FAIRVALE HIGH SCHOOL

1 THORNEY ROAD FAIRFIELD WEST NEW 2165

Job No. **161274**

STORMWATER SERVICES

- STORMWATER PIPE
- STORMWATER RISING MAIN PIPE
- EXISTING STORMWATER PIPE
- RAINWATER PIPE
- SUB-SOIL DRAINAGE LINE

STORMWATER LEGEND

- PROPOSED SEALED JUNCTION PIT
- PROPOSED GRATED SUFACE INLET PIT. PIT DIMENSIONS ARE GOVERNED BY DEPTH REFER TO DETAIL.
- EXISTING PIT
- PIT TO BE REMOVED
- PROPOSED KERB INLET PIT
- PROPOSED GRATED DRAIN
- PROPOSED RAINWATER TANK
- DOWNPIPE, RISER OR VERTICAL DROP
- RO1 - RAINWATER OUTLET FOR BALCONIES, ROOF, CARPARK ETC
- GS1 - DOWNPIPE WITH RAIN HEAD OVERFLOW
- GS2 - DOWNPIPE WITH SUMP SIDE OVERFLOW
- GS3 - DOWNPIPE WITH SUMP HIGH CAPACITY OVERFLOW
- SWALE DRAIN
- OVERLAND FLOW PATH
- ROOF FALL DIRECTION
- P 35.05 — PROPOSED PAVEMENT SURFACE LEVEL
- GL 35.05 — PROPOSED PIT SURFACE LEVEL
- IL 34.75 — PROPOSED PIT INVERT LEVEL
- FFL 23.56 — PROPOSED FINISHED FLOOR LEVEL
- + 35.11 — EXISTING SURFACE LEVEL
- 36.00 — EXISTING SURVEY CONTOUR
- TREE PROTECTION ZONE (TPZ)

EXISTING SERVICES

- S —— S —— EXISTING SEWER LINE
- T —— T —— EXISTING TELSTRA LINE
- G —— G —— EXISTING GAS LINE
- E —— E —— EXISTING ELECTRICITY LINE
- W —— W —— EXISTING WATER LINE
- O —— O —— EXISTING OPTUS LINE
- OF —— OF —— EXISTING OPTIC FIBRE LINE
- C —— C —— EXISTING COMMUNICATIONS LINE

GENERAL PIPEWORK LEGEND

- FLOW DIRECTION
- SERVICE / SIZE — SERVICES TO ABOVE
- SERVICE / SIZE — SERVICES FROM BELOW
- FALL DIRECTION
- STW Ø225 @ 1.0%min — PIPE TYPE, SIZE AND GRADE
- CONNECTION
- CONTINUATION
- END CAP
- ? — KEYNOTE TAG

GENERAL ABREVIATIONS

AB	ABOVE BENCH
AFFL	ABOVE FINISHED FLOOR LEVEL
CIS	CAST IN SLAB
CL	CENTRELINE
CS	CEILING SPACE
Cu	COPPER
DIA	DIAMETER
DP	DOWNPIPE
Ex.	EXISTING
FC	FALSE CEILING
FFL	FINISHED FLOOR LEVEL
GL	GROUND LEVEL
HBS	PIPES HUNG BELOW SLAB
HL	HIGH LEVEL
IG	IN-GROUND
IL	INVERT LEVEL
LL	LOW LEVEL
O/F	OVERFLOW
PVC	POLYVINYLCHLORIDE
RL	REDUCED LEVEL
SL	SURFACE LEVEL
S/S	STAINLESS STEEL
UB	UNDER BENCH
uPVC	UNPLASTICISED POLYVINYLCHLORIDE
U/S	UNDER SIDE
VD	VERTICAL DROP

PROJECT INFORMATION TABLE

THE TABLES BELOW ARE TO BE READ IN CONJUNCTION WITH THE ADJACENT NOTES

GEOTECHNICAL INFORMATION

COMPANY	REPORT No.	DATED
JK GEOTECHNICS	30428S	19.06.17

SURVEY INFORMATION

THE SURVEY INFORMATION ON THESE DRAWINGS HAS BEEN PROVIDED BY

COMPANY	DATED
C.M.S. SURVEYORS	18/01/17-23/01/17

CIVIL DRAWING LIST

No.	SHEET NAME
C001	NOTES & LEGEND
C050	TYPICAL DETAILS SHEET 1
C051	TYPICAL DETAILS SHEET 2
C100	EXTERNAL STORMWATER PLAN 1
C200	EXTERNAL STORMWATER PLAN 2

GENERAL

1. ALL EXISTING LEVELS TO BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT OF WORKS
2. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE NOMINATED OR APPLICABLE COUNCIL SPECIFICATION. WHERE A SPECIFICATION HAS NOT BEEN NOMINATED THEN THE CURRENT NSW DEPARTMENT OF HOUSING CONSTRUCTION SPECIFICATION IS TO BE USED. THE NOMINATED SPECIFICATION SHALL TAKE PRECEDENCE TO THESE NOTES..
3. ALL DRAWINGS SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECTURAL DRAWINGS & DRAWINGS FROM OTHER CONSULTANTS.
4. THE CONTRACTOR SHOULD REPORT ANY DISCREPANCIES ON THE DRAWINGS TO THE ENGINEER RESPONSIBLE FOR THE DESIGN.
5. THE CONTRACTOR SHOULD LOCATE AND LEVEL ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION AND PROTECT AND MAKE ARRANGEMENTS WITH THE RELEVANT AUTHORITY TO RELOCATE AND/OR ADJUST IF NECESSARY. INFORMATION GIVEN ON THE DRAWINGS IN RESPECT TO SERVICES IS FOR GUIDANCE ONLY AND IS NOT GUARANTEED COMPLETE NOR CORRECT.
6. CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORK WITHIN ADJACENT LANDS WITHOUT THE PERMISSION OF THE OWNER.
7. SURPLUS EXCAVATED MATERIAL SHALL BE PLACED WHERE DIRECTED OR REMOVED FROM SITE.
8. ALL NEW WORKS SHALL MAKE A SMOOTH JUNCTION WITH EXISTING.
9. ALL DRAINAGE LINES THROUGH ADJACENT LOTS SHALL BE CONTAINED WITHIN EASEMENTS CONFORMING TO COUNCIL'S STANDARDS.
10. THE CONTRACTOR SHALL CLEAR THE SITE BY REMOVING ALL RUBBISH, FENCES AND DEBRIS ETC. TO THE EXTENT SPECIFIED.
11. PRIOR TO COMMENCEMENT OF WORK, THE CONTRACTOR SHALL PROVIDE A TRAFFIC MANAGEMENT PLAN PREPARED BY AN ACCREDITED PERSON IN ACCORDANCE WITH RMS REQUIREMENTS, FOR ANY WORK ON OR ADJACENT TO PUBLIC ROADS, PLAN TO BE SUBMITTED TO COUNCIL & RMS.

SURVEY

1. JONES NICHOLSON IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY 3rd PARTY INFORMATION PROVIDED ON THIS DRAWING.
2. ALL LEVELS ARE TO A.H.D.
3. ALL CHAINAGES AND LEVELS ARE IN METRES, AND DIMENSIONS IN MILLIMETRES.
4. CONTRACTORS SHALL ARRANGE FOR THE WORKS TO BE SET OUT BY A REGISTERED SURVEYOR.

EARTHWORKS

1. PROVIDE PROTECTION BARRIERS TO PROTECTED/SENSITIVE AREAS PRIOR TO ANY BULK EXCAVATION.
2. OVER FULL AREA OF EARTHWORKS, CLEAR VEGETATION, RUBBISH, SLABS ETC. AND STRIP TOP SOIL. AVERAGE 200mm THICK. REMOVE FROM SITE, EXCEPT TOP SOIL FOR RE-USE.
3. CUT AND FILL OVER THE SITE TO LEVELS REQUIRED.
4. PRIOR TO ANY FILLING IN AREAS OF CUT OR IN EXISTING GROUND, PROOF ROLL THE EXPOSED SURFACE. REFER TO PROJECT INFORMATION TABLES FOR MINIMUM ROLLER WEIGHT AND THE MINIMUM NUMBER OF PASSES.
5. EXCAVATE AND REMOVE ANY SOFT SPOTS ENCOUNTERED DURING PROOF ROLLING AND REPLACE WITH APPROVED FILL COMPACTED IN LAYERS. THE WHOLE OF THE EXPOSED SUBGRADE AND FILL SHALL BE COMPACTED TO 98% STANDARD MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2%.
6. FOR ON SITE FILLING AREAS, THE CONTRACTOR SHALL TAKE LEVELS OF EXISTING SURFACE AFTER STRIPPING TOPSOIL AND PRIOR TO COMMENCING FILL OPERATIONS.
7. WHERE HARD ROCK IS EXPOSED IN THE EXCAVATED SUB-GRADE, THIS WILL BE INSPECTED AND A DECISION MADE ON THE LEVEL TO WHICH EXCAVATION IS TAKEN.
8. FILL IN 200mm MAXIMUM (LOOSE THICKNESS) LAYERS TO UNDERSIDE OF BASECOURSE USING THE EXCAVATED MATERIAL AND COMPACTED TO 98% STANDARD (AS 1289 5.1.1). MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT ± 2% SHOULD THERE BE INSUFFICIENT MATERIAL FROM SITE EXCAVATIONS, IMPORT AS NECESSARY CLEAN GRANULAR FILL TO THE DESIGN ENGINEERS APPROVAL.
9. COMPACTION TESTING TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT INFORMATION TABLE. THE COSTS OF TESTING AND RE-TESTING ARE TO BE ALLOWED FOR BY THE BUILDER.
10. BATTERS TO BE AS SHOWN, OR MAXIMUM 1 VERT : 4 HORIZ. ALL CONDUITS AND MAINS SHALL BE LAID PRIOR TO LAYING FINAL PAVEMENT.
11. ALL BATTERS AND FOOTPATHS ADJACENT TO ROADS SHALL BE TOP SOILED WITH 150mm APPROVED LOAM AND SEEDED UNLESS OTHERWISE SPECIFIED.

SAFETY IN DESIGN

THERE ARE INHERENT RISKS WITH CONSTRUCTING, MAINTAINING, OPERATING, DEMOLISHING, DISMANTLING AND DISPOSING THIS DESIGN THAT ARE TYPICAL OF SIMILAR DESIGNS. AS FAR AS IS REASONABLY PRACTICABLE RISKS HAVE BEEN ELIMINATED OR MINIMISED THROUGH THE DESIGN PROCESS. HAZARD CONTROLS MUST STILL BE IMPLEMENTED BY THE CONTRACTOR, OWNER OR OPERATOR TO ENSURE THE SAFETY OF WORKERS.

- JONES NICHOLSON'S ASSESSMENT DID NOT IDENTIFY ANY UNIQUE RISKS ASSOCIATED WITH THE DESIGN

STORMWATER DRAINAGE

1. STORMWATER DRAINAGE SHALL BE GENERALLY IN ACCORDANCE WITH CURRENT AUSTRALIAN STANDARDS AND COUNCIL'S SPECIFICATION.
2. PIPES OF 225mm DIA. AND UNDER SHALL BE UPVC.
3. PIPES OF 300mm DIA. AND LARGER SHALL BE FRC OR CONCRETE CLASS 2 RUBBER RING JOINTED UNO.
4. ALL FRC OR RCP STORMWATER PIPES WITHIN ROAD RESERVE AREAS TO BE CLASS 3 U.N.O.
5. MINIMUM COVER TO PIPES 300mm DIA. AND OVER GENERALLY SHALL BE 600mm IN CARPARK & ROADWAY AREAS UNO.
6. PIPES SHALL GENERALLY BE LAID AT THE GRADES INDICATED ON THE DRAWINGS.
7. PIPES UP TO 150mm DIA SHALL BE LAID AT 1.0% MIN. GRADE U.N.O.
8. PIPES 225mm DIA AND OVER SHALL BE LAID AT 0.5% MIN. GRADE U.N.O.
9. BACKFILL TRENCHES WITH APPROVED FILL COMPACTED IN 200mm LAYERS TO 98% OF STANDARD DENSITY.
10. ANY PIPES OVER 16% GRADE SHALL HAVE CONCRETE BULKHEADS AT ALL JOINTS.
11. PITS SHALL BE AS DETAILED WITH METAL GRATES AT LEVELS INDICATED. ALL PITS DEEPER THAN 1200mm TO HAVE CLIMB IRONS. ALL GRATED PITS WITHIN PEDESTRIAN AND BUILDING AREAS TO HAVE ANTI-SLIP HEELGUARD GRATES
12. BUILD INTO UPSTREAM FACE OF ALL PITS A 3.0m SUBSOIL LINE FALLING TO PITS TO MATCH PIT INVERTS.
13. ALL COURTYARD & LANDSCAPED PITS TO BE 450 SQUARE UNLESS NOTED OTHERWISE.
14. ALL DRIVEWAY & OSD PITS TO BE 600 SQUARE UNLESS NOTED OTHERWISE.
15. INSTALL TEMPORARY SEDIMENT BARRIERS TO INLET PITS, TO COUNCIL'S STANDARDS UNTIL SURROUNDING AREAS ARE PAVED OR GRASSED.
16. PITS & DOWNPIPE LOCATIONS AND LEVELS MAY BE VARIED TO SUIT SITE CONDITIONS AFTER CONSULTING THE ENGINEER.
17. DOWNPIPES SHOWN ARE INDICATIVE ONLY, ALL ROOF GUTTERING AND DOWNPIPES TO THE CURRENT AUSTRALIAN STANDARDS.
18. ALL PLANTER BOXES AND BALCONIES TO BE CONNECTED TO THE PROPOSED STORMWATER DRAINAGE LINE.
19. HAND-EXCAVATE STORMWATER PIPES IN VICINITY OF TREE ROOTS.
20. FOOTPATH CROSSING LEVELS SHOWN ARE TO BE ADJUSTED TO FINAL COUNCIL'S ISSUED LEVELS.
21. GEOTEXTILE FABRIC TO BE PLACED UNDER RIP RAP SCOUR PROTECTION.
22. ALL BASES OF PITS TO BE BENCHED TO HALF PIPE DEPTH AND PROVIDE GALVANISED ANGLE SURROUNDINGS TO GRATE.
23. SUBSOIL LINE PIPES AND FITTINGS SHALL BE PERFORATED PLASTIC TO CURRENT AUSTRALIAN STANDARDS. LAY PIPES ON FLOOR OF TRENCH GRADED AT 1% MIN. AND OVERLAY WITH FILTER MATERIAL EXTENDING TO WITHIN 200mm OF SURFACE. PROVIDE FILTER FABRIC OF PERMEABLE POLYPROPYLENE BETWEEN FILTER MATERIAL AND TOPSOIL
24. SHOULD THE CONTRACTOR ELECT TO INSTALL PRECAST STORMWATER PITS AND THEY ARE PERMITTED BY COUNCIL AND THE CLIENT, THE PRECAST PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH RMS STANDARDS INCLUDING:
    1. SEAL THE SEGMENTS TOGETHER USING A SITE-APPROVED NON-SHRINK GROUT OR MASTIC-TYPE PRODUCT. APPLY THE SEALANT IN ACCORDANCE WITH THE PRODUCT MANUFACTURER'S REQUIREMENTS.
    2. ENSURE THAT NO GAPS REMAIN AND THAT A SMOOTH FACE EXISTS BETWEEN MULTIPLE UNITS.
    3. LEAVE THE SEGMENTS UNDISTURBED UNTIL THE PERIOD OF CURING IS COMPLETED IN ACCORDANCE WITH THE GROUT OR SEALANT PRODUCT MANUFACTURER'S REQUIREMENTS.

STORMWATER DRAINAGE INSTALLATION

1. SUPPLY & INSTALLATION OF DRAINAGE WORKS TO BE IN ACCORDANCEWITH THESE DRAWINGS, THE COUNCIL SPECIFICATION AND THE CURRENT APPLICABLE AUSTRALIAN STANDARDS.
2. BEDDING OF THE PIPELINES IS TO BE TYPE 'HS2' IN ACCORDANCE WITH THE STANDARDS AND AS FOLLOWS:
    a. COMPACTED GRANULAR MATERIAL IS TO COMPLY WITH THE FOLLOWING GRADINGS:

SIEVE SIZE (mm)	19	2.36	0.60	0.30	0.15	0.075
% MASS PASSING	100	50-100	20-90	10-60	0-25	0-10

    - AND THE MATERIAL PASSING THE 0.075 SIEVE HAVING LOW PLASTICITY AS DESCRIBED IN APPENDIX D OF AS1726.
    b. BEDDING DEPTH UNDER THE PIPE TO BE 100mm.
    c. BEDDING MATERIAL TO BE EXTENDED FROM THE TOP OF THE BEDDING ZONE UP TO 0.3 TIMES PIPE OUTSIDE DIAMETER. THIS REPRESENTS THE 'HAUNCH ZONE.'
    d. THE BEDDING & HAUNCH ZONE MATERIAL IS TO BE COMPACTED TO A MINIMUM RELATIVE COMPACTION OF 98% WITHIN ROAD RESERVES AND TRAFFICABLE AREAS AND 95% ELSEWHERE FOR COHESIVE MATERIAL OR A MINIMUM DENSITY INDEX OF 70% IN ACCORDANCE WITH THE STANDARDS FOR COHESIONLESS MATERIAL.
    e. COMPACTION TESTING SHALL BE CARRIED OUT BY AN APPROVED ORGANISATION WITH A NATA CERTIFIED LABORATORY FOR ALL DRAINAGE LINES LAID WHOLLY OR IN PART UNDER THE KERB & GUTTER OR PAVEMENT.
3. BACKFILL SHALL BE PLACED & COMPACTED IN ACCORDANCE WITH THE SPECIFICATION. A GRANULAR GRAVEL AGGREGATE MATERIAL (<10mm) BACKFILL IS RECOMMENDED FOR THE BEDDING, HAUNCH SUPPORT AND SIDE ZONE DUE TO IT'S SELF COMPACTING ABILITY.
4. A MINIMUM OF 150mm CLEARANCE IS TO BE PROVIDED BETWEEN THE OUTSIDE OF THE PIPE BARREL AND THE TRENCH WALL FOR PIPES < 600 DIA. 200mm CLEARANCE FOR PIPES 600 TO 1200 DIA AND D/6 CLEARANCE FOR PIPES > 1200 DIA.

PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	BY	DESCRIPTION
1	20.10.17	JH	SSD ISSUE

NSW GOVERNMENT

JDH architects

ISO 9001 Quality Management · ISO 14001 Environmental Management · AS/NZS 4801 Occupational Health & Safety Management

CIVIL · STRUCTURAL · BUILDING SERVICES

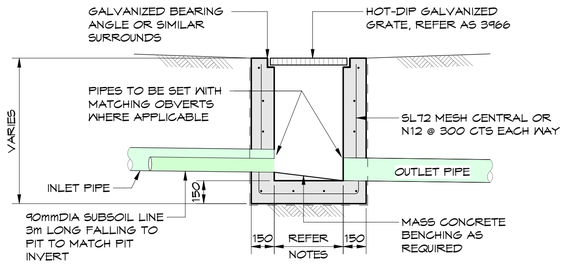
JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU ABN: 51 003 316 032

DESIGN : TH
DRAWN : JH
DATE : OCT 2017
DRG SIZE : A1
SCALE : As indicated
PROJECT MGR : BJ

CIVIL DESIGN NOTES & LEGEND

FAIRVALE HIGH SCHOOL
1 THORNEY ROAD FAIRFIELD WEST NEW 2165
JDH ARCHITECTS

161274 C001 1

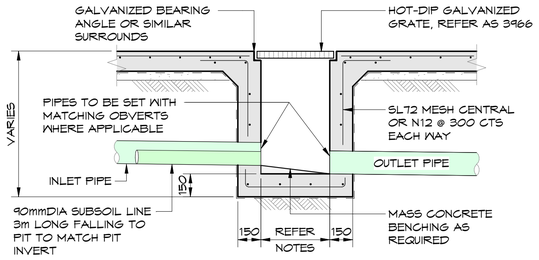


MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS			
DEPTH OF INVERT OF OUTLET		DEPTH OF INVERT OF OUTLET	
		WIDTH	LENGTH
	< 600	450	450
> 600		600	600
> 900		600	900
> 1200		900	900
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1200mm			

NOTES:

1. CLIMB IRONS SHALL BE PROVIDED UNDER LID AT 300 CTS TO COUNCIL STANDARDS WHERE PIT DEPTH IS DEEPER THAN 1000.
2. REINFORCEMENT NOTED IS ONLY REQUIRED FOR PITS EXCEEDING 900 DEEP, SUBJECT TO COUNCIL REQUIREMENTS. PITS GREATER THAN 3000 DEEP WILL REQUIRE STRUCTURAL ENGINEERS DESIGN.
3. PROVIDE 90Dia x 3000 LONG SUBSOIL DRAINAGE STUB PIPE SURROUNDED WITH 100mm THICKNESS OF NOMINAL 20mm COARSE FILTER MATERIAL WRAPPED IN GEOTEXTILE FILTER FABRIC. (BIDUM A24 OR APPROVED SIMILAR). TO BE PARALLEL TO UPSTREAM SIDE OF EACH INLET PIPE.
4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
5. CONCRETE STRENGTH F'c = 32 MPa

TYPICAL CONCRETE INLET PIT - NATURAL SURFACE



MINIMUM INTERNAL DIMENSIONS FOR STORMWATER PITS			
DEPTH OF INVERT OF OUTLET		DEPTH OF INVERT OF OUTLET	
		WIDTH	LENGTH
	< 600	450	450
> 600		600	600
> 900		600	900
> 1200		900	900
*STEP IRONS SHALL BE PROVIDED FOR PITS WITH DEPTHS EXCEEDING 1200mm			

NOTES:

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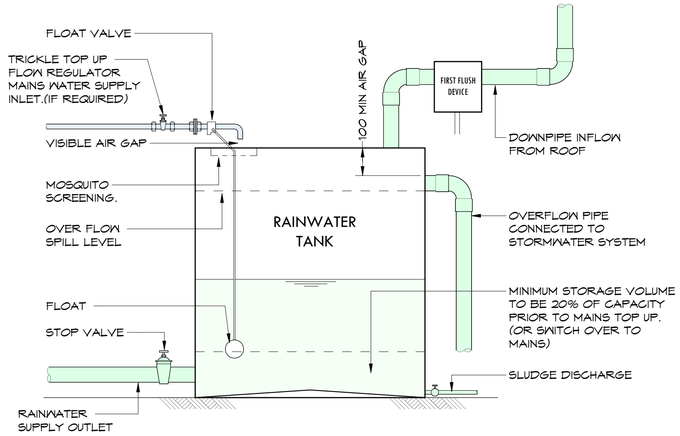
4. ALTERNATIVE PIT CONSTRUCTION MAY BE USED SUBJECT TO THE ENGINEERS APPROVAL.
5. CONCRETE STRENGTH F'c = 32 MPa

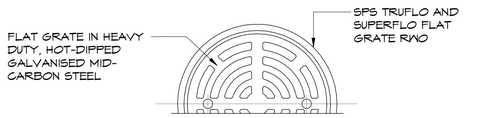
TYPICAL CONCRETE INLET PIT - CONCRETE SURFACE

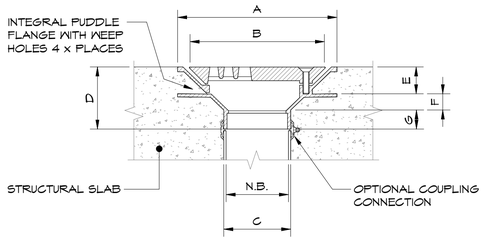


NOTES:

- RAINWATER TANKS USAGE TO BASIX REQUIREMENTS. MAINS WATER TOP-UP SYSTEM INSTALLED TO AS/NZS 3500.1 (2003) IS TO BE PROVIDED FOR TRICKLE TOP-UP OF RAINWATER TANK IF THE STORED WATER BECOMES LESS THAN SET MINIMUM WATER LEVEL. ALTERNATIVELY PROVIDE SWITCH OVER TO MAINS DEVICE WHEN TANK STORAGE REACHES MINIMUM WATER LEVEL. (RAINBANK OR SIMILAR)
- INSTALL FIRST FLUSH DEVICE TO RESTRICT LEAVES, DEBRIS, DUST AND OTHER CONTAMINATING MATERIAL ENTERING THE RAINWATERTANK AND POLLUTING THE WATER.

TYPICAL RAINWATER TANK DETAIL





N.B.	A	B	C	D	E	F	C	FLOW RATE * L/S
100	260	200	110	95	44	26	25	8.2
150	260	200	160	80	48	29	28	10.2
SUPERFLO**	400	290	160	143	66	39	38	17

* BASED ON 50mm HEAD OF WATER ABOVE SURFACE LEVEL. FOR FURTHER DATA REFER TO FLOW CHARTS.

** SUPERFLO AVAILABLE IN 150mm OUTLET ONLY.

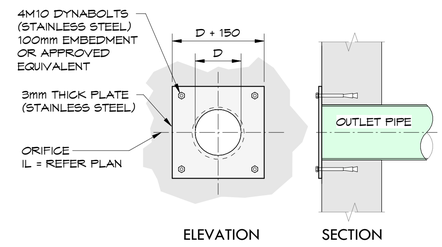
SPECIFICATION CODE:

- TIA100F (100mm TRUFLO CI BODY, GALVANISED FLAT GRATE).
- TIA150F (150mm TRUFLO CI BODY, GALVANISED FLAT GRATE).
- TIA100/90F2 (150mm SUPERFLO CI BODY, GALVANISED FLAT GRATE).

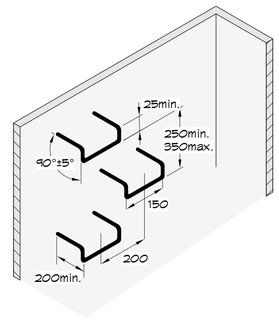
SUGGESTED APPLICATIONS:

- CAR PARK DECKS.
- PLANT ROOMS.
- PEDESTRIAN PRECINCTS.

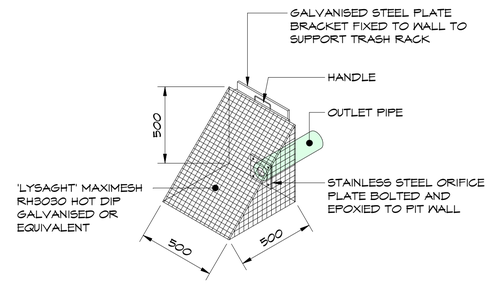
SPS TRUFLO & SUPERFLO FLAT GRATE RWO



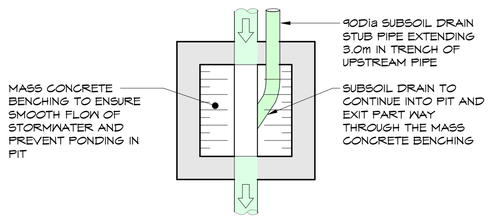
TYPICAL ORIFICE PLATE DETAIL



STEP IRON DETAIL



TYPICAL TRASH RACK SCREEN DETAIL



TYPICAL SUBSOIL PIPE/PIT BENCHING

2	31.10.17	JH	SSD RE-ISSUE
1	20.10.17	JH	SSD ISSUE
AMDT	DATE	BY	DESCRIPTION

NSW GOVERNMENT

JDH architects

bsi. ISO 9001 Quality Management | ISO 14001 Environmental Management | AS/NZS 4801 Occupational Health & Safety Management

CIVIL · STRUCTURAL · BUILDING SERVICES

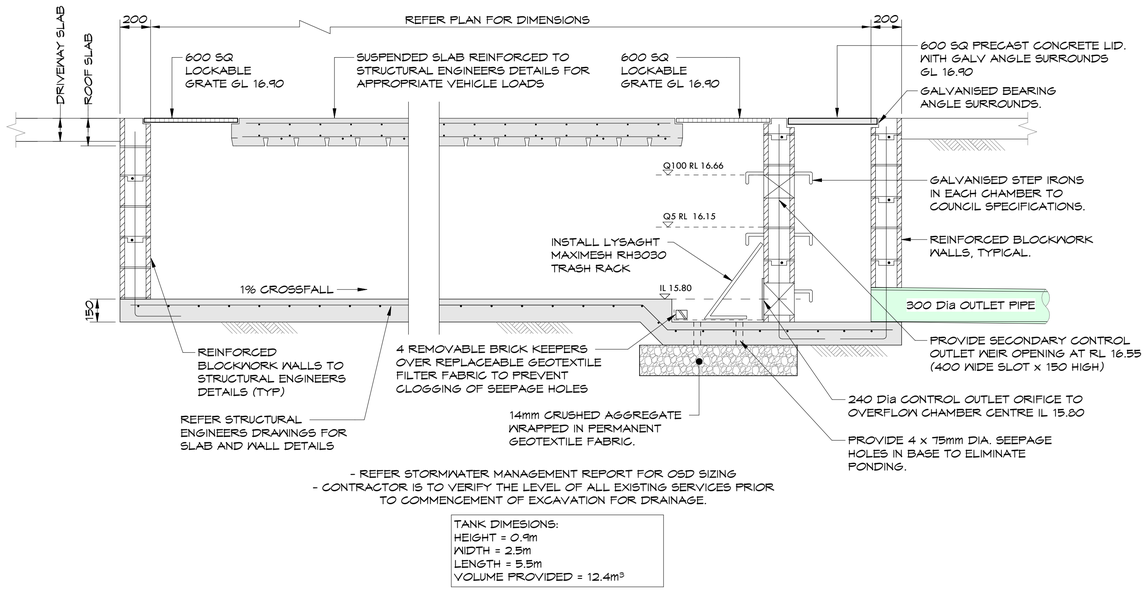
JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU ABN: 51 003 316 032

DESIGN : TH
DRAWN : JH
DATE : OCT 2017
DRG SIZE : A1
SCALE : As indicated
PROJECT MGR : BJ

CIVIL DESIGN
TYPICAL DETAILS
SHEET 1

FAIRVALE HIGH SCHOOL
1 THORNEY ROAD FAIRFIELD WEST NEW 2165
JDH ARCHITECTS

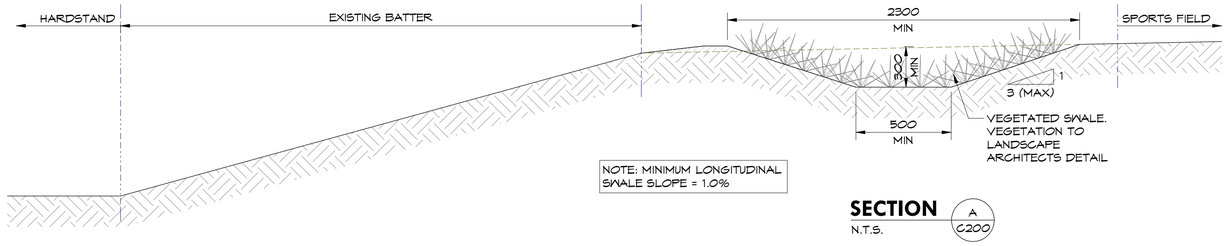
161274
C050 2



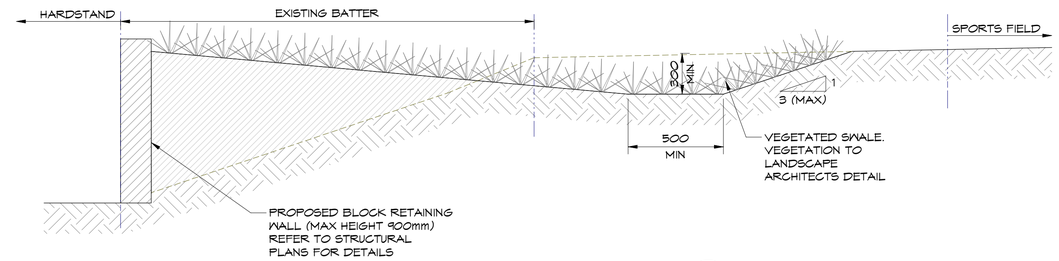
- REFER STORMWATER MANAGEMENT REPORT FOR OSD SIZING
- CONTRACTOR IS TO VERIFY THE LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION FOR DRAINAGE.

TANK DIMESIONS:
HEIGHT = 0.9m
WIDTH = 2.5m
LENGTH = 5.5m
VOLUME PROVIDED = 12.4m³

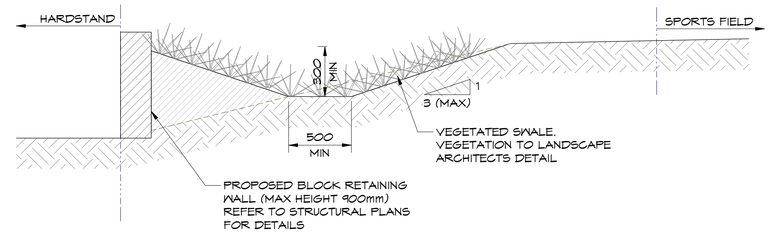
ON SITE DETENTION TANK 1 DETAIL



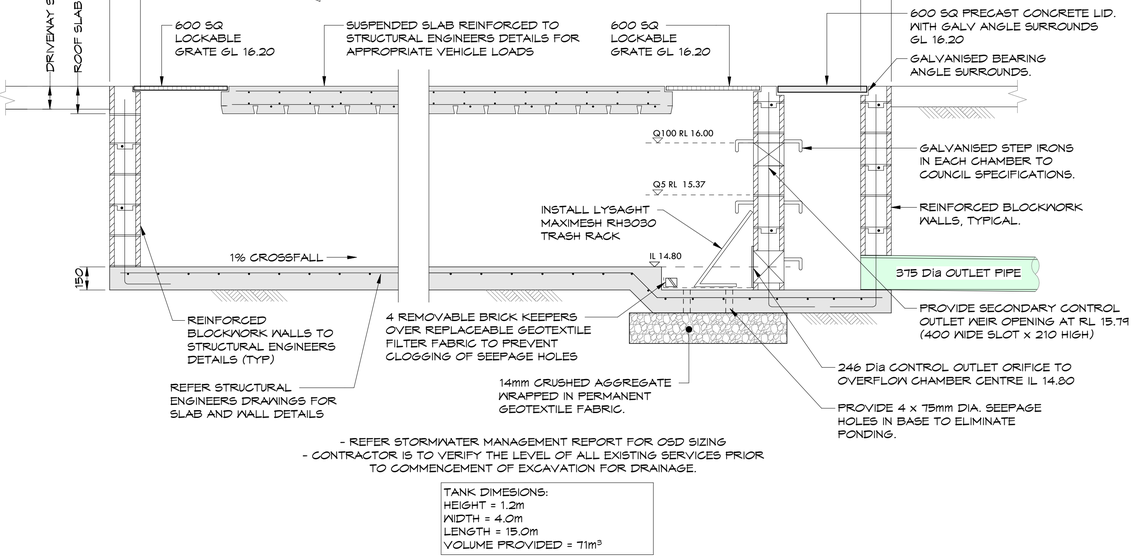
SECTION A C200
N.T.S.



SECTION B C200
N.T.S.



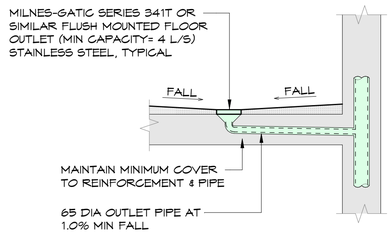
SECTION C C200
N.T.S.



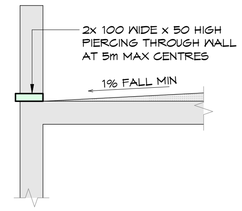
- REFER STORMWATER MANAGEMENT REPORT FOR OSD SIZING
- CONTRACTOR IS TO VERIFY THE LEVEL OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF EXCAVATION FOR DRAINAGE.

TANK DIMESIONS:
HEIGHT = 1.2m
WIDTH = 4.0m
LENGTH = 15.0m
VOLUME PROVIDED = 71m³

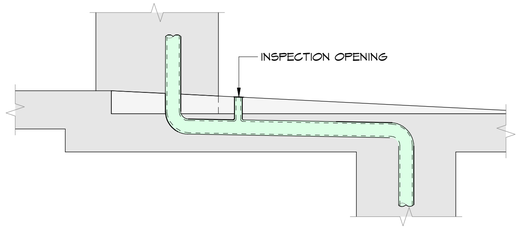
ON SITE DETENTION TANK 2 DETAIL



TYPICAL BALCONY FLOOR OUTLET DETAIL



TYPICAL BALCONY SPITTIER DETAIL



TYPICAL DOWNPIPE TRANSFER DETAIL

PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

AMDT	DATE	BY	DESCRIPTION
2	31.10.17	JH	SSD RE-ISSUE
1	20.10.17	JH	SSD ISSUE

NSW GOVERNMENT

JDH architects

bsi. ISO 9001 Quality Management | ISO 14001 Environmental Management | AS/NZS 4801 Occupational Health & Safety Management

CIVIL · STRUCTURAL · BUILDING SERVICES

JONES NICHOLSON CONSULTING ENGINEERS
WWW.JONESNICHOLSON.COM.AU ABN: 51 003 316 032

DESIGN : TH
DRAWN : JH
DATE : OCT 2017
DRG SIZE : A1
SCALE : 1 : 20
PROJECT MGR : BJ

CIVIL DESIGN
TYPICAL DETAILS
SHEET 2

FAIRVALE HIGH SCHOOL
1 THORNEY ROAD FAIRFIELD WEST NEW 2165
JDH ARCHITECTS

161274
C051 2

PIT SCHEDULE				
TAG	PIT G.L. (m)	PIT I.L. (m)	SIZE (mm)	DESCRIPTION
1	20.10	19.78	450 x 450	GRATED INLET PIT
2	20.05	19.60	450 x 450	GRATED INLET PIT
3	20.00	19.40	450 x 450	GRATED INLET PIT
4	19.45	18.90	600 x 600	GRATED INLET PIT
5	19.24	18.62	600 x 600	GRATED INLET PIT
6	19.50	18.98	450 x 450	GRATED INLET PIT
7	19.40	18.80	450 x 450	GRATED INLET PIT
8	18.25	17.45	600 x 600	GRATED INLET PIT
9	18.15	17.30	600 x 600	GRATED INLET PIT
10	18.00	17.10	600 x 600	GRATED INLET PIT
11	17.75	16.30	600 x 900	GRATED INLET PIT
12	16.50	15.90	600 x 600	GRATED INLET PIT
13	16.37	15.67	600 x 600	GRATED INLET PIT
14	16.36	15.60	600 x 600	GRATED INLET PIT
15	16.35	15.50	600 x 900	GRATED INLET PIT
16	16.33	15.40	600 x 600	GRATED INLET PIT
17	16.31	15.38	600 x 600	GRATED INLET PIT
18	16.90	16.50	450 x 450	GRATED INLET PIT
19	16.80	16.30	450 X 450	GRATED INLET PIT
20	16.80	16.30	450 x 450	GRATED INLET PIT
21	16.50	16.10	450 x 450	GRATED INLET PIT
22	16.36	15.83	450 x 450	GRATED INLET PIT
23	16.34	15.63	450 x 450	GRATED INLET PIT
24	16.32	15.53	450 x 450	GRATED INLET PIT
25	16.30	15.46	600 x 600	GRATED INLET PIT
26	17.06	16.70	450 x 450	GRATED INLET PIT
27	17.04	16.59	450 x 450	GRATED INLET PIT
28	17.02	16.46	450 x 450	GRATED INLET PIT
29	17.01	16.34	600 x 600	GRATED INLET PIT
30	16.99	16.18	600 x 600	GRATED INLET PIT
31	16.96	16.03	600 x 600	GRATED INLET PIT
32	16.94	15.93	900 x 600	GRATED INLET PIT
33	17.03	16.58	450 x 450	GRATED INLET PIT
34	16.98	16.17	600 x 600	GRATED INLET PIT
35	16.80	15.55	900 x 900	SEALED JUNCTION PIT

PIT LEVELS SUBJECT TO CHANGE BASED ON CHANGES TO ARCHITECTURAL LEVELS

PRELIMINARY NOT TO BE USED FOR CONSTRUCTION

EXTERNAL STORMWATER PLAN 1

SCALE 1:200

0 4 8 12 16 20m
4 3 2 1
SCALE 1:200

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AMDT	DATE	BY	DESCRIPTION
2	31.10.17	JH	SSD ISSUE
1	20.10.17	JH	SSD ISSUE

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CIVIL • STRUCTURAL • BUILDING SERVICES

JONES NICHOLSON CONSULTING ENGINEERS

WWW.JONESNICHOLSON.COM.AU ABN: 51 003 316 032

DESIGN : TH
DRAWN : JH
DATE : JUL 2017
DRG SIZE : A1
SCALE : 1:200
PROJECT MGR : BJ

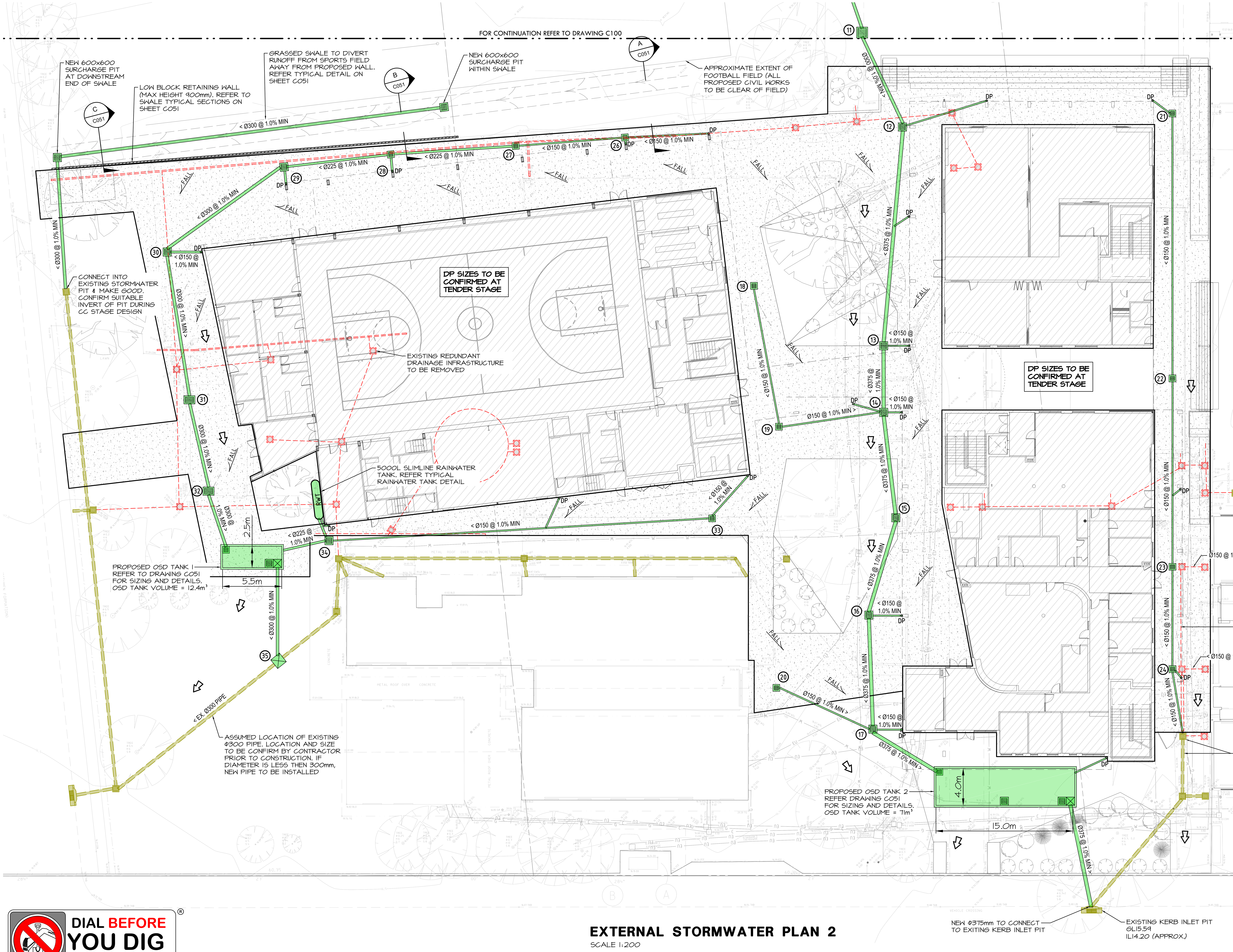
CIVIL DESIGN
EXTERNAL
STORMWATER PLAN 1

FAIRVALE HIGH SCHOOL

THORNEY ROAD, FAIRFIELD WEST
NSW 2165

JDH ARCHITECTS

161274
C1002



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PIT LEVELS SUBJECT TO CHANGE BASED ON CHANGES TO ARCHITECTURAL LEVELS

NOT TO BE USED FOR CONSTRUCTION

PRELIMINARY

EXTERNAL STORMWATER PLAN 2

SCALE 1:200

0 4 8 12 16 20m
SCALE 1:200

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AMDT	DATE	BY	DESCRIPTION
2	31.10.17	JH	SSD ISSUE
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CIVIL DESIGN EXTERNAL STORMWATER PLAN 2

FAIRVALE HIGH SCHOOL
THORNEY ROAD, FAIRFIELD WEST NSW 2165
JDH ARCHITECTS

161274
C200 2