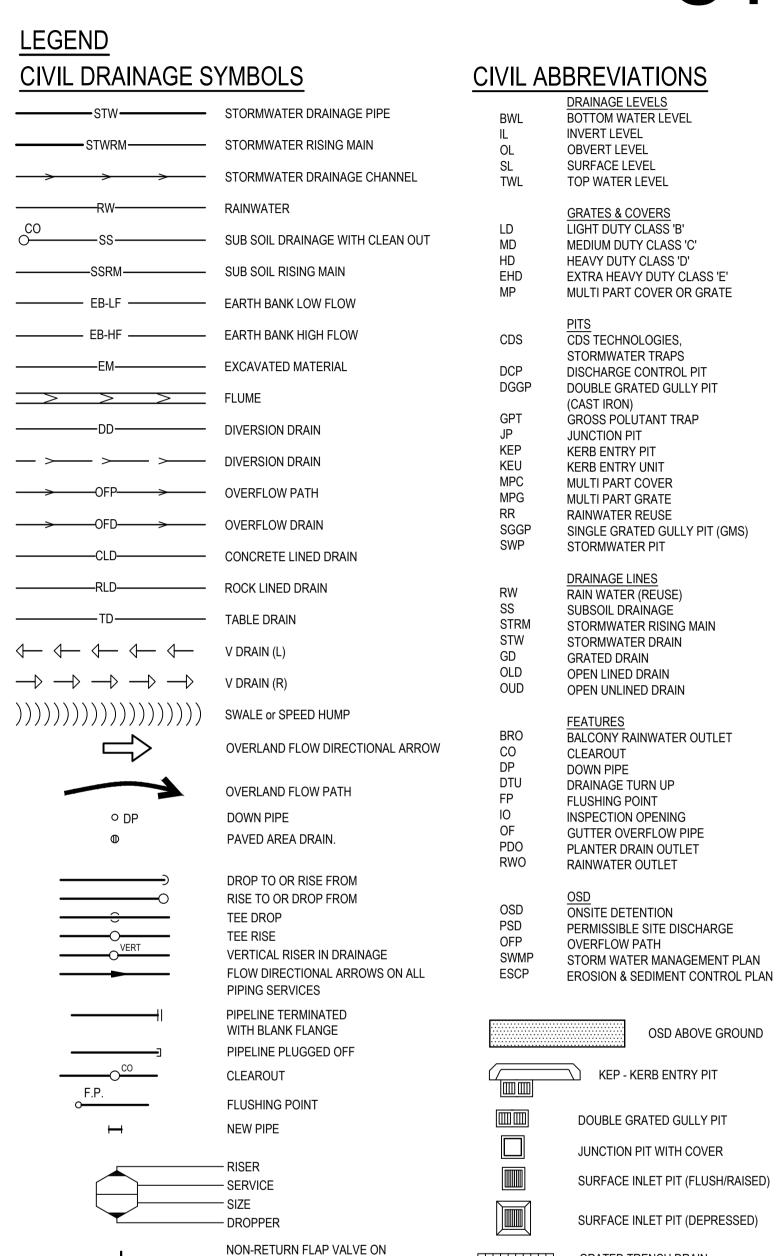
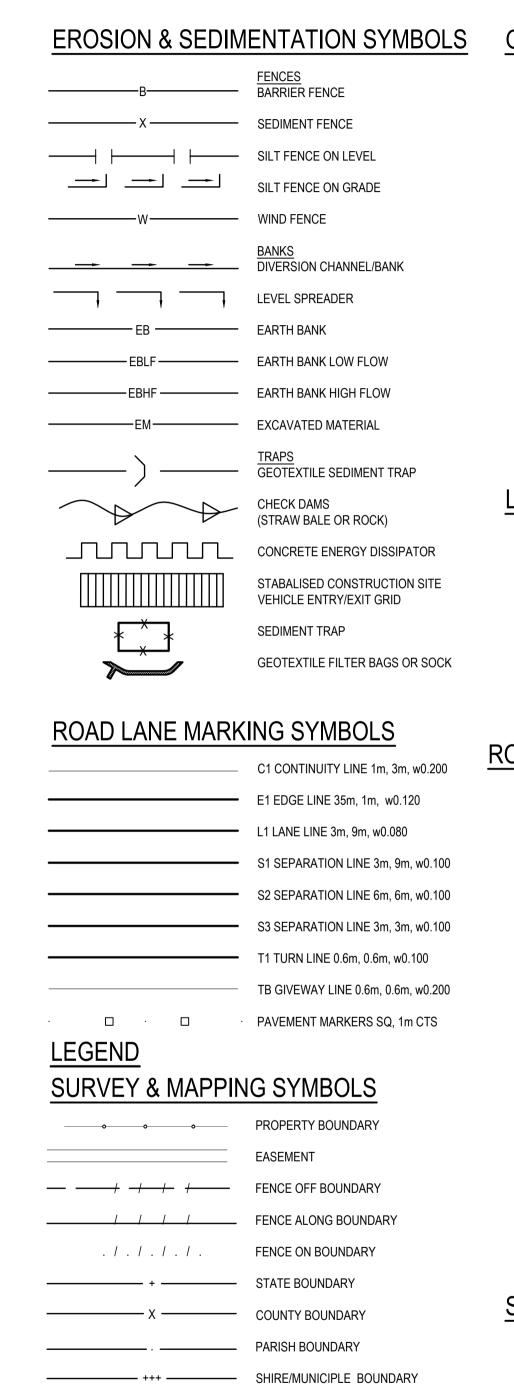
# CENTRAL PARK - BLOCK 8 BROADWAY STORMWATER DRAINAGE CONCEPT PLAN



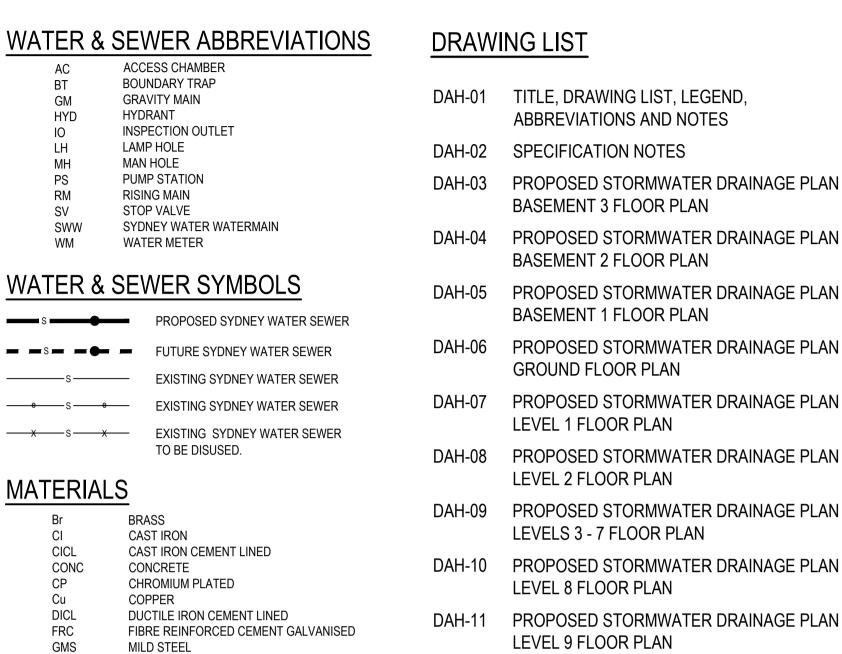
INSIDE FACE OF PIT AT ALL DOWN PIPES & SUB SOIL DRAINAGE LINES

TO OSD SYSTEM



| GENEF         | RAL ABBREVIATIONS                            | SERVICES & UTIL   | ITIES SYMBOLS   |
|---------------|--|---|---|
| CTS<br>©      | CENTERS<br>CENTRE LINE                       | ——————————————————————————————————————                    | · AIR   |
| DIA<br>DMR    | DIAMETER DEPARTMENT OF MAIN ROADS            |   | CABLES  |
| DWG           | DRAWING                                      | D   | - DRAINS  |
| EX.<br>GALV   | EXISTING GALVANIZED                          | ——Е——   | · ELECTRICAL  |
| HD GALV<br>ID | HOT DIPED GALVANIZED INTERNAL DIAMETER       | LV  | · LOW VOLTAGE   |
| L.O.C.<br>MAX | LIMIT OF CONTRACT<br>MAXIMUM                 | HV  | · HIGH VOLTAGE  |
| MIN<br>NB     | MINIMUM<br>NOMINAL BORE                      | V   | TRANSMISSION POWER LINES  |
| N.I.C.<br>No. | NOT IN CONTRACT<br>NUMBER                    | EFF   | COMMON EFFLUENT   |
| NOM<br>NTS    | NOMINAL<br>NOT TO SCALE                      | ERM-  |   |
| OD<br>PECP    | OUTSIDE DIAMETER PUMP ELECTRIC CONTROL PANEL |   | EFFLUENT RISING MAIN  |
| REV<br>RTA    | REVISION ROADS AND TRAFFIC AUTHORITY         |   | FUEL  |
| SQ            | SQUARE                                       | G   | · GAS   |
| SRA<br>STD    | STATE RAIL AUTHORITY<br>STANDARD             | G(HP)   | GAS HIGH PRESSURE   |
| UNO<br>VERT   | UNLESS NOTED OTHERWISE<br>VERTICAL           | G(MP)   | GAS MEDIUM PRESSURE   |
| FVFI          | S ABBREVIATIONS                              | G(LP)   | GAS LOW PRESSURE  |
| CL            | CEILING LEVEL                                | ——————————————————————————————————————                    | GAS   |
| FFL<br>FGL    | FINISHED FLOOR LEVEL FINISHED GROUND LEVEL   | NG  | NATURAL GAS   |
| GL<br>HL      | EXISTING GROUND LEVEL<br>HIGH LEVEL          | ———н  | HYDRAULIC POWER   |
| HP<br>LL      | HIGH POINT<br>LOW LEVEL                      | ——————————————————————————————————————                    | IRRIGATION  |
| ML<br>NS      | MID LEVEL NATURAL SURFACE LEVEL              |   | RTA ROADS & TRAFFIC AUTHORITY                                   |
| PL<br>RL      | PLATFORM LEVEL REDUCED LEVEL                 |   | SRA STATE RAIL SERVICE  |
| US            | UNDER SIDE                                   | s   | SEWER   |
| USFL          | UNDERSIDE FLOOR                              | SRM   | SEWER RISING MAIN   |
|               | AVEMENT ABBREVIATIONS                        | т   | TELECOMMUNICATIONS TELSTRA                                      |
| AC<br>CBR     |  | OF  | OPTICAL FIBRE OF  |
| DGB<br>DGS    |  | SMOF  |   |
| DSL<br>F.C.F  | DESIGN SUBGRADE LEVEL  R. FINE CRUSHED ROCK  |   | OPTICAL FIBRE CABLE SMOF  |
| O.T.I<br>RC   |  |   | OPTUS   |
| SF<br>?       | STRIP FOOTING RECYCLED CONCRETE              |   | OVERHEAD COMMUNICATION CABLE                                    |
| BJ            | <u>JOINTS</u>                                | W   | WATER   |
| CIJ           | BUTT JOINT<br>CRACK INDUCED JOINT            | WRM   | WATER RISING MAIN   |
| CJ            | CONSTRUCTION JOINT CONTRACTION JOINT         | ——— MS  | MISCELLANEOUS SERVICE   |
| CJ<br>DJ      | CONTROL JOINT DOWELLED JOINT                 | x   | X   |
| DKJ<br>EJ     | DOWELLED KEY JOINT<br>EXPANSION JOINT        | — ү   | · Y   |
| IJ<br>KJ      | ISOLATION JOINT<br>KEYED JOINT               | Z   | Z<br>DDANNAGE CHI VEDTO 8 DIDE CIZEO                            |
| SC<br>TJ      | SAW CUT<br>TOOL JOINT                        |   | DRAINAGE CULVERTS & PIPE SIZES GREATER THAN & INCLUDING 450 DIA |
| TKJ           | TOBY KEYED JOINT<br>FEATURES                 | NOTE:-  | TO BE SHOWN IN FULL WIDTH                                       |
| JK<br>LP      | NEW JERSEY KERB BARRIER                      | 'e' ON SERVICE LINE REPRESENT<br>OR THE USE OF LOWER CASE |   |
| NKL<br>PP     | LIGHT POLE<br>NOMINAL KERB LINE              | 'x' ON SERVICE LINE REPRESENT                             |   |
| SL            | POWER POLE<br>STREET LIGHT                   | DRAFTING SYMBO  |   |
| TL            | TRAFFIC LIGHT                                | DIAL TING STRIDE  | <u>)LO</u>  |
| SURVF         | Y ABBREVIATIONS                              | SCALE BARS D  | AMENDMENT No.   |
| AHD           | AUSTRALIAN HEIGHT DATUM                      | 2 0 4   | 8 12m   |
| BK<br>BM      | BOTTOM OF KERB<br>BENCH MARK                 | SCALE 1:  | 200   |
| CL<br>D.E.    | CENTRE LINE<br>DRAINAGE EASEMENT             | 2000 0 4000   | 8000 12000mm  |
| DH&W<br>FD    | DRILL HOLE & WING<br>FOUND                   | SCALE 1:  | 200   |
| INV           | INVERT                                       | OF OTION OVAPOL   |   |

SECTION SYMBOL



## PROPOSED STORMWATER DRAINAGE PLAN **BASEMENT 2 FLOOR PLAN** PROPOSED STORMWATER DRAINAGE PLAN BASEMENT 1 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN GROUND FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 1 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 2 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVELS 3 - 7 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 8 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 9 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 10 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 11 FLOOR PLAN PROPOSED STORMWATER DRAINAGE PLAN LEVEL 12 FLOOR PLAN DAH-15 PROPOSED STORMWATER DRAINAGE PLAN **ROOF PLAN** STORMWATER DRAINAGE SCHEMATIC EROSION AND SEDIMENT CONTROL PLAN DAH-18 EROSION AND SEDIMENT CONTROL DETAILS

**CENTRAL PARK** BLOCK 8 **BROADWAY** 

SMART DESIGN STUDIO **432 BOURKE STREET SURRY HILLS NSW 2010** 

# PROPOSED SURFACE LEVEL Warren Smith & Partners Pty Ltd

K & G

RL 165.40

NATIONAL PARK BOUNDARY

STATE RECREATION BOUNDARY

TELSTRA EXCHANGE BOUNDARY

A SECTION No.

REFERENCE DRAWING 22 PIT No.

LINE No.

MS

MILD STEEL

POLYETHYLENE

STAINLESS STEEL

**CATCHMENT ABBREVIATIONS** 

REINFORCED CONCRETE

REINFORCED CONCRETE PIPE

RECTANGULAR HOLLOW SECTION

CATCHMENT

PAVED CATCHMENT AREA

ROOFED CATCHMENT AREA

LANDSCAPE CATCHMENT AREA

AVERAGE RECURRENCE INTERVAL

LITRES PER SECOND (VELOCITY)

METRES PER SECOND (VELOCITY

CUBIC METRES PER SECOND

TERRACE CATCHMENT AREA

CATCHMENT AREA

QUANTITY OF FLOW

NYLON

CATCHMENT SYMBOLS



## DA ISSUE TITLE, DRAWING LIST, LEGEND, ABBREVIATIONS AND NOTES

DATE. OCTOBER 2013 4587000 DAH-01

Consulting Engineers

GRATED TRENCH DRAIN

SERVING THE CONSTRUCTION INDUSTRY SINCE 1981

Hydraulic Services I Civil Engineering I Fire Protection I Sydney Water Accredited • Water Servicing Co-ordinator • Design and Project Management

**KERB & GUTTER** 

TOP OF KERB

RIGHT OF CARRIAGEWAY STATE SURVEY MARK

#### **GENERAL**

- G1. DESIGN HEREIN HAS BEEN PREPARED BY WARREN SMITH AND PARTNERS PTY LTD CONSULTING CIVIL ENGINEERS, LEVEL 1, 123 CLARENCE ST, SYDNEY NSW 2000. TEL:- (02) 9299 1312, FAX:- (02) 9290 1295.
- G2. THE DRAWINGS HEREIN SHALL BE READ AS REQUIRED IN CONJUNCTION WITH ARCHITECTURAL DRAWINGS SMART DESIGN STUDIO ARCHITECTS TEL:- (02) 8332 4333, FAX:- (02)

AND LANDSCAPE ARCHITECTURAL DRAWINGS TURF DESIGN STUDIOS

- TEL:- (02) 9527 3380, FAX:- (02) 9527 2307 G3. ALL DIMENSIONS IN MILLIMETRES UNO. REDUCED LEVELS AND CHAINAGES ARE IN METRES.
- DO NOT SCALE DRAWINGS. USE FIGURED DIMENSIONS. G4. THE PROPOSED WORKS DETAILED HEREIN SHALL BE CONSTRUCTED TO THE REQUIREMENTS

OF COUNCIL GENERALLY AS DETAILED HEREUNDER.

G5. ALL EXISTING SERVICES SHALL BE VERIFIED FOR DEPTH AND HORIZONTAL POSITION BY PHYSICAL MEANS PRIOR TO EXCAVATION. ANY DISCREPANCIES SHALL BE BROUGHT FORTHWITH TO THE PROJECT MANAGER'S

#### STORMWATER & SUB-SOIL DRAINAGE

#### MATERIALS:

- STW1. PIPES AND FITTINGS FOR STORMWATER DRAINAGE SHALL BE AS FOLLOWS UNO ON THE
  - A. POLYVINYL CHLORIDE (PVC) WITH SOLVENT WELDED JOINTS FOR BELOW GROUND DRAINAGE UP TO 225mm.
  - B. FIBRE REINFORCED CEMENT WITH RUBBER RINGS FOR PIPE DIA'S GREATER THAN 225mm. UNO.
  - C. REINFORCED CONCRETE WHERE REQUIRED BY AS 3500 FOR EXCESSIVE DEPTH.
  - D. INSTALL IN ACCORDANCE WITH AUSTRALIAN STANDARD AS3500 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- STW2. PIPES & FITTINGS FOR SUBSOIL DRAINAGE SHALL BE SLOTTED POLYVINYL CHLORIDE (PVC) WITH SOLVENT
- WELDED JOINTS, MIN. 150mm DIAMETER. STW3. IN GROUND DRAINAGE PIPEWORK SERVING DP's

SHALL BE MINIMUM 150mm DIA. UNO.

- STW4. GRATED DRAINS SHALL BE 150mm NOM. A. 150mm NOM. WIDTH IN NON TRAFFICABLE AREAS. B. 225mm NOM. WIDTH IN TRAFFICABLE AREAS.
- STW5. STORMWATER PITS ARE AS SHOWN & SPECIFIED ON THE PLANS . PRECAST TYPE ACCEPTABLE WITH STEP IRONS FOR DEPTH GREATER THAN 1000. BENCH ALL PITS MIN. 50mm & FORM SMOOTH TRANSITION
- STW6. SELECT FILL SHALL BE MATERIAL OBTAINED FROM EXCAVATION OF THE PIPE TRENCH OR IMPORTED WITH A PARTICLE SIZE FOR ROCK NOT GREATER THAN 75mm OR FOR OTHER THAN ROCK NOT GREATER THAN 150mm.
- STW7. IMPORTED FILL SHALL BE EITHER, AND GENERALLY SIZE NOT GREATER THAN 5mm WRAPPED ALL ROUND WITH GEOTEXTILE FILTER FABRIC OR APPROVED HIGH COMPACTION SAND OR APPROVED CRUSHED ROAD
- STW8. STORMWATER PITS AND GRATES TO CONFORM WITH STANDARD COUNCIL REQUIREMENTS. WHERE ON PUBLIC LAND, GRATES TO BE SUPPLIED IN CLASS SHOWN ON THE DRAWINGS.

#### **INSTALLATION REQUIREMENTS:**

- ALIGNED SO THAT THE CENTRES OF THE INLET PIPES INTERSECT WITH THE CENTRE OF THE OUTLET PIPE AT THE DOWNSTREAM FACE OF THE PIT.
- SHALL CONFORM TO AS3500 PART3 AS FOLLOWS, UNO: 1% FOR 100 AND 150 mm DIA. 0.5% FOR 225 mm DIA 0.4% FOR 300 mm DIA 0.35% FOR 375 mm DIA
- STW11. MINIMUM DEPTH OF COVER SHALL BE :-- 300mm IN PRIVATE PROPERTY (NON VEHICULAR TRAFFIC).
- STW12. BED ALL PIPES FIRMLY AND EVENLY ONTO IMPORTED
- STW13. LAY AND JOINT ALL PIPES IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND AS 3725-1989 LOADS ON BURIED CONCRETE PIPES AS 2566-1998 BURIED FLEXIBLE PIPELINES AS 1597.2-1996 PRECAST REINFORCED CONCRETE BOX CULVERTS. AS 3500-1990 NATIONAL PLUMBING & DRAINAGE CODE. PART 2, SANITARY PLUMBING AND SANITARY DRAINAGE.
- SYDNEY WATER REQUIREMENTS.

#### CONCRETE WORKS

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, THE STANDARDS ASSOCIATION AUSTRALIA, STANDARDS CITED IN AS3600, THE DRAWINGS AND THE SPECIFICATION.
- C2. ALL CONCRETE SHALL BE 80mm NOMINAL SLUMP, 20mm MAXIMUM AGGREGATE WITH NO ADMIXTURES OR FLY ASH, UNLESS OTHERWISE APPROVED.
- ALL CONCRETE WORK IN CONTACT WITH SEWER TO HAVE TYPE SL PORTLAND CEMENT, OTHERWISE TYPE A CEMENT FOR BRIDGE WORKS, A MAXIMUM 56 DAYS SHRINKAGE OF 600 MICROSTRAIN, A MINIMUM CEMENT CONTENT 350kg/m3 AND MAXIMUM WATER:CEMENT RATIO OF 0.40
- C3. STRENGTH GRADE OF CONCRETE SHALL BE: 25 MPa (KERBS, EDGE STRIPS & CONCRETE ENCASEMENT) AND 32 MPa ELSEWHERE.
- C4. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR APPROVED. GENERALLY FOR HAND PLACED KERB & GUTTER 6mm THICK APPROVED BITUMINOUS MASTIC JOINTING MATERIAL SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 6m. FOR MACHINE PLACED KERB & GUTTER 6mm THICK APPROVED BITUMINOUS MASTIC JOINTING MATERIAL SHALL BE PROVIDED AT INTERVALS NOT EXCEEDING 12m & GUILLOTINED DUMMY GROOVED JOINTS, 25mm IN DEPTH, SHALL BE FORMED EVERY 3m OF GUTTER. JOINTS ARE ALSO REQUIRED AT EACH END OF GUTTER CROSSING AND GULLY PITS. JOINTS SHALL BE SET VERTICAL AND SQUARE TO THE KERB.
- C5. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C6. WELDING OR SPLICES IN REINFORCEMENT SHALL BE USED ONLY IN POSITIONS APPROVED BY THE ENGINEER.
- C7. CONCRETE CURING SHALL BE IN ACCORDANCE WITH AS3600. CURING SHALL BE COMMENCED WITHIN TWO HOURS OF FINISHING OPERATIONS AND SHALL BE CONTINUED FOR A MINIMUM OF SEVEN DAYS BY AN APPROVED PROPRIETARY COMPOUND OR BY KEEPING CONTINUOUSLY
- C8. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS3610. FORMWORK SHALL NOT BE STRIPPED NOR PROPS REMOVED WITHOUT APPROVAL
- C9. FABRIC LAP DETAILS SHALL BE IN ACCORDANCE WITH FIG.13.2.4 OF
- C10. HOOKS, LAPS AND BENDS SHALL BE IN ACCORDANCE WITH
- C11. ALL CHEMICAL ANCHORS SHALL BE EITHER 'CHEMSET' BY "RAMSET" WITH THE GLASS CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS
- HILTI HVU ADHESIVE ANCHOR WITH FOIL CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTION. ALL CHEMICAL ANCHORS SHALL BE HOT DIPPED GALVANIZED AND BE MIN M16 DIA. U.N.O

#### GENERAL EARTHWORKS. SITEWORKS & FILLING:

#### FILLING:

- SGE1. THESE CLAUSES SHALL BE READ IN CONJUNCTION WITH "REPORT ON GEOTECHNICAL INVESTIGATION BY COFFEY GEOSCIENCES P/L REPORT No. S22216/1-AG (2005) PH 9406 1000 FAX: 9406 1002
- SGE2. THE RECOMMENDATIONS CONTAINED IN THE GEOTECH REPORT SHALL OVERRIDE THE CLAUSES PRESENTED HEREIN.
- SGE3. STRIP ALL TOPSOIL AND UNDERLYING FILL AND STOCKPILE TOPSOIL FOR LATER REUSE FOR LANDSCAPING PURPOSES.
- SGE4. NEW FILL REQUIRED TO REINSTATE CUT LEVELS TO PROPOSED BENCHING LEVELS SHALL BE SOURCED FROM OTHER PARTS OF THE EXCAVATION AS SELECT FILL OR IMPORTED FILL AS SPECIFIED BELOW IN SGE 4 AND SGE 5.
- SGE5. SELECT FILL SHALL CONSIST OF LOCALLY DERIVED OR CUT NATURAL CLAYS.
- SGE6. IMPORTED FILL SHALL CONSIST OF RIPPED SANDSTONE OR SHALE OR SIMILAR MATERIAL WITH MAXIMUM PARTICLE SIZE NOT GREATER THAN 120mm AND A MOISTURE CONTENT WITHIN 2-3% OF STANDARD OPTIMUM.
- SGE7. ALL FILL (COHESIVE SOIL) SHALL BE PLACED IN LAYERS OF 200mm MAXIMUM THICKNESS, COMPACTED BY MACHINE ROLLING TO ACHIEVE A DRY DENSITY RATIO OF NOT LESS THAN 98% STANDARD MAXIMUM AT A CORRESPONDING MOISTURE CONTENT WITHIN 2-3% OF STANDARD OPTIMUM.
- SGE8. IN AREAS WHERE HIGH IMPACT ROLLING IS USED TEST EACH FINAL LAYER OF NOT GREATER THAN 300mm TO 400mm TO ACHIEVE A DRY DENSITY RATIO OF NOT LESS THAN 98% STANDARD MAXIMUM AT A CORRESPONDING MOISTURE CONTENT WITHIN 2-3% OF STANDARD OPTIMUM.

#### **EXCAVATION BATTERS:**

- SGE8. ALL TEMPORARY BATTERS CUT IN CLAY SUBSTRATE SHALL BE 1 HORIZ: 1 VERT. ALL LONG TERM EXPOSED BATTERS CUT IN CLAY SUBSTRATE SHALL BE 2 HORIZ · 1 VFRT ALL DETENTION BASIN BATTERS IN CLAY SUBSTRATE SHALL BE 3 HORIZ: 1 VERT. ALL DETENTION BASIN BATTERS IN ROCK SUBSTRATE
- SGE9. GEOTECHNICAL TESTING IS TO BE UNDERTAKEN TO AT LEAST LEVEL 1 CONTROL OF FILL COMPACTION STANDARD, AS DEFINED IN AS. 3738 AS FOLLOWS

SHALL BE NEAR VERTICAL.

- FOR GENERAL FILL OR CUT AREAS OVER THE AREA PROVIDE ONE (1) TEST PER 200mm LAYER, OVER AN AREA NOT GREATER THAN 500 m<sup>2</sup>.
- FOR GENERAL FILL AREAS IN CONCENTRATED AREAS ADJACENT TO AND BEHIND THE STRUCTURE AND ADJACENT TO AND BEHIND RETAINING WALLS PROVIDE ONE (1) TEST PER 200mm LAYER, OVER AN AREA NOT GREATER THAN 50m<sup>2</sup>.
- SGE10. SUBMIT ALL GEOTECHNICAL TEST RESULTS TO WARREN SMITH & PARTNERS FOR REVIEW PRIOR TO CONTINUATION WITH SUBSEQUENT SECTION OF WORK

#### EARTH WORKS FOR SERVICES

- E1. EXCAVATE TRENCHES AND STOCKPILE ALL MATERIAL FOR INSPECTION WITH REGARD TO RE-USE FOR TRENCH BACKFILL. REMAINING MATERIAL TO BE REMOVED FROM SITE.
- E2. BEDDING MATERIAL SHALL CONSIST OF IMPORTED FILL ONLY. THICKNESS OF BEDDING LAYER SHALL BE 75mm IN O.T.R. AND 200mm IN ROCK.
- E3. EMBED ALL PIPES WITH IMPORTED FILL. PROVIDE 200mm SIDE SUPPORT AND 150mm OVERLAY ABOVE
- E4. TRENCH FILL ABOVE THE EMBEDMENT ZONE TO THE UNDERSIDE OF THE ROAD PAVEMENT OR FOOTWAY FILL MATERIAL SHALL BE AS FOLLOWS:

## TRENCH FILL MATERIAL SHALL CONSIST OF IMPORTED FILL

AS SPECIFIED HEREIN OF EITHER HIGH GRADE COMPACTION SAND OR APPROVED CRUSHED ROAD GRAVEL CONFORMING TO RTA FORM 3051 OR SIMILAR. OTHER THAN ROADWAY

TRENCH FILL MATERIAL EXCAVATED SHALL CONSIST OF SELECT FILL AS SPECIFIED HEREIN AND SHALL NOT CONTAIN MORE THAN 20% OF STONES OF SIZE BETWEEN 75mm & 150mm AND NONE LARGER THAN 150mm. PRIOR TO THE USE OF THE EXCAVATED MATERIAL IT SHALL BE INSPECTED AND APPROVED BY THE CONSULTANT.

E5. COMPACT BEDDING, EMBEDMENT AND TRENCH FILL MATERIALS AS FOLLOWS:

FOR GRANULAR FILL MATERIAL (NON-COHESIVE SOILS) EG. COARSE AGGREGATE FILL, HIGH GRADE COMPACTION SAND, THE DENSITY INDEX (ID) SHALL BE

NOT LESS THAN 70%.

FOR GRANULAR MATERIAL (NON-COHESIVE SOILS), THE DENSITY INDEX (ID) SHALL BE NOT LESS THAN 70%.

FOR NON-GRANULAR FILL MATERIAL (COHESIVE SOILS). THE DRY DENSITY RATIO (RD) SHALL BE NOT LESS THAN 95%.

**E6. MEASURE OF COMPACTION:-**THE DEGREE OF COMPACTION SHALL BE MEASURED BY ONE OF THE FOLLOWING PARAMETERS:-

GRANULAR FILL (NON-COHESIVE SOILS). THE DENSITY INDEX (ID) DETERMINED IN ACCORDANCE WITH AS 1289.E6.1 BASED ON THE MAXIMUM AND MINIMUM DRY DENSITIES IN ACCORDANCE WITH AS 1289.E5.1 AND THE FIELD DRY DENSITY IN ACCORDANCE WITH AS 1289.5.3.2, AS 1289.E3.5 OR AS 1289.E8.1.

- NON-GRANULAR FILL (COHESIVE SOILS). THE DRY DENSITY RATION (RD) DETERMINED IN ACCORDANCE WITH AS 1289.5.4.1 BASED ON THE FIELD DRY DENSITY IN ACCORDANCE WITH AS 1289.5.3.2 AND THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS 1289.5.1.1
- E7. GEOTECHNICAL TESTING IS TO BE UNDERTAKEN TO AT LEAST LEVEL 1 CONTROL OF FILL COMPACTION STANDARD, AS DEFINED IN AS. 3738 AS FOLLOWS
- TEST EACH 300mm LAYER ABOVE PIPE CROWN.
- TEST BASE & SUB-BASE LAYERS WHERE APPLICABLE.
- TESTS SHALL BE REQUIRED AT EACH 50m CENTRES WHERE THE LENGTH OF TRENCH IS WITHIN THE 50m REQUIREMENT
- E8. SUBMIT ALL GEOTECHNICAL TEST RESULTS TO WARREN SMITH & PARTNERS FOR REVIEW PRIOR TO CONTINUATION WITH SUBSEQUENT SECTION OF WORK.

- RES1. RESTORE ALL TRAFFIC AREAS TO PRE EXISTING
- RES2. FOR ALL SURFACES OTHER THAN IN TRAFFIC AREAS RESTORE DISTURBED SURFACES TO PRE-EXISTING CONDITIONS AND COMPACT AS SPECIFIED.
- RES3. RESTORE ALL AUTHORITY OWNED AREAS TO COUNCIL STANDARDS

#### ROAD WORKS, DRIVEWAYS & CARPARKS

- R1. ALLOW FOR LEVEL 2 TESTING AND SUB-GRADE CONDITIONS & PAVEMENT THICKNESS TO BE VERIFIED BY GEOTECHNICAL CONSULTANT AFTER INSPECTION OF PRELIMINARY BOXING.
- R2. ALLOW FOR ANY SUB-GRADE REPLACEMENT WORK TO BE DETERMINED AS REQUIRED BY GEOTECHNICAL CONSULTANT AT THE TIME OF PAVEMENT CONSTRUCTION.
- R3. MINIMUM DRY DENSITY RATIOS (AS 1289 3.4.1-1993) TO BE: **BASECOURSE** 98% MODIFIED 95% MODIFIED SUB-GRADE 100% STANDARD SUB-GRADE REPLACEMENT 100% STANDARD
- R4. PAVEMENT MATERIALS TO COMPLY WITH RTA SPECIFICATION No. 3051 OR SIMILAR AS APPROVED BY GEOTECHNICAL CONSULTANT.
- R5. PROVIDE (1) TEST FOR EACH LAYER NOT EXCEEDING 250mm THICK BEING BASECOURSE, SUB-BASE & SUB-GRADE OVER AN AREA NOT GREATER THAN 500m<sup>2</sup>
- R6. SUBMIT ALL GEOTECHNICAL TEST RESULTS TO WARREN SMITH & PARTNERS FOR REVIEW PRIOR TO CONTINUATION WITH SUBSEQUENT SECTION OF WORK.

#### APPROVALS

- A1. THE AS CONSTRUCTED WORKS SHALL BE INSPECTED BY DESIGN CONSULTANT. MINIMUM 48 HOURS NOTICE SHALL APPLY TO ALL INSPECTIONS.
- A2. THE DESIGN PLANS HEREIN ARE SUBJECT TO COUNCIL APPROVAL PRIOR TO CONSTRUCTION. OBTAIN EXPRESS (WRITTEN) ADVICE TO PROCEED FROM PROJECT MANAGER PRIOR TO COMMENCEMENT.
- A3. SUBMIT WORK-AS-EXECUTED DRAWINGS IN CIVILCAD OR DXF DIGITAL FORMAT AND HARD COPY FORMAT. VERIFY ALL CONSTRUCTION WORKS SHOWN HEREON.
- A4. CERTIFY THAT THE AS CONSTRUCTED SYSTEM HAS BEEN BUILT IN ACCORDANCE WITH THE APPROVED PLANS ISSUED FOR CONSTRUCTION.

#### SERVICES UNDER ROAD SURFACES

S1. ALL OTHER SERVICES INCLUDING BUT NOT LIMITED TO WATER, HYDRANT, GAS, SEWER, ELECTRICAL AND COMMUNICATIONS CONDUITS OR CABLES SHALL BE LAID WITH MINIMUM 600mm U.N.O. COVER BELOW PROPOSED ROAD SURFACE OR APPROVED OTHER MEANS TO PROTECT DURING CONSTRUCTION.

### **ROAD SIGNS & LINE MARKING**

- RS1. ALL SIGNS AND LINEMARKING SHALL BE TO ROADS & TRAFFIC AUTHORITY STANDARDS AND SPECIFICATIONS AND AS.1742, MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES
- RS2. ALL LINEMARKING SHALL BE AUGMENTED BY RETROREFLECTIVE RAISED PAVEMENT MARKERS (RRPMs) AND ALL SHALL BE TO AS 1742.2 - 1994 AND AS 1742.2 /AMDT 1/1997-10-05
- RS3. ALL ROAD SIGNS AND POSTS SHALL BE TO AS 1742.2 1994 AND AS 1742.2 /AMDT 1/1997-10-05

#### CLOSED CIRCUIT COLOUR TV (CCTV)

- CCTV 1. UNDERTAKE A CCTV INSPECTION OF ALL THE COMPLETED DRAINAGE IN ACCORDANCE WITH THE GUIDELINES OF THE AUSTRALIAN CONDUIT CONDITION EVALUATION MANUAL (ACCEM)
- CCTV 2. APPLY THE FOLLOWING REQUIREMENTS TO THE CCTV INSPECTION:-
  - A. USE DATA CAPTURE SOFTWARE APPROVED BY SYDNEY WATER
  - B. USE CERTIFIED CCTV OPERATORS
  - C. THE CCTV VIDEOTAPE SHALL BE OF QUALITY TO ALLOW ACCURATE ASSESSMENT OF THE INTERNAL CONDITION OF THE
- CCTV 3. FURNISH TO THE DESIGN CONSULTANT:-A. TWO (2) VIDEO TAPES B. ONE SET OF SURVEY DATA ON 3 1/2 DISKETTE C. ONE HARD COPY PRINTOUT OF THE SURVEY DATA.

#### HYDRAULIC SERVICES

- H1. ALL WORKS CARRIED OUT SHALL COMPLY WITH AS-3500, SYDNEY WATER & COUNCIL REQUIREMENTS. OBTAIN NECESSARY AUTHORITIES APPROVALS PRIOR TO COMMENCING WORKS.
- H2. PRIOR TO COMMENCING WORKS SURVEY & INSPECT SITE & CONFIRM LOCATION & LEVELS OF ALL HYDRAULIC SERVICES PIPEWORK. NO CLAIMS FOR ADDITIONAL COSTS RESULTING FROM THE LACK OF KNOWLEDGE OF SITE CONDITIONS RELATING TO WORKS TO BE DONE OR LOCATIONS AND LEVELS OF EXISTING AND NEW SERVICES WILL BE
- H3. PRIOR TO CAPPING OFF & REMOVAL OF REDUNDANT SERVICES CONFIRM ON SITE THAT SERVICE IS NOT SUPPLYING EXISTING BUILDINGS OR
- H4. COLD WATER PIPEWORK SHALL CONSIST OF COPPER TUBE & FITTINGS IN ACCORDANCE WITH AS 1432 TYPE B. PIPES AND FITTINGS SHALL BE JOINTED WITH 15% SILVER SOLDER.
- H5. ALL NEW UNDERGROUND METAL PIPEWORK SHALL BE INSTALLED WITH POLYETHYLENE SLEEVING OBTAINED FROM "TYCO WATER AUST" AND INSTALLED TO MANUFACTURE'S REQUIREMENTS.
- H6. LANDSCAPE IRRIGATION WATERING PIPEWORK SHALL CONSIST OF MEDIUM DENSITY POLYETHYLENE PIPE CLASS PN16 WITH ELECTRO FUSION JOINTS OR EQUAL TO EXISTING PIPEWORK

#### COUNCIL STANDARDS

LGA 1. THE DRAWINGS HEREIN SHALL BE READ IN CONJUNCTION WITH COUNCIL'S STANDARDS & SPECIFICATIONS WHICH SHALL OVERRIDE SPECIAL DETAILS SHOWN ON THE DRAWINGS.

#### TRAFFIC NOTE:

- 1. A TRAFFIC CONTROL PLAN IS TO BE PREPARED BY AN ACCREDITED RTA TRAFFIC CONTROLLER AND SUBMITTED TO COUNCIL. THIS TRAFFIC PLAN IS TO BE CERTIFIED BY AND IMPLEMENTED TO THE SATISFACTION OF AN ACCREDITED RTA TRAFFIC CONTROLLER PRIOR TO COMMENCEMENT OF WORK
- 2. ALL TRAFFIC CONTROL WORKS SHALL ONLY BE CARRIED OUT BY ACCREDITED RTA TRAFFIC CONTROLLERS.

#### REINFORCED CONCRETE

- 1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, THE SAA STANDARDS CITED IN AS3600, THE DRAWINGS AND THE SPECIFICATION.
- 2. ALL CONCRETE SHALL BE 80mm SLUMP, 20mm MAXIMUM AGGREGATE WITH NO ADMIXTURES OR FLY ASH, UNLESS APPROVED BY THE ENGINEER. ALL CONCRETE TO HAVE TYPE SL PORTLAND CEMENT WITH NO FLY ASH.
- 3. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN OR APPROVED BY THE ENGINEER.
- 4. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- 5. WELDING OR SPLICES IN REINFORCEMENT SHALL BE USED ONLY IN POSITIONS APPROVED BY THE ENGINEER.
- 6. CONCRETE CURING SHALL BE IN ACCORDANCE WITH AS3600. CURING SHALL BE COMMENCED WITHIN TWO HOURS OF FINISHING OPERATIONS AND SHALL BE CONTINUED FOR A MINIMUM OF SEVEN DAYS BY AN APPROVED PROPRIETARY COMPOUND OR BY KEEPING CONTINUOUSLY
- 7. FORMWORK SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH AS3610. FORMWORK SHALL NOT BE STRIPPED NOR PROPS REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.
- 8. FABRIC LAP DETAILS SHALL BE IN ACCORDANCE WITH DRAWINGS
- 9. HOOKS, LAPS AND BENDS SHALL BE IN ACCORDANCE WITH AS3600 UNO.

## THE CONCRETE STRENGTH SHALL COMPLY WITH THE

**FOLLOWING:** 

| ELEMENT                | MIN CEMENT<br>CONTENT<br>(kg/m³) | SLUMP<br>(mm) | NOM MAX<br>AGGREGATE<br>SIZE (mm) | GRADE<br>DESIGNATION<br>(Mpa) |
|------------------------|----------------------------------|---------------|-----------------------------------|-------------------------------|
| REINFORCED<br>CONCRETE | 360                              | 80            | 20                                | SL32                          |
| MASS<br>CONCRETE       | 260                              | 80            | 20                                | N20                           |
| PILES                  | 360                              | 80            | 20                                | N40                           |

NO PENETRATIONS, RECESSES OR CHASES OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS

ALL EDGES TO HAVE 20mm CHAMFERS, WHERE VISIBLE IN THE FINISHED WORK.

ALL CHEMICAL ANCHORS SHALL BE EITHER 'CHEMSET' BY "RAMSET" WITH THE GLASS CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS

GALVANIZED AND BE MIN M16 DIA. U.N.O.

HILTI HVU ADHESIVE ANCHOR WITH FOIL CAPSULE SYSTEM INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURERS INSTRUCTION. ALL CHEMICAL ANCHORS SHALL BE HOT DIPPED DO NOT SCALE FROM DRAWINGS, CHECK & VERIFY ALL DIMENSIONS & LEVELS BEFORE COMMENCEMENT OF ANY WORK.

THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH AND PARTNERS.

#### **GENERAL NOTES:**

CONSTRUCTION.

ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S STANDARDS AND SPECIFICATIONS AS DIRECTED BY THE ENGINEER

ALL DISTURBED TURFED AREAS AND BATTERS TO BE TOPSOILED, TURFED OR SPRAY

NORTH POINT

- THE CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORKS WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE LAND OWNER.
- ALL FILLING TO BE COMPACTED TO A MINIMUM 95% OF THE STANDARD MAXIMUM DRY DENSITY AS TESTED IN ACCORDANCE WITH E1.1 OF AS1289 - 1977.
- FILL MATERIAL TO BE APPROVED BY THE CONSTRUCTION ENGINEER SURPLUS EXCAVATED MATERIAL TO BE PLACED WHERE DIRECTED BY THE ENGINEER.
- ALL MEASUREMENTS IN METRES UNLESS OTHER NOTED.
- MEASUREMENTS SHALL BE TAKEN FROM THE FIGURED DIMENSIONS AND ARE NOT TO BE SCALED FROM THE DRAWINGS
- PROVISION FOR TRAFFIC CONTROL DURING CONSTRUCTION TO BE IN ACCORDANCE WITH
- DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER
- AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS. EROSION AND SEDIMENT CONTROLS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH E.P.A. REQUIREMENTS. CONTRACTOR IS TO CLEAR SITE BY REMOVING ALL SURPLUS SPOIL, RUBBISH, ETC.

OF SERVICES ONLY. ACTUAL LOCATION SHOULD BE VERIFIED ON SITE PRIOR TO

UTILITY INFORMATION SHOWN ON THE DRAWINGS IS INTENDED TO DEPICT THE PRESENCE

DA ISSUE 17.12.13 DA ISSUE 05.12.13 ISSUE AMENDMENT DATE

Warren Smith & Partners Pty Ltd A 1st Floor, 123 Clarence Street, Sydney 2000 NSW Australia T 02 9299 1312 F 02 9290 1295 E wsp@warrensmith.com.au



**SMART DESIGN STUDIO 432 BOURKE STREET** 

ic:OAC/R61/0771 • Design and Project Management

**SURRY HILLS NSW 2010** PROJECT **CENTRAL PARK** BLOCK 8 BROADWAY

SPECIFICATION NOTES

CHECKED APPROVED N.T.S. @ A1 N.T.S @ A3 RAWING No **ISSUE** OCTOBER 2013 DAH-02 JOB No. 4587000 DA ISSUE

FROM INLET TO OUTLET

CONSIST OF SINGLE SIZED AGGREGATE WITH PARTICLE

GRAVEL CONFORMING TO RTA FORM 3051 OR SIMILAR.

STW9. PIPES SHALL BE TRUE TO GRADES SHOWN AND

STW10. MINIMUM GRADES FOR GRAVITY STORMWATER DRAINAGE

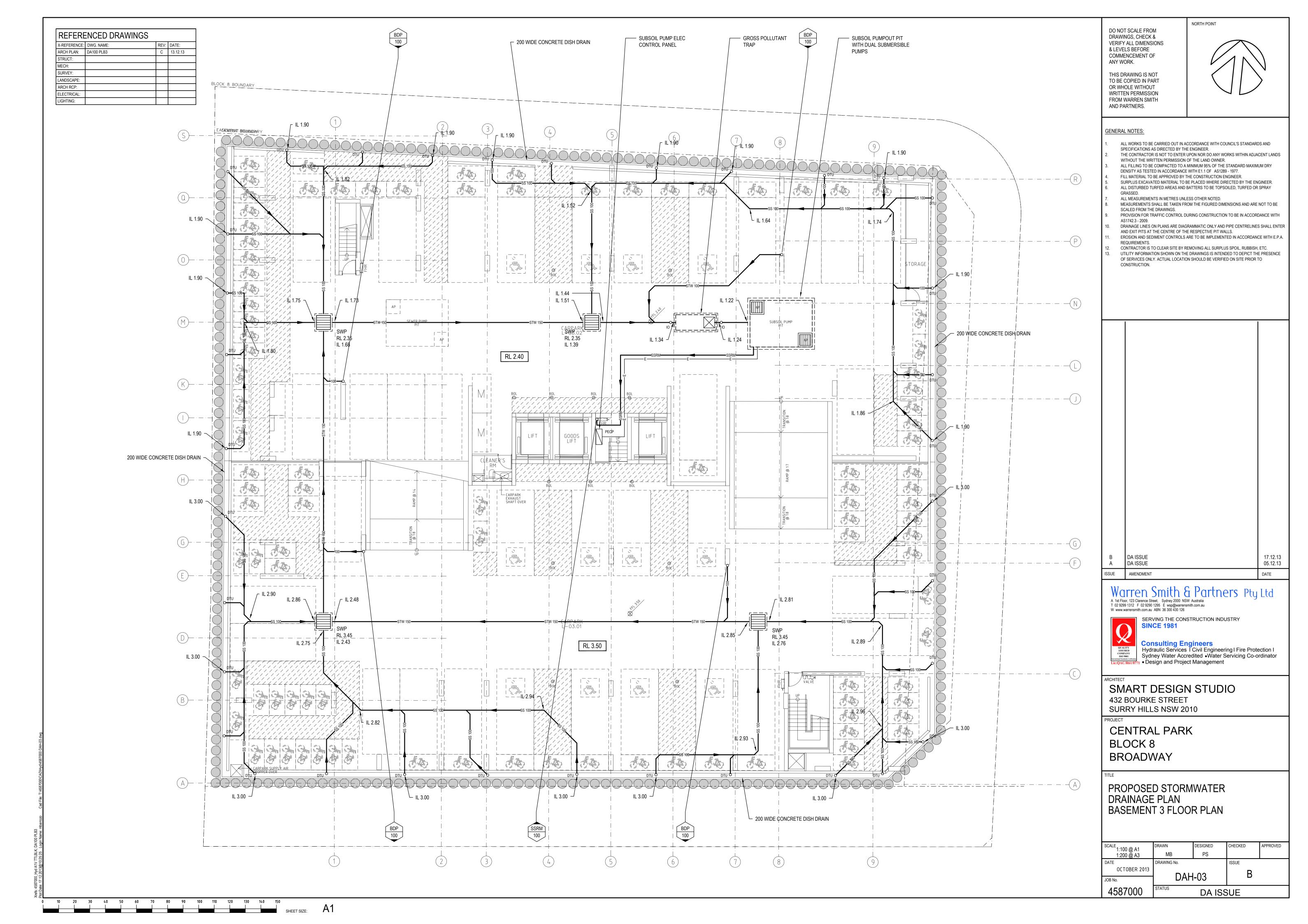
- 450mm IN PUBLIC AREAS. - 600mm IN VEHICULAR TRAFFICABLE AREAS (FOOTWAY/ROADWAY).

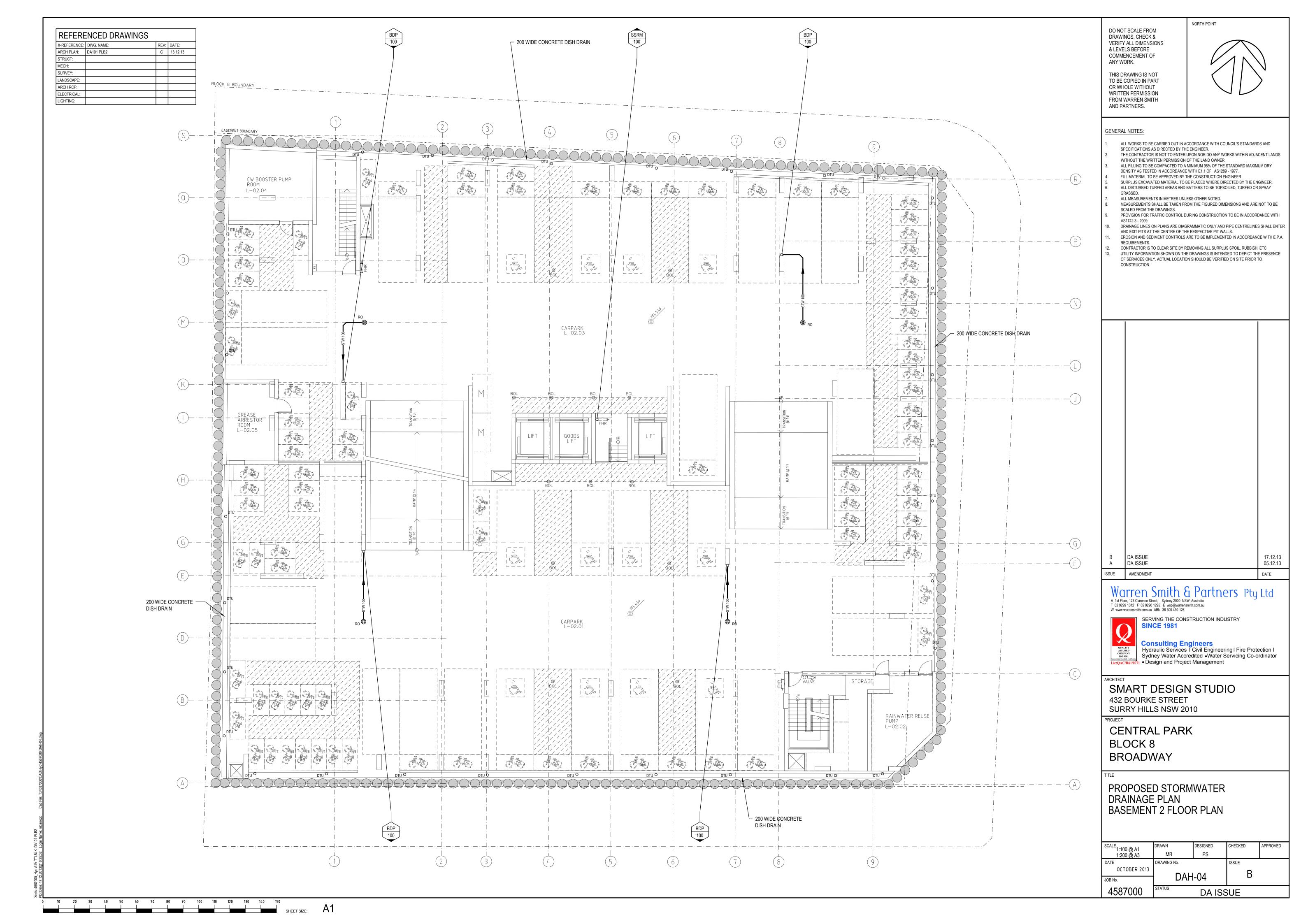
BEDDING FILL MATERIAL.

STW14. ALLOW TO TEST ALL PIPES AND PITS TO MANUFACTURERS REQUIREMENTS

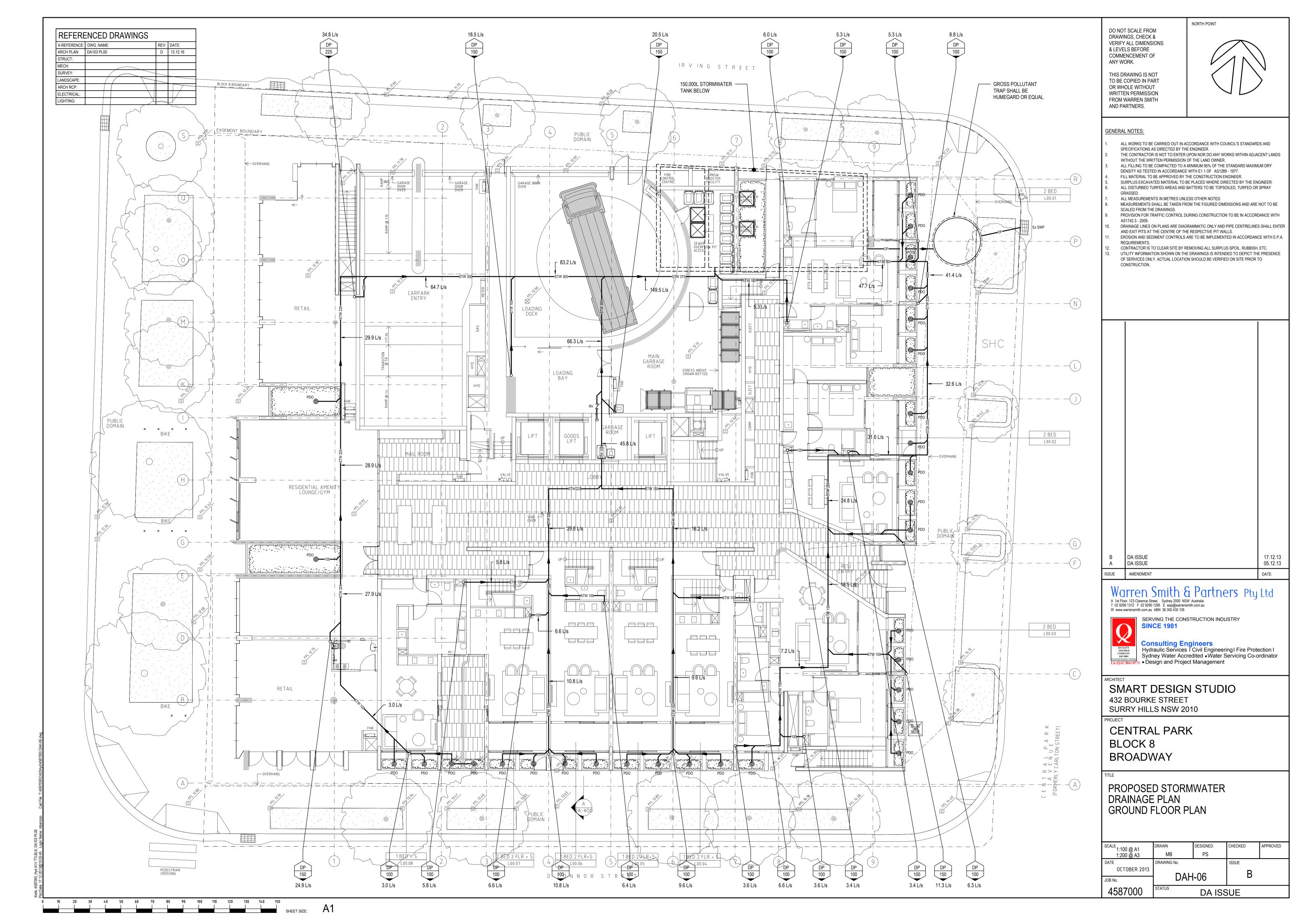
#### RESTORATION:

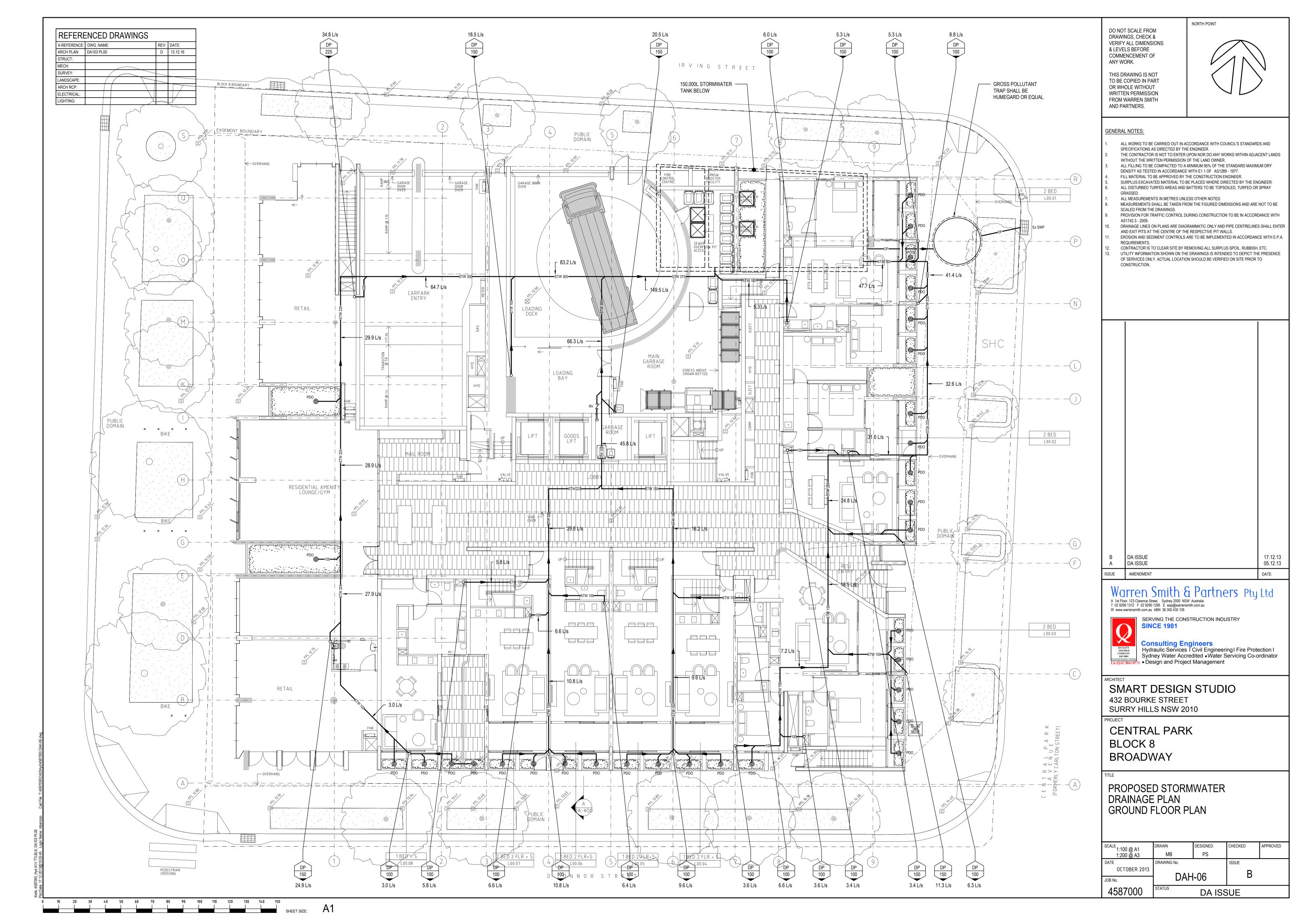
## CONDITION.

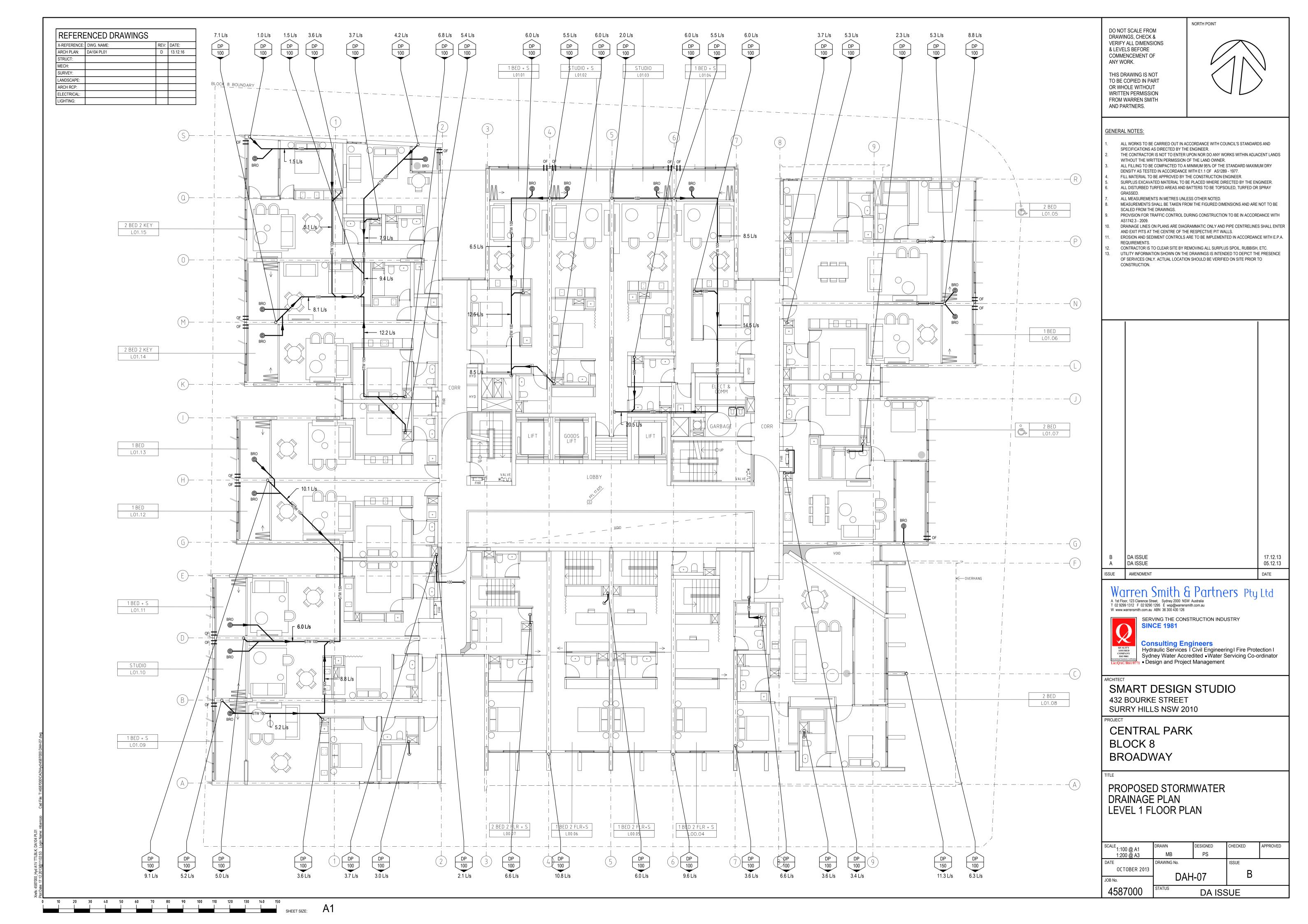


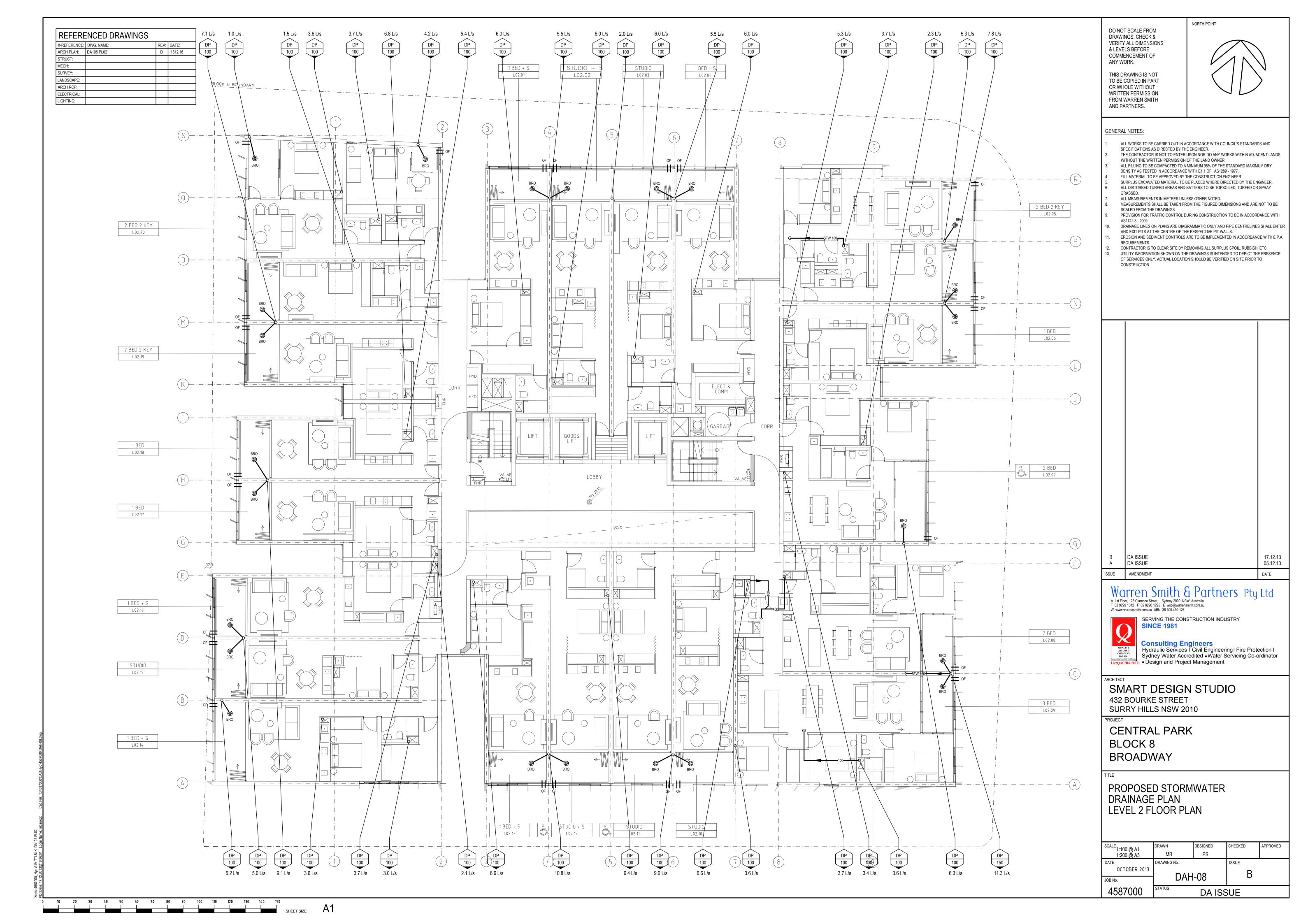


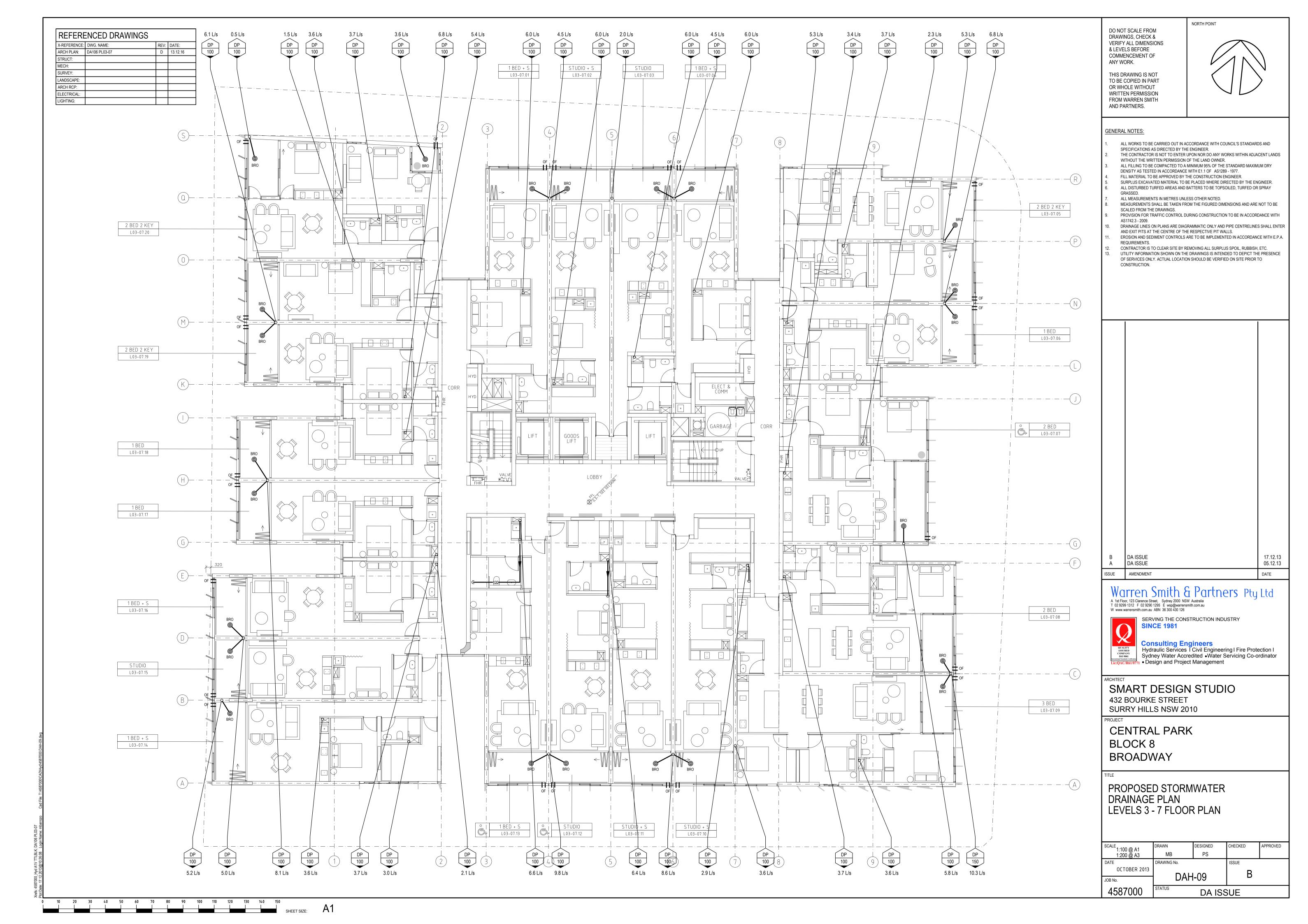


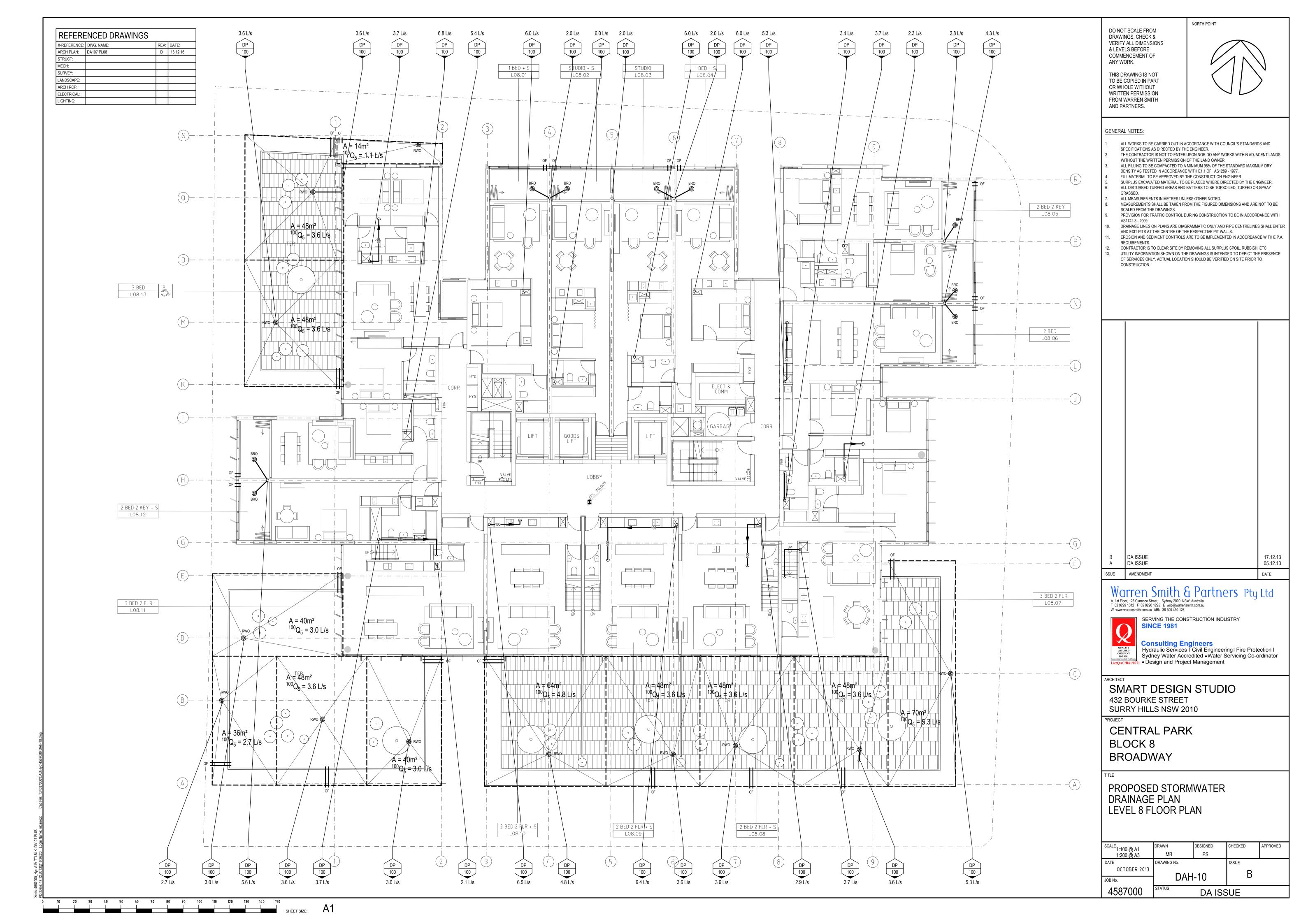


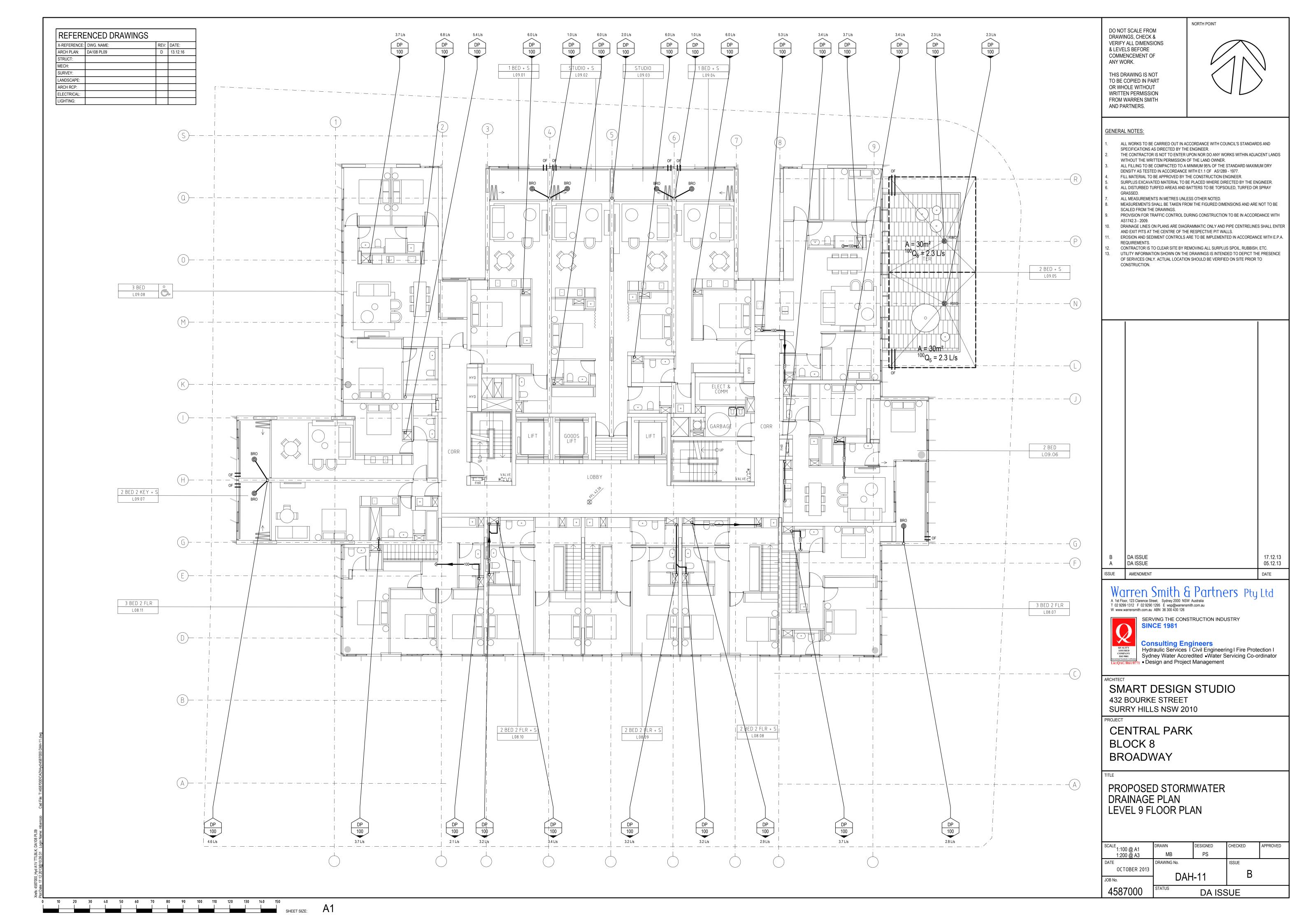


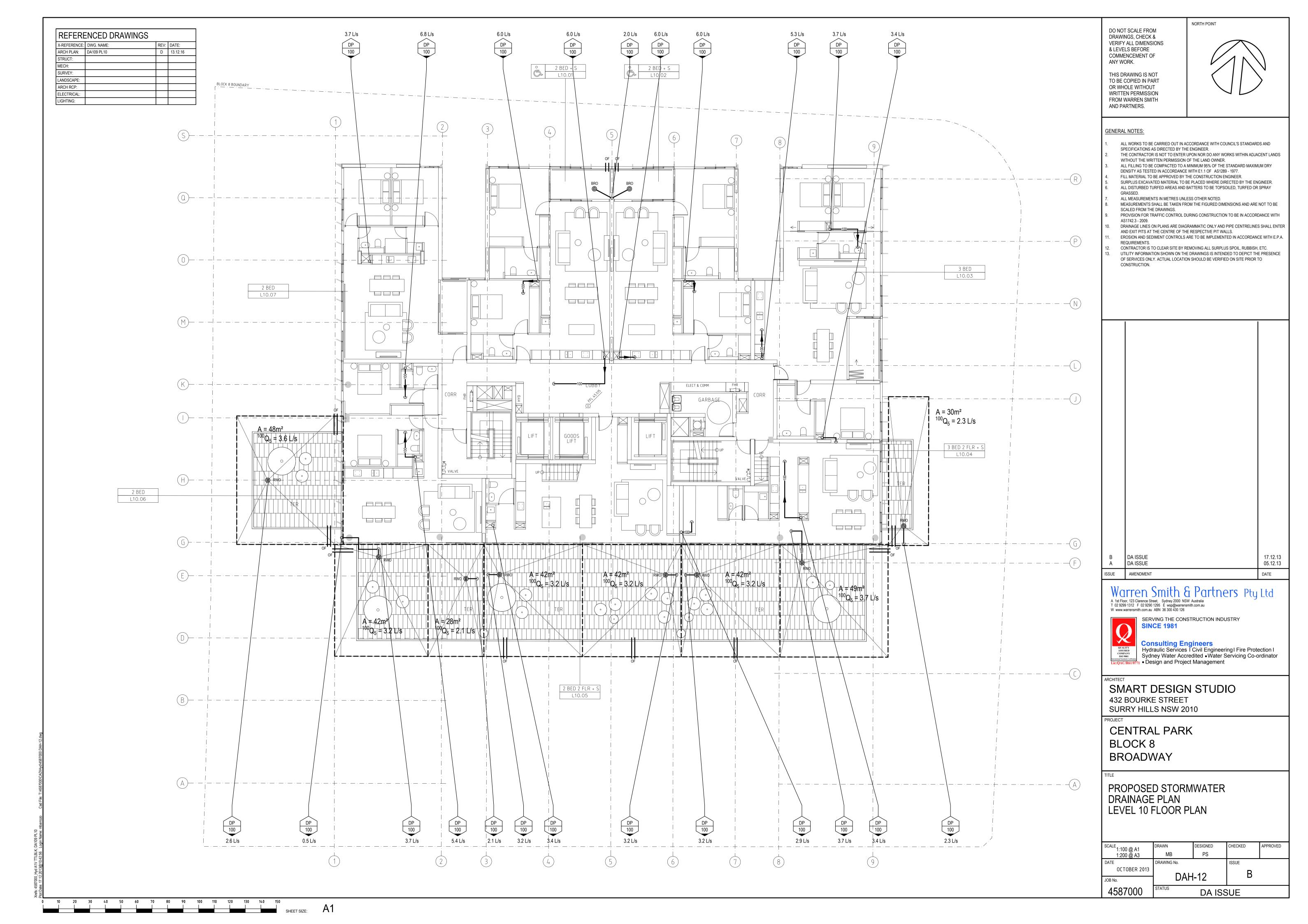


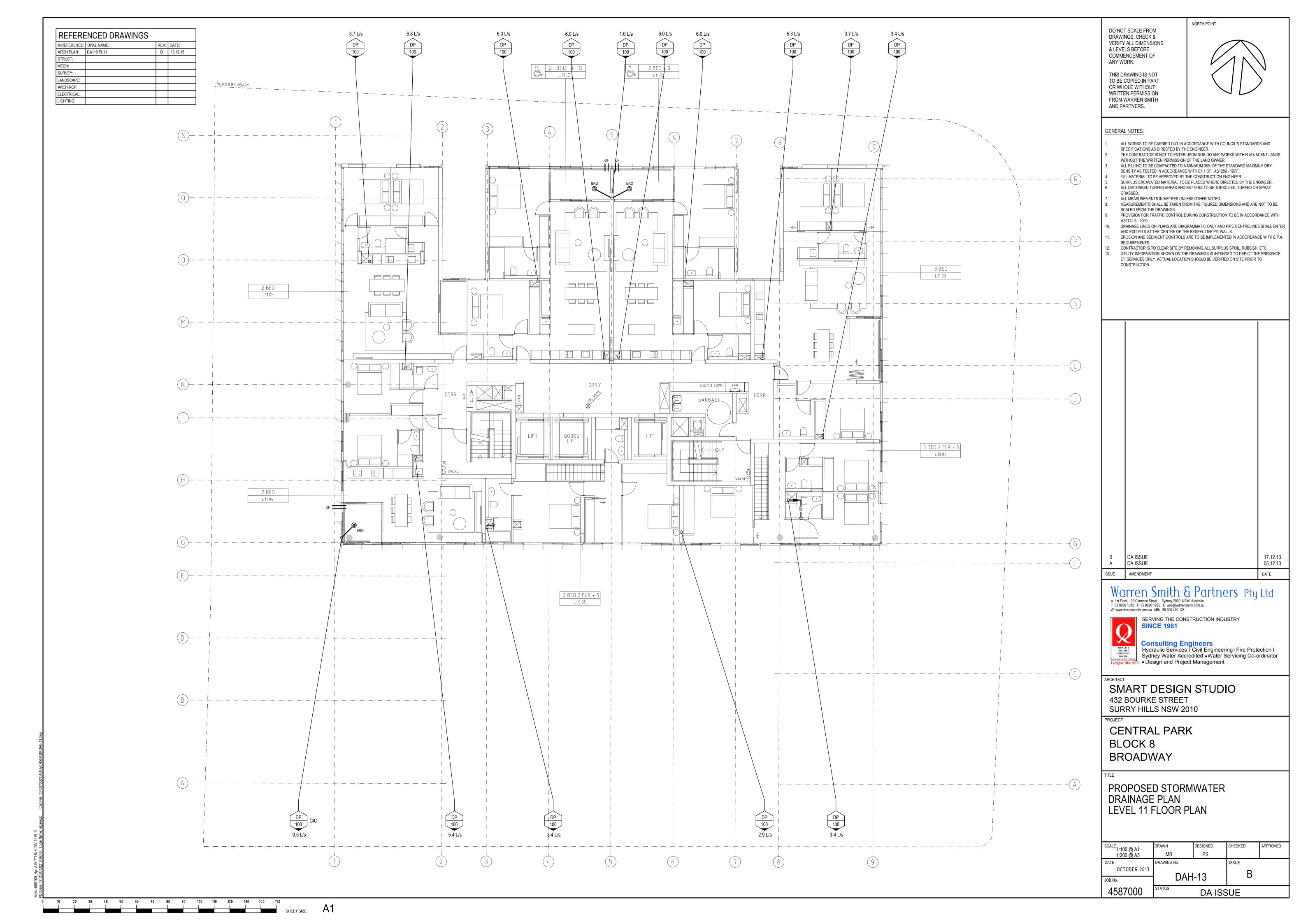


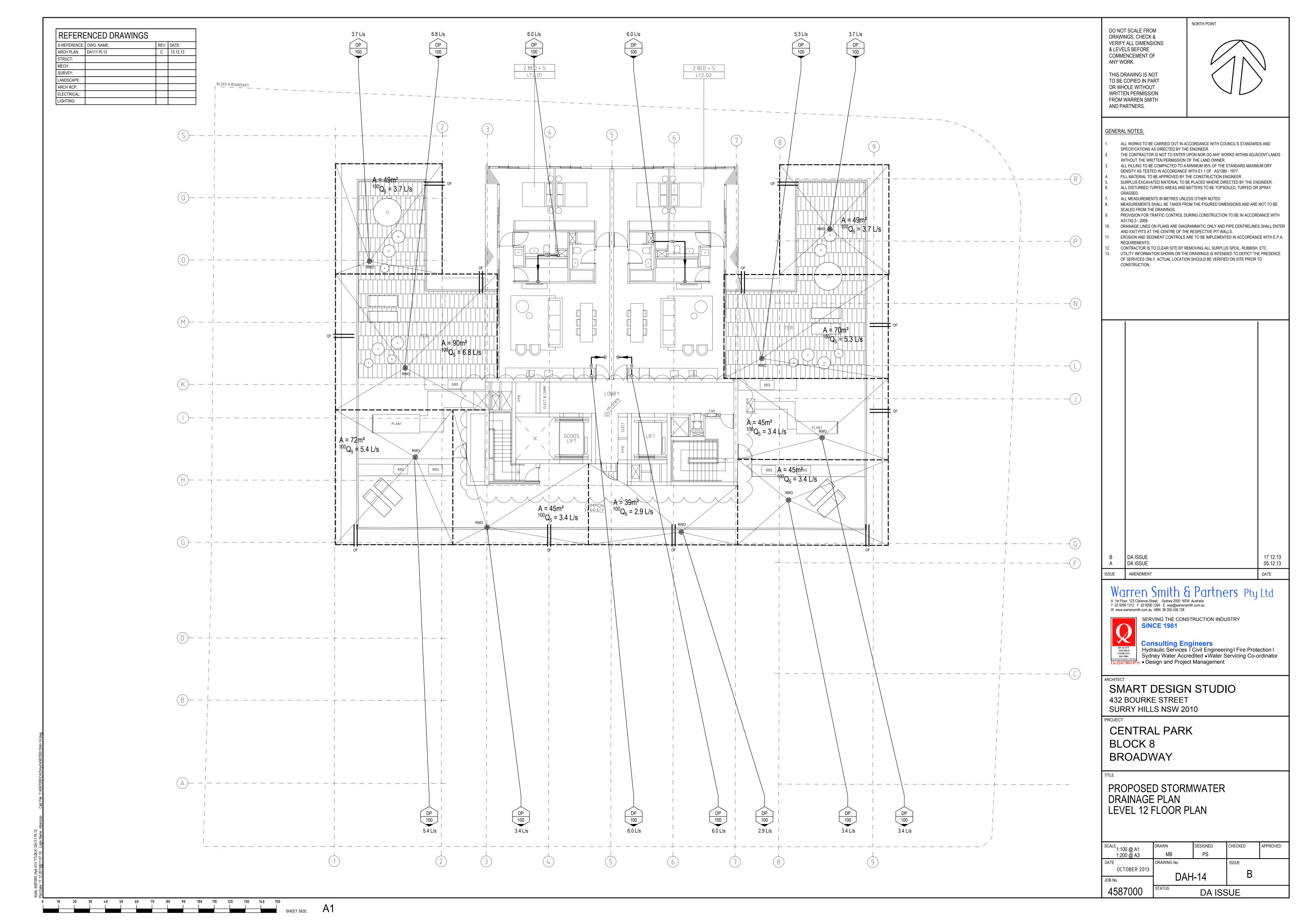


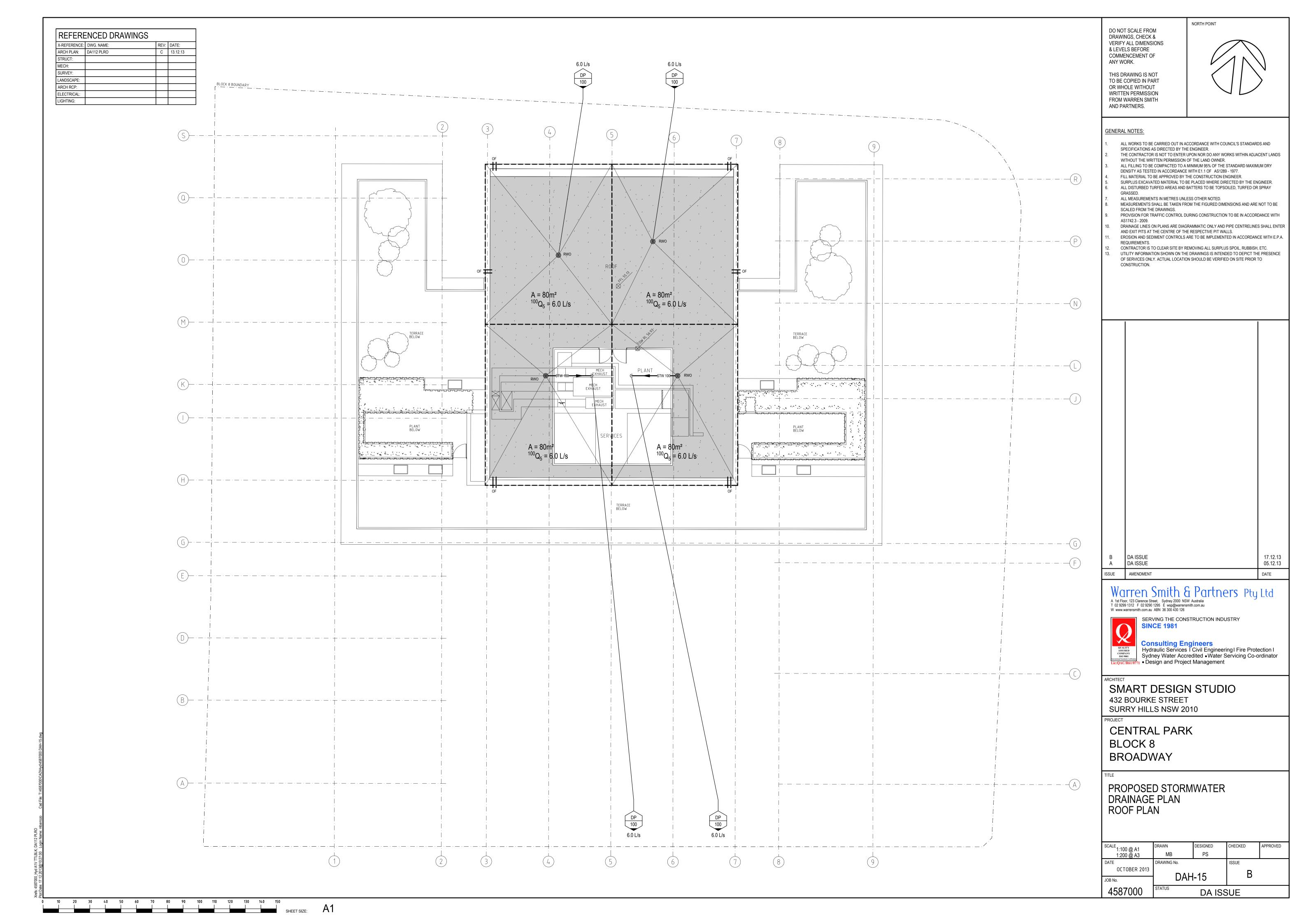


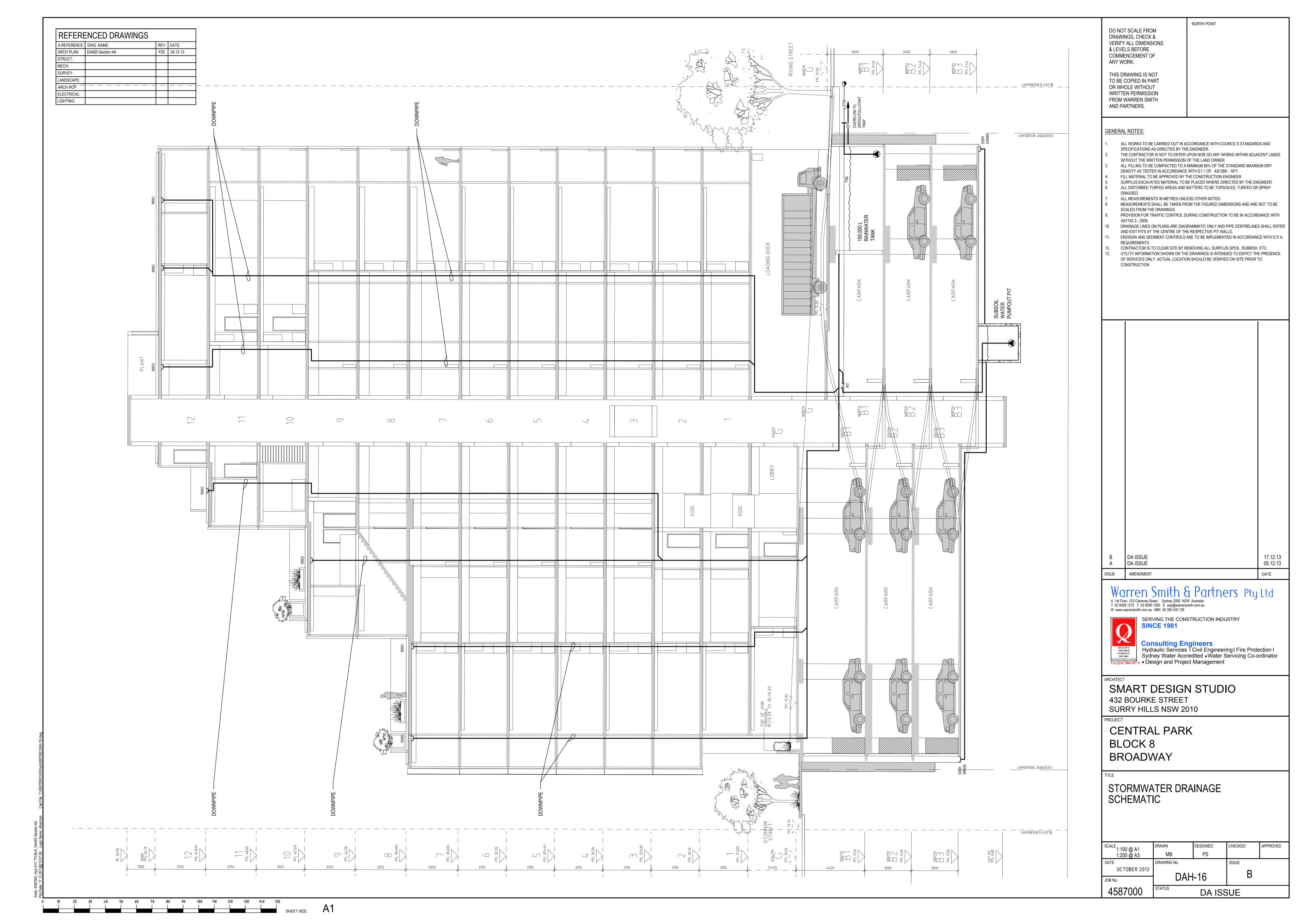


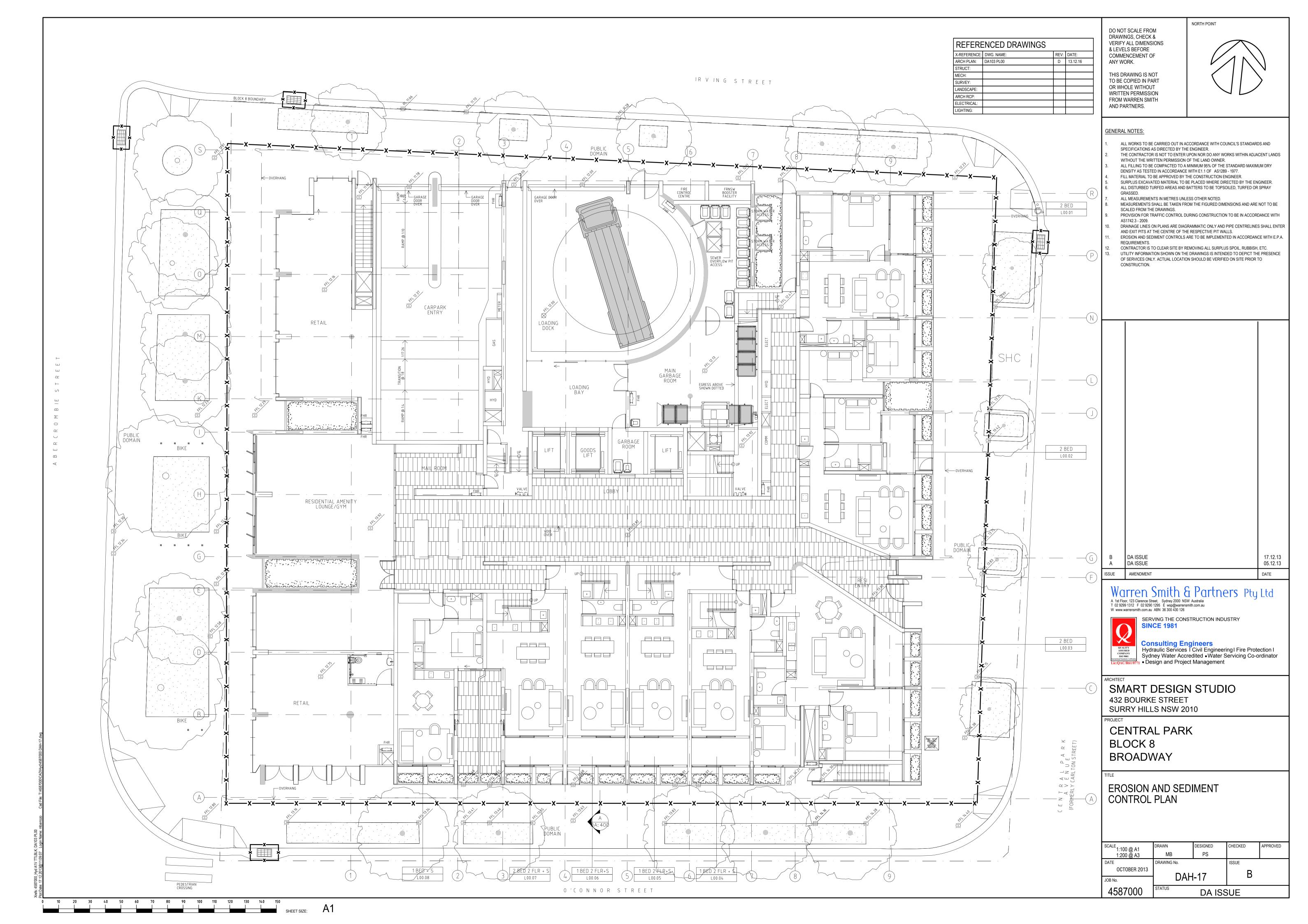


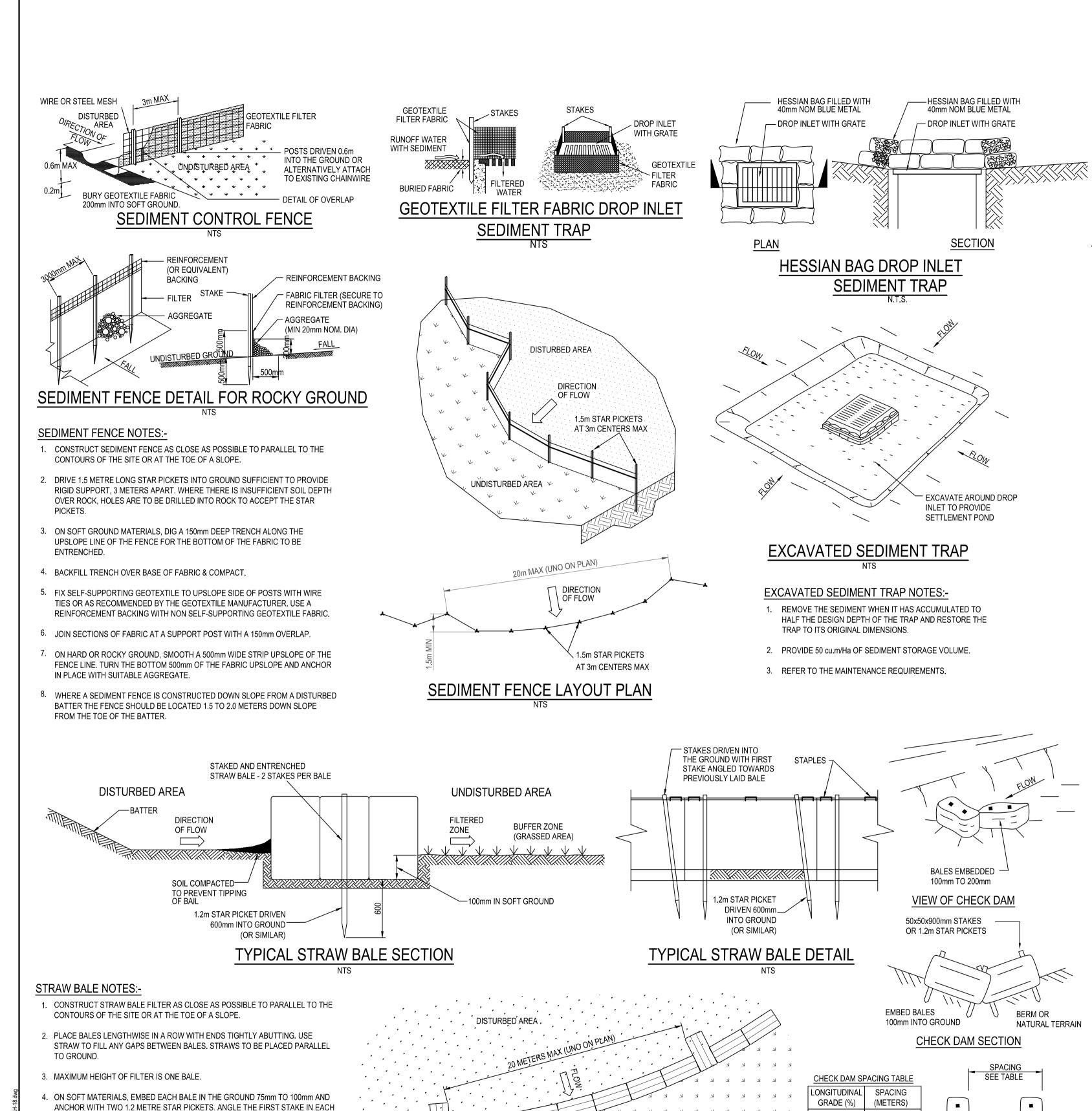












BALE TOWARDS THE PREVIOUSLY LAID BAIL. DRIVE STAKES 600mm INTO THE

DISTURBED BATTER THE BALES SHOULD BE LOCATED 1.5 TO 2.0 METERS DOWN

WHERE A STRAW BALE FILTER IS CONSTRUCTED DOWN SLOPE FROM A

6. WHERE REQUIRED WRAP GEOTEXTILE FILTER FABRIC AROUND BALES AND

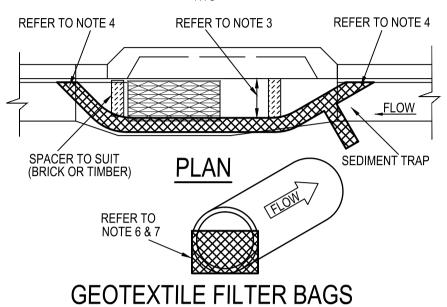
GROUND AND FLUSH WITH THE TOP OF THE BALES.

SLOPE FROM THE TOE OF THE BATTER.

STAPLE IN POSITION.

#### **BLUE METAL FILLED** ROAD SURFACE -HESSIAN SAND BAGS OR **CONSTRUCTION SITE** GEOTEXTILE FILTER BAGS -MIN LENGTH 15m-**GUTTER LIP** DIRECTION OF STORMWATER FLOW GEOTEXTILE FABRIC RUNOFF FROM PAD DIRECTED TO SEDIMENT TRAP **GRATED INLET**

## NEW/EXISTING GRATED KERB ENTRY PIT SEDIMENT CONTROL BARRIER

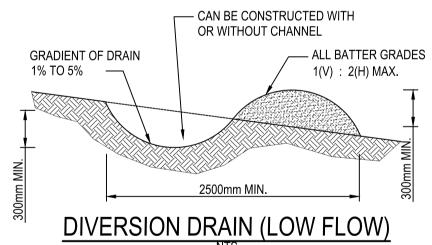


## SEDIMENT BARRIER FOR PITS & PIPES, NOTES:-

- SLEEVES ARE TO BE MADE FROM GEOTEXTILE FABRIC LONGER THEN THE LENGTH OF THE INLET PIT.
- 2. FILL SLEEVE WITH 5 OR 10mm CLEAN GRAVEL
- PLACE THE SLEEVE AT THE OPENING OF THE KERB INLET LEAVING A
- 4. SLEEVE MUST BE PLACED AGAINST THE KERB TO PREVENT BYPASS.

100mm GAP TO ACT AS AN EMERGENCY OVERFLOW.

- 5. FIT SLEEVE TO ALL INLETS DOWNSTREAM OF THE WORKS.
- FOR DRAINAGE WORKS FIT GEOTEXTILE FABRIC OR GEO BAGS TO UPSTREAM FACE OF ALL OPEN PIPES.
- MAINTAIN AN OPENING AT THE TOP OF THE PIPE OF 1/3 OF THE PIPE
- 8. THE FILTERS ARE TO BE CLEANED AND MAINTAINED DAILY.
- ALL CARE SHOULD BE TAKEN TO MINIMIZE SEDIMENT REACHING THE STORMWATER SYSTEM BY MINIMIZING EXCAVATION WORKS AND PREVENTING EXCESS WATER FLOW THROUGH WORKS.



## **DIVERSION DRAIN NOTES:-**

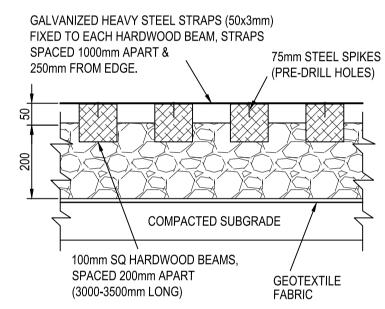
- 1. CONSTRUCT WITH GRADIENT OF 1 PER CENT TO 5 PER CENT.
- 2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE.
- 3. DRAINS TO BE OF CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTION NOT V-SHAPED.
- 4. EARTH BANKS TO BE ADEQUATELY COMPACTED IN ORDER TO PREVENT FAILURE.
- 5. PERMANENT OR TEMPORARY STABILIZATION OF THE EARTH BANK TO BE COMPLETED WITHIN 10 DAYS OF CONSTRUCTION.
- 6. ALL OUTLETS FROM DISTURBED LANDS ARE TO FEED INTO A SEDIMENT BASIN OR SIMILAR.
- DISCHARGE RUN OFF COLLECTED FROM UNDISTURBED LANDS ONTO EITHER A STABILIZED OR AN UNDISTURBED DISPOSAL SITE WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED.
- COMPACT BANK WITH A SUITABLE IMPLEMENT IN SITUATIONS WHERE THEY ARE REQUIRED TO FUNCTION FOR MORE THAN FIVE DAYS.
- EARTH BANKS TO BE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT WILL IMPEDE NORMAL FLOW.

TIMBER SLATS OR METAL GRILLE 100mm HIGH SPACED 200mm APART BERM 0.3m MIN HIGH

## STABILIZED CONSTRUCTION SITE VEHICLE ENTRY/EXIT

#### SITE ENTRY/EXIT NOTES:-

- ALL VEHICLE ENTRANCES & EXITS TO THE CONSTRUCTION SITE MUST BE STABILIZED TO PREVENT THEM BECOMING A SOURCE OF SEDIMENT, BY PROVIDING A VEHICLE SHAKE AREA. THIS MAY CONSIST OF A TIMBER, CONCRETE OR STEEL SHAKER GRID OR RUBBLE AREA.
- THE VEHICLE EXIT AREA IS TO BE MAINTAINED IN A CLEAN & SERVICEABLE CONDITION DURING THE TOTAL TIME OF USAGE.
- ANY UNSEALED ROAD BETWEEN THE DEVICE AND COUNCILS ROADWAY IS TO BE TOPPED WITH 100mm THICK, 40mm NOMINAL SIZE
- 4. PUBLIC ROADS MUST BE KEPT FREE OF DIRT AND MUD. SEDIMENT TRACKED ONTO THE PUBLIC ROADWAY BY VEHICLES LEAVING THE CONSTRUCTION SITE IS TO BE SWEPT UP IMMEDIATELY.
- 5. FENCES SHOULD BE ERECTED TO ENSURE VEHICLES CAN NOT BYPASS THE STABILIZED ACCESS POINTS, UNLESS COMING FROM A STABILIZED



## **VEHICLE SHAKER GRID**

#### SITE ENTRY/EXIT CONSTRUCTION NOTES:-

- 1. STRIP TOP SOIL & LEVEL SITE. PROVIDE CATCH DRAIN AT SIDES TO
- DIRECT RUNOFF WATER TO SEDIMENT TRAPS. COMPACT SUBGRADE AND REMOVE ANY HIGH POINTS.

STRENGTH (AS3706.4-90) OF 2500 N.

- 3. COVER AREA WITH GEOTEXTILE FABRIC. THIS MAY BE WOVEN OR NEEDLE PUNCHED PRODUCT WITH A MINIMUM CBR BURST
- 4. CONSTRUCT 200mm THICK RUBBLE PAD OVER GEOTEXTILE USING ROAD BASE OR 30-40mm AGGREGATE. MINIMUM LENGTH 15 METRES OR TO BUILDING ALIGNMENT. MINIMUM WIDTH 3 METRES. CONSTRUCT 300mm HIGH HUMP IMMEDIATELY WITHIN BOUNDARY TO DIVERT WATER TO A SEDIMENT TRAP.
- 5. WHERE GRIDS ARE USED FIRST CONSTRUCT A 150 THICK PAD OVER GEOTEXTILE FABRIC. LEVEL THIS IN BOTH DIRECTIONS. LOWER GRID ON TO THE PREPARED BASE AND ENSURE THAT NO PART IS SITTING ON ANY HIGH POINTS. BACKFILL THE SPACES BETWEEN THE GRIDS TO WITHIN 50mm OF THE TOP.
- 6. PROVIDE RAMPS AT ENDS AND SIDE OF GRIDS. IF DEPRESSIONS OCCUR IN THE RAMPS DURING USE. ADD ADDITIONAL MATERIAL.

### MAINTENANCE REQUIREMENTS:-

- 1. ACCUMULATED SILT & SEDIMENT MUST BE REMOVED AT REGULAR INTERVALS AND AFTER EACH MAJOR STORM.
- 2. SILT & SEDIMENT MUST BE REMOVED FROM OFF THE SITE OR TO A COUNCIL APPROVED LOCATION WITHIN THE SITE, WHERE IT WILL NOT ERODE.
- 3. THE SEDIMENT FENCES, BALES & TRAPS SHALL BE REGULARLY INSPECTED, ESPECIALLY AFTER RAIN AND KEPT IN GOOD REPAIR AND FUNCTIONING CONDITION AT ALL TIMES.
- 4. CONSTRUCTION OPERATIONS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT, EROSION & WATER POLLUTION SHALL BE MINIMIZED.
- 5. THE SEDIMENT TRAPS SHALL BE REMOVED AND THE AREA STABILIZED WHEN THE CONSTRUCTION AREA HAS BEEN PROPERLY STABILIZED.

NORTH POINT DO NOT SCALE FROM DRAWINGS, CHECK & **VERIFY ALL DIMENSIONS** & LEVELS BEFORE COMMENCEMENT OF ANY WORK. THIS DRAWING IS NOT TO BE COPIED IN PART OR WHOLE WITHOUT WRITTEN PERMISSION FROM WARREN SMITH

#### GENERAL NOTES:

AND PARTNERS.

- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S STANDARDS AND
- SPECIFICATIONS AS DIRECTED BY THE ENGINEER THE CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORKS WITHIN ADJACENT LANDS WITHOUT THE WRITTEN PERMISSION OF THE LAND OWNER.
- ALL FILLING TO BE COMPACTED TO A MINIMUM 95% OF THE STANDARD MAXIMUM DRY DENSITY AS TESTED IN ACCORDANCE WITH E1.1 OF AS1289 - 1977.
- FILL MATERIAL TO BE APPROVED BY THE CONSTRUCTION ENGINEER. SURPLUS EXCAVATED MATERIAL TO BE PLACED WHERE DIRECTED BY THE ENGINEER.
- ALL DISTURBED TURFED AREAS AND BATTERS TO BE TOPSOILED, TURFED OR SPRAY
- ALL MEASUREMENTS IN METRES UNLESS OTHER NOTED. MEASUREMENTS SHALL BE TAKEN FROM THE FIGURED DIMENSIONS AND ARE NOT TO BE
- SCALED FROM THE DRAWINGS
- PROVISION FOR TRAFFIC CONTROL DURING CONSTRUCTION TO BE IN ACCORDANCE WITH
- DRAINAGE LINES ON PLANS ARE DIAGRAMMATIC ONLY AND PIPE CENTRELINES SHALL ENTER AND EXIT PITS AT THE CENTRE OF THE RESPECTIVE PIT WALLS.
- EROSION AND SEDIMENT CONTROLS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH E.P.A. REQUIREMENTS. CONTRACTOR IS TO CLEAR SITE BY REMOVING ALL SURPLUS SPOIL, RUBBISH, ETC. UTILITY INFORMATION SHOWN ON THE DRAWINGS IS INTENDED TO DEPICT THE PRESENCE
- OF SERVICES ONLY. ACTUAL LOCATION SHOULD BE VERIFIED ON SITE PRIOR TO CONSTRUCTION.

DA ISSUE 17.12.13 DA ISSUE 05.12.13 ISSUE AMENDMENT DATE

#### Warren Smith & Partners Pty Ltd A 1st Floor, 123 Clarence Street, Sydney 2000 NSW Australia

T 02 9299 1312 F 02 9290 1295 É wsp@warrensmith.com.au W www.warrensmith.com.au ABN 36 300 430 126 SERVING THE CONSTRUCTION INDUSTRY **SINCE 1981** 



Consulting Engineers
Hydraulic Services I Civil Engineering I Fire Protection I

Sydney Water Accredited •Water Servicing Co-ordinator ic:OAC/R61/0771 • Design and Project Management

**SMART DESIGN STUDIO 432 BOURKE STREET SURRY HILLS NSW 2010** 

**CENTRAL PARK BLOCK 8 BROADWAY** 

**EROSION AND SEDIMENT CONTROL DETAILS** 

CHECKED APPROVED N.T.S @ A1 N.T.S. @ A3 **ISSUE** OCTOBER 2013 DAH-18 JOB No. 4587000 DA ISSUE

STRAW BALE CHECK DAM DETAILS

CHECK DAM PLAN

0 - 5

5 -10

10 - 15

GREATER

THAN 15

10

UNDISTURBED AREA

-STRAW BALES TIGHTLY ABUTTING TOGETHER.

TYPICAL STRAW BALE LAYOUT PLAN