



mainroads
WESTERN AUSTRALIA

SPECIFICATION 100

GENERAL REQUIREMENTS

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REVISION REGISTER			
Clause Number	Description of Revision	Authorised By	Issue Date
102.08 103.04 103.07.04	RPA / Drone Operations added Requirements for telecommunications services updated Maintenance of toilet facilities amended to include sanitary services	MCCM	9/11/2023
100.02 103.03.01, 103.03.02 & Annexure 103B 103.04.04 103.06 103.07 Whole document	References updated Superintendent's Main Office and Additional Office(s) amended to include varying office sizes and quantities of furniture and equipment, site office drawings updated Facsimile services deleted Requirements for transportable materials testing laboratory amended Contact details of Radiation Safety Officer (RSO) added NDM storage facilities amended Site toilet facilities added Website links, terminology updated throughout	DDPC	14/03/2023
102.06 & 102.07	Use of RTK GNSS "Rover" Controller added	MC	28/10/2020
103.06 & 104.01	Notice Period for the release of Hold Points changed to 'Business Days'	MC	21/09/2020
Guidance Notes Section 9.2	Service Alterations link to Horizon Power amended	MC	03/08/2020
Headers	Date of publication of some Headers amended	SCO	05/11/2019
101.06	Supply of Materials clause amended and Section 105 Water Supplies moved to Specification 303	MC	21/10/2019
103.05.01	Error in contents of clause corrected	MC	17/06/2019
101.07	Amendments to Project Works Signs clause	MC	07/06/2019
106.08	Link to undertake Works in Main Roads Road Reserves amended	MC	16/05/2019
Guidance Notes	Note 12 concerning As Built and Handover Requirements added	SCO	12/01/2015
103.04.09	Clause deleted	A/SCO	04/06/2010
Whole document	Reviewed and amended by section Custodians	A/SCO	01/04/2010
Whole document	Reviewed and amended by section Custodians	A/SCO	22/01/2010
Annexure 100G & Guidance Note 11.2	Amended	SCO	06/09/2007
Guidance Notes	New note 12 concerning As Built And Handover Requirements added	SCO	20/08/2007

REVISION REGISTER			
Clause Number	Description of Revision	Authorised By	Issue Date
101.08.2, Annexure 100F & 100G Guidance Notes	Project Work Sign details amended New Guidance Note 11 concerning Project Work Signs added	CMPM	22/06/2007
103.06.01 Annexure 100N Guidance Notes	Sub-clauses 7 and 8 amended, sub-clause 9 deleted and transferred to sub-clause 7b) Deleted New note 10.2 added	PSM UDSM	16/01/2007
100.02 102.06.1 b) to h) 103.06.1 106.06.1 & 106.06.2	'Radiation Safety (General) Regulations 1983' and 'Code of Practice and Safety Guide' added Sub-clauses b) to h) added back (omitted in error at previous revision) NDM Site storage requirements amended Amended to include Synergy	CMPM UDSM	03/01/2007

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SPECIFICATION 100 SERIES

GENERAL REQUIREMENTS

100 GENERAL

100.01 SCOPE

1. The work under this specification consists of general management requirements for the administration of work under the Contract.

100.02 REFERENCES

1. Australian Standards, Main Roads Standards and Main Roads Test Methods are referred to in abbreviated form (e.g. AS 1234, MRS 67-08-43 or WA 123). For convenience, the full titles are given below:

Acts and Regulations

Mines Safety and Inspection Act 1994
Radiation Safety (General) Regulations 1983

Code of Practice

Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) – Code of Practice and Safety Guide – Portable Density/Moisture Gauges Containing Radioactive Sources

Australian Standards

AS 1348 Road and Traffic Engineering – Glossary of Terms
AS 1744 Standard Alphabets for Road Signs

Main Roads Standards

Geodetic Control Survey Standard D22#371770
Engineering Surveys Guidelines – Construction Surveying Guideline

Main Roads Specifications

Specification 202 TRAFFIC
Specification 203 HEALTH AND SAFETY MANAGEMENT
Specification 204 ENVIRONMENTAL MANAGEMENT
Specification 301 VEGETATION CLEARING AND DEMOLITION
Specification 302 EARTHWORKS
Specification 303 MATERIAL AND WATER SOURCES
Specification 701 ROADWAY LIGHTING
Specification 712 TRAFFIC SIGNALS

101 DESCRIPTION OF WORKS

101.01 GENERAL

1. The Works to be executed under this Contract are detailed at Annexure 101A. **Scope of Works**
2. Where applicable, Separable Portions of the work under the Contract are described at Annexure 101B. **Separable Portions**

101.02 SITE ACCESS

1. The extent of the Site is as indicated on the Drawings, and access to the Site is as described in Annexure 101C.

101.03 WORKS BY OTHERS

1. Where so indicated in Annexure 101D, the work under the Contract will be undertaken in conjunction with works by others. The Contractor must allow free access by others as required or ordered by the Superintendent to enable these other works to be completed.

101.04 INTERPRETATION OF TERMS

1. Unless otherwise detailed in the Contract, the meaning of road engineering terms in this Specification will be as defined in AS 1348.

101.05 SPECIFICATIONS, CODES AND TEST METHODS

1. In general, materials, manufactured articles and workmanship must conform to the relevant standards of the Standards Association of Australia. Where these provisions conflict with the requirements of the Contract, the Contract will take precedence. **Standards Association**
2. Unless otherwise stated all Standards, Codes or Test Methods referred to in this Specification will be those current at the Tender closing date. **Currency**
3. Main Roads Test Methods are available from Main Roads website, www.mainroads.wa.gov.au under Technical & Commercial / Technical Library / Materials Engineering / Test Methods. **Test Methods**

101.06 SUPPLY OF MANUFACTURED MATERIALS

1. Details of manufactured materials to be supplied to the Contractor by the Principal and the time of their supply is indicated in Annexure 101E. **Principal**
2. Details of materials required to be supplied by the Contractor are contained within the relevant Specification. **Contractor**

101.07 ADVERTISING AND PROJECT WORKS SIGNS

1. Strictly no advertising will be permitted on the Site other than:
 - (a) project signs approved in writing by the Superintendent;
 - (b) names of manufacturers or names of owner on items of constructional plant; and
 - (c) Contractor's mailbox.
2. The Contractor must provide project works signs that inform the public and industry of the project details. The Contractor must install **XXX** number of project works signs at locations as detailed on the Drawings. Refer to Annexure 101F for sign layout details.
3. Unless otherwise shown on the Drawings, all text displayed on the project works sign must comply with AS 1744.
4. Project works signs must be installed by the Contractor no later than one week from the Principal issuing Possession of Site.
5. **All proposed locations for the signs must be marked on site and approved by the Superintendent prior to their installation.**
6. Signs and sign supports must be fabricated and installed as per Main Roads Western Australia Standard Drawings.
7. The signs and supports must be maintained in good condition for the full period of display.
8. The Contractor is responsible for all costs and charges relating to the manufacture, installation, maintenance and subsequent removal of all project works signs from the Site.
9. The Contractor must remove all project signs from the Site to an authorised disposal site no earlier than 4 weeks and no later than 6 weeks from the date of Practical Completion unless otherwise directed by the Superintendent.

**Sign
Installation**

HOLD POINT

Sign Removal

ANNEXURE 101A

DESCRIPTION OF WORKS

1. The Works comprise the construction of Highway / Road / Street within the Shire / Town / City of between and SLK to SLK .
2. The Works include the following:
 - (a) Reconstruction to subgrade / basecourse / primerseal / seal / asphalt stage of km of road;
 - (b) Construction of Bridge No. over River / Creek;
 - (c) Construction of ancillary drainage works;
 - (d) Construction of km of side roads;
 - (e) Other

COMPLETE THE ABOVE TO SUIT THE WORKS IN TABULAR FORM IF APPROPRIATE INCLUDING ANY SPECIAL FEATURES, AND DELETE THIS NOTE

ANNEXURE 101B

SEPARABLE PORTIONS

1. The execution of the work under the Contract will be subject to Separable Portions as follows:
 - (a) Separable Portion A
 - (b) Separable Portion B
 - (c) Separable Portion C

LIST ALL SEPARABLE PORTIONS AS REQUIRED, AND DELETE THIS NOTE

ANNEXURE 101C

SITE ACCESS

1. Access to the Site must be limited to the following points:
 - (a) Separable Portion A
 - (b) Separable Portion B
 - (c) Separable Portion C

ADD OTHERS AS REQUIRED, AND DELETE THIS NOTE

ANNEXURE 101D

WORKS BY OTHERS

Nature of work by others	Location	Timing of works	Comments

ADD OTHERS AS REQUIRED, AND DELETE THIS NOTE

ANNEXURE 101E

PRINCIPAL SUPPLIED MANUFACTURED MATERIALS

General details of materials supplied by the Principal are as follows:

Purpose in Works	Material / Type	Location	Approx. Quantity Available	Cost (Rate) (excl. GST)	When Available	Further Details or Other Requirements (e.g. Specification Clause)

ANNEXURE 101F

PROJECT WORKS SIGN(S)

102 SURVEY INFORMATION

102.01 SUPPLIED SURVEY SETTING OUT INFORMATION

1. Prior to commencing work under the Contract, the Contractor must certify to the Superintendent that the Contractor has checked the digital design model provided by the Principal to ensure that there is no discrepancy between the digital design model and the Drawings.
2. The points where the batters of the earthworks in the design model meet the existing undisturbed ground surface (interface strings) have been calculated from a survey of that ground. The Contractor must establish new interface strings based on the design information contained in the Drawings and the actual ground surface at the time of construction.
3. Setting out information and levels for tolerance checks at any point must, wherever possible, be determined from the Drawings with the exception of any Cross Section Drawings. Any Cross Section Drawings have been generated from the design model and are provided to the Contractor for information only and are not generally to be used for setting out the Works or for determining levels for tolerance checks.
4. Where setting out information or levels for tolerance checks that cannot be determined from the Drawings, the Contractor may use the digital design model for those purposes.
5. Setting-out information for culverts and other drainage structures is detailed on the Drawings.

HOLD POINT

***Drainage
Structures***

102.02 ROAD REFERENCE MARKS

1. Road Reference Marks have been established by the Principal in accordance with Geodetic Control Survey Standard D22#371770. This standard is available on the Main Roads website:

<https://www.mainroads.wa.gov.au/globalassets/technical-commercial/technical-library/surveying-and-geospatial-services/geodetic-surveying-guidelines/geodetic-control-survey-standard.pdf?v=49bb0d>
2. The location and level of each road reference mark is shown at Annexure 102A and is also available on the Main Roads website:

<https://mainroads.maps.arcgis.com/apps/webappviewer/index.html?id=6575d128a0154b389bb5fcf997525374>

102.03 RE-ESTABLISHMENT OF ROAD REFERENCE MARKS

1. Any Road Reference Marks (RRMs) outside the batter of the earthworks that are disturbed by the Contractor must be re-established at the Contractor's expense, to the tolerances given in Geodetic Control Survey Standard.
2. Any RRM that is re-established must be surveyed, constructed and data lodged in accordance with Geodetic Control Survey Standard.

Disturbance

***Data
Lodgement***

3. The Contractor must notify the Superintendent of its intention to disturb, where necessary, a RRM prior to its disturbance.

102.04 SURVEY CONTROL FOR BRIDGE WORKS

1. The Contractor must establish from the provided RRM's two survey marks to define line and one survey mark to define level at each bridge site. The Contractor is responsible for the protection and maintenance of these marks, and must use only these marks for setting out the bridges. **Line, Station & Level**
2. Setting out marks must be placed by the Contractor to an accuracy that ensures that the construction tolerances of the structures, as stated in the Specifications and Drawings, are achieved. **Accuracy**

102.05 PROTECTION OF ALL OTHER SURVEY MARKS

1. The Contractor's attention is brought to the existence of cadastral survey marks defining property boundaries and the road reserve, and State Survey Marks or Bench Marks established on or in the vicinity of the Site. **Established Survey Marks**
2. The Contractor must be aware of these marks and is responsible for all associated re-establishment costs as a result of any disturbance to these marks outside the batters of the earthworks resulting from the Contractor's activities. **Disturbance**
3. When the Contractor becomes aware of the need to re-establish either of these types of marks, the following will apply:
 - (a) Cadastral Marks: **Cadastral Marks**

In accordance with the Landgate Regulations, all re-establishment cadastral surveys must be carried out by a Licensed Surveyor. The Contractor will ensure that its Licensed Surveyor provides a "Regulation 25A certificate" for the Superintendent upon completion of the survey.
 - (b) State Survey Marks (SSMs) and Bench Marks (BMs): **SSMs and BMs**

Prior to any disturbance, the Contractor must notify the Superintendent of the need to re-establish either of these types of marks. The Superintendent will arrange relocation and/or replacement through the Principal's surveyor and Landgate.

102.06 LASER AND GLOBAL POSITIONING CONSTRUCTION CONTROL SYSTEMS

1. When grader blade laser control or other automated control systems are used for the purpose of road construction, such that the construction pegging of the earthworks, subgrade or pavement would not otherwise be provided, then the following horizontal and longitudinal alignment control requirements must be established by the Contractor for the use of the Superintendent prior to the commencement of subgrade preparation or any pavement construction: **Control Requirements**
 - (a) Offset pegs must be established on at least one side of the road formation. **Offset Pegs**

- (b) The pegs must be placed at 500mm offset to the surface design edge of subgrade.
 - (c) Chainages must be clearly marked on the pegs. **Pegs Marked**
 - (d) The spacing between pegs must not be greater than 50m on straights and 20m on curves and include all curve Tangent Points. **Pegs Spacing**
 - (e) The pegs must be placed vertical and within ± 30 mm tolerance to their exact horizontal location (i.e. RTK GNSS may be used for establishing pegs at their Horizontal location).
 - (f) The pegs must remain undisturbed until the Superintendent has released the Hold Point to allow the bituminous binder to be applied. Any pegs that are disturbed must be re-established by the Contractor at no cost to the Principal. **Pegs Removal**
 - (g) Construction levels are not required to be marked on the pegs.
 - (h) The pegs must be removed by the Contractor at the completion of the Works.
2. When grader blade laser control or other automated control systems are used for the purpose of road construction, such that the construction pegging of the earthworks, subgrade or pavement would not otherwise be provided, then the following must be provided by the Contractor for the use of the Superintendent prior to the commencement of any earthworks, subgrade preparation or pavement construction: **Superintendent's Portable Controller**
- (a) An RTK GNSS "Rover" system which integrates with the site / Contractor's RTK base station and coordinate system. This is to include GNSS receiver, pole and "controller" computer and associated software.

102.07 CONSTRUCTION SURVEYING

1. All construction surveying must be in accordance with Main Roads' Guideline for Construction Survey, available on Main Roads' website: **Construction Surveying**
- <https://www.mainroads.wa.gov.au/technical-commercial/technical-library/surveying-and-geospatial-services/engineering-surveys-guidelines/construction-surveying-guideline/>

102.08 RPA / DRONE OPERATIONS

1. Only Contractor's Personnel that hold a Remotely Piloted Aircraft (RPA) operator's certificate (ReOC) from the Civil Aviation Safety Authority (CASA) may undertake RPA operations. RPA operations must be conducted in accordance with CASA requirements. Recreational drone (model aircraft) use is not permitted at locations where work under the Contract is being undertaken. **CASA Approved**
2. The Contractor and/or relevant operator(s) must hold a current public liability insurance policy that covers RPA operations. **Insurance**
3. All RPA pilots must hold a CASA remote pilot licence (RePL), even if operating an RPA in the sub 2kg category. **Pilot Licence**

- | | |
|---|--------------------------------------|
| 4. At least 7 days prior to any RPA operations, the Contractor must certify to the Superintendent that the RPA operator’s certificate and insurance requirements have been met. | <i>HOLD POINT</i> |
| 5. At least 7 days prior to any RPA operations, the Contractor must certify to the Superintendent that all Contractor RPA pilots hold a CASA remote pilot licence. | <i>HOLD POINT</i> |
| 6. All RPA operations must comply with the basic rules for flying of RPA devices by qualified remote pilots as published by CASA. | <i>Basic Rules</i> |
| 7. For each individual RPA operation a flight plan and methodology must be prepared. | <i>Flight Plan</i> |
| 8. For each individual RPA operation a risk assessment must be completed to ensure that there are no adverse impacts upon the Principal, Superintendent, Contractor, road users, adjacent landowners and the public. | <i>Risk Assessment</i> |
| 9. The Contractor must ensure that any RPA operation adheres to Civil Aviation Safety Regulation 1998 Part 101, observance of restricted air space location and compliance with flying below 400 feet limitations. | <i>Safety Regulation</i> |
| 10. For areas near aerodromes or heliports, or inside prohibited or restricted areas, additional approval may also be required from other organisations in control of the airspace. All approval(s) must be obtained prior to flights being undertaken. | <i>Additional Approvals</i> |
| 11. Prior to any RPA operation, the Contractor must provide to the Superintendent for approval the proposed flight plan, methodology, risk assessment and any required additional approvals. | <i>HOLD POINT</i> |
| 12. If the Contractor’s RPA is to fly directly over private property, a communication strategy must be developed to inform the landowner(s) and occupant(s) of the proposed RPA activities above their property. | <i>Communication Strategy</i> |
| 13. At least 7 days prior to any RPA operations over private property, the Contractor must certify to the Superintendent that the Contractor has a communication strategy to inform the landowner(s) and occupant(s). | <i>HOLD POINT</i> |

ANNEXURE 102A

ROAD REFERENCE MARKING SUMMARY SHEET

103 SITE FACILITIES

103.01 CONTRACTOR'S SITE FACILITIES

- | | |
|--|-------------------------------|
| <p>1. The Contractor must supply and maintain facilities on-site for all Contractor's staff, workers and subcontractors. The facilities must include all necessary offices, stores, workshops, sheds, toilets, washing facilities, accommodation, change rooms, shelter sheds, drying conveniences, mess rooms and other facilities as required by industrial agreements for such camps, including the cleaning and maintenance of the camp.</p> | <i>Provision</i> |
| <p>2. Accesses to the sites must be constructed by the Contractor and maintained in a dust-free condition throughout the duration of the Contract.</p> | <i>Access Tracks</i> |
| <p>3. On-site storage facilities must be provided for all materials to be incorporated into the Works such as cement and steel reinforcement. The Contractor must provide facilities satisfactory for the storage of such materials as may be described in the various sections of the Specifications.</p> | <i>Storage</i> |
| <p>4. Details of site(s) available to the Contractor for the establishment of a camp and facilities are provided at Annexure 103A.</p> | <i>Available Sites</i> |
| <p>5. Prior to erecting any campsite facility or site office structures, the Contractor must ensure that the proposed location and positioning of the units and all associated services and all specialised storage areas, including areas for septic tanks, effluent discharge and camp rubbish, have been detailed on a layout plan and approved by the Superintendent and where applicable, the Local Government.</p> | <i>HOLD POINT</i> |
| <p>6. All buildings and facilities established and used by the Contractor must be removed from the Site at no cost to the Principal on completion of the Works and the Site must be left in a clean and tidy condition.</p> | <i>Site Clean-up</i> |
| <p>7. Upon completion of the Works, the access tracks established by the Contractor must be removed and the ground rehabilitated as specified in Specification 302 EARTHWORKS.</p> | |

103.02 STORAGE OF HAZARDOUS MATERIALS

- | | |
|---|--------------------------------------|
| <p>1. Sites for the storage of fuel, oil and other contaminant materials including plant maintenance sites must be specially designed to confine any spillages within the site in accordance with statutory requirements. These sites must ensure that any spillages are confined. Adequate quantities of suitable material to counteract spillages will be kept on hand by the Contractor.</p> | <i>Spillages</i> |
| <p>2. The Contractor must check with the Local Government for any special requirements with respect to the storage of nuclear density meters as described in clause 103.06.</p> | <i>Nuclear Density Meters</i> |

103.03 SUPERINTENDENT’S SITE OFFICE

The Project Manager or Superintendent Elect to determine the size of the site office to accommodate the number of personnel to be on site. The site office selected should be the minimum size to comfortably fit the Superintendent’s site-based personnel and be one of the following sizes:

- 6x3m – select **blue highlighted option** throughout this clause 103.03. This size office is only suitable where the office space is required for one person, with occasional use by a second person. The main benefit of this size is that it can fit on most ‘standard-size’ tilt trays and therefore may not require a crane to load and unload. It is therefore generally cheaper and quicker to supply and install. Note that with this size office, there is limited space for meetings, IT servers, etc.
- 12x3m – select **green highlighted option** throughout this clause 103.03. This size office is typically suitable where the office space is utilised regularly by 2-3 personnel, with occasional use by up to 2 more personnel. A 12x3m office is typically a single module and is therefore generally cheaper and quicker to install than larger offices. While a 12x3m office can fit on some larger tilt trays, in most cases, a crane will be utilised to load or unload the office.
- 12x6m – select **yellow highlighted option** throughout this clause 103.03. This size office is typically suitable where the office space is utilised regularly by 4-5 personnel, with occasional use by up to 2 more personnel. This size will also allow for more separated areas for meetings, etc. A 12x6m office is typically 2x 12x3m modules joined together and is therefore generally more expensive and takes longer to install than smaller offices. In most cases, a crane will be utilised to load or unload the office.
- 12x9m – select **pink highlighted option** throughout this clause 103.03. This size office should only be selected where the office space is utilised regularly by greater than 5 personnel (full-time). A 12x6m office is typically 3x 12x3m modules joined together and is therefore generally more expensive and takes longer to install than smaller offices. In most cases, a crane will be utilised to load or unload the office.

When determining the number of personnel utilising the office, consideration should be made for:

- the following personnel who would typically be on site full-time and therefore require dedicated office space:
 - the Superintendent’s Representative(s);
 - any Surveillance Officer(s);
 - any Site Engineer(s); and
 - any Business Support Officer(s); and
- the following personnel who would typically not be on site full-time and therefore only require access to shared office space:
 - the Superintendent;
 - surveyor(s);
 - materials tester(s);
 - other auditors (safety, quality, environment, traffic); and
 - representatives of the Principal.
- Clause 103.03.02 is only required where multiple locations exist as part of the Works. If not required, delete clause and amend heading to “NOT USED”.

(ADJUST DETAILS BELOW AS REQUIRED, AND DELETE THIS ENTIRE ROW)

103.03.01 SUPERINTENDENT’S MAIN OFFICE

- | | |
|--|----------------------------------|
| 1. The Contractor must provide an office for the Superintendent at the location of the Works. | Provision of Office |
| 2. The Superintendent’s office must be provided and fully functional in accordance with this clause 103.03.01, from the time that the Contractor commences the Works to a date two weeks following the achievement of Practical Completion, with the exception of a partial Practical Completion in which the Superintendent’s office is still required, or unless otherwise approved by the Superintendent. | Timeframe Office Required |
| 3. The office must be maintained and cleaned daily for the duration of the Contract as detailed at clause 103.03.01(2). | Maintenance |
| 4. The Superintendent’s office must be separate from the Contractor’s site office, but within the same compound. | Location |
| 5. The office must have minimum plan dimensions of [6x3m / 12x3m / 12x6m / 12x9m], with the height at wall plates of not less than 2.4m. | Dimensions |
| 6. The Contractor must provide a parking area, accessible to two wheel drive vehicles within 100m of the Superintendent’s site office. The parking area must be large enough to accommodate [three / four / six / eight] light vehicles and be sign posted “Main Roads Parking Only”. | Parking Area |
| 7. The office must be supplied and equipped as detailed with water, continuous 240 volt electric power and telecommunications services specified in clause 103.04. All installation fees, connection fees and consumption costs associated with the use of the office must be paid by the Contractor. | Utility Requirements |
| 8. The office must be in good condition, vinyl floored, lined, thermally insulated, weatherproof, windows complete with curtains/blinds, fly screens and doors. | Fixtures |
| 9. By use of interior walls, the office must be sub-divided into the separate areas to accommodate a layout similar to that detailed at Annexure 103B. | Interior Walls |
| 10. The office must be equipped with the following in “as new” condition, with the positioning of furnishings similar to that detailed at Annexure 103B: | Furniture & Equipment |
| (a) Yale type lock with a minimum of four keys. In urban or built-up areas the outer door will also be fitted with a hasp and staple, and padlocks and keys will be supplied by the Superintendent; | |
| (b) [one / three / four / six] cherry/graphite ‘L-shaped’ workstation(s) having dimensions not less than 1.8m x 1.8m x 0.72m high equipped with lockable cherry/graphite three drawer mobile pedestal; | |
| (c) [one / one / two / six] cherry/graphite desk(s) having plan dimensions not less than 1.8m x 0.9m with lockable cherry/graphite three drawer mobile pedestal; | |
| (d) [one / one / two / three] four-drawer lockable filing cabinet(s); | |
| (e) [one / one / two / three] cherry/graphite 900w x 800h x 315d bookcase(s); | |

- (f) [delete this item and leave 'not used' / one / two / three] two-door lockable tall cabinets for stationary and filing storage;
- (g) [two / four / six / nine] high back office chairs (with arm rests) on castors featuring full ergonomic height, back and seat adjustments;
- (h) [one / three / four / six] visitors chair(s) (with arm rests) on castors featuring ergonomic height, back and seat adjustments;
- (i) [delete this item and leave 'not used' / delete this item and leave 'not used' / one / two] meeting table(s) having dimensions 1.8m x 0.9m with [six / ten] matching chairs;
- (j) one kitchen table having dimensions 1.8m x 0.9m with four matching chairs;
- (k) one refrigerator, minimum capacity 350 litres, complete with freezer compartment;
- (l) one stainless steel sink with cupboard under, continuous filtered potable water supply, and drainage system to be provided to the sink;
- (m) [two / four / eight / ten] split reverse cycle air conditioners, each of minimum 2kW cooling capacity;
- (n) one electric water jug with automatic cut-off; **or** an electric hot water dispenser with a capability of heating water to 92 degrees Celsius; **and/or** cold water dispensers with ongoing supplies of 15 litres water refill bottles (optional only if filtered potable water supply not suitable);
- (o) one microwave oven, with minimum power of 1000W;
- (p) ongoing supply of tea, coffee, sugar and non-powdered milk;
- (q) each office/room having double fluorescent tubes or LED lighting;
- (r) each office/room have quad power sockets;
- (s) [one / one / two / four] pin-board(s) and [one / one / two / four] whiteboard(s), securely mounted to the walls; and
- (t) [two / four / six / nine] rubbish bins.

103.03.02 SUPERINTENDENT'S ADDITIONAL OFFICE(S)

- | | |
|---|---|
| 1. The Contractor must provide additional offices for the Superintendent at each bridge site. | Provision of
Additional Office |
| 2. The Superintendent's office must be provided and fully functional in accordance with this clause 103.03.02, from the time that the Contractor commences the Works on the Site relating to the relevant bridge to a date two weeks following the achievement of Practical Completion of the relevant bridge, unless otherwise approved by the Superintendent. | Timeframe
Office
Required |
| 3. The office must be maintained and cleaned daily for the duration of the Contract as detailed at clause 103.03.02(2). | Maintenance |
| 4. The Superintendent's office must be separate to any Contractor's office at the bridge site, but within the same compound. | Location |
| 5. The office will have minimum plan dimensions of 6x3m, with the height at wall plates of not less than 2.4m. | Dimensions |

- | | |
|---|---|
| <p>6. The Contractor must provide a parking area, accessible to two wheel drive vehicles within 100m of the Superintendent’s site office. The parking area must be large enough to accommodate three light vehicles and be sign posted “Main Roads Parking Only”.</p> | <p>Parking Area</p> |
| <p>7. The office must be supplied and equipped as detailed with water, continuous (24 hour) 240 volt electric power [and telecommunications services specified in clause 103.04 – optional, delete if not required]. All installation fees, connection fees and consumption costs associated with the use of the office must be paid by the Contractor.</p> | <p>Utility Requirements</p> |
| <p>8. The office must be in good condition, vinyl floored, lined, thermally insulated, weatherproof, windows complete with curtains/blinds, fly screens and doors.</p> | <p>Fixtures</p> |
| <p>9. By use of interior walls, the office shall be sub-divided into the separate areas to accommodate a layout similar to that detailed at Annexure 103B.</p> | <p>Interior Walls</p> |
| <p>10. The office must be equipped with the following in “as new” condition, with the positioning of furnishings similar to that detailed at Annexure 103B:</p> <ul style="list-style-type: none"> (a) Yale type, lock with a minimum of four keys. In urban or built-up areas the outer door will also be fitted with a hasp and staple, and padlocks and keys will be supplied by the Superintendent; (b) one cherry/graphite ‘L-shaped’ workstation having dimensions not less than 1.8m x 1.8m x 0.72m high equipped with lockable cherry/graphite three drawer mobile pedestal; (c) one cherry/graphite desk having plan dimensions not less than 1.8m x 0.9m with lockable cherry/graphite three drawer mobile pedestal; (d) one four-drawer lockable filing cabinet; (e) one cherry/graphite 900w x 800h x 315d bookcases; (f) not used; (g) two high back office chairs (with arm rests) on castors featuring full ergonomic height, back and seat adjustments; (h) one visitors chairs (with arm rests) on castors featuring ergonomic height, back and seat adjustments; (i) not used; (j) one kitchen table having dimensions 1.8m x 0.9m with four matching chairs; (k) one refrigerator, minimum capacity 350 litres, complete with freezer compartment; (l) one stainless steel sink with cupboard under, continuous filtered potable water supply and drainage system to be provided to the sink; (m) two split reverse cycle air conditioners, minimum 2kW cooling capacity; (n) one electric water jug with automatic cut-off in “as new” condition; or an electric hot water dispenser with a capability of heating water to 92 degrees Celsius; and/or cold water dispensers with ongoing supplies of 15 litres water refill bottles (optional only if filtered potable water supply not suitable); | <p>Furniture & Equipment</p> |

- (o) one microwave oven, with minimum power of 1000W;
- (p) ongoing supply of tea, coffee, sugar and non-powdered milk;
- (q) each office/room having double fluorescent tubes or LED lighting;
- (r) each office/room have quad power sockets;
- (s) **one** pin-board and **one** whiteboard, securely mounted to the walls;
and
- (t) **two** rubbish bins.

103.04 TELECOMMUNICATIONS SERVICES

103.04.01 GENERAL

1. The Principal will provide all telecommunications infrastructure required for the Superintendent's site office in accordance with this clause 103.04, unless otherwise specified.
2. The Contractor must install the infrastructure and physical connections required at the Superintendent's site office.
3. For security reasons, the Principal will arrange with the relevant carrier for the Principal's data telecommunications service to utilise the data telecommunications infrastructure provided by the Contractor.
4. The telecommunications infrastructure must be suitable for the data services specified in clause 103.04.02.

103.04.02 DATA SERVICES

1. The Principal will arrange the subscription to one data telecommunications service for connection to its edge device (to be installed by the Principal at the Superintendent's site office) to meet the data networking needs of the Superintendent.
2. The data service must be connected from the Superintendent's site office to the Principal's Wide Area Network (WAN).
3. The data service arranged by the Principal will terminate in the Superintendent's site office on infrastructure provided by the Principal. The data service must have equivalent committed information rate as provided to the Contractor's site office but not less than 10 Mbps (minimum) committed information rate:
 - (a) Telstra or Vocus IP WAN service (the preferred data service);
 - (b) Enterprise or Business grade NBN fixed line service;
 - (c) Business grade Low Earth Orbit (LEO) satellite service; or
 - (d) Business grade NBN satellite service.
4. If the terrestrial services listed above are not reasonably feasible, a suitable mobile data service equivalent in performance to the preferred data service may be offered by the Contractor.

5. The Contractor must make all reasonable efforts to ensure that a telecommunications service provider nominated by the Principal is able and willing to deliver the offered data service to the Superintendent's site office.
6. If the relevant telecommunications service provider confirms in writing to the Contractor that none of data communications services specified in clause 103.04.02(3) above is practicable to deliver for the purposes of the Contract, then an alternative data communications service must be provided by the Contractor subject to the prior approval of the Superintendent.

103.04.03 VOICE SERVICES

1. Where the data communications service specified in clause 103.04.02(3) is provided, voice services for the Superintendent's site office will be provided by the Principal.
2. Where sufficient Telstra mobile data coverage is available externally to the Superintendent's site office but not available or of sufficient strength internally to make and receive telephone calls, the Contractor must install an ACMA approved Telstra repeater in the site offices.

103.04.04 NOT USED

103.04.05 MULTI-FUNCTION DEVICE

1. The Contractor must provide one multi-function device (MFD) in the Superintendent's office for exclusive use by the Superintendent.
2. The MFD must be new or in "as new" condition and, for the duration of the site office, provided with continuous supply of all associated consumables required by Superintendent.

3. The MFD must have the following features:

(a) B & W Digital Device	21 – 35 ppm
(b) Colour Device	15 ppm
(c) Paper Input	A4, A3, manual
(d) Bin	500 Sheet
(e) Duplex	Standard
(f) Security	Password print, mailbox facility
(g) Memory	512MB
(h) Power Consumption	Energy Star compliant
(i) Automatic Document Feeder (ADF)	Standard
(j) Paper Input	Additional tray (250 sheet)
(k) Finisher	Collator, Stapler
(l) Scan	Supportable formats: Email, TIFF, JPG, PDF, scan to PC

(m) Scanning resolution	600 x 600 dpi, 400 x 400 dpi, 300 x 300 dpi and 200 x 200 dpi
(n) Print resolution	1200 x 1200 dpi
(o) Network interface or printer kit to support the following	Ethernet 100BaseT, TCP/IP, DHCP, wifi
(p) Software	Template printing, OCR, Electronic Audit, Web Interface, MS Windows 10 compliant, Windows Server 2019 x32/x64, certified print drivers PCL6, postscript 3
(q) Hardware	Console (pedestal/cabinet)
(r) Management Reporting	Enabled

103.04.06 ACCESS SECURITY

1. The telecommunications services and associated equipment must be for the sole access and use of the Superintendent.
2. The services and equipment must be housed and secured in the Superintendent’s site office. The Contractor must provide industry-standard structured cable reticulation from the Site’s building distributor (BD) to the services and equipment in the Superintendent’s site office.
3. The Contractor must provide a telecommunications building distributor (TBD) in the Superintendent’s site office. This TBD must be located within two metres of the location designated by the Superintendent for the location of the Principal’s edge device. The TBD must be connected by the Contractor to the telecommunications service provider’s network directly or indirectly via a site BD.
4. The Contractor must provide physical and transmission security for each telecommunication service to the satisfaction of Superintendent.
5. The Contractor must provide reasonable access for the Principal’s technical staff to the Contractor’s and Superintendent’s site offices to facilitate delivery, installation, diagnosis, repair and restoration of the services and equipment provided.

103.04.07 OTHER REQUIREMENTS

1. The Contractor must supply and install a communications cabinet or rack consistent with and suitable for the structured cabling system and telecommunications infrastructure specified in this clause.
2. Each telecommunications service must be provided with relevant, contemporary, standard customer premise equipment (CPE) comprising:
 - (a) connecting facilities such as connectors and cabling, and
 - (b) terminating equipment including network terminating units, terminal adapters and the equipment specified.

Cabinet / Rack

CPE

3. Unless otherwise specified, the CPE must be at least the basic terminating equipment that is provided by the service provider for the relevant telecommunications service installed.
4. The CPE must be connected to the relevant telecommunications service termination within the office, and must be tested by the service provider prior to commissioning, while so connected. The Contractor must obtain a certificate, showing each test and its result, from the service provider. Each result must meet the minimum industry standards, unless otherwise specified.
5. The Contractor must provide cat 6 structured cabling for voice and data reticulation within the Superintendent's office(s) from a single location in the vicinity of the TBD to each of the separate office areas (to allow the Principal to install an edge device).
6. An additional cat 6 cable must be provided by the Contractor to the relevant office area to allow connection to the MFD specified in clause 103.04.05.
7. Each telecommunications service must be installed, connected, tested, functioning and with features in accordance with the industry standards, unless otherwise specified.
8. All telecommunications services to be provided by the Contractor are to be installed and commissioned within five Business Days of the Superintendent's office buildings being delivered to Site.
9. At least 20 Business Days before the provider intends to connect the relevant telecommunications service(s), the Contractor is to provide the Superintendent with the provider's reference details relating to that (those) connection(s) and the scheduled date(s) for connection.

***Structured
Cabling***

***MFD
Connecting
Cable***

***Testing of Tele-
communications
Services***

Installation

***Connection
Dates***

103.04.08 SERVICE LEVELS

1. The Contractor must provide a business hours 8-hour response service level agreement (SLA) with the relevant supplier for each telecommunication service and associated features.
2. The Contractor must provide a similar service level agreement for the equipment provided by the Contractor in accordance with this clause 103.04.
3. For all telecommunications services, infrastructure and physical connections that the Contractor provides pursuant to this clause, the Contractor must meet all costs associated with the ordering, delivery, connection, support of service levels, access and usage and for disconnection of each telecommunications service and its CPE.

***Service Level
Agreement***

103.05 ACCOMMODATION FOR THE SUPERINTENDENT AND ADDITIONAL PERSONNEL

103.05.01 GENERAL

1. The Contractor must provide and maintain the following accommodation facilities and services prior to the commencement of any construction activities on the site until 14 days after Practical Completion of the works or on approval by the Superintendent.
 - (a) The Contractor must provide one two-bedroom transportable building or equivalent approved by the Superintendent, which is fully air conditioned (reverse cycle split system). The accommodation building must be in good condition, vinyl floored, lined, thermally insulated, weatherproof, windows complete with curtains/blinds, fly screens and doors, and must be similar in size to that shown in Main Roads' drawing 9831-5504 (Annexure 103C) complete with all furnishings and fittings as shown including:
 - (i) mats to all external doors;
 - (ii) a new colour television of minimum size 48cm with access to regional television stations and any other services available in the Contractor's camp; and
 - (iii) a telephone hand set connected to its own line or to an extension of the line provided to the office for the Superintendent.
2. The Contractor must position the quarters in the vicinity of the offices for the Superintendent. The Contractor must:
 - (a) construct a suitable drainage and sewerage system to the building;
 - (b) provide and maintain to the building a continuous potable hot and cold water supply sufficient for the needs of a bathroom/laundry/kitchen and a three phase electrical power supply of three kilowatts operating capacity;
 - (c) provide new pillows, linen and two towels for each of the two people using the quarters; and
 - (d) have the beds made and floors vacuumed daily, linen and towels changed twice weekly.
3. **Prior to the positioning of the Superintendent's Office and/or Living Quarters, the Contractor will nominate the proposed location for such facilities to the Superintendent.**

***Positioning,
Power &
Drainage***

Cleaning

HOLD POINT

103.05.02 ADDITIONAL ACCOMMODATION

1. The Contractor must provide and maintain additional single quarters, accommodation, meals and laundry services for the number of Superintendent's representatives indicated in Annexure 103D.
2. Shower, toilet, laundry and additional facilities in camp mess rooms will be to a standard comparable to that established by industrial caterers currently operating in the North West of Western Australia.

***Number of
Representatives***

Ablutions

3. Additional accommodation for the Superintendent's or Principal's representatives in a camp must include reverse cycle air conditioned single quarters (each with a minimum 1.5kw cooling capacity) and be floored, lined, thermally insulated, weatherproof, windows complete with curtains/blinds, fly screens and door. Each accommodation unit must comprise a bedroom with dimensions not less than 3m x 3.6m x 2.40m high and a private bathroom ensuite with minimum dimensions 3m x 1.2m x 2.4m high.

4. The bedroom ensuite must contain the following:

Bedroom

- (a) one bunk and inner spring mattress – 2m x 0.92m;
- (b) closet, 0.4m x 0.4m x 1.8m high;
- (c) one writing table with drawer – 0.75m x 0.5m, complete with chair;
- (d) one "as new" lounge chair;
- (e) one ceiling light;
- (f) one wall light;
- (g) one mirror, minimum size 0.6m x 0.3m;
- (h) two double power sockets (3 pin);
- (i) one small refrigerator, complete with freezer compartment;
- (j) two chests of drawers – 0.4m x 0.4m x 0.7m high; and
- (k) a new colour television with minimum size 48cm with access to regional television stations and any other services available in the Contractor's camp.

5. The bathroom ensuite must contain the following:

Bathroom

- (a) shower;
- (b) toilet;
- (c) one hand basin, complete with shelf and mirrored vanity cabinet;
- (d) one ceiling light;
- (e) two double power sockets (3 pin);
- (f) one mirror; and
- (g) hot and cold filtered potable running water.

6. The Contractor must provide and maintain to the quarters, a continuous filtered potable water supply sufficient for the needs of the quarters and a suitable drainage and sewerage system. A power supply to cater for all of the Superintendent's requirements must also be provided.

Water & Drainage

7. The Contractor must supply all camp accommodation with pillows, linen, two blankets and two towels per person have the beds made and floors swept daily and linen and towels changed twice weekly.

Cleaning

8. Paths 600mm wide of Class N20 concrete will be constructed to connect the living quarters for the Superintendent's and Principal's representatives together and to the site office, camp mess and ablution facilities.

Pathways

103.05.03 MEALS FOR SUPERINTENDENT AND REPRESENTATIVES

- | | |
|--|--------------------------------|
| <p>1. Meals must be to a minimum standard comparable to that established by industrial caterers currently operating in the North West of Western Australia. The Superintendent's Representatives may not reside in the camp on a continuous basis. The Superintendent's Representatives will give at least 24 hours' written notice of their intention not to take a meal.</p> | <p>Minimum Standard</p> |
|--|--------------------------------|

103.06 LABORATORIES

103.06.01 CONTRACTOR'S LABORATORY AND NDM STORAGE FACILITIES

- | | |
|--|--|
| <p>1. If the Contractor utilises a transportable materials testing laboratory it must:</p> <p>(a) provide a suitable working environment (including in relation to temperature, noise and dust) for the range of testing proposed to be undertaken in the laboratory, along with any additional activities that the laboratory is utilised for;</p> <p>(b) be positioned in the vicinity of the Contractor's site office or camp site; and</p> <p>(c) where a mobile batching plant is utilised by the Contractor for asphalt or binder production, any associated transportable laboratory must be within the vicinity of the production plant for the duration that asphalt or binder is being produced.</p> | <p>Position of Laboratory</p> |
| <p>2. At least 5 Business Days prior to the proposed conducting of any materials conformance testing the Contractor must submit to the Superintendent the proposed Laboratory Quality Manual required by the National Association of Testing Authorities (NATA).</p> | <p>HOLD POINT</p> |
| <p>3. If a Nuclear Density Meter (NDM) is to be stored on-site, the Contractor must provide evidence to the Superintendent that the Contractor has informed Radiological Council WA of this storage location. The Contractor must also provide the Superintendent with a copy of the testing facility radiation safety manual and the contact details for their Radiation Safety Office (RSO).</p> | <p>NDM Storage</p> |
| <p>3.1 <i>Temporary Storage (less than twelve months)</i></p> | |
| <p>3.1.1 If the NDM is to be stored temporarily on-site for a period of less than one month, it is permissible for the meter to be stored in an unoccupied locked vehicle provided the following conditions can be met:</p> <p>(a) The vehicle must be secured within a compound and at least five metres separation from any office / accommodation units / sheds, work and access areas, or other parked vehicles.</p> <p>(b) The meter must be locked at the handle and secured within its locked transport container secured within the vehicle.</p> <p>(c) A placard with the RSO contact details must be attached to the vehicle.</p> | <p>< 1 Month</p> <p>Secured</p> <p>RSO</p> |

	(d) Radiation warning placard(s) must be placed on the vehicle and at least five metres from the storage vehicle.	Radiation Placards
3.1.2	If the NDM is to be stored temporarily on-site for a period of one to twelve months in a transportable materials testing laboratory, it is permissible provided the following conditions can be met:	< 12 Months
	(a) The laboratory must be secured within a compound and at least five metres separation from any office / accommodation units / sheds, work and access areas, or other parked vehicles.	
	(b) The NDM must be locked at the handle and stored in a locked container secured to the laboratory floor.	Secured
	(c) A placard with the RSO contact details must be placed at the front of the laboratory.	RSO
	(d) Radiation warning placard(s) must be placed adjacent to any entry to the storage laboratory (the placard(s) must be removed when there is no meter stored).	Radiation Placards
	(e) Under no circumstances is the laboratory to be occupied while the meter is stored within the laboratory.	
3.2	<i>Longer Term Storage (greater than twelve months)</i>	Storage > 12 Months
3.2.1	If the NDM is to be stored on-site for a period of greater than 12 months, or for any lesser period where the relevant permissible storage arrangements detailed at clause 103.06.01 (3.1) are not utilised, the Contractor must provide and erect a storage shed or sea container for the security and protection of the NDM. Such storage shed or sea container must be located in the vicinity of the laboratory (if provided) or if a laboratory is not provided, then in the vicinity of the Contractor's site facilities.	
3.2.2	The storage shed or sea container must be at least five metres from any office / accommodation units / sheds, work and access areas, or other parked vehicles.	
3.2.3	The Contractor must provide clean dry storage facilities for the security and protection of any Consistency Block.	Consistency Block
3.2.4	The NDM storage facility must meet the following requirements:	
	(a) If a storage shed is utilised:	Storage Shed
	(i) a 3m x 3m x 50mm minimum thickness concrete base must be constructed within the shed; and	
	(ii) the lockable shed must be secured to the slab.	
	(b) If a sea container is utilised it must be of similar dimensions and lockable.	Sea Container
	(c) Radiation warning placards must be attached to all sides of the shed / sea container.	Radiation Placards

(d) The compound that the storage shed or sea container is located in must be fenced and must meet the following requirements:

Compound

- (i) the fence must be at least 2m high;
- (ii) there must be at least 2m separation on all sides between the storage facility and the fence;
- (iii) any gates into the compound must be lockable; and
- (iv) a placard with the RSO contact details must be placed at the front of the compound.

(e) The compound and storage facilities must be used exclusively for the storage of the NDM and must not be used for any other purpose.

4. On-site storage must be in accordance with the requirements of the Australian Radiation Protection and Nuclear Safety Agency – Code of Practice and Safety Guide – Portable Density/Moisture Gauges Containing Radioactive Sources. This document is available at ARPANSA – Code of Practice website – <https://www.arpansa.gov.au/regulation-and-licensing/regulatory-publications/radiation-protection-series/codes-and-standards/rps5>.

Standards

103.06.02 SUPERINTENDENT'S LABORATORY AND NDM STORAGE SHED

- 1. The Superintendent may place on site for their use a transportable materials testing laboratory for the duration of the Contract.
- 2. Where the Contractor is erecting an on-site facility for the storage of its own NDM, it will be permissible to allow joint storage of both devices in the one shed.
- 3. The Superintendent's laboratory will not be available for use by the Contractor.

103.07 SITE TOILET FACILITIES

103.07.01 GENERAL

- 1. The contents of this clause 103.07 applies to places that the Contractor is undertaking work under the Contract and are additional to any toilet facilities provided at accommodation facilities, including a camp.
- 2. The Contractor must ensure that its workers are given adequate opportunities to utilise toilet facilities while undertaking work under the Contract.

103.07.02 MAIN TOILET FACILITIES

- 1. The Contractor must ensure that toilet facilities are provided within 100m of the Superintendent's site office.

Location

- | | |
|---|---------------------------------|
| 2. The toilet facilities provided must consist of a minimum of two toilets dedicated to each of male and female (i.e. a minimum of four toilets total). | Number of
Facilities |
| 3. The toilet facilities must be available for use by the Superintendent and any workers on the Site at all times that the Site operations are occurring. | Use of
Facilities |
| 4. For the avoidance of doubt such periods include times outside of normal Site working hours where maintenance activities and similar are being undertaken. | |
| 5. Where such toilet facilities are existing public facilities, the Contractor must ensure that it has agreement from the owner or operator of such facilities to utilise the facilities as part of its site toilet facilities. | Public
Facilities |

103.07.03 SECONDARY TOILET FACILITIES

1. Where the work under the Contract is such that the main toilet facilities detailed at clause 103.07.02 are located such that they do not allow for convenient use by any workers undertaking work under the Contract, the Contractor must ensure that secondary toilet facilities are provided for all such workers.

103.07.04 MAINTENANCE OF TOILET FACILITIES

- | | |
|---|--------------------|
| 1. The Contractor must ensure that the toilets provided are: | Maintenance |
| (a) adequately stocked with paper towel, liquid soap, toilet paper and hand sanitiser at all times; | |
| (b) equipped with a rubbish bin for general waste; | |
| (c) equipped with dedicated sanitary bins in all toilet facilities utilised by females that are appropriately maintained, including regular disposal; | |
| (d) cleaned on a regular basis (and in any event not less than daily on days that the Site operations are occurring) in a professional manner; | |
| (e) sufficiently lit such that they are suitable for use at all times that the Site operations are occurring; and | |
| (f) connected to a water supply that is available at all times. | |
| 2. Wastewater must be disposed of regularly and in accordance with any environmental requirements. | Wastewater |

ANNEXURE 103A

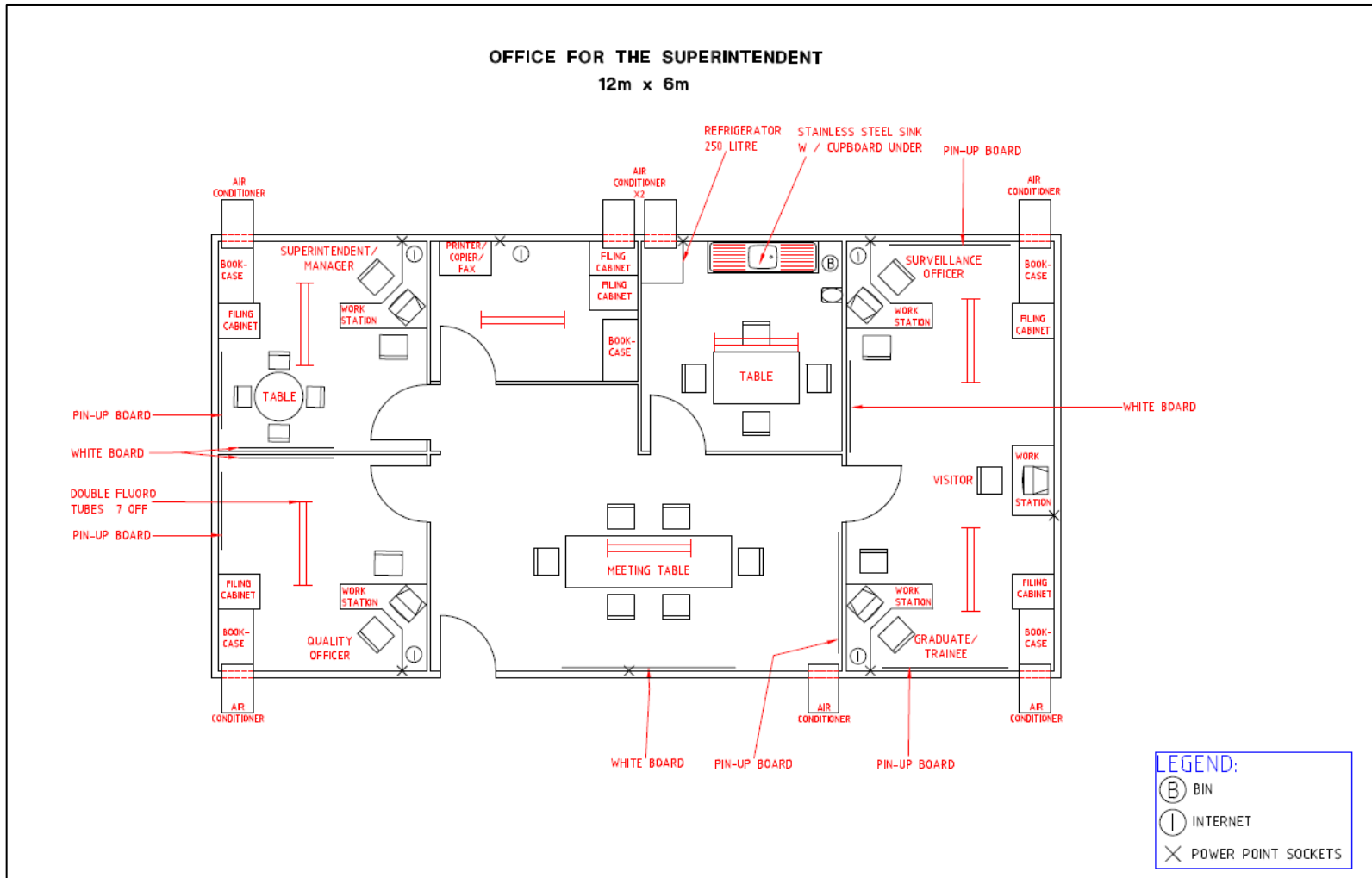
CONTRACTOR'S SITE FACILITIES

(INSERT DETAILS OF ANY KNOWN SITES, OTHERWISE INSERT REQUIREMENT FOR THE CONTRACTOR TO SEEK APPROVAL FROM LOCAL GOVERNMENT AND/OR SUPERINTENDENT FOR PROPOSED SITES, AND DELETE THIS NOTE)

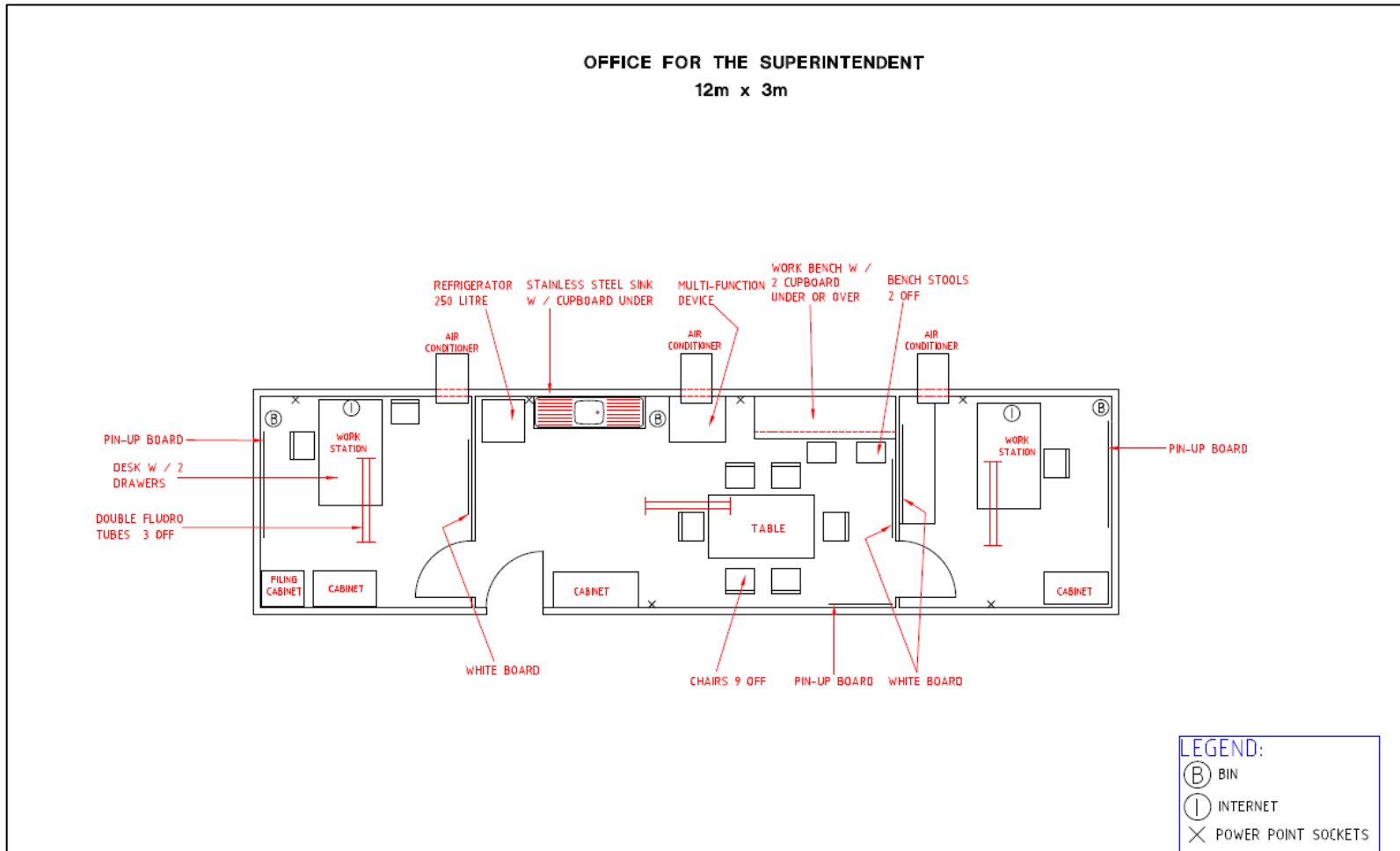
ANNEXURE 103B

SUPERINTENDENT'S OFFICE

(a) Site Office – 12m x 6m



(b) Site Office – 12m x 3m



ANNEXURE 103D

SUPERINTENDENT'S REPRESENTATIVES

1. The number of personnel of the Principal for this Contract, including Superintendent's Representatives, is:



(INSERT ESTIMATED NUMBER, AND DELETE THIS NOTE)

104 ENTRY TO LAND

104.01 GENERAL

1. The protection and maintenance of the environment outside the Site and the need to consult with, and have regard for the landowner's or Lessee's property must be observed by the Contractor.
2. The Contractor must not enter upon any land outside the designated clearing areas detailed in Specification 301 VEGETATION CLEARING AND DEMOLITION unless the Hold Point at clause 104.01.3 has been released by the Superintendent.
3. **Prior to the proposed entry by the Contractor onto any land outside the limits of clearing for the Works, the Contractor must obtain written approval of the land owner or Lessee detailing the standard of construction, maintenance and rehabilitation of any affected areas and give the Superintendent at least five Business Days' notice of any such intention.**
4. The Contractor must comply with all conditions specified by the landowner or Lessee for entry onto land outside the limits of clearing for the work under the Contract.
5. Upon completion of the Works, all access tracks established by the Contractor must be removed and the ground rehabilitated as specified in Specification 302 EARTHWORKS.

HOLD POINT

105 NOT USED

106 UTILITIES AND SERVICES

106.01 LOCATION

1. The location of all existing utilities and services shown on the Drawings will be regarded as indicative only. The Contractor must ascertain the exact location of the utilities prior to commencing works in the area. **Exact Location**

106.02 LIAISON

1. The Contractor must make the appropriate allowances in the Contractor's Construction Program for all necessary liaison and programming with service authorities as required for the provision of installation by service authorities during the work under the Contract. The Contractor must reinstate, make good, and backfill service trenches to the relevant service authority requirements. **Service Authorities**

106.03 CONTRACTOR'S EQUIPMENT

1. No utility may be moved to accommodate the Contractor's equipment or its method of operation when the utility does not interfere with the work under the Contract, unless such removal is at the expense of the Contractor, and in each case subject to the approval of the utility authority concerned. **Non-Essential Relocation**

106.04 PROTECTION OF SERVICES

1. The Contractor must locate and take all necessary precautions when working in the vicinity of all utilities and services within the construction site. The Superintendent may arrange for the repair of damage not made good by the Contractor and the cost of such repair will be deducted from payments due to the Contractor. **Damage and Repair**

106.05 RELOCATION OF SERVICES

1. Relocation/alterations to services are detailed in Annexure 106A and must be arranged by the Contractor before the Superintendent will permit any roadworks in the vicinity to proceed. Any special requirements relating to such relocations are also noted in Annexure 106A. **By Contractor**
2. Where any service relocation/alterations have been, or will have been, arranged by the Principal prior to Possession of Site, or are scheduled to be arranged by the Principal during the Contract period, details of such relocation/alterations are provided in Annexure 106B. **By Principal**
3. **Where described as such in the Specification and prior to the commencement of work under the Contract in the vicinity of the service, the Contractor must seek the Superintendent's confirmation that all required utility services alterations have been completed by the Principal.** **HOLD POINT**
4. The Contractor must excavate trenches, place select bedding, lay conduits as required and leave these trenches open in a safe condition until the utility authority or company has relocated their service cable or pipe and then backfill as required. **Trenches**

106.06 STREET LIGHTING

- | | |
|---|---|
| 1. Existing street lighting poles requiring relocation for roads under the Principal’s jurisdiction will be relocated by the Contractor as indicated on the Drawings. Western Power Corporation (WPC) lighting will normally be relocated by WPC or arranged for relocation through WPC and/or Synergy. | <i>Relocation</i> |
| 2. The Contractor must liaise with WPC and/or Synergy as necessary for this work to proceed during the work under the Contract. The Contractor must allow reasonable time and access to effect the relocation of light poles to ensure relocation is coordinated with the road and / or bridge works. | <i>Contractor to Liaise with WPC/Synergy</i> |
| 3. Existing street lighting poles identified for removal on roads under the Principal’s jurisdiction will be removed from site to an authorised disposal site by the Contractor or purchased and removed by the Contractor from site. | <i>Removal</i> |
| 4. Street lighting should be operational at all times during the roadworks. The Contractor must liaise with the Principal and WPC to ensure an appropriate level of lighting (permanent or temporary) is provided for the duration of the work under the Contract. | <i>Operation</i> |
| 5. Street lighting works must be carried out in accordance with Specification 701 ROADWAY LIGHTING. | <i>Lighting</i> |

106.07 TRAFFIC SIGNALS

- | | |
|---|-------------------------------------|
| 1. The Contractor must not interfere in any way with the operation of any existing traffic signal equipment, except as otherwise allowed in Specification 202 TRAFFIC. | <i>No Interference</i> |
| 2. Particular care must be taken where working in close proximity to traffic signal control boxes (signal controllers) due to the presence of underground communications cabling which maintains co-ordinated traffic control as part of Perth’s SCATS (Sydney Co-ordinated Adaptive Traffic System) network. | <i>Communication Cabling</i> |
| 3. Existing signal poles requiring relocation are as indicated on the Drawings and comply with the requirements of Specification 712 TRAFFIC SIGNALS. | <i>Relocation</i> |

106.08 NOT USED

ANNEXURE 106A

RELOCATION / ALTERATION TO SERVICES (BY CONTRACTOR)

Type of Utility or Service	Owner	Location	Requirement

ANNEXURE 106B

RELOCATION / ALTERATION TO SERVICES (BY PRINCIPAL)

Type of Utility or Service	Owner	Location	Requirement	Timing

107 CONTRACT SPECIFIC REQUIREMENTS

107.01 – 107.10 NOT USED

GUIDANCE NOTES

FOR REFERENCE ONLY – DELETE GUIDANCE NOTES FROM FINAL DOCUMENT

1. All edits to this Specification are to be made using track changes, to clearly show added/ deleted text.
2. If **all** information relating to a clause is deleted, the clause number should be retained and the words **“NOT USED”** should be inserted.
3. The proposed document with tracked changes must be submitted to the Project Manager for review, prior to finalising the document.
4. Once the Project Manager’s review is complete, accept all changes in the document, turn off track changes and refresh the Table of Contents.
5. The overall Custodian of this specification is Manager Contracts and Commercial Management. The following table indicates others with an interest in parts of this Specification:

Title	Clause No.	Section
Survey Information	102.01 – 102.07	Survey and Mapping Manager
Telecommunications	103.04	Snr Communications Consultant or Snr Technical Consultant
Laboratories	103.06	Testing and Calibration Manager

1. DESCRIPTION OF WORKS (ANNEXURE 101A)

Complete as required. The format shown is typical, but may be varied to suit the Works. Include all salient features of the Works.

2. SEPARABLE PORTIONS (ANNEXURE 101B)

2.1 Where Separable Portions are used, insert as many Separable Portions as are required, and describe the location of each Separable Portion, usually in terms of:

- (a) Chainage, for typical rural Works, or
- (b) From Street / Road to Street / Road, for urban Works

NOTE: Separable Portions are not normally required for most Major Works and are only used where one or more portions of the Works must be completed ahead of other portions. If in doubt regarding the necessity of nominating Separable Portions, seek advice from Delivery Planning and Contracts Branch.

2.2 Ensure that the Annexure to the General Conditions (PART B) in the Conditions of Tendering is completed for the full description of Separable Portions.

2.3 Where Separable Portions are not used, insert “NOT USED” at Annexure 101B.

3. ACCESS TO SITE (ANNEXURE 101C)

3.1 List all permitted access points to the site, usually by nominating side road entries.

3.2 This is usually more critical in urban works or in built-up areas than in typical rural works. In the interests of overall traffic safety, it may be desirable in built-up areas to limit the Contractor’s access to the site to nominated points.

4. WORKS BY OTHERS (ANNEXURE 101D)

- 4.1 Detail all known instances of Works being undertaken by Others during the Contract period in Annexure 101D, particularly the timing of such work so that the Contractor can make due allowance in their program.
- 4.2 Examples of Works by Others might include:
 - (a) relocation of services and utilities (often by the relevant service authority);
 - (b) installation of traffic signals;
 - (c) provision of pavement marking;
 - (d) landscaping.

5. CONTRACT SPECIFIC REQUIREMENTS

- 5.1 Where it is necessary to include a reference to special site works or other special provisions of a temporary nature, such a reference can be made as a CONTRACT SPECIFIC REQUIREMENT commencing at clause 107.01. For example, the need for special working platforms for certain items of plant, or a specially designed detour to be built around the Works, etc.
- 5.2 The CONTRACT SPECIFIC REQUIREMENT can itself refer to other Specification Parts that are required to effect the construction of the feature.

6. PRINCIPAL SUPPLIED MANUFACTURED MATERIALS (ANNEXURE 101E)

List all Principal-supplied materials that are manufactured (e.g. light poles, signs etc.), giving for each item such details as:

- 6.1 TYPE OF MATERIAL (e.g. plastic pipes, culvert units, etc.)
- 6.2 WHERE LOCATED (e.g. roadside dumpsite at SLK Road; MRWA Depot at, etc.)
- 6.3 QUANTITY
- 6.4 COST TO THE CONTRACTOR (if applicable)
- 6.5 OTHER CONSIDERATIONS
- 6.6 Examples of Works by Others might include:
 - (a) The complete details of materials supplied by the Principal should be inserted into the relevant Specification Part. This would particularly apply to details for the following items that have a high technical content:
 - (i) Traffic Signal components
 - (ii) Street Lighting components
 - (iii) Emergency Telephone components
 - (b) The value of Principal-supplied materials is entered in the Conditions of Tendering.
 - (c) Where applicable, details can be expanded in the "Information for Tenderers".
 - (d) Insert appropriate availability of material, which may be described as:
 - (i) From the date of Possession of Site
 - (ii) Within weeks of Possession of Site
 - (iii) As from(insert date)

7. SETTING OUT INFORMATION (CLAUSE 102.01)

- 7.1 The Project Manager must ensure that Road Reference Marks (RRMs) have been established during pre-construction and are available for construction. If not, then action should be taken to establish the RRMs to the required Main Roads Survey Standard 67/08/36.
- 7.2 If the RRMs are to be established as a separate survey prior to construction, then it is essential that the marks are connected to the original geodetic survey network that was used

to define the ground model for design. This may have only been a minor control traverse. Further information for these requirements can be obtained from the Senior Geodetic Surveyor.

- 7.3 Coordinate values of RRM's are available from the Survey Portal on the Main Roads website, www.mainroads.wa.gov.au under Technical & Commercial / Technical Library / Surveying and Geospatial Services / Survey Portal. It is the Project Manager's responsibility to ensure the co-ordinate values of the RRM's have remained unaltered since establishment to ensure that no ambiguities arise between the Contractor's surveyor and Main Roads' survey representatives.
- 7.4 The Project Manager must be aware of the need for the project to be designed and supplied in its respective Main Roads WA approved Project Zone Coordinate System (GDA94). The Project Manager must ensure all spatially referenced data e.g. RRM's, design models, Drawings and amendments, are supplied in their nominated Project Zone.
- 7.5 GENIO default output Double Precision D23.17 output is the standard MX output that will ensure the integrity of the digital model is retained. It is the Contractor's responsibility to convert this data into any other required digital output for its needs.
- 7.6 The Principal will not supply String Reports (MX Minor Option 992), Cross Section Reports (MX Minor Option 994) or Geometry Reports (MX Minor Option 980) for setting out the Works. The Principal has provided sufficient information in the form of Design Drawings and the Design Model to enable the Contractor to set out of the Works. The Contractor is responsible for any reporting or reformatting of the design model.

8. CONTRACTOR'S SITE FACILITIES (ANNEXURE 103A)

- 8.1 Provide details of known available sites suitable for camp location.

9. SERVICE ALTERATIONS (ANNEXURE 106A)

- 9.1 For service alterations undertaken by the Principal, it is essential to detail the timing of such alterations in order for the Contractor to make due allowance in the Construction Program.
- 9.2 Clause 106.06.2 directs the Contractor to contact Western Power and/or Synergy and this is applicable for all locations with the South West Interconnected System (SWIS). For locations outside this area the Contractor will need to be directed to Horizon Power and the clause will need to be amended accordingly. The extent of Horizon Power and SWIS's areas is detailed on the plan available at:

<https://horizonpower.com.au/about-us/our-service-area/>

10. PROJECT WORKS SIGNS (CLAUSE 101.07)

- 10.1 Clause 101.07 and Annexure 101F refer to Project Works Sign details. The approved State Government funded project sign is sign no. MR-GZ-23 (Drawing No. 200931-0013) and other State and non-State funded project signs are available from the Main Roads website, www.mainroads.wa.gov.au under Technical & Commercial / Technical Library / Signs Index / Guide Signs / Funding Series (MR-GZ).
- 10.2 The Project Manager must liaise with Strategy and Communications Directorate to determine the correct project sign template(s) to be used for the Project, based on the funding source.
- 10.3 The Project Manager must arrange for the design of project specific signs. In addition, the Project Manager must also determine the number of signs required for the Project and their installation locations in consultations with the Strategy and Communications Directorate.
- 10.4 The Project Manager must arrange for the 'designed' Project Specific Signs and their locations to be approved by the Strategy and Communications Directorate before including them in the Tender Documents for the Project.
- 10.5 The Project Manager must include a copy of the approved Project Works Sign(s) in Annexure 101F.

11. AS BUILT AND HANDOVER REQUIREMENTS

- 11.1 On all metropolitan projects where there is need for the Contractor to provide any of the above information such as, as-built drawings, operating manuals and the like, the Project Manager should liaise with the Data Management Support Officer in the Asset Management Section of Metropolitan Region, as to the adequacy and format of the information that will need to be provided.
- 11.2 Where the information to be provided relates to a particular Specification Series such as for, traffic signal manuals, then the requirements must be detailed in the As Built and Handover Requirements section of the relevant Specification.

12. CONTRACT SPECIFIC REQUIREMENTS (CLAUSE 107.01 – 107.10)

CONTRACT SPECIFIC REQUIREMENTS

The following clauses are to be placed under the CONTRACT SPECIFIC REQUIREMENTS, as required. After inserting the clause, change the clause number and heading to style “H2 SP” so it appears in the Table of Contents.

XXX.XX SUB HEADING (H2 SP)

1. Insert text

Keyword SP

2. Insert text

XXX.XX SUB HEADING (H2 SP)

1. Insert text

2. Insert text

AMENDMENT CHECKLIST

Specification No. **100** Title: **GENERAL REQUIREMENTS** Revision No: _____

Project Manager: _____ Signature: _____ Date: _____

Checked by: _____ Signature: _____ Date: _____

Contract No: _____ Contract Name: _____

ITEM	DESCRIPTION	SIGN OFF
<i>Note: All changes/amendments must be shown in tracked changes until approved.</i>		
1.	Project Manager has reviewed the Specification and identified additions and amendments.	
2.	Standard clauses amended? MUST SEEK approval from Manager Contracts and Commercial Management.	
3.	Any unlisted materials/products proposed and approved by the Project Manager? If "Yes" provide details at 16.	
4.	Deleted clauses shown as " NOT USED ".	
5.	Ensure appropriate INSPECTION AND TESTING parameters are included in Specification 201 (test methods, minimum testing frequencies verified).	
6.	AS-BUILT AND HANDOVER requirements addressed.	
7.	CONTRACT SPECIFIC REQUIREMENTS addressed? Contract specific materials, products, clauses added? (refer Specification Guidance Notes).	
8.	ANNEXURES completed (refer Specification Guidance Notes).	
9.	Estimates Manager has approved changes to SMM .	
10.	Project Manager certifies completed Specification reflects intent of the design.	
11.	Independent verification of completed Specification arranged by Project Manager.	
12.	Project Manager's review completed.	
13.	SPECIFICATION GUIDANCE NOTES deleted.	
14.	TABLE OF CONTENTS updated.	
15.	FOOTER updated with Document No., Contract No. and Contract Name.	
16.	Supporting information prepared and submitted to Project Manager.	
Additional information or further action:		

Signed: _____ (Project Manager) Date: _____