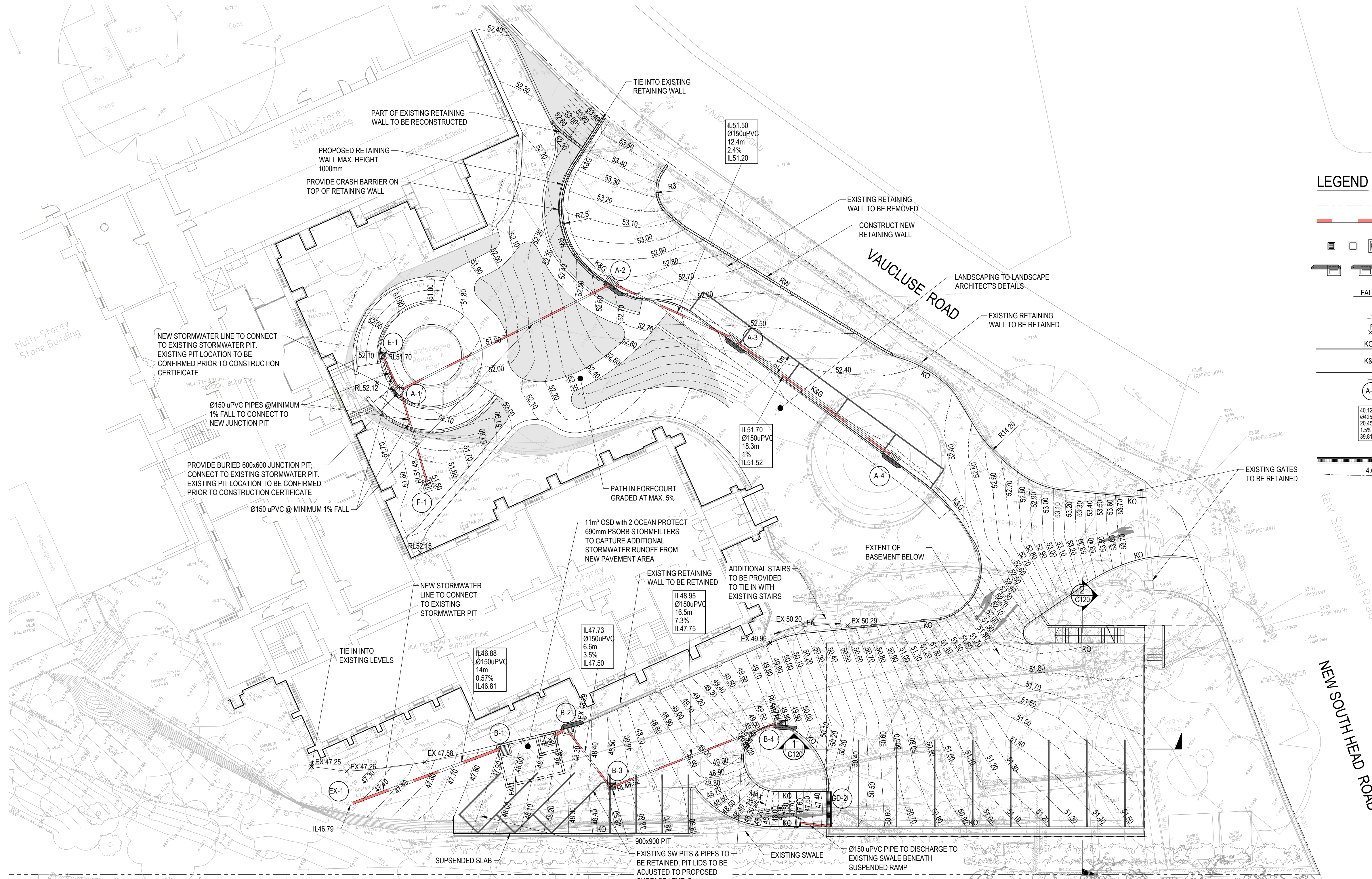




1. PROPOSED BOUNDARY

2. PROPOSED STORMWATER PIPE

3. PROPOSED SURFACE INLET PITS

4. PROPOSED LINTEL ONGRADE & SAG PITS

5. DENOTES DIRECTION OF FALL

6. EXISTING SPOT LEVEL

7. PROPOSED SPOT LEVEL

8. PROPOSED KERB ONLY

9. PROPOSED KERB AND GUTTER

10. PROPOSED PIT TAG

11. LINE LETTER

12. PIT NUMBER

13. STORMWATER UPSTREAM INVERT RL

14. STORMWATER PIPE DIAMETER & CLASS

15. STORMWATER PIPE LENGTH

16. STORMWATER PIPE GRADE

17. STORMWATER DOWNSTREAM INVERT RL

18. PROPOSED GRATED DRAIN

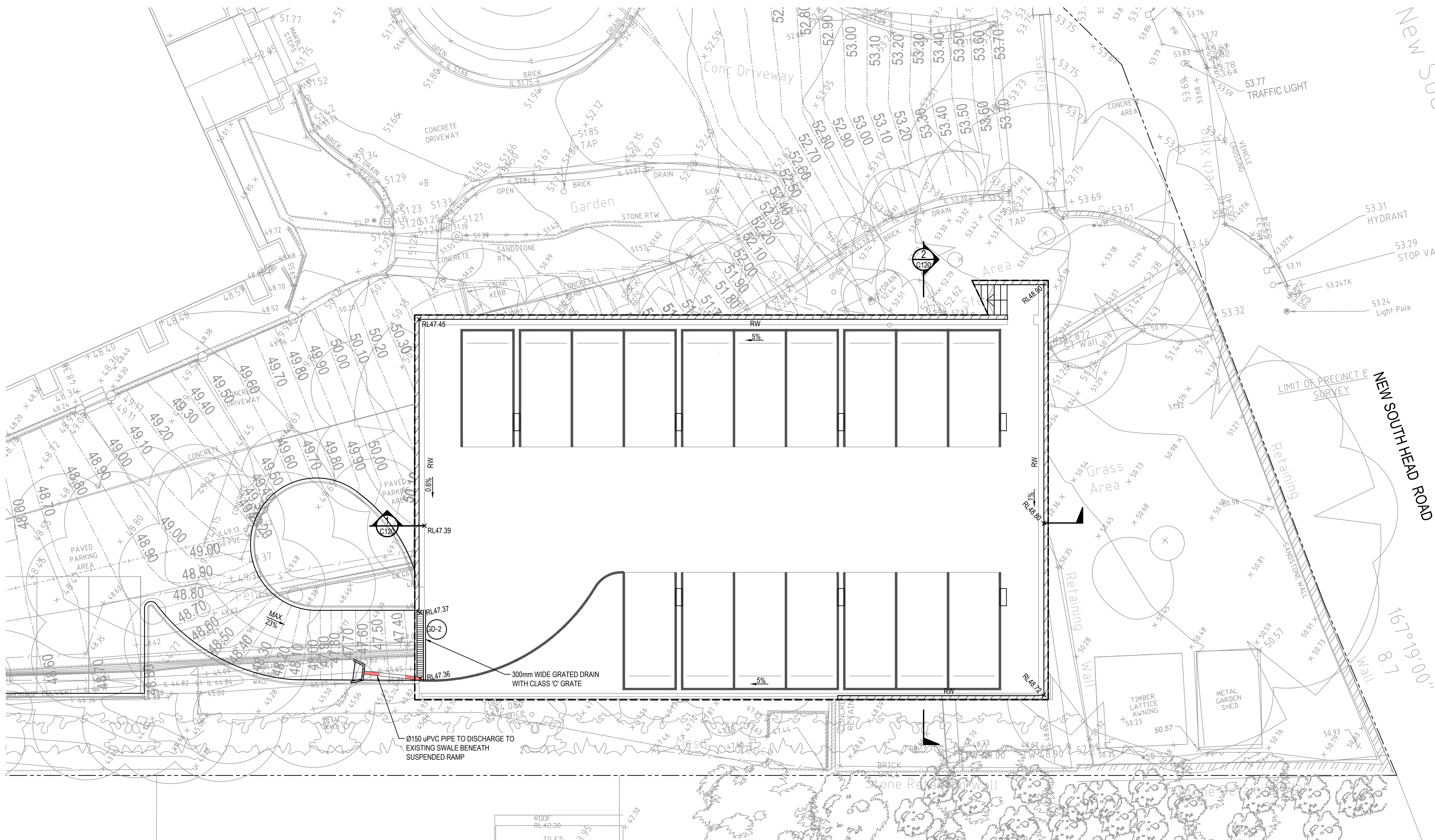
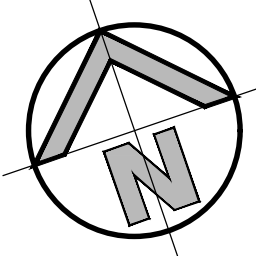
19. PROPOSED CONTOURS

SCALE: 1:200



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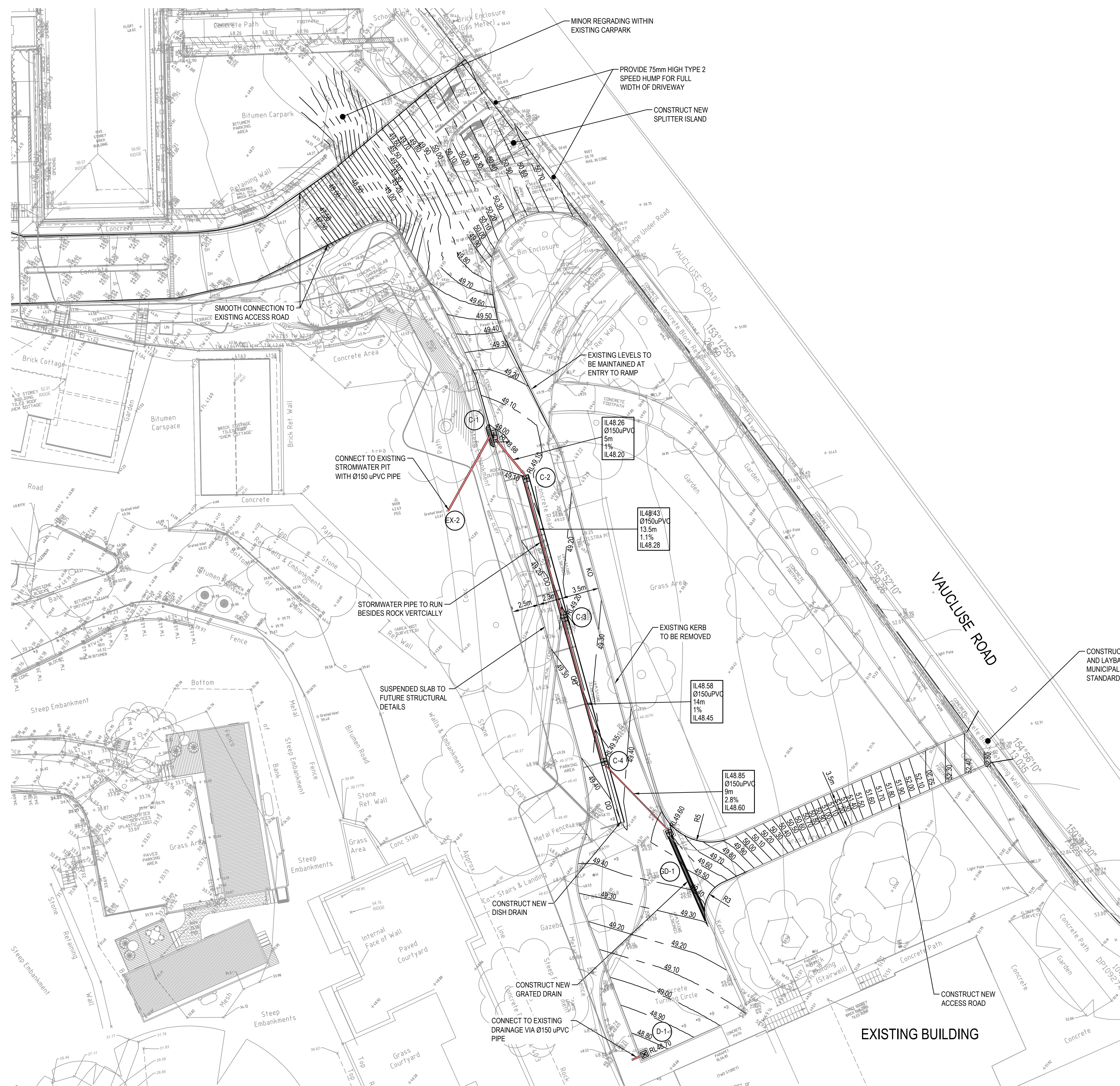
SENIOR SCHOOL - INTERNAL ROADWAY DESIGN PLAN - BASEMENT LEVEL

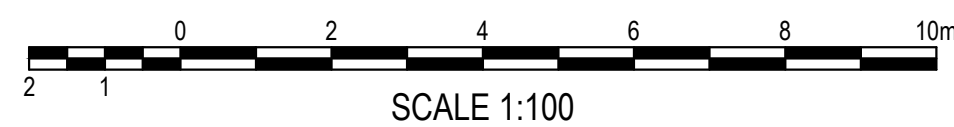
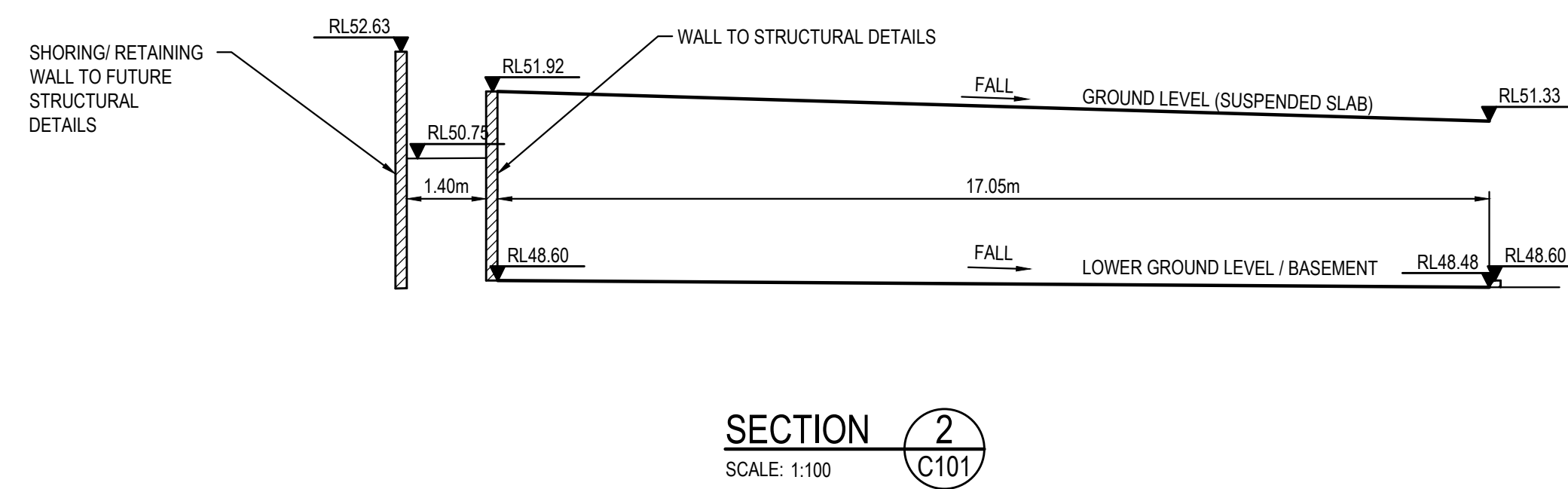
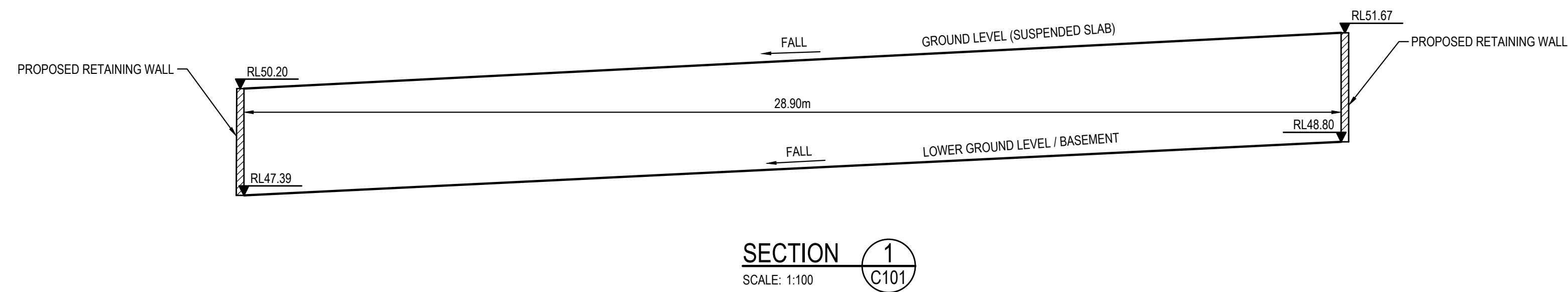
SCALE: 1:100



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SURVEY INFORMATION SURVEYED BY: CRUX SURVEYING AUSTRALIA DATUM: AHD ORIGIN OF LEVELS: SSM 99001, RL 53.939 (AHD) <table><tr><td>01</td><td>ISSUED FOR INFORMATION ONLY</td><td>KR</td><td>AF</td><td>-</td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>REVISION</td><td>AMENDMENT</td><td>DRAWN</td><td>DESIGNED</td><td>DATE</td><td>REVISION</td><td>AMENDMENT</td><td>DRAWN</td><td>DESIGNED</td><td>DATE</td></tr></table>	01	ISSUED FOR INFORMATION ONLY	KR	AF	-						REVISION	AMENDMENT	DRAWN	DESIGNED	DATE	REVISION	AMENDMENT	DRAWN	DESIGNED	DATE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
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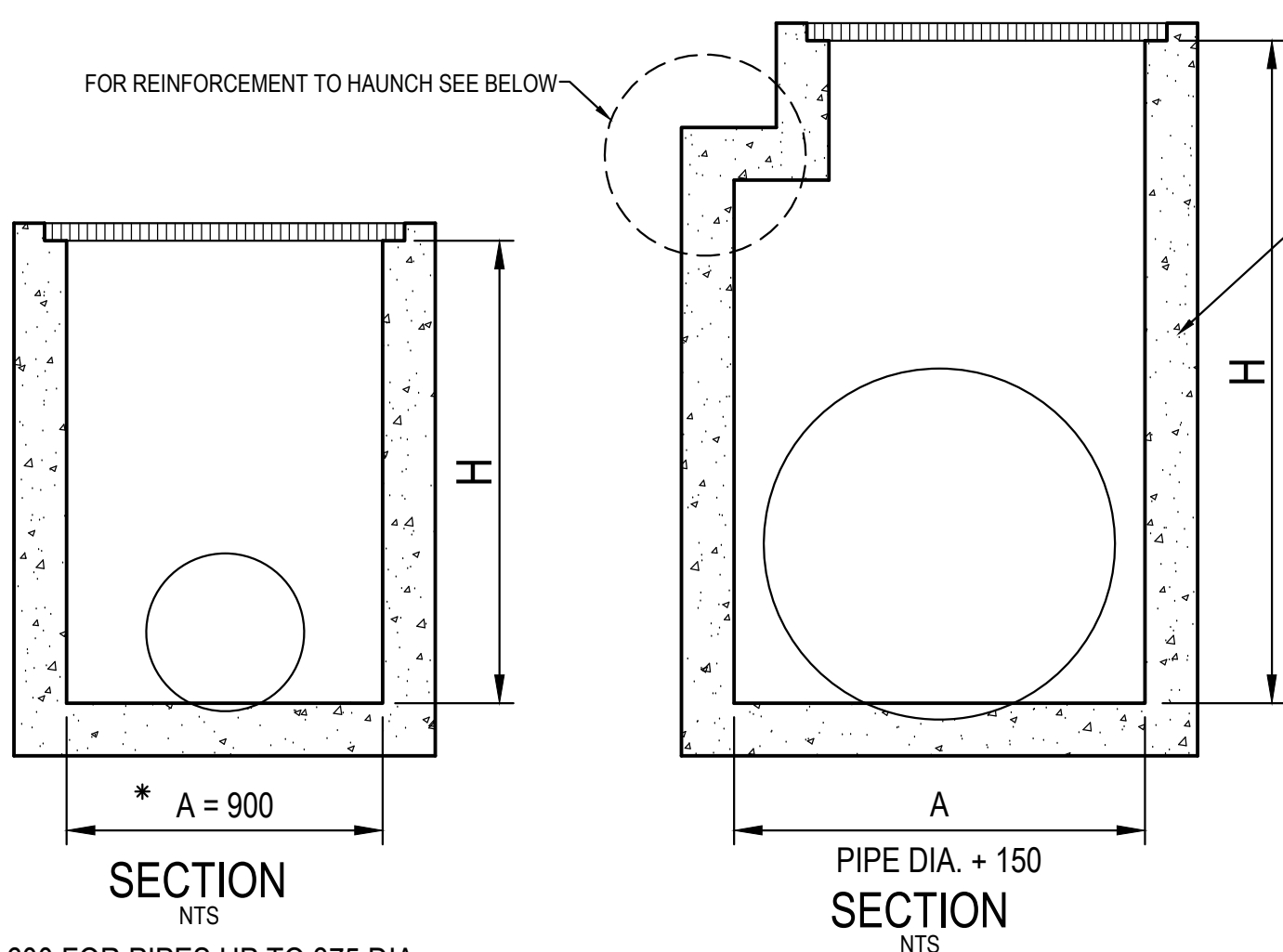


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IT IS THE CONTRACTORS RESPONSIBILITY TO SELECT PIT CHAMBER SIZE WITH REGARDS TO PIPE SIZE, DEPTH TO INVERT AND SKEW ANGLE. REFER SKETCHES BELOW.

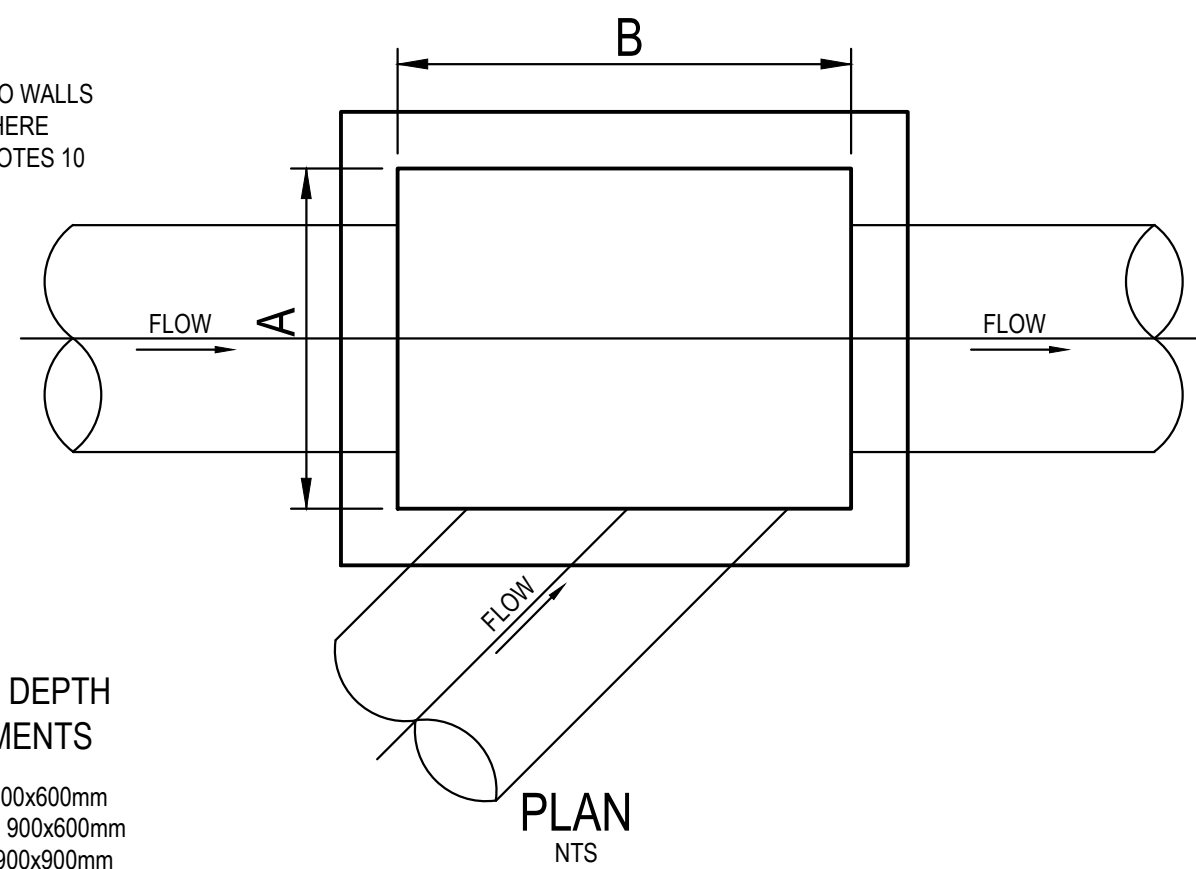
- ① SELECT PIT CHAMBER USING THE STEPS BELOW:
- ② SELECT PIT CHAMBER SIZE DEPENDING ON THE PIPE DIAMETERS.
- ③ CHECK PIT CHAMBER SIZE TO SATISFY DEPTH TO INVERT REQUIREMENTS.
CHECK PIT CHAMBER DIMENSIONS TO SATISFY THE SKEW ANGLE IN THE TABLE.



*A = 600 FOR PIPES UP TO 375 DIA.

- ① PIT CHAMBER DIMENSIONS
FOR PIPES UP TO 600 DIA.

FOR B = 600mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 225mm
 FOR B = 900mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 375mm
 FOR B = 1200mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 600mm
 FOR B = 1500mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 825mm
 FOR B = 1900mm - MAX. SIDE ENTRY PIPE AT 45° SKEW = 1050mm



- ## ② PIT SIZE & DEPTH REQUIREMENTS

H = 0-900mm - AxB = 600x600mm
H = 900-1200mm - AxB = 900x600mm
H = >1200mm - AxB = 900x900mm

- ③ PIT CHAMBER FOR
SIDE ENTRY ON SKEW

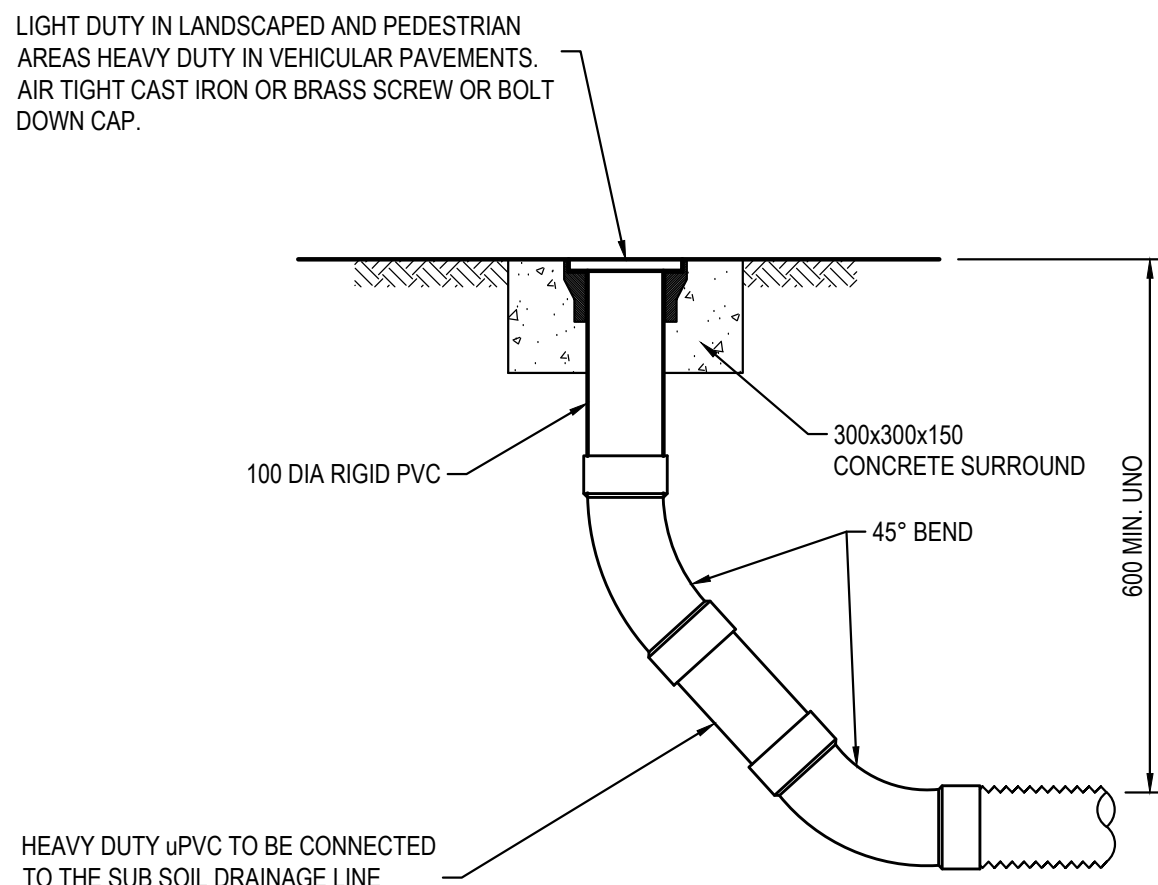
SIEVE SIZE (MM)	WEIGHT PASISNG (%)
75.0	100
9.5	100 TO 50
2.36	100 TO 30
0.60	50 TO 15
0.075	25 TO 0

SIEVE SIZE (MM)	WEIGHT PASISNG (%)
19.0	100
2.36	100 TO 50
0.60	90 TO 20
0.30	60 TO 10
0.15	25 TO 0
0.075	10 TO 0

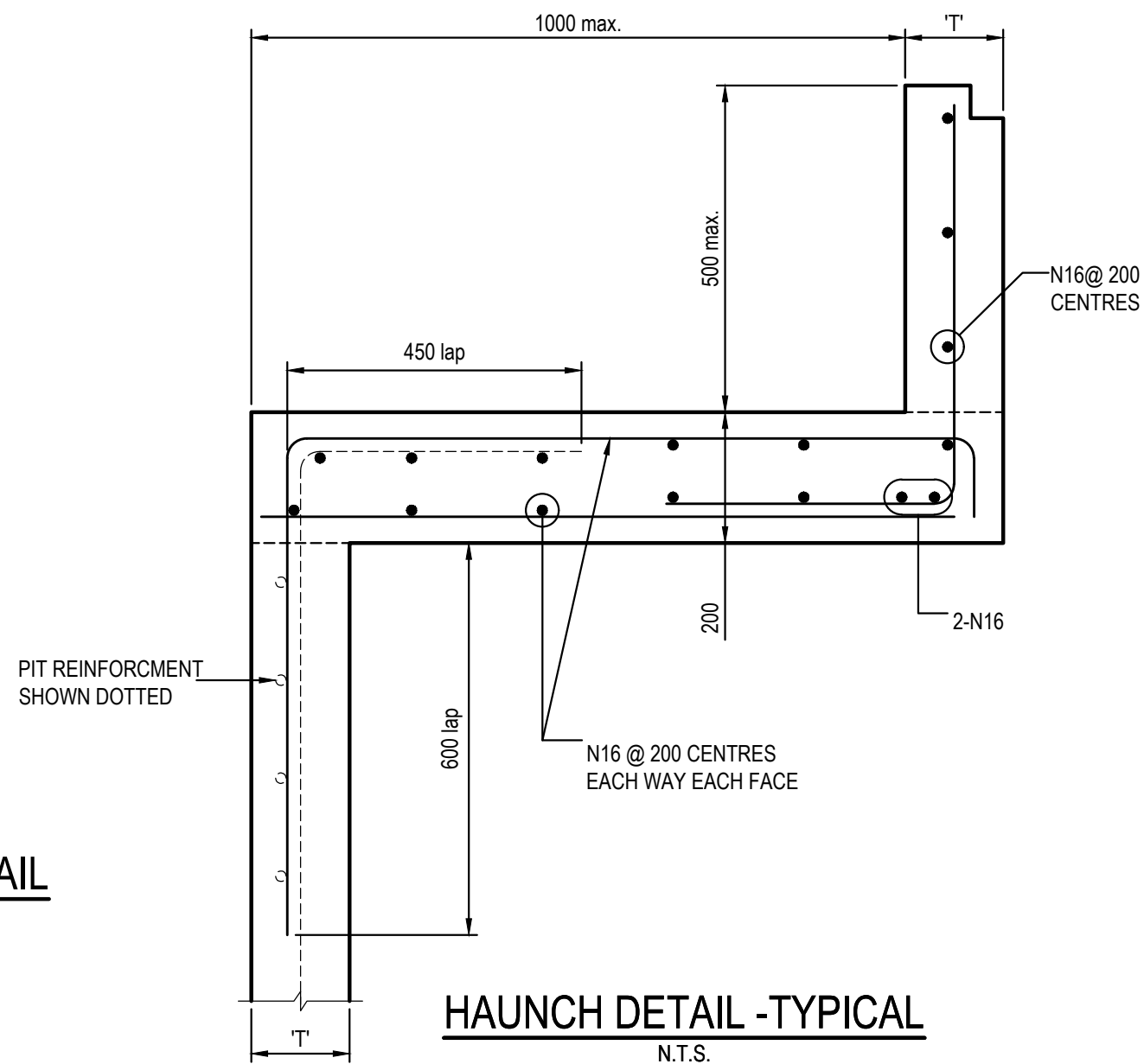
SUPPORT TYPE	BED ZONE X	HAUNCH ZONE Y	BED AND HAUNCH ZONES COMPACTION	MAX BEDDING FACTOR
HS1	100 IF D<=1500, OR 150 IF D>=1500	0.1D	50	2.0
HS2		0.3D	60	2.5
HS3		0.3D	70	4.0

PIT/STRUCTURE NUMBER		DESCRIPTION			
A-4	C-1	SAG KERB INLET PIT WITH 1.8m LINTEL AND MEDIUM DUTY GRATED LID CLASS "C" WITH OCEANGUARD IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL REQUIREMENT			
A-2	A-3	B-2	B-4	ON GRADE KERB INLET PIT WITH 1.8m LINTEL AND MEDIUM DUTY GRATED LID CLASS "C" WITH OCEANGUARD IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL REQUIREMENT	
C-2	C-3	C-4	D-1	F-1	SURFACE INLET PIT WITH HINGED 600x600 MEDIUM DUTY GRATED LID CLASS "C" WITH OCEANGUARD IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL'S REQUIREMENTS.
B-3	E-1	SURFACE INLET PIT WITH HINGED 450x450 MEDIUM DUTY GRATED LID CLASS "C" WITH OCEANGUARD IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL'S REQUIREMENTS.			
A-1	JUNCTION PIT WITH 600x600 HINGED MEDIUM DUTY CONCRETE LID CLASS "C" IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL'S REQUIREMENTS.				
B-1	OSD TANK ACCESS OPENING WITH 900x900 HINGED MEDIUM DUTY GRATED LID CLASS "C" WITH LOCK-DOWN SYSTEM IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL'S REQUIREMENTS.				
SD-1	200mm WIDE MEDIUM DUTY GRATED DRAIN AND MEDIUM DUTY FRAME CLASS "C" IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL'S REQUIREMENTS.				
SD-2	300mm WIDE MEDIUM DUTY GRATED DRAIN AND MEDIUM DUTY FRAME CLASS "C" IN ACCORDANCE WITH WOOLLAHRA MUNICIPAL COUNCIL'S REQUIREMENTS.				
EX-1	EX-2	EXISTING PIT TO REMAIN.			

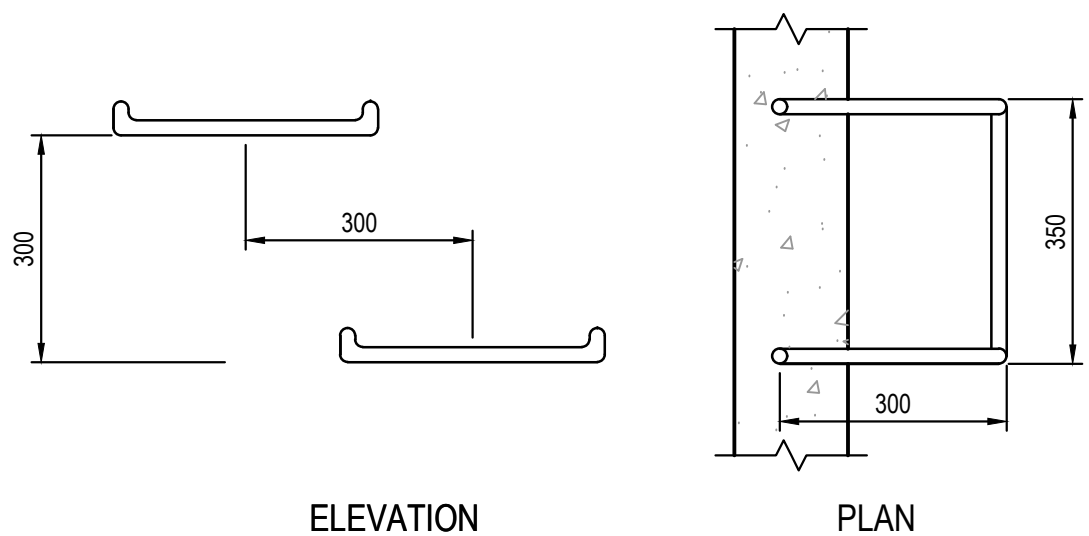
1. ALL STORMWATER WORK TO COMPLY WITH AS 3500 PART 3.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE MINIMUM COVER OF 600mm ON ALL PIPES.
3. PROTECTION OF PIPES DUE TO LOADS EXCEEDING W7 WHEEL LOAD SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
4. BEDDING TYPE SHALL BE TYPE H2 FOR RCP. WHERE NECESSARY THE OVERLAY ZONE SHALL BE REDUCED TO ACCOMMODATE PAVEMENT REQUIREMENTS. REFER TO THIS DRAWING FOR DETAILS.
5. MINIMUM COVER OVER EXISTING PIPES FOR PROTECTION DURING CONSTRUCTION SHALL BE 800mm.
6. NO CONSTRUCTION LOADS SHALL BE APPLIED TO PLASTIC PIPES.
7. FINISHED SURFACE LEVELS SHOWN ON LAYOUT PLAN DRGS TAKE PRECEDENCE OVER DESIGN DRAINAGE SURFACE LEVELS.
8. ALL PIPES UP TO AND INCLUDING 300 DIA. SHALL BE SOLVENT OR RUBBER RING JOINTED PVC CLASS SH PIPE TO AS1260. ALL OTHER PIPES TO BE RCP USING CLASS 2 RUBBER RING JOINTED PIPE. HARDIES FRC PIPE MAY BE USED IN LIEU OF RCP IF DESIRED IN GROUND. ALL AERIAL PIPES TO BE PVC CLASS SH.
9. ALL PITS IN NON TRAFFICABLE AREAS TO BE PREFABRICATED POLYESTER CONCRETE "POLYCRETE" WITH "LIGHT DUTY" CLASS B GALV. MILD STEEL GRATING AND FRAME.
ALL PITS IN TRAFFICABLE AREAS (CLASS "D" LOADING MAX) TO HAVE 150mm THICK CONCRETE WALLS AND BASE CAST IN-SITU f_c=32 MPa. REINFORCED WITH N12-200 BOTH LOADING WAYS CENTRALLY PLACE. U.N.O. ON SEPARATE DESIGN DRAWINGS IN THIS SET. GALV.MILD STEEL GRATING AND FRAME TO SUIT DESIGN LOADING. PRECAST PITS, RECTANGULAR OR CIRCULAR IN SHAPE, MAY BE USED IN LIEU AND SHALL COMPLY WITH RELEVANT AUSTRALIAN STANDARDS.
10. ALL PITS, GRATINGS AND FRAMES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS SPECIFICATION AND TO BE IN ACCORDANCE WITH AS3500.3 AND AS3996.
 11. PIT CHAMBER DIMENSIONS ARE TO BE SELECTED TO SATISFY THE FOLLOWING:
 - PIPE SIZE
 - DEPTH TO INVERT
 - SKEW ANGLEREFER TYPICAL PIT CHAMBER DETAILS BELOWIF PIT LID SIZE IS SMALLER THAN THE PIT CHAMBER SIZE THEN THE PIT LID IS TO BE CONSTRUCTED ON THE CORNER OF THE PIT CHAMBER WITH THE STEP IRONS DIRECTLY BELOW. ALTERNATIVELY THE PIT LID TO BE USED, IS TO BE THE SAME SIZE AS THE PIT CHAMBER.
12. FOR PIPE SIZES GREATER THAN Ø300mm, PIT FLOOR IS TO BE BENTCH TO FACILITATE FLOW.
13. GALVANISED STEP IRONS SHALL BE PROVIDED AT 300 CTS FOR PITS HAVING A DEPTH EXCEEDING 1200mm. SUBSOIL DRAINAGE PIPE SHALL BE PROVIDED IN PIPE TRENCHES ADJACENT TO INLET PIPES. (MINIMUM LENGTH 3m).
14. ALL SUBSOIL PIPES SHALL BE 100mm SLOTTED PVC IN A FILTER SOCK, UNO, WITH 3m INSTALLED UPSTREAM OF ALL PITS.
15. ALL PIPEWORK SHALL HAVE MINIMUM DIAMETER 100.
16. MINIMUM GRADE FOR ROOFWATER DRAINAGE LINES SHALL BE 1%.
17. ALL PIPE JUNCTIONS AND TAPER UP TO AND INCLUDING 300 DIA. SHALL BE VIA PURPOSE MADE FITTINGS.
18. ALL ROOF DRAINAGE TO BE INSTALLED IN ACCORDANCE WITH AS3500, PART 3. TESTING TO BE UNDERTAKEN AND REPORTS PROVIDED TO THE SUPERINTENDENT.
19. LOCATION OF THE DIRECT DOWN PIPE CONNECTIONS MAY VARY ON SITE TO SUIT SITE CONDITIONS, WHERE CONNECTION SHOWN ON LONG SECTIONS CHANGES ARE INDICATIVE ONLY.
20. PITS IN EXCESS OF 1.5 m DEEP TO HAVE WALL AND FLOOR THICKNESS INCREASED TO 200mm. REINFORCED WITH N12@200 CTS CENTRALLY PLACED BOTH WAYS THROUGHOUT U.N.O.ON SEPARATE DESIGN DRAWINGS IN THIS SET. IF DEPTH EXCEEDS 5m CONTACT ENGINEER.
21. SUBSOIL DRAINAGE LINES FOR LANDSCAPE AREA NOT SHOWN ON THESE DRAWINGS. REFER TO LANDSCAPING PLANS FOR DETAILS.
22. ALL STORMWATER PITS TO HAVE Ø100 uPVC SLOTTED SUBSOIL PIPES CONNECTED TO THEM. THESE SUBSOILS TO EXTEND 3m UPSTREAM OF THE PIT AT A MINIMUM GRADE.



SCALE 1:10
NOTE: SLOTTED RIGID PVC PIPE AND
FITTINGS MAY BE USED

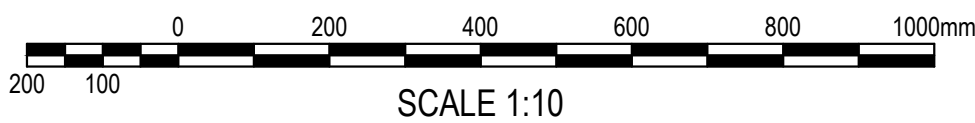
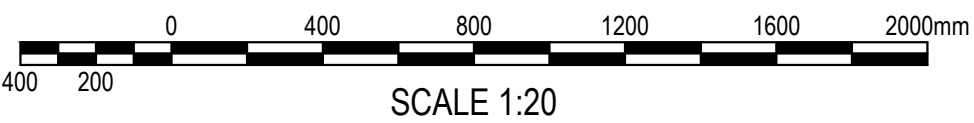


N.T.S.



TYPICAL STEP IRON DETAIL

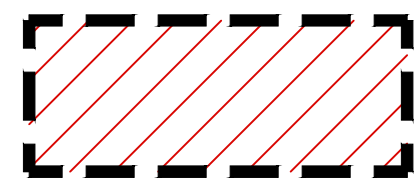
SCALE 1:10

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SCALE: NTS

PERVIOUS AREA = 1038m²

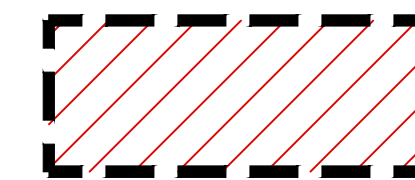


IMPERVIOUS AREA = 2226m²

SCALE: NTS

A diagram of a rectangular arena. The arena is bounded by a thick black line. Inside the arena, there are numerous small green arrows pointing downwards, indicating the direction of movement for the subjects.

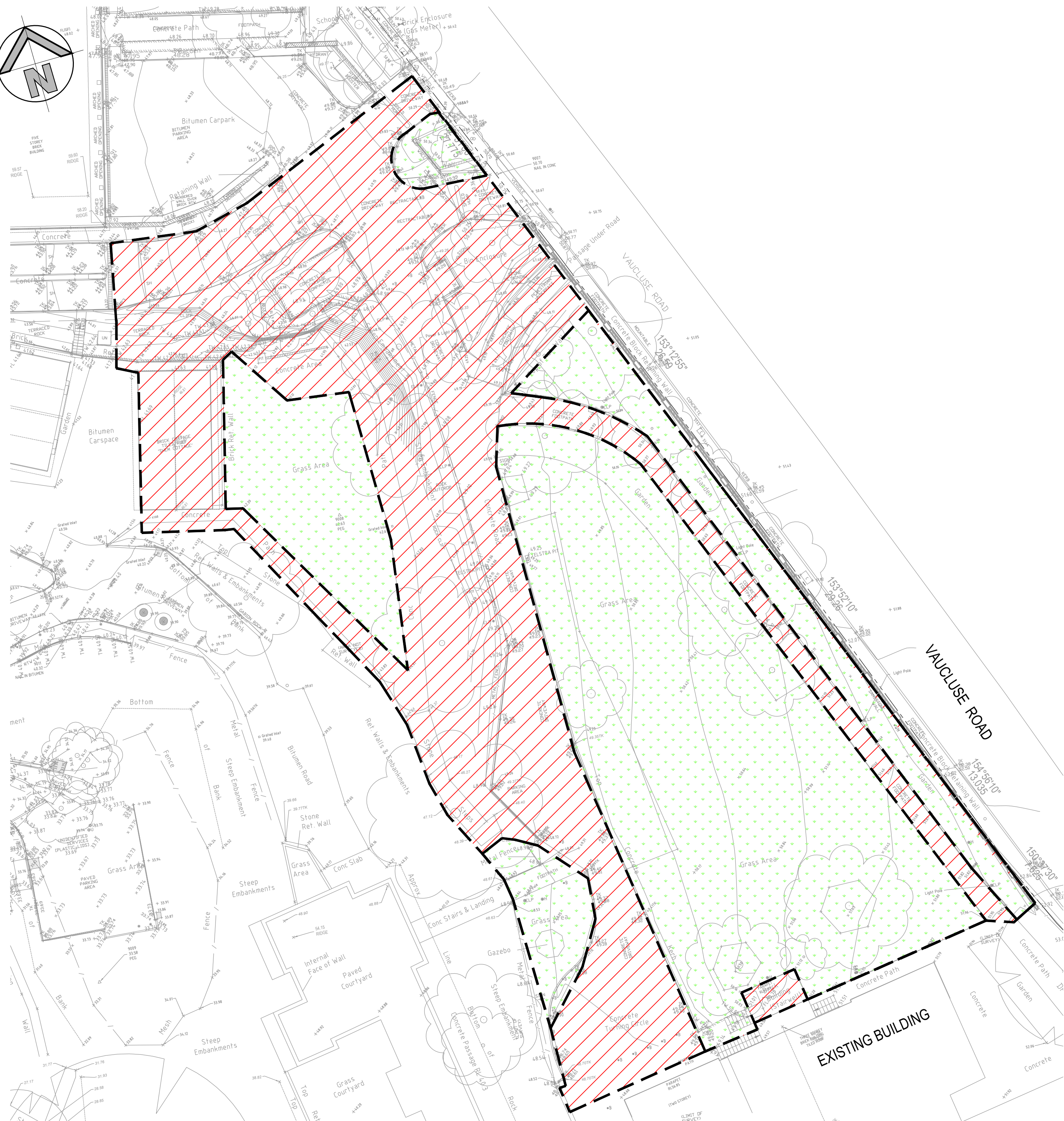
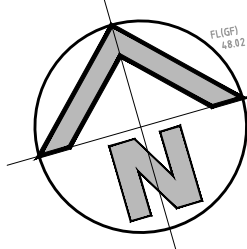
PERVIOUS AREA = 1146m²



IMPERVIOUS AREA = 2100m²

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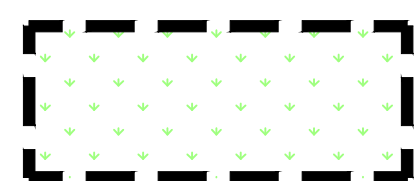
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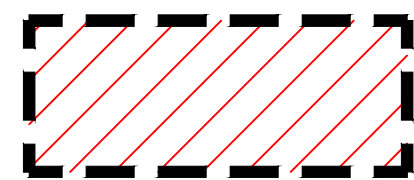
JUNIOR SCHOOL - STORMWATER CATCHMENT PLAN - PRE DEVELOPMENT

SCALE: NTS

PRE DEVELOPMENT CATCHMENT AREA

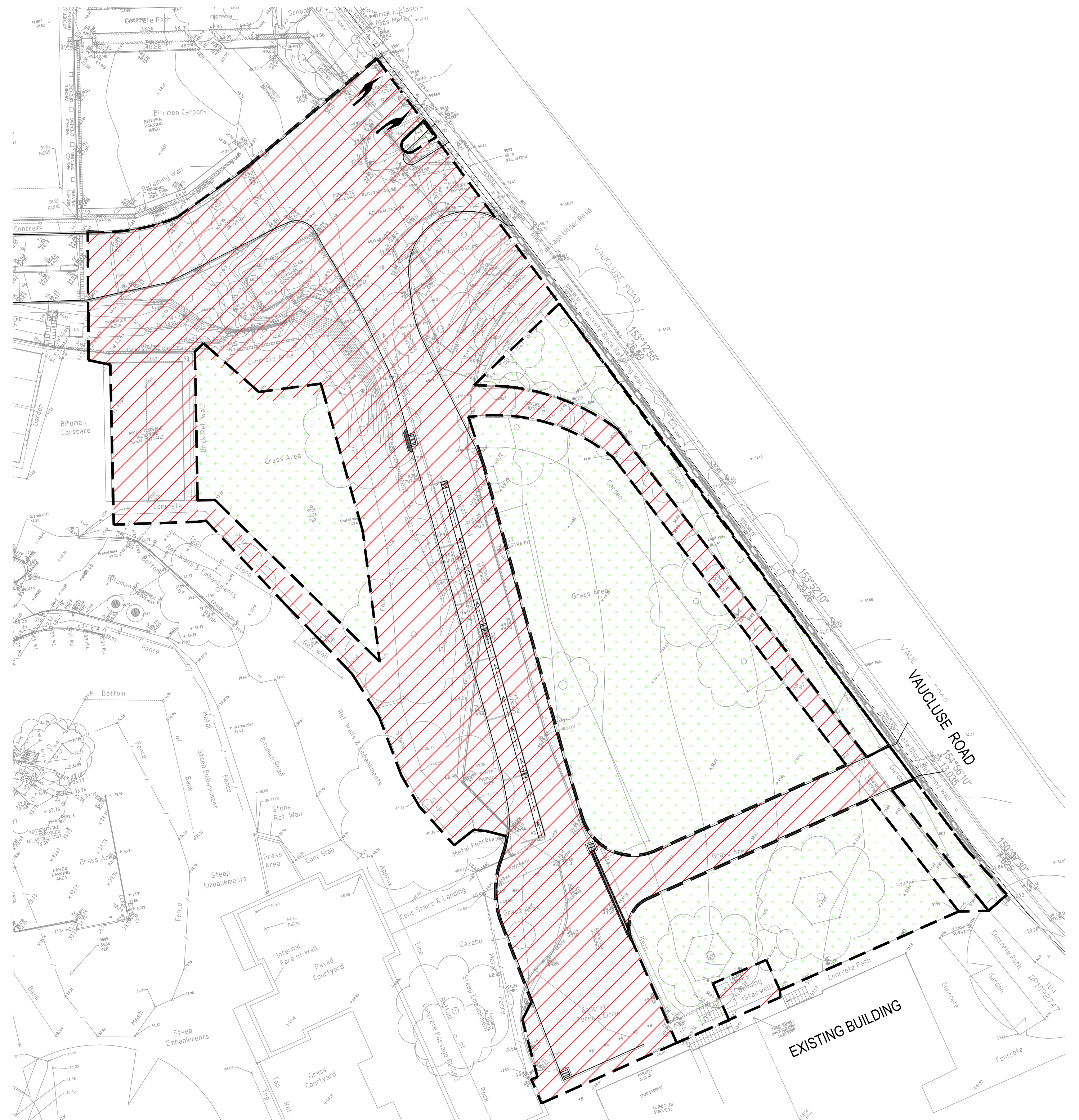


PERVIOUS AREA = 1737m²



IMPERVIOUS AREA = 1801m²

TOTAL AREA = 3538m²



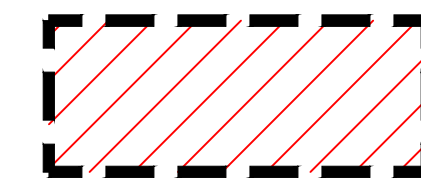
JUNIOR SCHOOL - STORMWATER CATCHMENT PLAN - POST DEVELOPMENT

SCALE: NTS

POST DEVELOPMENT CATCHMENT AREA



PERVIOUS AREA = 1548m²



IMPERVIOUS AREA = 1990m²

TOTAL AREA = 3538m²

FOR INFORMATION ONLY

SURVEY INFORMATION SURVEYED BY: CRUX SURVEYING AUSTRALIA DATUM: AHD ORIGIN OF LEVELS: SSM 99001, RL 53.939 (AHD)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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