pumped down with the works to recommence immediately once the Sewerage Pump Station has been stopped.

Where the Contractor considers that bypass pumping, tankering or other measures to deal with upstream flows are considered necessary or expedient then the Principal is to be consulted and a detailed proposal outlining the proposed methodology for maintaining sewerage services during the CCTV activity is to be submitted for the information of the Principal. The allowable level of flow in the pipe as defined above shall be maintained (except in circumstances where this is not possible and is approved by the Principal).

The Principal will advise approval or otherwise to undertake the survey as proposed. The provision, coordination and supervision of the equipment, the public and residents with the survey and associated works are the responsibility of the Contractor.
18.1 Minor Diversions

The Contractor must inform any affected residents, not less than two working days in advance of any activities requiring minor diversion of sewer flows and the expected duration of such operations. It shall be the responsibility of the Contractor to maintain full sewerage services to owners or occupiers affected. All steps deemed necessary, including those deemed necessary by the Principal, to prevent spillages or backup of sewage must be taken by the Contractor.

The Contractor must retain on-site sufficient standby pumping equipment to replace defective units in the event of a breakdown. A competent person must at all times attend to the bypass pumping equipment.

Approval by the Principal of the Contractor’s proposals must not relieve the Contractor of his responsibilities to ensure that sufficient and adequate pumping arrangements are provided at all times for all flows.

Under no circumstances will the Contractor be allowed to divert sewage or any other matter removed from sewers to any stormwater drainage system.

The cost of providing temporary diversion of sewerage flows shall generally be in accordance with the requirements of Clause 17 of Technical Specification Part C of the Principal’s Requirements.

Where it becomes evident that the selected minor diversion flow control measures are insufficient to prevent spillage or to hold stable the maximum allowable depth of flow during a CCTV event due to unexpected and unforeseen flows from tidal influences or upstream private pump stations or from localised rainfall issues, the Contractor shall notify the Principal of the situation. The Contractor may be instructed to Standby pending a Direction or to abandon the works. The appropriate rate in the schedule of rates would then apply.

18.2 Major Diversions

Inform the Principal should a major diversion be required. On approval by the Principal, the Principal will assume all responsibility for the bypass, enabling the Contractor to undertake the required CCTV and associated works. Included in Part D: Attachment C is a documented procedure for the planning and execution of network control associated with a major diversion.

18.3 Surge Prevention

When the flow in a sewer line is plugged, blocked or bypassed, sufficient precaution must be taken to protect the sewers from surging and causing damage. All precautions must be taken to ensure operations do not cause damage to or flooding of public or private properties.

Ensure that surges or spillages of sewage as a result of lack of capacity of a main sewer diversion system do not occur. Assess the flow in each line to be rehabilitated and to ensure that all plant and equipment used for the temporary diversion of flows is of adequate performance.

Note that the sewers to be surveyed may be subject to inflow or infiltration. It is to be noted that during wet weather events where the rainfall is in excess of 10mm/hour or more than 50mm per day, the volume of inflow and infiltration into the system may require the works to be rescheduled. In some locations near foreshores, rivers and canals, flows may be elevated due to infiltration from spring high tides and these additional inflows during this spring tide event may require the works to be rescheduled.

If the works proceed and the provided diversion capacity is exceeded, the Contractor must either:

- Cease work at the earliest possible time and reinstate flow in the sewer or
- Continue work by increasing the capacity of the diversion system to match the higher actual or anticipated flow rate.

Be responsible for clean-up, restoration and payment of compensation, to the satisfaction of the Principal, of any area affected by surges or spillages associated with works under this Contract. The cost of providing surcharge prevention services and liability shall generally be in accordance with the requirements of Clause 18 Technical Specification Part C.
19. **Standard specifications**

Unless specifically amended in this documentation, all works carried out under the Contract must be undertaken in accordance with the requirements of the current edition of Gold Coast City Council’s Standard Specifications and Drawings.

Works must comply with all relative legislation and Gold Coast City Council Local Laws. In particular attention is drawn to requirements of the Environmental Protection Act 1994 and safety responsibilities of the works.

20. **Deliverables**

20.1 **Survey Report**

For sewer surveys using Traditional Video Image CCTV Survey systems, for each MH to MH section surveyed, provide continuous video records for the entire length of each main inspected, delivered on DVD external USB flash drive or hard drive as a single survey file where an individual survey cannot fit onto a standard DVD. Single survey files with multiple inspections included within a single survey file will not be accepted. The DVD / USB recording must be a continuous record with no breaks or jumps in the picture and it shall be encoded using the WSAA Conduit Inspection Reporting Code of Australia (WSA 05-2008 Version2.2) and the *Condition Ratings*, must be provided in hard copy and also in electronic PDF format with individual PDF files created for each inspection as stated above.

The report must include a summary table listing the following fields in order:

- Main Asset ID.
- Date of Inspection.
- Total pipe length (from inspection).
- Number of Junctions on the line.
- The score of identified defects.

The report shall also include still images of every defect with a resolution not less than 640 x 480.

Each DVD/USB shall have a hard copy summary sheet incorporated as part of the protective plastic cover, listing the file names included on each DVD / USB, the name of the CCTV contractor and the name / number of the contract. The DVD / USB will also be printed with this information.

The file name convention for MPEG and PDF files must be as follows.

- Main Asset ID–Date (YYYYMMDD)–Preclean/Postclean- US/DS.

Care must be taken to ensure the main Asset ID is correct and is not simply wastewater MH start point to end point, as this will not necessarily be correct, depending on direction of travel. Wastewater main Asset ID’s are available as part of the network data supplied to the CCTV contractor at the commencement of the contract. The US/DS refers to the direction of travel of the camera.

Should an inspection be abandoned for any reason, the file name should include ‘aban’ after the direction of travel.

If for any reason there is more than one file requiring creating with the same name, due to two inspections taking place on the same day of the same main in the same direction and in the same state of cleanliness, an incremental number shall be added to the end of the file name and the inspections be placed in chronological order (e.g. the earlier inspection shall have a ‘1’ and the next inspection a ‘2’). This will also apply if there is more than one inspection that has been abandoned with the same parameters. Some examples of file names are shown as follows:

- S004-00326M S004-00329M-20101002-Preclean-US.mpg
- S009-00135M S009-00137M-20100805-Postclean-DS.pdf
- S098-01045M S098-01046M-20101211-Postclean-DS-1.mpg
Note that wastewater main Asset ID’s will be supplied in the electronic data with a forward slash (/) and spaces separating MH ID’s. As this character is not allowed in Microsoft Windows files, the forward slash and spaces must be replaced by the CCTV contractor with a single space between MH ID’s, as shown in the above examples.

The Principal runs Wincan Version 8 as a CCTV reviewing tool. In addition to the other requirements specified, digital Wincan information, or alternatively information that can be imported into a Wincan Version 8 database, shall be supplied. The video footage should be digitally linked with the reports observation index in Wincan.

At the commencement of the inspection footage of each MH length, display the following additional electronically generated and displayed information:

- Date and time of inspection.
- Whether the inspection is pre or post sewer cleaning.
- Start MH Asset ID number to finish MH Asset ID number. Full GCW asset identifier must be used.
- Direction of travel.
- Whether or not precipitation has occurred in the catchment area in the 4 hours before the survey.
- Nominal diameter and material of the main as observed.
- Name of CCTV Contractor and the name of the CCTV Operator(s).
- The site coding sheets shall be entered by the Contractor onto a DVD using an approved reporting software package.

During the inspection the video must continuously display the following information in a manner that does not interfere with the main subject of the picture:

- automatic updated distance measurement from the start point to decimetre level (e.g. 54.7m)
- nominal pipe diameter
- abbreviated pipe material ( e.g. AC )
- abbreviated direction of travel ( US or DS )
- start and end point Asset ID ( not abbreviated ).

Care must be taken to ensure all information displayed is accurate at all times. Footage found displaying incorrect information will not be accepted. All video footage shall be encoded to MPEG 1 format.

It is acknowledged that MPEG 2 and MPEG 4 may be a more suitable format, the majority of the Principals staff will use Windows Media Player (WMP) to view video footage. MPEG 2 and MPEG 4 formats cannot be played on WMP without installing appropriate codecs and this is not possible at this time.

All DVD recordings are required to be documented in sequence with the work carried out.

Clearly labelled and numbered DVD / USB, digitised pictures clearly labelled and numbered, or printed photographs must be required of the following:

- Significant structural and service defects.
- Conditions that might affect future rehabilitation of the sewer.

For sewer and stormwater surveys using Innovative Digital Still Photograph CCTV Survey systems, in addition to the Panoramic like visual presentation of the inside pipe face of the sewer, a condition assessment report from AWWA or WSAA certified personnel that is as near as possible to the herein and directly above nominated WSAA Code and Council specific requirements must be provided.

## 20.2 Survey Report Review

On receipt of a package of works from the Contractor as scheduled in the Contract, the Principal will review all information supplied against the Contract requirements prior to final acceptance.

The Principal will have competency and experience in the following:
Part C: Technical Specifications

- interpretation of information contained in the inspection reports
- identification and coding of defects and other features
- application of a scoring and grading system
- recognition of the structural deterioration features of pipes for a variety of materials
- recognition of service defects and the likely parameters contributing to the defects in wastewater systems
- recognition of poor quality video and camera operation
- management of data from CCTV inspections.

An acceptance checklist has been supplied in Part D Attachments to assist with checking the compliance of all relevant clauses in this document against the deliverables submitted by the Contractor. The quality assurance checklist is designed for use by the Contractor and the Principal, with completed hard copies for each inspection to be submitted by the Contractor with each package of works.

Note that a checklist is required to be completed for each inspection. This may result in multiple checklists being required for each main if, for example, cleaning is required, or an obstruction causing an abandoned inspection instigates a further inspection from the other direction.

Full ownership of the physical and intellectual property must reside with the Principal.
Part D: Attachments

The following Attachments uploaded as separate files on LG Tenderbox:

- Attachment A: MAINTENANCE HOLE – AS CONSTRUCTED – MAP-UP TEMPLATE
- Attachment B: TECHNICAL STANDARD – SEWER MAINTENANCE HOLE ASSESSMENT
- Attachment C: SEWERAGE NETWORK CONTROL PROCESS
- Attachment D: BRANCH DRAIN RELINING AND PATCHING SPECIFICATION
- Attachment E: Example CCTV Report

Attachment F to be accessed through the below link:


- Attachment F: WATERMARK TECHNICAL SPECIFICATION WMTS – 518:2017. REHABILITATION OF EXISTING NON PRESSURE PIPELINES BY THE USE OF CURED IN PLACE PIPE (CIPP)