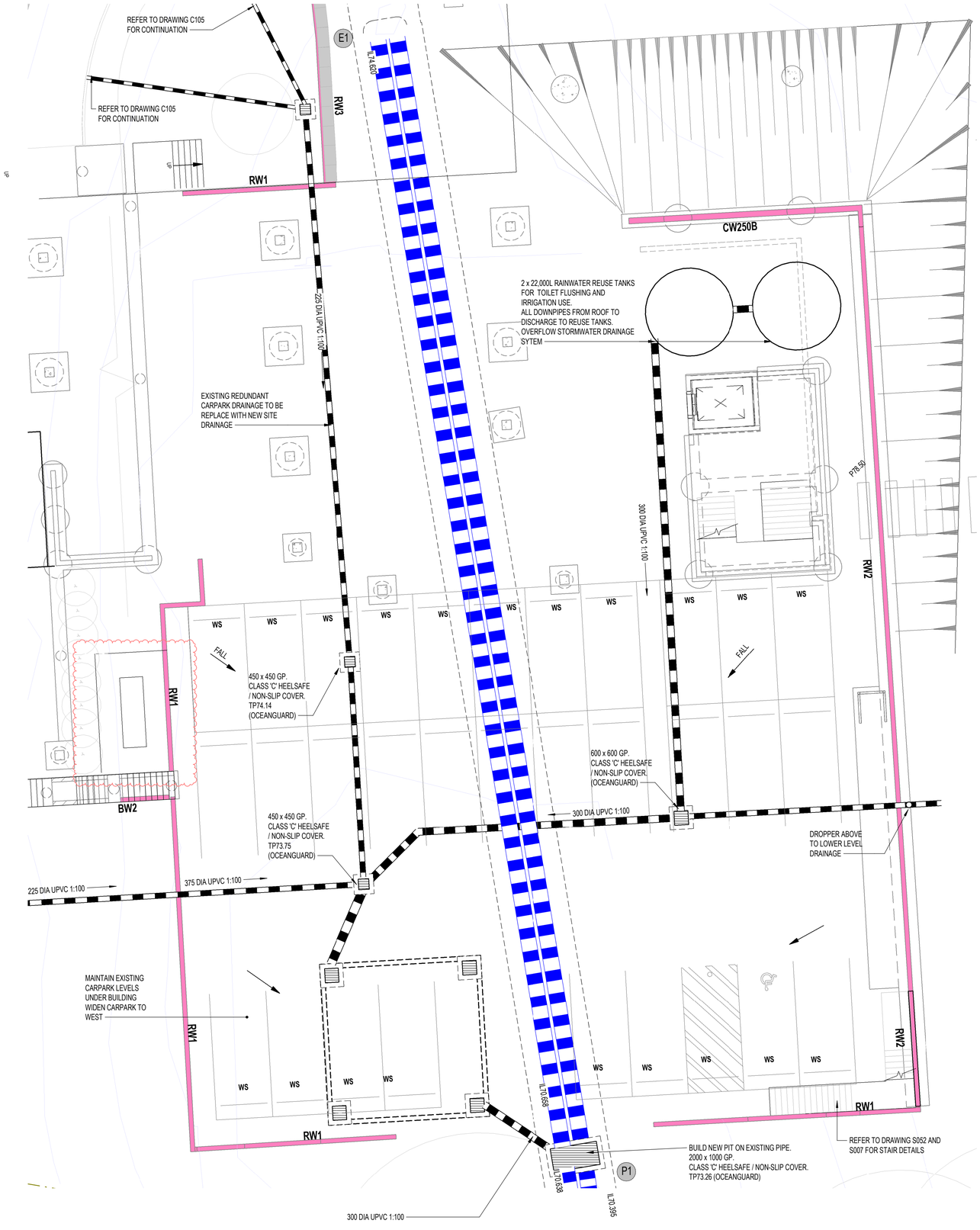

LOWER GROUND DRAINAGE PLAN

SCALE 1 : 100

ISSUE	REVISION	DATE
B	DA ISSUE	21/09/23
A	TENDER ISSUE	5/05/23
1	95% DESIGN DEVELOPMENT ISSUE	13/04/23

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CLIENT
CAPITAL PROJECT CONTROL

ARCHITECT
EVE architecture

TITLE
LOWER GROUND DRAINAGE PLAN

Designed	CW	Drawn	RJ	North
Project Leader	MW	Sheet Size	A1	
Project Director	MW	Certified	-	
Printed 21/09/2023 9:03:09 AM		Version	19	
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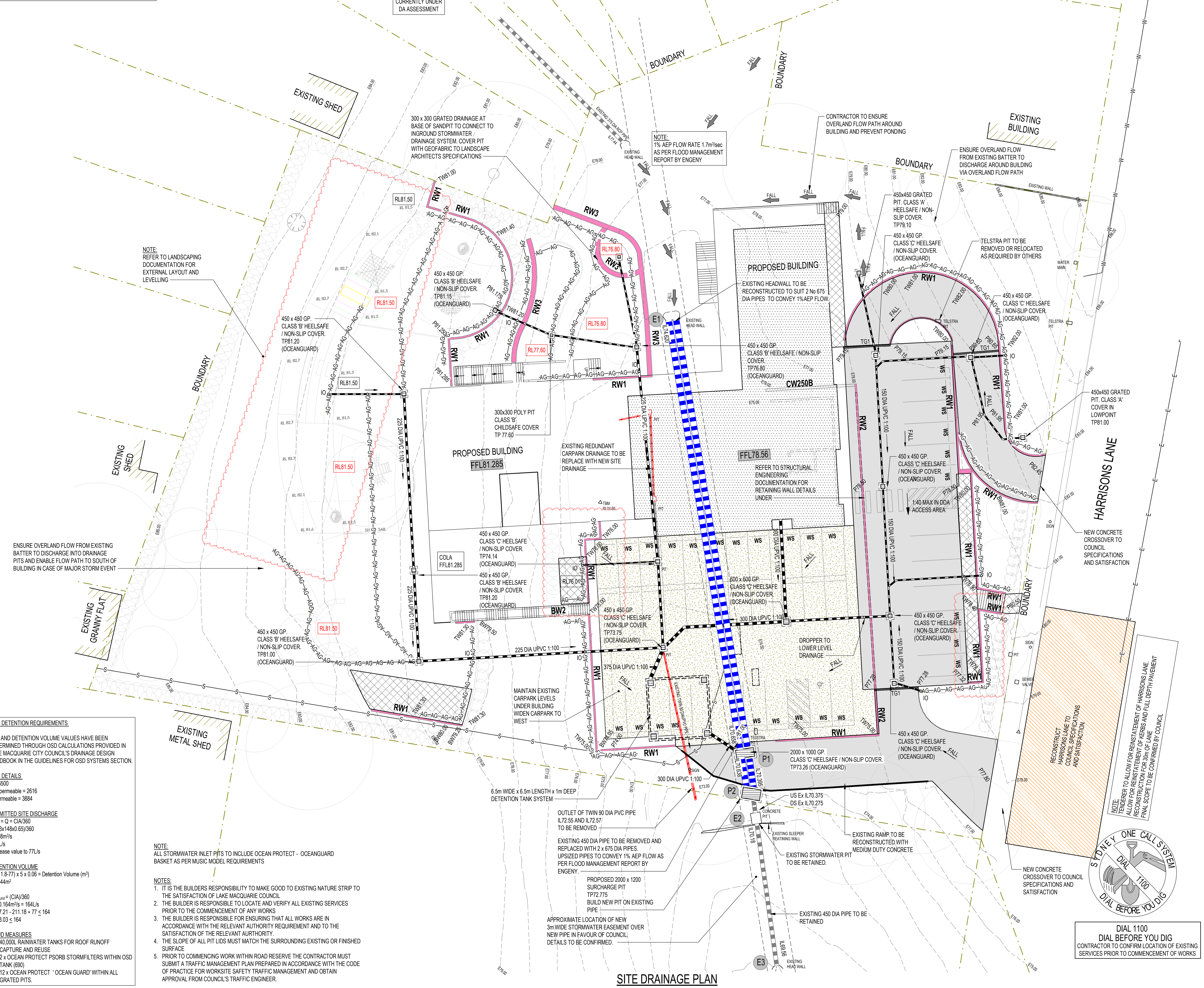
DA ISSUE

Project	Drawing	Revision
210970	C104	B

ASPECT AUTISM SCHOOL - CARDIFF , 6 HARRISONS LANE, CARDIFF HEIGHTS

NOTE:
REFER TO FLOOD MODELLING REPORT BY ENGENY FOR DETAILS OF THE FLOOD STUDY AND PROPOSED FLOOD MANAGEMENT



SITE DETENTION REQUIREMENTS

PSD AND DETENTION VOLUME VALUES HAVE BEEN DETERMINED THROUGH OSD CALCULATIONS PROVIDED IN LAKE MACQUARIE CITY COUNCIL'S DRAINAGE DESIGN HANDBOOK IN THE GUIDELINES FOR OSD SYSTEMS SECTION.

SITE DETAILS
A = 6500
A Impermeable = 2616
A Permeable = 3884

PERMITTED SITE DISCHARGE
PSD = Q = CIA/360
= (0.3x148x0.65)/360
= 0.08m³/s
= 80L/s
Decrease value to 77L/s

DETENTION VOLUME
= (211.8-77) x 5 x 0.06 = Detention Volume (m³)
= 40.44m³

$Q_{100\ und}$ = (CIA)/360
Q = 0.164m³/s = 164L/s
= 297.21 - 211.18 + 77 ≤ 164
= 163.03 ≤ 164

WSUD MEASURES
- 40,000L RAINWATER TANKS FOR ROOF RUNOFF CAPTURE AND REUSE
- 2 x OCEAN PROTECT PSORB STORMFILTERS WITHIN OSD TANK (690)
- 12 x OCEAN PROTECT ' OCEAN GUARD' WITHIN ALL GRATED PITS.

NOTE:
ALL STORMWATER INLET PITS TO INCLUDE OCEAN PROTECT - OCEANGUARD BASKET AS PER MUSIC MODEL REQUIREMENTS

NOTES:
1. IT IS THE BUILDERS RESPONSIBILITY TO MAKE GOOD TO EXISTING NATURE STRIP TO THE SATISFACTION OF LAKE MACQUARIE COUNCIL
2. THE BUILDER IS RESPONSIBLE TO LOCATE AND VERIFY ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORKS
3. THE BUILDER IS RESPONSIBLE FOR ENSURING THAT ALL WORKS ARE IN ACCORDANCE WITH THE RELEVANT AUTHORITY REQUIREMENT AND TO THE SATISFACTION OF THE RELEVANT AUTHORITY.
4. THE SLOPE OF ALL PIT LIDS MUST MATCH THE SURROUNDING EXISTING OR FINISHED SURFACE
5. PRIOR TO COMMENCING WORK WITHIN ROAD RESERVE THE CONTRACTOR MUST SUBMIT A TRAFFIC MANAGEMENT PLAN PREPARED IN ACCORDANCE WITH THE CODE OF PRACTICE FOR WORKSITE SAFETY TRAFFIC MANAGEMENT AND OBTAIN APPROVAL FROM COUNCIL'S TRAFFIC ENGINEER.

SITE DRAINAGE PLAN

SCALE 1 : 200

DIAL 1100
DIAL BEFORE YOU DIG
CONTRACTOR TO CONFIRM LOCATION OF EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS

LEGEND

	DENOTES MEDIUM DUTY CONCRETE PAVING. REFER TO DRAWING C100 FOR DETAILS
	DENOTES CONCRETE FOOTPATH PAVING. REFER TO DRAWING C100 FOR DETAILS
	DENOTES ASPHALT CARPARK PAVING. REFER TO DRAWING C100 FOR DETAILS
Pxx.xx	DENOTES PROPOSED PAVEMENT LEVEL.
IKxx.xx	DENOTES PROPOSED INVERT OF KERB LEVEL.
ILxx.xx	DENOTES PROPOSED INVERT OF PIPE LEVEL.
TWxx.xx	DENOTES TOP OF RETAINING WALL LEVEL
BWxx.xx	DENOTES BOTTOM OF RETAINING WALL LEVEL
DP	DENOTES DOWNPIPE. REFER TO ARCHITECTURAL AND HYDRAULIC DOCUMENTATION FOR DOWNPIPE LOCATIONS
TG1	200 WIDE x 200 DEEP GRATED TRENCH ON RAMP TO DISCHARGE TO DRAINAGE SYSTEM. CLASS 'D' HEELSAFE, NON-SLIP COVER
FW	DENOTES FLOOR WASTE. REFER TO DRAWING C001 FOR DETAILS.
K	DENOTES BARRIER KERB. REFER TO DRAWING C001 FOR DETAILS.
KC	DENOTES BARRIER KERB. REFER TO DRAWING C001 FOR DETAILS.
WS	DENOTES WHEEL STOP. REFER TO DRAWING C100 FOR DETAILS.
RW1	DENOTES BLOCK RETAINING WALL REFER STRUCTURAL DRAWINGS
RW2	REFER TO STRUCTURAL DRAWING FOR DETAIL
RW3	STONE RETAINING WALL. REFER TO LANDSCAPE ARCHITECTS AND STRUCTURAL DRAWINGS FOR DETAILS
	DENOTES EXISTING STORMWATER PIPE. REFER TO PLAN FOR DETAILS.
	DENOTES PROPOSED STORMWATER PIPE. REFER TO PLAN FOR DETAILS.
-AG—AG-	DENOTES 100 DIA UPVC AG DRAIN.
SCJ	DENOTES SAWCUT JOINT. REFER TO DRAWING C001 FOR DETAILS.
FALL	DENOTES EXISTING OVERLAND FLOW PATH.

NOTES:
1. ALL PIT LIDS WITHIN TRAFFICABLE AREAS ARE TO BE MIN CLASS 'C'.
   - ALL PIT LIDS WITHIN LANDSCAPED AREAS ARE TO BE MIN CLASS 'B'.
   - ALL GRATED LIDS ARE TO BE HEEL PROOF/NON-SLIP.
2. ALL SITE AND PAVEMENT PREPARATION TO BE IN ACCORDANCE WITH GEOTECHNICAL REPORT
3. ALL SITE PAVING TO FALL AWAY FROM THE BUILDING.
4. ALL STORMWATER PIPES ARE TO BE 100 DIA UPVC AT 1:100 GRADE UNLESS NOTED OTHERWISE.
5. REFER TO ARCHITECTURAL AND HYDRAULIC DOCUMENTATION FOR DOWNPIPE LOCATIONS

ISSUE	REVISION	DATE
B	DA ISSUE	21/09/23
A	TENDER ISSUE	5/05/23
6	95% DESIGN DEVELOPMENT ISSUE	13/04/23
5	75% DESIGN DEVELOPMENT ISSUE	07/03/23
4	50% ISSUE	21/02/23
3	DA ISSUE	04/11/22

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CLIENT
CAPITAL PROJECT CONTROL

ARCHITECT
EJE architecture

TITLE
SITE DRAINAGE PLAN

Designed	CW	Drawn	RJ
Project Leader	MW	Sheet Size	A1
Project Director	MW	Certified	-
Printed	21/09/2023 7:47:21 AM	Version	19

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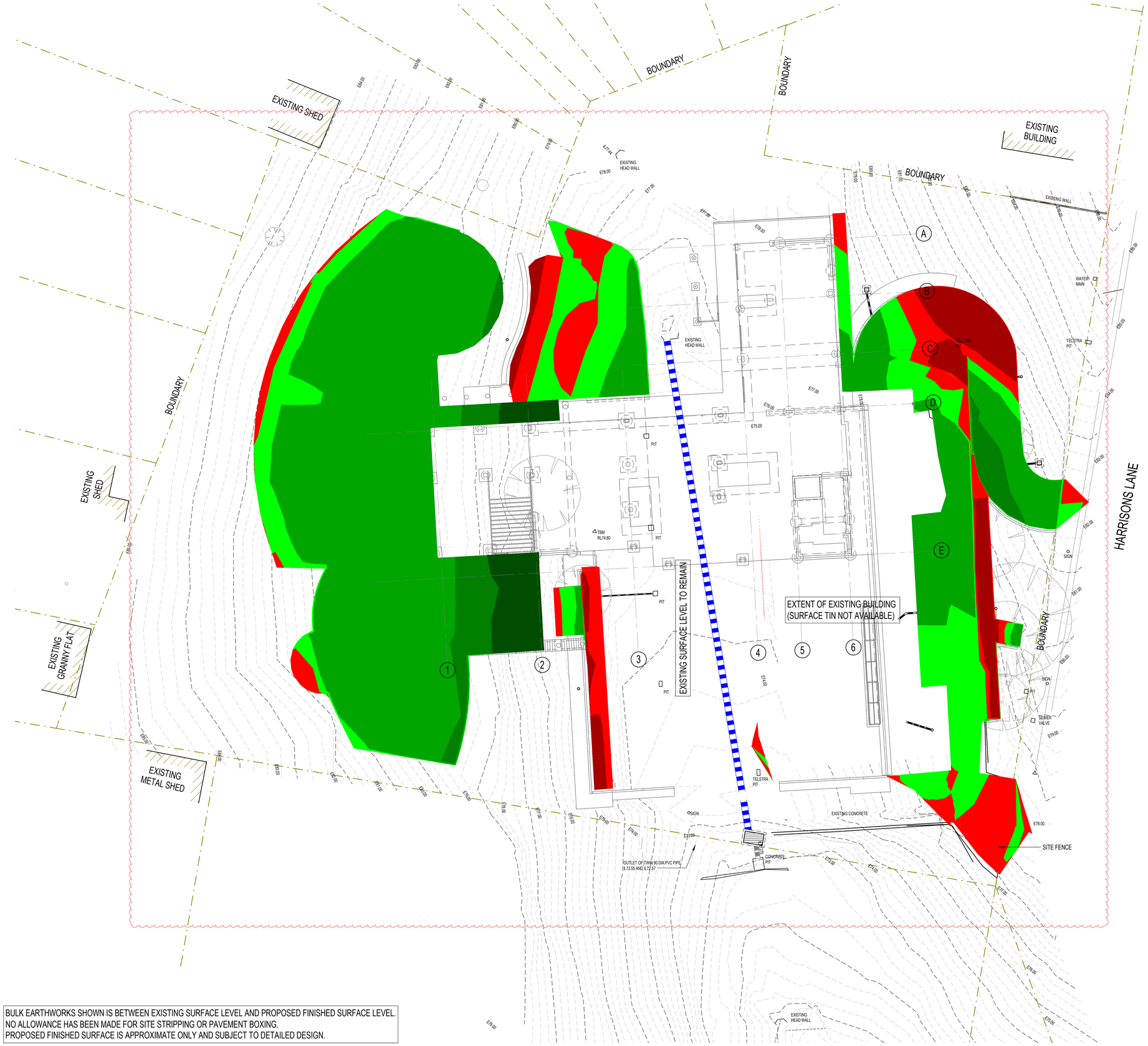
North

DA ISSUE

Project	Drawing	Revision
210970	C105	B

ASPECT AUTISM SCHOOL - CARDIFF , 6 HARRISONS LANE, CARDIFF HEIGHTS



BULK EARTHWORKS SHOWN IS BETWEEN EXISTING SURFACE LEVEL AND PROPOSED FINISHED SURFACE LEVEL.
NO ALLOWANCE HAS BEEN MADE FOR SITE STRIPPING OR PAVEMENT BOXING.
PROPOSED FINISHED SURFACE IS APPROXIMATE ONLY AND SUBJECT TO DETAILED DESIGN.

BULK EXCAVATION PLAN

SCALE 1 : 200

BULK EARTHWORKS DEPTHS		
LOWER VALUE (m)	UPPER VALUE (m)	COLOUR
-3.0	-2.5	
-2.5	-2.0	
-2.0	-1.5	
-1.5	-1.0	
-1.0	-0.5	
-0.5	0	
0	0.5	
0.5	1.0	
1.0	1.5	
1.5	2.0	
2.0	2.5	
2.5	3.0	
3.0	3.5	

ASPECT AUTISM SCHOOL - CARDIFF , 6 HARRISONS LANE, CARDIFF HEIGHTS

ISSUE	REVISION	DATE
C	DA ISSUE	21/09/23
B	DA ISSUE	21/09/23
A	DA ISSUE	21/09/23
3	95% DESIGN DEVELOPMENT ISSUE	21/04/23
2	95% DESIGN DEVELOPMENT ISSUE	19/04/23
1	DA ISSUE	04/11/22

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CLIENT
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ARCHITECT
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TITLE
BULK EXCAVATION PLAN

Designed	CW	Drawn	RJ	North
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Printed 21/09/2023 1:42:16 PM		Version	19	
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DA ISSUE

Project	Drawing	Revision
210970	C120	C

CIVIL AND DRAINAGE NOTES

C1. ALL LEVELS ON STRUCTURAL/CIVIL DRAWINGS ARE TO DATUM NOMINATED BY PROJECT SURVEYOR.
REFER SURVEY DRAWINGS FOR EXISTING BOUNDARIES, LEVELS ETC.
ALL LEVELS ARE IN METRES. ALL EXISTING LEVELS SHOWN ARE TO BE CONFIRMED ON SITE.

C2. PAVEMENT LEVELS ARE FINISHED LEVELS THROUGHOUT.

C3. ANY EXISTING PAVEMENT, KERB AND CHANNEL, KERB OR THE LIKE THAT IS DAMAGED DURING CONSTRUCTION IS TO BE REINSTATED TO ITS ORIGINAL CONDITION AND TO THE SATISFACTION OF THE RELEVANT AUTHORITY PRIOR TO THE COMPLETION OF WORKS.

C4. ALL EARTH BATTERS ARE TO BE IN THE RATIO OF 1 TO 4 OR LESS UNLESS NOTED OTHERWISE.
BATTERS ARE TO BE KEPT A MINIMUM 1 METRE FROM BUILDINGS, ROADS, WALLS AND THE LIKE.

C5. SUBGRADE PREPARATION:
ALL VEGETATION, TOP SOIL AND FILL MATERIAL SHALL BE REMOVED FROM THE PAVEMENT AREA AND EXTENDING 300mm PAST THE EDGE OF THE PAVEMENT TO EXPOSE THE SUBGRADE MATERIAL AS NOTED IN THE GEOTECHNICAL REPORT.
THE SUBGRADE (PRIOR TO ANY FILL OR PAVEMENT BEING PLACED) SHALL BE PROOF ROLLED IN THE PRESENCE OF THE PROJECT GEOTECHNICAL ENGINEER (OR RELEVANT AUTHORITY) AND BE APPROVED TO HAVE A MINIMUM CBR OF 3% UNLESS NOTED OTHERWISE. THE MOISTURE CONTENT OF THE SUBGRADE SHOULD BE BETWEEN 90% AND 120% OF O.M.C.

ANY SOFT SPOTS ENCOUNTED SHALL BE EXCAVATED AND REPLACED WITH COMPACTED FILL IN LAYERS NOT GREATER THAN 150mm THICK TO A MINIMUM DENSITY OF 95% M.M.D.D MEASURED IN ACCORDANCE WITH AS 1289.5.2.1.

THE MATERIAL TO BE USED AS FILL SHALL BE APPROVED BY THE PROJECT GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT.
THE CLIENT IS TO BE ADVISED OF ANY VARIATION WORKS RELATING TO SUBGRADE PREPARATION PRIOR TO PROCEEDING WITH ANY REMEDIAL WORKS.

C6. ALL DRAINAGE, WORKMANSHIP AND MATERIALS TO COMPLY WITH:
AS 3500.3:2018 (STORMWATER DRAINAGE).
AS 2870:2011 (RESIDENTIAL SLABS AND FOOTINGS).
RELEVANT AUTHORITY STANDARD DRAWING AND SPECIFICATIONS.
AS APPLICABLE.

C7. FINISHED SURFACES ADJACENT TO BUILDINGS ARE TO FALL 50mm MIN AWAY FROM BUILDING FOR THE FIRST METRE.

C8. IT IS THE CONTRACTORS RESPONSIBILITY TO LOCATE AND IDENTIFY ALL EXISTING SERVICES PRIOR TO COMMENCING CONSTRUCTION.

C9. PRIOR TO COMMENCING WORK THE CONTRACTOR IS TO ENSURE THAT ALL NECESSARY INVESTIGATION IS UNDERTAKEN TO ENSURE THAT THE WORKS CAN BE CONSTRUCTED AS DESIGNED.
IF THE WORK CANNOT BE CARRIED OUT AS SHOWN THE CLIENT IS TO BE NOTIFIED IMMEDIATELY.

C10. REFER TO ARCHITECTS DRAWINGS FOR CONSTRUCTION LEVELS.
REFER ANY DISCREPANCIES TO THE ARCHITECT.

C11. ALL EXISTING UNDERGROUND SERVICES ARE TO BE LOCATED PRIOR TO ANY EXCAVATION AND NO EXISTING SERVICE SHALL BE DISCONNECTED OR DISTURBED WITHOUT THE APPROVAL OF THE CLIENT OR RESPONSIBLE AUTHORITY.

C12. ALL PIT COVERS TO COMPLY WITH AS3500.3:2018 'STORMWATER AND DRAINAGE' AND AS3996-2006 'ACCESS COVERS AND GRATES'. BUILDER TO CONFIRM ALL PIT COVER TYPES AND FINISH WITH THE ARCHITECT AND/OR SUPERINTENDENT AND ENSURE FIT FOR PURPOSE PRIOR TO ORDERING.

C13. STORMWATER DRAINS SUSPENDED UNDER SLABS OR ALONG WALLS SHALL BE TO APPROVED DETAILS.

C14. ANY MISALIGNMENTS THAT MAY BE SOLVED BY CORBELLING OF PIT WALLS MAY ONLY BE CARRIED OUT WITH THE WRITTEN APPROVAL OF THE ENGINEER.

C15. ALL DOWNPIPE COLLECTOR PIPES SHALL MATCH DOWNPIPE SIZE (100 DIA MIN) AT A GRADE OF 1 IN 100 UNLESS NOTED OTHERWISE.

C16. ALL PIPE JUNCTIONS SHALL BE MADE WITH A 45° JOINT.

C17. CLASS OF PIPES:

(a) CONCRETE PIPES (RC)
SHALL CONFORM TO AS 1342 "PRECAST CONCRETE DRAINAGE PIPES"
AND SHALL BE CLASS 2 PIPE WITH SPIGOT AND SOCKET RUBBER RING JOINTS UNLESS NOTED OTHERWISE.
ALL CONCRETE PIPES UNDER PAVEMENTS TO BE CLASS 4

(b) FIBRE REINFORCED CEMENT PIPES (FRC)
SHALL CONFORM TO AS 1342 "PRECAST CONCRETE DRAINAGE PIPES"
AND SHALL BE TESTED TO THE REQUIREMENTS OF
AS 1712 APPENDIX D "ASBESTOS CEMENT SEWER PIPES".
ALL FRC PIPES SHALL BE CLASS X WITH ADCOL "V" RING JOINTS.
FOR PIPE SIZES GREATER THAN 300mm ALTERNATIVE JOINTING MAY BE PERMITTED WITH THE APPROVAL OF THE CITY ENGINEER.

UNPLASTICISED PVC PIPES (UPVC)

(c) (c.1) WITHIN PROPERTY:

ALL UPVC PIPES SHALL CONFORM TO
AS 2032 "CODE PRACTISE FOR THE INSTALLATION OF UPVC PIPES" PART 7 AND SHALL BE CLASS 6 SEWER QUALITY OR HEAVY DUTY STORMWATER DEPENDING ON APPLICATION.
ALL JOINTING PROCEDURES SHALL CONFORM TO AS 2032 PART 3 AND SHALL BE EITHER SOLVENT WELDED OR RUBBER RING JOINTS.

WITHIN ROAD RESERVE:

(c.2) ALL UPVC PIPES SHALL CONFORM TO AS 1260
"UNPLASTICISED P.V.C (UPVC) PIPES AND FITTING FOR SEWERAGE APPLICATIONS" PARTS 1 TO 5 AND SHALL BE CLASS S.H PIPES

C18. COVER DETAILS:

LOCATION	MINIMUM COVER (mm)	
	CAST IRON, GALVANIZED STEEL	PLASTICS
1. NOT SUBJECT TO VEHICULAR LOADING		
a) WITHOUT PAVEMENT -		
i) FOR SINGLE DWELLING; OR	100	100
ii) FOR OTHER THAN SINGLE DWELLINGS	100	300
b) WITH PAVEMENT OF BRICK OR UNREINFORCED CONCRETE	100*	100*
2. SUBJECT TO VEHICULAR LOADING		
a) OTHER THAN ROADS:		
i) WITHOUT PAVEMENT	300	450
ii) WITH PAVEMENT OF -		
A) REINFORCED CONCRETE FOR HEAVY VEHICULAR LOADING; OR	NIL*	100*
B) BRICK OR UNREINFORCED CONCRET FOR LIGHT VEHICULAR LOADING.	NIL*	75*
b) ROADS:		
i) SEALED; OR	600	600
ii) UNSEALED	600	750
3. SUBJECT TO CONSTRUCTION EQUIPMENT LOADING OR IN EMBANKMENT CONDITIONS	600	750
4. LAND ZONE OF AGRICULTURAL USE	600	600

*BELOW THE UNDERSIDE OF THE PAVEMENT.

C19. WHERE A DRAIN IS LAID PARALLEL TO A FOOTING IT IS TO BE LOCATED SUCH THAT THE BASE OF ANY OF THE TRENCH IS NOT BELOW THE LINE OF INFLUENCE OF THE FOOTING WHICH IS 1H : 1V IN CLAY OR 2H : 1V IN SAND SOILS.

C20. ALL DRAINAGE EXCAVATIONS ARE TO BE BACKFILLED WITH A SUITABLE APPROVED MATERIAL. UNDER SEALED PAVEMENTS AND BUILDING SLABS, THIS SHALL BE 20mm, DGS20. BACKFILL TO BE COMPACTED IN LAYERS NOT EXCEEDING 150mm LOOSE THICKNESS TO A DRY DENSITY OF NOT LESS THAN 95% OF THE MODIFIED COMPACTION TEST AS 1289.5.2.1

C21. FOR CONCRETE HEADWALL DETAILS REFER RELEVANT AUTHORITY STANDARD DRAWINGS

C22. ALL CONCRETE SHALL BE 32MPa STRENGTH GRADE COMPLYING WITH THE REQUIREMENTS OF AS 1379:1991. UNLESS SPECIFIED OTHERWISE.

C23. ALL PIPING THAT PENETRATES A FOOTING/STRUCTURE IS TO BE LAGGED WITH A COMPRESSIBLE MATERIAL, 50mm MINIMUM.

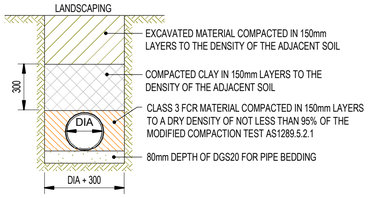
C24. CONTRACTOR / BUILDER IS TO COMPLETE ALL LINE MARKINGS AS INDICATED ON ARCHITECTURAL DRAWINGS AND SPECIFICATIONS UNLESS NOTED OTHERWISE. REFER TO ARCHITECT FOR SET OUT OF LINE MARKING.
ALL LINE MARKING TO BE COMPLETED IN ACCORDANCE WITH THE RELEVANT AUSTRALIAN STANDARDS AUTHORITY REQUIREMENT OR RMS SPECIFICATIONS.

C25. CONTRACTOR / BUILDER SHALL ALLOW FOR AND OBTAIN ALL NECESSARY AUTHORITY APPROVALS AND PERMITS.

C26. UNLESS NOTED OTHERWISE, ALL PAVEMENT CONSTRUCTION TO FOLLOW THE RELEVANT RMS OR LOCAL AUTHORITY STANDARDS AND SPECIFICATIONS.

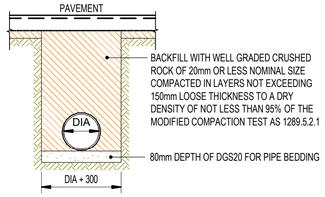
DEPTH TO INVERT OF OUTLET	MINIMUM INTERNAL DIMENSIONS (mm)		
	RECTANGULAR		CIRCULAR
	WIDTH	LENGTH	DIAMETER
≤600	350	350	-
≤600	450	450	600
>600 ≤900	600	600	900
>900 ≤1200	600	900	1000
>1200	900	900	1000

MINIMUM INTERNAL DIMENSIONS FOR STORMWATER AND INLET PITS



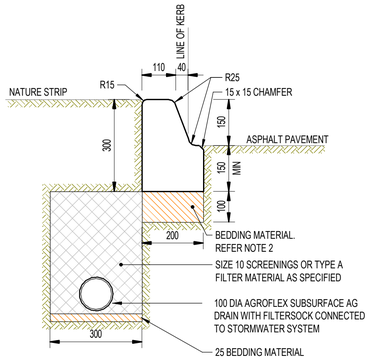
PIPE LAYING DETAIL - LANDSCAPE AREAS

NOTE:
1. IN REACTIVE SOILS OR WHERE TRENCH IS NEAR FOUNDATIONS, CLAY OR IMPERVIOUS MATERIAL SHALL BE USED AS BACKFILL. WHERE POSSIBLE, MAINTAIN 1.5m HORIZONTAL CLEARANCE FROM BUILDINGS.
2. FOR REINFORCED CONCRETE PIPES IF DIAMETER GREATER THAN 300mm, USE A BEDDING DEPTH OF 100mm OF 20mm OR LESS NOMINAL SIZE DGB20.
3. ALL TRENCHES OVER 1.5m DEPTH TO BE IN ACCORDANCE WITH CURRENT OH&S (CONFINED SPACES) REGULATIONS AND THE CODE OF PRACTICE FOR CONFINED SPACES.



PIPE LAYING DETAIL - PAVED AREAS

NOTE:
1. IN REACTIVE SOILS OR WHERE TRENCH IS NEAR FOUNDATIONS, CLAY OR IMPERVIOUS MATERIAL SHALL BE USED AS BACKFILL. WHERE POSSIBLE, MAINTAIN 1.5m HORIZONTAL CLEARANCE FROM BUILDINGS.
2. FOR REINFORCED CONCRETE PIPES IF DIAMETER GREATER THAN 300mm, USE A BEDDING DEPTH OF 100mm OF 20mm OR LESS NOMINAL SIZE DGB20.
3. ALL TRENCHES OVER 1.5m DEPTH TO BE IN ACCORDANCE WITH CURRENT OH&S (CONFINED SPACES) REGULATIONS AND THE CODE OF PRACTICE FOR CONFINED SPACES.

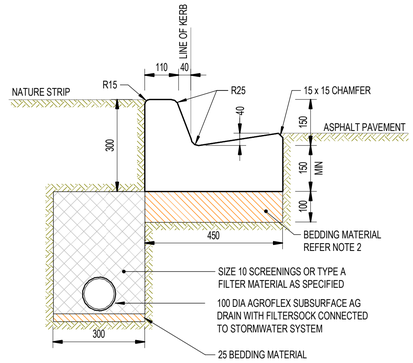


BARRIER KERB DETAIL (K)

SCALE 1:10

NOTES:
1. CONCRETE SHALL BE NORMAL - CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH HTE REQUIREMENTS OF AS 1379
2. BEDDING SHALL BE 100mm MIN COMPACTED (98% MMDD) DEPTH OF DGS20 FINE CRUSHED ROCK OR SAND.

NOTE:
TYPICAL VICROADS KERB DETAIL ONLY.
REFER RELEVANT AUTHORITY STANDARD DRAWINGS FOR FURTHER INFORMATION

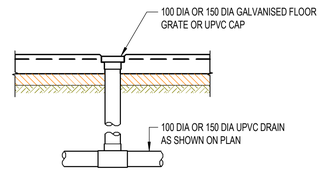


BARRIER KERB AND CHANNEL DETAIL (KC)

SCALE 1:10

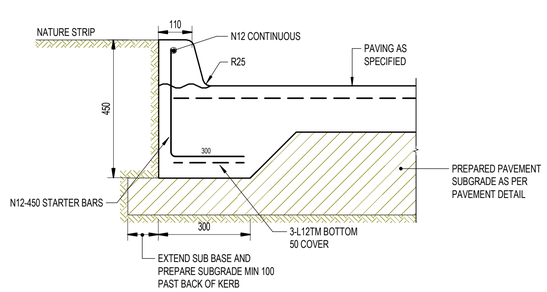
NOTES:
1. CONCRETE SHALL BE NORMAL - CLASS N25 STANDARD STRENGTH GRADE COMPLYING WITH HTE REQUIREMENTS OF AS 1379
2. BEDDING SHALL BE 100mm MIN COMPACTED (98% MMDD) DEPTH OF DGS20 FINE CRUSHED ROCK OR SAND.

NOTE:
TYPICAL VICROADS KERB DETAIL ONLY.
REFER RELEVANT AUTHORITY STANDARD DRAWINGS FOR FURTHER INFORMATION



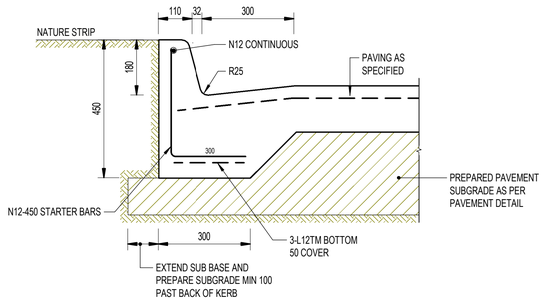
FLOOR WASTE / INSPECTION OPENING DETAIL

NOTE:
ALL FITTINGS TO COMPLY TO 'AS 1260 - UPVC PIPES AND FITTINGS FOR DRAIN, WASTE AND VENT APPLICATION' AND INSTALLED AS PER 'AS 2032 CODE OF PRACTICE FOR INSTALLATION OF UPVC PIPE SYSTEMS'



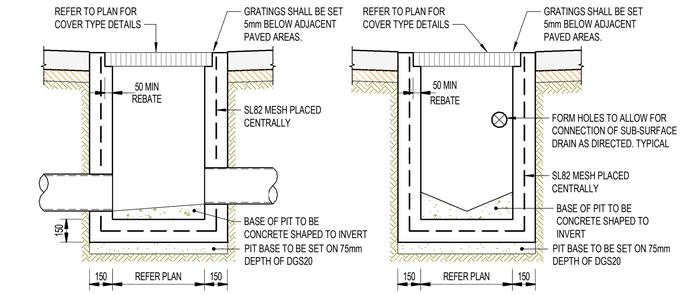
BARRIER KERB DETAIL (K) (RIGID PAVING)

SCALE 1:10



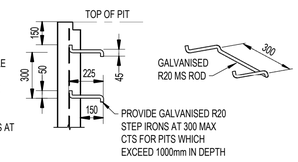
BARRIER KERB AND CHANNEL DETAIL (KC) (RIGID PAVING)

SCALE 1:10

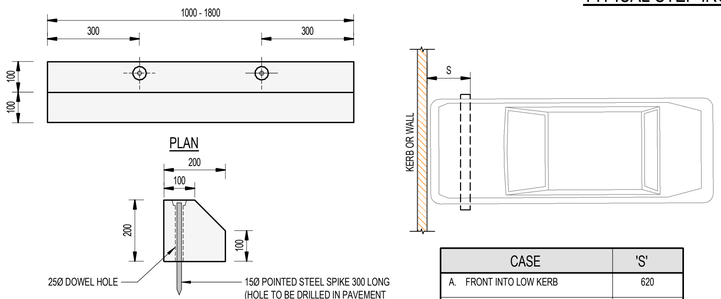


GRATED PIT DETAIL (JUNCTION PIT SIMILAR)

NOTES:
1. ALL GRATED LIDS ARE TO BE FABRICATED TO SUIT INVERT PROFILE OF PAVEMENT OR ROAD.
2. ALL JUNCTION PIT LIDS TO BE CAST IRON, CONCRETE INFILL TYPE UNLESS NOTED OTHERWISE.
3. REFER TO PIT SCHEDULE OR PLAN FOR TYPE AND DIMENSIONS.
4. FOR PITS GREATER THAN 1000mm IN DEPTH, PROVIDE STEP IRONS AT 300mm CTS AS PER DETAIL ON THIS DRAWING.



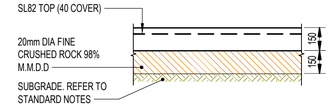
TYPICAL STEP IRON DETAIL



PRECAST WHEELSTOP DETAIL (WS)

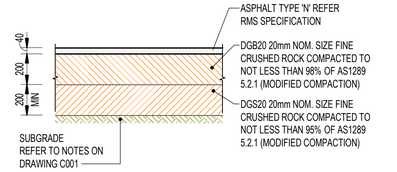
CASE	'S'
A. FRONT INTO LOW KERB	620
B. REAR INTO LOW KERB	900
C. FRONT INTO HIGH KERB OR WALL	820
D. REAR INTO HIGH KERB OR WALL	1100

IN ACCORDANCE WITH AS2890



MEDIUM DUTY CONCRETE PROFILE DETAIL

NOTES:
1. ALL PAVING SLABS TO HAVE RE-ENTRANT REINFORCEMENT AS PER STANDARD RE-ENTRANT BAR REINFORCEMENT DETAILS.
2. LOCATE JOINTS AT 4500 MAX CTS.
3. SAWCUTS ARE TO BE MADE 24 HOURS OF SLAB BEING POURED.
4. IF THE SLAB IS TO BE POURED IN MORE THAN ONE STAGE, THEN A DOWEL JOINT SHALL BE PROVIDED AT THE CONSTRUCTION JOINTS. 24 HOURS TO ELAPSE BETWEEN POURS OF ADJACENT SLABS.
5. SLAB SUB-GRADE TO BE PROOF ROLLED TO ENSURE MIN CBR 3. ANY SOFT SPOT TO BE DUG OUT AND REPLACED WITH CRUSHED ROCK COMPACTED 150mm LAYERS.
6. MIN 40mm COVER FOR REINFORCEMENT



MEDIUM DUTY ASPHALT PAVEMENT DETAIL

NOTE:
PAVEMENT MARKUPS ARE INDICATIVE AND TO BE FINALISED IN DETAILED DESIGN

B	DA ISSUE			21/09/23
A	TENDER ISSUE			5/05/23
5	95% DESIGN DEVELOPMENT ISSUE			13/04/23
4	75% DESIGN DEVELOPMENT ISSUE			07/03/23
3	50% ISSUE			21/02/23
2	DA ISSUE			04/11/22
ISSUE	REVISION			DATE

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TITLE
CIVIL NOTES AND DETAILS

Designed	CW	Drawn	RJ	North
Project Leader	MW	Sheet Size	A1	
Project Director	MW	Certified	-	
Printed 21/09/2023 7:47:01 AM		Version	19	
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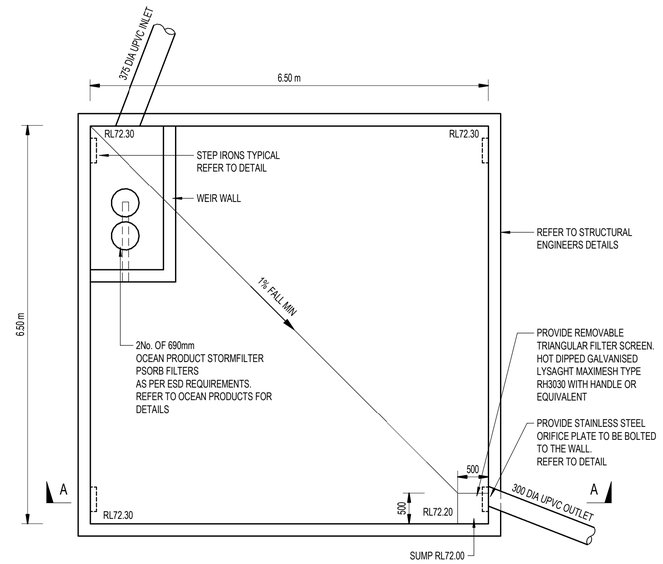
DA ISSUE

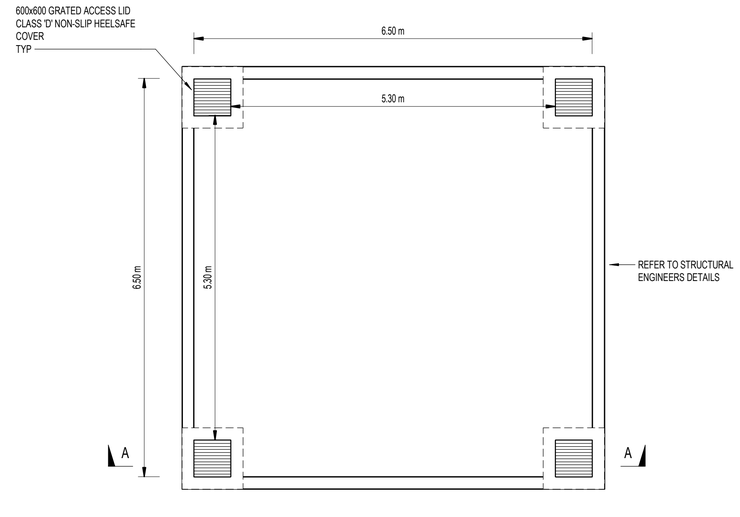
Project	Drawing	Revision
210970	C100	B

ASPECT AUTISM SCHOOL - CARDIFF , 6 HARRISONS LANE, CARDIFF HEIGHTS



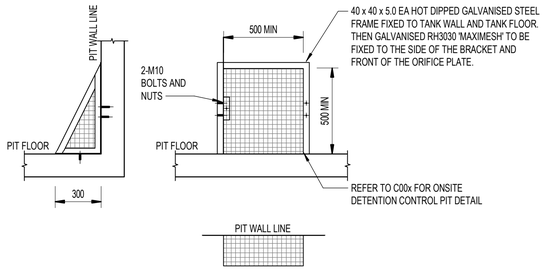
OSD TANK BASE PLAN

SCALE 1:50



OSD TANK ROOF PLAN

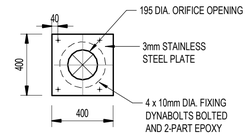
SCALE 1:50



OSD MAXIMESH DETAIL

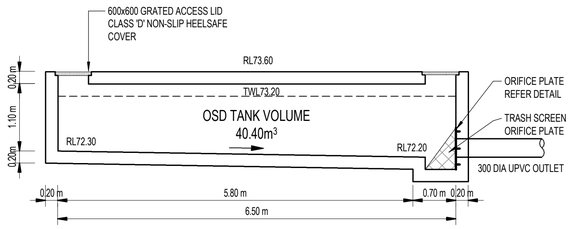
SCALE 1:20

NOTES:
1. MESH TO BE MAXIMESH RH3030 (OR EQUIVALENT) EXPANDED STEEL MESH, GALV/ZINC COATED.
2. MESH TO BE AFFIXED TO 40 x 40 x 5 EA SECTION BY 2 x 10mm GALV/ZINC/SS NUT AND BOLT. BOLTS TO BE WELDED IN PLACE SO AS TO BE RETAINED ON ANGLE SECTION.
3. EQUAL ANGLE SECTIONS TO BE MIN LENGTH 300mm FIXED TO PIT WALLS.



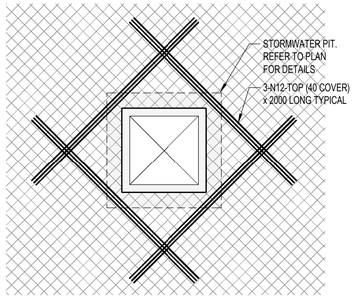
OSD TANK ORIFICE PLATE DETAIL

SCALE 1:20

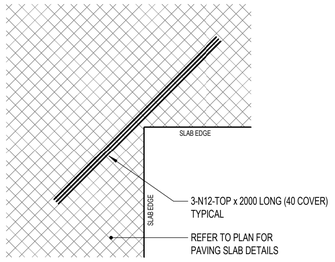


OSD TANK CROSS SECTION A-A

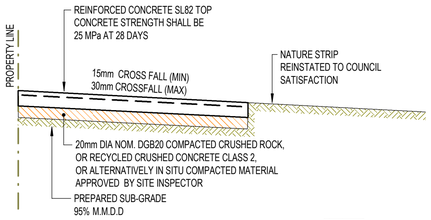
SCALE 1:50



RE-ENTRANT BAR DETAIL AT STORMWATER PIT



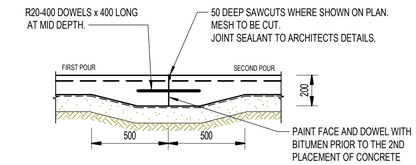
RE-ENTRANT BAR DETAIL - PAVING SLAB



CONCRETE FOOTPATH DETAIL

SCALE 1:20

NOTES:
1. SAW CUT JOINTS AT 1500mm MAX
2. SAW CUTS ARE TO BE MADE WITHIN 24 HOURS OF SLAB BEING POURED.
3. IF THE SLAB IS TO BE POURED IN MORE THAN ONE STAGE, THEN A KEY DOWEL JOINT SHALL BE PROVIDED AT THE CONSTRUCTION JOINTS, 24 HOURS TO ELAPSE BETWEEN POURS OF ADJACENT SLABS.
4. SLAB SUBGRADE TO BE PROOF ROLLED TO ENSURE MIN CBR 3. ANY SOFTSPOT TO BE DUG OUT AND REPLACED WITH CRUSHED ROCK COMPACTED IN 150mm LAYERS.
5. THIS IS TYPICAL FOOTPATH DETAIL ONLY. REFER TO THE RELEVANT AUTHORITY STANDARD DETAILS FOR FURTHER INFORMATION.



DOWEL CONSTRUCTION JOINT DETAIL - DJ

SCALE 1:20

NOTES:
1. 24 HOURS TO ELAPSE BETWEEN POURS OF ADJACENT SLABS.
2. LOCATION OF JOINT TO BE TO THE APPROVAL OF THE ENGINEER
3. REFER PLANS FOR SLAB THICKNESS AND REINFORCEMENT.

ISSUE	REVISION	DATE
B	DA ISSUE	21/09/23
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TITLE
OSD TANK DETAILS

Designed	CW	Drawn	RJ	North
Project Leader	MW	Sheet Size	A1	
Project Director	MW	Certified	-	
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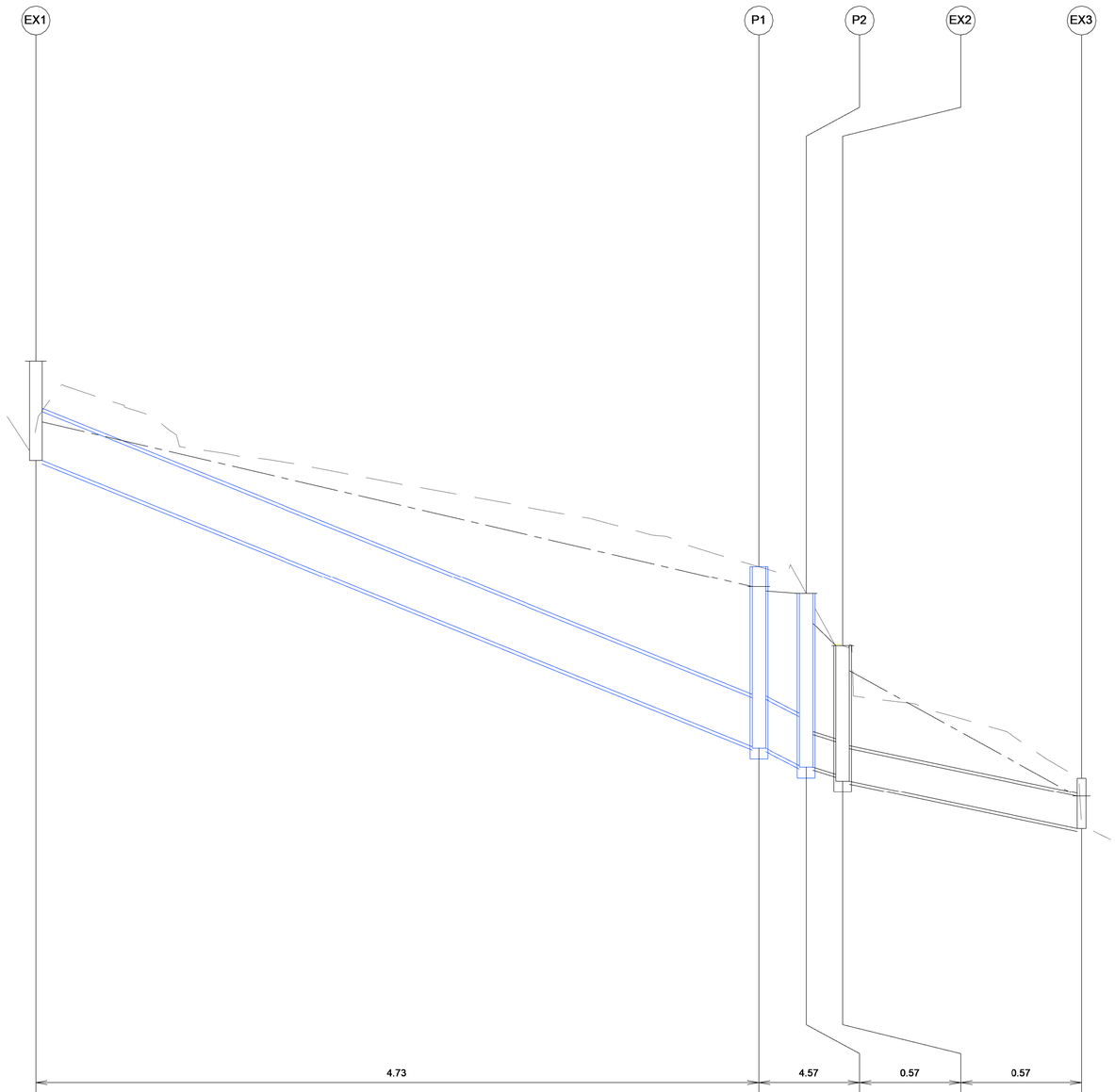
DA ISSUE

Project	Drawing	Revision
210970	C101	B

ASPECT AUTISM SCHOOL - CARDIFF , 6 HARRISONS LANE, CARDIFF HEIGHTS



PIPE CAPACITY (m3/s)	4.73		4.57	0.57	0.57
PIPE FLOW (m3/s)	1.730		1.730	1.730	1.730
Vf - FULL PIPE VELOCITY (m/s)	Vf=2.42		Vf=2.42	Vf=10.88	Vf=10.88
PIPE DIAMETER (mm)	(2x)675□ RCP 2		(2x)675□ RCP 2	EX 450□	EX 450□
PIPE GRADE	1 in 12.6		1 in 13.6	1 in 25.3	1 in 25.1
DATUM	64.0				
FINISHED SURFACE LEVEL	76.000	73.149	72.775	72.052	70.220
DEPTH TO INVERT	1.380	2.491 / 2.511	2.380 / 2.400	1.777 / 1.872	0.700
HYDRAULIC GRADE LINE	76.000 / 75.154	72.869 / 72.808	72.773 / 72.775 / 72.362	72.052 / 71.707	69.970
INVERT LEVEL	74.620	70.658 / 70.638	70.395 / 70.375	70.275 / 70.160	69.520 / 69.520
CHAINAGE	0.000	50.071	50.071 / 3.297	53.368 / 2.525	55.893 / 16.568 / 72.462

OUTFALL DRAIN LONGITUDINAL SECTIONEXST 01

ASPECT AUTISM SCHOOL - CARDIFF , 6 HARRISONS LANE, CARDIFF HEIGHTS

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B	DA ISSUE	21/09/23
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TITLE
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Project Director	MW	Certified	-	
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Project	Drawing	Revision
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