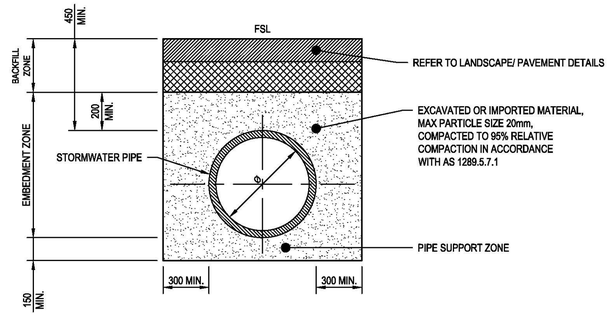
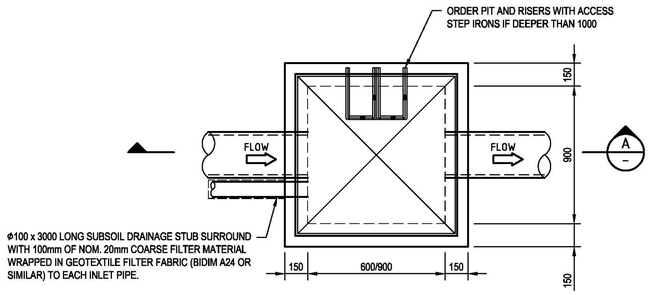


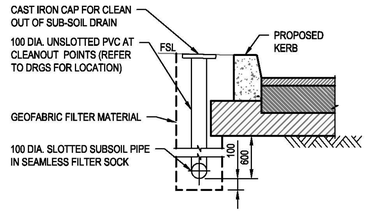
TRENCH DETAIL-BURIED PIPE UNDER NON-TRAFFICABLE AREA

NTS



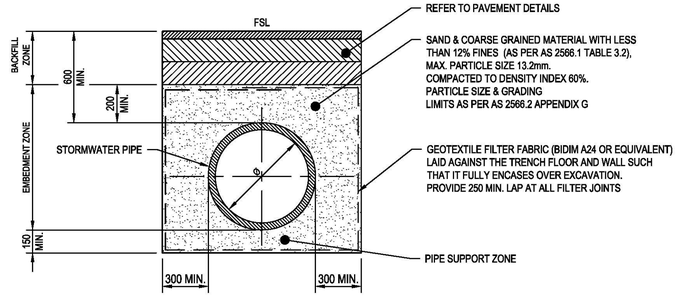
CAST IN-SITU GRATED SURFACE INLET PIT/JUNCTION PIT PLAN

NTS



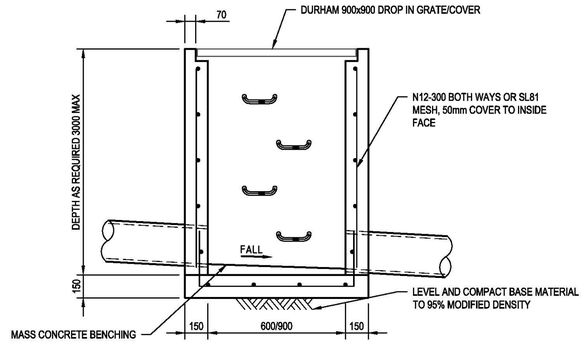
SUB-SURFACE DRAIN AND FLUSHING POINT DETAIL

NTS



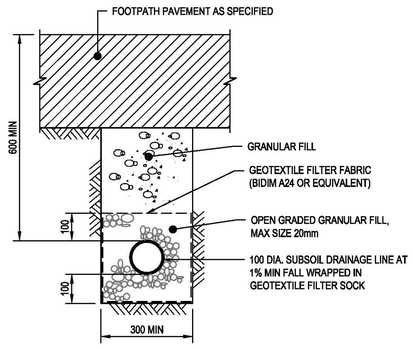
TRENCH DETAIL-BURIED PIPE UNDER TRAFFICABLE AREA

NTS



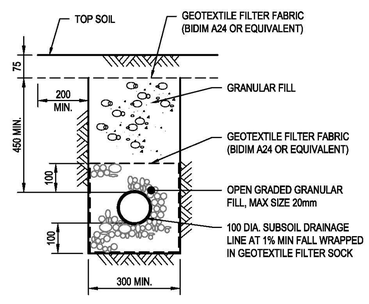
A SECTION

NTS



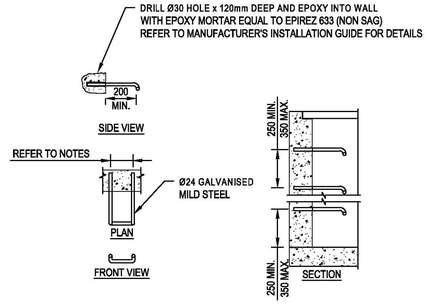
SUBSOIL DRAINAGE LINE IN PAVED AREAS

NTS



SUBSOIL DRAINAGE LINE IN LANDSCAPE AREAS

NTS



PIT STEP IRONS TYPICAL DETAILS

NOTES :
1. WHEN POSITIONED IN STRAIGHT ALIGNMENT, STEP IS 400mm WIDE.
2. STAGGERED STEPS ARE 200mm WIDE, STEPS ARE STAGGERED 200 CENTRE TO CENTRE FOR ALL ALTERNATIVE STEPS.
3. SPACING OF STEPS ARE UNIFORM TO WITHIN ±2mm IN EACH PIT.

PRELIMINARY

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
D	SCHEME DESIGN FOR APPROVAL		MR	MD*	BM*	03.11.17
C	SCHEME DESIGN FOR APPROVAL		MR	MD*	BM*	06.10.17
B	ISSUED FOR DEVELOPMENT APPLICATION		MR	MD*	MW*	21.08.17
A	ISSUED FOR DEVELOPMENT APPLICATION		MR	MD*	MW*	03.08.17

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Drawn M.RANGWALA		Designer G.DE SWARDT	
Drafting Check A.MACLEAN*		Design Check A.RAHMAN*	
Approved (Project Director)			
Date			
Scale NTS	This Drawing must not be used for Construction unless signed as Approved	Original Size A1	Drawing No: 21-26108-CF-SD-CI-1015 Rev: D

Client NSW DEPARTMENT OF EDUCATION
Project CARLINGFORD PUBLIC SCHOOL REDEVELOPMENT
Title CIVIL
STORMWATER DRAINAGE DETAILS-SHEET 1 OF 2

Plot Date: 7 February 2018 - 6:04 PM Plotted by: Mona Rangwala Cad File No: G:\21\26108\2. Carlingford PS\00 Common\CADD\Drawings\21-26108-CF-SD-CI-1015.dwg

INDICATIVE LOCATION OF SITE STOCKPILE
PROVIDE SEDIMENT FENCE TO DOWNSTREAM SIDE OF STOCKPILE. FOR DETAIL REFER DRG 21-26108-CF-SD-CI-1036

KERB INLET FILTER
FOR DETAIL REFER DRG
21-26108-CF-SD-CI-1036

INSTALL SEDIMENT FENCE
FOR DETAIL REFER DRG
21-26108-CF-SD-CI-1036

CONSTRUCT A STABILIZED
SITE ACCESS. REFER DRG
21-26108-CF-SD-CI-1036

INSTALL GEOTEXTILE SEDIMENT INLET FILTER
TO ALL PROPOSED & EXISTING STORMWATER PITS
FOR DETAIL REFER DRG 21-26108-CF-SD-CI-1036

EARTH BANK
FOR DETAIL REFER DRG
21-26108-CF-SD-CI-1036

NEW SCHOOL BUILDING
FFL 118.1

NEW COVERED OUTDOOR AREA

RICKARD STREET

LEGEND:

- PROPOSED SEDIMENT FENCE
- PROPOSED GEOTEXTILE FILTER AROUND EXISTING & NEW STORMWATER PITS & TRENCH
- STABILIZED SITE ACCESS (TEMP ACCESS)
- PROPOSED EARTH BANK
- PROPOSED KERB INLET FILTER
- EXTENT OF WORK
- BOUNDARY LINE

NOTES:

1. ALL WORKS SHALL BE GENERALLY CARRIED OUT IN ACCORDANCE WITH:
   (A) EPA - POLLUTION CONTROL MANUAL FOR URBAN STORMWATER.
   (B) DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT MANUAL - "URBAN EROSION & SEDIMENT CONTROL".
   (C) SOIL AND CONSTRUCTION VOLUME 1, 4TH EDITION, MARCH 2004 - LANDCOM 'BLUEBOOK'
2. MAINTAIN ALL EROSION AND SEDIMENT CONTROL DEVICES TO THE SATISFACTION OF THE PRINCIPAL'S REPRESENTATIVE.
3. MINIMISE THE AREA OF SITE BEING DISTURBED AT ANY ONE TIME.
4. PROTECT ALL STOCKPILES OF MATERIALS FROM SCOUR AND EROSION. DO NOT STOCKPILE LOOSE MATERIAL IN ROADWAYS, NEAR DRAINAGE PITS OR IN WATERCOURSES.
5. ALL SOIL AND WATER CONTROL MEASURES ARE TO BE PUT BACK IN PLACE AT THE END OF EACH WORKING DAY, AND MODIFIED TO BEST SUIT SITE CONDITIONS.
6. CONTROL WATER FROM UPSTREAM OF THE SITE SUCH THAT IT DOES NOT ENTER THE DISTURBED SITE.
8. ALL CONSTRUCTION VEHICLES SHALL ENTER & EXIT THE SITE VIA THE APPROVED CONSTRUCTION ENTRY/EXIT ROUTE.
9. ALL VEHICLES LEAVING THE SITE SHALL BE CLEANED & INSPECTED BEFORE LEAVING.
10. MAINTAIN ALL STORMWATER PIPES CLEAR OF DEBRIS & SEDIMENT. INSPECT STORMWATER SYSTEM & CLEAN OUT AFTER EACH STORM EVENT.
11. CLEAN OUT ALL EROSION & SEDIMENT CONTROL DEVICES AFTER EACH STORM EVENT.
12. SEDIMENT AND EROSION CONTROL PLAN IS INDICATIVE ONLY.
13. ALL NEW STORMWATER PITS TO BE SURROUNDED BY GEOTEXTILE INLET FABRIC DURING CONSTRUCTION.

EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:200

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

PRELIMINARY

No	Revision	Note: * indicates signatures on original issue of drawing or last revision of drawing	Drawn	Job Manager	Project Director	Date
G	REVISED ISSUE FOR DEVELOPMENT APPLICATION		MR	MD*	BM*	08.03.18
F	REVISED ISSUE FOR DEVELOPMENT APPLICATION		MR	MD*	BM*	30.01.18
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D	SCHEME DESIGN FOR APPROVAL		MR	MD*	MW*	06.10.17
C	ISSUED FOR DEVELOPMENT APPLICATION		MR	MD*	MW*	07.09.17

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

N

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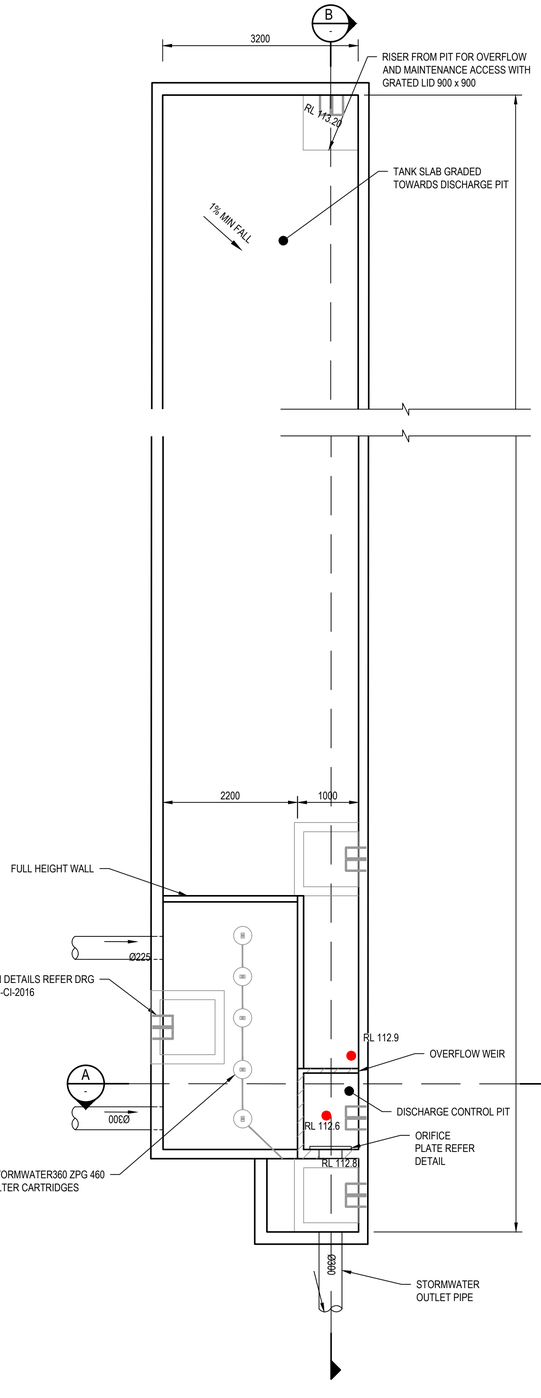
DO NOT SCALE

Drawn	M.RANGWALA	Designer	G.DE.SWARDT
Drafting Check	A.MACLEAN*	Design Check	A.RAHMAN*
Approved (Project Director)			
Date			
Scale	1:200	This Drawing must not be used for Construction unless signed as Approved	

Client NSW DEPARTMENT OF EDUCATION
Project CARLINGFORD PUBLIC SCHOOL REDEVELOPMENT
Title CIVIL
EROSION AND SEDIMENT CONTROL PLAN

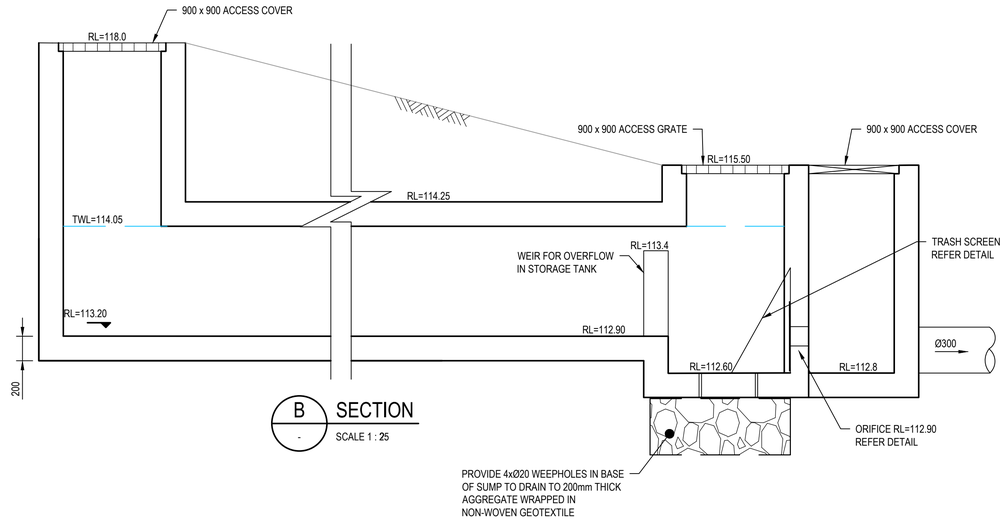
Original Size A1
Drawing No: 21-26108-CF-SD-CI-1035 Rev: G

Plot Date: 9 March 2018 - 1:10 PM Plotted by: Daniel Ghashghaie Cad File No: \\ghdnet\ghd\AU\Sydney\Projects\21\26108\2. Carlingford PS\00 Common\CADD\Drawings\21-26108-CF-SD-CI-1035.dwg



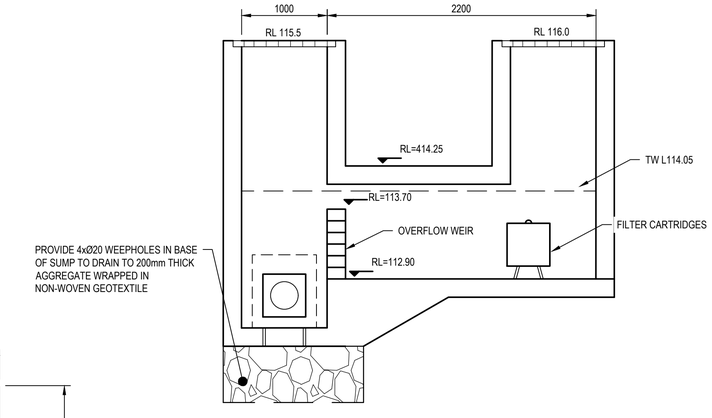
ONSITE STORMWATER DETENTION TANK (OSD) AND WATER QUALITY CHAMBER(SQC) PLAN

SCALE 1:50



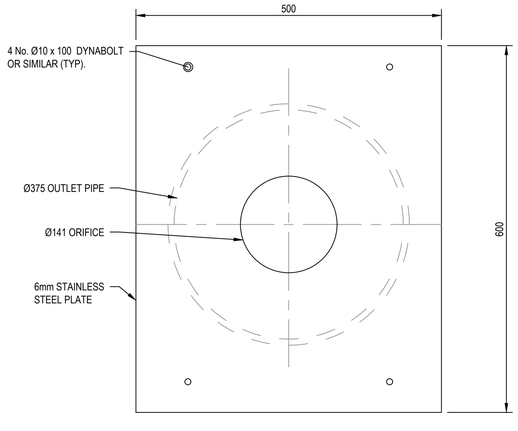
B - SECTION

SCALE 1 : 25



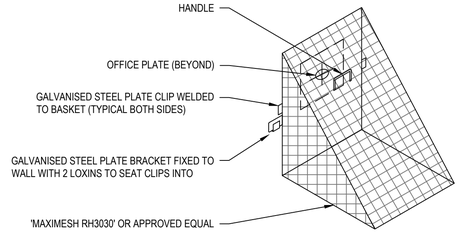
A - SECTION

SCALE 1 : 25



ORIFICE PLATE DETAIL

SCALE 1:5



TRASH SCREEN DETAIL

NTS

NOTES:

1. STRUCTURAL DETAIL DRGS WILL BE PROVIDED CONSTRUCTION SET
2. ALL ACCESS LIDS/GRATES TO BE 'CLASS B OR D' BOLT DOWN.
3. REFER MANUFACTURERS SPECIFICATION FOR INSTALLATION AND MAINTENANCE INSTRUCTIONS.

DESIGN SUMMARY

TOWN CENTRE = PARRAMATTA
CATCHMENT NAME = DEVLINS CREEK

ON-SITE DETENTION:

DESIGN BASIS:
- UPRCT
- SITE STORAGE REQUIREMENT = 100.5m³/ha

BYPASS AREA/PERCENTAGE = 7%

THEREFORE PERMITTED SITE DISCHARGE = 58.21L/s
- DISCHARGE FROM FILTER CHAMBER 12.10 L/s
- ADJUSTED PSD 46.11

ON-SITE DETENTION SUMMARY:
- BELOW GROUND TANK

TOP WATER LEVEL = RL114.0
OVERFLOW LEVEL = RL114.0
ORIFICE CENTERLINE = RL112.90
ORIFICE DIAMETER = Ø141mm

TREATMENT NODES:
- STORMWATER 360 ZPG 'STORMFILTER' CARTRIDGE 11 x 460
- GRASSLINE SWALE

TREATMENT STANDARDS:

POLLUTANT	REDUCTION STANDARDS	REDUCTION ACHIEVED
GROSS POLLUTANTS	90%	100%
TOTAL SUSPENDED SOLIDS	85%	86.1%
TOTAL PHOSPHORUS	65%	79%
TOTAL NITROGEN	45%	51.5%

MUSIC MODEL PARAMETERS IN ACCORDANCE WITH PARRAMATTA WSUD

OSD PLAQUE

NTS

CORNERS: SQUARE
COLOUR: ETCHED AND FILLED BLACK LEGEND ON NATURAL SILVER BACKGROUND
MATERIAL: ALUMINIUM 0.9mm MILL

OSD SIGNAGE NOTES

1. A CONFINED SPACE DANGER SIGN SHALL BE POSITIONED IN A LOCATION AT ALL ACCESS POINTS,SUCH THAT IT IS CLEARLY VISIBLE TO PERSONS PROPOSING TO ENTER THE BELOW GROUND TANKS CONFINED SPACE.
2. MINIMUM DIMENSIONS OF THE SIGN 250mm x 180mm
3. THE SIGN SHALL BE MANUFACTURED FROM COLOUR BONDED ALUMINIUM OR POLYPROPYLENE.
4. SIGN SHALL BE AFFIXED USING SCREWS AT EACH CORNER OF THE SIGN.

PRELIMINARY

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E	REVISED ISSUE FOR DEVELOPMENT APPLICATION		BS	MD*	BM*	08.03.18
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B	SCHEME DESIGN FOR APPROVAL		MR	MD*	BM*	06.10.17
A	ISSUED FOR DEVELOPMENT APPLICATION		MR	PM*	MD*	07.09.17

0 0.05 0.1 0.15 0.2 0.25m
SCALE 1:5 AT ORIGINAL SIZE
0 0.25 0.5 0.75 1.0 1.25m
SCALE 1:25 AT ORIGINAL SIZE
0 0.5 1.0 1.5 2.0 2.5m
SCALE 1:50 AT ORIGINAL SIZE

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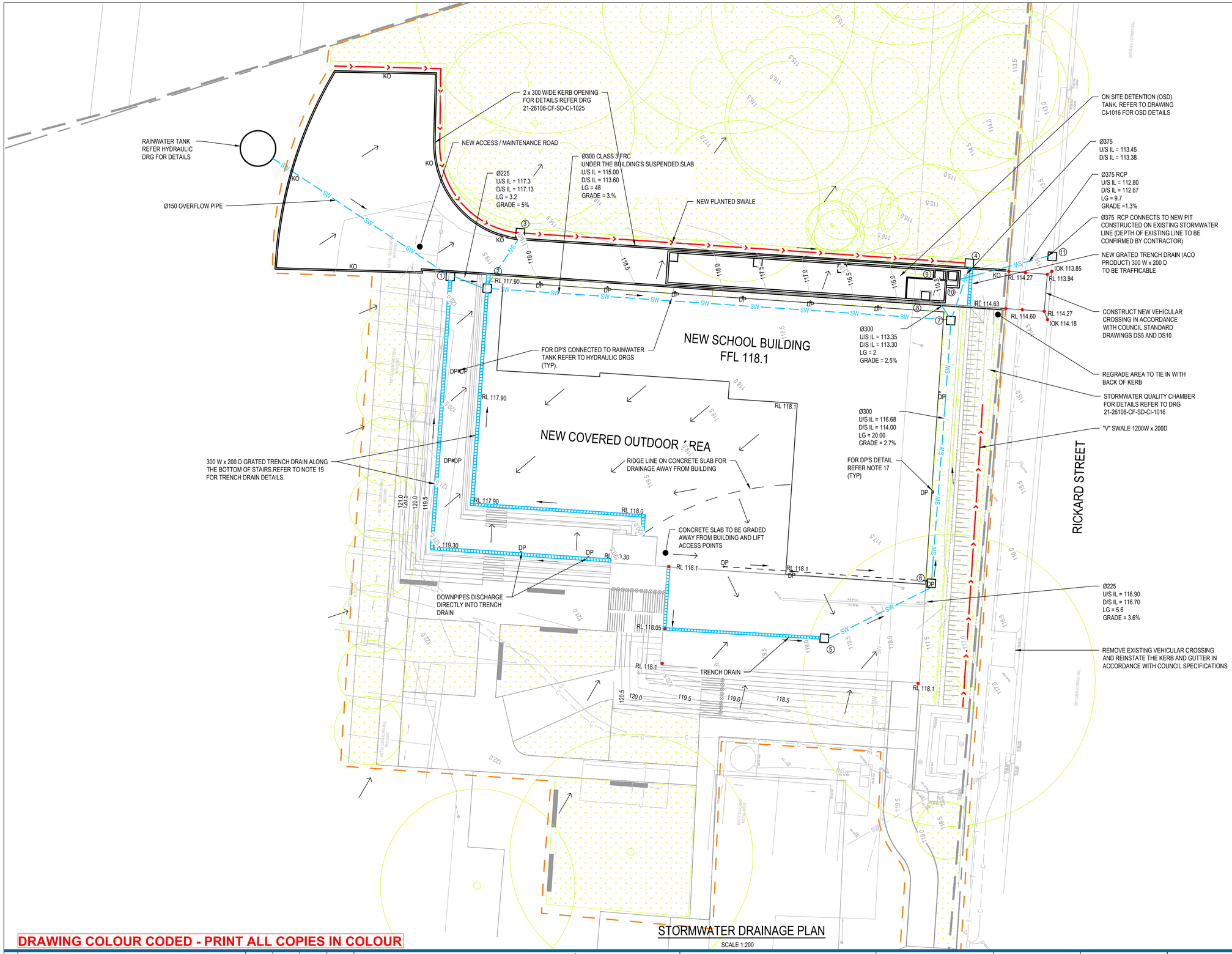
Drawn M.RANGWALA | Designer G.DE SWARDT
Drafting Check A.MACLEAN* | Design Check A.RAHMAN*
Approved (Project Director)
Date
Scale 1.25
This Drawing must not be used for Construction unless signed as Approved

Client NSW DEPARTMENT OF EDUCATION
Project CARLINGFORD PUBLIC SCHOOL REDEVELOPMENT
Title CIVIL
STORMWATER DRAINAGE DETAILS-SHEET 2 OF 2

Original Size A1
Drawing No: 21-26108-CF-SD-CI-1016 Rev: E

Plot Date: 9 March 2018 - 12:34 PM Plotted by: Daniel Ghashghaie
Cad File No: \\ghdnet\ghd\AU\Sydney\Projects\21\26108\2. Carlingford PS\00 Common\CADD\Drawings\21-26108-CF-SD-CI-1016.dwg



PIT SCHEDULE

PIT NO	PIT DETAILS	SURFACE LEVEL
1	900x900 GRATED INLET PIT	119.30
2	900x900 GRATED INLET PIT	117.90
3	900x900 GRATED INLET PIT	118.80
4	900x900 GRATED INLET PIT	114.30
5	900x900 GRATED INLET PIT	117.90
6	900x900 GRATED INLET PIT	117.23
7	900x900 GRATED INLET PIT	115.0
8	STORMWATER360 CONCRETE CHAMBER	116.0
9	OSD	115.50
10	JUNCTION PIT	115.30
11	NEW GRATED KERB INLET PIT	112.58

LEGEND:

- NEW GRATED TRENCH DRAIN 300mm WIDE x 200mm DEEP
- NEW STORMWATER PIPE
- NEW STORMWATER GRATED INLET PIT
- PIPE FLOW DIRECTION
- NEW DOWN PIPE DRAIN
- NEW DOWN PIPE CONNECTED TO RAINWATER TANK
- NEW 'V' SWALE DRAIN 1.2 WIDE x 0.2 DEEP
- NEW SUBSOIL DRAIN
- NEW FLUSHING POINT
- OVERLAND FLOW DIRECTION
- LIMIT OF WORKS
- SITE BOUNDARY

ABBREVATION:

RL	REDUCE LEVEL
IOK	INVERT OF KERB
FFL	FLOOR FINISH LEVEL
KO	KERB ONLY

NOTES:

1. ALL STORMWATER PIPES TO HAVE A MINIMUM OF 1% SLOPE IN DIRECTION SHOWN.
2. ALL IN-GROUND STORMWATER PIPES TO BE FRC CLASS 2 PIPES UNO.
3. ALL PIPES TO BE MINIMUM 450mm BELOW LANDSCAPED SURFACES AND 600 BELOW SURFACES IN TRAFFICABLE AREA.
4. UNLESS NOTED OTHERWISE, THE IN-GROUND STORMWATER PIPES SHALL BE FIBRE REINFORCED CONCRETE CLASS 2 APPROVED SPIGOT AND SOCKET WITH RUBBER RING JOINTS.
5. STORMWATER PIPES ARE TO BE INSTALLED IN ACCORDANCE WITH AS 3725. ALL BEDDING IS TO BE TYPE H2 UNLESS NOTED OTHERWISE.
6. CARE IS TO BE TAKEN WITH LEVELS OF STORMWATER LINES. GRADE SHOWN ARE NOT TO BE REDUCED WITHOUT APPROVAL.
7. STORMWATER PITS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.
8. GRATES AND COVERS SHALL CONFORM WITH AS 3996-1992.
9. ALL WORKS SHALL BE CARRIED OUT IN ACCORDANCE WITH CURRENT STANDARDS AND CONSTRUCTION SPECIFICATIONS.
10. THE CONTRACTOR SHALL VERIFY LOCATIONS OF EXISTING SERVICES WITH ALL RELEVANT AUTHORITIES BEFORE COMMENCING CONSTRUCTION.
11. ALL STRUCTURES TO BE CONSTRUCTED TO NEW FINISHED SURFACE LEVELS.
12. DATUM FOR LEVELS IS AHD, THE POSITION, SIZE, SURFACE LEVELS AND INVERT LEVELS OF EXISTING STORMWATER PITS ARE TAKEN FROM SURVEY DRAWING. THESE NEED TO BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
13. ALL STORMWATER PITS SHALL BE CONSTRUCTED USING CAST IN-SITU CONCRETE OR HEAVY DUTY PRECAST PITS.
14. CONNECTION TO EXISTING STORMWATER PITS TO BE CARRIED OUT BY THE CONTRACTOR IN ACCORDANCE WITH THE SPECIFICATION AND IN CONSULTATION WITH COUNCIL/RELEVANT AUTHORITIES. MAKE REQUIRED OPENING IN THE EXISTING STORMWATER PIT WALL AT THE CONNECTION POINT OF NEW LINE. REPAIR AND MAKE GOOD THE PIT WALL INCLUDING NECESSARY ADJUSTMENT OF THE PIT BENCHING TO MATCH NEW PIPE CONNECTIONS.
15. GRATES, FRAMES AND COVERS IN ROADWAYS TO BE CLASS D.
16. GRATES AND FRAMES NOT IN ROADWAYS TO BE CLASS B.
17. ALL GRATES TO BE HINGED AND LOCKABLE. PROVIDE HEEL SAFE GRATE AS PER AS 1428.1-7.5 IN ROADWAYS AND PARKING AREA (PEDESTRIAN TRAVERSING AREAS).
18. ALL DOWNPIPE DRAINAGE LINES TO BE Ø150 UPVC. REFER TO HYDRAULIC DRGS FOR LOCATIONS AND DETAILS.
19. ALL TRENCH DRAINS TO BE ACO PRODUCTS OR SIMILAR APPROVED.

STORMWATER DRAINAGE PLAN

SCALE 1:200

DRAWING COLOUR CODED - PRINT ALL COPIES IN COLOUR

PRELIMINARY

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E	SCHEME DESIGN FOR APPROVAL		MR	MD*	MW*	06.10.17

0 2 4 6 8 10m
SCALE 1:200 AT ORIGINAL SIZE

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DO NOT SCALE

Drawn	M.RANGWALA	Designer	G.DE SWARDT
Drafting Check	A.MACLEAN*	Design Check	A.RAHMAN*
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Scale	1:200	This Drawing must not be used for Construction unless signed as Approved	

Client NSW DEPARTMENT OF EDUCATION
Project CARLINGFORD PUBLIC SCHOOL REDEVELOPMENT
Title CIVIL
STORMWATER DRAINAGE PLAN

Original Size A1
Drawing No: 21-26108-CF-SD-CI-1010 Rev: I

Plot Date: 9 March 2018 - 1:09 PM Plotted by: Daniel Ghashghaie Cad File No: \\ghdnet\ghd\AU\Sydney\Projects\21\26108\2. Carlingford PS\00 Common\CADD\Drawings\21-26108-CF-SD-CI-1010.dwg