COURSE OF THE TENDER AND CONTRACT. IF ANY DISCREPANCY OCCURS ON THE DRAWINGS OR BETWEEN DRAWINGS AND SPECIFICATION, THE TENDERER SHALL DURING TENDERING REFER THE DISCREPANCY TO MEINHARDT INFRASTRUCTURE & ENVIRONMENT PTY LTD OR SHALL ASSUME THE LARGER/ GREATER COST/ TIME/ SIZE - INTERPRETATION ANY DISCREPANCY SHALL BE REFERRED TO MEINHARDT INFRASTRUCTURE & ENVIRONMENT PTY LTD FOR WRITTEN CLARIFICATION BEFORE

DRAWINGS THE SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE

- PROCEEDING WITH THE WORK & ALL WORK COVER AND OHS STANDARDS ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE BUILDING CODE OF AUSTRALIA AND THE RELEVANT CURRENT AUSTRALIAN STANDARDS.
- ALL DIMENSIONS SHOWN SHALL BE VERIFIED ON SITE. DRAWINGS MUST NOT BE SCALED.
- ONLY SUBSTITUTIONS APPROVED IN WRITING BY MEINHARDT INFRASTRUCTURE & ENVIRONMENT PTY LTD
- DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL STRUCTURES AND WORKS IN A STABLE CONDITION AND SHALL ENSURE NO PART SHALL BE OVER STRESSED DURING CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL ALLOW FOR PROVIDING MATERIALS AND WORK WHICH IS INCIDENTAL TO THE ITEMS SPECIFIED AND WHICH WOULD BE NECESSARY TO ACHIEVE THE RESULTS REQUIRED BY THE DRAWINGS. THE CONTRACTOR WILL BE DEEMED TO HAVE INSPECTED THE SITE OF THE WORKS, ASSESSED AVAILABLE ACCESS INQUIRED INTO THE LOCATION OF AUTHORITIES UNDERGROUND ASSETS, EXAMINED THE GEOTECHNICAL REPORT AND THE NATURE OF THE GROUND AND OBTAINED THE LOCAL CLIMATE AND RAINFALL INFORMATION.

THE CONTRACTOR SHALL BE DEEMED TO HAVE ALLOWED IN HIS CONTRACT SUM FOR EXCAVATION IN ALL MATERIALS. THE CONTRACTOR SHALL ENSURE THAT ALL TIMES, THE MEANS AND METHODS OF CARRYING OUT THE WORK TO BE UNDERTAKEN CONFORM WITH THE STANDARDS AND REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY

ACT 1985 AND ANY OTHER APPLICABLE LEGISLATION, CODES OF PRACTICE AND STANDARDS ALL PERSONNEL WORKING ADJACENT TO A TRAFFICABLE ROAD OR FORMATION SHALL WEAR RED SAFETY VESTS. THE CONTRACTOR SHALL PROTECT THE PUBLIC FROM DANGERS INHERENT IN EXCAVATIONS, OBSTRUCTIONS, WORKING PLANT AND FALLING OBJECTS. SUCH MEASURES THAT ARE TAKEN SHALL BE ADEQUATE TO MAINTAIN THE SAFETY OF THE PUBLIC DURING PERIODS OUTSIDE NORMAL WORKING HOURS ON SITE. THE CONTRACTOR SHALL ENSURE THAT ALL TRENCH EXCAVATION FOR INSTALLATION OF PIPEWORKS (OR OTHER WORKS) OF DEPTHS GREATER THAN 1.5 METRES MUST BE CONTINUOUSLY SUPERVISED BY A MINE MANAGER AND AT

ALL TIMES BE ADEQUATELY SUPPORTED. ALL WORK WITHIN ROAD RESERVES, PUBLIC PROPERTY OR PRIVATE PROPERTY - SHALL BE EXECUTED STRICTLY IN ACCORDANCE WITH THE REQUIREMENTS OF THE RELEVANT AUTHORITY OR LAND OWNER.

CONTRACTOR SHALL OBTAIN FROM THE RELEVANT AUTHORITIES DETAILS OF ALL EXISTING SERVICES WITHIN THE VICINITY OF THE WORKS AND SHALL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGE CAUSED TO EXISTING SERVICES DURING THE EXECUTION OF THE WORKS.

THE CONTRACTOR SHALL COMPLY WITH AND GIVE NOTICES REQUIRED BY ANY ACT OF PARLIAMENT, ORDINANCE REGULATION OR BY-LAW OF ANY AUTHORITY HAVING JURISDICTION OVER THE WORKS AND SHALL PAY ALL FEES OR CHARGES LEGALLY DEMANDABLE UNDER ANY SUCH ACT OF PARLIAMENT, ORDINANCE, REGULATION OR BY-LAW.

PRIOR TO WORKS. THE CONTRACTOR SHALL UNDERTAKE AN EXISTING DEFECTS INSPECTION AND REPORT TO LIST ANY EXISTING DAMAGE TO ROADS, FOOTPATHS, KERBS CROSSINGS CHANNELS NATURE STRIPS, ETC. SUCH LISTS SHALL BE PREPARED IN DUPLICATE BY THE CONTRACTOR AND A COPY SENT TO THE SUPERINTENDENT.

DATUM: Australian Height Datum (AHD) ORIGIN OF LEVELS: BM / SSM XXXX RLXXXX ORIGIN OF CO-ORDINATES: Mapping Grid Of Australia (MGA)

THE CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK, AND REPORT ANY DISCREPANCIES TO THE SUPERINTENDENT.

ALL EXISTING SERVICES (INCLUDING ANY NOT SHOWN ON THE PLANS) MUST BE ACCURATELY LOCATED IN POSITION AND LEVEL PRIOR TO ANY EXCAVATION. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. MINIMUM SERVICE CLEARANCES SHALL BE MAINTAINED FROM THE RELEVANT SERVICE AUTHORITY. THE CONTRACTOR SHALL ARRANGE FOR ALL SETTING OUT BY A REGISTERED SURVEYOR.

THE CONTRACTOR SHALL OBTAIN ALL REGULATORY AUTHORITY APPROVALS AT THEIR OWN EXPENSE. WHERE NEW WORKS ABUT EXISTING, THE CONTRACTOR MUST ENSURE THAT A SMOOTH AND EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.

ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION, UNLESS SPECIFIED OTHERWISE. EXCAVATED TRENCHES SHALL BE COMPACTED TO THE SAME DENSITY AS THE ADJACENT NATURAL MATERIAL. ANY SUBSIDENCES DURING THE PERIOD TO BE RECTIFIED AS DIRECTED BY THE SUPERINTENDENT.

ANY EXISTING TREES WHICH FORM PART OF THE FINAL LANDSCAPING PLAN WILL BE PROTECTED FROM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH THE LANDSCAPE ARCHITECT'S DETAILS AND/OR BY: a) PROTECTING THEM WITH BARRIER FENCING OR SIMILAR MATERIALS INSTALLED OUTSIDE THE DRIP LINE, b) ENSURING THAT NOTHING IS NAILED TO THEM,

c) PROHIBITING PAVING, GRADING, SEDIMENT WASH OR PLACING OF STOCKPILES WITHIN THE DRIP LINE EXCEPT UNDER THE FOLLOWING CONDITIONS

ENCROACHMENT ONLY OCCURS ON ONE SIDE AND NO CLOSER TO THE TRUNK THAN EITHER 1.5m OR HALF THE DISTANCE BETWEEN THE OUTER EDGE OF THE DRIP LINE AND THE TRUNK, WHICH EVER IS THE GREATER

- A DRAINAGE SYSTEM THAT ALLOWS AIR AND WATER TO CIRCULATE THROUGH THE ROOT ZONE (e.g. A GRAVEL BED) IS PLACED UNDER ALL FILL LAYERS OF MORE THAN 300mm - CARE IS TAKEN NOT TO CUT ROOTS UNNECESSARILY OR TO COMPACT THE SOIL AROUND THEM.

RECEPTORS FOR CONCRETE AND MORTAR SLURRIES. PAINTS. ACID WASHINGS, LIGHT-WEIGHT WASTE MATERIALS AND LITTER ARE TO BE EMPTIED AS NECESSARY. DISPOSAL OF WASTE SHALL BE IN A MANNER APPROVED BY THE SUPERINTENDENT OR AS SPECIFIED IN THE WORKS CONTRACT.

# PROVISION FOR TRAFFIC

UNLESS OTHERWISE SPECIFIED, THE CONTRACTOR SHALL MAKE PROVISION FOR TRAFFIC, IN ACCORDANCE WITH THIS SECTION OF THE SPECIFICATION AND THE RELEVANT RTA SPECIFICATIONS OR AUSTRALIAN STANDARD AS1742 "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES".

THE CONTRACTOR SHALL ASCERTAIN AND COMPLY WITH THE REQUIREMENTS OF THE AUTHORITY RESPONSIBLE FOR PUBLIC ROADS. THE CONTRACTOR SHALL SO CONDUCT THE OPERATIONS AS TO MINIMISE OBSTRUCTION AND INCONVENIENCE TO

THE PUBLIC, AND SHALL NOT HAVE UNDER CONSTRUCTION AN GREATER LENGTH OR AMOUNT OF WORK THAN CAN BE MANAGED PROPERLY WITH DUE REGARD TO THE CONVENIENCE OF THE PUBLIC.

REV DESCRIPTION

THE CONTRACTOR SHALL COMPLY WITH THE CURRENT EDITIONS OF THE FOLLOWING RTA AND AUSTRALIAN STANDARDS. **AUSTRALIAN STANDARDS** 

AS 1289 TESTING SOILS FOR ENGINEERING PURPOSES

AS 3798 GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS

QA SPECIFICATIONS R41-R50

ALL WORK SHALL COMPLY WITH THE PROJECT GEOTECHNICAL REPORT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT ALL CONTROL AND COMPLIANCE EXAMINATION AND

TESTING OF MATERIALS AND WORK. UNLESS OTHERWISE SPECIFIED, ALL TESTS SHALL BE UNDERTAKEN IN ACCORDANCE WITH THE APPROPRIATE AUSTRALIAN STANDARD TEST METHOD. WHERE THERE IS NO RELEVANT AUSTRALIAN STANDARD TEST METHOD THEN THE CURRENT APPROPRIATE RTA TEST METHOD OR OTHER SPECIFIED TEST METHOD SHALL BE USED. ALL TESTS SHALL 4. BE CONDUCTED BY EXPERIENCED TESTING OFFICERS IN A LABORATORY ACCREDITED BY THE NATIONAL ASSOCIATION

OF TESTING AUTHORITIES-NATA. DETERMINATION OF THE NATURE AND QUANTITY(IES) OF THE EXISTING SITE MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. WHERE INCLUDED IN THE DOCUMENTS, GEOTECHNICAL REPORTS ARE INCLUDED FOR INFORMATION ONLY. INTERPRETATION OF THE REPORT/S SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE DEEMED TO HAVE ALLOWED IN THE CONTRACT SUM FOR EXCAVATION IN ALL MATERIAL.

NO ADDITIONAL PAYMENT SHALL BE MADE FOR EXCAVATION IN ROCK NOR ANY HARD OR SOFT MATERIAL. USE OF ON-SITE MATERIAL WITHIN THE WORKS SHALL ONLY BE PERMITTED WHERE THE MATERIAL EITHER: I. IS SPECIALLY STATED WITHIN THE DOCUMENTS AS BEING USED IN THE WORKS, OR

II. IS PERMITTED BY THE SUPERINTENDENT ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE SUPERINTENDENT AND SHALL COMPLY WITH THE FOLLOWING -

a) FREE FROM ORGANIC AND PERISHABLE MATTER;

b) MAXIMUM PARTICLE SIZE 75mm; AND c) PLASTICITY INDEX - BETWEEN 2% AND 15%.

WHEN A SURFACE IS UNABLE TO SUPPORT CONSTRUCTION EQUIPMENT OR IT IS NOT POSSIBLE TO COMPACT THE OVERLYING MATERIALS BECAUSE OF HIGH MOISTURE CONTENT, THEN ONE OR MORE OF THE FOLLOWING ALTERNATIVE ACTIONS MAY BE

(I) ALLOW THE MATERIAL TO DRY TO A MOISTURE CONTENT WHICH ALLOW IT TO BE COMPACTED AND ALLOW THE PLACEMENT AND COMPACTION OF OVERLYING MATERIAL

(II) SCARIFY THE MATERIAL TO A DEPTH OF 200MM AND WORK AS NECESSARY TO ACCELERATE DRYING. RECOMPACT AS SPECIFIED WHEN MOISTURE CONTENT APPROXIMATES OPTIMUM (III) EXCAVATE AND REPLACE THE SOFT MATERIAL

THE ACTION TO BE ADOPTED SHALL BE AT THE CONTRACTOR'S DISCRETION AND EXPENSE, BUT SHALL BE ADVISED TO THE SUPERINTENDENT BEFORE ACTION COMMENCES. IF THE CONTRACTOR ELECTS PURSUANT TO (I) ABOVE TO ALLOW THE MATERIAL TO DRY, RESULTING DELAYS, IF ANY, SHALL NOT

THE FINISHED SUBGRADE SHALL NOT BE DISTURBED BY TRAFFIC OR OTHER OPERATIONS, AND SHALL BE PROTECTED AND MAINTAINED BY THE CONTRACTOR UNTIL THE FIRST LAYER OF FILL OR SUB-BASE IS PLACED THEREON. THE SUBGRADE SHALL BE KEPT DRAINED AND COMPLETELY FREE OF STANDING WATER AT ALL TIMES. THE CONTRACTOR SHALL PLAN AND CARRY OUT THE WHOLE OF THE WORKS TO MINIMISE THE EFFECTS OF RUN-OFF AND EROSION ON THE SITE AND ON DOWNSTREAM AREAS. HE SHALL AVOID UNNECESSARY GROUND DISTURBANCE AND PROVIDE AS NECESSARY

CONSTITUTE GROUNDS FOR AN EXTENSION OF CONTRACT PERIOD OR DATE OF PRACTICAL COMPLETION.

FOR THE PROPER CONTROL OF STORMWATER RUN-OFF AT EVERY STAGE OF THE WORKS PRIOR TO THE COMMENCEMENT OF EARTHWORKS TOPSOIL IS TO BE STRIPPED WITHIN THE LIMITS OF THE EARTHWORKS AND FROM ANY AREAS TO BE COVERED BY PAVING, STRUCTURES OR FILL, AND ALL AREAS WHICH ARE TO SUPPORT PAVEMENTS, EMBANKMENTS, STRUCTURES AND THE LIKE OR FILLING UNDER SUCH WORKS, SHALL BE STRIPPED CLEAR OF ALL TREES, LOGS, STUMPS, SCRUB, GRASS, ROOT GROWTH, CULTIVATED SOIL, WET OR SPONGY NATURAL SOIL, DECAYED VEGETABLE MATTER AND ANY OTHER DELETERIOUS SUBSTANCE. THE CONTRACTOR SHALL BREAK UP AND REMOVE ALL ASPHALT AND CONCRETE MATERIAL UPON WHICH FILL OR PAVEMENT SHALL BE PLACED.

ALL MATERIAL WITHIN THE LIMIT OF THE EARTHWORKS SHALL BE WHOLLY REMOVED. FILL ALL HOLES WITH APPROVED MATERIAL IN MAXIMUM 150MM COMPACTED THICKNESS LAYERS COMPACTED TO THE DENSITY TO

THE ADJOINING UNDISTURBED SOIL AND TO THE APPROVAL OF THE SUPERINTENDENT. MOISTURE CONDITION THE NATURAL SUBGRADE TO WITHIN THE RANGE 97% TO 103% OF STANDARD OPTIMUM MOISTURE CONTENT AND COMPACT TO ACHIEVE A MINIMUM STANDARD DRY DENSITY RATIO TO A MINIMUM DEPTH OF 200MM. IF REQUIRED THE AREA SHOULD BE TYNED AND SCARIFIED FULL DEPTH TO FACILITATE THIS PROCESS.

ANY SOFT, WEAK OR UNSTABLE AREAS EXPOSED BY THE COMPACTION PROCESS, OR DURING TEST ROLLING, AND WHICH DO NOT RESPOND TO FURTHER COMPACTION OR MOISTURE CONDITIONING SHALL BE EXCAVATED AND REPLACED. THE CONTRACTOR SHALL BE DEEMED TO HAVE ASSESSED THE EXTENT OF UNSTABLE AREAS AND SHALL BE DEEMED TO HAVE INCLUDED IN THE CONTRACT SUM FOR ALL ACTIVITIES REQUIRED FOR UNSTABLE AREA RECTIFICATION INCLUDING THE DELIVERY,

EXCAVATION TO THE LINES, LEVELS AND GRADES AS REQUIRED FOR UNDERGROUND SERVICES SPECIFIED IN THE RELEVANT SERVICES SECTIONS, INCLUDING DRAINAGE, HYDRAULIC, ELECTRICAL AND THE LIKE. UNLESS OTHERWISE SPECIFIED MAKE THE TRENCHES STRAIGHT BETWEEN MANHOLES, INSPECTION POINTS, JUNCTIONS AND THE LIKE, WITH VERTICAL SIDES AND UNIFORM

PLACING AND COMPACTING OF APPROVED MATERIAL AS WELL AS THE EXCAVATION AND DISPOSAL OF REPLACED MATERIAL.

DEPTH SHALL BE AS REQUIRED BY THE RELEVANT SERVICES AND ITS BEDDING. CUT BACK ROOTS ENCOUNTERED IN TRENCHES TO LESS THAN 600mm CLEAR OF THE RELEVANT SERVICE. REMOVE SUCH OTHER OBSTRUCTIONS INCLUDING ROOTS, STUMPS, BOULDERS AND THE LIKE WHICH MAY, IN THE OPINION OF THE SUPERINTENDENT, INTERFERE WITH THE PROPER FUNCTIONING OF THE SERVICE.

LAY AND BED SERVICES IN ACCORDANCE WITH THE RELEVANT SERVICES SPECIFICATION SECTION. BACKFILL AND COMPACT SERVICE TRENCHES AS SOON AS POSSIBLE AFTER APPROVAL OF LAID AND BEDDED SERVICE.

COMPACT BACKFILL IN PIPE TRENCHES SO THAT THE PIPE IS BUTTRESSED BY THE WALLS OF THE TRENCH. WHERE FILLING IS DESIGNATED BY THE CONTRACT OR IS SHOWN ON THE DRAWINGS AS STRUCTURAL OR CONTROLLED FILL THE CONTRACTOR SHALL ENGAGE AN INDEPENDENT GEOTECHNICAL TESTING AUTHORITY TO SUPERVISE SUBGRADE PREPARATION, FILL PLACEMENT, COMPACTION AND TO UNDERTAKE SAMPLING AND TESTING AND REPORTING TO SATISFY THE REQUIREMENTS OF THIS SPECIFICATION AND THOSE OF AS 2870 AND AS 3798, FOR CONTROLLED FILL

NO FILL SHALL BE PLACED OVER LAYERS NOT TESTED AND HAVING SATISFACTORY RESULTS. WHERE EXCAVATED MATERIAL IS NOT SUITABLE FOR FILLING, FILL MATERIAL, AS SPECIFIED IN THIS SPECIFICATION SECTION, "IMPORTED FILL" SHALL BE USED.

ALL FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200mm THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR -2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289.5.1.1-2003-METHODS OF TESTING SOILS FOR ENGINEERING PURPOSES OF NOT LESS THAN THE FOLLOWING STANDARD MINIMUM DRY DENSITY -STANDARD DRY DENSITY UNDER BUILDING SLABS

VEHICULAR PAVED AREAS 100% NON-VEHICULAR PAVED AREAS LANDSCAPED AREAS

UNLESS OTHERWISE PERMITTED, NO FILLING SHALL BE PLACED AGAINST ANY STRUCTURES, WING WALLS OR RETAINING WALLS WITHIN FOURTEEN DAYS OF CASTING. STRUT WALLS AS NECESSARY TO PREVENT MOVEMENT DURING PLACING AND COMPACTION. PLACE AND COMPACT FILLING OVER AND AROUND PIPES, CULVERTS, BRIDGES AND OTHER STRUCTURES SO AS TO AVOID

UNLESS OTHERWISE DETAILED BACKFILL AT STRUCTURES SHALL BE FILLED AS FOLLOWS: WHERE THE GAP BETWEEN THE STRUCTURE AND UNDISTURBED GROUND EXCEEDS 2m, BACKFILL THE ZONE WITHIN 2m OF THE STRUCTURE WITH DGS20 SUBBASE FINE CRUSHED ROCK AND BACKFILL IN THE ZONE BEYOND 2m OF THE STRUCTURE WITH SELECT FILL TO THE APPROVAL OF THE SUPERINTENDENT OR DGS20 SUBBASE FINE CRUSHED ROCK. UNLESS OTHERWISE DETAILED, MATERIAL WITHIN 300mm OF WEEPHOLES SHALL BE AN APPROVED GRANULAR FILTER MEDIUM OF

COARSE SAND OR CRUSHED STONE WRAPPED AND SURROUNDED WITH AN APPROVED GEOTEXTILE SEPARATION LAYER. HORIZONTAL:

NO POINT SHALL BE GREATER THAN + OR - 100mm FROM THE DESIGN LOCATION. VERTICAL:

SUBGRADE LEVEL: +0 -25mm PAVEMENT DESIGN SUBGRADE:

LEVEL: +0, -25mm OTHER: +50, -50mm

> STRAIGHTNESS (EXCLUDES ROCK): MAXIMUM 20MM DEPARTURE FROM 3M STRAIGHT EDGE LAID: - PARALLEL TO ROAD CENTER LINE - NORMAL TO INTENDED CONTOURS

AREAS UPON WHICH FILLS ARE TO BE CONSTRUCTED, ALL LAYERS OF FILLING, AND MATERIALS LESS THAN 150mm BELOW PERMANENT SUBGRADE LEVEL IN CUTTINGS, SHALL BE COMPACTED SO AS TO BE CAPABLE OF WITHSTANDING TEST ROLLING, WITHOUT VISIBLE DEFORMATION OR SPRINGING, WITH A PNEUMATIC TYRED ROLLER OR HIGHWAY TRUCK BALLASTED TO COMPLY

PNEUMATIC TYRED - NOT LESS THAN 3 T PER TYRE WITH TYRES INFLATED TO 550 KPa. HIGHWAY TRUCK - WITH REAR AXLE OR AXLES LOADED TO NOT LESS THAN 8 T EACH WITH TYRES INFLATED TO 550KPa

TEST ROLLING SHALL BE CARRIED OUT IMMEDIATELY BEFORE OVERLYING LAYERS ARE PLACED. WHERE TEST ROLLING IS REQUIRED AT SOME LATER DATE, THE SURFACE SHALL BE MOISTURE CONDITIONED AS AND GIVEN NOT LESS THAN FOUR COVERAGES OF THE TEST ROLLER BEFORE TEST ROLLING COMMENCES. THE WORK SHALL NOT BE ACCEPTED AS COMPLETE UNLESS ALL TEST RESULTS ARE PROVIDED TO THE SUPERINTENDENT.

THE CONTRACTOR SHALL PROVIDE ALL MATERIAL PROPERTY AND QUALITY TEST RESULTS TO THE SUPERINTENDENT. THE CONTRACTOR SHALL PROGRAM THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED

DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS, ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED BY THE CONTRACTOR AT THEIR OWN EXPENSE

TESTING OF THE FILL MATERIAL SHALL BE CARRIED OUT BY AN APPROVED NATA REGISTERED LABORATORY AT THE CONTRACTORS EXPENSE.

# **EXISTING SERVICES**

EXISTING SERVICES HAVE BEEN PLOTTED FROM SUPPLIED DATA AND AS SUCH THEIR ACCURACY CANNOT BE GUARANTEED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. THE CONTRACTOR SHALL ALLOW FOR THE CAPPING OFF, EXCAVATION AND REMOVAL IF REQUIRED OF ALL REDUNDANT EXISTING

SERVICES IN AREAS AFFECTED BY WORKS WITHIN THE CONTRACT AREA, AS SHOWN ON THE DRAWINGS UNLESS DIRECTED

OTHERWISE BY THE SUPERINTENDENT. THE CONTRACTOR SHALL ENSURE THAT AT ALL TIMES SERVICES TO ALL BUILDINGS NOT AFFECTED BY THE WORKS ARE NOT

DISRUPTED. IF REQUIRED, THE CONTRACTOR SHALL CONSTRUCT TEMPORARY SERVICES TO MAINTAIN EXISTING SUPPLY TO BUILDINGS REMAINING IN OPERATION DURING WORKS TO THE SATISFACTION AND APPROVAL OF THE SUPERINTENDENT. ONCE DIVERSION IS COMPLETE AND COMMISSIONED THE CONTRACTOR SHALL REMOVE ALL SUCH TEMPORARY SERVICES AND MAKE GOOD TO THE

SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT SERVICE AUTHORITY. INTERRUPTION TO SUPPLY OF EXISTING SERVICES SHALL BE DONE SO AS NOT TO CAUSE ANY INCONVENIENCE TO THE PRINCIPAL. THE CONTRACTOR IS TO GAIN APPROVAL FROM THE SUPERINTENDENT FOR TIME OF INTERRUPTION - THE CONTRACTOR IS

RESPONSIBLE FOR ALL LIAISON. ALL BRANCH GAS AND WATER SERVICES UNDER DRIVEWAYS AND BRICK PAVING SHALL BE LOCATED IN 80mm DIA uPVC SEWER

GRADE CONDUITS EXTENDING A MINIMUM OF 500mm BEYOND THE EDGE OF PAVING. CLEARANCE AND COVER REQUIREMENTS SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY BEFORE

COMMENCEMENT OF WORKS AND SHALL BE ADHERED TO AT ALL TIMES.

CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS ONLY

WHERE SUBSOIL DRAINAGE LINES PASS UNDER FLOOR SLABS AND VEHICULAR PAVEMENTS, UNSLOTTED uPVC DWV GRADE CLASS SN8 PIPE SHALL BE USED. PROVIDE SUBSOIL DRAINAGE IN ACCORDANCE WITH COUNCIL SPECIFICATIONS WITH CONTINUOUS FALL TO DOWNSTREAM PITS

LOCATED AS SHOWN ON PLAN AND AS MAYBE DIRECTED BY COUNCIL / SUPERINTENDENT ALL SUBSOIL DRAINAGE PIPES SHALL BE Ø100mm CLASS 400 PERFORATED DRAINAGE PIPE LAID AT 1.0%MIN GRADE WRAPPED IN GEOFABRIC (UNO) AND BE LAID AT A MIN DEPTH OF 300mm BELOW PAVEMENT SUB-BASE COURSE.

ALL DRAINAGE PIPES Ø300mm AND ABOVE SHALL BE SPIGOT AND SOCKET REINFORCED CONCRETE PIPES WITH RUBBER RING

ALL DRAINAGE PIPES LESS THAN OR EQUAL TO Ø225mm SHALL BE uPVC DWV GRADE CLASS SN8 IN ACCORDANCE WITH AS/NZS1260:2009-PVC-U PIPES AND FITTINGS FOR DRAIN, WASTE AND VENT APPLICATION WITH SOLVENT WELDED JOINTS (UNO).

MINIMUM GRADE TO STORMWATER LINES TO BE 1%(UNO).

ALL PIPE JUNCTIONS UP TO AND INCLUDING Ø450mm AND TAPERS, SHALL BE VIA PURPOSE MADE FITTINGS (UNO).

EQUIVALENT STRENGTH FIBROUS REINFORCED CONCRETE AND/OR VITRIFIED CLAY PIPE MAY BE USED SUBJECT TO APPROVAL BY

THE SUPERINTENDENT AND CONSENT AUTHORITY. TRENCHES MUST BE KEPT CLEAR OF WATER AT ALL TIMES AND TIMBERED WHERE NECESSARY TO PREVENT COLLAPSE. CONCRETE PIPES SHALL, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, BE CLASS 2, RUBBER RING JOINT, COMPLYING WITH AS1342. PVC PIPES SHALL COMPLY WITH AS 2439 AND MAY BE PLAIN OR CORRUGATED.

WHERE STORMWATER LINES PASS UNDER FLOOR SLABS DWV GRADE uPVC RUBBER RING JOINTS ARE TO BE USED (UNO) PIPES SHALL BEAR EVENLY ON THE BED PREPARED AS SPECIFIED ABOVE AND LAID WITH THE SOCKETS POINTED UPGRADE. ALL PIPES SHALL BE LAID IN STRAIGHT LINES, TO TRUE INVERT LEVELS AND GRADES AS SHOWN ON PLANS. EACH PIPE SHALL BE SEPARATELY BONED BETWEEN ACCURATELY ESTABLISHED GRADE POINTS. THE CONTRACTOR SHALL ADHERE SUPERINTENDENT'S WRITTEN APPROVAL UNLESS NOTED OTHERWISE, BEDDING SHALL BE TYPE H2 FOR PIPES NOT UNDER PAVEMENTS AND TYPE HS3 FOR PIPES UNDER

PAVEMENTS IN ACCORDANCE WITH AS/NZS3725 (2007) - DESIGN FOR INSTALLATION OF BURIED CONCRETE PIPES. BACKFILL TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL TO 300mm (MIN) ABOVE THE PIPE. WHERE THE PIPE IS UNDER PAVEMENTS BACKFILL REMAINDER OF TRENCH TO PAVEMENT SUBGRADE WITH SAND OR APPROVED GRAVEL SUB-BASE

COMPACTED IN 150mm LAYERS TO 98% STANDARD MAXIMUM DRY DENSITY. THE CONTRACTOR IS TO ENSURE COMPACTION EQUIPMENT IS APPROPRIATE FOR THE PIPE CLASS USED.

12. ALL PIPE JOINTING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS FOR THE TYPE 13. CONTRACTOR TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER

CONNECTION BETWEEN DISSIMILAR PIPEWORK. 14. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE

PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH WITH NO PROTRUSION. WHERE ANY PIPE IS CUT INTO A LARGER PIPE, SUCH CONNECTION SHALL BE NEATLY MADE AND NO PART OF THE PIPE OR DOWNPIPE SHALL BE ALLOWED TO PROJECT. ANY CUT-IN JUNCTION SHALL BE MADE IN THE TOP HALF OF THE LARGER PIPE. SUCH JUNCTION TO CONCRETE PIPES SHALL BE SURROUNDED WITH A NEAT COLLAR OF CEMENT MORTAR AS DIRECTED OR AS DETAILED

ON THE DRAWINGS. JUNCTIONS BETWEEN PVC PIPES SHALL USE PROPRIETY FITTINGS INTENDED FOR THE PURPOSE. THE ENDS OF PIPES WHICH CONNECT WITH SIDE ENTRY, JUNCTION OR OTHER PITS SHALL BE NEATLY CUT TO FIT THE INNER FACE OF THE CONCRETE. WHERE UPVC PIPES ENTER/LEAVE PITS A RUBBER RING JOINT MANHOLE COUPLING SHALL BE CAST INTO THE

BEDDING, HAUNCH AND OVERLAY MATERIALS SHALL CONFORM TO THE DETAILS SHOWN ON THE DRAWINGS. 17. ALL PITS AND ENDWALLS SHALL BE CONSTRUCTED IN THE POSITIONS AND TO THE LEVELS SHOWN ON THE DRAWINGS OR AS COUNCIL'S CONSTRUCTION PIT DETAILS TO TAKE PRECEDENCE TO THE CONSTRUCTION DETAILS SHOWN IN THIS DOCUMENTATION.

PRECAST PITS OR ALTERNATIVE DESIGN TYPES CAN BE USED SUBJECT TO COUNCIL APPROVAL PIT COVERS SHALL BE PLACED IN ACCORDANCE WITH THE DETAIL SITE PLANS AND PIT SCHEDULE (IF PROVIDED) IN REGARD TO TYPE, SIZE, LOCATION AND LEVEL. THE BASE OF EACH PIT SHALL BE INFILLED AND SHAPED WITH CONCRETE OR CEMENT MORTAR TO PROVIDE A SMOOTH FLOW PATH.

18. PITS DEEPER THAN 1000mm SHALL HAVE STEP IRONS INSTALLED IN ACCORDANCE WITH THE LOCAL OR STATUTORY AUTHORITY

19. ALL DOWNPIPES SHALL BE CONNECTED TO AT THE END OF A PIPE OR ELBOW AND WHICH THEY SHALL ENTER CENTRALLY. WHERE PVC DOWNPIPES AND UNDERGROUND DRAINAGE ARE USED, THE DOWNPIPES SHALL BE CONNECTED TO THE UNDERGROUND DRAINS WITH SUITABLE STANDARD FITTINGS, BENDS ETC AND WITH SOLVENT JOINTS. THE CONTRACTOR SHALL LAY AND GRADE DRAINS FROM DOWNPIPES TO COMPLY WITH THE REQUIREMENTS FOR PIPE MATERIAL

AND COVER REQUIRED BY AS3500.3. WHERE THE REQUIREMENTS OF AS3500.3 CANNOT BE MET THE CONTRACTOR SHALL REFER THE MATTER TO THE SUPERINTENDENT. 20. SUPPLY APPARATUS AND MATERIALS NECESSARY FOR, AND CARRY OUT THE TESTS REQUIRED BY THE SPECIFICATION OR REGULATORY AUTHORITIES, IN THE PRESENCE OF THE SUPERINTENDENT AND THE RELEVANT AUTHORITY. LEAVE PIPE JOINTS EXPOSED TO ENABLE OBSERVATION DURING THE TESTS.

ENSURE PVC SOLVENT CEMENT JOINTS HAVE BEEN CURED FOR AT LEAST 24 HOURS BEFORE TESTING. 21. THE CONTRACTOR SHALL PRESSURE TEST WITH WATER, ALL STORMWATER PIPEWORK IN OR UNDER THE STRUCTURE, IN

ACCORDANCE WITH AS 3500.3. 22. WHERE SHOWN IN THE DOCUMENTS OR WHERE THE GRADE OF THE PIPELINE IS ≥15%, CONCRETE BULKHEADS SHALL BE CONSTRUCTED AT EVERY SECOND JOINT. THE AXIS OF THE BULKHEAD SHALL BE VERTICAL WITH A MINIMUM TOP WIDTH OF 200mm UNLESS OTHERWISE DIRECTED THE TOP OF BULKHEADS SHALL EXTEND TO WITHIN 300mm OF FINISHED SURFACE LEVEL OR TO THE SUBGRADE LEVEL WHERE THE PIPELINE IS UNDER A ROAD PAVEMENT. ON EACH SIDE OF THE PIPE AT THE LEVEL OF THE TRENCH INVERT 100mm DIA PIPES SHALL PASS THROUGH THE BULKHEAD. SUCH PIPES SHALL BE FILLED WITH FIBREGLASS WOOL OR OTHER APPROVED FILTER MATERIAL. THE BULKHEAD SHALL BE LOCATED DIRECTLY BEHIND THE DOWNSTREAM COLLAR SO AS NOT TO ENCASE THE JOINT. REFER TO DETAILS SHEET.

### SERVICE TRENCHES AND CONDUITS

MATERIAL SHALL COMPLY WITH THE CURRENT EDITIONS OF THE FOLLOWING AUSTRALIAN STANDARDS.

AS 2053 NON-METALLIC CONDUITS AND FITTINGS AS 2032 CODE OF PRACTICE FOR UPVC PIPE SYSTEMS

AS 3500.3 NATIONAL PLUMBING AND DRAINAGE CODE, PART 3 STORMWATER DRAINAGE ELECTRICAL DUCTING CONDUIT SHALL BE HEAVY DUTY PVC. COLOURED ORANGE AND SOLVENT CEMENT JOINTED

FOR WATER DUCTING THE CONTRACTOR SHALL PROVIDE AND LAY CONDUITS FOR THE UTILITY SERVICE TO ALLOTMENTS, AS SHOWN ON THE DRAWINGS. CONDUITS SHALL, UNLESS SHOWN OTHERWISE ON THE DRAWINGS, BE 80 N.B. DIAMETER CLASS 12 UPVC PRESSURE PIPE WITH SOLVENT WELDED JOINTS.

GAS DUCTING SHALL BE AS FOR WATER DUCTING. CONTRACTOR TO COORDINATE SHARED TRENCH AND LIASE WITH ALL WORKMANSHIP AND NBN Co / GAS / TELSTRA FOR SUPPLY AND PLACEMENT OF CONDUIT AND GIVE MINIMUM 14 DAYS PRIOR TO THE NEED FOR DUCTING TO BE INSTALLED.

ALL UNCLASSIFIED DUCTING SHALL BE AS FOR WATER DUCTING.

DRAW WIRES SHALL BE 2.8mm HIGH TENSILE GALVANISED DRAW WIRE. ALL EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH THE STORMWATER DRAINAGE AND BASE AND SUBBASE-CRUSHED

BEDDING AND HAUNCHING SHALL COMPLY WITH THE REQUIREMENTS OF AS2032 UNLESS OVERRIDEN BY THE REQUIREMENTS OF THE RELEVANT AUTHORITY OR THE RELEVANT SERVICES SECTIONS OF THE SPECIFICATION. LOW PERMEABILITY BEDDING AND BACKFILL SHALL BE PROVIDED, WHERE SHOWN ON THE PLAN OR OTHERWISE DIRECTED. WHERE SERVICES OR CONDUITS ARE PLACED UNDER PAVEMENT THE COVER FROM TOP OF THE SERVICE OR CONDUIT TO THE

PAVEMENT SURFACE SHALL, UNLESS SHOWN OTHERWISE ON THE DRAWINGS OR REQUIRED BY SERVICE AUTHORITIES, BE NOT LESS THAN 750MM AND TO THE INVERT LEVEL OF OPEN DRAINS SHALL BE NOT LESS THAN 600mm UNLESS OTHERWISE APPROVED BY THE SUPERINTENDENT, CROSSING OF PAVEMENT SHALL BE MADE SQUARE OR NEAR SQUARE WITH THE DIRECTION OF TRAFFIC. WHERE IT IS NECESSARY FOR EXISTING ASPHALT OR CONCRETE PAVEMENTS TO BE CUT THEY SHALL BE SAWN FOR THE FULL

DEPTH OF ASPHALT OR CONCRETE 11. CONDUITS SHALL BE PLACED UNDER LANDSCAPE OR NON-PAVED AREAS WITH NOT LESS THAN 450mm COVER UNLESS A GREATER DEPTH IS REQUIRED BY THE RELEVANT AUTHORITY OR SERVICES SECTION OF THE SPECIFICATION.

END DUCT CROSSINGS 500mm BEHIND KERBS UNLESS SHOWN OTHERWISE ON THE DRAWINGS. END DUCT CROSSINGS 1000mm CLEAR OF THE PAVEMENT WHERE THERE IS NO KERB. UNLESS SHOWN OTHERWISE ON THE DRAWINGS LOCATE DUCTS TO AVOID OTHER SERVICES AND WITH STRAIGHT LINES AND GRADES UNLESS DIRECTED OTHERWISE EACH UNUSED CONDUIT IN EACH CONDUIT BANK SHALL BE FITTED WITH A SINGLE UNJOINED LENGTH OF DRAW WIRE OF A LENGTH EQUAL TO THE LENGTH OF THE DUCT PLUS 2 METERS.

CAP BOTH ENDS OF ALL UNUSED CONDUITS WITH STANDARD UPVC CAPS OR APPROVED WATERTIGHT CAP. LEAVE ENDS OF CONDUITS EXPOSED UNTIL THEIR LOCATIONS HAVE BEEN RECORDED BY THE RELEVANT AUTHORITIES.

### BASE AND SUBBASE-CRUSHED ROCK ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CURRENT EDITIONS OF THE FOLLOWING RTA AND AUSTRALIAN

STANDARDS. AUSTRALIAN STANDARDS AS 1141 METHODS OF SAMPLING AND TESTING AGGREGATES AS 1289 TESTING OF SOILS FOR ENGINEERING PURPOSES

QA SPECIFICATIONS R71-R84

QA SPECIFICATIONS 3051-3151 THE CRUSHED ROCK SHALL COMPLY WITH THE RELEVENT RTA SPECIFICATIONS.

THE RTA PROVISIONS FOR SOUNDNESS AND ABRASION REQUIREMENTS SHALL APPLY. THE GRADING OF THE CRUSHED ROCK BY MASS SHALL COMPLY WITH THE RELEVENT RTA SPECIFICATION. WHERE IT IS SPECIFIED THAT WATER SHALL BE ADDED TO THE CRUSHED ROCK PRIOR TO DELIVERY, SUCH WATER SHALL BE CLEAR

AND SUBSTANTIALLY FREE FROM DETRIMENTAL IMPURITIES SUCH AS SOILS, SALTS, ACIDS, ALKALIS AND VEGETABLE SUBSTANCES. WHERE SPECIFIED CEMENT SHALL COMPLY WITH THE REQUIREMENTS OF EITHER AUSTRALIAN STANDARD SPECIFICATION AS1315-PORTLAND CEMENT OR AS1317-BLENDED CEMENT.

THE SUBGRADE, OR PREVIOUS PAVEMENT COURSE, SHALL HAVE BEEN TESTED AND ACCEPTANCE CRITERIA MET BEFORE THE PLACING OF THE NEXT COURSE WILL BE PERMITTED. CRUSHED ROCK MATERIAL SHALL NOT BE PLACED ON A WATERLOGGED SUBGRADE OR THE MOISTURE CONTENT OF THE CRUSHED ROCK SHALL BE MAINTAINED WITHIN -2%, +2% OF OPTIMUM MOISTURE CONTENT AT ALL

TIMES DURING SPREADING AND COMPACTION. EACH LAYER SHALL BE COMPACTED AS SOON AS POSSIBLE AFTER SPREADING AND WHILE THE MOISTURE CONTENT IS WITHIN THE

SPECIFIED RANGE TO ACHIEVE A UNIFORM DENSITY IN THE LAYER. AT THE COMPACTION OF EACH LAYER WITHIN THE COURSE, THE CONTRACTOR SHALL ARRANGE FOR THE LAYER TO BE TESTED FOR COMPLIANCE WITH THE REQUIRED DENSITY. ALL TEST RESULTS SHALL BE SUBMITTED TO THE SUPERINTENDENT FOR APPROVAL PRIOR

TO CONSTRUCTION OF THE NEXT COURSE OR SURFACE TREATMENT. WHERE TEST RESULTS INDICATE THE AREA FAILS TO COMPLY WITH THE REQUIRED DENSITY CRITERIA, THE CONTRACTOR SHALL RE-ROLL, LOOSEN, RE-WATER, RE-COMPACT, OR REMOVE AND REPLACE THE LAYER AS DIRECTED BY THE SUPERINTENDENT, TO ACHIEVE A LAYER COMPLYING IN FULL WITH THIS SPECIFICATION. COSTS OF RECTIFICATION AND RETESTS SHALL BE BORNE BY THE CONTRACTOR

ASPHALTIC CONCRETE NOTES

PAVEMENT PREPARATION

ASPHALTIC CONCRETE MIX DESIGN, MANUFACTURE, PLACING AND COMPACTION SHALL BE IN ACCORDANCE WITH RTA SPECIFICATION R116-ASPHALT (DENSE GRADED AND OPEN GRADED) AND AS2150- 2005-HOT MIX ASPHALT- A GUIDE TO GOOD PRACTICE. ANNEXURE R116/1 TO BE COMPLETED BY SUBCONTRACTOR AND SUBMITTED FOR APPROVAL BY SUPERINTENDENT 7 DAYS PRIOR TO AC WORKS.

MINERAL FILLER TO COMPLY WITH AS2150-2005-HOT MIX ASPHALT- A GUIDE TO GOOD PRACTICE.

JOB MIX - 7mm NOMINAL SIZE AGGREGATE. MINIMUM BITUMEN CONTENT (%) BY (MASS OF TOTAL MASS) - 5.1%. MIX STABILITY - BETWEEN 16kN AND 36 kN AS DETERMINED BY RTA TEST METHOD T601-COMPACTION OF TEST SPECIMENS OF DENSE

GRADE BITUMINOUS MIXTURES AND T603-STABILITY OF DENSE GRADE BITUMINOUS MIXTURES. AIR VOIDS IN COMPACTED MIX - BETWEEN 4% OF VOLUME AND 7% OF THE MIX. VOIDS FILLED IN BINDER. 65-80% OF AIR VOIDS IN THE TOTAL MINERAL AGGREGATE FILLED BY BINDER IN ACCORDANCE WITH RTA TEST METHOD T601-COMPACTION OF TEST SPECIMENS OF DENSE GRADE BITUMINOUS MIXTURES, T605-MAXIMUM DENSITY OF BITUMINOUS PLANT MIX AND T606-BULK DENSITY OF COMPACTED DENSE GRADED BITUMINOUS MIXTURES.

7. ALL DEPRESSIONS OR UNEVEN AREAS ARE TO BE TACK-COATED AND BROUGHT UP TO GENERAL LEVEL OF PAVEMENT WITH

THE EXISTING SURFACE TO BE SEALED, SHALL BE DRY AND BROOMED BEFORE COMMENCEMENT OF WORK TO ENSURE COMPLETE REMOVAL OF ALL SUPERFICIAL FOREIGN AND LOOSE MATTER.

BITUMEN. APPLICATION RATE FOR RESIDUAL BITUMEN SHALL BE 0.15 TO 0.30 LITRES/SQUARE METRE. APPLICATION SHALL BE BY

ASPHALTIC CONCRETE BEFORE LAYING OF MAIN COURSE. THE WHOLE OF THE AREA TO BE SHEETED WITH ASPHALTIC CONCRETE SHALL BE LIGHTLY AND EVENLY COATED WITH RAPID SETTING

MEANS OF A MECHANICAL SPRAYER WITH SPRAY BAR. ALL ASPHALTIC CONCRETE SHALL BE SPREAD WITH A SELF PROPELLED PAVING MACHINE.

THE ASPHALTIC CONCRETE SHALL BE LAID AT A MIX TEMPERATURE AS SHOWN BELOW -ROAD SURFACE TEMP IN SHADE (°C) TEMPERATURES(°C) NOT PERMITTED 5 - 10 10 - 15 15 - 25

ASPHALTIC CONCRETE SHALL NOT BE LAID WHEN THE ROAD SURFACE IS WET OR WHEN COLD WINDS CHILL THE MIX TO ADVERSELY

AFFECT TEMPERATURE OF MIX DURING SPREADING AND COMPACTION OPERATIONS. THE MINIMUM COMPACTED THICKNESS IS 50mm IN TWO (2) LAYERS.

THE NUMBER OF JOINTS BOTH LONGITUDINAL AND TRANSVERSE SHALL BE KEPT TO A MINIMUM.

14. THE DENSITY AND SURFACE FINISH AT JOINTS SHALL BE SIMILAR TO THOSE OF THE REMAINDER OF THE LAYER.

ALL COMPACTION SHALL BE UNDERTAKEN USING SELF PROPELLED ROLLERS. INITIAL ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 105°C.

SECONDARY ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 60°C. CHARACTERISTIC VALUE OF RELATIVE COMPACTION OF A LOT WHEN TESTED IN ACCORDANCE WITH AS2734-2005-HOT MIX ASPHALT-A GUIDE TO GOOD PRACTICE SHALL BE 95%.

FINISHED PAVEMENT PROPERTIES FINISHED SURFACES SHALL BE SMOOTH, DENSE AND TRUE TO SHAPE AND SHALL NOT VARY MORE THAN 10mm FROM THE SPECIFIED PLAN LEVEL AT ANY POINT AND SHALL NOT DEVIATE FROM THE BOTTOM OF A 3m STRAIGHT EDGE LAID IN ANY DIRECTION BY MORE

### CONCRETE NOTES

USE "AS3972-1997-PORTLAND AND BLENDED CEMENTS-TYPE GP" CEMENT (UNO).

ALL CONCRETE SHALL BE SUBJECT TO PROJECT CONTROL SAMPLE AND TESTING TO AS3600-2001-CONCRETE STRUCTURES CONSOLIDATE BY VIBRATION. CURE SURFACES AS SHOWN ON THE PLANS OR AS DIRECTED IN THE SPECIFICATION OR AS DIRECTED BY THE

FIX REINFORCEMENT AS SHOWN ON DRAWINGS. THE TYPE AND GRADE IS INDICATED BY A SYMBOL AS SHOWN BELOW: HOT ROLLED DEFORMED BAR, GRADE 500

PLAIN ROUND BAR, GRADE 250 HARD DRAWN WIRE FABRIC SQUARE OR RECTANGULAR FOLLOWING THIS SYMBOL A NUMERAL INDICATES THE SPECIFIED DIAMETER.

PROVIDE BAR SUPPORTS OR SPACERS TO PROVIDE CONCRETE COVER AS DETAILED TO ALL REINFORCEMENT. CONCRETE PAVEMENTS CONCRETE MIX PARAMETERS a) MAXIMUM AGGREGATE SIZE 20mm

> c) FLEXURAL STRENGTH AT 90 DAYS = 3.85 MPa d) MAXIMUM WATER/CEMENT RATIO = 0.55 e) MAXIMUM SHRINKAGE LIMIT = 650 MICRON STRAINS (AS1012 pt 13) f) MINIMUM CEMENT CONTENT = 300kg/m<sup>3</sup>

b) FLEXURAL STRENGTH AT 28 DAYS = 3.5 MPa (F'c=32MPa)

g) CEMENT TO BE TYPE "SL" (NORMAL CEMENT) to AS3972 SAWN JOINTS ARE TO BE CUT NOT SOONER THAN 24 HOURS AND NOT LATER THAN 48 HOURS AFTER CONCRETE POUR TO AVOID DAMAGING

THE SURFACE DURING SAWCUT OR AS DIRECTED BY THE SUPINTENDENT. JOINT LAYOUT SHALL BE AS DETAILED ON THE PLANS.

PROVIDE 10mm WIDE EXPANSION JOINTS BETWEEN ALL BUILDINGS, OTHER STRUCTURES AND PAVEMENTS BOND BREAKER TO BE TWO (2) UNIFORM COATS OF BITUMEN EMULSION ALL OVER THE EXPOSED SURFACE AND ON END. DOWELS AND TIE BARS TO MEET STRENGTH REQUIREMENTS OF STRUCTURAL GRADE STEEL IN ACCORDANCE WITH AS ISO 1

302-2005-GEOMETRICAL PRODUCT SPECIFICATIONS. DOWELS AND TIE BARS SHALL BE a) STRAIGHT, b) TO LENGTH SPECIFIED.

c) ALL DOWELS TO BE HOT DIP GALVANISED.

d) SAWN TO LENGTH NOT CROPPED. DIMENSIONS OF SEALANT RESERVOIR DEPENDANT ON THE SEALANT TYPE ADOPTED. SUPERINTENDENT APPROVAL TO BE OBTAINED FOR SEALANT AND RESERVOIR DIMENSIONS AND DETAIL PROPOSED BY THE CONTRACTOR. REFER TO PLANS FOR TYPICAL ARRANGEMENT AND

PRIOR TO THE PLACEMENT OF CONCRETE IN THE ADJACENT SLAB, 'ABLEFLEX' FILLER SHALL BE ADHERED TO THE ALREADY CAST AND CLEANED CONCRETE FACE USING AN APPROVED WATERPROOF ADHESIVE. ADHESIVE SHALL BE LIBERALLY APPLIED TO THE FULL FACE OF THE CONCRETE SLAB TO BE COVERED BY THE FILLER, AND ON THE FULL FACE OF THE FILLER TO BE ADHERED.

THE BASE COURSE SHALL BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER IMMEDIATELY PRIOR TO POURING THE CONCRETE. ALL WORK TO BE FINISHED TO SATISFY ITS INTENDED USE AS SHOWN ON THE PLANS, AND / OR IN ACCORDANCE WITH THE SPECIFICATION.

ALL CONCRETE KERBS TO HAVE A MINIMUM CHARACTERISTIC COMPRESSIVE STRENGTH F'c=25MPa (UNO). ALL KERBS, DISH DRAINS, etc. TO BE CONSTRUCTED ON 75mm MINIMUM BASE COURSE.

INTEGRAL KERB JOINTS SHALL MATCH THE LOCATION OF THE PAVEMENT JOINTING.

KERB EXPANSION JOINTS SHALL BE FORMED FROM 10mm COMPRESSIBLE CORK FILLER BOARD FOR THE FULL DEPTH OF THE SECTION. EXPANSION JOINTS SHALL BE LOCATED AT DRAINAGE PITS, ON TANGENT POINTS OF CURVES AND ELSEWHERE AT 12m MAXIMUM SPACING TOOLED JOINTS SHALL BE MIN 3mm WIDE AND LOCATED AT MAXIMUM 3m SPACING.

LINEMARKING WORKS TO BE IN ACCORDANCE WITH EITHER THE CURRENT AUSTRALIAN STANDARD AS:2890 OFF STREET CARPARKING CODE OR AS SHOWN ON THE PLANS OR AS DIRECTED BY THE SUPERINTENDENT.

CARPARK LINEMARKING TO BE WHITE, 80-100mm THICK AND BE IN ACCORDANCE WITH AS:2890 OFF STREET CARPARKING CODE. THE SCOPE OF WORK SHALL INCLUDE ALL PAVEMENT MARKINGS TO ROADS AND CARPARKS. THE WORK CARRIED OUT AND TESTING PERFORMED SHALL COMPLY WITH THE CURRENT, RELEVANT AUSTRALIAN STANDARD

EITHER SOLVENT OR WATERBORNE AND COMPLYING WITH THE REQUIREMENTS OF THE AUSTRALIAN STANDARD

AND RTA STANDARDS WHERE NECESSARY. ALL MARKINGS SHALL BE SPOTTED OUT AND APPROVED BY THE SUPERINTENDENT PRIOR TO APPLICATION. UNLESS OTHERWISE SPECIFIED, PERMITTED OR SHOWN ON THE DRAWINGS, PAINT SHALL BE WHITE, WITHOUT GLASS BEADS,

PAINT SHALL BE APPLIED AT A WET THICKNESS OF BETWEEN 0.35mm - 0.45mm. PAINT SHALL ONLY BE APPLIED TO CLEAN AND DRY SURFACES. ALL LONGITUDINAL LINES SHALL BE APPLIED BY A SELF-PROPELLED MACHINE.

LINEMARKING REMOVAL SHALL BE CARRIED OUT BY GRINDING OR SANDBLASTING. REMOVAL BY BURNING WILL NOT BE PERMITTED. THE EXTENT OF LINEMARKING TO BE ERADICATED SHALL BE CONFIRMED ON SITE PRIOR TO REMOVAL. ANY MARKINGS

INCORRECTLY REMOVED SHALL BE REINSTATED AT THE CONTRACTOR'S EXPENSE. ALL MARKINGS SHALL BE COMPLETED IN A WORKMAN LIKE MANNER AND BE STRAIGHT, SMOOTH AND WITH EVEN CURVES. ANY NON-CONFORMING WORK, SHALL BE REMOVED AND REINSTATED AT THE DIRECTION OF THE SUPERINTENDENT AT THE

CONTRACTORS EXPENSE 12. IF FINAL SEAL LAYER LAID, ALL LINEMARKING SHALL BE THERMOPLASTIC.

NOT FOR CONSTRUCTION





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PUTNEY HILL RESIDENTIAL DEVELOPMENT FRASERS PUTNEY PTY LTD CHARLES STREET, RYDE APPROVED RL PD **GENERAL NOTES** PLANNING APPLICATION

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