DOCUMENTATION OF CIVIL WORKS

NEW DEVELOPMENT

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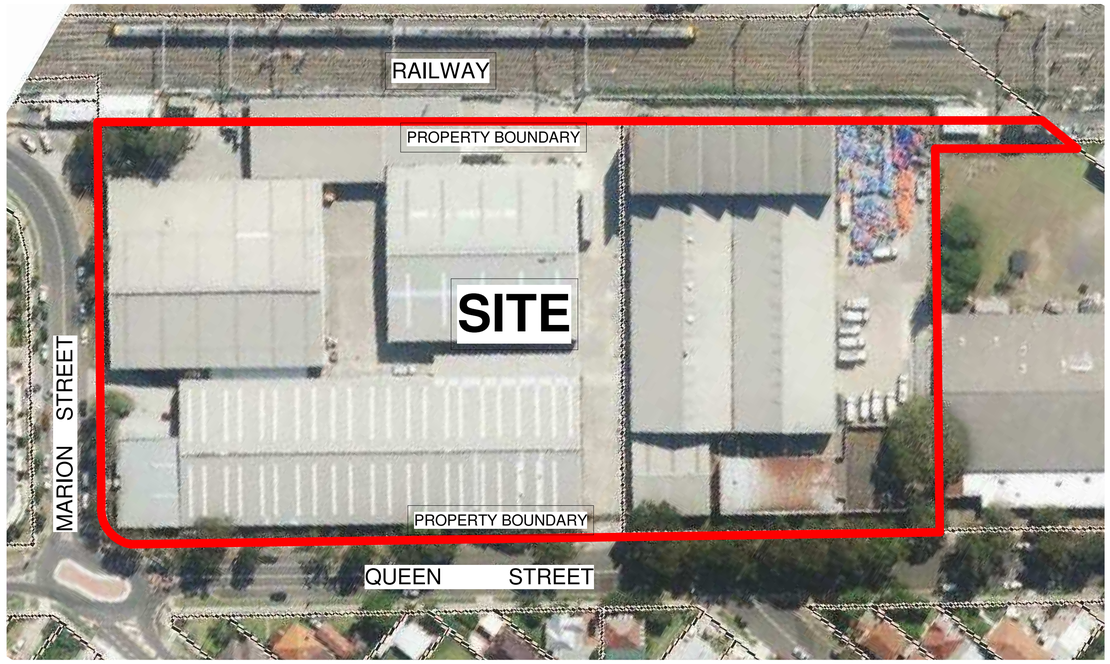

LOCALITY PLAN
NOT TO SCALE

CIVIL DRAWING LIST	
Sheet Number	Sheet Name
SW.00	COVER SHEET
SW.01	GENERAL NOTES
SW.02	EXISTING CATCHMENT PLAN
SW.03	PROPOSED STORMWATER CATCHMENT
SW.04	EXCAVATION PLAN
SW.05	SILT & SEDIMENTATION PLAN
SW.06	SILT & SEDIMENTATION DETAILS
SW.11	STORMWATER CONCEPT PLAN - BASEMENT
SW.12	STORMWATER CONCEPT PLAN - PODIUM SLAB
SW.13	OSD 1 PLAN & SECTIONS
SW.14	OSD 2 PLAN & SECTIONS
SW.15	OSD 3 PLAN & SECTIONS
SW.16	PUMP OUT TANK DETAILS
SW.17	STORMWATER CONCEPT PLAN - TYPICAL LEVEL
SW.18	STORMWATER CONCEPT PLAN - ROOF
SW.21	PODIUM SLAB PARTIAL PLAN -1
SW.22	PODIUM SLAB PARTIAL PLAN -2
SW.23	PODIUM SLAB PARTIAL PLAN -3
SW.40	STORMWATER SECTIONS & DETAILS SHEET 1

STORMWATER NOTES

SW1. STORMWATER DRAINS TO BE RUN TO SUIT THE LOCAL SEWERAGE AND DRAINAGE BOARD, FROM THE STORMWATER DRAINS WITH PIPES AND FITTINGS SET NOT LESS THAN MINIMUM FALLS RECOMMENDED BY THE GOVERNING AUTHORITY, WITH MATERIALS AND LEVELS SHOWN ON THE DRAWINGS AND IN THE SPECIFICATION.

SW2. ALL PIPES SHALL BE UPVC 100mm DIAMETER U.N.O. IN ACCORDANCE WITH AS3500.3 NATIONAL PLUMBING AND DRAINAGE CODE, PART 3: STORMWATER DRAINAGE.

SW3. ALL PIPES TO BE UPVC OR CONCRETE AS NOTED AND IN ACCORDANCE WITH AS3500.3 NATIONAL PLUMBING AND DRAINAGE CODE, PART 3: STORMWATER DRAINAGE.

SW4. ALL UPVC PIPES TO BE INSTALLED IN ACCORDANCE WITH AUSTRALIAN STANDARD AS2032.

SW5. ALL PIPES SHALL BE LAID AT A MINIMUM GRADE OF 1 IN 100 U.N.O.

SW6. ARROWS INDICATE THE DIRECTION OF GRADE.

SW7. ALL FOOTPATH AND DRIVEWAY CROSSINGS SHALL BE TO LOCAL COUNCIL REQUIREMENTS.

SW8. ALL LEVELS ARE APPROXIMATE ONLY AND SHALL NEED TO BE CONFIRMED PRIOR TO CONSTRUCTION.

SW9. ALL EXISTING LEVELS ARE SHOWN AS A SPOT LEVEL OR A CONTOUR WITHOUT ANY PREFIX OR DESCRIPTION.
LEVEL DESCRIPTIONS ARE AS FOLLOWS;
FL - FLOOR LEVEL
SL - SURFACE LEVEL
IL - INVERT LEVEL
ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM (AHD) U.N.O.

SW10. MINIMUM COVER TO UPVC STORMWATER PIPES SHALL BE; TRAFFICABLE AREAS - 450 mm
LANDSCAPE AREAS - 300 mm
COVER IS MEASURED VERTICALLY FROM THE TOP OF THE PIPE TO THE FINISHED SURFACE LEVEL.
PIPES TO BE PROTECTED BY CONCRETE ENCASEMENT TO ENGINEERS APPROVAL IF MINIMUM COVER CANNOT BE ACHIEVED.

SW11. CONNECTION OF UPVC TO PRECAST PITS TO BE BY TREATING THE PIPE WITH PVC GLUE AND SEAL WITH A 3:1 SAND CEMENT MORTAR.

SW12. ALL CONCRETE PIPES AND ASSOCIATED ELEMENTS SHALL BE MANUFACTURED AND PROVIDED WITH A STRENGTH CLASSIFICATION IN ACCORDANCE WITH AS4058, PRECAST CONCRETE PIPES (PRESSURE AND NON-PRESSURE).

SW13. ALL CONCRETE PIPES AND ASSOCIATED ELEMENTS SHALL BE INSTALLED IN ACCORDANCE WITH AS3725, LOADS ON BURIED CONCRETE PIERS AND AS3500.3 NATIONAL PLUMBING AND DRAINAGE CODE, PART 3: STORMWATER DRAINAGE.

SW14. "K" ON PLAN DENOTES KERB AS DETAILED WITH "T.O.K" DENOTING LEVEL FOR TOP OF KERB FOR DATUM INDICATED.

SW15. PITS SHALL BE OF A SIZE AS SHOWN OR NOTED WITH GALVANISED GRATED COVERS OR AN APPROVED EQUIVALENT. ALL PITS IN BARKED OR WOODCHIP LANDSCAPED AREAS SHALL HAVE COVERS OR STANDARD COVERS MODIFIED TO ENSURE DEBRIS DOES NOT ENTER STORMWATER SYSTEM.

REFERENCE DOCUMENTS

1. SURVEY DRAWING PREPARED BY:

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   DATED: 25 NOVEMBER 2015

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COVER SHEET

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.00	B

GENERAL

G1. THESE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL OTHER RELEVANT DOCUMENTS INCLUDING ALL WORKING DRAWINGS AND SPECIFICATIONS, AND WRITTEN INSTRUCTIONS AS MAY BE ISSUED PRIOR TO OR DURING THE COURSE OF CONSTRUCTION. ALL DISCREPANCIES AND VARIATIONS SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.

G2. ALL STRUCTURAL WORK SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL RELEVANT AND CURRENT RMS SPECIFICATIONS/CODES.

G3. STRUCTURAL DRAWINGS SHALL NOT BE SCALED IN ORDER TO OBTAIN DIMENSIONS. DIMENSIONS WHERE SHOWN ON STRUCTURAL DRAWINGS SHALL BE CO-ORDINATED WITH ALL OTHER RELEVANT DRAWINGS.

G4. DURING CONSTRUCTION, THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PART SHALL BE OVERSTRESSED.

CONSTRUCTION NOTES

GENERAL

1. NOT ALL TACKCOATS AND CURING COMPOUNDS ARE SHOWN ON THESE DRAWINGS.
2. DRAWINGS TO BE READ IN CONJUNCTION WITH TECHNICAL GUIDE P-G-002.

ASPHALT

3. AS PER R116, EACH ASPHALT COURSE DEPTH MUST ALLOW FOR INDIVIDUAL ASPHALT LAYER THICKNESSES. THE RANGE OF ALLOWABLE ASPHALT LAYER THICKNESS DURING PAVING IS LISTED IN TABLE 3.1
4. ONLY DENSE GRADED ASPHALT AND STONE MASTIC ASPHALT LAYERS ARE INCLUDED IN THE 175 mm MINIMUM ASPHALT THICKNESS OVER LEAN-MIX CONCRETE OR HEAVILY BOUND MATERIAL. SPRAYED SEALS AND OPEN GRADED ASPHALT WEARING COURSE LAYERS ARE NOT TO BE CONSIDERED AS CONTRIBUTING TO THE 175 mm MINIMUM THICKNESS.

GRANULAR

5. AS PER R71, EACH COURSE THICKNESS IS TO COMPRISE COMPACTED LAYERS THAT ARE NOT MORE THAN 150 mm OR LESS THAN 100 mm THICK (A SPECIFIED COURSE THICKNESS OF 150 - 200 mm DOES NOT COMPLY).

PRIMERSEAL, SPRAYED SEAL AND LOW CUTTER SEAL

6. FOR ASPHALT OVER UNBOUND GRANULAR MATERIAL, REFER TO TECHNICAL GUIDE P-G-002.
7. USE THE AVERAGE LEAST DIMENSION (ALD) OF SEALING AGGREGATE TO DETERMINE THE CONTRIBUTION OF A SPRAYED SEAL THICKNESS TO THE TOTAL PAVEMENT THICKNESS.
8. A LOW CUTTER SEAL IS TO BE PROVIDED AT ALL LOCATIONS WHERE A SPRAYED SEAL IS TO BE PLACE DIRECTLY UNDER AN ASPHALT LAYER.
9. THE APPLICATION OF A LOW CUTTER SEAL IS AS FOLLOWS:
   - AGGREGATE SPREAD RATE FOR 10 mm AGGREGATE AS PER RMS FORM 395K, AGGREGATE DESIGN. AGGREGATE SPREAD RATEFOR 7 mm AGGREGATE IS BETWEEN 200 - 230 m²/m³
   - A MAXIMUM OF 2% CUTTER OIL MAY BE USED
   - USE 1% ADHESION AGENT
   - DOUBLE THE AMOUNT OF ROLLING FOR A SPRAYED SEAL
   - TO BE PLACED IN ACCORDANCE WITH R106.
10. A 7 mm SPRAYED SEAL IS TO BE PROVIDED OVER THE SMZ LAYER, EXCEPT AT THE FOLLOWING LOCATIONS:
    (a) DIRECTLY UNDER AN ASPHALT LAYER, WHERE A LOW CUTTER SEAL IS TO BE PROVIDED
    (b) DIRECTLY UNDER A GRANULAR LAYER (AS APPROVED BY THE PRINCIPAL)
11. FINAL SPRAYED SEAL IS TO BE APPLIED 12 MONTHS AFTER APPLICATION OF PRIMERSEAL. PAVEMENT DESIGNER TO NOMINATE FINAL SPRAYED SEAL TYPE.

BITUMINOUS CURING COMPOUND OVER CONCRETE PAVEMENT

12. IF A NON-BITUMINOUS CURING COMPOUND IS USED AS PER R83, IT IS TO BE REMOVED IMMEDIATELY PRIOR TO THE APPLICATION OF A BITUMINOUS QUICK DRYING PRIME, FOLLOWED BY A SPRAYED SEAL OR ASPHALT LAYER.

BITUMINOUS WATERPROOFING MEMBRANE

13. APPLY BITUMINOUS WATERPROOFING MEMBRANE IN ACCORDANCE WITH B344.

DEBONDING TREATMENT

14. APPLY DEBONDING TREATMENT FOR CONCRETE IN ACCORDANCE WITH R82.

BITUMINOUS PRIMER OVER BRIDGE DECK OR APPROACH SLAB

15. APPLY BITUMINOUS PRIMER IN ACCORDANCE WITH B344.

REFERENCES

RMS 3051:GRANULAR BASE AND SUBBASE MATERIALS FOR SURFACED ROAD PAVEMENTS
RMS B80: CONCRETE WORK FOR BRIDGES
RMS B344:SPRAYED BITUMINOUS WATERPROOFING MEMBRANE FOR CONCRETE BRIDGE DECKS
RMS R44: EARTHWORKS
RMS R71: CONSTRUCTION OF UNBOUND AND MODIFIED PAVEMENT COURSE
RMS R73: CONSTRUCTION OF PLANT MIXED HEAVILY BOUND PAVEMENT COURSE
RMS R82: LEAN-MIX CONCRETE SUBBASE
RMS R83: CONCRETE PAVEMENT BASE
RMS R106:SPRAYED BITUMINOUS SURFACING (WITH CUTBACK BITUMEN)
RMS R116:HEAVY DUTY DENSE GRADED ASPHALT
RMS R119:OPEN GRADED ASPHALT
RMS R121:STONE MASTIC ASPHALT
RMS FORM 395K:SEAL OR RESEAL DESIGN CALCULATION SHEET
RMS TECHNICAL GUIDE P-G-002 TYPICAL PAVEMENT PROFILES
RMS R141: PAVEMENT MARKING
RMS R53: CONCRETE (FOR GENERAL USE), MORTAR AND GROUT
RMS R15: KERBS AND GUTTERS
RMS Q4: QUALITY MANAGEMENT SYSTEM (TYPE 4)

CONCRETE

C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH RMS R83,R53 EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.

C2. CONCRETE COMPOSITION AND CLEAR COVER TO REINFORCEMENT SHALL BE AS FOLLOWS:

ELEMENT	AS 3600 f'c MPa	COVER mm.
FOOTINGS	20	65
ALL - UNO. PAVEMENT	40	40
KERB & GUTTER	32	-

ADMIXTURES, WHERE USED, SHALL COMPLY WITH THE REQUIREMENTS OF RMS R83.

C3. ALL CONCRETE SUPPLY & TESTING SHALL CONFORM WITH RMS R83.

C4. CONSTRUCTION JOINTS SHALL BE PROPERLY FORMED AND USED ONLY WHERE SHOWN ON DRAWINGS OR SPECIFICALLY APPROVED BY THE ENGINEER.

C5. NO HOLES, CHASES OR EMBEDMENTS OF PIPES, OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS, SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.

C6. ALL CONCRETE SHALL BE PLACED AND CURED IN ACCORDANCE WITH RMS R83.

C7. HORIZONTAL FORMWORK SHALL BE STRIPPED WHEN APPROVED BY THE ENGINEER.

C8. SLABS AND BEAMS SHALL BEAR ONLY ON THE BEAMS, WALLS ETC. SHOWN ON THE STRUCTURAL DRAWINGS. ALL OTHER BUILDING ELEMENTS SHALL BE KEPT 15mm CLEAR OF SOFFITS OF STRUCTURAL ELEMENTS.

C9. COMPLETED STRUCTURAL ELEMENTS SHALL CONFORM WITH THE SHAPES, LINES, LEVELS, GRADES AND DIMENSIONS REQUIRED BY THE CONTRACT DRAWINGS.

C10. ALL CONCRETE REINFORCEMENT SHALL CONFORM WITH AS/NZS 4671, DUCTILITY GRADE: CLASS N. NO REINFORCEMENT SHALL BE WELDED WITHOUT PRIOR APPROVAL.

C11. R = STRUCTURAL GRADE ROUND BAR
N = "TEMPCORE" DEFORMED BAR
F = HARD DRAWN STEEL WIRE REINFORCING FABRIC
DESIGNATION CODE OF REINFORCEMENT BARS:-

NO. OF BARS — BAR GRADE AND TYPE
14 N16-300
NOMINAL BAR SIZE — SPACING IN mm

UNO - UNLESS NOTED OTHERWISE.
NSOP - NOT SHOWN ON PLAN.
LV - LENGTH VARIES.

C12. TRANSVERSE TIE BARS N12-300, WHERE NOT OTHERWISE SHOWN. SPLICE WHERE NECESSARY AND LAP WITH MAIN BARS 400mm.

C13. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS SHOWN ON THE STRUCTURAL DRAWINGS OR IN POSITIONS OTHERWISE APPROVED IN WRITING BY THE PRINCIPAL. LAPS SHALL BE IN ACCORDANCE WITH AS3600 AND NOT LESS THAN THE DEVELOPMENT FOR EACH BAR. SITE BENDING OF REINFORCING BARS SHALL BE DONE WITHOUT HEATING USING MECHANICAL BENDING TOOLS. WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE STRUCTURAL ENGINEER. FABRICS SHALL BE LAPPED 2 RANSVERSE WIRES PLUS 50mm. BUNDLED BARS SHALL BE TIED TOGETHER AT 30 BAR DIAMETER CENTRES WITH THREE WRAPS OF TIE WIRE.

C14. REINFORCEMENT IS SHOWN DIAGRAMMATICALLY. IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.

C15. ALL REINFORCEMENT SHALL BE MAINTAINED IN POSITION DURING CONCRETING.

QUALITY ASSURANCE

1. THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN A QUALITY ASSURANCE SYSTEM MEETING THE REQUIREMENTS OF RMS Q4 BE SUCH THAT RECORDS ARE KEPT OF ALL ASPECTS AND STAGES OF THE WORK.
2. THE RECORDS FOR EACH CONSTRUCTION TASK SHALL BE STAGED AND ITEMISED TO THE SATISFACTION OF THE CONTRACTOR ADMINISTRATOR. THE PROFORMAS FOR RECORDS SHALL BE SUBMITTED TO THE CONTRACTOR ADMINISTRATOR FOR APPROVAL AND WORK SHALL NOT COMMENCE UNTIL SUCH APPROVAL HAS BEEN GIVEN.
3. DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN ACCURATE AND UP TO DATE RECORDS AND SHALL MAKE SUCH RECORDS AVAILABLE TO THE CONTRACTOR ADMINISTRATOR IF REQUESTED. FAILURE TO MAINTAIN RECORDS AS SPECIFIED WILL RESULT IN THE CONTRACTOR RE-INSPECTING COMPLETED WORKS IF INSTRUCTED TO DO SO BY THE CONTRACTOR ADMINISTRATOR.
4. AT THE COMPLETION OF EACH STAGE OF THE WORKS THE CONTRACTOR SHALL CERTIFY THAT THOSE WORKS HAVE BEEN UNDERTAKEN AND COMPLETED IN ACCORDANCE WITH THE DRAWINGS, SPECIFICATION AND INSTRUCTIONS ISSUED DURING THE COURSE OF THE CONTRACT.

ASPHALTIC CONCRETE NOTES

GENERAL

1. MINERAL AGGREGATES TO COMPLY WITH CLAUSE 2.1 - MATERIALS OF RMS SPECIFICATION R116 "ASPHALT (DENSE AND OPEN GRADED)".
2. MINERAL FILLER TO COMPLY WITH AS 2357 (LATEST EDITION) MINERAL FILLERS FOR ASPHALT AND CLAUSE 2.1.2 - FILLER OF RMS SPECIFICATION R116 "ASPHALT (DENSE AND OPEN GRADED)".
3. BITUMEN BINDER SHALL COMPLY WITH CLAUSE 2.1.3 - BINDER OF RMS SPECIFICATION R116 - "ASPHALT (DENSE AND OPEN GRADED)".

MIX PROPORTIONS

1. JOB MIX - 10mm AND 20mm (AS SPECIFIED ON DRAWINGS) NOMINAL SIZE AGGREGATE MINIMUM BITUMEN CONTENT (%) BY MASS OF TOTAL MASS - 5.1%.
2. AIR VOIDS IN COMPACTED MIX - BETWEEN 4% AND 7% OF THE VOLUME OF THE MIX.
3. VOIDS FILLED IN BINDER - 65-80% OF AIR VOIDS IN THE TOTAL MINERAL AGGREGATE FILLED BY BINDER IN ACCORDANCE WITH RMS TEST METHOD T605 AND T607.

PAVEMENT PREPARATION

1. THE EXISTING SURFACE TO BE SEALED SHALL BE DRY AND BROOMED BEFORE COMMENCEMENT OF WORK TO ENSURE COMPLETE REMOVAL OF ALL SUPERFICIAL FOREIGN MATTER.
2. ALL DEPRESSIONS OR UNEVEN AREAS ARE TO BE TACK-COATED AND BROUGHT UP TO GENERAL LEVEL OF PAVEMENT WITH ASPHALTIC CONCRETE BEFORE LAYING OF MAIN COURSE.

TACK COAT

1. THE WHOLE OF THE AREA TO BE SHEETED WITH ASPHALTIC CONCRETE SHALL BE LIGHTLY AND EVENLY COATED WITH RAPID SETTING BITUMEN COMPLYING WITH RMS SPECIFICATIONS 3252, 3253, 3254, 3259 AND 3269. APPLICATION RATE FOR RESIDUAL BITUMEN SHALL BE 0.15 TO 0.30 LITRES/SQUARE METRE. APPLICATION SHALL BE BY MEANS OF A MECHANICAL SPRAYER WITH SPRAY BAR.

SPREADING

1. ALL ASPHALTIC CONCRETE SHALL BE SPREAD WITH A SELF PROPELLED PAVING MACHINE.
2. THE ASPHALTIC CONCRETE SHALL BE LAID AT A MIX TEMPERATURE AS SHOWN BELOW: ROAD SURFACE TEMPERATURE IN SHADE A(°C), MIX TEMPERATURES (°C)
   5-10°C: NOT PERMITTED
   10-15°C: 150°C
   15-25°C: 145°C
   OVER 25°C: 140°C
3. ASPHALTIC CONCRETE SHALL NOT BE LAID WHEN THE ROAD SURFACE IS WET OR WHEN COLD WINDS CHILL THE MIX TO ADVERSELY AFFECT SPREADING AND COMPACTION.

JOINTS

1. THE NUMBER OF JOINTS BOTH LONGITUDINAL AND TRANSVERSE SHALL BE KEPT TO A MINIMUM.
2. THE DENSITY AND SURFACE FINISH AT JOINTS SHALL BE SIMILAR TO THOSE OF THE REMAINDER OF THE LAYER.

COMPACTION

1. ALL COMPACTION SHALL BE UNDERTAKEN USING SELF PROPELLED ROLLERS.
2. INITIAL ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 105°C.
3. SECONDARY ROLLING SHALL BE COMPLETED BEFORE THE MIX TEMPERATURE FALLS BELOW 60°C USE PNEUMATIC TYRED ROLLER.
4. MINIMUM CHARACTERISTICS VALUE OF RELATIVE COMPACTION OF A LOT WHEN TESTED IN ACCORDANCE WITH CLAUSE 4.9 - COMPACTION OF RMS SPECIFICATION 116 "ASPHALT (DENSE AND OPEN GRADED)" SHALL BE 95%.

FINISHED PAVEMENT PROPERTIES

1. FINISHED SURFACES SHALL BE SMOOTH DENSE AND TRUE TO SHAPE AND SHALL NOT VARY MORE THAN 10MM FROM THE SPECIFIED PLAN LEVEL AT ANY POINT AND SHALL NOT DEVIATE FROM THE BOTTOM OF A 3M STRAIGHT EDGE LAID IN ANY DIRECTION BY MORE THAN 5MM.

EARTHWORKS

1. THE CONTRACTOR SHALL PROVIDE PROPER FENCING, GUARDING, LIGHTING AND OBSERVATION OF ALL EARTHWORKS, TEMPORARY ROADWAYS, FOOTWAYS, GUARDS AND FENCES AS MAY BE RENDERED NECESSARY FOR THE ACCOMMODATION AND PROTECTION OF PEDESTRIANS, VEHICLES, ANIMALS AND THE PUBLIC.
2. DURING THE EXECUTION OF WORKS, THE CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF EXISTING SERVICES. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED TO THE EXISTING SERVICES TO THE SATISFACTION OF THE SUPERINTENDENT AND THE RELEVANT SERVICE AUTHORITY, AT NO COST TO THE PRINCIPAL.
3. WHERE IT IS NECESSARY TO REMOVE, DIVERT OR CUT INTO ANY EXISTING SERVICE, THE CONTRACTOR SHALL GIVE AT LEAST THREE (3) DAYS NOTICE OF ITS REQUIREMENTS TO THE SUPERINTENDENT, WHO WILL ADVISE WHAT ARRANGEMENTS SHOULD BE MADE FOR THE ALTERATION OF SUCH EXISTING WORKS
4. THE EXCAVATION SHALL BE CARRIED OUT IN THE LOCATIONS SHOWN AND TO THE LEVELS, WIDTHS AND BATTER SLOPES INDICATED ON THE DRAWINGS.
5. EXCAVATED MATERIAL NOT MEETING THE SPECIFICATION FOR FILL MATERIAL SHALL BE DISPOSED OF OFF SITE IN AN APPROPRIATE MANNER.
6. WHERE EXCAVATION WORK IS REQUIRED IN THE VICINITY OF EXISTING SERVICES, THE CONTRACTOR SHALL SUPPORT ALL SERVICES DURING THE WORKS.
7. WHERE EXCAVATED MATERIAL IS TO BE USED FOR FILLING, THE MATERIAL SHALL BE INSPECTED AND APPROVED BY THE SUPERINTENDENT PRIOR TO USE.
8. UNLESS SPECIFIED OTHERWISE ALL FILL SHALL BE COMPACTED TO A STANDARD MAXIMUM DRY DENSITY RATIO BETWEEN 98% - 102% MAXIMUM AT -1% TO +3% OF STANDARD OPTIMUM MOISTURE CONTENT AS DETERMINED BY AS1289.5.4.1 (LATEST ADDITION)
9. ALL WASTE MATERIALS SHALL BE DISPOSED OFF-SITE IN AN APPROPRIATE MANNER.
10. WHERE ROCK IS EXPOSED DURING EXCAVATION, THE CONTRACTOR SHALL CEASE EXCAVATION AT THIS LOCALITY AND CONTACT THE SUPERINTENDENT WHO WILL THEN ADVISE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
11. THE CONTRACTOR SHALL AT ITS OWN EXPENSE DO ALL THINGS NECESSARY TO DIVERT ANY WATER INTERFERING WITH THE PROGRESS OF WORKS, KEEP THE EXCAVATIONS AND TRENCHES FREE FROM WATER WHILE THE WORKS ARE IN PROGRESS AND PREVENT ANY DAMAGE TO THE WORKS BY WATER DUE TO FLOODS OR OTHER CAUSES. THE CONTRACTOR SHALL HAVE PUMPING EQUIPMENT FOR KEEPING THE EXCAVATION OR TRENCHES CONSTANTLY DEWATERED DURING THE TIMES THE WORKS ARE IN PROGRESS. ANY WORK OR MATERIAL DAMAGED BY WATER SHALL BE MADE GOOD BY THE CONTRACTOR.
12. WHERE DIRECTED BY THE SUPERINTENDENT THE BOTTOM OF TRENCHES OR EXCAVATIONS SHALL BE COMPACTED PRIOR TO THE PLACING OF ANY BEDDING OR CONCRETE MATERIALS.SHOULD, IN THE OPINION OF THE SUPERINTENDENT, THE FOUNDATION MATERIAL BE INCAPABLE OF EFFECTIVE COMPACTION, THE MATERIAL SHALL BE REMOVED AND REPLACED WITH APPROPRIATE MATERIAL.

GENERAL COMPACTION NOTES

1. FOUNDATION MATERIAL DEEMED BY THE SUPERINTENDENT AS UNSUITABLE TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.
2. UNLESS OTHERWISE APPROVED OR SPECIFIED. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE SUPERINTENDENT AND SHALL COMPLY WITH THE FOLLOWING:
   A) FREE FROM ORGANIC AND PERISHABLE MATTER
   B) MAXIMUM PARTICLE SIZE 75MM
   C) PLASTICITY INDEX BETWEEN 2% AND 20%
   D) CBR > 10
3. SELECT FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200MM LOOSE THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289E3.1 OF NOT LESS THAN THE FOLLOWING STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289E1.1:
4. LOCATION STANDARD DRY DENSITY
   -AREAS OF SERVICE TRENCHES 98%
   -EMBANKMENTS 100%
   -LANDSCAPED AREAS 90%
   -CONCRETE FOUNDATIONS 100%
5. THE CONTRACTOR SHALL PROGRAMME THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS. ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED BY THE CONTRACTOR AT HIS COST.
6. COMPACTION CONTROL TESTING SHALL BE CARRIED OUT BY AND AT THE COST OF THE CONTRACTOR TO CONFORM WITH LEVEL 1. AS DEFINED IN AS3798 (LATEST EDITION).

FILL

1. FOUNDATION MATERIAL DEEMED BY THE SUPERINTENDENT AS UNSUITABLE TO BE REMOVED AS DIRECTED BY THE SUPERINTENDENT AND REPLACED WITH APPROVED MATERIAL SATISFYING THE REQUIREMENTS LISTED BELOW.
2. UNLESS OTHERWISE APPROVED OR SPECIFIED. ALL FILL MATERIAL SHALL BE FROM A SOURCE APPROVED BY THE SUPERINTENDENT AND SHALL COMPLY WITH THE FOLLOWING:
   A) FREE FROM ORGANIC AND PERISHABLE MATTER
   B) MAXIMUM PARTICLE SIZE 75MM
   C) PLASTICITY INDEX BETWEEN 2% AND 20%
   D) CBR > 10
3. SELECT FILL MATERIAL SHALL BE PLACED IN MAXIMUM 200MM LOOSE THICK LAYERS AND COMPACTED AT OPTIMUM MOISTURE CONTENT (+ OR - 2%) TO ACHIEVE A DRY DENSITY DETERMINED IN ACCORDANCE WITH AS1289E3.1 (LATEST EDITION) OF NOT LESS THAN THE FOLLOWING STANDARD MAXIMUM DRY DENSITY IN ACCORDANCE WITH AS1289E1.1 (LATEST EDITION):
   LOCATION STANDARD DRY DENSITY
   -AREAS OF SERVICE TRENCHES 98%
   -ROAD AND CARPARKS 100%
   -LANDSCAPED AREAS 90%
4. THE CONTRACTOR SHALL PROGRAMME THE EARTHWORKS OPERATION SO THAT THE WORKING AREAS ARE ADEQUATELY DRAINED DURING THE PERIOD OF CONSTRUCTION. THE SURFACE SHALL BE GRADED AND SEALED OFF TO REMOVE DEPRESSIONS. ROLLER MARKS AND SIMILAR WHICH WOULD ALLOW WATER TO POND AND PENETRATE THE UNDERLYING MATERIAL. ANY DAMAGE RESULTING FROM THE CONTRACTOR NOT OBSERVING THESE REQUIREMENTS SHALL BE RECTIFIED BY THE CONTRACTOR AT HIS COST.
5. COMPACTION CONTROL TESTING SHALL BE CARRIED OUT BY AND AT THE COST OF THE CONTRACTOR TO CONFORM WITH LEVEL 1, AS DEFINED IN AS3798 (LATEST EDITION).
6. REPLACEMENT SUBGRADE MATERIAL MAY COMPRISE GRANULAR FILL MATERIAL AND SHOULD HAVE A CBR OF AT LEAST 10%. REPLACEMENT SUBGRADE FILL SHALL BE PLACED ON PROOF ROLLED SUBGRADE IN HORIZONTAL LAYERS OF 200MM TO 250MM MAXIMUM LOOSE THICKNESS (DEPENDING ON THE SIZE OF THE EQUIPMENT) AND COMPACTED TO A MINIMUM DRY DENSITY RATIO (MDDR) OF 98% STANDARD, AT MOISTURE CONTENT WITHIN 2% OF OPTIMUM MOISTURE CONTENT.
7. WHERE EXCAVATED MATERIAL IS TO BE USED FOR FILLING, THE MATERIAL SHALL BE INSPECTED AND APPROVED BY THE SUPERINTENDENT PRIOR TO USE.

SIGNAGE & LINEMARKING

1. ALL SIGNAGE & LINEMARKING TO BE IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARD & RMS SPECIFICATION.

LANDSCAPING (PUBLIC ROAD RESERVE)

1. ALL LANDSCAPING TO BE UNDERTAKEN IN ACCORDANCE WITH THE REQUIREMENTS OF ASHFIELD COUNCIL.
2. FOR DETAILS OF ALL LANDSCAPING REFER TO DRAWINGS BY HASSELL.

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BY	CHKD	DESCRIPTION	DATE	REV

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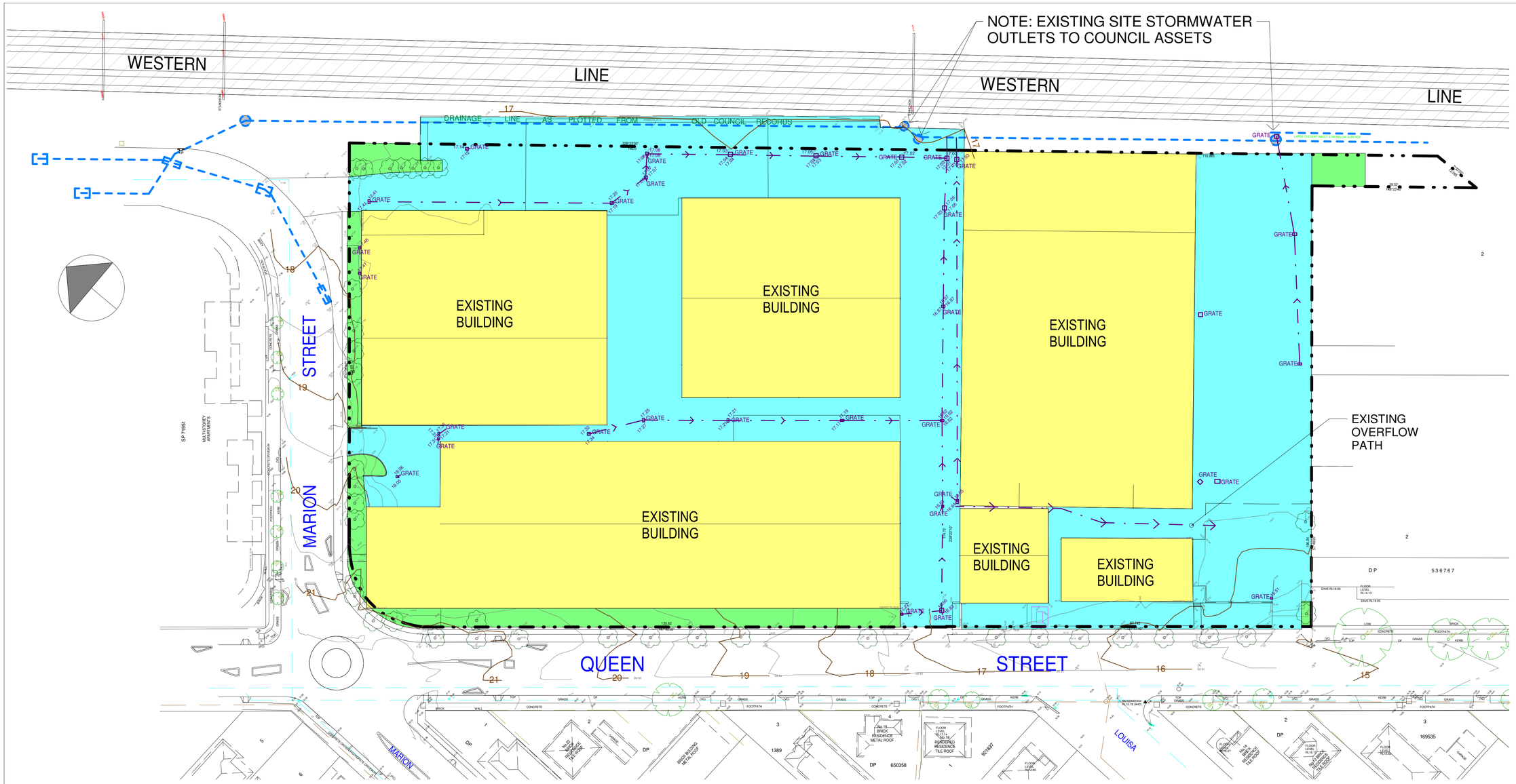
PROJECT
1A QUEEN STEET, AUBURN

GENERAL NOTES

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE 1 : 1	DATE MAY 2017	SW.01	A



EXISTING SITE & STORMWATER ARRANGEMENT

SCALE 1:500 @A1

LEGEND

- SITE BOUNDARY
- EXISTING STORMWATER DRAINAGE LINE (PLOTTED FROM OLD COUNCIL RECORDS)
- EXISTING SITE DRAINAGE EVIDENT IN PAVING
- + XX.XX EXISTING LEVEL FROM SURVEY

FOR EXISTING SERVICES REFER SURVEY DRAWING PREPARED BY LTS LOCKLEY (AS LISTED IN REFERENCE DOCUMNENTS)

NOTES:

- SITE AREA 2.687 Ha
- SITE COVERAGE (HARD SURFACE)
  ROOF 16180 m²
  CONCRETE PAVING 10232.5 m²
  INCLUDES PAVING & BUILDING BEYOND SITE IN RAILWAY PROPERTY 900 m²
- BLUE INDICATES CONCRETE HARDSTAND.
- YELLOW INDICATES STEEL ROOF BUILDINGS.
- GREEN INDICATES PLANTS (1150 m² APPROX)

REFERENCE DOCUMENTS

1. SURVEY DRAWING PREPARED BY:

   Higgins Surveyors
   Ph. +61 2 9264 8044
   REF No. 02254
   DATED: 31-03-10

   & LTS LOCKLEY
   Ph. +61 1300 587 000
   REF No. 41954DT
   DATED: 08/05/15

2. GEOTECHNICAL ENG. REPORT BY:

   COFFEY GEOTECHNICS
   Ph. +61 2 9406 1000
   REPORT NO: GEOTLCOV25566AA-AB
   DATED: 25 NOVEMBER 2015

3. ARCHITECTURAL DRAWINGS BY:

   AJ + C
   Ph. +61 2 9311 8222
   Project No: 15011

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EXISTING CATCHMENT PLAN

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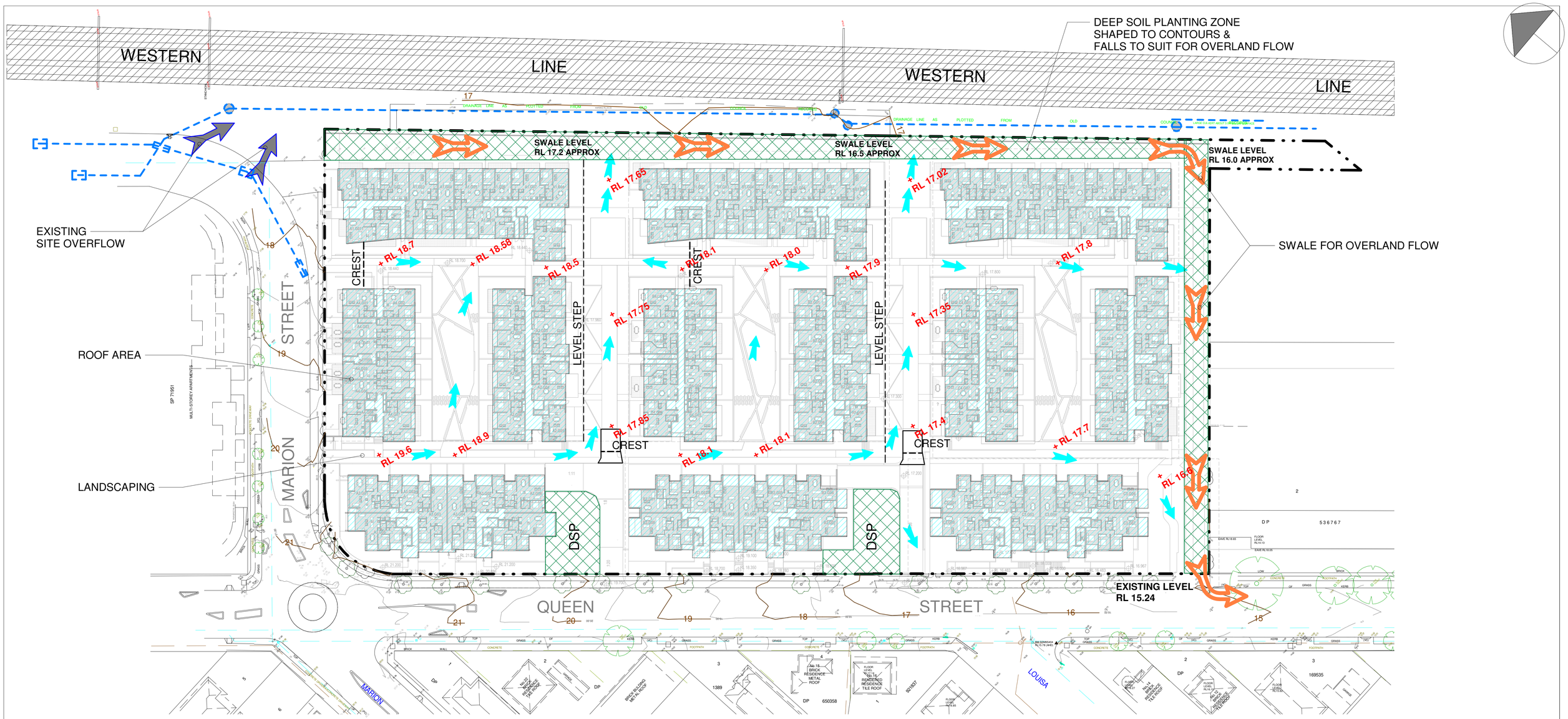
CHKD.			
APPRD.		DRAWING NO. SW.02	REV B
A1	SCALE As indicated	DATE MAY 2017	

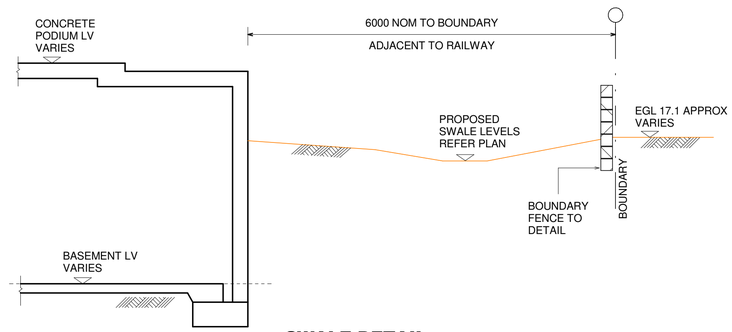


PROPOSED STORMWATER CATCHMENT - OVERLAND FLOW PATHS

SCALE 1:500 @A1

LEGEND

- SITE BOUNDARY
- EXISTING STORMWATER DRAINAGE LINE (PLOTTED FROM OLD COUNCIL RECORDS)
- DEEP SOIL PLANTING (DSP)
  SURFACE AREA: 2800 m²
- + RL ----- PROPOSED SURFACE LEVEL
- ROOF AREAS



SWALE DETAIL

SCALE 1:50@A1

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PROPOSED STORMWATER CATCHMENT

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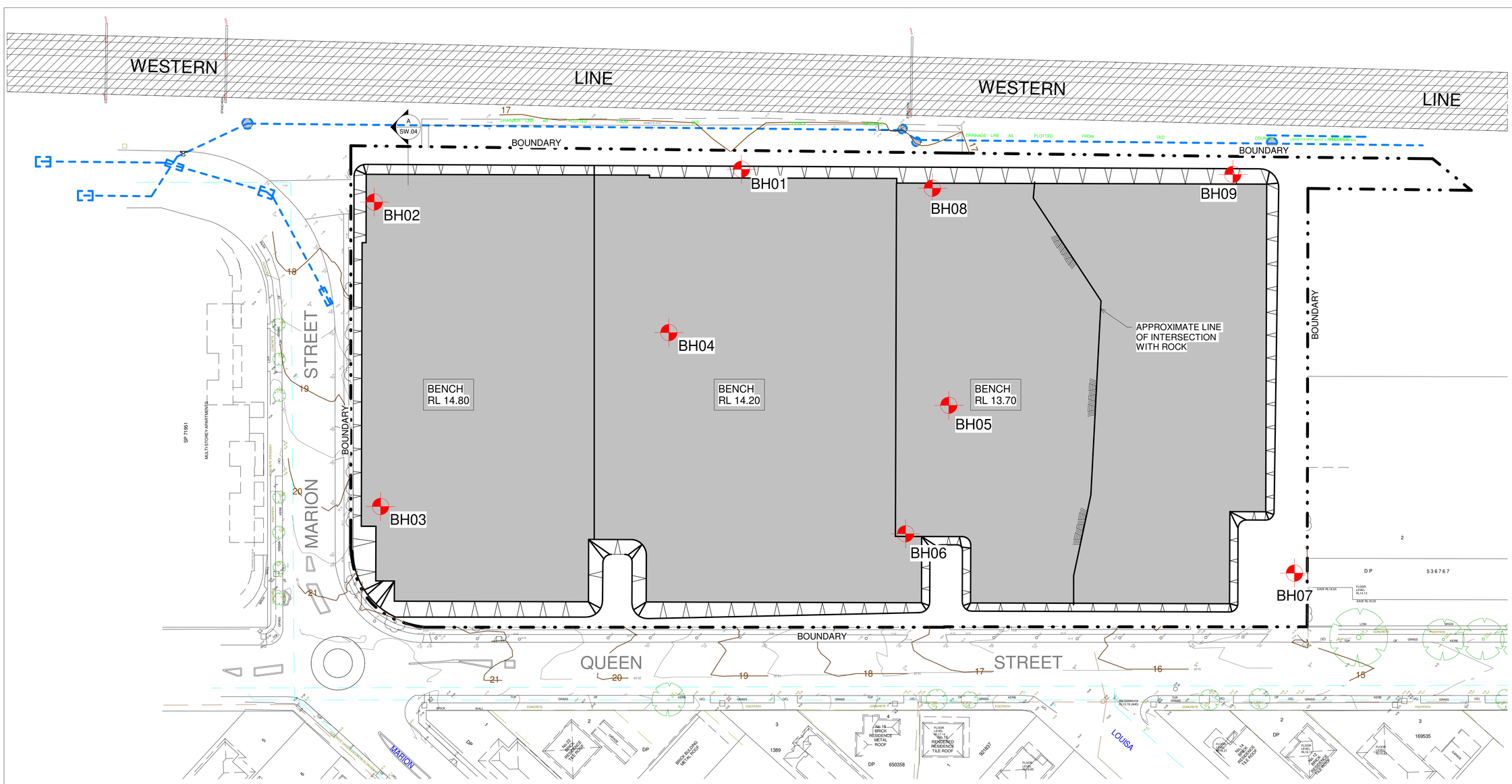
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.03	B



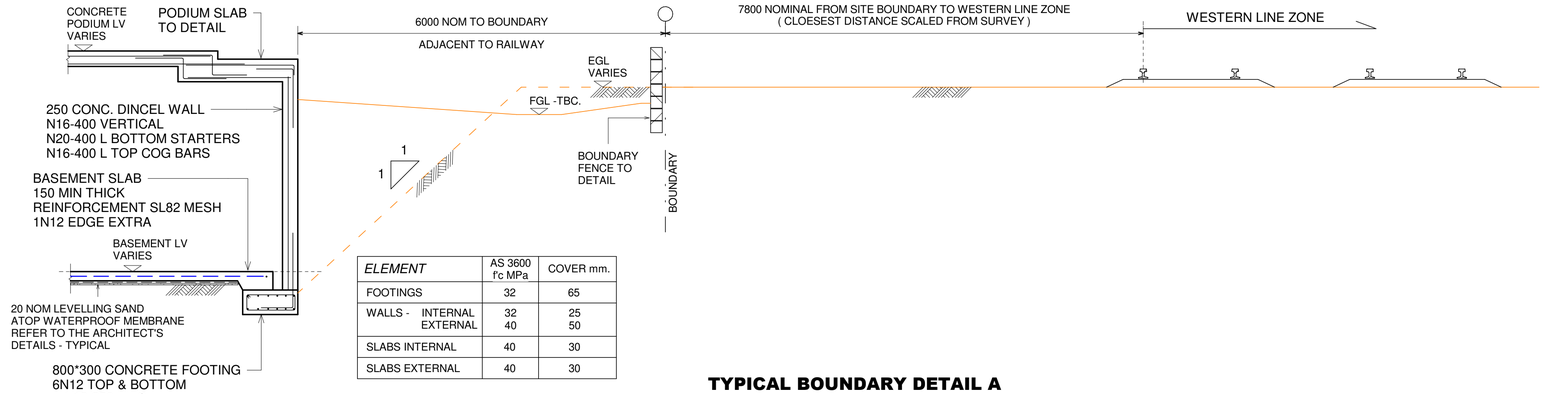
EXCAVATION PLAN

SCALE 1:500 @A1

DENOTES BOREHOLE LOCATION.
REFER GEOTECHNICAL REPORT/S FOR DETAILS.
(REFERENCE DOCUMENTS LIST ON DRAWING CV.01)

APPROXIMATE CLASS III SANDSTONE RL FOR BOREHOLE
1 - 15.30
2 - 15.10
3 - 17.20
4 - 15.70
5 - 15.50
6 - 15.70
7 - 11.10
8 - 14.50
9 - 12.10

EARTHWORK SCHEDULE	
WORK	VOLUME, m^3
CUT	70490
FILL	0



ELEMENT	AS 3600 f'c MPa	COVER mm.
FOOTINGS	32	65
WALLS - INTERNAL	32	25
EXTERNAL	40	50
SLABS INTERNAL	40	30
SLABS EXTERNAL	40	30

TYPICAL BOUNDARY DETAIL A

SCALE 1:50@A1

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EXCAVATION PLAN

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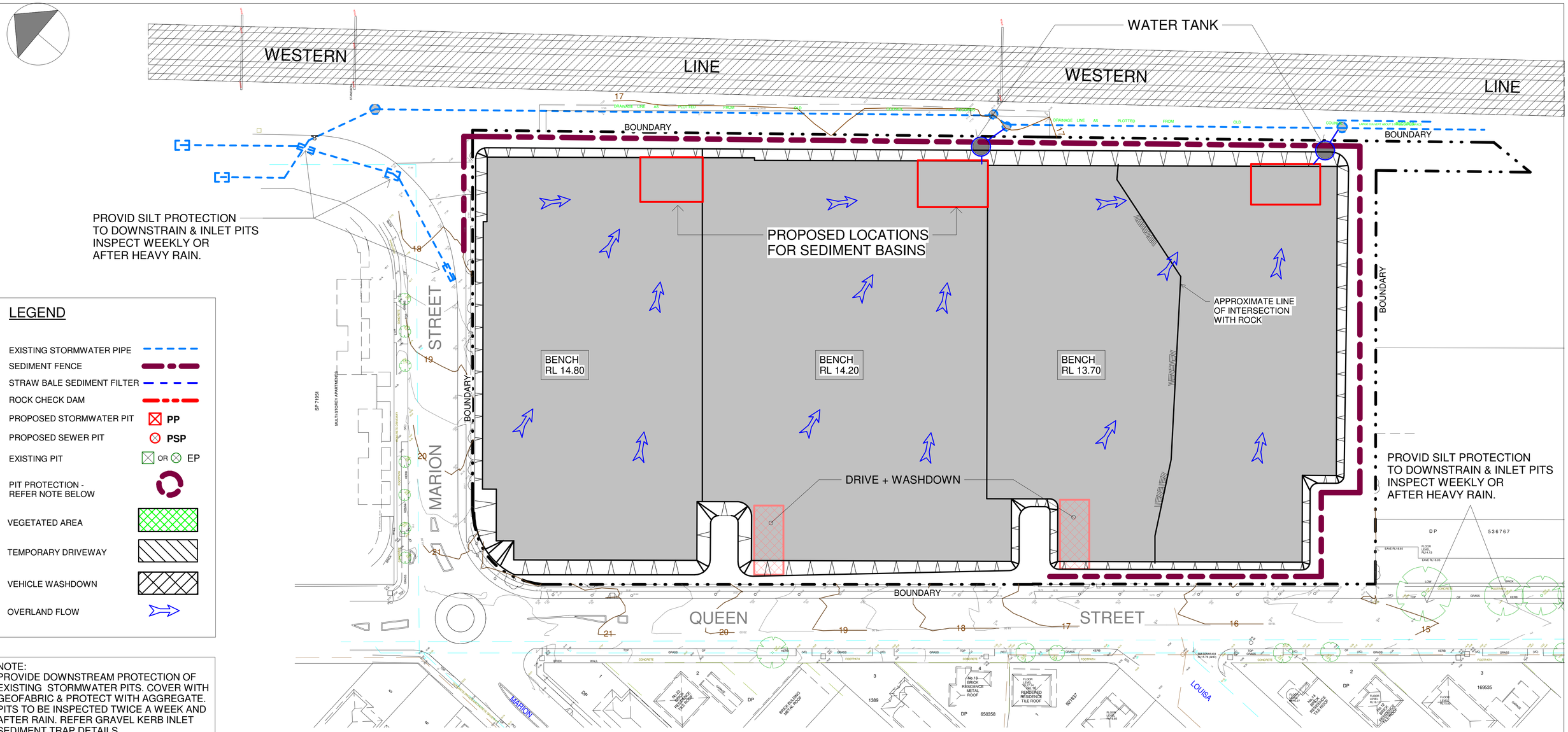
CHKD.				
APPRD.		DRAWING NO. SW.04	REV B	
A1	SCALE As indicated	DATE MAY 2017		



LEGEND

- EXISTING STORMWATER PIPE
- SEDIMENT FENCE
- STRAW BALE SEDIMENT FILTER
- ROCK CHECK DAM
- PROPOSED STORMWATER PIT — PP
- PROPOSED SEWER PIT — PSP
- EXISTING PIT — OR EP
- PIT PROTECTION - REFER NOTE BELOW
- VEGETATED AREA
- TEMPORARY DRIVEWAY
- VEHICLE WASHDOWN
- OVERLAND FLOW

NOTE:
PROVIDE DOWNSTREAM PROTECTION OF EXISTING STORMWATER PITS. COVER WITH GEOFABRIC & PROTECT WITH AGGREGATE. PITS TO BE INSPECTED TWICE A WEEK AND AFTER RAIN. REFER GRAVEL KERB INLET SEDIMENT TRAP DETAILS.

PUMP WATER FROM SEDIMENT BASIN TO HIGH LEVEL WATER TANK FOR GRAVITY DISCHARGE TO EXISTING STORMWATER

SILT & SEDIMENTATION PLAN

SCALE 1:500 @A1

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SILT & SEDIMENTATION PLAN

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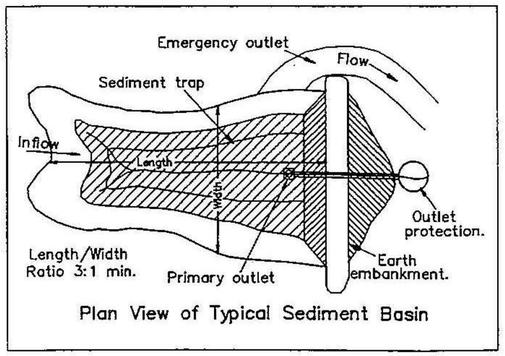
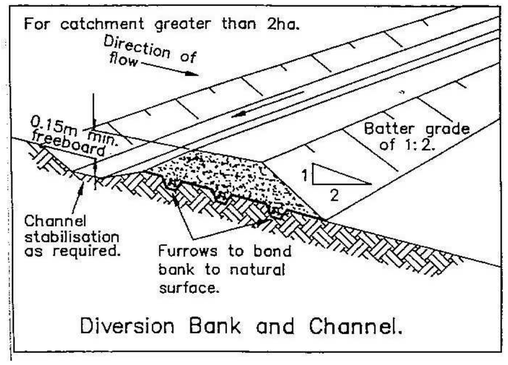
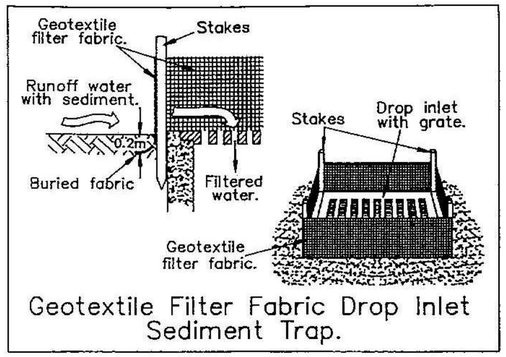


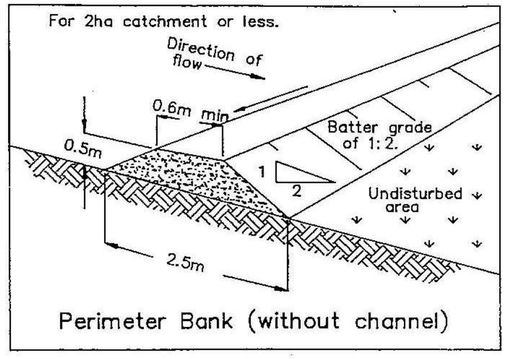
Plan View of Typical Sediment Basin



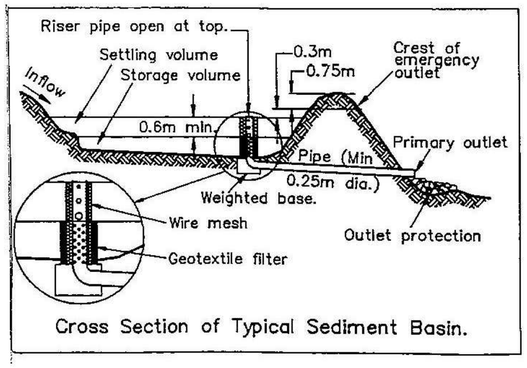
Diversion Bank and Channel.



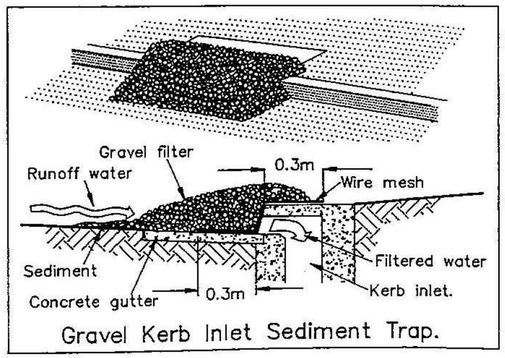
Geotextile Filter Fabric Drop Inlet Sediment Trap.



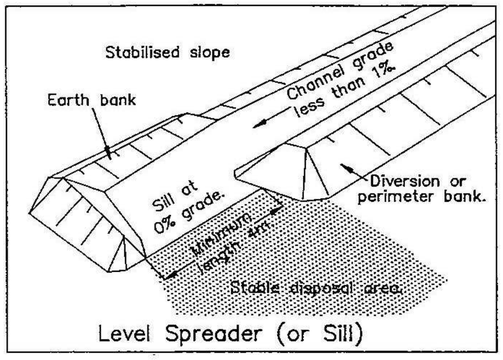
Perimeter Bank (without channel)



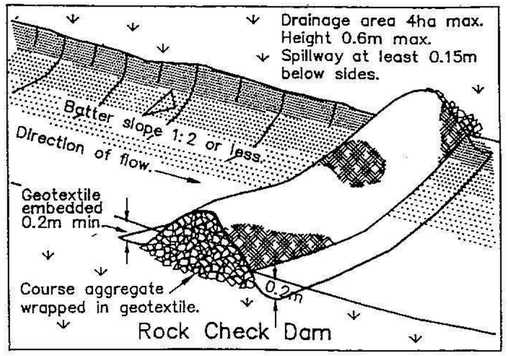
Cross Section of Typical Sediment Basin.



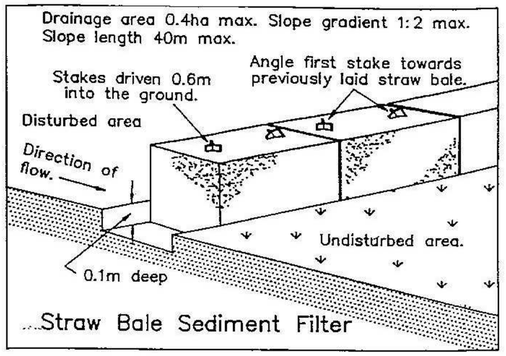
Gravel Kerb Inlet Sediment Trap.



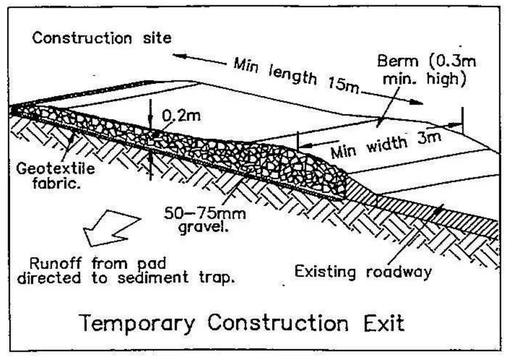
Level Spreader (or Sill)



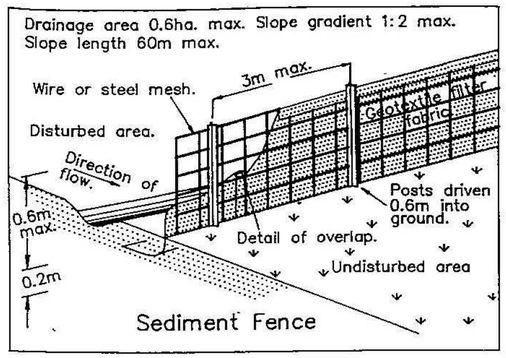
Rock Check Dam



Straw Bale Sediment Filter



Temporary Construction Exit



Sediment Fence

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SILT & SEDIMENTATION DETAILS

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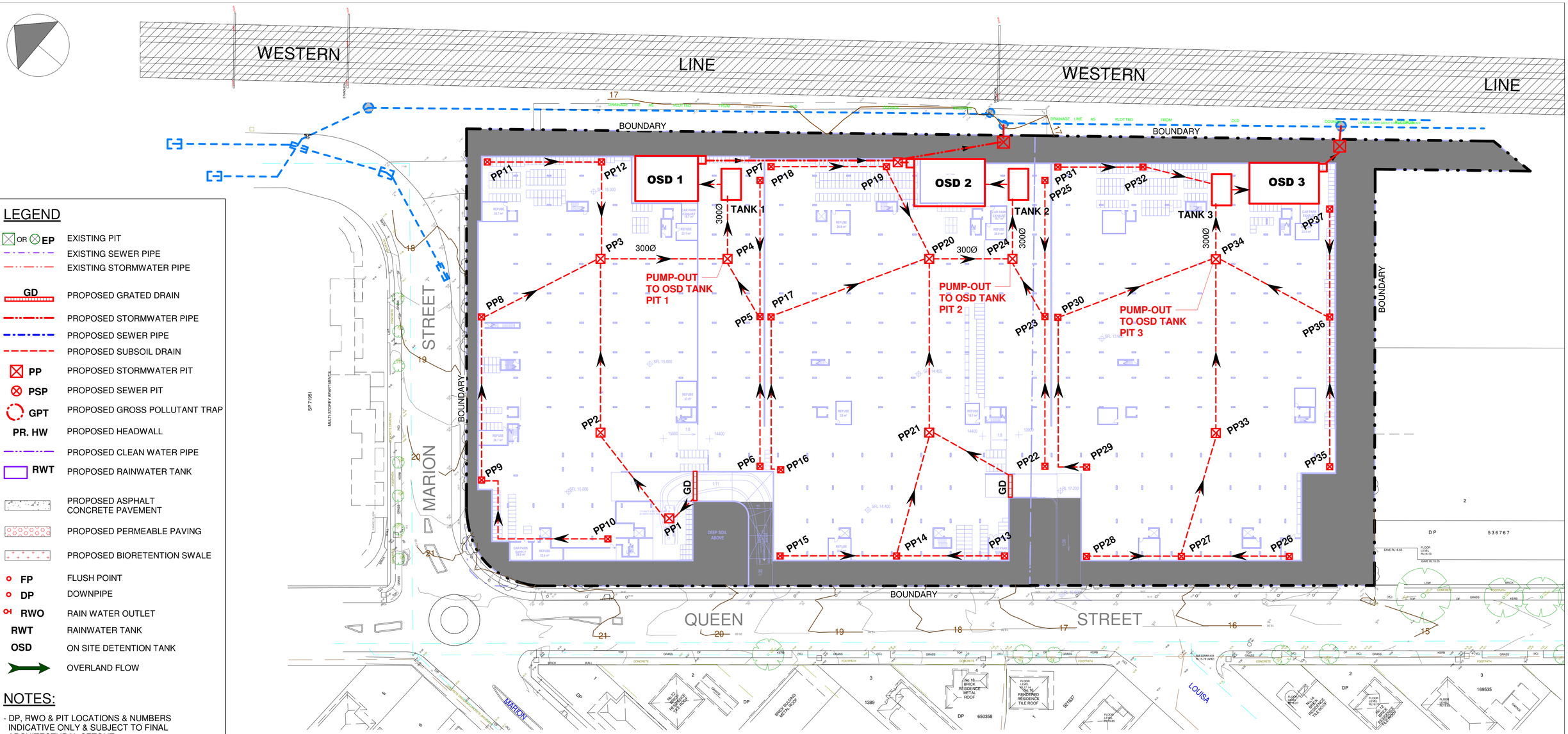
APPRD.		DRAWING NO. SW.06 / REV B
A1	SCALE 1 : 15	DATE MAY 2017



LEGEND

☒ OR ⊗ EP	EXISTING PIT
	EXISTING SEWER PIPE
	EXISTING STORMWATER PIPE
GD	PROPOSED GRATED DRAIN
	PROPOSED STORMWATER PIPE
	PROPOSED SEWER PIPE
	PROPOSED SUBSOIL DRAIN
☒ PP	PROPOSED STORMWATER PIT
⊗ PSP	PROPOSED SEWER PIT
○ GPT	PROPOSED GROSS POLLUTANT TRAP
PR. HW	PROPOSED HEADWALL
	PROPOSED CLEAN WATER PIPE
☐ RWT	PROPOSED RAINWATER TANK
	PROPOSED ASPHALT CONCRETE PAVEMENT
	PROPOSED PERMEABLE PAVING
	PROPOSED BIORETENTION SWALE
○ FP	FLUSH POINT
○ DP	DOWNPIPE
RWO	RAIN WATER OUTLET
RWT	RAINWATER TANK
OSD	ON SITE DETENTION TANK
→	OVERLAND FLOW

NOTES:

- DP, RWO & PIT LOCATIONS & NUMBERS INDICATIVE ONLY & SUBJECT TO FINAL ARCHITECTURAL SETOUT
- ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3.2

STORMWATER CONCEPT PLAN - BASEMENT

1 : 500

ALL PIPES --- 225 Ø PVC AT NOM 1% FALL
PROVIDE SLOTTED AGRICULTURAL DRAINS AT 8m CENTRES NOMINAL
DRAIN TO PITS N.S.O.P.

PIT SCHEDULE

PIT No	SIZE	SURFACE LEVEL	INVERT LEVEL	GRATE CLASS
PP1	600x600	16.1	14.37	B
PP2	600x600	14.97	14.09	B
PP3	600x600	14.97	13.235	B
PP4	900x900	14.37	12.925	B
PP5	600x600	14.37	13.465	B
PP6	600x600	14.37	13.845	B
PP7	600x600	14.37	13.845	B
PP8	600x600	14.97	13.565	B
PP9	600x600	14.97	13.975	B
PP10	600x600	14.97	14.445	B
PP11	600x600	14.97	14.445	B
PP12	600x600	14.97	14.155	B

PIT SCHEDULE

PIT No	SIZE	SURFACE LEVEL	INVERT LEVEL	GRATE CLASS
PP13	600x600	14.37	13.845	B
PP14	600x600	14.37	13.545	B
PP15	600x600	14.37	13.845	B
PP16	600x600	14.37	13.845	B
PP17	600x600	14.37	13.445	B
PP18	600x600	14.37	13.845	B
PP19	600x600	14.37	13.555	B
PP20	600x600	14.37	12.77	B
PP21	600x600	14.37	13.215	B
PP22	600x600	13.87	13.345	B
PP23	600x600	13.87	12.965	B
PP24	900x900	13.87	12.56	B
PP25	600x600	13.87	13.345	B

PIT SCHEDULE

PIT No	SIZE	SURFACE LEVEL	INVERT LEVEL	GRATE CLASS
PP26	600x600	13.87	13.345	B
PP27	600x600	13.87	13.075	B
PP28	600x600	13.87	13.345	B
PP29	600x600	13.87	13.345	B
PP30	600x600	13.87	12.85	B
PP31	600x600	13.87	13.345	B
PP32	600x600	13.87	13.115	B
PP33	600x600	13.87	12.72	B
PP34	900x900	13.87	12.27	B
PP35	600x600	13.87	13.345	B
PP36	600x600	13.87	12.965	B
PP37	600x600	13.87	13.345	B

PUMP OUT TANK SCHEDULE

TANK No	VOLUME	PUMP CAPACITY
TANK 1	80m³	18 L/s
TANK 2	80m³	18 L/s
TANK 3	80m³	18 L/s

NOTE :
PP1, PP2 CONTAIN "STORMWATER 360 ENVIROPOD OILSORB" INSERTS FOR OIL & TRASH REMOVAL

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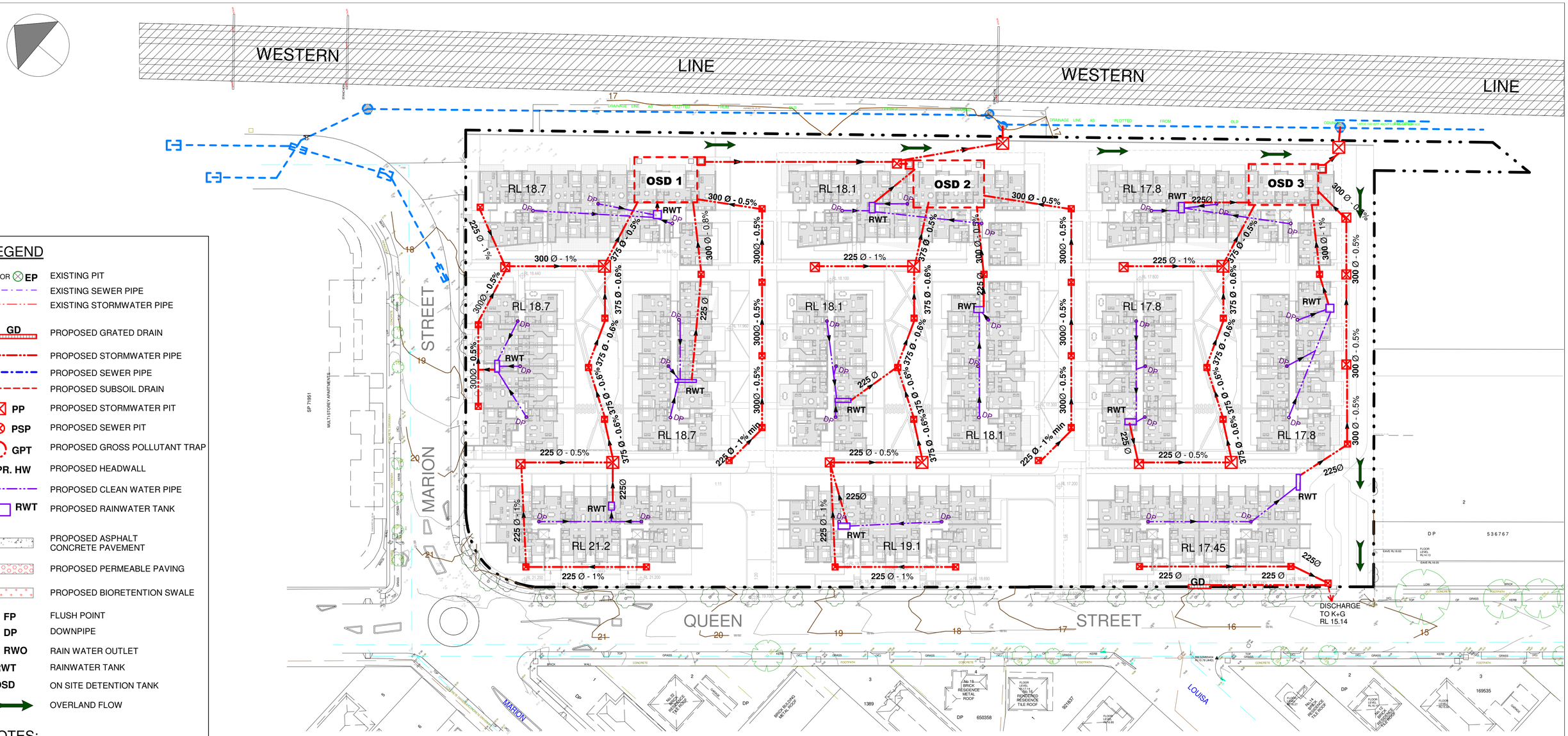
STORMWATER CONCEPT PLAN - BASEMENT

DESIGN J.T.
DRAWN W.S.
CHKD.
APPRD.
PROJECT NO. 5933
DRAWING NO. SW.11
REV B
A1
SCALE As indicated
DATE MAY 2017



LEGEND

- EXISTING PIT (OR EP)
- EXISTING SEWER PIPE
- EXISTING STORMWATER PIPE
- GD — PROPOSED GRATED DRAIN
- PROPOSED STORMWATER PIPE
- PROPOSED SEWER PIPE
- PROPOSED SUBSOIL DRAIN
- PP — PROPOSED STORMWATER PIT
- PSP — PROPOSED SEWER PIT
- GPT — PROPOSED GROSS POLLUTANT TRAP
- PR. HW — PROPOSED HEADWALL
- PROPOSED CLEAN WATER PIPE
- RWT — PROPOSED RAINWATER TANK
- PROPOSED ASPHALT CONCRETE PAVEMENT
- PROPOSED PERMEABLE PAVING
- PROPOSED BIORETENTION SWALE
- FP — FLUSH POINT
- DP — DOWNPIPE
- RWO — RAIN WATER OUTLET
- RWT — RAINWATER TANK
- OSD — ON SITE DETENTION TANK
- OVERLAND FLOW

NOTES:

- DP, RWO & PIT LOCATIONS & NUMBERS INDICATIVE ONLY & SUBJECT TO FINAL ARCHITECTURAL SETOUT
- ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3.2

ALL PIPEWORK SHALL BE 375Ø PVC AT 1% U.N.O.

STORMWATER CONCEPT PLAN - PODIUM SLAB

1 : 500

REFER TO INDIVIDUAL PLANS FOR PIT DETAILS FROM DRAWING SW21 - SW23

ALL DRAINAGE SHALL BE INSTALLED IN ACCORDANCE WITH AS3500.2 AND LOCAL GOVERMENT SPECIFICATIONS

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STORMWATER CONCEPT PLAN - PODIUM SLAB

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
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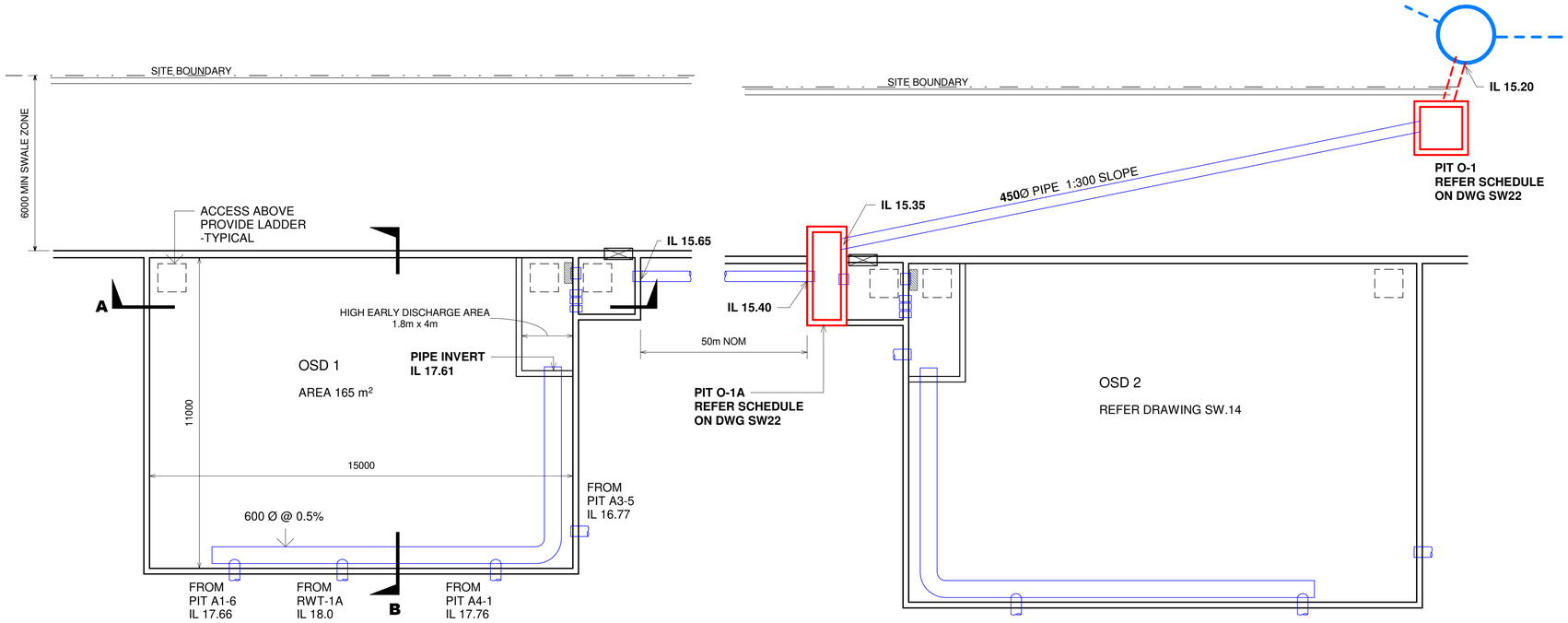
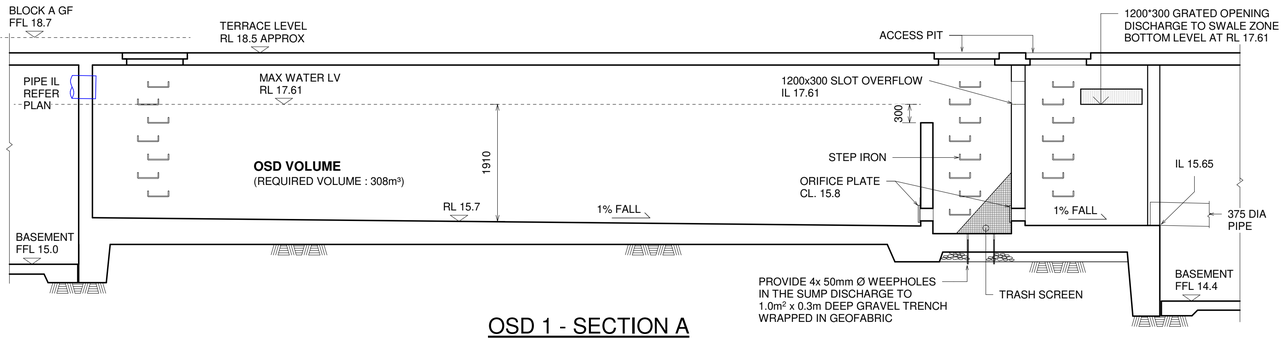


OSD 1&2 PLAN

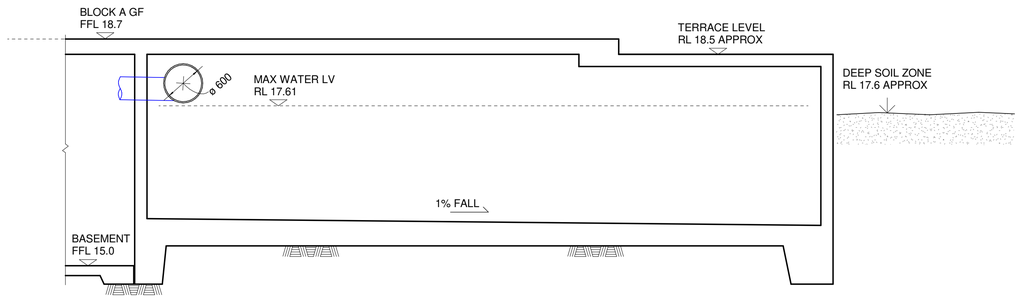
SCALE 1:100 @A1



OSD 1 - SECTION A

SCALE 1:50 @A1

OSD 1 ORIFICE DIAMETER: 176 mm



OSD 1 - SECTION B

SCALE 1:50 @A1

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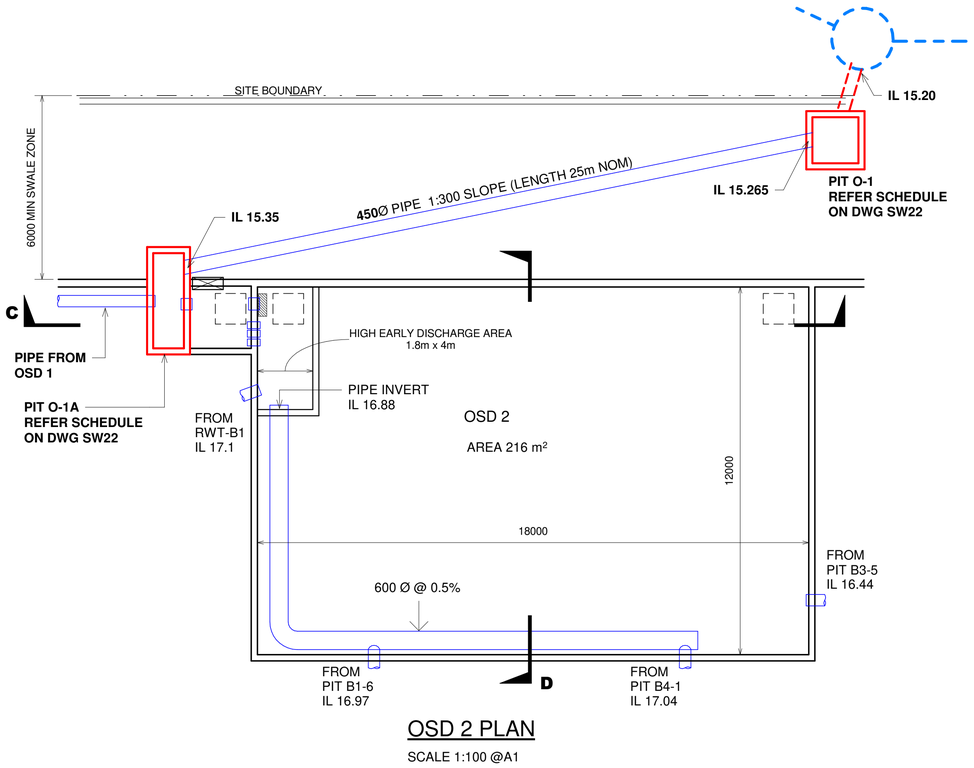
PROJECT
1A QUEEN STEET, AUBURN

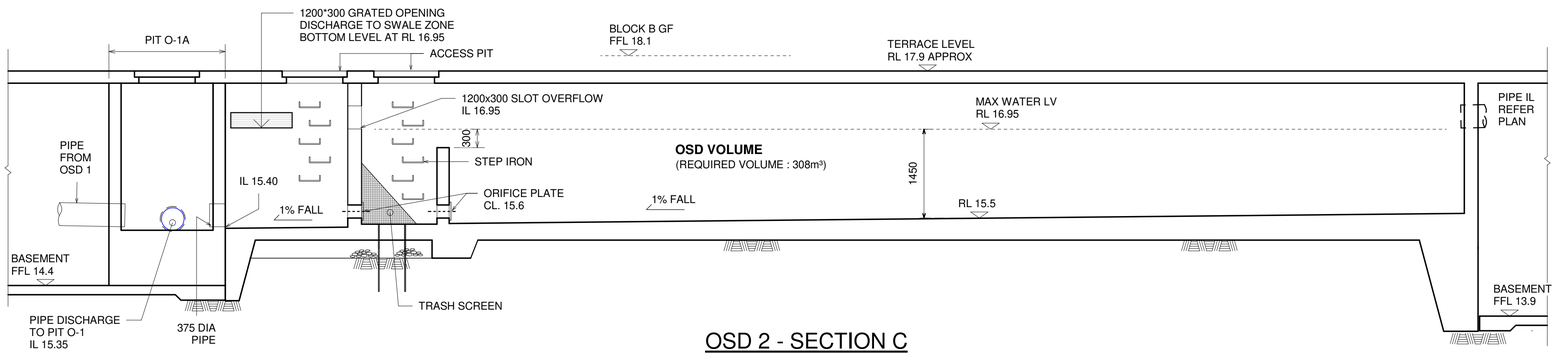
OSD 1 PLAN & SECTIONS

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.13 / B



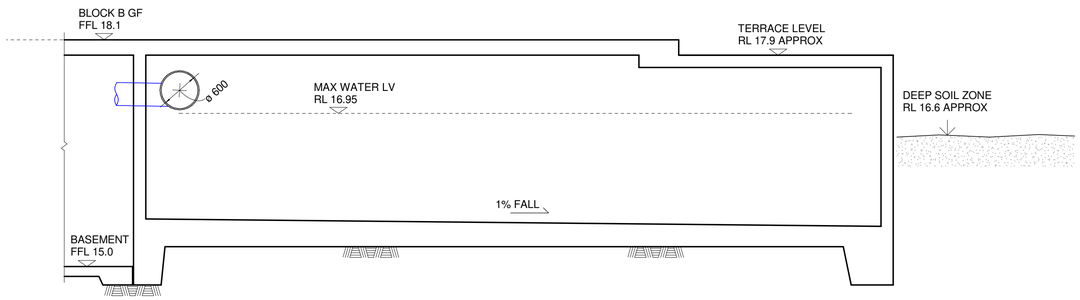
OSD 2 PLAN

SCALE 1:100 @A1



OSD 2 - SECTION C

OSD 2 ORIFICE DIAMETER: 214 mm



OSD 2 - SECTION D

SCALE 1:50 @A1

WS	RY	ISSUE FOR DA	09.03.2018	A
BY	CHKD	DESCRIPTION	DATE	REV

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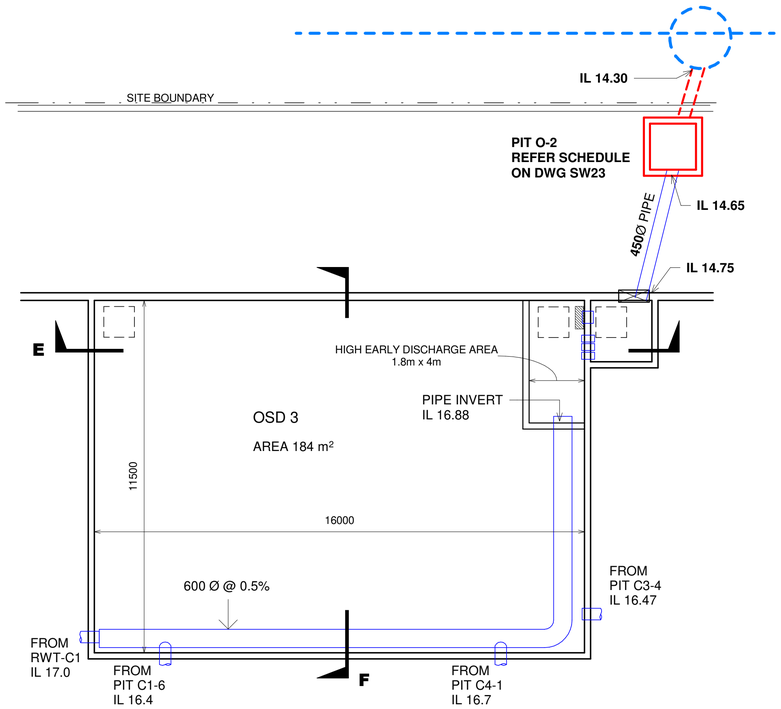
1A QUEEN STEET, AUBURN

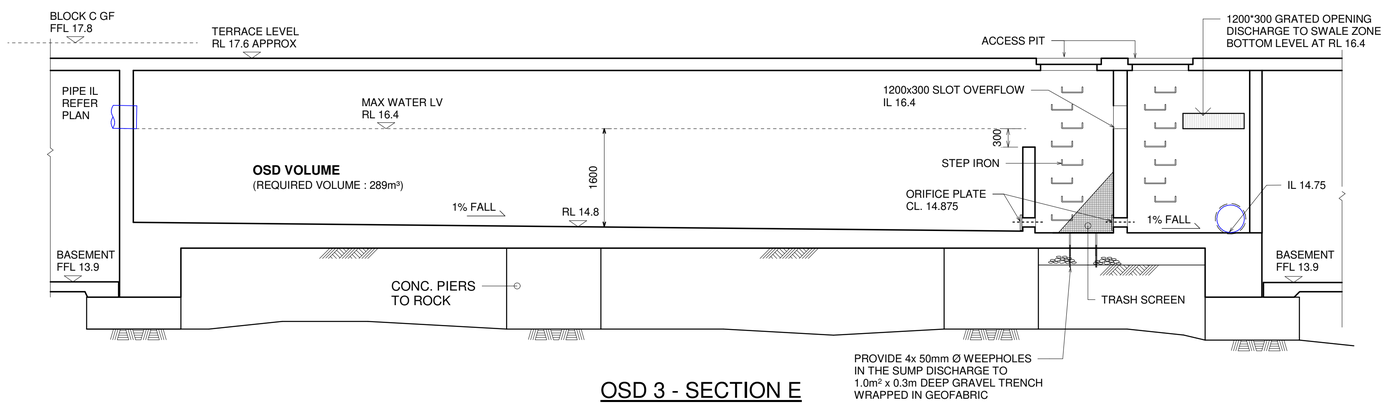
OSD 2 PLAN & SECTIONS

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.14	A



OSD 3 PLAN

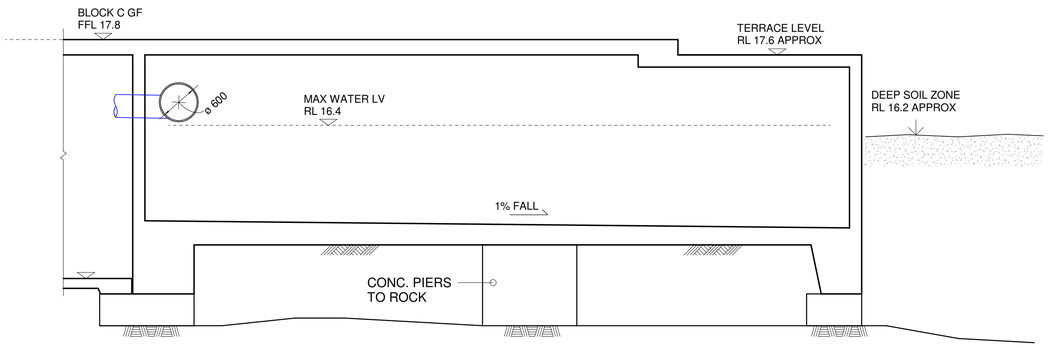
SCALE 1:100 @A1



OSD 3 - SECTION E

SCALE 1:50 @A1

OSD 3 ORIFICE DIAMETER: 152 mm



OSD 3 - SECTION F

SCALE 1:50 @A1

WS	RY	ISSUE FOR DA	09.03.2018	A
BY	CHKD	DESCRIPTION	DATE	REV

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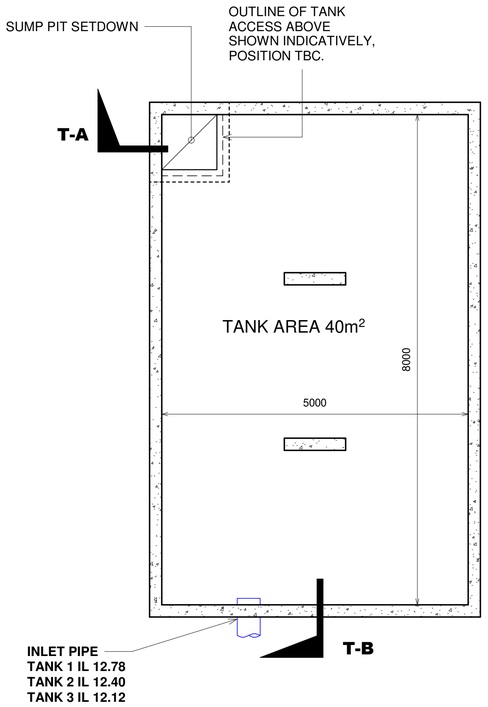
PROJECT
1A QUEEN STEET, AUBURN

OSD 3 PLAN & SECTIONS

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.15	A



PUMP OUT TANK TYPICAL PLAN

BASEMENT STORAGE CALCULATIONS

TANK 1 & 2 & 3 (PER TANK)

CATCHMENT AREA = 282 m^2 (PER TANK)

100 ARI 90 MIN INTENSITY = 57.1 mm/hr

PRIMARY STORAGE = 24 m^3 (PER TANK)

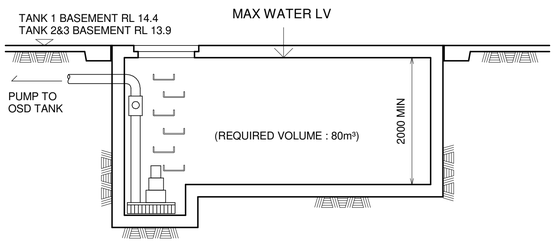
100 ARI 12 hr INTENSITY = 16.7 mm/hr

SECONDARY STORAGE = 54 m^3 (PER TANK)

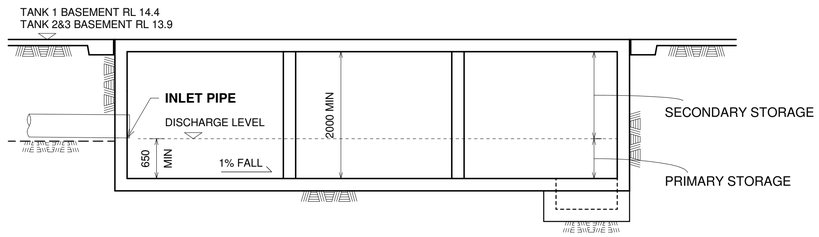
TOTAL STORAGE = 78 m^3 (PER TANK)

PUMP CAPACITY:
- ARI 100 5 MIN INTENSITY = 228 mm/hr
- RATE = 64 m^3/hr = 18 L/s

NOTE :
2 TANKS REQUIRED.
3 TANKS SUPPLIED TO SUIT CONSTRUCT STAGING
STORAGE VOLUME SUPPLIED = 240 m^3



SECTION T-A



SECTION T-B

WS	RY	ISSUE FOR DA	09.03.2018	A
BY	CHKD	DESCRIPTION	DATE	REV

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PROJECT
1A QUEEN STEET, AUBURN

PUMP OUT TANK DETAILS

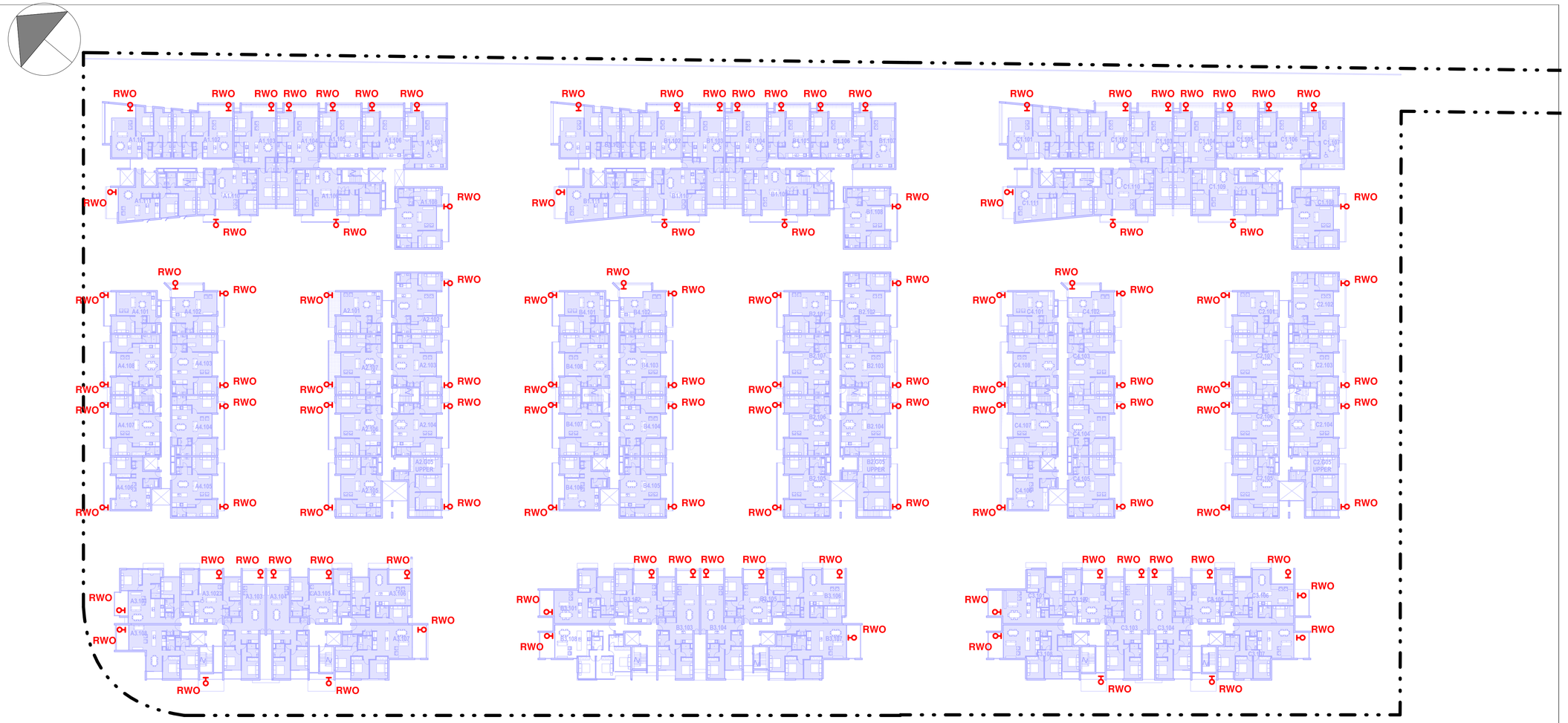
DESIGN J.T.	DRAWN W.S.	PROJECT NO. 5933
CHKD.		
APPRD.		DRAWING NO. SW.16 / REV A
A1	SCALE 1 : 50	DATE MAY 2017

LEGEND

OR EP	EXISTING PIT
	EXISTING SEWER PIPE
	EXISTING STORMWATER PIPE
GD	PROPOSED GRATED DRAIN
	PROPOSED STORMWATER PIPE
	PROPOSED SEWER PIPE
	PROPOSED SUBSOIL DRAIN
PP	PROPOSED STORMWATER PIT
PSP	PROPOSED SEWER PIT
GPT	PROPOSED GROSS POLLUTANT TRAP
PR. HW	PROPOSED HEADWALL
	PROPOSED CLEAN WATER PIPE
RWT	PROPOSED RAINWATER TANK
	PROPOSED ASPHALT CONCRETE PAVEMENT
	PROPOSED PERMEABLE PAVING
	PROPOSED BIORETENTION SWALE
FP	FLUSH POINT
DP	DOWNPIPE
RWO	RAIN WATER OUTLET
RWT	RAINWATER TANK
OSD	ON SITE DETENTION TANK
	OVERLAND FLOW

NOTES:

- DP, RWO & PIT LOCATIONS & NUMBERS INDICATIVE ONLY & SUBJECT TO FINAL ARCHITECTURAL SETOUT
- ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3.2



STORMWATER CONCEPT PLAN - TYPICAL LEVEL

1 : 400

SUBJECT TO COORDINATION WITH THE ARCHITECT FOR CC.

WS	RY	ISSUE FOR DA	09.03.2018	B
WS	JT	ISSUE FOR DA	04.09.2017	A
BY	CHKD	DESCRIPTION	DATE	REV

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PROJECT
1A QUEEN STEET, AUBURN

STORMWATER CONCEPT PLAN - TYPICAL LEVEL

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.17	B

LEGEND

OR EP	EXISTING PIT
	EXISTING SEWER PIPE
	EXISTING STORMWATER PIPE
GD	PROPOSED GRATED DRAIN
	PROPOSED STORMWATER PIPE
	PROPOSED SEWER PIPE
	PROPOSED SUBSOIL DRAIN
PP	PROPOSED STORMWATER PIT
PSP	PROPOSED SEWER PIT
GPT	PROPOSED GROSS POLLUTANT TRAP
PR. HW	PROPOSED HEADWALL
	PROPOSED CLEAN WATER PIPE
RWT	PROPOSED RAINWATER TANK
	PROPOSED ASPHALT CONCRETE PAVEMENT
	PROPOSED PERMEABLE PAVING
	PROPOSED BIORETENTION SWALE
FP	FLUSH POINT
DP	DOWNPIPE
RWO	RAIN WATER OUTLET
RWT	RAINWATER TANK
OSD	ON SITE DETENTION TANK
	OVERLAND FLOW

NOTES:

- DP, RWO & PIT LOCATIONS & NUMBERS INDICATIVE ONLY & SUBJECT TO FINAL ARCHITECTURAL SETOUT
- ALL WORKS TO BE IN ACCORDANCE WITH AS3500.3.2

STORMWATER CONCEPT PLAN - ROOF

1 : 400

SCHEMATIC ONLY --- SUBJECT TO COORDINATION WITH THE ARCHITECTURAL LAYOUT + HYDRAULIC ENGINEERS DETAILS.

BY	CHKD	DESCRIPTION	DATE	REV
WS	RY	ISSUE FOR DA	09.03.2018	B
WS	JT	ISSUE FOR DA	04.09.2017	A

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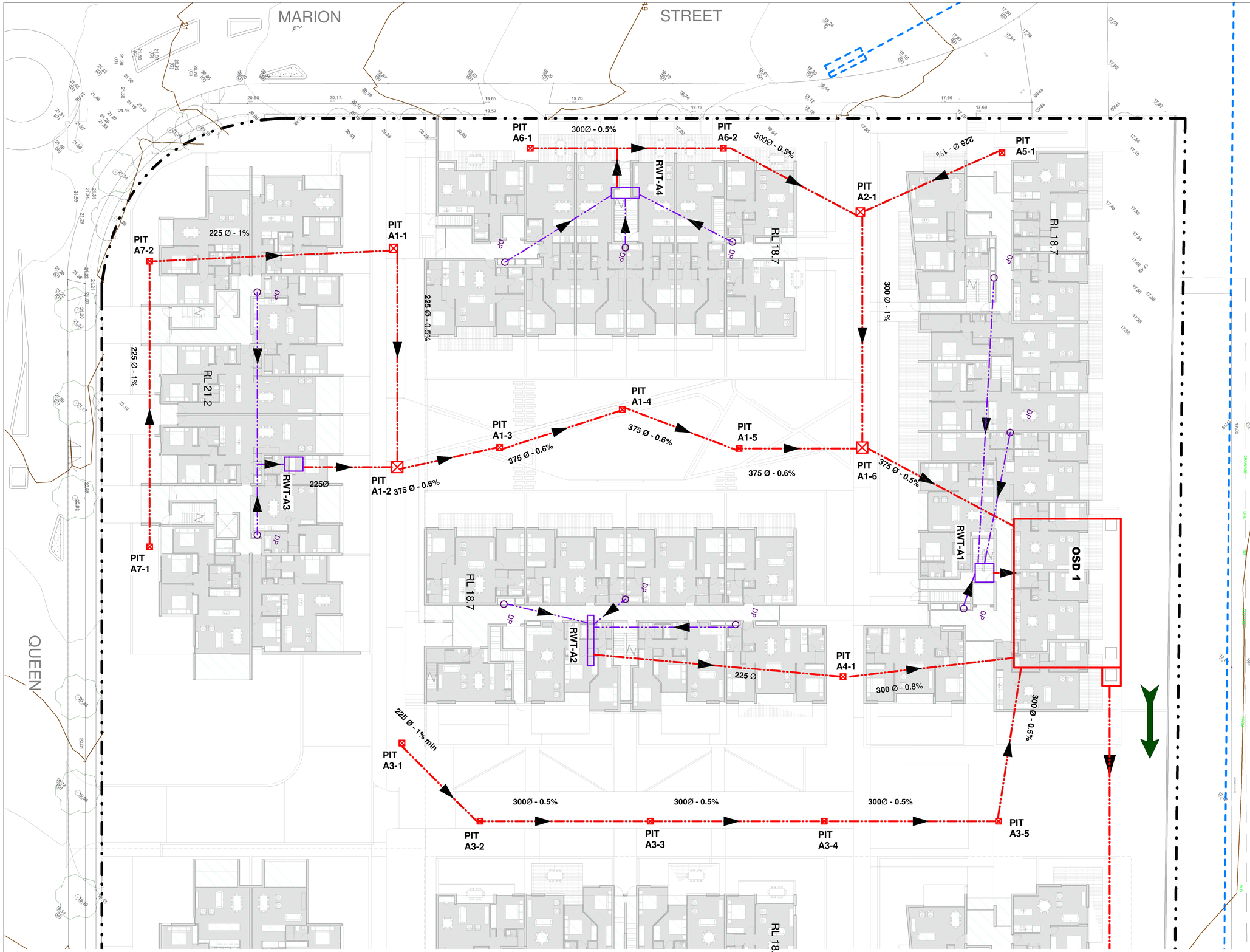
STORMWATER CONCEPT PLAN - ROOF

DESIGN J.T.	DRAWN W.S.	PROJECT NO. 5933
CHKD.		
APPRD.		DRAWING NO. SW.18 / REV B
A1	SCALE As indicated	DATE MAY 2017



PODIUM SLAB PARTIAL PLAN - BLOCK A

SCALE 1:200 @A1

PIT SCHEDULE

PIT No	SIZE	SURFACE LEVEL	INVERT LEVEL	GRATE CLASS
A1-1	900x900	19.6	18.3	B
A1-2	1200x1200	18.9	18.174	B
A1-3	600x600	18.75	18.09	B
A1-4	600x600	18.7	18.02	B
A1-5	600x600	18.6	17.94	B
A1-6	1200x1200	18.55	17.75	B
A2-1	900x900	18.7	17.85	B
A3-1	600x600	18.15	17.25	B
A3-2	600x600	17.85	17.135	B
A3-3	600x600	17.8	16.975	B
A3-4	600x600	17.75	16.86	B
A3-5	600x600	17.65	16.85	B
A4-1	600x600	18.5	17.85	B
A5-1	600x600	18.6	17.95	B
A6-1	900x900	18.6	18.10	B
A6-2	900x900	18.6	17.95	B
A7-1	600x600	21.1	20.6	B
A7-2	600x600	21.1	20.3	B

WATER TANK SCHEDULE

WATER TANK No	VOLUME	OVERFLOW LEVEL
RWT-A1	9m³	18.2
RWT-A2	9m³	18.2
RWT-A3	9m³	20.5
RWT-A4	9m³	18.2

WS	RY	ISSUE FOR DA	09.03.2018	B
WS	JT	ISSUE FOR DA	04.09.2017	A
BY	CHKD	DESCRIPTION	DATE	REV

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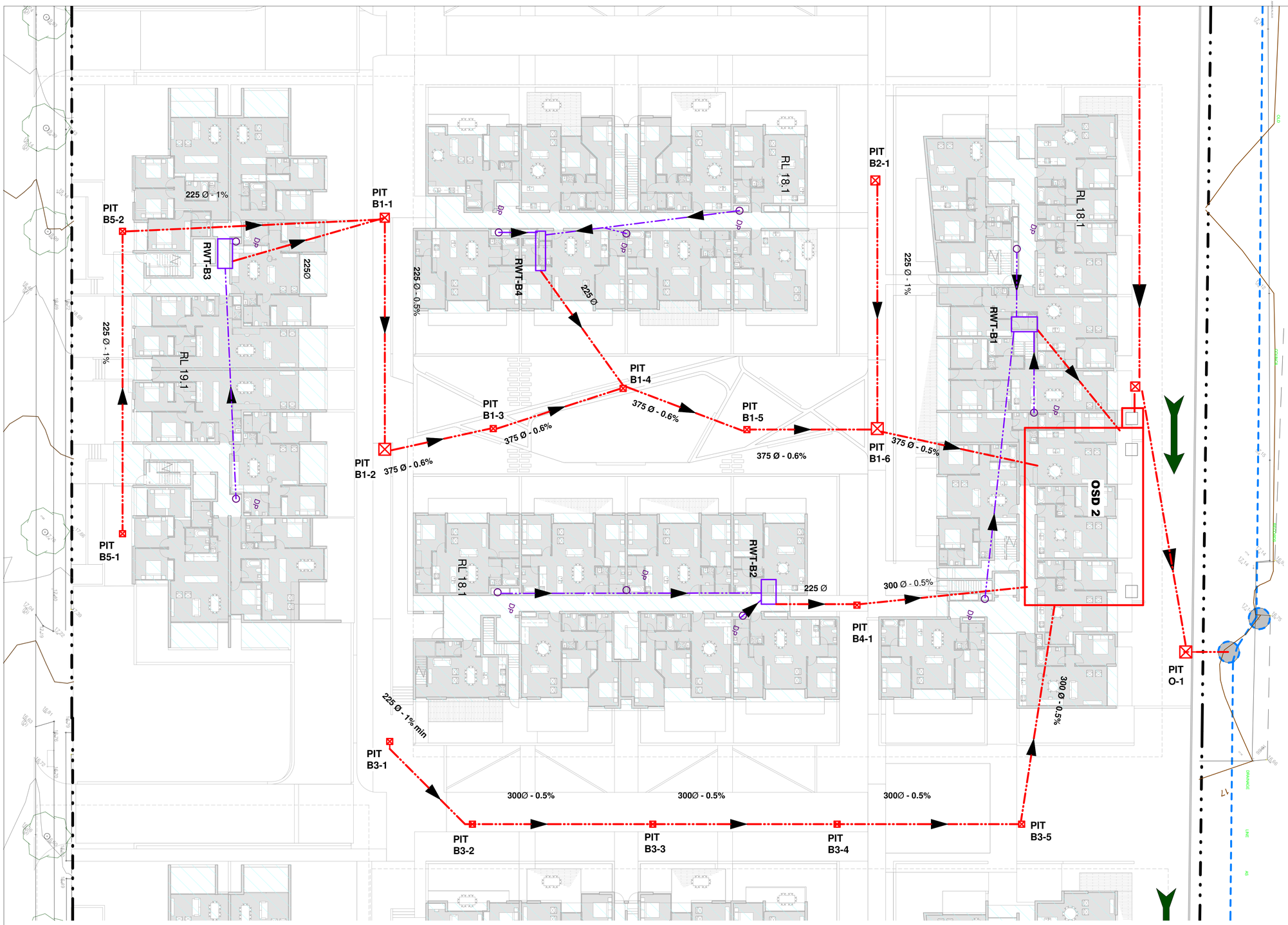
PROJECT
1A QUEEN STEET, AUBURN

PODIUM SLAB PARTIAL PLAN -1

DESIGN J.T.	DRAWN W.S.		PROJECT NO. 5933
CHKD.			
APPRD.		DRAWING NO. SW.21	REV B
A1	SCALE As indicated	DATE MAY 2017	



PIT SCHEDULE

PIT No	SIZE	SURFACE LEVEL	INVERT LEVEL	GRATE CLASS
B1-1	900x900	18.1	17.59	B
B1-2	1200x1200	18.05	17.374	B
B1-3	900x900	17.95	17.29	B
B1-4	900x900	17.90	17.22	B
B1-5	900x900	17.85	17.14	B
B1-6	1200x1200	17.8	17.05	B
B2-1	900x900	18.1	17.4	B
B3-1	900x900	17.40	16.9	B
B3-2	900x900	17.35	16.85	B
B3-3	900x900	17.30	16.75	B
B3-4	900x900	17.25	16.65	B
B3-5	900x900	17.15	16.55	B
B4-1	900x900	17.70	17.1	B
B5-1	600x600	19.0	18.4	B
B5-2	600x600	19.0	18.1	B
O-1	1500x1500	16.8 tbc	15.25 tbc	B
O-1A	1000x3000	17.9	15.35	B

WATER TANK SCHEDULE

WATER TANK No	VOLUME	OVERFLOW LEVEL
RWT-B1	9m³	17.4
RWT-B2	9m³	17.4
RWT-B3	9m³	18
RWT-B4	9m³	17.4

PODIUM SLAB PARTIAL PLAN - BLOCK B

SCALE 1:200 @A1

WS	RY	ISSUE FOR DA	09.03.2018	B
WS	JT	ISSUE FOR DA	04.09.2017	A
BY	CHKD	DESCRIPTION	DATE	REV

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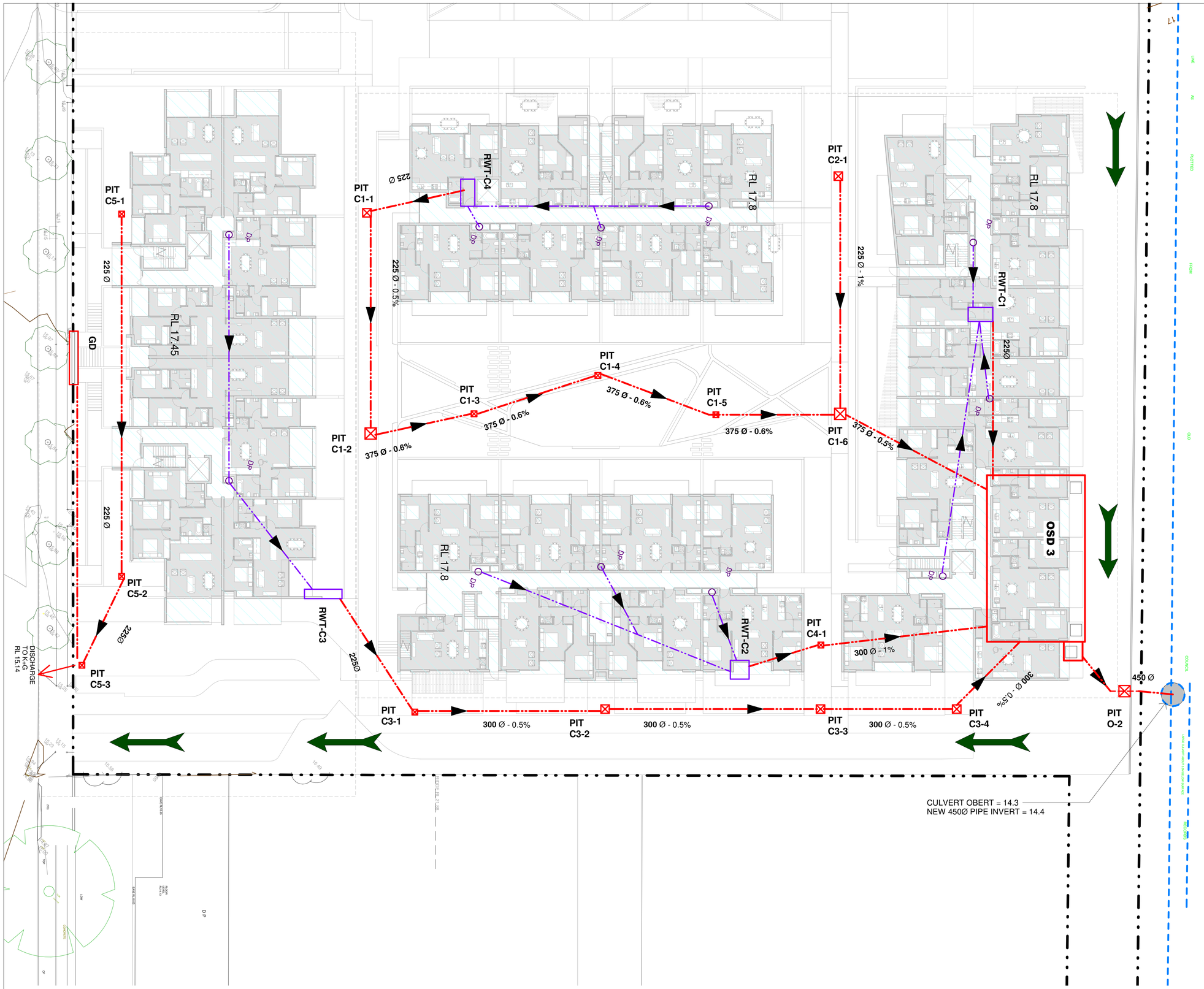
PROJECT
1A QUEEN STEET, AUBURN

PODIUM SLAB PARTIAL PLAN -2

DESIGN J.T.	DRAWN W.S.		PROJECT NO. 5933
CHKD.			
APPRD.		DRAWING NO. SW.22	REV B
A1	SCALE As indicated	DATE MAY 2017	



PIT SCHEDULE

PIT No	SIZE	SURFACE LEVEL	INVERT LEVEL	GRATE CLASS
C1-1	900x900	17.80	17.08	B
C1-2	900x900	17.78	16.955	B
C1-3	600x600	17.70	16.87	B
C1-4	600x600	17.70	16.80	B
C1-5	600x600	17.70	16.72	B
C1-6	1200x1200	17.70	16.53	B
C2-1	900x900	17.80	17.08	B
C3-1	600x600	17.50	16.8	B
C3-2	600x600	17.50	16.7	B
C3-3	600x600	17.50	16.59	B
C3-4	600x600	17.50	16.52	B
C4-1	600x600	17.55	16.90	B
C5-1	600x600	17.35	16.90	B
C5-2	600x600	17.35	16.7	B
C5-3	600x600	15.40	15.15	B
O-2	1500x1500	16.1	14.65	B

WATER TANK SCHEDULE

WATER TANK No	VOLUME	OVERFLOW LEVEL
RWT-C1	9m³	17.3
RWT-C2	9m³	17.3
RWT-C3	9m³	16.9
RWT-C4	9m³	17.3

PODIUM SLAB PARTIAL PLAN - BLOCK C

SCALE 1:200 @A1

WS	RY	ISSUE FOR DA	09.03.2018	B
WS	JT	ISSUE FOR DA	04.09.2017	A
BY	CHKD	DESCRIPTION	DATE	REV

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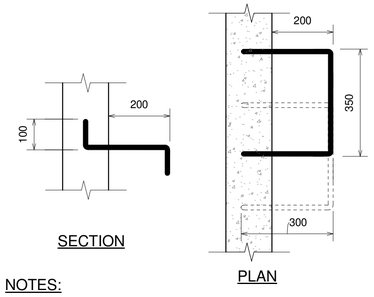
PROJECT
1A QUEEN STEET, AUBURN

PODIUM SLAB PARTIAL PLAN -3

DESIGN J.T.	DRAWN W.S.		PROJECT NO. 5933
CHKD.			
APPRD.		DRAWING NO. SW.23	REV B
A1	SCALE As indicated	DATE MAY 2017	



SECTION

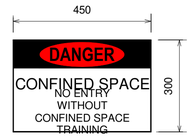
PLAN

NOTES:

1. WHEN POSITIONING IN STRAIGHT ALIGNMENT, STEP TO BE 400 WIDE.
2. STAGGERED STEPS TO BE 300 WIDE, STEPS TO BE STAGGERED 300 CENTRE TO CENTRE FOR ALTERNATE STEPS WITH MINIMUN 45 OVERLAP.
3. SPACING TO BE UNIFORM TO WITHIN +-8mm IN EACH PIT.
4. STEP IRONS TO BE H.D. GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH LOCAL GOVERNMENT'S CODES & REQUIREMENTS

STEP IRONS

NOT TO SCALE



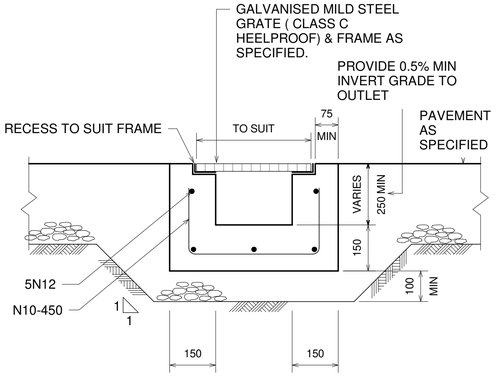
CONFINED SPACE SIGN

NOT TO SCALE

NOTE:
BACKGROUND IS YELLOW
TEXT IS WHITE ON BLACK BACKGROUND

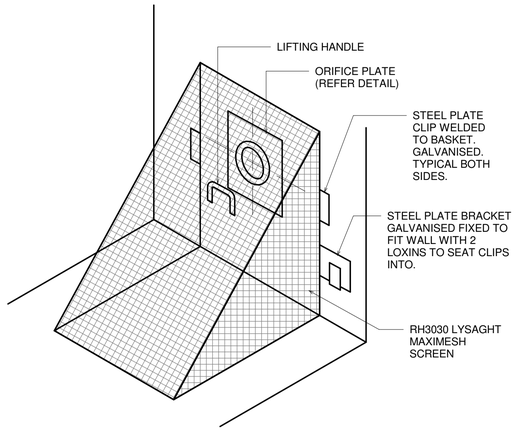
RAINWATER SIGN

NOT TO SCALE



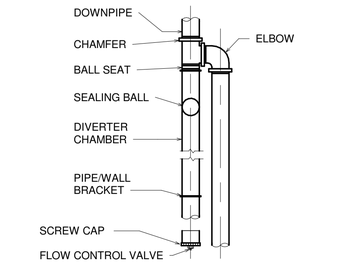
GRATED DRAIN PAVEMENT

SCALE 1:10



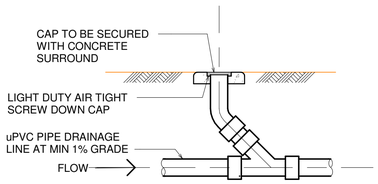
GROSS POLLUTANT TRAP

NOT TO SCALE



FIRST FLUSH DIVERTER

N.T.S.

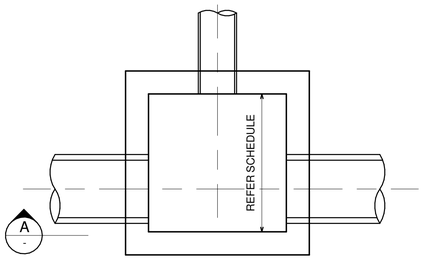


CLEANING EYE

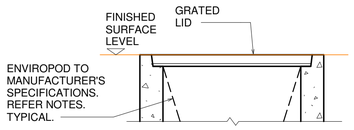
NOT TO SCALE

NOTES

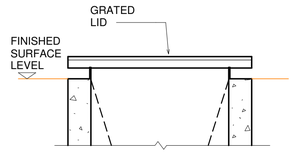
1. CONCRETE STRENGTH N25.
2. SIDE DIMENSIONS WILL VARY SUBJECT TO PIPE SIZE. SIDE DIMENSIONS ARE DETERMINED BY LARGEST OUTSIDE PIPE DIMENSIONS PLUS 200.
3. PIT DIMENSIONS ARE ALSO GOVERNED BY THE DEPTH OF THE PIT. PLEASE REFER TO POINT (h). PAGE A7-2. WATER MANAGEMENT DEVELOPMENT CONTROL PLAN- DCP 47. APPENDIX 7 - DESIGN OF PROPERTY AND INTERALLOTMENT DRAINAGE SYSTEMS. KU-RING-GAI COUNCIL.
4. REINFORCEMENT IN WALLS/SLAB TO BE IN ACCORDANCE WITH LOCAL GOVERNMENT'S CODES & REQUIREMENTS
5. UNLESS NOTED OTHERWISE, PROVIDE ENVIROPODS TO ALL GRATED PITS.



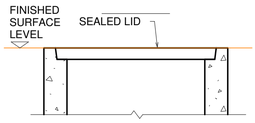
PLAN (LID REMOVED)



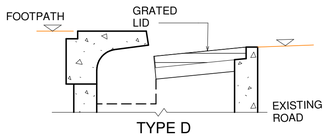
TYPE A



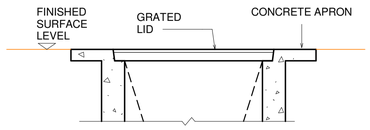
TYPE B



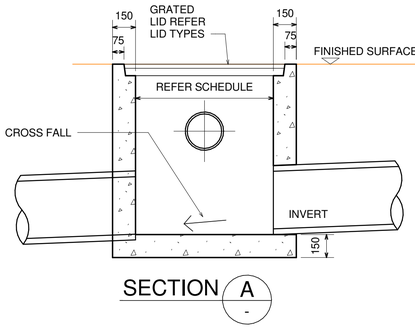
TYPE C



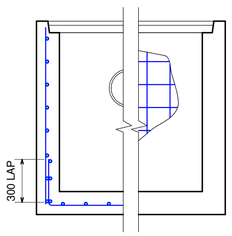
TYPE D



TYPE E



SECTION



REINFORCEMENT DETAIL

PIT LID TYPES

WS	RY	ISSUE FOR DA	09.03.2018	B
WS	JT	ISSUE FOR DA	04.09.2017	A
BY	CHKD	DESCRIPTION	DATE	REV

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PROJECT
1A QUEEN STEET, AUBURN

STORMWATER SECTIONS & DETAILS SHEET 1

DESIGN J.T.	DRAWN W.S.	PROJECT NO.	
CHKD.		5933	
APPRD.		DRAWING NO.	REV
A1	SCALE As indicated	DATE MAY 2017	SW.40	B