KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW
CIVIL DRAWINGS

LOCALITY PLAN
N.T.S

DRAWING REGISTER	
DRAWING No.	DRAWING TITLE
KOPS-MHT-00-00-DR-C-0010	COVER SHEET, DRAWING INDEX AND LOCALITY PLAN
KOPS-MHT-00-00-DR-C-0020	STANDARD NOTES
KOPS-MHT-00-00-DR-C-0060	EROSION AND SEDIMENTCONTROL PLAN
KOPS-MHT-00-00-DR-C-0065	EROSION AND SEDIMENTCONTROL DETAILS
KOPS-MHT-00-00-DR-C-0070	BULK EARTHWORKS PLAN
KOPS-MHT-00-00-DR-C-0080	BULK EARTHWORKS LONGITUDINAL SECTIONS
KOPS-MHT-00-00-DR-C-0101	CIVIL SITEWORKS PLAN
KOPS-MHT-00-00-DR-C-0110	PAVEMENT PLAN
KOPS-MHT-00-00-DR-C-0200	CIVIL DETAILS
KOPS-MHT-00-00-DR-C-0210	TEMPORARY VEHICLE ACCESS WORKS ON HOLD
KOPS-MHT-00-00-DR-C-0300	ON-SITE DETENTION TANK DETAILS
KOPS-MHT-00-00-DR-C-0710	STORMWATER DRAINAGE PIT SCHEDULE

ENVIRONMENTAL MANAGEMENT PLAN

PRIOR TO THE COMMENCEMENT OF ANY WORKS THE CONTRACTOR SHALL PREPARE A SITE MANAGEMENT PLAN FOR APPROVAL BY THE SUPERINTENDENT.
ITEMS TO BE ADDRESSED INCLUDE:

- EROSION AND SEDIMENT CONTROL
- FLORA AND FAUNA CONSERVATION
- WATER QUALITY MANAGEMENT
- DUST CONTROL
- NOISE CONTROL
- ACCESS MANAGEMENT
- WASTE MANAGEMENT
- POLLUTION CONTROL
- MONITORING AND REPORTING
- CORRECTIVE ACTION

IMPORTANT NOTES

1. PRIOR TO THE COMMENCEMENT OF BUILDING WORKS ON SITE, THE CONTRACTOR MUST VERIFY THE FEASIBILITY OF THE OUTFALL STORMWATER DRAINAGE SYSTEM/S TO THE LEGAL POINT OF DISCHARGE AS DOCUMENTED BY:
   - VERIFICATION OF THE INVERT LEVEL OF THE DRAIN FORMING THE LEGAL POINT OF DISCHARGE
   - VERIFICATION THAT THE ROUTE FROM THE SITE TO THE LEGAL POINT/S OF DISCHARGE IS CLEAR OF ALL OTHER AUTHORITY SERVICES.
   IF EITHER OF THE ABOVE CANNOT BE VERIFIED, THE CONTRACTOR MUST IMMEDIATELY NOTIFY THE SUPERINTENDENT.
2. PRIOR TO THE COMMENCEMENT OF ANY WORKS, THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES, NOTIFY THE AUTHORITIES RESPONSIBLE FOR THOSE SERVICES AND COMPLY WITH ALL OF THE REQUIREMENTS OF THOSE AUTHORITIES.

ATTENTION TO CONTRACTOR
OH & S REQUIREMENTS

1. IN ACCORDANCE WITH CLAUSE 15 OF AS2124-1992, THE CONTRACTOR MUST ENSURE THE SAFETY OF THE CONTRACTOR'S EMPLOYEES AND ALL OTHER PEOPLE WHO ARE ON OR ADJACENT TO THE SITE. THE CONTRACTOR MUST COMPLY WITH THE NSW WHS ACT OF 2011.
2. THE CONTRACTOR MUST ENSURE THAT ALL PEOPLE EMPLOYED ON THE SITE WEAR APPROVED SAFETY APPAREL. THIS INCLUDES SAFETY HELMETS, SAFETY BOOTS, EAR AND EYE PROTECTION, WHERE APPROPRIATE.
3. THE CONTRACTOR IS NOT PERMITTED TO BREAK-IN TO AN EXISTING LIVE PIPELINE, ENTER A LIVE ACCESS CHAMBER OR REMOVE THE COVER TO A LIVE ACCESS CHAMBER.
4. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL EXISTING SERVICES IN WORKS AFFECTED AREAS PRIOR TO COMMENCING ANY WORKS.

THE CONTRACTOR SHALL BE TOTALLY RESPONSIBLE FOR AND AT ALL TIMES PROVIDE A SAFE WORKING ENVIRONMENT IN THE VICINITY OF THE SITE OF WORKS IN FULL COMPLIANCE WITH THE OCCUPATIONAL HEALTH AND SAFETY REGULATIONS.

HEALTH AND SAFETY

1. THE OBLIGATION OF MEINHARDT [OR OTHER RELEVANT MEINHARDT ENTITY] (MEINHARDT) AS THE DESIGN ENGINEER IS LIMITED TO ENSURING THAT THOSE PARTS OF THE BUILDING OR STRUCTURE THAT ARE TO BE USED AS A WORKPLACE ARE, AS FAR AS REASONABLY PRACTICABLE, DESIGNED TO BE SAFE AND WITHOUT RISKS TO THE HEALTH OF THOSE PERSONS USING THE BUILDING OR STRUCTURE AS A WORKPLACE FOR THE PURPOSE FOR WHICH IT WAS DESIGNED IN ACCORDANCE WITH SECTION 22 OF THE NSW WHS ACT 2011.
2. MEINHARDT IS NOT RESPONSIBLE FOR THE OCCUPATIONAL HEALTH AND SAFETY OF PERSONS AT THE SITE AS THOSE OBLIGATIONS RESIDE WITH THE CONTRACTORS AND/OR SUB-CONTRACTORS WHO OCCUPY OR HAVE CONTROL OF THE SITE IN ACCORDANCE WITH APPLICABLE OCCUPATIONAL HEALTH AND SAFETY LEGISLATION, CODES OR PRACTICE, GUIDANCE NOTES, AUSTRALIAN STANDARDS AND OTHER RELEVANT DOCUMENTATION.
3. ANY ADVICE OR GUIDANCE CONCERNING OCCUPATIONAL HEALTH AND SAFETY ISSUES ARISING AT THE SITE SHOULD BE DIRECTED TO THE HEALTH AND SAFETY EXECUTIVE OR OFFICER NOMINATED FOR THE PROJECT.

NOTE:
THIS PROJECT SHOULD BE READ IN CONJUNCTION WITH ALL OTHER SERVICES CONSULTANTS ASSOCIATED WITH THIS PROJECT BEFORE COMMENCEMENT OF ANY WORKS.

ALL EXISTING PROPERTY SERVICES' LOCATIONS AND DEPTHS ARE APPROXIMATE AND MUST BE VERIFIED ON SITE.
THE CONTRACTOR SHOULD SUPPLY PRECISE LOCATIONS AND DEPTHS TO THE SUPERINTENDENT FOR REVIEW PRIOR TO ANY WORKS THAT MAY AFFECT THESE SERVICES.

GEOTECHNICAL DESIGN COMPLIANCE AND SITE INSPECTION ATTENDANCE

THESE DESIGN PLANS SHALL BE READ IN CONJUNCTION WITH GEOTECHNICAL REPORT No.32976LTrptRev2KPS DATED 7 MAY, 2020 PREPARED BY JKGeotechnics. THE PROVISIONS AND RECOMMENDATION CONTAINED WITHIN THE REPORT ARE TO BE STRICTLY COMPLIED WITH.

ALL COMPACTION REQUIREMENT RESULTS SHALL BE CARRIED OUT IN ACCORDANCE WITH GEOTECHNICAL REPORT RECOMMENDATIONS.

LATENT CONDITIONS (SUBGRADE IMPROVEMENTS)

ANY ADDITIONAL WORKS WHICH MAY LEAD TO A VARIATION SHALL BE APPROVED BY THE SUPERINTENDENT PRIOR TO THE COMMENCEMENT OF ANY WORKS AND INCLUDE THE FOLLOWING PROVISIONS:

a) NOTIFICATIONS FOR INSPECTIONS TO SUPPORT POTENTIAL VARIATION CLAIMS REQUIRE MINIMUM 48 HOUR NOTICE PERIOD. (SITE REPRESENTATION WILL BE AT THE DISCRETION OF THE SUPERINTENDENT).
b) SUBGRADE IMPROVEMENTS ARE TO BE MANAGED BY THE PROJECT GEOTECHNICAL ENGINEER WITH INPUT FROM THE SUPERINTENDENT.
c) CONSULTANT COSTS FOR GEOTECHNICAL REPRESENTATION AND REPORTING TO BE BORNE BY THE CONTRACTOR
d) ADDITIONAL INSPECTIONS BY THE SUPERINTENDENT TO SUPPORT VARIATION CLAIMS FOR LATENT CONDITIONS SHALL BE BORNE BY CONTRACTOR.

BEFORE YOU DIG www.byda.com.au

WARNING
PROPOSED SERVICES
THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

MEINHARDT
Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: NSW GOVERNMENT School Infrastructure NSW

PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: COVER SHEET, DRAWING INDEX AND LOCALITY PLAN

STATUS: **TENDER ISSUE**
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			N.T.S

PROJECT No: 132560
DRAWING No: KOPS-MHT-00-00-DR-C-0010
REV: T1

STANDARD CIVIL NOTES

1. GENERAL

1.1 THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS, AND SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK. THESE PLANS ARE BASED UPON THE EXISTING CONDITION SURVEY PREPARED BY OTHERS. WHERE SITE CONDITIONS DIFFER TO THE SURVEY OR DESIGN DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE SUPERINTENDENT PRIOR TO PROCEEDING WITH WORKS.

1.2 IF ANY DISCREPANCY OCCURS ON THE DRAWINGS OR BETWEEN THE DRAWINGS AND SPECIFICATION, THE TENDERER SHALL DURING TENDER REFER THE DISCREPANCY TO THE SUPERINDENDENT. OR ASSUME THAT THE DRAWINGS TAKE PRECEDENCE OVER THE SPECIFICATION. ANY DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT FOR WRITTEN CLARIFICATION BEFORE PROCEEDING WITH THE WORK.

1.3 THESE DRAWINGS MUST NOT BE SCALED.

1.4 ALL DIMENSIONS AND REDUCED LEVELS MUST BE VERIFIED ON SITE BEFORE THE COMMENCEMENT OF ANY WORK.

1.5 THE CONTRACTOR SHALL SET OUT THE WORKS FROM THE NOMINATED DESIGN LINES, SURVEY BENCHMARKS AND CONTROL POINTS SHOWN ON THE PLANS AND TO THE SPECIFIED DETAILS. UPON REQUEST AN ELECTRONIC BASE PLAN OF THE CIVIL DRAWING CAN BE SUPPLIED FOR INFORMATION, MEINHARDT HOLDS NO LIABILITY TO THE ACCURACY OF ELECTRONIC FILES.

1.6 ALL LEVELS SHOWN ARE TO THE AUSTRALIAN HEIGHT DATUM AND ALL COORDINATES ARE TO MAP GRID OF AUSTRALIA (MGA 2020).

1.7 ALL SPOT LEVELS SHOWN ARE TO INVERT (FACE) OF KERB OR EDGE OF PAVEMENT WHERE APPLICABLE, UNLESS SHOWN OTHERWISE.

1.8 EXISTING SURFACE CONTOURS, WHERE SHOWN, ARE INTERPOLATED AND MAY NOT BE ACCURATE.

1.9 GRADE EVENLY BETWEEN FINISHED SURFACE SPOT LEVELS. FINISHED SURFACE CONTOURS ARE SHOWN FOR CLARITY. WHERE FINISHED SURFACE LEVELS ARE NOT SHOWN, THE SURFACE SHALL BE GRADED SMOOTHLY SO THAT IT WILL DRAIN AND MATCH ADJACENT SURFACES OR STRUCTURES.

1.10 MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN AND RESPONSIBLE AUTHORITY STANDARDS.

1.11 THE CONTRACTOR SHALL COMPLY WITH ALL REGULATIONS OF AUTHORITIES HAVING JURISDICTION OVER THE WORKS.

1.12 ONLY SUBSTITUTIONS APPROVED IN WRITING BY THE SUPERINTENDENT SHALL BE ACCEPTED.

1.13 ALL WORKS WITHIN THE ROAD RESERVE SHALL BE IN ACCORDANCE WITH THE RESPONSIBLE ROAD AUTHORITY SPECIFICATIONS AND DRAWINGS AND ENGINEERING, DESIGN AND CONSTRUCTION MANUAL/S.

1.14 SERVICE INFORMATION SHOWN IS BASED ON PLANS SUPPLIED BY AUTHORITIES AND IS APPROXIMATELY ONLY. PRIOR TO COMMENCEMENT OF ANY WORKS, THE CONTRACTOR SHALL LOCATE ALL UNDERGROUND SERVICES AND COMPLY WITH ALL REQUIREMENTS OF THOSE AUTHORITIES.

1.15 WHERE CIVIL DRAWINGS HAVE BEEN PROVIDED IN AUTOCAD OR DIGITAL FORMAT, THE CONTRACTOR SHALL UTILISE THESE FOR INFORMATION ONLY. DESIGN DRAWINGS ARE TO BE REFERENCED FOR SURFACE LEVELS AND WILL TAKE PRECEDENCE FOR SETOUT OVER 3D MODELS. ANY INFORMATION EXTRACTED FROM 3D MODELS ARE TO BE CROSSCHECKED WITH FORMALLY ISSUED PDF FILES AND SITE CONDITIONS. IF ANY DISCREPANCIES EXIST, THE SUPERINTENDENT IS TO BE CONSULTED FOR REVIEW.

1.16 SHOP DRAWING REVIEW OF SUBCONTRACTOR DRAWINGS ARE NOT WITHIN THE CIVIL SCOPE. WHERE SHOP DRAWINGS ARE PRODUCED, MEINHARDT DOES NOT TAKE ANY RESPONSIBILITY TO THE SUITABILITY OF ACCURACY OF THESE DRAWINGS.

1.17 THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN OF ALL TEMPORARY WORKS.

2. EARTHWORKS AND GEOTECHNICAL

2.1 THE CONTRACTOR SHALL COMPLY WITH THE CURRENT EDITIONS OF THE FOLLOWING ROAD AUTHORITY AND AUSTRALIAN STANDARDS:
- AS 1289 TESTING SOILS FOR ENGINEERING PURPOSES
- AS 3798 GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS
- ROAD AUTHORITY SPECIFICATION - SITE CLEARING

2.2 GRANULAR MATERIAL SPECIFIED AS PER GEOTECHNICAL REPORT SUBJECT TO SUPERINTENDENT'S APPROVAL.

2.3 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 ROAD AUTHORITY TEST METHOD OR OTHER SPECIFIED TEST METHOD SHALL BE USED. ALL TESTS SHALL BE CONDUCTED BY EXPERIENCED TESTING OFFICERS IN A LABORATORY ACCREDITED BY THE NATIONAL ASSOCIATION OF TESTING AUTHORITIES (NATA).

2.4 DETERMINATION OF THE NATURE AND QUANTITY(IES) OF THE EXISTING SITE MATERIALS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR (GEOTECHNICAL REPORT PREPARED BY OTHERS).
THE GEOTECHNICAL REPORT WAS USED AS THE BASIS OF DESIGN. INTERPRETATION OF THE REPORT/S SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL ENGAGE THEIR OWN GEOTECHNICAL ENGINEER DURING CONSTRUCTION TO VERIFY ACTUAL SITE CONDITIONS.

2.5 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.
SUITABLE MATERIAL EXCAVATED FROM THE SITE MAY BE USED AS FILL ONLY WHERE APPROVED IN WRITING BY THE SUPERINTENDENT, OR WHERE SHOWN ON THE DRAWINGS.
IMPORTED FILL SHALL BE APPROVED MATERIALS COMPRISING GRANULAR IGNEOUS WEATHERED ROCK OR QUARRY WASTE (SUCH AS 40mm CLASS 3 OR CLASS 4), SANDY CLAY OR WEATHERED SEDIMENTARY ROCK. THE FILL MATERIAL MAXIMUM PARTICLE SIZE AFTER COMPACTION SHALL NOT EXCEED 40mm, NOT LESS THAN 50% OF THE MATERIAL SHALL BE COARSER THAN 75 MICRON AND IT SHALL HAVE A LIQUID LIMIT NOT EXCEEDING 35%. GRANULAR MATERIAL SHALL BE WELL GRADED.
UNSUITABLE MATERIAL SHALL MEAN ANY MATERIAL WHICH CONTAINS VEGETABLE MATTER, ROOTS, STUMPS AND OR ANY OTHER PERISHABLE, FOREIGN OR DELETERIOUS MATTER, OR CONTAINS CLAY HAVING A LIQUID LIMIT EXCEEDING 80% AND OR A PLASTICITY INDEX EXCEEDING 50% OR CONTAINS ROCK, GRAVEL OR OTHER PIECES WHOSE LEAST DIMENSION EXCEEDS 100mm, OR IS SILTY MATERIAL OR IS OTHERWISE CONSIDERED AS BEING UNSUITABLE.

2.6 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 TAKEN:
A) ALLOW THE MATERIAL TO DRY TO A MOISTURE CONTENT WHICH ALLOW IT TO BE COMPACTED AND ALLOW THE PLACEMENT AND COMPACTION OF OVERLYING MATERIAL
B) SCARIFY THE MATERIAL TO A DEPTH OF 200mm AND WORK AS NECESSARY TO ACCELERATE DRYING. RECOMPACT AS SPECIFIED WHEN MOISTURE CONTENT APPROXIMATES OPTIMUM 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 (A) ABOVE TO ALLOW THE MATERIAL TO DRY, RESULTING DELAYS, IF ANY, SHALL NOT CONSTITUTE GROUNDS FOR AN EXTENSION OF CONTRACT PERIOD OR DATE OF PRACTICAL COMPLETION.

2.7 THE NATURAL SUBGRADE SHALL BE MOISTURE CONDITIONED TO WITHIN THE RANGE 98% TO 102% OF STANDARD OPTIMUM MOISTURE CONTENT AND COMPACTED 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.

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

2.9 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. THE CONTRACTOR SHALL AVOID UNNECESSARY GROUND DISTURBANCE AND PROVIDE AS NECESSARY FOR THE PROPER CONTROL OF STORMWATER RUN-OFF AT EVERY STAGE OF THE WORKS.

2.10 ALL FILL AND PAVEMENT MATERIALS SHALL BE COMPACTED IN LAYERS NOT EXCEEDING A MAXIMUM LOOSE THICKNESS OF 250mm TO THE DENSITIES SPECIFIED BELOW:

A) LANDSCAPED AREAS	95% STANDARD DRY DENSITY
B) FILL UNDER ANY FOOTINGS AND FLOOR SLABS FOR ANY STRUCTURE	
- FINE CRUSHED ROCK	98% MODIFIED DRY DENSITY
C) FILL UNDER ROAD PAVEMENTS	
- FINE CRUSHED ROCK	98% MODIFIED DRY DENSITY
D) ROAD PAVEMENT MATERIALS	
- SUBBASE AND BASE COURSE	98% MODIFIED DRY DENSITY

2.11 WHERE EXCAVATED MATERIAL IS NOT SUITABLE FOR FILLING, "IMPORTED FILL" SHALL BE USED. COMPACT IMPORTED BULK FILL IN LAYERS OF 150mm MAXIMUM COMPACTED DEPTH AND AT OPTIMUM MOISTURE CONTENT. THE CONTRACTOR SHALL CARRY OUT TESTING AT A FREQUENCY WHICH IS SUFFICIENT TO ENSURE THAT THE MATERIALS AND WORK SUPPLIED UNDER THE CONTRACT COMPLIES WITH THE SPECIFIED REQUIREMENTS AND CONFORMING TO AS3798 TABLE 8.1 (ADOPTING WHICHEVER GIVES THE MOST TEST RESULTS). NO FILL SHALL BE PLACED OVER LAYERS NOT TESTED AND HAVING UNSATISFACTORY RESULTS.

2.12 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 GRADES. 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, REDUNDANT SERVICES 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.

2.13 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.

2.14 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.

2.15 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 UNBALANCED LOADING OR MOVEMENT. UNLESS OTHERWISE DETAILED BACKFILL AT STRUCTURES SHALL BE FILLED AS FOLLOWS:
A) WHERE THE GAP BETWEEN THE STRUCTURE AND UNDISTURBED GROUND EXCEEDS 2m, BACKFILL THE ZONE WITHIN 2m OF THE STRUCTURE WITH CLASS 3 FINE CRUSHED ROCK AND BACKFILL IN THE ZONE BEYOND 2m OF THE STRUCTURE WITH SELECT FILL TO THE APPROVAL OF THE SUPERINTENDENT OR CLASS 3 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.

2.16 AREAS UPON WHICH FILL IS TO BE CONSTRUCTED, ALL LAYERS OF FILLING, AND MATERIALS LESS THAN 150mm BELOW PERMANENT SUBGRADE LEVEL IN CUT, 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 WITH THE FOLLOWING:
A) PNEUMATIC TYRED - NOT LESS THAN 3t PER TYRE WITH TYRES INFLATED TO 550 kPa.
B) HIGHWAY TRUCK - WITH REAR AXLE OR AXLES LOADED TO NOT LESS THAN 8t EACH WITH TYRES INFLATED TO 550 kPa
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 REQUIRED AND GIVEN NOT LESS THAN FOUR COVERAGES OF THE TEST ROLLER BEFORE TEST ROLLING COMMENCES.

2.17 THE WORK SHALL NOT BE ACCEPTED AS COMPLETE UNLESS ALL TEST RESULTS ARE PROVIDED TO THE SUPERINTENDENT AND APPROVED. THE CONTRACTOR SHALL PROVIDE ALL MATERIAL PROPERTY AND QUALITY TEST RESULTS TO THE SUPERINTENDENT.

3. SITE CLEAN UP

3.1 ALL EXISTING REDUNDANT CONCRETE, PAVEMENT, SOIL, RUBBISH AND CONSTRUCTION DEBRIS SHALL BE TAKEN UP AND REMOVED FROM SITE.

3.2 PRIOR TO COMPLETION, THE CONTRACTOR SHALL ENSURE THE SITE OF WORKS IS TIDIED AND OBTAIN A CLEARANCE FROM THE SUPERINTENDENT.

3.3 APPROPRIATE CLEANING FACILITIES WILL BE INSTALLED ON SITE TO ENSURE THERE IS NO MUD, SOIL OR DEBRIS DEPOSITED BY VEHICLES ON ABUTTING PUBLIC ROADS.

3.4 SITE ACCESS ROADS AND ABUTTING PUBLIC ROADS TO BE REGULARLY SWEPT TO KEEP THEM CLEAN AND DEBRIS FREE.

4. STORMWATER DRAINAGE

4.1 ALL WORKMANSHIP AND MATERIALS SHALL COMPLY WITH THE CURRENT EDITIONS OF THE FOLLOWING AUSTRALIAN STANDARDS.
- AS 1260 UNPLASTICISED PVC (UPVC) PIPES AND FITTINGS FOR SEWERAGE APPLICATIONS.
- AS 1597 PRECAST REINFORCED CONCRETE BOX CULVERTS PART 1, SMALL CULVERTS (NOT EXCEEDING 1200mm WIDTH AND 900mm DEPTH).
- AS 1631 CAST IRON NON-PRESSURE PIPES AND PIPE FITTINGS
- AS 1650 GALVANISED COATINGS
- AS 1657 FIXED PLATFORMS, WALKWAYS, STAIRWAYS AND LADDERS
- AS 2032 CODE OF PRACTICE FOR INSTALLATION OF UPVC PIPE SYSTEMS
- AS 2439 PERFORATED PLASTICS DRAINAGE AND EFFLUENT PIPE FITTINGS. PART 1, PERFORATED DRAINAGE PIPE AND ASSOCIATED FITTINGS
- AS 3500.3 NATIONAL PLUMBING AND DRAINAGE CODE, PART 3, STORMWATER DRAINAGE
- AS 3725 LOADS ON BURIED CONCRETE PIPES
- AS 3996 METAL ACCESS COVERS, ROAD GRATES AND FRAMES
- AS 4058 PRECAST CONCRETE PIPES (PRESSURE AND NON-PRESSURE)
- AS 4139 FIBRE REINFORCED CONCRETE PIPES AND FITTINGS

4.2 ALL BEDDING TO BE TYPE H2 IN ACCORDANCE WITH AS3725 UNLESS NOTED OTHERWISE.

4.3 THE CONTRACTOR SHALL COMPLY WITH THE 'MINES (TRENCHES) REGULATIONS 1982' FOR ALL SHORING, SUPPORT OF TRENCHES, QUALIFICATIONS OF PERSONNEL AND NOTIFICATION TO THE RESPONSIBLE AUTHORITY.

4.4 TRENCHES MUST BE KEPT CLEAR OF WATER AT ALL TIMES AND TIMBERED >1m DEPTH WHERE NECESSARY TO PREVENT COLLAPSE.

4.5 SUITABLE SAFETY BARRIERS SHALL BE PROVIDED AROUND THE EXCAVATION AT ALL TIMES. THE BARRIERS SHALL BE SUITABLY ILLUMINATED OVERNIGHT TO THE SATISFACTION OF THE SUPERINTENDENT.

4.6 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 LEVELLED BETWEEN ACCURATELY ESTABLISHED GRADE POINTS. THE CONTRACTOR SHALL ADHERE TO THE DRAWINGS AND SHALL NOT BE PERMITTED TO VARY THE LINE, LEVELS OR LOCATION OF THE DRAIN WITHOUT THE SUPERINTENDENT'S WRITTEN APPROVAL.

4.7 ALL PIPE JOINTING SHALL BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S WRITTEN SPECIFICATIONS FOR THE TYPE OF PIPE BEING USED.

4.8 FOR REACTIVE CLAY SITES, ALL STORMWATER DRAINAGE CONNECTIONS SHALL BE PROVIDED WITH A MECHANICAL FLEXIBLE JOINT AT THE INTERFACE BETWEEN THE STRUCTURE AND IN-GROUND PIPE INSTALLATION.

4.9 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 BY THE SUPERINTENDENT OR AS DETAILED ON THE DRAWINGS. JUNCTIONS BETWEEN PVC PIPES SHALL USE PROPRIETY FITTINGS INTENDED FOR THE PURPOSE.

4.10 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 PIT WALL.

4.11 ALL PITS AND ENDWALLS SHALL BE CONSTRUCTED IN THE POSITIONS AND TO THE LEVELS SHOWN ON THE DRAWINGS OR AS DIRECTED BY THE SUPERINTENDENT.
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.
PIT COVER LEVELS ARE SHOWN FOR GUIDANCE ONLY. THE CONTRACTOR SHALL ALLOW TO CONSTRUCT THE COVERS ON A SLOPE AS REQUIRED TO SUIT THE FINAL SURFACE SHAPES AND GRADES.

4.12 ALL DRAINAGE TO BE SETOUT A MINIMUM OF 1000mm FROM ADJACENT BUILDINGS UNLESS NOTED OTHERWISE.

4.13 ALL DRAINAGE PITS TO BE EITHER CAST IN-SITU CONCRETE PITS AS DETAILED OR AN APPROVED PRECAST PIT COMPLYING WITH THE RELEVANT AUSTRALIAN STANDARDS. CONTRACTOR TO OBTAIN APPROVAL FROM THE MAINTAINING AUTHORITY TO INSTALL PRECAST PITS. PITS LOCATED IN GROUND WATER OR COASTAL AREAS SHALL HAVE MINIMUM 80mm COVER TO REINFORCEMENT AT ALL FACES.

4.14 UNLESS NOTED OTHERWISE, ALL DRAINAGE PITS SHALL BE FITTED WITH BOLT-DOWN CONCRETE INFILL COVERS AND/OR FABRICATED STEEL GRATES COMPLYING WITH AS 3996 AS REQUIRED, OR AS DIRECTED BY SUPERINTENDENT.

4.15 UNLESS NOTED OTHERWISE, ALL PIT COVERS SHALL MEET THE FOLLOWING MINIMUM CLASS:
CLASS B FOR PITS WITHIN LANDSCAPING OR AREAS NOT SUBJECT TO VEHICLE TRAFFIC
CLASS C FOR PITS WITHIN LIGHT-VEHICLE TRAFFICKED AREAS AND PRIVATE ROADWAYS
CLASS D FOR PITS WITHIN HEAVY-VEHICLE TRAFFICKED AREAS AND/OR PUBLIC ROADWAYS
IF ANY DISCREPANCY EXISTS BETWEEN THE ABOVE AND THE PIT SCHEDULE DRAWING, THE DISCREPANCY SHALL BE REFERRED TO THE SUPERINTENDENT FOR REVIEW AND DIRECTION.

4.16 CONTRACTOR TO ALLOW TO FINISH PITS FLUSH WITH SURROUNDING LEVELS ON COMPLETION. COVER LEVELS ON THE DRAWINGS AND PIT SCHEDULE ARE TO THE CENTER OF THE PIT AND MAY BE MODIFIED ONSITE ± 20mm TO MEET CONSTRUCTION TOLERANCES AND FINISHED PAVEMENT LEVELS.

4.17 ALL DOWNPIPES SHALL BE CONNECTED TO 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.

4.18 UNLESS NOTED OTHERWISE, ALL DOWNPIPES & GRATED INLETS SHALL BE CONNECTED TO PITS OR MAIN STORMWATER DRAINS WITH PVC SN8 OR SN10 OF THE FOLLOWING SIZES LAID AT MINIMUM GRADE OF 1 IN 100:
A) 100Ø SN10 FOR DOMESTIC CONSTRUCTION
B) 150Ø SN8 FOR COMMERCIAL/INDUSTRIAL CONSTRUCTION
C) 100Ø SN10 FOR BASEMENT GRATED INLETS
D) IF U.P.V.C. OR OTHER PIPES ARE TO BE USED, APPROVAL MUST BE GIVEN BY THE SUPERINTENDENT
E) GREEN STAR PROJECTS SHALL SUBSTITUTE PVC WITH APPROVED EQUIVALENT HDPE OR PP PIPES.

4.19 ALL IN GROUND DOWNPIPE CONNECTIONS ARE TO BE 150Ø UPVC OR EQUAL TO THE DOWNPIPE SIZE, WHICHEVER IS GREATER, UNLESS SHOWN OTHERWISE. DOWNPIPE CONNECTIONS TO THE MAIN STORMWATER DRAINAGE SHALL BE VIA A 45° OBLIQUE JUNCTION OR BANDAGE JOINT AS DETAILED OR DIRECT TO A STORMWATER PIT. SUSPENDED DOWNPIPE CONNECTIONS WITHIN THE BUILDING ARE TO BE SUPPORTED WITH APPROVED HANGERS AT 1.2m CENTRES. THE ALIGNMENT OF SUSPENDED DRAINS IS SCHEMATIC ONLY. THE FINAL ALIGNMENT IS TO COMPLY WITH THE ARCHITECTURAL PLANS.

4.20 ALL MAIN STORMWATER DRAINS SHALL BE CONSTRUCTED USING ONE OF THE FOLLOWING TYPES OF PIPES WITH RUBBER RING JOINTS:
A) 300Ø AND ABOVE, MIN. CLASS 2 RCP OR SHOWN OTHERWISE ON PLAN IN ACCORDANCE WITH AS4058
B) 100Ø STIFFNESS SN10. 150Ø AND ABOVE STIFFNESS SN8 P.V.C. IN ACCORDANCE WITH AS1260
C) CLASS 2 F.R.C. OR SHOWN OTHERWISE ON PLAN TO AS4139
D) IF U.P.V.C. OR OTHER PIPES ARE TO BE USED, APPROVAL MUST BE GIVEN BY THE SUPERINTENDENT.
E) ALL STORMWATER DRAINAGE PIPES 225Ø AND LESS TO BE SEWER QUALITY UPVC WITH SOLVENT WELDED JOINTS, UNLESS NOTED OTHERWISE.

4.21 FOR SYPHONIC ROOF DRAINAGE SYSTEMS, REFER TO HYDRAULIC DRAWINGS FOR SIZE OF ALL CONNECTIONS BETWEEN DOWNPIPES AND MAIN STORMWATER DRAINS. THE CONNECTOR TO THE STORMWATER SYSTEM SHALL HAVE THREE TIMES THE CAPACITY OF THE FLOW RATE FROM THE SYPHONIC SYSTEM.

4.22 FOR SUBSOIL DRAINAGE, 100Ø CLASS 1000 IN THE ROAD RESERVE AND CLASS 400 UPVC AGI (AG) DRAINS ELSEWHERE WITH 20mm N.S. SCREENINGS BACKFILL SHALL BE INSTALLED BEHIND ALL KERBING AND RETAINING WALLS UNLESS OTHERWISE NOTED, AT MINIMUM GRADE OF 1 IN 250 AND CONNECTED TO THE NEAREST DRAIN OR PIT. WHERE AGI DRAINS PASS UNDER SLABS OR PAVEMENTS, UNSLOTTED SECTIONS OF PIPE ARE TO BE USED.

4.23 THE CONTRACTOR SHALL ENSURE THAT CONSTRUCTION MACHINERY DOES NOT TRAFFIC DIRECTLY OVER STORMWATER DRAINAGE. WHERE THIS IS NOT POSSIBLE, ENSURE THAT MINIMUM 300mm COVER IS PROVIDED OVER THE STORMWATER DRAINAGE FOR THE DURATION OF THE WORKS. WHERE MINIMUM COVER OVER STORMWATER DRAINAGE IS NOT AVAILABLE, THE CONTRACTOR SHALL USE APPROPRIATE MEASURES TO PROTECT THE INTEGRITY OF THE PIPE OR INCREASE THE CLASS OF THE PIPE.

4.24 FOR BASEMENTS WITHIN THE GROUNDWATER TABLE, ALL STORMWATER DRAINAGE CONNECTIONS ARE TO BE SEALED WITH AN APPROVED SEALANT TO PREVENT GROUNDWATER INGRESS INTO THE DRAINAGE SYSTEM, AND FIXED IN PLACE TO PREVENT FLOTATION DUE TO BUOYANCY, UNLESS NOTED OTHERWISE.

4.25 UNLESS NOTED OTHERWISE, GROUNDWATER IS NOT TO BE DISCHARGED INTO THE LOCAL STORMWATER SYSTEM IN THE PERMANENT CONDITION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A TRADE WASTE AGREEMENT WITH THE RELEVANT AUTHORITY FOR THE TEMPORARY DISCHARGE OF GROUNDWATER DURING CONSTRUCTION.

4.26 IN CIRCUMSTANCES WHERE FIRE TEST DRAINS HAVE BEEN CONNECTED TO THE STORMWATER SYSTEM, TESTS CANNOT BE CARRIED OUT WITHIN ONE HOUR OF A STORM EVENT.

4.27 OUTFALL DRAINAGE CONNECTION INVERT LEVELS ARE TO BE VERIFIED & CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF ANY WORKS ON SITE. ANY DISCREPANCIES TO BE NOTIFIED TO THE SUPERINTENDENT.

4.28 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.

4.29 THE CONTRACTOR SHALL PRESSURE TEST WITH WATER, ALL STORMWATER PIPEWORK IN OR UNDER THE STRUCTURE, IN ACCORDANCE WITH AS 3500.3.

4.30 WHERE WATER TANKS ARE SPECIFIED, APPROPRIATE FILTERS ARE TO BE INCORPORATED TO ENSURE GROSS POLLUTANTS AND LITTER ARE PREVENTED FROM ENTERING THE TANKS. NOMINAL APERTURE SIZE OF 5mm IS RECOMMENDED. AN EFFECTIVE MAINTENANCE PROGRAM INCLUDING REGULAR CLEANING OF FILTERS IS TO BE ADOPTED TO ENSURE SYSTEM REMAINS FULLY FUNCTIONAL.

4.31 PROPRIETARY STORMWATER FILTRATION/TREATMENT SYSTEMS AND PUMPS ARE TO BE INSTALLED AND CONSTRUCTED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS.

4.32 FOR SITES WHERE STORMWATER INFRASTRUCTURE IS CONSIDERED A LIGATURE RISK, THE CONTRACTOR IS RESPONSIBLE FOR PROCURING SUITABLE ANTI-LIGATURE PRODUCTS FOR PIT LIDS, GRATES, ETC.

5. CONCRETE

5.1 ALL WORKMANSHIP AND CONCRETE MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE FOLLOWING AUSTRALIAN STANDARDS AS APPLICABLE, THE SPECIFICATION AND DETAILS ON THE DRAWINGS UNLESS INSTRUCTED OTHERWISE BY THE SUPERINTENDENT:
- AS 1012 METHODS OF TESTING CONCRETE
- AS 2758.1 DENSE NATURAL AGGREGATES
- AS 1478 CHEMICAL ADMIXTURES FOR USE IN CONCRETE
- AS 1379 READY MIXED CONCRETE
- AS 3972 PORTLAND AND BLENDED CEMENTS
- AS 1302 STEEL REINFORCING BARS FOR CONCRETE
- AS 1303 HARD DRAWN STEEL REINFORCING WIRE FOR CONCRETE
- AS 1304 HARD DRAWN STEEL WIRE REINFORCING FABRIC FOR CONCRETE
- AS 3600 CONCRETE STRUCTURES
- AS 3610 FORMWORK FOR CONCRETE

THE WATER USED SHALL BE FREE OF ALL SUBSTANCES HARMFUL TO CONCRETE AND ITS REINFORCEMENT. ADMIXTURES SHALL NOT BE USED WITHOUT WRITTEN PERMISSION FROM THE SUPERINTENDENT. ALL CONCRETE SHALL BE READY MIXED CONCRETE.

5.2 UNLESS OTHERWISE SPECIFIED, SHOWN ON THE DRAWINGS, OR DIRECTED BY THE SUPERINTENDENT, REINFORCEMENT FOR CONCRETE SHALL BE FREE FROM ANY COATING WHICH WILL REDUCE, OR PREVENT BONDING OF THE CONCRETE TO THE STEEL.

5.3 UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE MINIMUM CLEAR COVER TO REINFORCEMENT SHALL BE 1.5 TIMES THE DIAMETER OF THE BARS OR 40mm, WHICHEVER IS GREATER, AND 80mm COVER IN GROUNDWATER OR COASTAL AREAS.

5.4 ALL KERBS, KERB & CHANNEL, SPOON DRAINS ETC. SHALL BE LAID OVER 75mm MINIMUM DEPTH OF COMPACTED CLASS 2 CRUSHED ROCK, UNLESS SHOWN OTHERWISE ON THE DRAWINGS.

5.5 WHERE REQUIRED MATCH ALL NEW KERBS TO EXISTING LEVEL NEATLY, ENSURING MINIMUM 1 IN 200 GRADE, SAW CUTTING AND REINSTATING PAVEMENT IN FRONT OF KERB TO FALL TOWARDS OR AWAY FROM NEW KERB LEVEL.

5.6 SCHEDULE OF CONCRETE PROPERTIES TO BE USED FOR THE PARTICULAR SECTION OF WORK SHALL BE AS FOLLOWS UNLESS STATED OTHERWISE INSTRUCTED OR SHOWN ON THE DRAWINGS: (MIX DESIGNS SHALL BE SUBMITTED BY THE CONTRACTOR TO THE SUPERINTENDENT FOR INSPECTION 28 DAYS PRIOR TO POUR).

LOCATION	GRADE (MPa)	MAX. AGGREGATE (mm)	SLUMP (mm)
KERBS, PITS, HEADWALLS	N25	20	80 ± 15
FOOTPATHS, RETAINING WALLS	N32	20	80 ± 15
VEHICULAR PAVEMENT	N32 TYPE 1	20	80 ± 15

TYPE 1 CONCRETE SHALL HAVE THE PROPERTIES OF NORMAL N32 CONCRETE WITH A FLEXURAL STRENGTH OF F't=4.4MPa

5.7 ALL REINFORCEMENT IN SLABS AND BEAMS SHALL BE SUPPORTED ON CHAIRS TO GIVE THE REQUIRED COVER. SPACING OF REINFORCEMENT CHAIRS SHALL NOT EXCEED 800mm IN ANY DIRECTION.

5.8 MINIMUM LAPS FOR REINFORCEMENT SHALL BE AS FOLLOWS, UNLESS NOTED OTHERWISE:

FABRIC	2 CROSS WIRES + 25mm.		
N12:	400mm.	N24:	1100mm
N16:	600mm.	N28:	1350mm
N20:	800mm.	N32:	1500mm

COG AND HOOK PIN DIAMETERS AND OVERALL DIMENSIONS SHALL BE AS PER THE REQUIREMENTS OF AS 3600 UNLESS NOTED OTHERWISE.

5.9 ALL BAR CRANKS SHALL BE NO GREATER THAN 1 IN 6, UNLESS NOTED OTHERWISE. REINFORCEMENT GRADES SHALL BE AS FOLLOWS:
BARS: GRADE 500N TO AS/NZS 4671.
FABRIC: HARD DRAWN WIRE FABRIC TO AS/NZS 4671.
LIGS & TIES: HARD DRAWN WIRE, GRADE 450W, TO AS/NZS 4671.
ANY STEELWORK SOURCED FROM MILLS LOCATED OUTSIDE AUSTRALIA ARE TO BE PROVIDED WITH CERTIFICATES PROVING ABOVE REQUIREMENTS VERIFIED BY NATA REGISTERED ORGANISATIONS.

5.10 CONSTRUCTION JOINTS, WHERE NOT SHOWN ON THE DRAWINGS, SHALL BE LOCATED TO THE APPROVAL OF THE SUPERINTENDENT.

5.11 THE MINIMUM CLEAR SPACING BETWEEN CONDUITS, CABLES, PIPES AND BARS SHALL BE AS REQUIRED BY AS 3600 BUT NOT LESS THAN THREE DIAMETERS HORIZONTALLY FOR HORIZONTAL CONDUITS, ETC. IN SLABS, WALLS AND FOOTINGS AND NOT LESS THAN ONE DIAMETER FOR ALL OTHER CONDUITS, ETC.

ALL PRIMARY REINFORCEMENT SHALL BE PLACED OUTERMOST.

5.12 CONCRETE SHALL NOT BE PLACED UNTIL THE SUPERINTENDENT HAS EXAMINED BOTH FORMWORK AND REINFORCEMENT IN PLACE AND GIVEN THEIR CONSENT TO PROCEED. 48 HOURS NOTICE SHALL BE GIVEN TO THE SUPERINTENDENT BEFORE PLACEMENT OF ANY CONCRETE HAS COMMENCED. CONCRETE SHALL NOT BE PLACED UNDER WATER OR DROPPED THROUGH A DISTANCE GREATER THAN 1.5M WITHOUT THE CONSENT OF THE SUPERINTENDENT.
DURING AND IMMEDIATELY AFTER THE PLACING OPERATION CONCRETE SHALL BE THOROUGHLY COMPACTED BY TAMPING, VIBRATION OR OTHER MEANS APPROVED BY THE SUPERINTENDENT.
THE CONCRETE SHALL BE SPRAYED WITH AN APPROVED CURING MEMBRANE SUCH AS CONCURE WB, IN STRICT ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION.

6. CONCRETE JOINTING

6.1 THE JOINTS IN THE NEW WORK SHALL COINCIDE WITH THOSE IN ABUTTING CONCRETE PAVING, OR OTHER JOINTED WORK, WHICH IS EITHER EXISTING OR PROPOSED. IF THE SPACING OF THE JOINTS IN EXISTING OR PROPOSED WORK IS VERY MUCH GREATER THAN THAT SPECIFIED FOR THE NEW WORK THEN ONE OR MORE EQUALLY SPACED JOINTS SHALL BE MADE IN THE NEW WORK BETWEEN EXISTING OR PROPOSED JOINTS SUCH THAT THE SPECIFIED SPACING WILL BE RETAINED AS NEATLY AS POSSIBLE.

6.2 2xN12 DIAGONAL CORNER BARS 1200 LONG ARE REQUIRED AT ALL RE-ENTRANT CORNERS OF OPENINGS IN FOOTPATHS.

6.3 EDGINGS
WHEN USING AN EXTRUSION MACHINE THE JOINTS SHALL BE MADE BY A METHOD APPROVED BY THE SUPERINTENDENT. WHEN USING FORMWORK, THEY SHALL CONSIST OF 3mm THICK STEEL PLATE PROFILED TO MATCH THE ITEM BEING CONSTRUCTED AND SHALL HAVE AN AREA NOT LESS THAN 75% OF THE SECTION BEING CONSTRUCTED. AS SOON AS IT IS PRACTICABLE AFTER THE FINISHING OF ANY WORK, THE TEMPLATES SHALL BE REMOVED AND THE RESULTANT GAP FINISHED WITH A GROOVING TOOL TO A DEPTH OF NOT LESS THAN 25mm TO PRODUCE A NEAT GROOVE WITH ROUNDED ARISES. JOINTS SHALL BE AT REGULAR INTERVALS AND THE SPACING BETWEEN JOINTS SHALL NOT EXCEED 3 METRES WITHOUT THE APPROVAL OF THE SUPERINTENDENT.

6.4 PROVIDE EXPANSION JOINTS AT 30m MAXIMUM CENTRES AND OR COINCIDE WITH THE JOINT SPACING IN THE ADJACENT ROADS OR FOOTPATHS. EXPANSION JOINTS SHALL ALSO BE PLACED AT EACH TANGENT POINT (START AND END OF HORIZONTAL CURVES) AND EACH SIDE OF LAYBACKS OR THE LIKE. THE EXPANSION JOINTS SHALL CONSIST OF 15mm THICK PREFORMED CORK OF THE FULL SHAPE OF THE ABUTTING KERB OR KERB AND CHANNEL ETC. NO EXPANSION OR OTHER CONSTRUCTION JOINT SHALL BE MADE WITHIN A DISTANCE OF 3m OF ANY RETURN IN THE KERBS OR FINISHING POINT OF THE CHANNEL.

6.5 FOOTPATHS AND SURFACING
EXPANSION JOINTS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 15m, ON EITHER SIDE OF VEHICLE CROSSINGS, AT CHANGES IN DIRECTION, AND AT JUNCTIONS WITH BRIDGES. THEY SHALL BE 15mm WIDE AND FILLED WITH AN APPROVED CORK FILLER EXTENDING FOR THE FULL WIDTH AND FULL DEPTH OF THE PAVING. THE FILLER SHALL BE PLACED IN POSITION BEFORE
CONCRETE IS PLACED, AND SHALL BE HELD FIRMLY IN POSITION DURING THE PLACING OF THE CONCRETE. WHERE POSSIBLE IT SHALL BE GLUED WITH AN APPROVED WATERPROOF GLUE TO THE EXISTING FACE OF THE JOINT.
TOOLED OR SAWCUT JOINTS AT LEAST 30mm DEEP AND 5mm WIDE SHALL BE FORMED WITH A CUTTING TOOL AT INTERVALS NOT EXCEEDING 2.5m OR AS DIRECTED BY THE SUPERINTENDENT.

6.6 JOINTS BETWEEN EDGINGS/FOOTPATHS/SURFACING/STRUCTURES:
EXCEPT ON NARROW MEDIANS (LESS THAN 0.6m WIDE) SURFACED FULL WIDTH, BOND BETWEEN THE CONCRETE ELEMENT AND OTHER STRUCTURE SHALL BE PREVENTED BY USING A STRIP OF 12mm PREFORMED CORK FILLER OR OTHER APPROVED MATERIAL BETWEEN THEM.

6.7 VEHICULAR PAVEMENT JOINTS
JOINTING SHALL BE CONSTRUCTED AS DOCUMENTED. WHERE AN ALTERNATIVE JOINTING SOLUTION HAS BEEN ADOPTED WITHOUT THE SUPERINTENDENT'S APPROVAL, THE CONTRACTOR IS RESPONSIBLE FOR ANY LIABILITY ARISING FROM THE PERFORMANCE OF THE PAVEMENTS.

6.8 DOWELLED SAWCUT, EXPANSION AND CONSTRUCTION JOINTS SHALL BE PROVIDED AS SPECIFIED TO ALL VEHICULAR PAVEMENTS NOT EXCEEDING 6.0m INTERVALS. JOINT SPACING SHALL ENSURE SLAB LENGTH IS NO GREATER THAN 1.5 TIMES SLAB WIDTH. EXPANSION JOINTS SHALL BE NO GREATER THAN 25m INTERVALS.

6.9 ALTERNATIVE DOWEL SYSTEMS MUST NOT BE USED WITHOUT THE PRIOR CONSENT OF THE SUPERINTENDENT. THE SUBCONTRACTOR SHALL SUBMIT A MANUFACTURER SPECIFICATION AND TESTING DATA OF THE PROPOSED SAMPLE FOR APPROVAL.

6.10 EXPOSED SURFACES
ALL EDGINGS SHALL BE RENDERED WITH A STEEL TROWEL FINISH UNLESS SPECIFIED OTHERWISE BY THE LANDSCAPE ARCHITECT. FRESH FOOTPATH AND SURFACING CONCRETE SHALL BE COMPACTED AND WORKED UNTIL ALL OF THE COARSE AGGREGATE IS BELOW THE SURFACE THE MORTAR COMES TO THE TOP. IT SHALL THEN BE STRUCK OFF AND FINISHED WITH A WOODEN FLOAT. AS SOON AS THE CONCRETE HAS SET SUFFICIENTLY, SUITABLE FILLING SHALL BE PLACED AND THOROUGHLY COMPACTED BEHIND AND UP TO THE LEVEL OF THE TOP OF THE KERB.

7. PAVEMENTS

7.1 ALL PAVEMENT MATERIALS SHALL COMPLY WITH THE RESPONSIBLE STATE/ROAD AUTHORITY STANDARD SPECIFICATIONS AND BE OF CONSISTENT QUALITY.

7.2 ALL BASE COURSE AND SUB-BASE MATERIAL SHALL BE IGNEOUS ROCK QUARRIED MATERIAL UNLESS SPECIFIED OTHERWISE AND COMPLY WITH THE RESPONSIBLE STATE/ROAD AUTHORITY STANDARD SPECIFICATIONS.

7.3 AS AN ALTERNATIVE TO THE USE OF IGNEOUS ROCK AS A SUB-BASE MATERIAL, A CERTIFIED RECYCLED CRUSHED CONCRETE MATERIAL COMPLYING WITH STATE/ROAD AUTHORITY STANDARDS WILL BE CONSIDERED SUBJECT TO MATERIAL SAMPLES AND APPROPRIATE CERTIFICATIONS BEING PROVIDED TO THE SATISFACTION OF THE SUPERINTENDENT.

7.4 CONCRETE PAVEMENT
N16 DIAGONAL CORNER BARS 1200mm LONG ARE REQUIRED AT ALL RE-ENTRANT CORNERS OF OPENINGS IN PAVEMENT SLABS.

7.5 ALL EXISTING PAVEMENT ADJACENT TO THE PROPOSED KERB OR PROPOSED JOINTS SHALL BE SAWCUT IN A NEAT LINE TO THE SATISFACTION OF THE SUPERINTENDENT AND HAVE 300mm OVERLAP.

7.6 ALL TRENCHING WORKS IN EXISTING PAVEMENTS SHALL BE NEATLY SAWCUT, NEW PAVEMENT REINSTATED WITH DOWELS AND TO NEATLY MATCH EXISTING LEVELS.

7.7 ASPHALT PAVEMENT
ASPHALT LAYERS UP TO 50mm THICKNESS SHALL BE COMPACTED TO 94% CHARACTERISTIC VALUE OF DENSITY RATIO
ASPHALT LAYERS GREATER THAN 50mm THICKNESS SHALL BE COMPACTED TO 96% CHARACTERISTIC VALUE OF DENSITY RATIO. ASPHALT WEARING COURSE SHALL NOT BE LAID IN THE RAIN, AND THE PREPARED PAVEMENT BASE LAYERS SHALL BE DRY AND FREE OF EXCESS MOISTURE PRIOR TO THE LAYING OF ASPHALT.

7.8 THE SURFACE FINISH OF THE ASPHALT LAYERS SHALL BE OF UNIFORM COMPOSITION AND OF CONSISTENT DENSITY. ANY 'BONEY' OR UNEVEN AREAS THAT ARE EVIDENT SHALL BE FULLY REWORKED TO THE SUPERINTENDENT'S SATISFACTION.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

MEINHARDT
Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591

Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT
NSW GOVERNMENT
School Infrastructure NSW

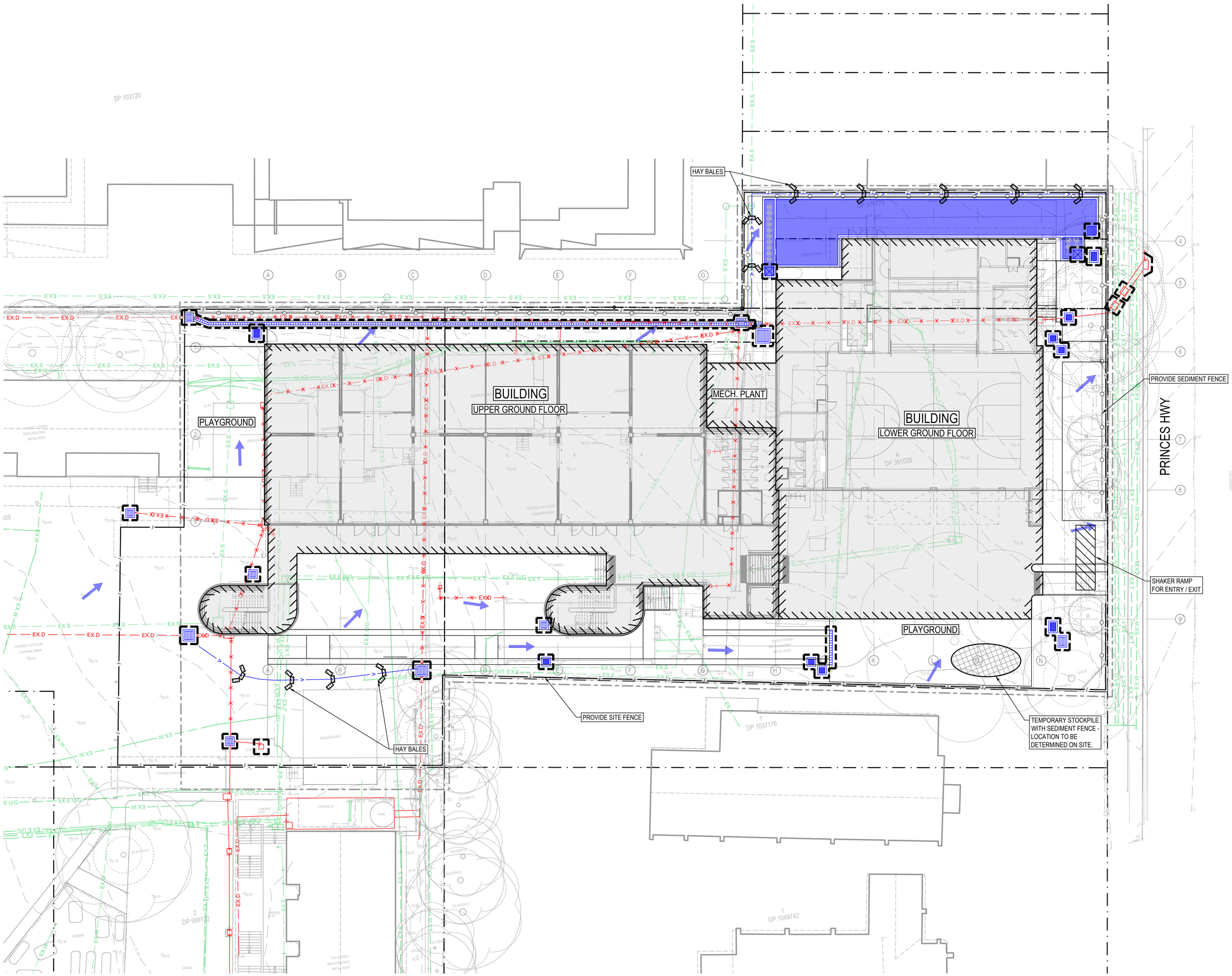
PROJECT
KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE
STANDARD NOTES

STATUS
TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			N.T.S

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0020	T1



LEGEND

ITEM	DESCRIPTION
156.6	EXISTING SURFACE CONTOURS
	TITLE BOUNDARY
EX.D	EXISTING STORMWATER DRAIN
	EXISTING STORMWATER PIT
EX.S	EXISTING SEWER
EX.G	EXISTING GAS
EX.W	EXISTING WATER
EX.W(R)	EXISTING RECYCLED WATER
EX.E	EXISTING ELECTRICITY
EX.E O/H	EXISTING OVERHEAD ELECTRICITY
EX.E L/V	EXISTING LOW VOLTAGE ELECTRICITY
EX.E H/V	EXISTING HIGH VOLTAGE ELECTRICITY
EX.T	EXISTING TELECOM CABLE
EX.FO	EXISTING FIBRE OPTIC CABLE
EX.NBN	EXISTING NBN COMMS CABLE
X X	EXISTING FEATURES TO BE REMOVED
	EXISTING TREE
	HOARDING/SECURITY FENCE
	SEDIMENT FENCE
	BUILDING OUTLINE
	SITE ACCESS GATE
	SHAKER RAMP FOR ENTRY/EXIT
	TEMPORARY STOCKPILE (LOCATION TBC ON-SITE)
	GEOTEXTILE PIT FILTER / FILTER SURROUND INSTALLED ON EXISTING PIT
	SANDBAGS INSTALLED ON EXISTING PIT
	OVERLAND FLOW ARROW
	PROPOSED DIVERSION SWALE
	HAY BALES

NOTE:
THIS DRAWING IS TO BE READ IN CONJUCTION WITH THE STORMWATER PLAN.

BEFORE YOU DIG
www.byda.com.au

WARNING
PROPOSED SERVICES

THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING
BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	16.01.25
P5	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
P6	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	24.01.25
P7	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	06.02.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25
T2	TENDER ISSUE	D.H	R.B	Y.C	12.03.25

0 2 4 6 8 10m
SCALE 1:200 @ A1 ; SCALE 1:400 @ A3

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591

Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT
NSW GOVERNMENT School Infrastructure NSW

TITLE
EROSION AND SEDIMENT CONTROL PLAN

PROJECT
KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

STATUS
TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			1:200

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0060	T2

DWG FILE: X:\132560...SINSW Kogarah PS\6_BIM\3_CAD_Drafting\KOPS-MHT-00-00-DR-C-0060.dwg - MH PLOT TIME: 12 Mar 2025, 5:11pm

SOIL AND WATER MANAGEMENT NOTES

1. IT HAS BEEN ASSUMED THAT HOARDINGS/SILT FENCING WILL BE PROVIDED TO THE STAGE BOUNDARY SUFFICIENT TO PREVENT SEDIMENT RUNOFF FROM LEAVING SITE (EXCEPT IN THE CASE OF ENTRY/EXIT LOCATIONS WHERE TEMPORARY CONSTRUCTION ENTRY/EXIT SEDIMENT TRAP ARE PROVIDED). IF THIS IS NOT THE CASE, PROVIDE SEDIMENT FENCE TO STANDARD DETAIL BELOW AS REQUIRED TO PREVENT SEDIMENT FROM LEAVING SITE, DIRECT RUNOFF TO SEDIMENT BASIN.
2. ALL SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH LANDCOM MANAGING URBAN STORMWATER "BLUE BOOK".
3. MINIMISE CLEARING OUTSIDE BASEMENT EXTENT AND IN ACCORDANCE WITH THE ARBORIST REPORT.
4. SEDIMENT CONTROL FOR LANDSCAPED WORKS DOWNSTREAM OF THE BUILDING TO INCLUDE A SILTFENCE AND SANDBAGS AS REQUIRED. INSTALL BUND TO DIVERT UPSTREAM CATCHMENT AWAY FROM DISTURBED SOIL AREA. TO BE MANAGED AT A RATE OF 166L/S PER HA BY THE CONTRACTOR ON SITE.

SEDIMENT CONTROL CONDITIONS

1. SEDIMENT FENCES WILL BE INSTALLED AS SHOWN AND ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER TO CONTAIN COARSER SEDIMENT FRACTIONS INCLUDING AGGREGATED FINES) AS NEAR AS POSSIBLE TO THEIR SOURCE.
2. SEDIMENT REMOVED FROM ANY TRAPPING DEVICE WILL BE RELOCATED WHERE FURTHER POLLUTION TO DOWNSLOPE LANDS & WATERWAYS CANNOT OCCUR.
3. STOCKPILES WILL BE PLACED WHERE SHOWN ON DRAWING OR ELSEWHERE AT THE DISCRETION OF THE SITE MANAGER AND NOT WITHIN 5m OF HAZARD AREAS INCLUDING LIKELY AREAS OF HIGH VELOCITY FLOWS SUCH AS WATERWAYS, PAVED AREAS & DRIVEWAYS.
4. WATER WILL BE PREVENTED FROM DIRECTLY ENTERING THE PERMANENT DRAINAGE SYSTEM WITH INLET FILTERS (SEE DETAILS) UNLESS IT IS SEDIMENT FREE.
5. TEMPORARY SEDIMENT TRAPS WILL BE RETAINED UNTIL AFTER THE LANDS THEY ARE PROTECTING ARE COMPLETELY REHABILITATED.
6. CONTRACTOR TO DESIGN/SIZE/CONSTRUCT TEMPORARY SEDIMENT BASIN, WATER SHOULD BE ALLOWED TO SETTLE BEFORE DISCHARGE. CONTRACTOR MUST VERIFY THAT WATER QUALITY MEETS AUTHORITIES REQUIREMENTS PRIOR TO DISCHARGE . ACCUMULATED SEDIMENT SHOULD THEN BE REMOVED & DISPOSED OF IN ACCORDANCE WITH ENVIRONMENTAL MANAGEMENT PROCEDURES.

SITE INSPECTION & MAINTENANCE CONDITIONS

THE SITE MANAGER WILL INSPECT THE SITE AT LEAST WEEKLY AND WILL:

1. ENSURE THAT DRAINS OPERATE PROPERLY & TO EFFECT ANY NECESSARY REPAIRS
2. REMOVE SPILLED SAND OR OTHER MATERIALS FROM HAZARD AREAS, INCLUDING LANDS CLOSER THAN 5m FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS ESPECIALLY WATERWAYS & PAVED AREAS.
3. REMOVE TRAPPED SEDIMENT WHENEVER LESS THAN DESIGN CAPACITY REMAINS WITHIN THE STRUCTURE
4. ENSURE REHABILITATED LANDS HAVE EFFECTIVELY REDUCED THE EROSION HAZARD AND TO INITIATE UPGRADING OR REPAIR AS APPROPRIATE.
5. CONSTRUCT ADDITIONAL EROSION AND/OR SEDIMENT CONTROL WORKS AS MIGHT BECOME NECESSARY TO ENSURE THE DESIRED PROTECTION IS GIVEN TO DOWNSLOPE LANDS AND WATERWAYS.
6. MAINTAIN EROSION & SEDIMENT CONTROL MEASURES IN A FULLY FUNCTIONING CONDITION UNTIL ALL EARTHWORK ACTIVITIES ARE COMPLETED AND THE SITE IS REHABILITATED.
7. REMOVE TEMPORARY SOIL CONSERVATION STRUCTURES AS THE LAST ACTIVITY IN THE REHABILITATION PROGRAM.

AS PART OF THE STATUTORY 'DILIGENCE OF CARE' RESPONSIBILITIES, THE SITE MANAGER WILL KEEP A LOGBOOK MAKING ENTRIES AT LEAST WEEKLY, IMMEDIATELY BEFORE FORECAST RAIN AND AFTER RAINFALL.
ENTRIES WILL INCLUDE:

1. THE VOLUME & INTENSITY OF ANY RAINFALL EVENTS
2. THE CONDITION OF ANY SOIL & WATER MANAGEMENT WORKS
3. THE CONDITION OF VEGETATION & ANY NEED TO IRRIGATE
4. THE NEED FOR DUST PREVENTION STRATEGIES
5. ANY REMEDIAL WORKS TO BE UNDERTAKEN

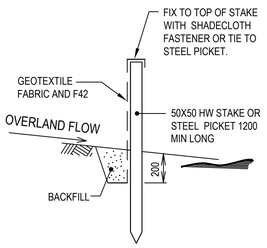
THE BOOK WILL BE KEPT ONSITE & MADE AVAILABLE TO ANY AUTHORISED PERSON ON REQUEST. IT WILL BE GIVEN TO THE PROJECT MANAGER AT THE CONCLUSION OF WORKS.

TREE PROTECTION

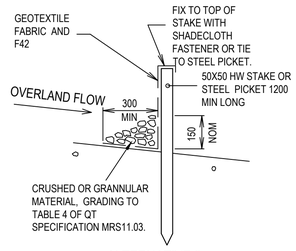
REFER TO ARBORIST REPORT FOR THE EXTENT OF TREES PROTECTION ZONE AND THE PROTECTION MEASURES REQUIRED.

RAILCORP

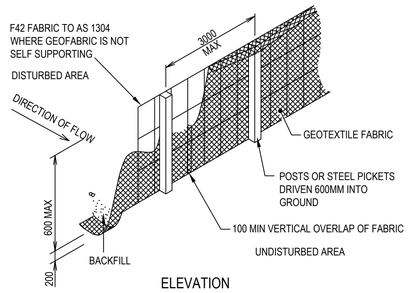
ALL SURFACE WATER TO BE EITHER DIVERTED INTO SWALE OR DIRECTED TOWARDS SEDIMENTATION TANK TO PREVENT ATER INFILTRATION TOWARDS TUNNELS AS DOCUMENTED ON THIS SHEET.



ALTERNATIVE 1



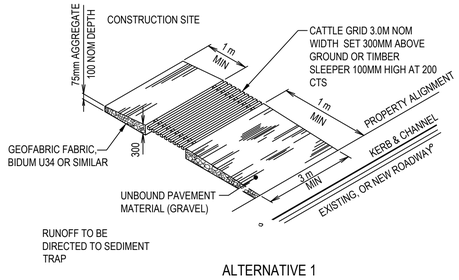
ALTERNATIVE 2



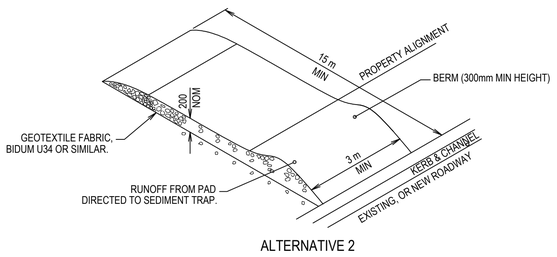
ELEVATION

SEDIMENT FENCE

NOT TO SCALE



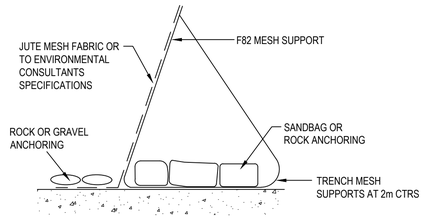
ALTERNATIVE 1



ALTERNATIVE 2

TEMPORARY CONSTRUCTION VEHICLE ENTRY/EXIT SEDIMENT TRAP

NOT TO SCALE

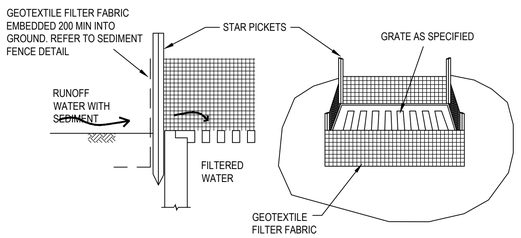


ALTERNATIVE SEDIMENT FENCE

NOT TO SCALE

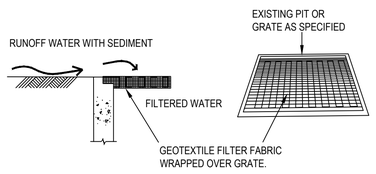
ALTERNATIVE SEDIMENT FENCE NOTES

1. INSTALL THIS TYPE OF SEDIMENT FENCE WHEN USE OF SUPPORT POSTS IS NOT DESIRABLE OR NOT POSSIBLE. SUCH CONDITIONS MIGHT APPLY, FOR EXAMPLE, WHERE APPROVAL IS GRANTED FROM THE APPROPRIATE AUTHORITIES TO PLACE THESE FENCES IN HIGHLY SENSITIVE ESTUARINE AREAS.
2. USE BENT TRENCH MESH TO SUPPORT THE F82 WELDED MESH FACING AS SHOWN ON THE DRAWING ABOVE. ATTACH THE JUTE MESH TO THE WELDED MESH FACING USING UV-RESISTANT CABLE TIES.
3. STABILISE THE WHOLE STRUCTURE WITH SANDBAG OR ROCK ANCHORING OVER THE TRENCH MESH AND THE LEADING EDGE OF THE JUTE MESH. THE ANCHORING SHOULD BE SUFFICIENTLY LARGE TO ENSURE STABILITY OF THE STRUCTURE IN THE DESIGN STORM EVENT, USUALLY THE 10 YEAR EVENT.



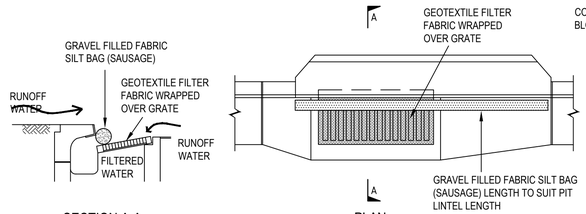
GEOTEXTILE PIT FILTER 1

NOT TO SCALE



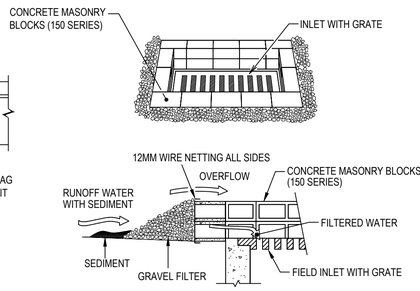
GEOTEXTILE PIT FILTER 2

NOT TO SCALE



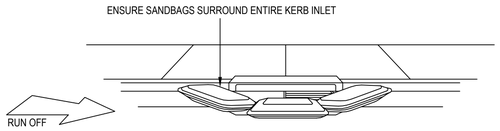
KERB INLET SEDIMENT TRAP

NOT TO SCALE



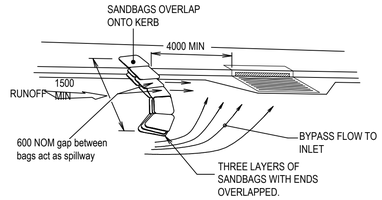
FIELD INLET SEDIMENT TRAP

NOT TO SCALE



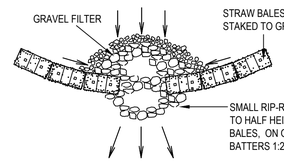
SANDBAG KERB INLET SEDIMENT TRAP

NOT TO SCALE



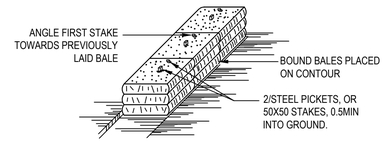
ON GRADE KERB INLET SEDIMENT TRAP

NOT TO SCALE

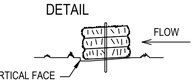


STRAW BALE AND STONE TRAP SEDIMENT CONTROL (CONCENTRATE FLOW)

NOT TO SCALE



ANCHORING DETAIL



BEDDING DETAIL

STRAW BALE BANK SEDIMENT CONTROL

NOT TO SCALE

BEFORE YOU DIG www.byda.com.au

WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: NSW GOVERNMENT School Infrastructure NSW

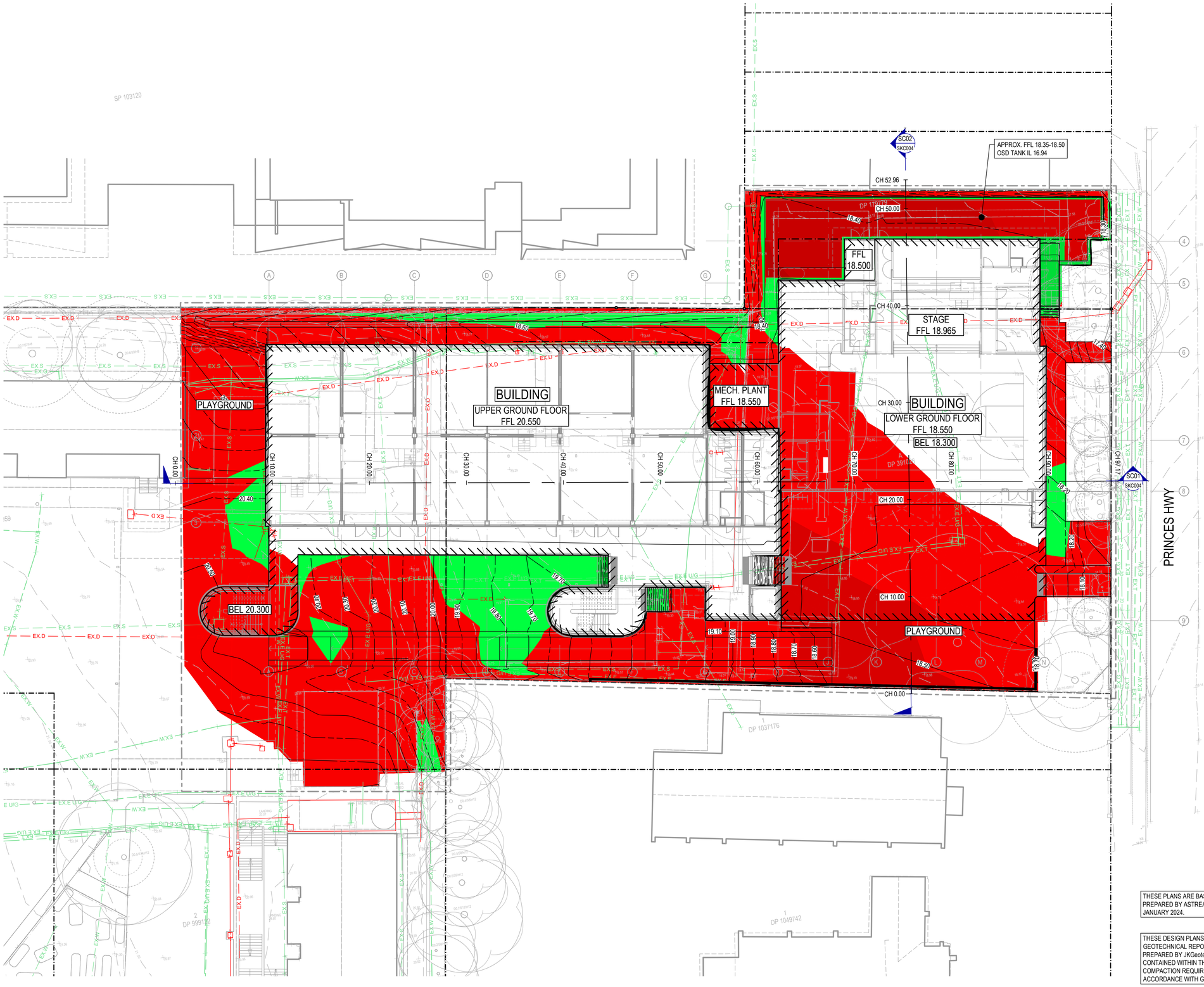
PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: EROSION AND SEDIMENT CONTROL DETAILS

STATUS: TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			N.T.S

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0065	T1



LEGEND

ITEM	DESCRIPTION
156.6	EXISTING SURFACE CONTOURS
156.6	PROPOSED SURFACE CONTOURS
+156.60	EXISTING SURFACE SPOT LEVELS
	TITLE BOUNDARY
EX.D	EXISTING STORMWATER DRAIN
	EXISTING STORMWATER PIT
	EXISTING STORMWATER PIT TO BE MODIFIED
EX.S	EXISTING SEWER
EX.G	EXISTING GAS
EX.W	EXISTING WATER
EX.W(R)	EXISTING RECYCLED WATER
EX.E	EXISTING ELECTRICITY
EX.E OH	EXISTING OVERHEAD ELECTRICITY
EX.E LV	EXISTING LOW VOLTAGE ELECTRICITY
EX.E HV	EXISTING HIGH VOLTAGE ELECTRICITY
EX.T	EXISTING TELECOM CABLE
EX.FO	EXISTING FIBRE OPTIC CABLE
EX.NBN	EXISTING NBN COMMS CABLE
	EXISTING FEATURES TO BE REMOVED

EARTHWORKS QUANTITIES

150mm STRIPPED VOLUME = (BUILDING AREA ONLY)	648m³
TOTAL CUT VOLUME =	588m³
TOTAL FILL VOLUME =	54m³
NET EXPORT VOLUME =	534m³

(NET VOLUME EXCLUDES STRIPPED SOIL, AS THIS IS ASSUMED TO BE REMOVED FROM SITE). NO FILL REQUIRED FOR SUSPENDED BUILDINGS.)

BULK EARTHWORKS

I.D	MIN. ELEVATION	MAX. ELEVATION	COLOUR
1	-2.500m	-2.000m	
2	-2.000m	-1.500m	
3	-1.500m	-1.000m	
4	-1.000m	-0.500m	
5	-0.500m	0.000m	
6	0.000m	0.500m	
7	0.500m	1.000m	
8	1.000m	1.500m	
9	1.500m	2.000m	

EARTHWORKS SUMMARY

NOTES:

1. BULK EARTHWORKS VOLUME IS BULK EARTHWORKS SURFACE MINUS 150mm STRIPPED EXISTING SURFACE.
2. EXCLUDES COMPACTION FACTORS.
3. ALL BATTERS TO BE 1 IN 2 MAX UNLESS NOTED OTHERWISE.
4. THE ABOVE VOLUMES ARE APPROXIMATE ONLY. IT IS RESPONSIBILITY OF THE TENDERERS TO CONFIRM THE SCOPE OF WORKS, CONDUCT OWN EARTHWORK CHECK AND CONFIRM ACCURACY.
5. ASSUMED BULK EARTHWORKS DEPTH FOR BUILDING IS 250mm (BUILDING SLAB THICKNESS PLUS BEDDING THICKNESS).
6. ASSUMED OSD TANK DEPTH IS APPROXIMATELY 2.0m BELOW FINISHED SURFACE.
7. ASSUMED BULK EARTHWORKS DEPTH FOR FOOTPATH PAVEMENT AND LANDSCAPE AREA IS 200mm.

BEFORE YOU DIG www.byda.com.au

THESE PLANS ARE BASED UPON THE EXISTING CONDITIONS SURVEY PREPARED BY ASTREA, REFERENCE No A4048-TOPO & A4048-UTIL DATED JANUARY 2024.

THESE DESIGN PLANS SHALL BE READ IN CONJUNCTION WITH GEOTECHNICAL REPORT No.32976LTrptRev2KPS DATED 7 MAY, 2020 PREPARED BY JKGeotechnics. THE PROVISIONS AND RECOMMENDATIONS CONTAINED WITHIN THE REPORT ARE TO BE STRICTLY COMPLIED WITH. ALL COMPACTION REQUIREMENT RESULTS SHALL BE CARRIED OUT IN ACCORDANCE WITH GEOTECHNICAL REPORT RECOMMENDATIONS.

WARNING
PROPOSED SERVICES

THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING
BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
P5	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	06.02.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25
T2	TENDER ISSUE	D.H	R.B	Y.C	12.03.25

0 2 4 6 8 10m
SCALE 1:200 @ A1 ; SCALE 1:400 @ A3

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: School Infrastructure NSW

PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: BULK EARTHWORKS PLAN

STATUS: TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			1:500

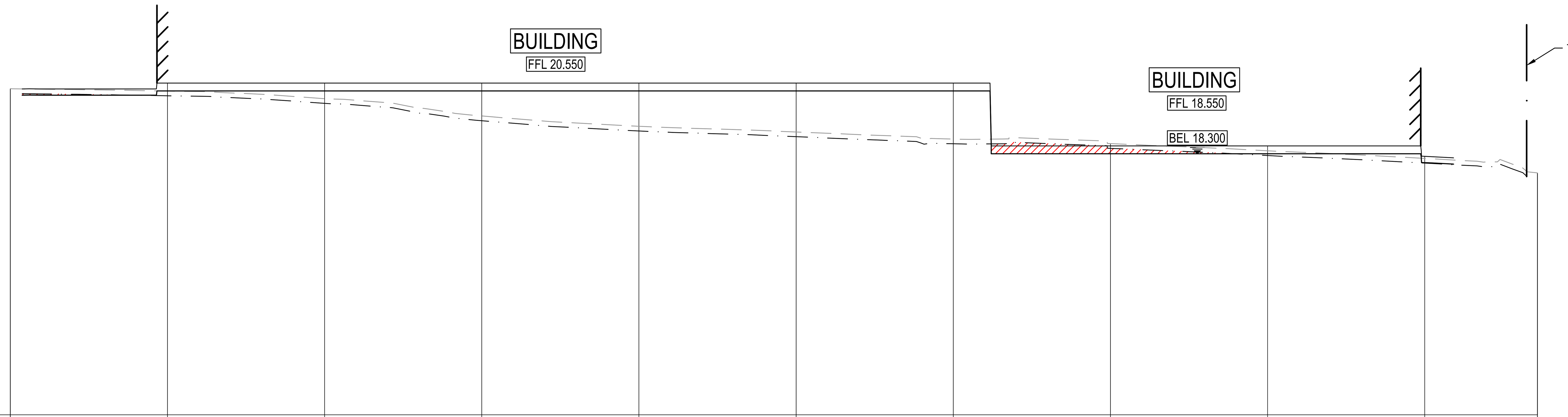
PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0070	T2

DWG FILE: X:\132560 - SINSW Kogarah PS\3_BIM\3_CAD_Drafting\KOPS-MHT-00-00-DR-C-0070.dwg , MHT-PLOT TIME: 12 Mar 2025, 5:06pm

LEGEND

FILL FROM STRIPPING SURFACE TO BULK EARTHWORKS SURFACE

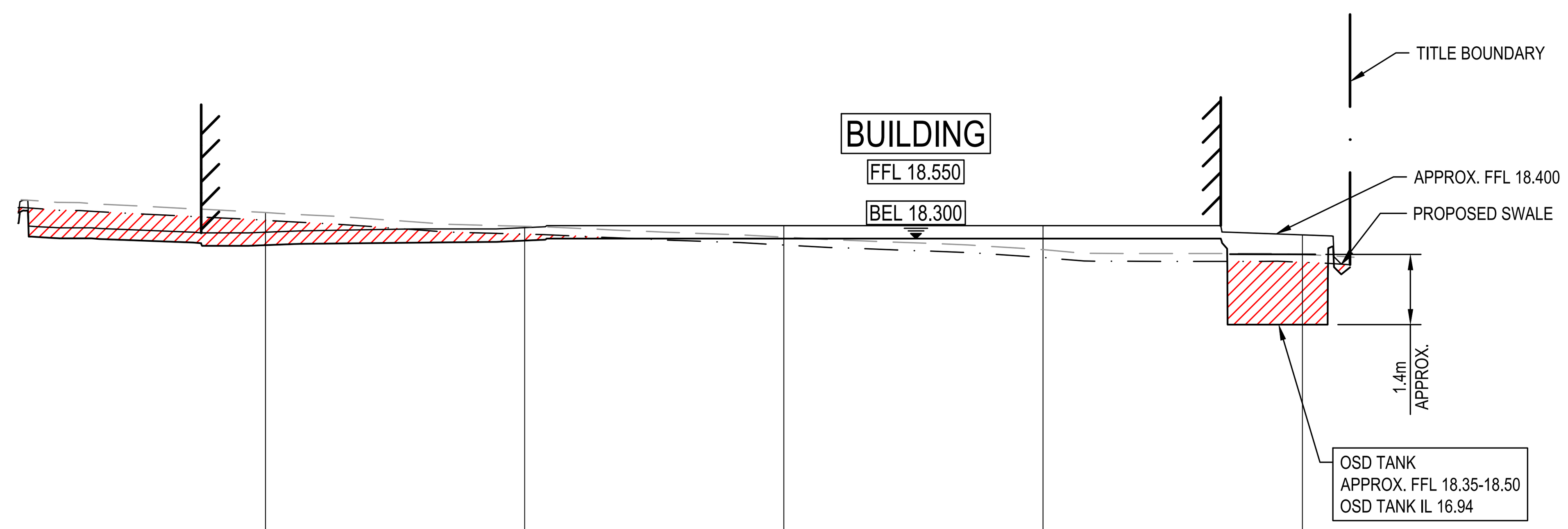
CUT FROM STRIPPING SURFACE TO BULK EARTHWORKS SURFACE



DATUM 10.000

DESIGN SURFACE LEVEL		20.550	20.550	20.550	20.550	20.550	20.550	18.550	18.550	18.218	
BULK EARTHWORK SURFACE LEVEL		20.300	20.300	20.300	20.300	20.300	20.300	18.300	18.300	18.018	
EXISTING SURFACE LEVEL	20.372	20.295	20.053	19.503	19.175	18.994	18.768	18.623	18.396	18.155	17.691
STRIPPED SURFACE LEVEL (150mm)		20.145	19.903	19.353	19.025	18.844	18.618	18.473	18.246	18.005	
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	60.000	70.000	80.000	90.000	97.173

SECTION SC01 SKC003
1:200 (H)
1:100 (V)



DATUM 10.000

DESIGN SURFACE LEVEL		18.426	18.513	18.550	18.550	18.372	
BULK EARTHWORK SURFACE LEVEL		18.176	18.263	18.300	18.300	16.640	
EXISTING SURFACE LEVEL		18.806	18.538	18.328	18.087	17.995	
STRIPPED SURFACE LEVEL (150mm)		18.656	18.388	18.178	17.937	17.845	
CHAINAGE	0.000	10.000	20.000	30.000	40.000	50.000	52.955

SECTION SC02 SKC003
1:200 (H)
1:100 (V)

BEFORE YOU DIG www.byda.com.au

WARNING
PROPOSED SERVICES
THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING
BEWARE OF UNDERGROUND SERVICES
THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

DWG FILE: \\au.meinhardtgroup.com\mhg-fs\Sydney\Projects\Projdir\132560 - SINSW Kogarah PS\5_BIM\3_CIV\2_Drafting\KOPS-MHT-00-00-DR-C-0080.dwg - MH PLOT TIME: 12 Feb 2025, 2:11pm

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

1:200 H 0 2 4 6 8 10m
1:100 V 0 1 2 3 4 5m
SCALE 1:200 HORIZONTAL
1:100 VERTICAL
AT ORIGINAL SIZE (A1)

MEINHARDT
Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT
NSW GOVERNMENT School Infrastructure NSW

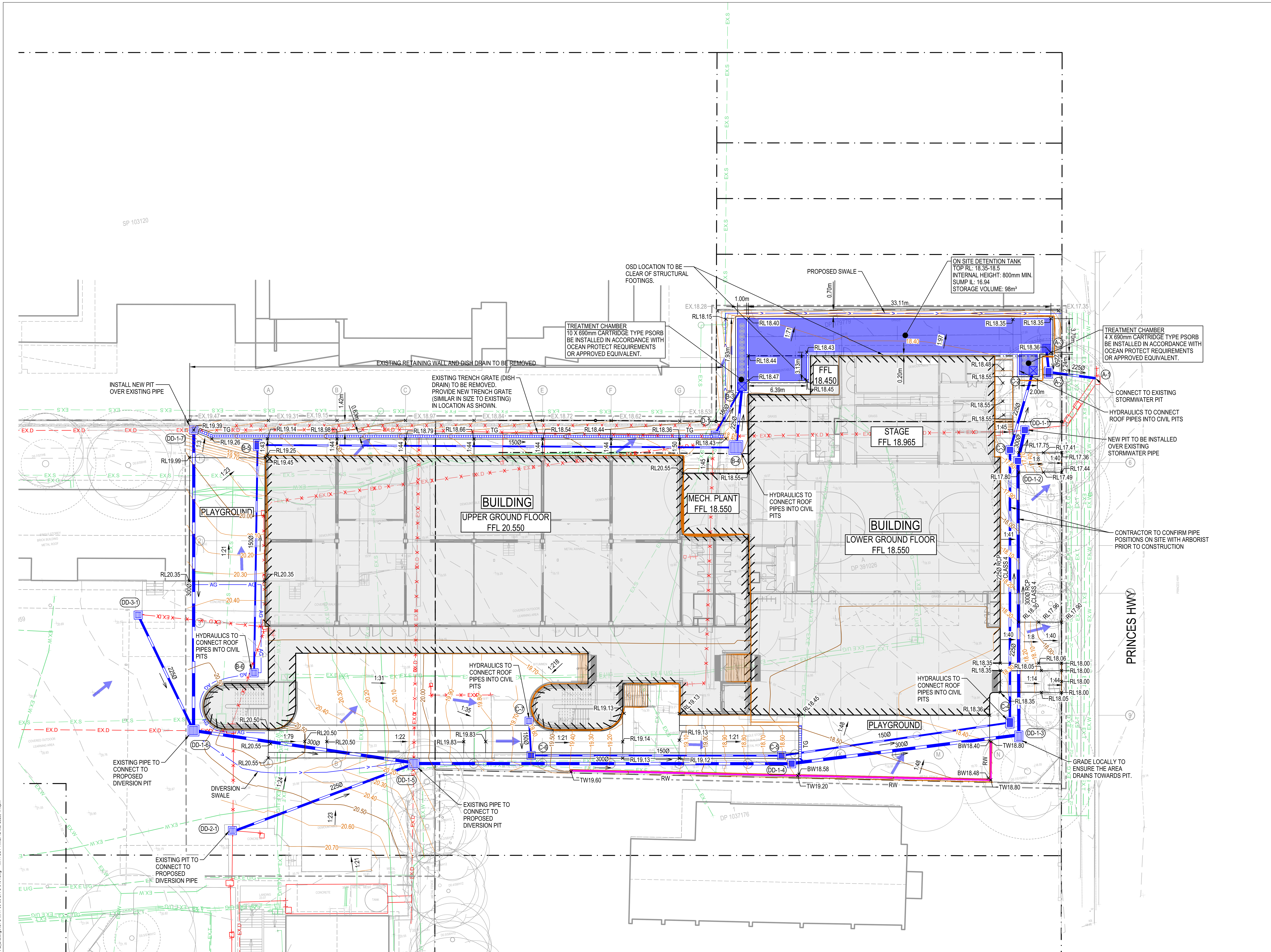
PROJECT
KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE
BULK EARTHWORKS
LONGITUDINAL SECTIONS

STATUS
TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			1:200

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0080	T1



LEGEND

ITEM	DESCRIPTION
21.20	EXISTING SURFACE CONTOURS
21.00	PROPOSED SURFACE CONTOURS
+21.20	EXISTING SURFACE SPOT LEVELS
+21.20	PROPOSED SURFACE SPOT LEVELS
+ TW19.60	TOP OF WALL LEVEL
+ BW18.40	BOTTOM OF WALL AT GROUND LEVEL
CL19.60	PIT COVER LEVEL
	TITLE BOUNDARY
SD	PROPOSED CONCRETE SPOONDRAIN
RW	PROPOSED RETAINING WALL
EX.D	EXISTING STORMWATER DRAIN
225Ø	PROPOSED STORMWATER DRAIN AND FLOW DIRECTION
AG	PROPOSED 100Ø UPVC AGRICULTURAL DRAIN CLASS 400
>	PROPOSED DIVERSION SWALE
Ex1	EXISTING STORMWATER PIT
Ex2	EXISTING STORMWATER PIT TO BE MODIFIED
1	PROPOSED STORMWATER PIT
TG	TRENCH GRATE
	OVERLAND FLOW ARROW
EX.S	EXISTING SEWER
EX.G	EXISTING GAS
EX.W	EXISTING WATER
EX.W(R)	EXISTING RECYCLED WATER
EX.E	EXISTING ELECTRICITY
EX.E O/H	EXISTING OVERHEAD ELECTRICITY
EX.E L/V	EXISTING LOW VOLTAGE ELECTRICITY
EX.E H/V	EXISTING HIGH VOLTAGE ELECTRICITY
EX.T	EXISTING TELECOM CABLE
EX.FO	EXISTING FIBRE OPTIC CABLE
EX.NBN	EXISTING NBN COMMS CABLE
X X	EXISTING FEATURES TO BE REMOVED

THESE PLANS ARE BASED UPON THE EXISTING CONDITIONS SURVEY PREPARED BY ASTREA, REFERENCE No A4048-TOPO & A4048-UTIL DATED JANUARY 2024.

THESE DESIGN PLANS SHALL BE READ IN CONJUNCTION WITH GEOTECHNICAL REPORT No.32976LTrptRev2KPS DATED 7 MAY, 2020 PREPARED BY JKGeotechnics. THE PROVISIONS AND RECOMMENDATIONS CONTAINED WITHIN THE REPORT ARE TO BE STRICTLY COMPLIED WITH. ALL COMPACTION REQUIREMENT RESULTS SHALL BE CARRIED OUT IN ACCORDANCE WITH GEOTECHNICAL REPORT RECOMMENDATIONS.

NOTE:
RCP CLASS 2 STW PIPES IN NON TRAFFIC AREAS UNLESS OTHERWISE NOTED.

BEFORE YOU DIG
www.byda.com.au

WARNING
PROPOSED SERVICES

THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING
BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	50% SCHEMATIC DESIGN	D.H	R.B	Y.C	22.11.24
P2	80% SCHEMATIC DESIGN	D.H	R.B	Y.C	13.12.24
P3	95% SCHEMATIC DESIGN	D.H	R.B	Y.C	18.12.24
P4	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	15.01.25
P5	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
P6	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	23.01.25
P7	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	24.01.25
P8	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	06.02.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25
T2	TENDER ISSUE	D.H	R.B	Y.C	12.03.25

0 2 4 6 8 10m
SCALE 1:200 @ A1 ; SCALE 1:400 @ A3

DWG FILE: X:\132560 - SINSW Kogarah PS\5_BIM\3_CIV\2_Drafting\KOPS-MHT-00-00-DR-C-0101.dwg - MH PLOT TIME: 12 Mar 2025, 4:49pm

MEINHARDT
Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: NSW GOVERNMENT — School Infrastructure NSW

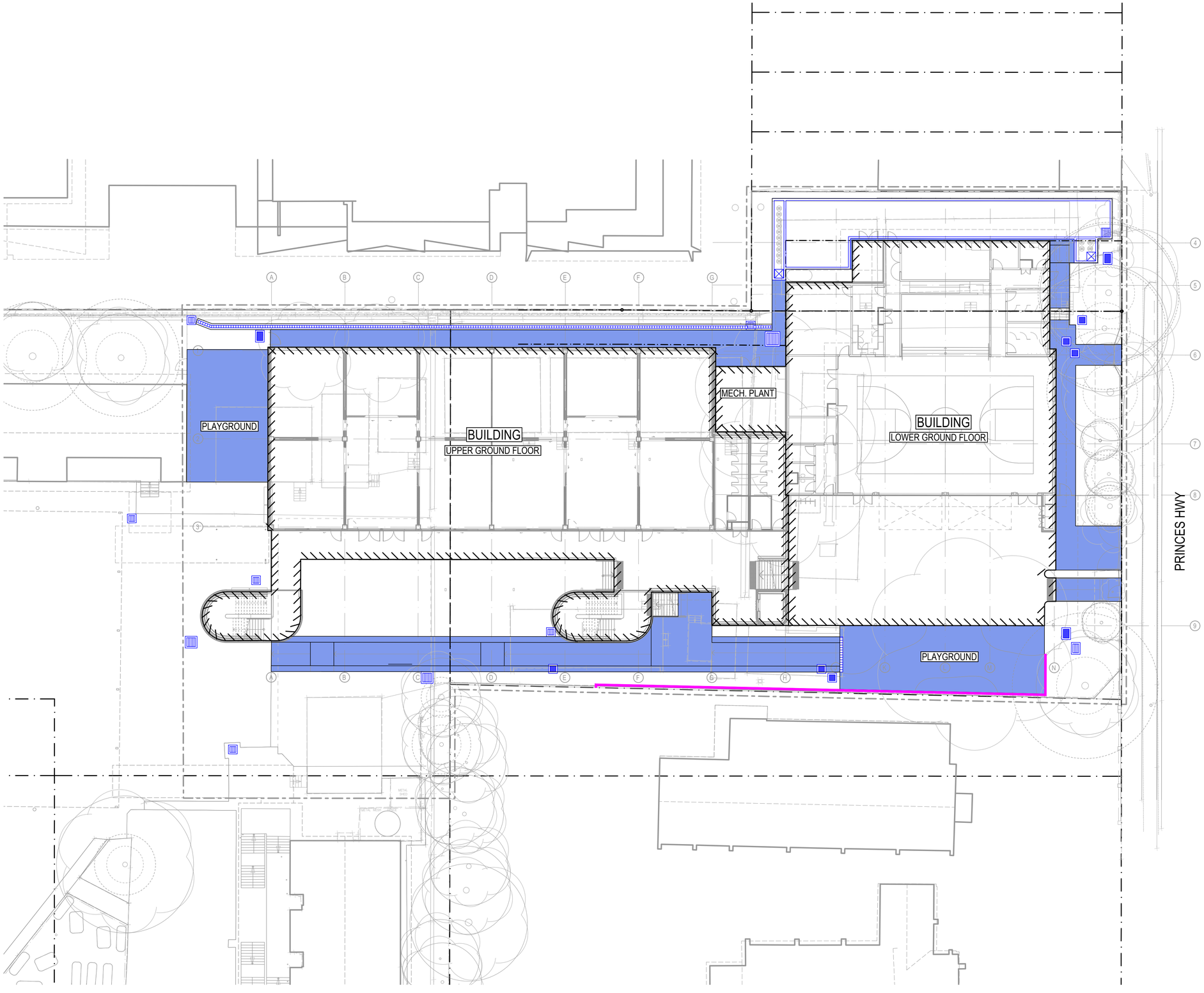
PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: CIVIL SITEWORKS PLAN

STATUS: **TENDER ISSUE**
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			1:200

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0101	T2



PAVEMENT LEGEND

	LIGHT DUTY CONCRETE PAVEMENT-PEDESTRIAN
	PROPOSED RETAINING WALL

BEFORE YOU DIG www.byda.com.au

WARNING
PROPOSED SERVICES

THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING
BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
P2	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	06.02.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25
T2	TENDER ISSUE	D.H	R.B	Y.C	12.03.25

0 2 4 6 8 10m

SCALE 1:200 @ A1 ; SCALE 1:400 @ A3

MEINHARDT

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591

Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT
NSW GOVERNMENT School Infrastructure NSW

TITLE
PAVEMENT PLAN

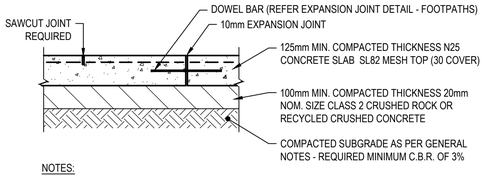
PROJECT
KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

STATUS
TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			1:200

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0110	T2

DWG FILE: X:\132560\...SW\SW Kogarah PS\3_BIM\3_CIV\2_Drafting\KOPS-MHT-00-00-DR-C-0110.dwg , MHT-PLOT TIME: 12 Mar 2025, 4:52pm

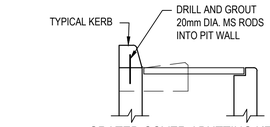


NOTES:
1. SAWCUT JOINTS 3mm WIDE x 1/4 SLAB DEEP CUT EVERY CROSS BAR
2. FULL DEPTH EXPANSION JOINTS WITH APPROVED EXPANSION JOINT MATERIAL SHALL BE PLACED, AT EVERY CHANGE OF GRADE AND AT CORNERS
3. REFER DESIGN PLAN FOR JOINTING LAYOUT
4. ALL ASPHALT AND CRUSHED ROCK MATERIALS AND CONSTRUCTION PROCEDURES SHALL COMPLY IN ALL RESPECTS WITH THE RELEVANT ROAD AUTHORITY SPECIFICATIONS

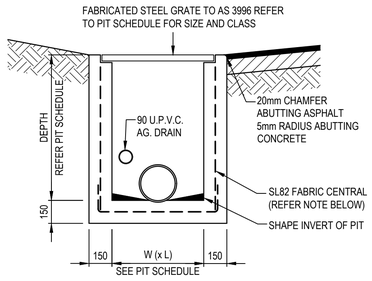
LIGHT DUTY CONCRETE PAVEMENT
N.T.S.

(PEDESTRIAN TRAFFIC AREAS ONLY)

AS SHOWN ON PLAN

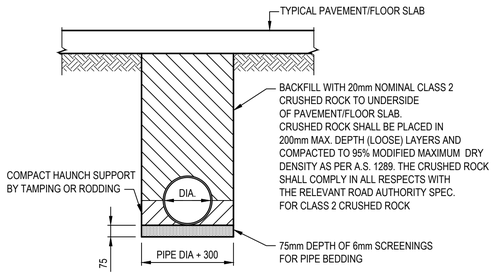


GRATED COVER ABUTTING KERB



NOTES:
1. PROVIDE 600mm LENGTH OF 90mm DIA. AGRICULTURAL PIPE CAST THROUGH UPSTREAM WALL OF PIT WITH GEOTEXTILE OR SIMILAR FILTER OVER.
2. REINFORCEMENT NOT REQUIRED IF DEPTH OF PIT IS LESS THAN 1000mm.
3. PROVIDE STEP IRONS AT 300mm MAX. CTS. IF DEPTH OF PIT EXCEEDS 1000mm
4. PRECAST PITS ARE TO GENERALLY COMPLY WITH THESE DETAILS.

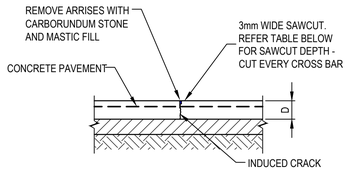
GRATED PIT DETAIL
N.T.S.



NOTE:
AVOID RUNNING CONSTRUCTION EQUIPMENT OVER THE PIPES UNTIL BACKFILL MATERIAL IS 300mm MIN. ABOVE CROWN OF PIPE.

PIPE LAYING DETAILS
UNDER ALL PAVEMENTS/FLOORS

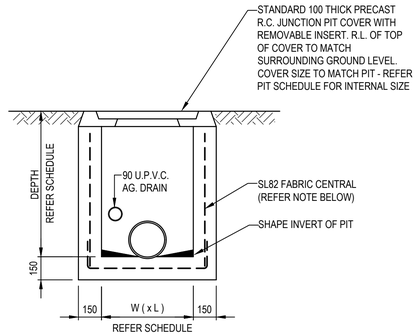
N.T.S.



NOTE: MAKE SAWCUT AS SOON AS PRACTICABLE AFTER POURING OF SLAB WITHOUT CAUSING DAMAGE TO THE EDGE OF THE SAWCUT (REFER SAWCUTTING NOTE DETAILS FORE REQUIREMENTS)

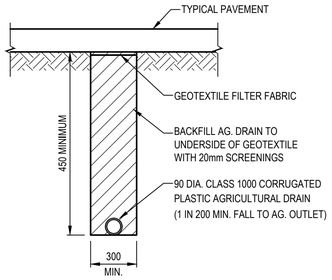
SLAB THICKNESS (D)	MESH DEPTH	SAWCUT DEPTH
120	30	35
150	40	45
170	40	45
200	40	50

CONTRACTION (SAWCUT) JOINT
(SHOWN SJ ON PLAN)



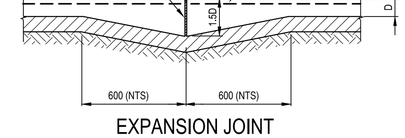
NOTES:
1. PROVIDE 600mm LENGTH OF 90mm DIA. AGRICULTURAL PIPE CAST THROUGH UPSTREAM WALL OF PIT WITH GEOTEXTILE OR SIMILAR FILTER OVER.
2. REINFORCEMENT NOT REQUIRED IF DEPTH OF PIT IS LESS THAN 1000mm.
3. PROVIDE STEP IRONS AT 300mm MAX. CTS. IF DEPTH OF PIT EXCEEDS 1000mm
4. PRECAST PITS ARE TO GENERALLY COMPLY WITH THESE DETAILS.

JUNCTION PIT (R.C. COVER)
N.T.S.

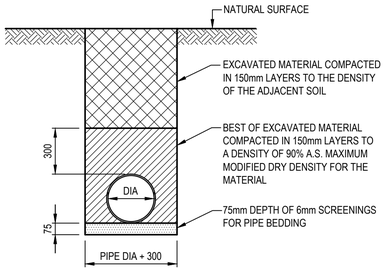


AG. PIPE LAYING DETAILS
UNDER PAVED AREAS

N.T.S.

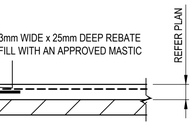


EXPANSION JOINT
N.T.S.



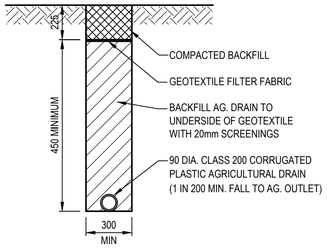
PIPE LAYING DETAILS (ALL PIPES)
UNDER LANDSCAPED AREAS

N.T.S.



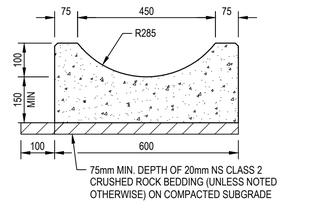
CONSTRUCTION JOINT DETAIL.
FOR FOOTPATHS ONLY

(SHOWN CJ ON PLAN)

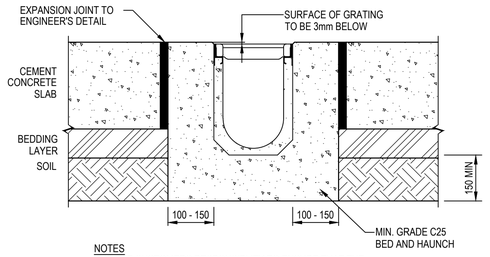


AG. PIPE LAYING DETAILS
UNDER LANDSCAPED AREAS

N.T.S.

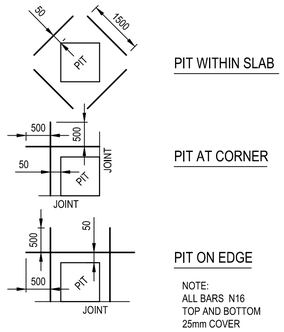


SPOON DRAIN (SD)
N.T.S



NOTES
IT IS THE CUSTOMERS RESPONSIBLITY TO ENSURE THAT THE MINIMUM DIMENSIONS ARE SUITABLE FOR THE GROUND CONDITIONS

LIGHT DUTY ACO DRAIN DETAIL (RIGID PAVEMENT)
N.T.S



NOTE:
ALL BARS N16
TOP AND BOTTOM
25mm COVER

DETAIL OF SLAB REINFORCEMENT AT PITS IN CONCRETE PAVEMENT
N.T.S

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
P2	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	06.02.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: NSW GOVERNMENT School Infrastructure NSW

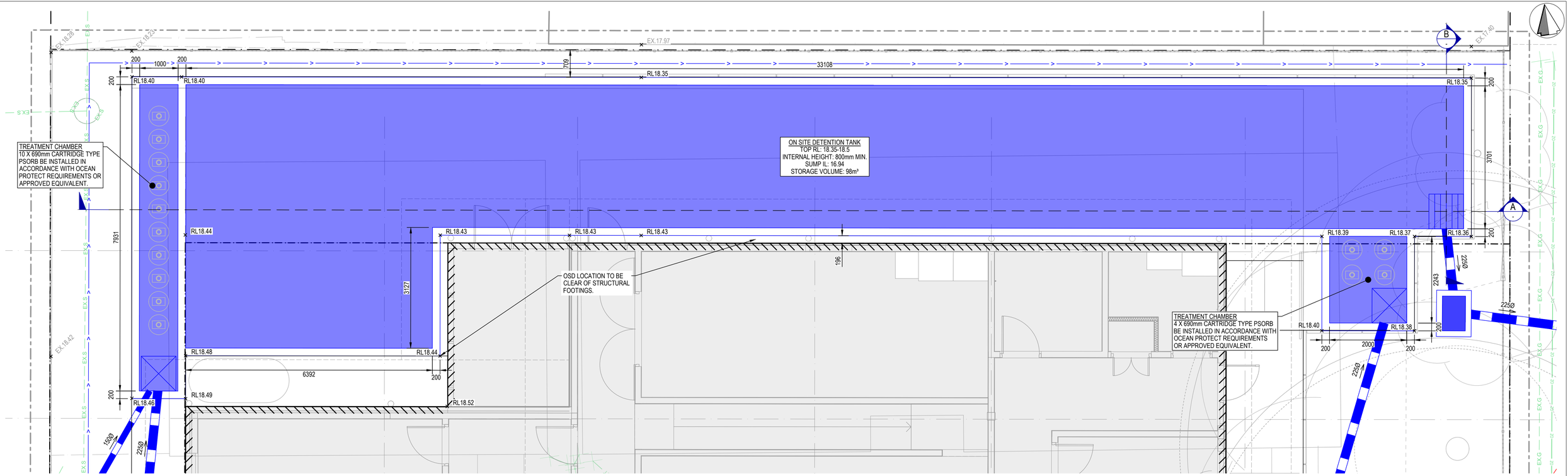
PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: CIVIL DETAILS

STATUS: **TENDER ISSUE**
NOT TO BE USED FOR CONSTRUCTION

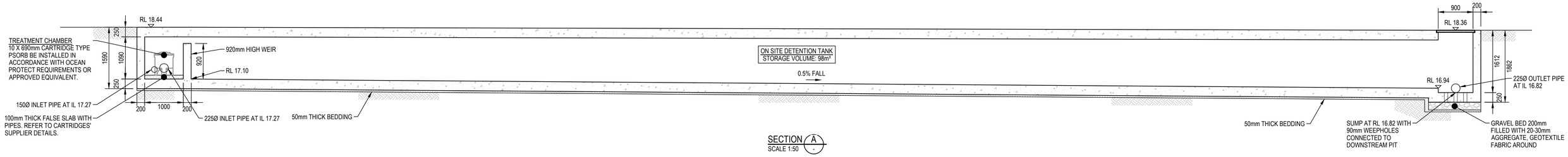
DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			AS SHOWN

PROJECT No: 132560
DRAWING No: KOPS-MHT-00-00-DR-C-0200
REV: T1



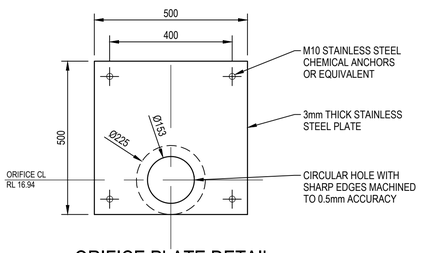
ON-SITE DETENTION TANK - PLAN

SCALE 1:50



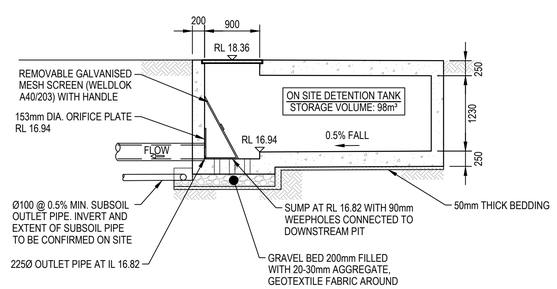
SECTION A

SCALE 1:50



ORIFICE PLATE DETAIL

SCALE 1:10



SECTION B

SCALE 1:50

BEFORE YOU DIG www.byda.com.au

WARNING

PROPOSED SERVICES

THE LOCATION AND EXTENT OF PROPOSED SERVICES IS INDICATIVE ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION. REFER TO AUTHORISED DOCUMENTATION BY RELEVANT AUTHORITY FOR CONSTRUCTION DETAILS

WARNING

BEWARE OF UNDERGROUND SERVICES

THE LOCATIONS OF UNDERGROUND SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN.

REV	DESCRIPTION	BY	DES	CHKD	DATE
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

0 0.5 1.0 1.5 2.0 2.5m
SCALE 1:50 @ A1 ; SCALE 1:100 @ A3

0 0.1 0.2 0.3 0.4 0.5m
SCALE 1:10 @ A1 ; SCALE 1:20 @ A3

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591
Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: NSW GOVERNMENT School Infrastructure NSW

PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: ON-SITE DETENTION TANK DETAILS

STATUS: TENDER ISSUE
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			AS SHOWN

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0300	T1

PIT SCHEDULE

PIT				INTERNAL		INLET		OUTLET		PIT		REMARKS
NAME	TYPE	EASTING	NORTHING	WD	LEN	DIA	INV LEV	DIA	INV LEV	SETOUT RL	DEPTH	
A-3	GRATED INLET PIT 900x900	327919.676	6240533.052	0.9	0.9			225	16.82	18.36	1.54	OSD TANK
A-2	JUNCTION PIT 600x900	327919.473	6240530.41	0.9	0.6	225	16.73	225	16.51	17.47	0.96	
A-1	EXISTING PIT	327924.673	6240528.751			225	16.11			16.89	0.78	
B-6	GRATED INLET PIT 600x600	327828.571	6240510.973	0.6	0.6			150	19.83	20.48	0.65	
B-5	JUNCTION PIT 600x900	327832.689	6240535.55	0.9	0.6	150	18.60	150	18.35	19.22	0.87	
B-4	SURFACE INLET PIT 1200x1200	327884.411	6240527.428	1.2	1.2	150	17.61	225	17.34	18.49	1.15	
B-3	JUNCTION PIT 900x900	327886.083	6240533.903	0.9	0.9	225	17.27			18.47	1.21	TREATMENT CHAMBER
						150	17.27					
C-7	GRATED INLET PIT 600x600	327857.594	6240501.251	0.6	0.6			150	18.96	19.62	0.66	
C-6	JUNCTION PIT 600x600	327857.187	6240497.482	0.6	0.6	150	18.93	150	18.83	19.60	0.77	WITH CONCRETE INFILL COVER
C-5	JUNCTION PIT 600x600	327884.297	6240493.353	0.6	0.6	150	17.87	150	17.85	18.61	0.76	WITH CONCRETE INFILL COVER
C-4	JUNCTION PIT 600x900	327909.542	6240493.178	0.9	0.6	150	17.60	225	17.49	18.49	1.00	
C-3	JUNCTION PIT 600x600	327914.032	6240522.666	0.6	0.6	225	17.19	225	17.17	17.77	0.60	WITH CONCRETE INFILL COVER
C-2	JUNCTION PIT 900x900	327917.844	6240530.861	0.9	0.9	225	17.13			18.38		TREATMENT CHAMBER
D-1	GRATED INLET PIT 600x600	327882.434	6240529.304	0.6	0.6			150	17.52	18.35	0.83	
DD-1-7	GRATED INLET PIT 600x600	327826.028	6240538.213	0.6	0.6			300	18.76	19.39	0.63	
DD-1-6	GRATED INLET PIT 900x900	327821.07	6240505.72	0.9	0.9	300	18.43	300	18.41	20.54	2.13	
						225	19.59					
DD-1-5	GRATED INLET PIT 900x900	327844.351	6240498.533	0.9	0.9	300	18.17	300	18.15	20.09	1.94	
						225	19.38					
DD-1-4	JUNCTION PIT 600x600	327885.246	6240492.31	0.6	0.6	300	17.73	300	17.71	18.58	0.87	
DD-1-3	GRATED INLET PIT 900x600	327910.281	6240491.54	0.6	0.9	300	17.46	300	17.44	18.50	1.06	
DD-1-2	JUNCTION PIT 600x600	327914.709	6240521.349	0.6	0.6	300	17.20	300	17.18	17.78	0.60	WITH CONCRETE INFILL COVER
DD-1-1	JUNCTION PIT 600x600	327915.96	6240524.573	0.6	0.6	300	17.16			17.66	0.51	
DD-2-1	GRATED INLET PIT 600x600	327823.633	6240494.252	0.6	0.6			225	20.07	20.63	0.56	
DD-3-1	GRATED INLET PIT 600x600	327816.974	6240519.116	0.6	0.6			225	19.73	20.45	0.72	

REV	DESCRIPTION	BY	DES	CHKD	DATE
P1	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	20.01.25
P2	100% SCHEMATIC DESIGN	D.H	R.B	Y.C	24.01.25
T1	TENDER ISSUE	D.H	R.B	Y.C	12.02.25

Meinhardt Infrastructure and Environment PTY. LTD.
A.C.N. 051 627 591

Level 4, 66 Clarence Street
Sydney NSW 2000
Australia
T: +61 2 9699 3088
F: +61 2 9319 7518
info@meinhardtgroup.com
http://www.meinhardtgroup.com

CLIENT: School Infrastructure NSW

PROJECT: KOGARAH PUBLIC SCHOOL
24B GLADSTONE STREET, KOGARAH, NSW

TITLE: STORMWATER DRAINAGE
PIT SCHEDULE

STATUS: **TENDER ISSUE**
NOT TO BE USED FOR CONSTRUCTION

DRAWN	DESIGNED	CHECKED	APPROVED	DATE	SCALE @ A1
D.H	R.B	Y.C			N.T.S

PROJECT No	DRAWING No	REV
132560	KOPS-MHT-00-00-DR-C-0710	T1