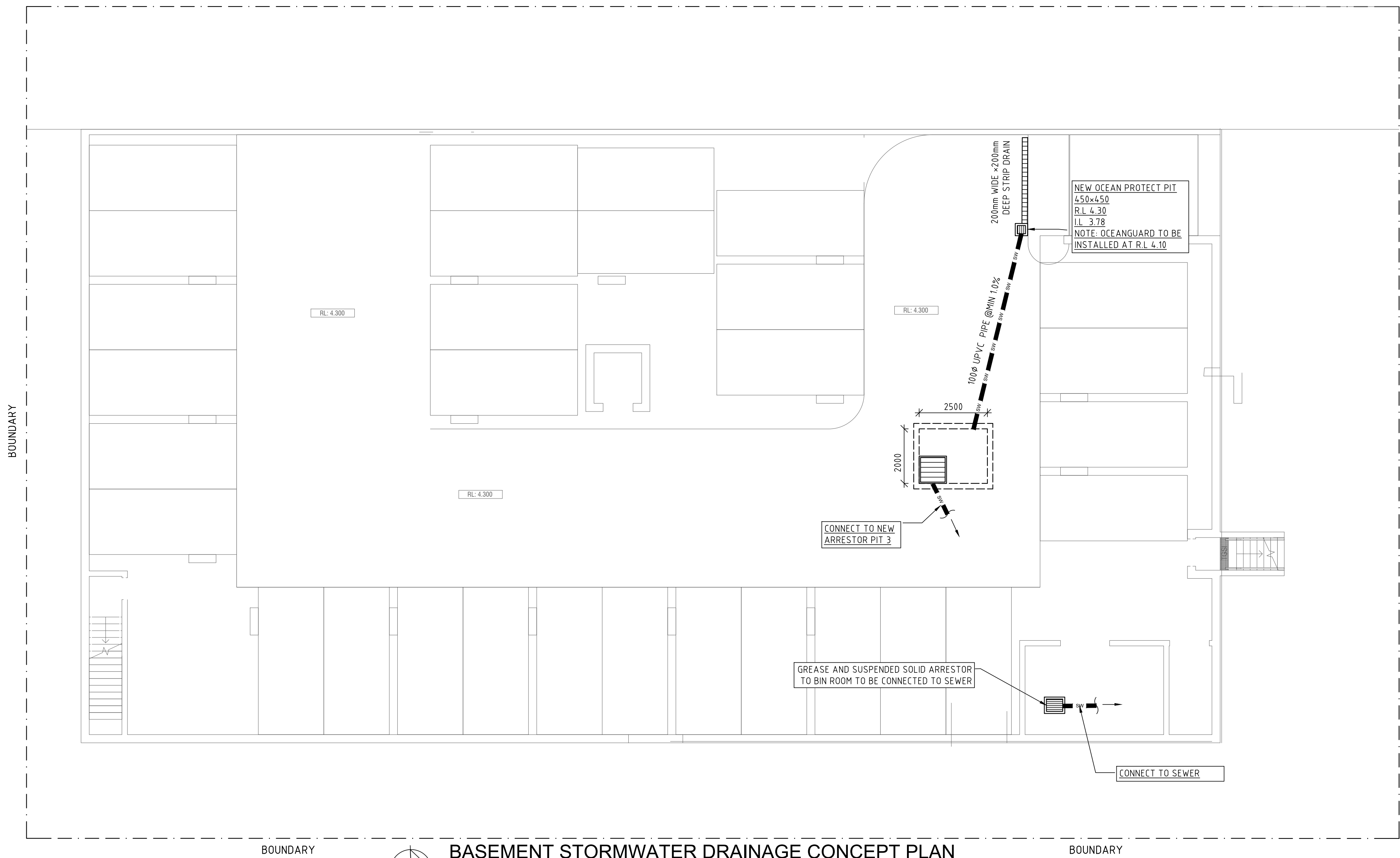


BASEMENT STORMWATER DRAINAGE CONCEPT PLAN

SCALE 1:100

NOTES:

- ALL DOWNPIPE LOCATIONS TO BE CHECKED BY ARCHITECT AND CONTRACTOR PRIOR TO CONSTRUCTION.

PUMP SPECIFICATIONS STANDARD PUMP-OUT NOTES

- THE PUMP-OUT SYSTEM IS DESIGNED TO WORK IN THE FOLLOWING MANNER -
- THE PUMPS SHALL BE PROGRAMMED TO WORK ALTERNATELY SO AS TO ALLOW BOTH PUMPS TO HAVE EQUAL OPERATION LOAD & PUMP LIFE.
 - A LOW LEVEL FLOAT SHALL BE PROVIDED TO ENSURE THAT THE MINIMUM REQUIRED WATER LEVEL IS MAINTAINED WITHIN THE SUMP AREA OF THE BELOW GROUND TANK. IN THIS REGARD THIS FLOAT WILL FUNCTION AS AN OFF SWITCH FOR THE PUMPS.
 - A SECOND FLOAT SHALL BE PROVIDED AT A HIGHER LEVEL, APPROXIMATELY 300mm ABOVE THE MINIMUM WATER LEVEL, WHEREBY ONE OF THE PUMPS WILL OPERATE & DRAIN THE TANK TO THE LEVEL OF THE LOW LEVEL FLOAT.
 - A THIRD FLOAT SHALL BE PROVIDED AT A HIGH LEVEL, WHICH IS APPROXIMATELY THE ROOF LEVEL OF THE BELOW GROUND TANK. THIS FLOAT SHOULD START THE OTHER PUMP THAT IS NOT OPERATING & ACTIVATE THE ALARM.
 - AN ALARM SYSTEM SHALL BE PROVIDED WITH A FLASHING STROBE LIGHT & A PUMP FAILURE WARNING SIGN WHICH ARE TO BE LOCATED AT THE DRIVEWAY ENTRANCE TO THE BASEMENT LEVEL. THE ALARM SYSTEM SHALL BE PROVIDED WITH A BATTERY BACK-UP IN CASE OF POWER FAILURE.

Type	Output		Outlet		Rated Head Capacity		Maximum Head Capacity		Weigh	Dimension			
	HP	kW	mm	Inch	M	LPM	M	LPM		L(mm)	W(mm)	H(mm)	
KS-03	1/3	0.25	40	1 1/2"	3	130	8	180	9	188	141	305	
KS-04	1/2	0.4	50	2"	5	150	8	220	11	208	140	359	
KS-05	1/2	0.4	50	2"	5	160	10	260	14	230	156	375	
KS-08	1	0.75	50	2"	6	240	13	380	21	290	180	425	
KS-20	2	1.5	80	3"	10	300	16	600	31	278	182	475	
KS-30	3	2.2	80	3"	10	500	18	800	42	390	250	450	
KS-50	5	3.7	100	4"	10	800	21	1100	48	450	240	530	
KS-75	7 1/2	5.6	100	4"	15	800	23	1300	60	550	310	590	
KS-100	10	7.5	150	6"	18	900	25	1600	70	550	310	610	

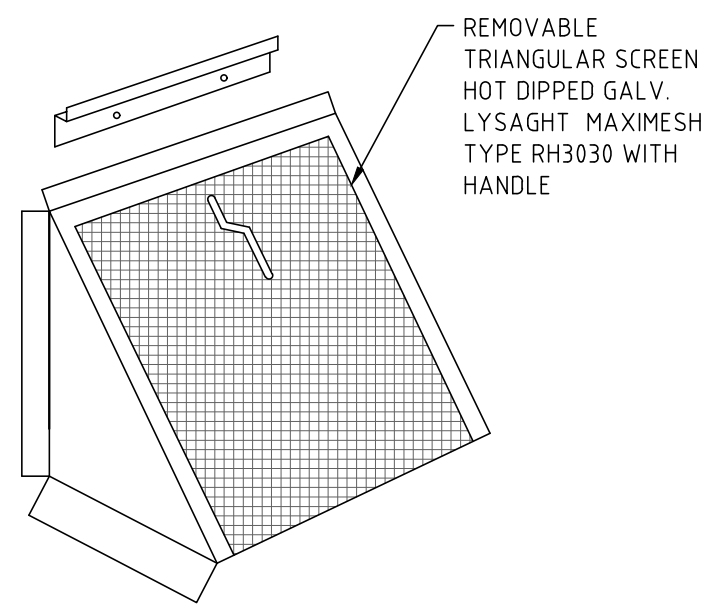
PUMP OUT CALCULATION

1. PUMP OUT REQUIREMENT:

DESIGN ARI: 100YRS
EXPOSED AREA DRAINING TO PUMP: 35.5m²
MINIMUM STORAGE CAPACITY(V_c): 35.5×(62.3/1000)×2=4.5m³
(2HRS, 10YRS ARI)
MINIMUM DISCHARGE RATE (Q_c): 35.5×207/3600 = 2.5L/s
(6MIN, 100 YRS ARI)

2. DESIGNED PUMP OUT SYSTEM:

PROPOSED PUMP PIT: 5m³
PROPOSED PUMP OUT RATE: 3L/s (MIN RATE REQUIRED AS PER AS3500.3 IS 10L/s)
PUMP OUT HYDRAULIC HEAD: 6m
PUMP OPERATION HOURS IS BE RESTRICTED BETWEEN 11:00pm AND 3.00 am.



SILT FILTER SCREEN

SCALE: NTS



COLOURS:
"DANGER" AND BACKGROUND WHITE
ELLIPTICAL AREA RED
RECTANGLE CONTAINING ELLIPSE BLACK
OTHER LETTERING AND BORDER BLACK

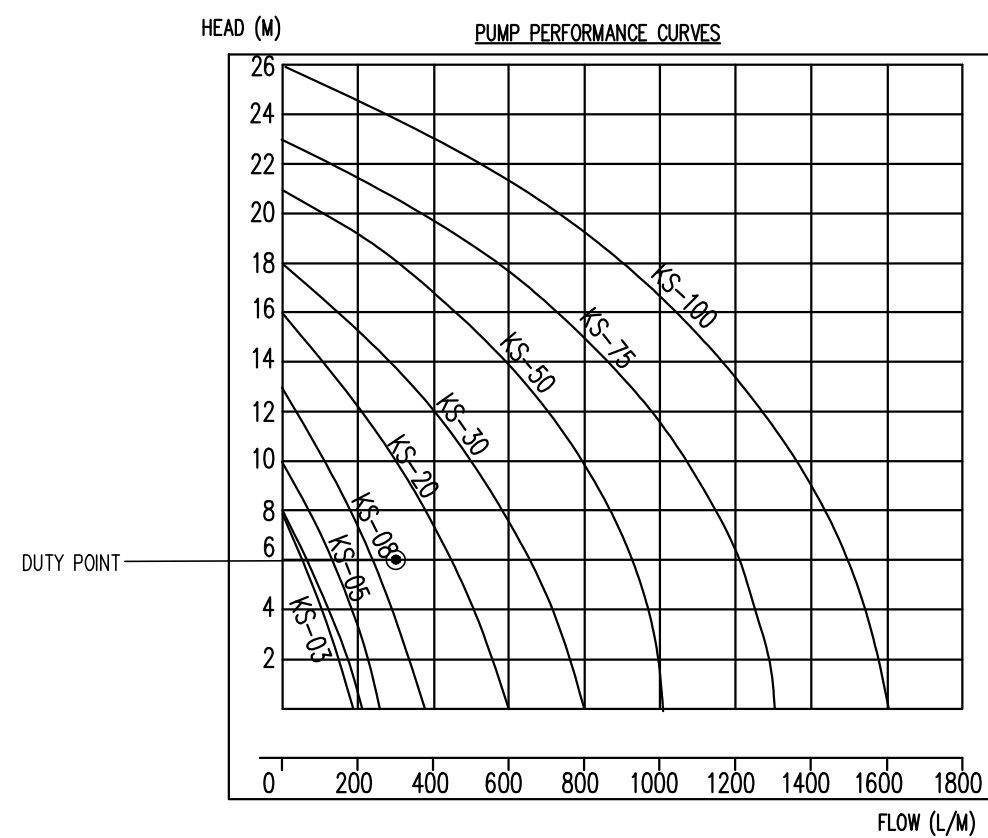
MATERIALS POLYPROPYLENE

CONFINED SPACE WARNING SIGN

SCALE: N.T.S.

PUMP OUT DETAILS:

DUAL KS-20 PUMP OR EQUIVALENT TO BE INSTALLED IN SUMP AND CONNECTED TO CONTROL PANEL WHICH WILL ALLOW FOR THE PUMPS TO OPERATE ALTERNATIVELY ON HIGH LEVEL ALARMS AT 4.0 L/s (PER PUMP) AT 6.0m HEAD.



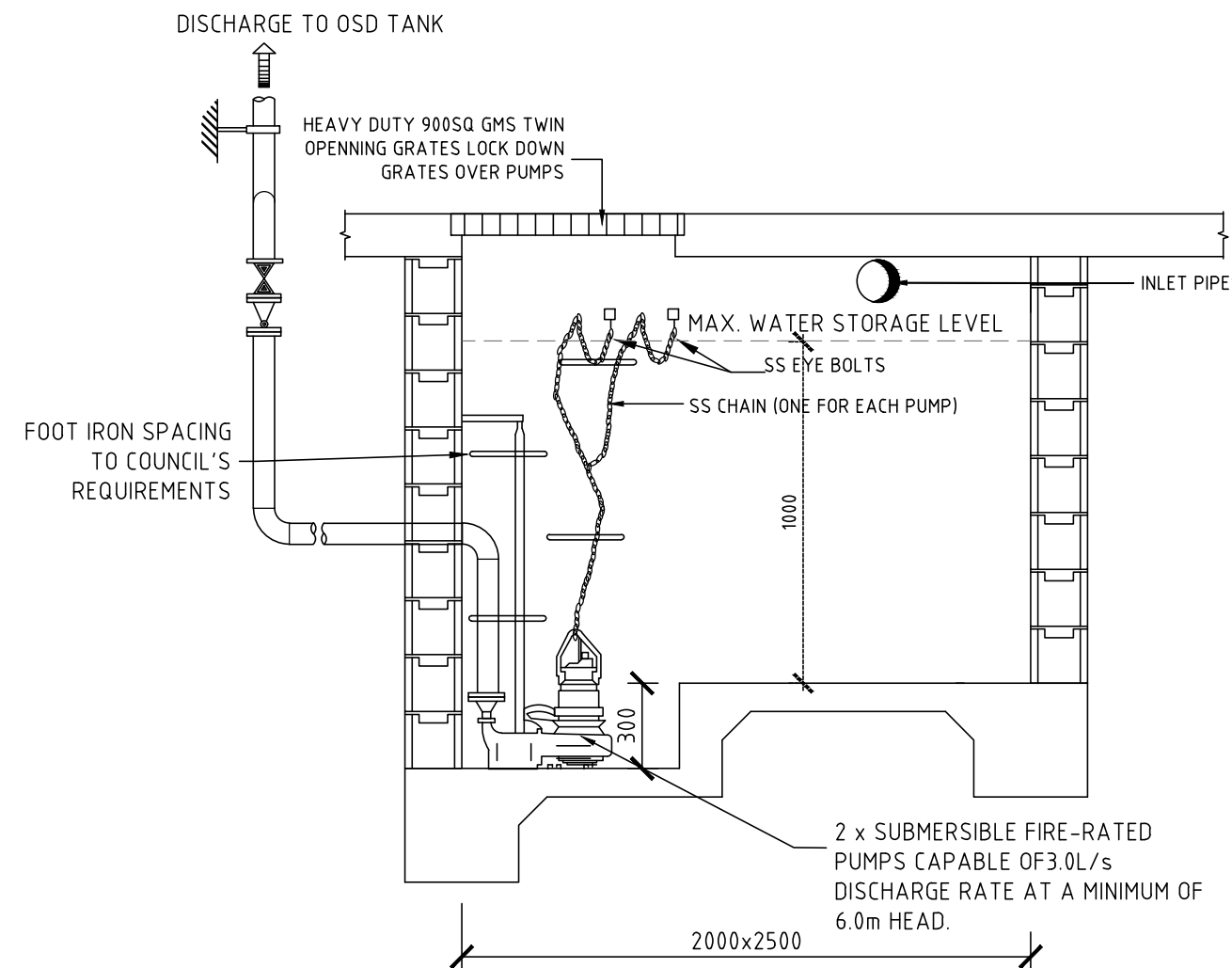
LEGEND

- FLOW DIRECTION
- PROPOSED STORMWATER PIPES
- GRATED INLET PIT
- GRATE DRAIN



STORMWATER DRAINAGE NOTES

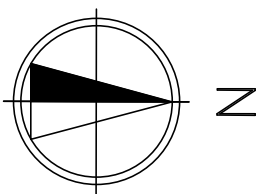
- ALL LINES ARE TO BE MIN. 1000 UPVC @ MIN 1.0% GRADE UNLESS NOTED OTHERWISE.
- IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE & LEVEL ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY EARTHWORKS. ALL DESIGN LEVELS SHOWN ON PLAN SHALL BE VERIFIED ON SITE PRIOR TO THE COMMENCEMENT OF ANY WORK.
- ALL PIPES TO HAVE MIN 300mm COVER IF LOCATED WITHIN PROPERTY (MEASURED FROM THE CROWN OF THE PIPE).
- ALL PITS IN DRIVEWAYS BE HEAVY DUTY GRATES. DIRECT SURFACE FLOW TO ALL GRATED SURFACE INLET PITS.
- ALL WORK DO BE DONE IN ACCORDANCE WITH AS/NZ 3500.3:2015 AND COUNCIL SPECIFICATIONS.
- LOCATION OF DOWNPIPES ARE INDICATIVE ONLY. DOWNPIPE & FLOOR WASTE SIZE, LOCATION & QUANTITY TO BE DETERMINED BY BUILDER & IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS.
- THIS PLAN IS TO BE READ IN CONJUNCTION WITH THE ARCHITECTURAL, HYDRAULIC, LANDSCAPE AND STRUCTURAL PLANS.
- ANY DISCREPANCIES OR OMISSIONS SHALL BE REFERRED TO THE DESIGN ENGINEER FOR RESOLUTION.
- ALL GUTTERS WILL BE FITTED WITH LEAF GUARDS AND SHOULD BE INSPECTED AND CLEANED TO ENSURE LEAF LITTER CANNOT ENTER THE DOWNPIPES.
- ALL PITS WITH DEPTH MORE THAN 1M MUST HAVE IRON STEPS.



TYPICAL SECTION TROUGH PUMP PIT

SCALE: NTS

REV.	BY	Date	Description	APPD
E	A.M.	02.02.22	CONCEPT DA	O.S.
D	A.M.	06.10.21	CONCEPT DA	O.S.
C	A.M.	14.09.21	CONCEPT DA	O.S.
B	A.M.	28.08.21	CONCEPT DA	O.S.
A	A.M.	30.06.21	CONCEPT DA	O.S.



CLIENT

ACN 647 465 236 PTY LTD

ARCHITECT

WALSH ARCHITECTS

RISE
ENGINEERS

RISE CONSULTING ENGINEERS PTY.LTD.

A: G03 15-19 ATCHISON STREET,
ST LEONARDS NSW 2073
E: admin@riseengineers.com.au
P: (02) 8057 9109



DRAWN	A.M.
DESIGNED	A.M.
CHECKED	O.S.
SCALE	As indicated
SIZE	A1

PROJECT
PROPOSED APARTMENT BUILDING
NO.20-26 AVON ROAD, DEE WHY, NSW 2099

DRAWING TITLE
BASEMENT STORMWATER DRAINAGE CONCEPT PLAN

DRAWING No

D.010

REV

E

JOB No

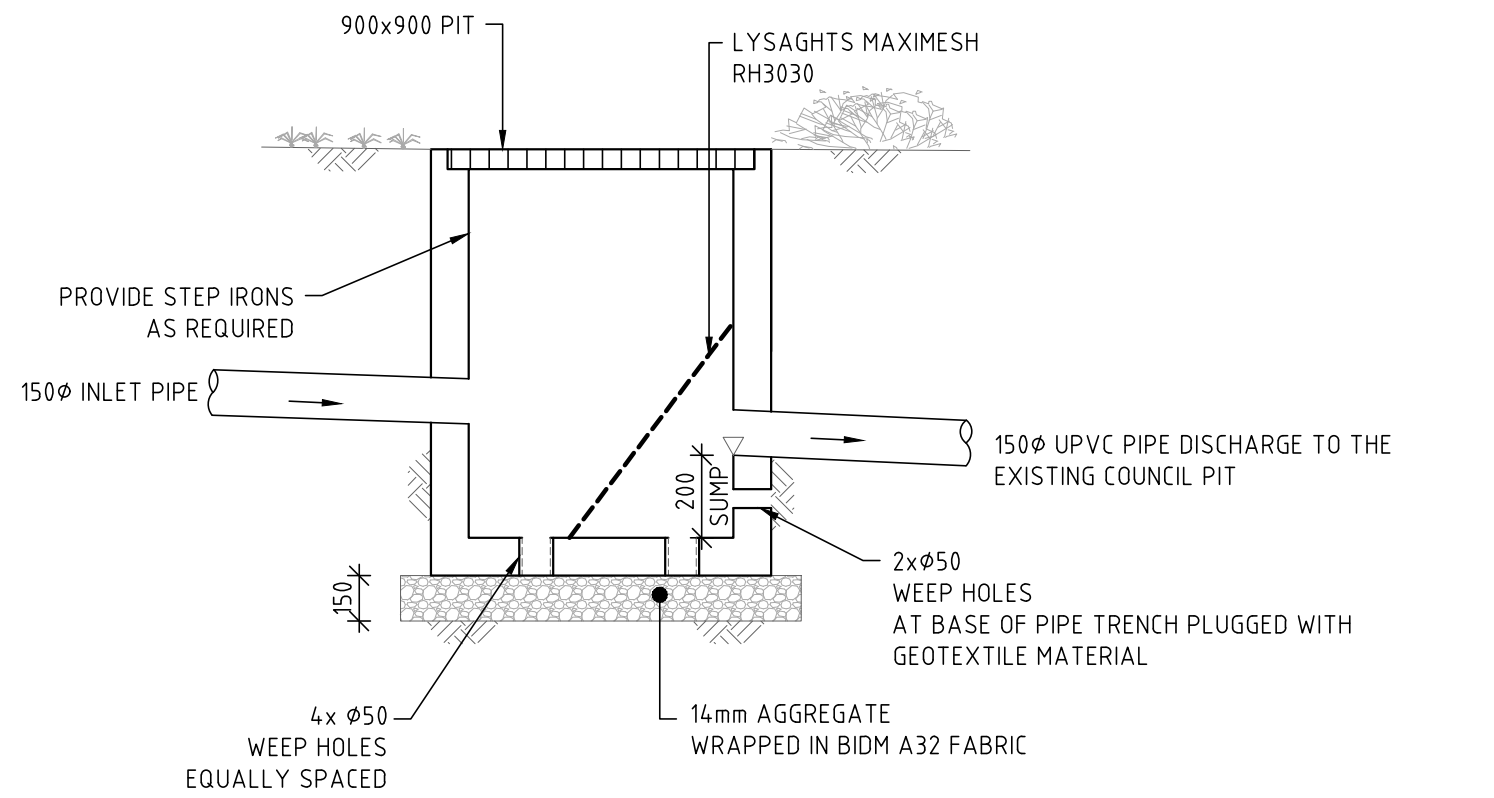
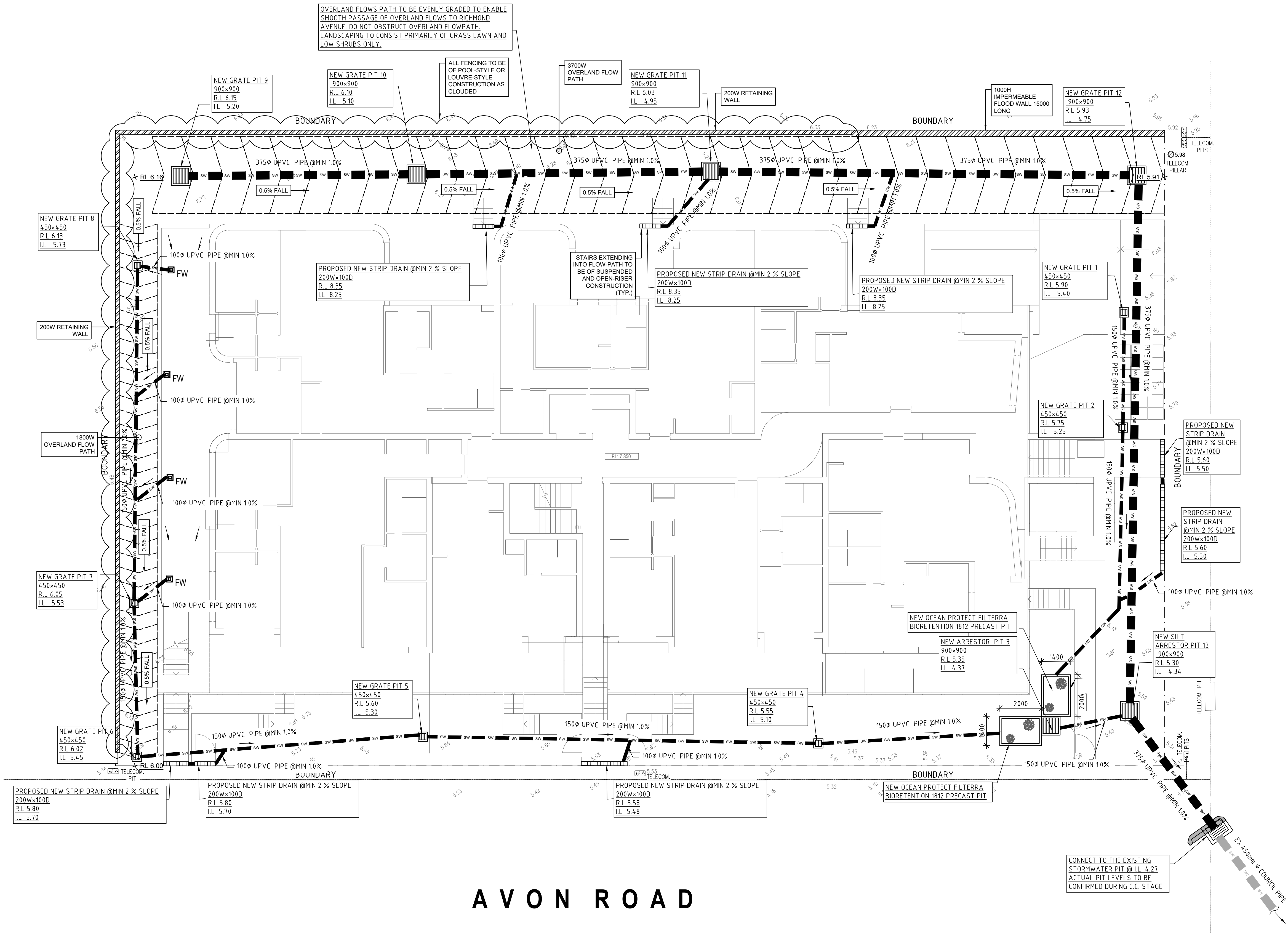
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LEGEND

- FLOW DIRECTION
- PROPOSED STORMWATER PIPES
- ▣ GRATED INLET PIT
- ▤ GRATE DRAIN

RICHMOND AVENUE



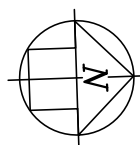
SILT ARRESTOR PIT 3
SCALE: NTS

GROUND FLOOR STORMWATER DRAINAGE CONCEPT PLAN

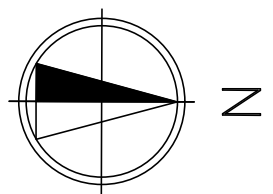
SCALE 1:100

NOTES:

1. ALL DOWNPIPE LOCATIONS TO BE CHECKED BY ARCHITECT AND CONTRACTOR PRIOR TO CONSTRUCTION.



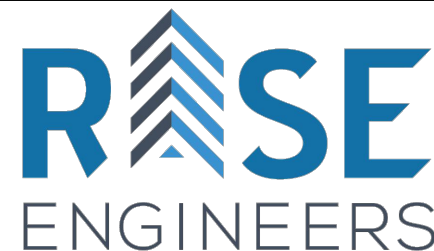
REV.	BY	Date	Description	APPD
E	A.M.	02.02.22	CONCEPT DA	O.S.
D	A.M.	06.10.21	CONCEPT DA	O.S.
C	A.M.	14.09.21	CONCEPT DA	O.S.
B	A.M.	26.08.21	CONCEPT DA	O.S.
A	A.M.	30.06.21	CONCEPT DA	O.S.



CLIENT

ACN 647 465 236 PTY LTD

ARCHITECT



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ST LEONARDS NSW 2073
E: admin@riseengineers.com.au
P: (02) 8057 9109



DRAWN	A.M.
DESIGNED	A.M.
CHECKED	O.S.
SCALE	As indicated
SIZE	A1

PROJECT
PROPOSED APARTMENT BUILDING
NO.20-26 AVON ROAD, DEE WHY, NSW 2099

DRAWING TITLE
STORMWATER DESIGN AND SECTION DETAILS

DRAWING No

D.020

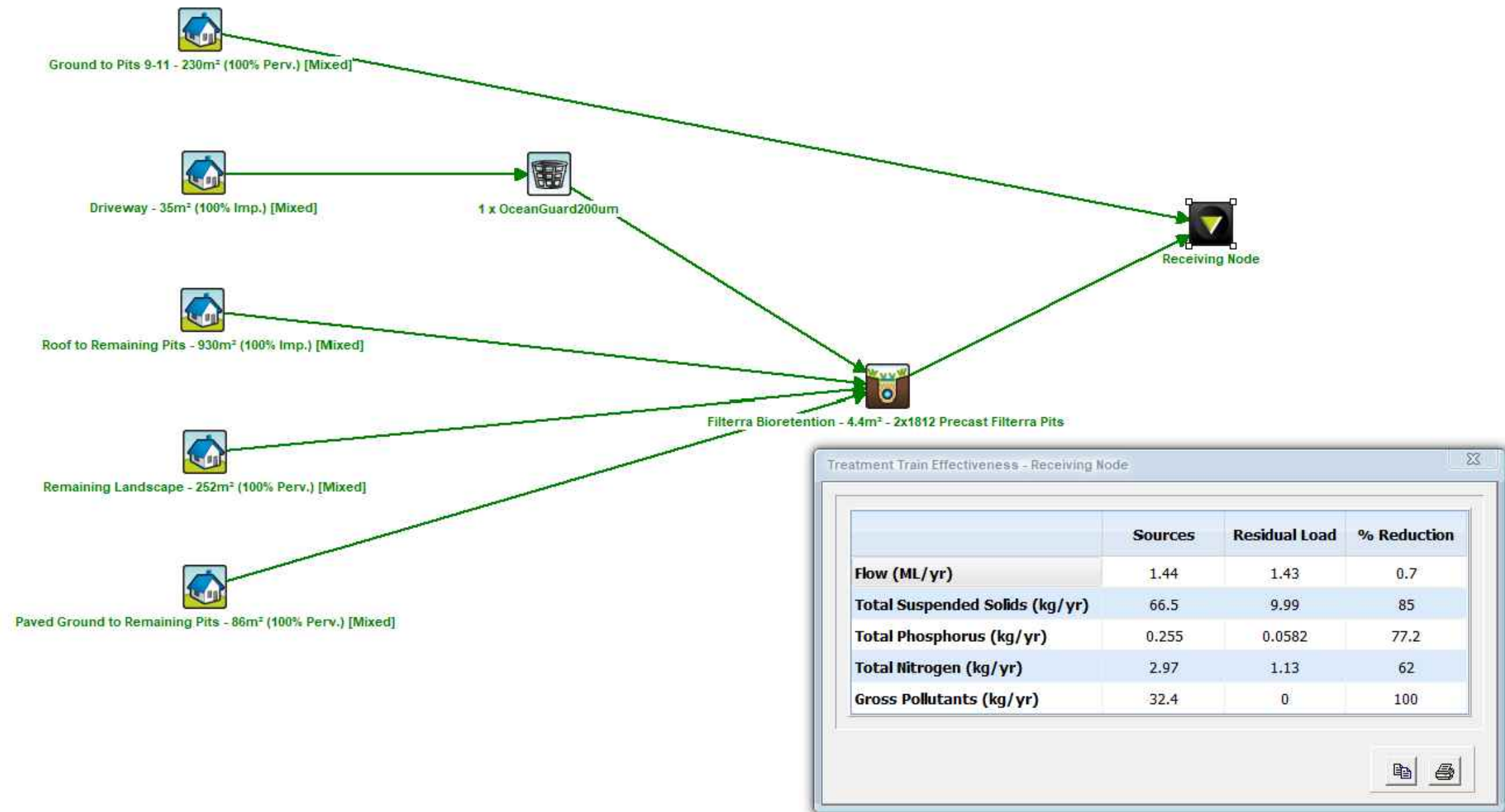
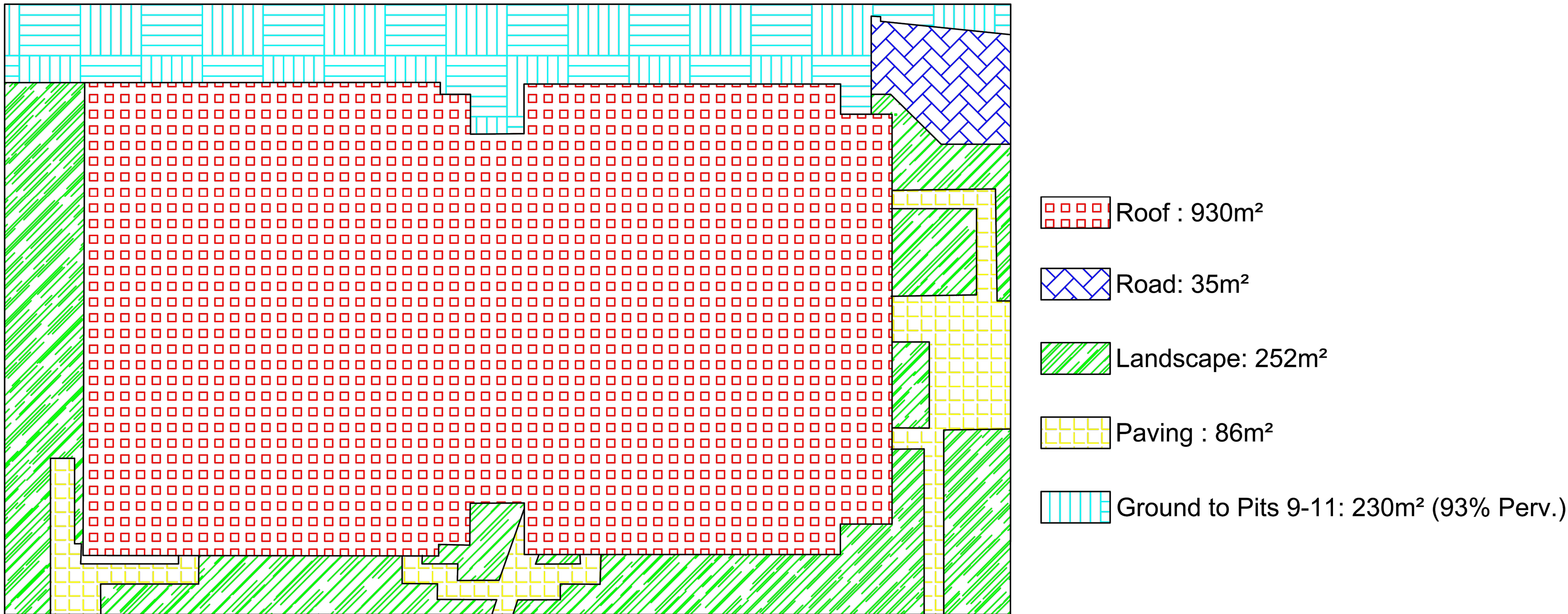
REV

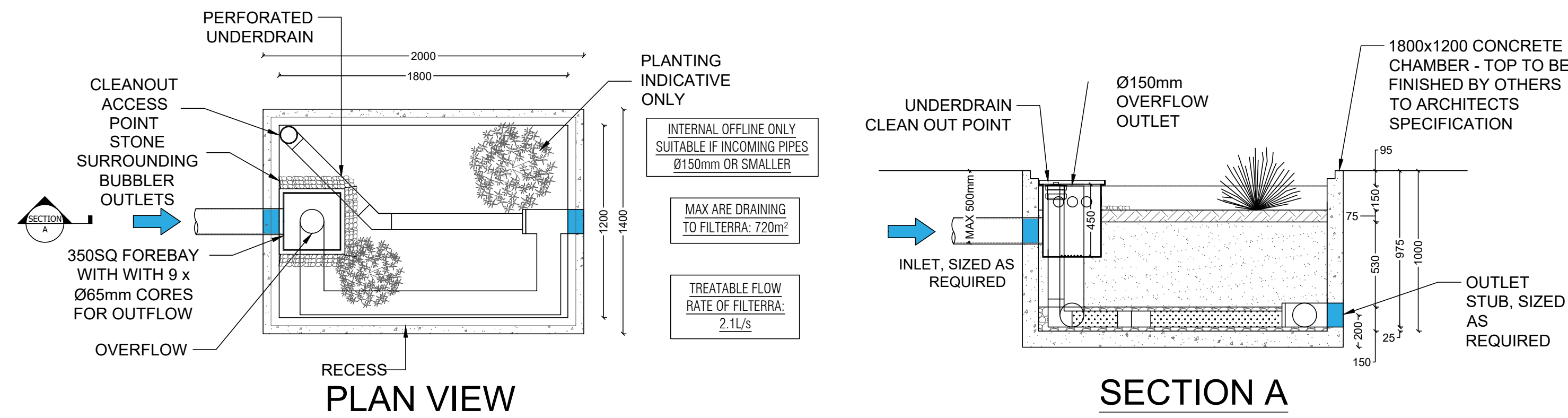
E

JOB No

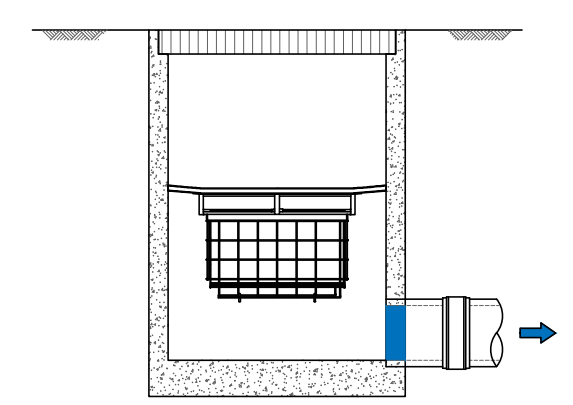
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MUSIC Model Site Area Breakup





TYPICAL FILTERRA BIORETENTION 1812 PRECAST PIT



TYPICAL OCEANGUARD PIT ARRANGEMENT