

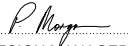
# SEWERAGE WORKS STANDARDS CONTROL BUILDING FOR SEWAGE PUMPS UP TO 80kW BLOCKWORK CONSTRUCTION



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**APPROVALS**  
ON BEHALF OF COUNCIL

 DESIGN ENGINEER	 DESIGN MANAGER
DATE: ..... 14.09.15 .....	DATE: ..... 14.09.15 .....

SHEET 1  
OF 9

**S.D. 273-01**  
**SEP 2015**



**GENERAL**

- 1 READ THESE DRAWINGS IN CONJUNCTION WITH SURVEY, OTHER ENGINEERING DRAWINGS, SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED. THE CONSTRUCTION NOTES SHALL APPLY UNLESS OTHERWISE VARIED BY THE DRAWINGS OR SPECIFICATIONS.
- 2 NOMINATION OF PROPRIETARY ITEMS DOES NOT INDICATE EXCLUSIVE PREFERENCE BUT INDICATES THE REQUIRED PROPERTIES OF THE ITEM. SIMILAR ALTERNATIVES HAVING THE REQUIRED PROPERTIES MAY BE OFFERED FOR APPROVAL.
- 3 REFER ANY DISCREPANCY TO THE SUPERINTENDENT BEFORE PROCEEDING WITH THE WORK.
- 4 DO NOT OBTAIN DIMENSIONS BY SCALING FROM THE DRAWINGS. ALL DIMENSIONS ARE IN MILLIMETRES AND ALL LEVELS IN METRES.
- 5 VERIFY SETTING OUT DIMENSIONS SHOWN ON THE DRAWINGS BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED.
- 6 MAINTAIN STRUCTURE IN STABLE CONDITION DURING CONSTRUCTION. NO PART SHALL BE OVERSTRESSED. PROVIDE TEMPORARY BRACING AS REQUIRED.
- 7 ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SAA CODES AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY.
- 8 DATUM FOR LEVELS IS AHD.
- 9 THE STRUCTURAL WORK SHOWN ON THE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING LOADS :
  - (a) WIND LOADS TO A.S. 1170.2-2011:  
BASIC WIND SPEED (m/s) = 57 m/s (ULT)  
REGION = B  
TERRAIN CATEGORY = 2  
IMPORTANCE LEVEL 2  
M TOPOGRAPHY = 1.25
  - (b) LIVE LOADS : ROOF = 0.25kPa

**EXISTING SERVICES**

- 1 THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATION OF EXISTING SERVICES PRIOR TO COMMENCING WITH THE WORKS.
- 2 THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING SERVICES DAMAGED DURING CONSTRUCTION WITH NEW SERVICES OF EQUIVALENT TYPE AND SPECIFICATIONS.

**FOUNDATIONS**

- 1 FOOTINGS HAVE BEEN DESIGNED FOR A SAFE WORKING PRESSURE OF 100 kPa. FOUNDATION MATERIAL SHALL BE APPROVED FOR THIS PRESSURE BY THE SUPERINTENDENT / BUILDING AUTHORITY BEFORE REINFORCEMENT AND / OR CONCRETE ARE PLACED. GEOTECHNICAL ENGINEER TO VERIFY THAT THE SOIL IS AS PER THE SOILS REPORT.
- 2 FOUNDATION LEVELS SHOWN ARE CONTRACT LEVELS - THE FINAL LEVELS SHALL BE AS DIRECTED BY THE SUPERINTENDENT.
- 3 FOUNDATION MATERIAL BENEATH SLABS ON GROUND SHALL BE COMPACTED TO 98% STANDARD COMPACTION IN ACCORDANCE WITH AS 1289.

**CONCRETE & REINFORCEMENT**

1. MATERIALS AND CONSTRUCTION TO AS 3600, AS 3610 STEEL REINFORCEMENT MATERIALS: TO AS 4671
2. PUMP STATION CONCRETE SHALL BE SPECIAL CLASS IN ACCORDANCE WITH WSA 114-2002: INDUSTRY STANDARD FOR CONCRETE SPECIAL CLASS.
3. CONCRETE QUALITY: TO AS 1379 READY MIX CONCRETE: TO AS 1379 - DO NOT USE ADMIXTURES WITHOUT WRITTEN APPROVAL FROM THE SUPERINTENDENT (SUPERVISING OFFICER).  
- CEMENT: TYPE 'GP' OR 'GB' TO AS 3972. MAXIMUM SIZE OF COARSE AGGREGATE: 20mm.
4. CONCRETE SHALL BE AS SHOWN IN THE FOLLOWING TABLE. WHERE IN CONFLICT WITH WSA 114-2002, THIS TABLE SHALL TAKE PRECEDENCE.

**CONCRETE & REINFORCEMENT (CONT.)**

ELEMENT	MIN CONTENT CEMENT	AGG SIZE mm	ADMIXTURE	SLUMP mm	MIN CONC. GRADE MPa	MAX WATER CEMENT RATIO
PUMP WELL, SLAB & VALVE PIT	360kg/m <sup>3</sup>	20	CONCRETE MIX TO BE SUBMITTED FOR APPROVAL	70	40	0.45
BENCHING, MASS CONC. & PLUG	300kg/m <sup>3</sup>	20		50	20	0.55
CONTROL BUILDING FOUNDATIONS	360kg/m <sup>3</sup>	20		80	32	0.45
CONTROL BUILDING SLAB	360kg/m <sup>3</sup>	20		80	32	0.45

5. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS PER THE FOLLOWING TABLE, UNLESS NOTED OTHERWISE (U.N.O.)

MIN CONC. GRADE MPa	32MPa	40MPa
PUMP WELL AND VALVE PIT SURFACES IN CONTACT WITH SEWAGE / SEWAGE GAS OR CAST AGAINST AGGRESSIVE SOILS (INCLUDING ACID SULFATE SOIL)	70mm	
VALVE PIT AND SLAB SURFACES WITHIN 1km OF THE COAST, NOT CAST AGAINST GROUND OR IN CONTACT WITH SEWAGE / SEWAGE GAS		65mm
VALVE PIT AND SLAB SURFACES NOT CAST AGAINST GROUND OR IN CONTACT WITH SEWAGE / SEWAGE GAS	40mm	30mm
SURFACE CAST AGAINST NON AGGRESSIVE SOILS	25mm	20mm

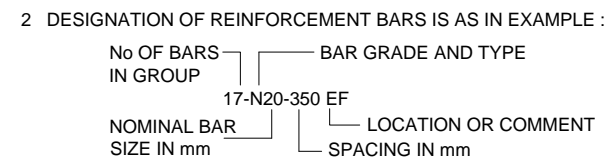
6. ALL PIPES THROUGH CONCRETE WALLS TO HAVE PUDDLE FLANGES CAST CENTRALLY IF THEY REQUIRE THRUSTING OR IF NOTED IN DESIGN. WHERE PENETRATIONS ARE CORED, INSIDE SURFACES ARE TO BE SCABBLED AND COATED WITH BOND CRETE OR A NEAT CEMENT SLURRY PRIOR TO GROUTING UP. CORE DIAMETER TO ALLOW 80mm TO FLANGE.
7. VERIFY STRENGTH BY PRODUCTION CONTROL TESTING TO AS 1379.
8. REINFORCEMENT SPLICE LOCATIONS: REFER DETAIL DRAWINGS. DO NOT VARY SPLICE LOCATIONS WITHOUT WRITTEN APPROVAL FROM THE SUPERINTENDENT (SUPERVISING OFFICER).
9. NO UNSPECIFIED HOLES, DUCTING OR CHASES ARE PERMITTED WITHOUT APPROVAL FROM THE SUPERINTENDENT (SUPERVISING OFFICER).
10. STRUCTURAL DIMENSIONS DO NOT INCLUDE TOPPING OR FINISHES.
11. FORM CONSTRUCTION JOINTS ONLY AT LOCATIONS SHOWN ON DRAWINGS. DO NOT VARY.
12. CHAMFERS OR FILLETS: 20mm TO EXPOSED FORMED EDGES U.N.O.
13. SUPPORT ALL REINFORCEMENT ON PLASTIC CHAIRS OR CONCRETE BLOCKS OF SUITABLE STRENGTH AT 800mm MAXIMUM SPACING.
14. LAP REINFORCING MESH 2 CROSS WIRES PLUS 25mm.
15. REINFORCEMENT SYMBOLS USED IN THESE DRAWINGS: ALL OTHER REINFORCEMENT DESIGNATIONS TO COMPLY WITH AS 4671.

SYMBOLS USED	AS 4671 DESIGNATION	LEGEND
BARS a-Nb-c a-Rb-c	a-D500Nb-c a-R250Nb-c	a - NUMBER OF BARS IN THE GROUP (OPTIONAL). b - NOMINAL BAR DIAMETER (mm). c - MAXIMUM CENTRE TO CENTRE BAR SPACING (OPTIONAL).
MESH SLde RLfgh	D500SLde D500RLfgh	d - NOMINAL BAR DIAMETER FOR SQUARE MESH (mm). e - SQUARE MESH STEEL SPACING divided by 100 (mm). f - NOMINAL BAR DIAMETER FOR LONGITUDINAL STEEL (mm). g - LONGITUDINAL STEEL SPACING DIVIDED BY 100 (mm). h - NOMINAL BAR DIAMETER FOR TRANSVERSE STEEL (mm).
EXAMPLE: THE SYMBOL 10-N16-200 DENOTES 10 BARS WITH 16mm NOMINAL DIAMETER PLACED AT 200mm MAXIMUM CENTRE TO CENTRE SPACING.		

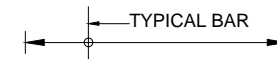
16. PREPARE COLD JOINTS BY LIGHT SCABBING, REMOVAL OF DEBRIS AND WASHING WITH CLEAN WATER.
17. DO NOT PLACE CONCRETE UNTIL REINFORCEMENT AND FORMWORK ARE INSPECTED BY THE SUPERINTENDENT (SUPERVISING OFFICER).
18. THOROUGHLY CLEAN OUT ALL FORMWORK PRIOR TO POURING.
19. VIBRATE CONCRETE DURING PLACEMENT TO GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION.
20. SURFACE FINISH: LIGHT BROOM SLAB SURFACE PERPENDICULAR TO TRAFFIC DIRECTION TO PRODUCE AN EVEN NON-SLIP FINISH.
21. COMMENCE CURING OF ALL CONCRETE SURFACES IMMEDIATELY ON FINISHING AND CONTINUE FOR 7 DAYS MINIMUM. WET CURE UNDER SEALED PLASTIC SHEETS.
22. FORMWORK TO WALLS AND SUSPENDED SLABS MUST REMAIN IN POSITION IN ACCORDANCE WITH A.S.3600.

**REINFORCEMENT**

1. SYMBOLS ON DRAWINGS FOR GRADE AND TYPE OF REINFORCEMENT ARE AS FOLLOWS :
  - R - DENOTES STRUCTURAL GRADE 230 PLAIN ROUND BAR TO AS/NZS 4671
  - N - DENOTES NORMAL DUCTILITY BAR TO AS/NZS 4671
  - L - DENOTES LOW DUCTILITY BAR TO AS/NZS 4671
  - SL - DENOTES HARD DRAWN WIRE REINFORCING FABRIC TO AS/NZS 4671



3. THE FOLLOWING ABBREVIATIONS APPLY TO THE LOCATION OF REINFORCEMENT :
  - EW EACH WAY    FF FAR FACE    CP CENTRALLY PLACED
  - EF EACH FACE    B BOTTOM    B/U BOTTOM UNDER (LAID FIRST)
  - NF NEAR FACE    T TOP    T/O TOP OVER (LAID LAST)
4. COGS AND HOOKS TO BE STANDARD IN ACCORDANCE WITH AS 3600.
5. EXTENT OF BARS SHOWN THUS :



6. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND IS NOT NECESSARILY IN TRUE PROJECTION.
7. MAINTAIN NOMINAL CLEAR CONCRETE COVER TO REINFORCEMENT (INCLUDING FITMENTS ) BY APPROVED CHAIRS, SPACERS, OR TIES AS REQUIRED TO PROVIDE ADEQUATE SUPPORT. FOR SLABS, SUPPORTS SHALL BE SPACED AT 600 MAXIMUM CROSS CENTRES FOR FABRIC AND BARS.
8. SPLICE REINFORCEMENT ONLY AT LOCATIONS SHOWN ON DRAWINGS, OR AS APPROVED BY SUPERINTENDENT. LAP LENGTH BARS SHALL BE AS BELOW:

(a) HORIZONTAL BARS WITH 300 OR MORE CONCRETE CAST BELOW.

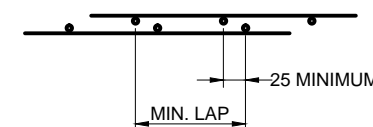
BAR	LAP
N12	375
N16	500
N20	750
N24	1100
N28	1375

(b) ALL OTHER BARS

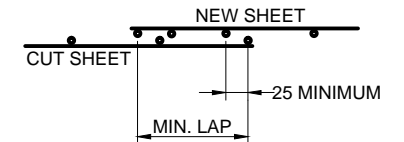
BAR	LAP
N12	300
N16	400
N20	600
N24	850
N28	1100

9. FABRIC SPLICES SHALL BE MADE BY EITHER OF THE TWO FOLLOWING METHODS :

(a) LAPPING OF FABRIC - 2 x CUT SHEETS



(b) LAPPING OF FABRIC - 1 x CUT SHEET & 1 x NEW SHEET



10. WELDING OF REINFORCEMENT IS ONLY PERMITTED WHERE SHOWN ON THE DRAWINGS OR OTHERWISE APPROVED BY THE SUPERINTENDENT.
11. DOWELS SHALL BE SAWN TO LENGTH. IN SKEWED JOINTS DOWELS SHALL BE ALIGNED WITH THE LONGITUDINAL JOINTS. DOWEL ALIGNMENT TO BE MAINTAINED BY USE OF A SUPPORT ASSEMBLY SUITABLE TO ENSURE A HORIZONTAL AND VERTICAL ALIGNMENT TOLERANCE OF 5 IN 400.

**STRUCTURAL STEEL**

1. ALL WORKMANSHIP AND MATERIALS SHALL BE GRADE 300 STEEL IN ACCORDANCE WITH AS 4100 AND AS 1554 EXCEPT WHERE VARIED BY THE SPECIFICATION.
2. ALL STEEL SHALL BE IN ACCORDANCE WITH AS 3678, AS 3679 OR AS 1163 FOR GRADE 350 TUBING.
3. COLD FORMED STRUCTURES IN ACCORDANCE WITH AS 1538. HOT DIP GALVANIZED Z350 G450 YIELD STRESS MINIMUM.
4. MINIMUM PLATE THICKNESS TO BE 10mm UNO. PROVIDE ALL CLEATS AND DRILL HOLES FOR FIXINGS, WHETHER OR NOT DETAILED ON THE DRAWINGS, TO THE APPROVAL OF THE COUNCIL ENGINEER.
5. ALL WELDS TO BE IN ACCORDANCE WITH AS 1554 :
  - ALL WELDS TO BE CATEGORY SP U.N.O.
  - ALL BUTT WELDS TO BE FULL PENETRATION U.N.O.
  - ALL FILLET WELDS TO BE 6 CONTINUOUS ELECTRODES TO BE CLASSIFICATION E41XX
  - EXTENT OF WELDS INSPECTION :  
VISUAL 100%    NON-DESTRUCTIVE 0%
6. REFER TO AISC 'STANDARDISED STRUCTURAL CONNECTIONS' FOR DESIGNATION AND DETAILS OF CONNECTIONS.

BOLT TYPE AND TIGHTENING PROCEDURE ARE DESIGNATED :  
NUMBER, SIZE - STRENGTH GRADE / TIGHTENING PROCEDURE  
STRENGTH GRADE 4.6 TO BE COMMERCIAL BOLTS TO AS 1111  
STRENGTH GRADE 8.8 TO BE HIGH STRENGTH STRUCTURAL BOLTS, NUTS AND WASHERS TO AS 1252.

TIGHTENING PROCEDURES :

- S - 'SNUG TIGHT'
- TB - BEARING MODE JOINT, BOLTS FULLY TENSIONED IN ACCORDANCE WITH AS 1511
- TF - FRICTION MODE JOINT, BOLTS FULLY TENSIONED IN ACCORDANCE WITH AS 1511
- E.G. 4M24 - 8.8 / TB = 4 x 24 DIAMETER METRIC HIGH STRENGTH STRUCTURAL BOLTS FULLY TENSIONED IN A BEARING MODE.

7. ALL BOLTS TO BE M20 - 4.6 / S. U.N.O. ALL BOLTS, NUTS AND WASHERS TO BE HOT DIP GALVANIZED TO AS1214. UNLESS OTHERWISE SPECIFIED.
8. CONTACT SURFACES FOR BOLTED CONNECTIONS USING 8.8 / TF PROCEDURE NOT TO BE PAINTED AND TO BE PREPARED AS SPECIFIED.
9. THE CONTRACTOR SHALL PREPARE WORKSHOP DRAWINGS AND SUBMIT THREE COPIES OF EACH FOR SUPERINTENDENT'S REVIEW OF GENERAL COMPLIANCE WITH THE DESIGN CONCEPT. FABRICATION SHALL NOT COMMENCE UNTIL THE SHOP DRAWINGS HAVE BEEN REVIEWED.
10. SURFACE TREATMENT OF STEELWORK: HOT DIPPED GALVANIZED TO AS1650 AFTER FABRICATION.
11. HOLES SHALL NOT BE MADE THROUGH THE BOTTOM FLANGE OF ROLLED STEEL PURLINS FOR THE SUPPORT OF HOOK BOLTS OR CEILING SUSPENSION SYSTEMS. ALL NECESSARY HOLES SHALL BE MADE THROUGH THE CENTRAL THIRD OF THE WEB.

ISSUE	AMENDMENT DETAILS	INITIALS	DATE
D	NOTES AMENDED	G.P.C.	07.2015
C	TEXT AMENDED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
A	ORIGINAL ISSUE	G.P.C.	02.2010



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DESIGN MANAGER	<i>[Signature]</i> DATE 15.06.15
DRAWN	ENGINEERING & OPERATIONS DESIGN UNIT
SCALE	AS SHOWN

PROJECT:	<b>SEWERAGE WORKS STANDARDS</b>	DRAWING NUMBER:	<b>S.D. 273-02</b>
PLAN TITLE:	<b>CONTROL BUILDING - BLOCK CONSTRUCTION NOTES (SHEET 1 OF 2 SHEETS)</b>		<b>JULY 2015</b>

ACAD FILE No: G:\\_AAA TSC STANDARD DRAWINGS\200 SEWERAGE STANDARDS\S.D.273 (July-15 Rev D).dwg

## SITE WORKS / EARTHWORKS

- 1 ALL SOILS CONTAINING ORGANIC MATTER (EG. ROOTS, GRASS, ETC.) MUST BE STRIPPED FROM THE BUILDING SITE PRIOR TO SLAB CONSTRUCTION AND MUST NOT BE USED AS FILL MATERIAL.
- 2 CUT SLOPES MUST BE LIMITED TO 1½: 1 (HORIZONTAL : VERTICAL). THE SLOPE SHOULD THEN BE GRASSED OR PAVED TO PREVENT SCOUR AND EROSION DAMAGE.
- 3 THE FILL PLATFORM SHOULD EXTEND AT LEAST 1.0m BEYOND THE BUILDING. REFER TO DESIGN ENGINEER FOR POSSIBLE PIERING OF ADJACENT PERIMETER FOOTINGS.
- 4 FILL BATTERS AT 2 : 1 (HORIZONTAL : VERTICAL) SLOPE, OR LESS, MUST BE FORMED TO THE NATURAL GROUND, AND ANTI-SCOUR AND EROSION MEASURES TAKEN. A SLOPE STEEPER THAN 2 : 1 WILL REQUIRE RETAINING.
- 5 ALL OVERSIZED MATERIAL, WHICH MAY IMPEDE COMPACTION, MUST BE REMOVED FROM THE BUILDING PLATFORM.
- 6 FILL IS TO BE UNIFORMLY COMPACTED IN UP TO 200mm HORIZONTAL LAYERS AND MUST ACHIEVE A MINIMUM STANDARD OF COMPACTION OF GREATER THAN 95% STANDARD COMPACTION TO AS 1289 FOR COHESIVE SOILS, OR A DENSITY INDEX GREATER THAN 65% FOR COHESIONLESS SOILS. LAYER THICKNESSES GREATER THAN 200mm WILL ONLY BE ALLOWED IF PERMITTED BY THE SUPERINTENDENT. BENCHING OF THE NATURAL GROUND WILL BE REQUIRED ON SLOPING GROUND PRIOR TO COMMENCEMENT OF FILL OPERATIONS.
- 7 CLAYS OF HIGH PLASTICITY OR HIGH IN-SITU MOISTURE CONTENT ARE NOT TO BE USED AS FILL.
- 8 AN IMPORTED GRANULAR FILL WITH A PLASTICITY INDEX PREFERABLY LESS THAN 15%, WITH NO EXCESSIVE OVERSIZED MATERIAL MAY BE USED.
- 9 FIELD DENSITY TESTS, OR EQUIVALENT, SHOULD BE CARRIED OUT TO VERIFY THAT THE STANDARD OF COMPACTION IS ACHIEVED.

## DRAINAGE

- 1 THE TOP SURFACE OF THE FLOOR SLAB SHALL BE AT A HEIGHT OF AT LEAST 300mm ABOVE THE 1 IN 100 YEAR FLOOD LEVEL AND 150mm ABOVE FINAL GROUND LEVEL.
- 2 SITE DRAINAGE IS TO BE MAINTAINED AT ALL TIMES, BOTH DURING AND AFTER CONSTRUCTION. AT NO TIME DURING CONSTRUCTION, OR SUBSEQUENTLY, SHOULD THE WATER BE ALLOWED TO POND ON OR NEAR THE FOOTINGS.
- 3 TO ENSURE ADEQUATE DRAINAGE FOR THE FOUNDATIONS, ON SLOPING SITES, DRAINS SHOULD BE PROVIDED AT THE BOTTOM OF EMBANKMENTS CLEAR OF THE FOUNDATION. IF THE SURFACE FLOW IS LIKELY TO BE LARGE, DRAINS SHOULD ALSO BE PROVIDED AT THE TOP OF ANY CUTTING TO AVOID SCOURING OF THE FACE.
- 4 SURFACE RUNOFF SHOULD BE COLLECTED AND DRAINED AWAY FROM THE BUILDING. DOWNPIPES FROM ROOFS SHOULD NOT BE ALLOWED TO DISCHARGE ON THE GROUND SURFACE NEAR THE BUILDING, EVEN FOR SHORT PERIODS. DURING CONSTRUCTION THE GROUND SURFACE ALL AROUND THE BUILDING SHOULD BE SLOPED AWAY FROM THE BUILDING AT A MINIMUM SLOPE OF 1 IN 20, FOR A MINIMUM DISTANCE OF 900mm, AND TO THE POINT WHERE PONDING WILL NOT OCCUR NEAR THE BUILDING.
- 5 SERVICES RUNNING PARALLEL TO THE FOOTINGS SHOULD NOT BE LOCATED CLOSER THAN 1.0m TO THE FOOTINGS.
- 6 ENSURE THAT TREES, EXISTING OR FUTURE, ARE NOT LOCATED CLOSER THAN 0.8m x THE MATURE HEIGHT OF THE TREE TO THE BUILDING, OR AS OTHERWISE DIRECTED.

## COLOUR SCHEME

- 1 REFER TO SPECIFICATIONS FOR COLOUR SCHEME INFORMATION.

## ACCESS OPENINGS

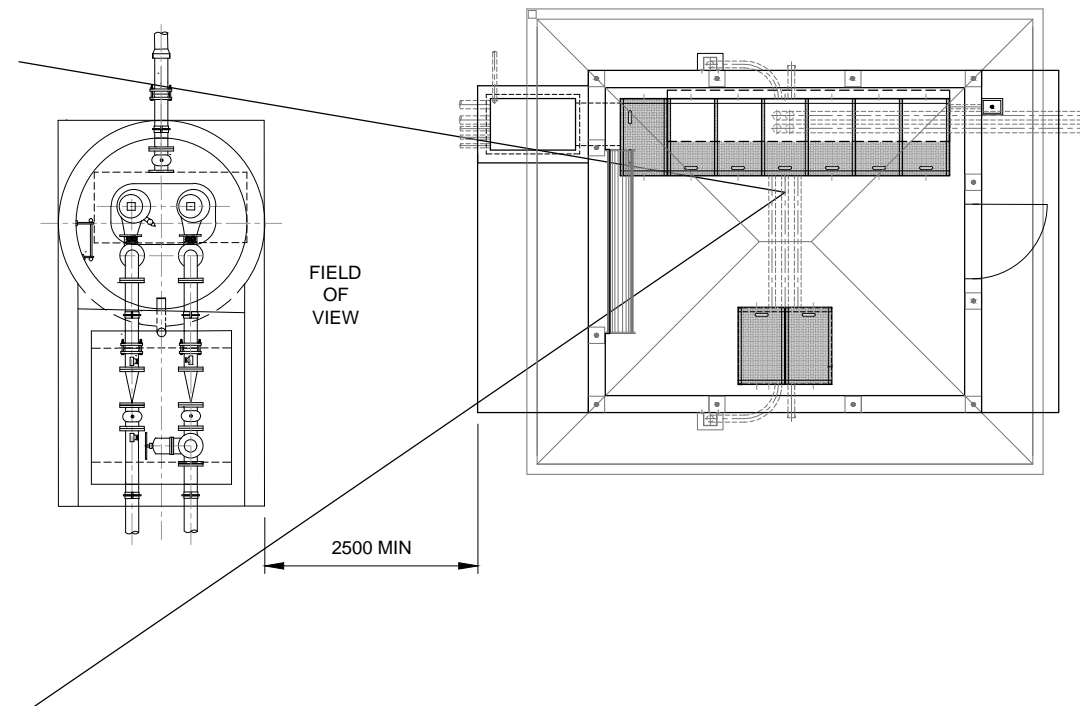
- 1 ACCESS COVERS SHALL BE 'HAVESTOCK' LITE LIFT GAS TIGHT COVERS.
- 2 ALL ACCESS COVERS SHALL BE CAST INTEGRAL WITH CONCRETE SLABS (NOT GROUTED INTO PRE FORMED RECESSES) AND FINISHED FLUSH WITH CONCRETE SURFACES.

## WATER SUPPLY

- 1 A METERED WATER SUPPLY COMPLETE WITH RPZ IS TO BE PROVIDED (REFER SPECIFICATIONS).
- 2 IF NECESSARY, PROVIDE A 50Ø CONDUIT TO ALLOW INSTALLATION OF THE WATER SERVICE BELOW ACCESS ROADS.

## GENERAL ARRANGEMENT

- 1 REFER TO DIAGRAM BELOW FOR AN INDICATION OF THE 'IDEAL' LOCATION OF THE CONTROL BUILDING IN RELATION TO THE PUMP WELL. THIS ARRANGEMENT ALLOWS THE OPERATOR TO STAND AT THE CONTROL CABINET AND SEE BOTH THE WELL LID AND THE VALVE PIT LID WITH THE ROLLER DOOR OPEN (VIEW OF WELL TO TAKE PRECEDENCE). THE SELECTED ARRANGMENT WILL BE SUBJECT TO SITE CONSTRAINTS AND COUNCIL APPROVAL.



D	NOTES AMENDED	G.P.C.	07.2015
C	TEXT AMENDED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
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DESIGN MANAGER	<i>[Signature]</i> DATE 15.06.15
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SCALE	AS SHOWN

PROJECT:

**SEWERAGE WORKS STANDARDS**

DRAWING NUMBER:

**S.D. 273-03**

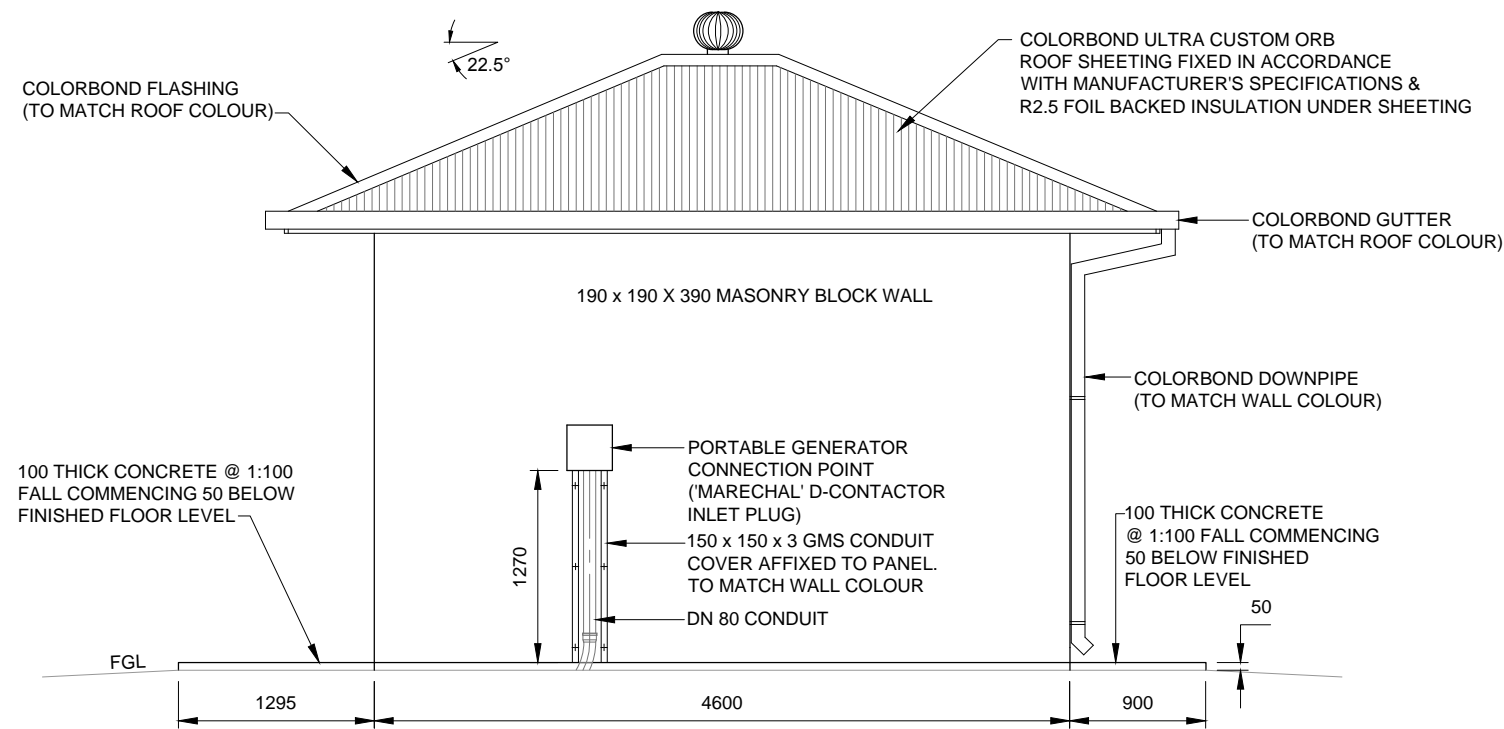
PLAN TITLE:

**CONTROL BUILDING - BLOCK CONSTRUCTION  
NOTES (SHEET 2 OF 2 SHEETS)**

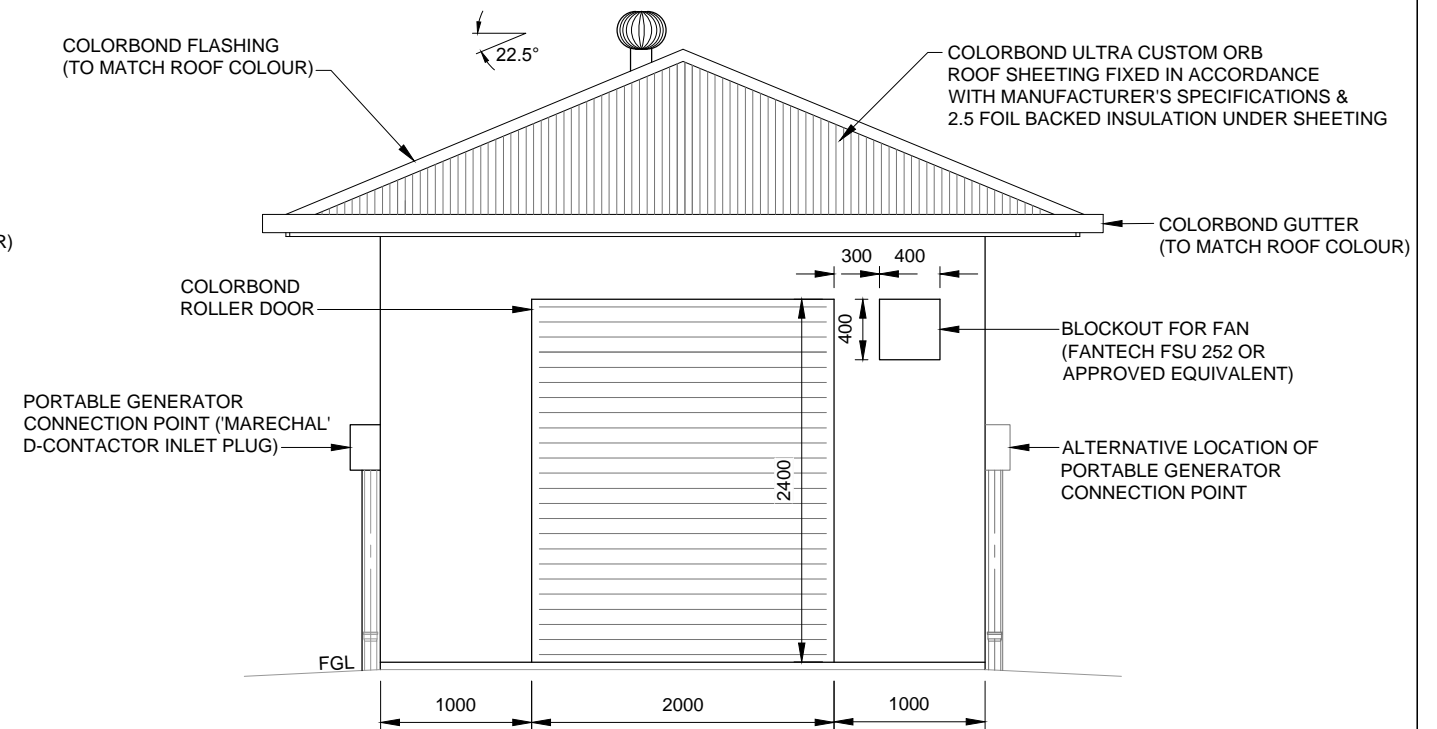
**JULY 2015**

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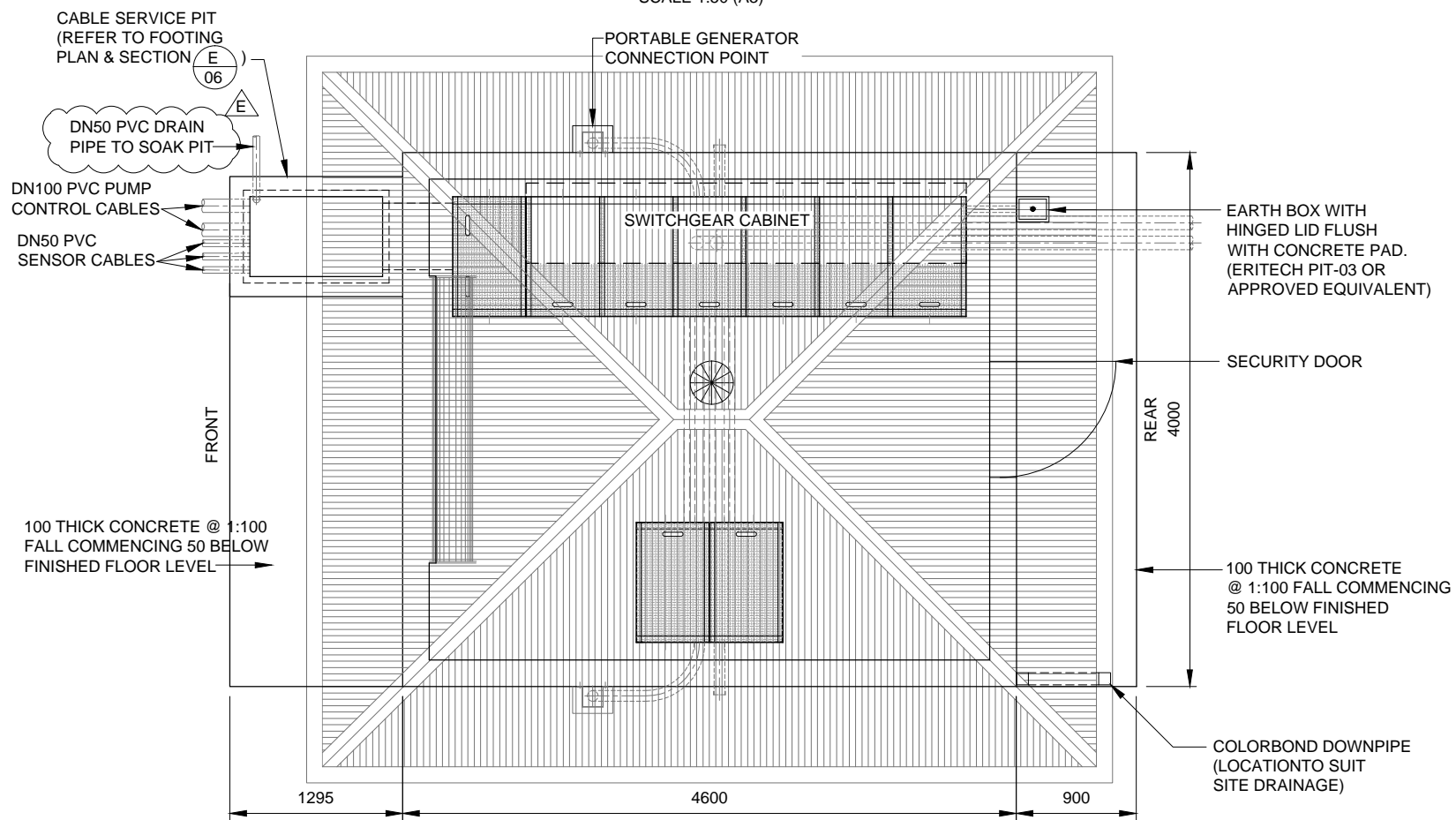
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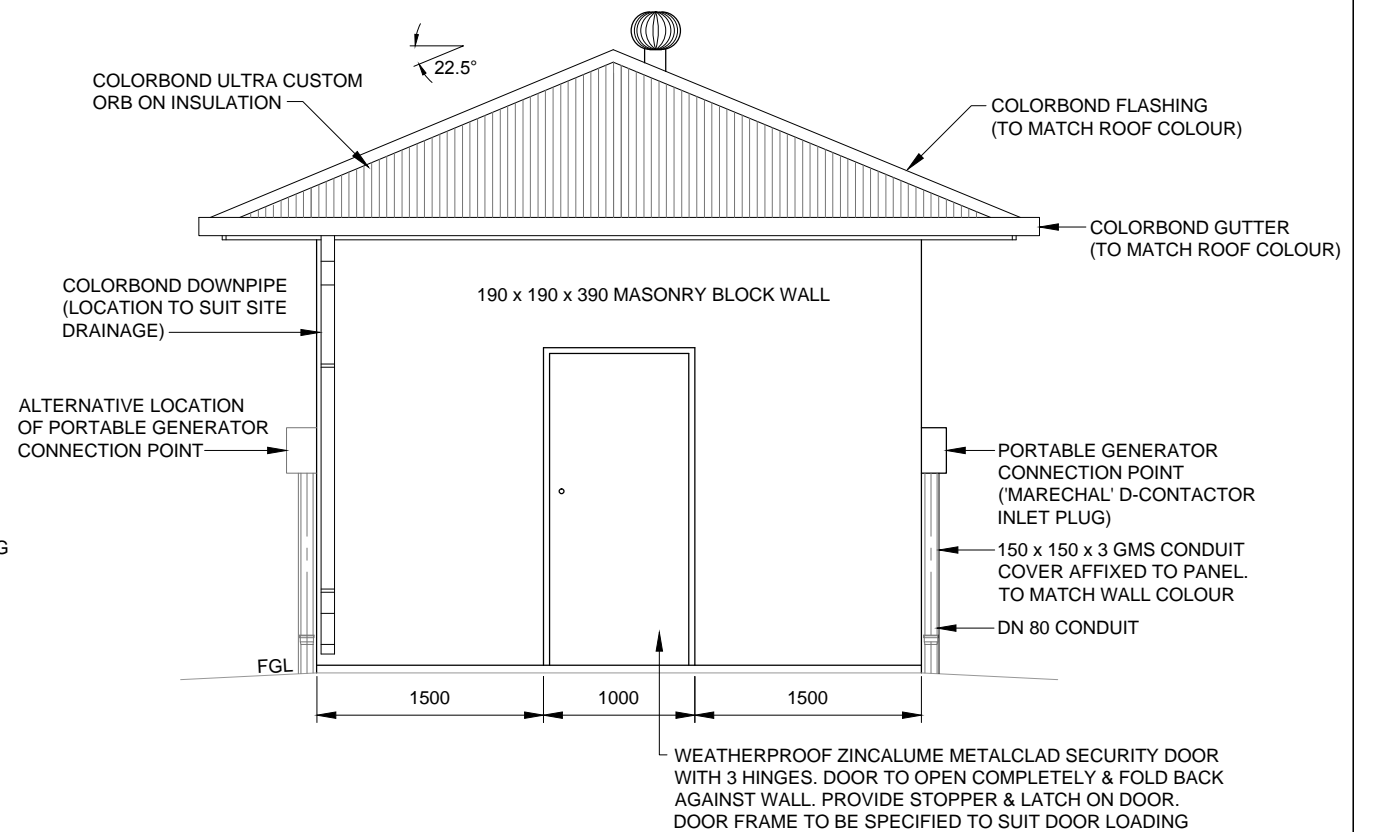
**SIDE ELEVATION**  
SCALE 1:50 (A3)



**FRONT ELEVATION**  
SCALE 1:50 (A3)



**OVERALL PLAN**  
SCALE 1: 50 (A3)



**REAR ELEVATION**  
SCALE 1:50 (A3)

ISSUE	AMENDMENT DETAILS	INITIALS	DATE
E	AMENDED TEXT	A.R.	09.2015
D	GENERATOR CONNECTION POINT ADDED	G.P.C.	07.2015
C	TEXT AMENDED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
A	ORIGINAL ISSUE	G.P.C.	02.2010

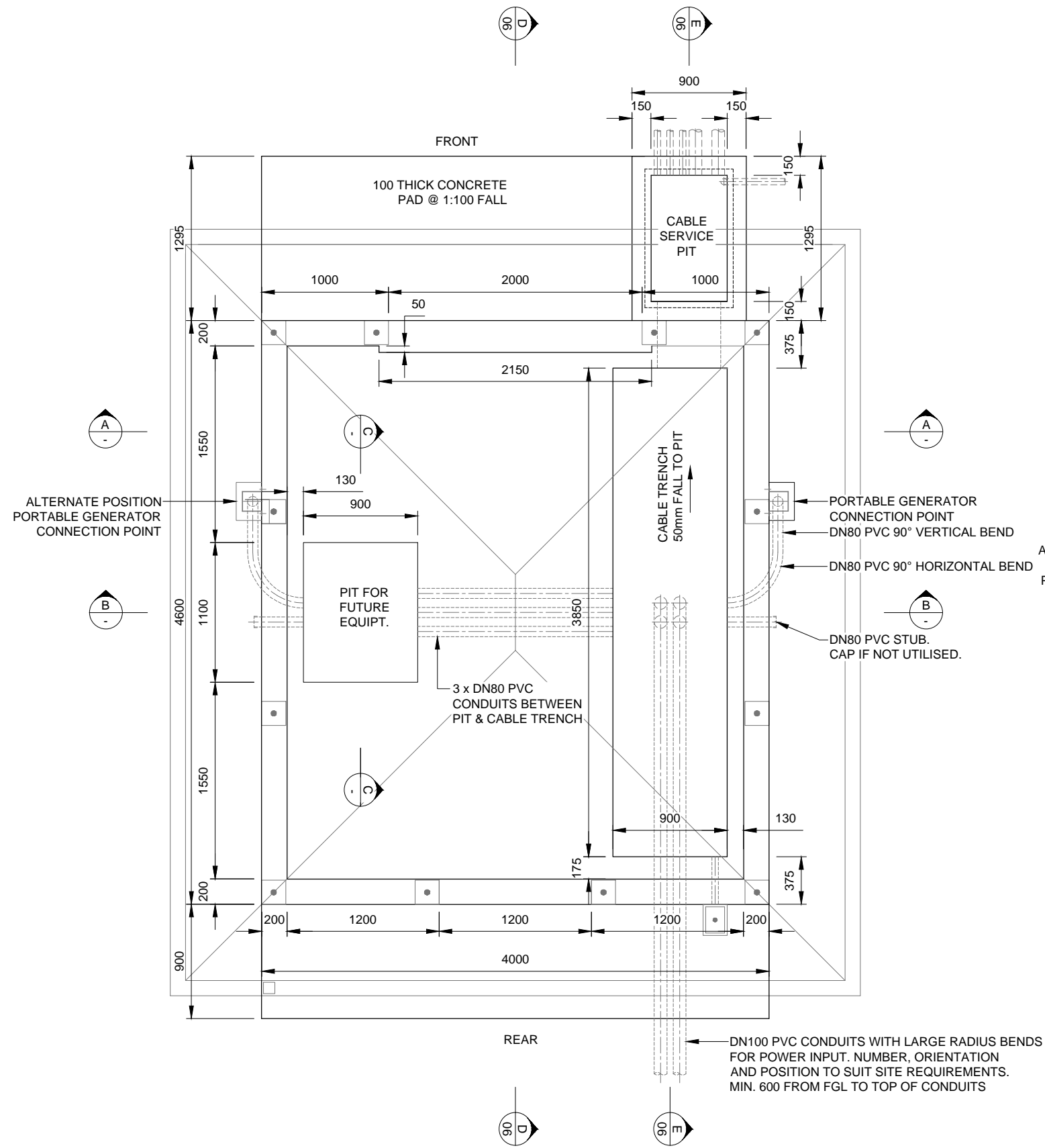


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SCALE	AS SHOWN

PROJECT:	<b>SEWERAGE WORKS STANDARDS</b>	DRAWING NUMBER:	<b>S.D. 273-04</b>
PLAN TITLE:	<b>CONTROL BUILDING - BLOCK CONSTRUCTION PLAN AND ELEVATIONS</b>		<b>SEP 2015</b>

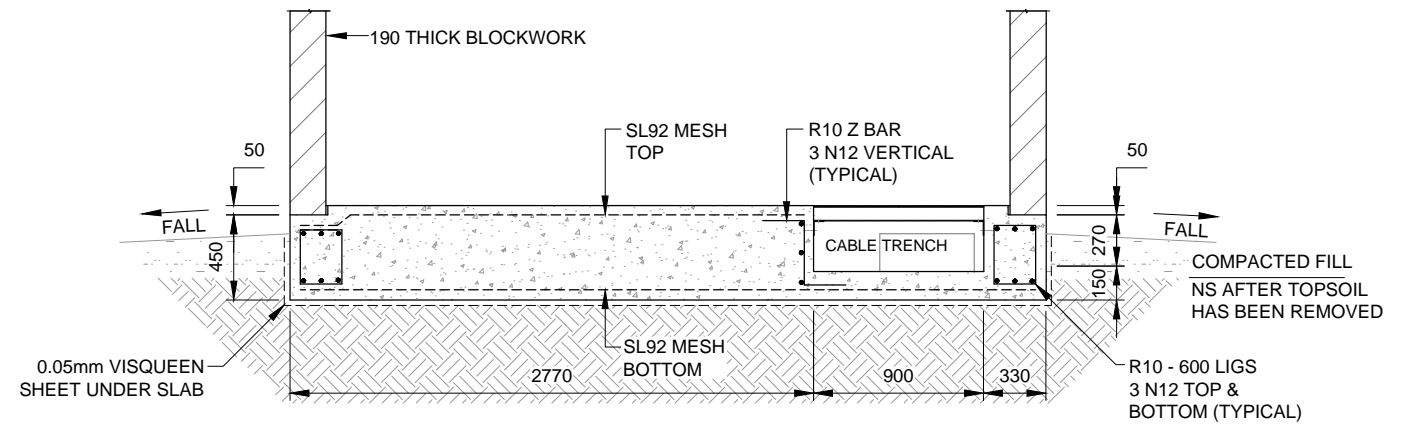




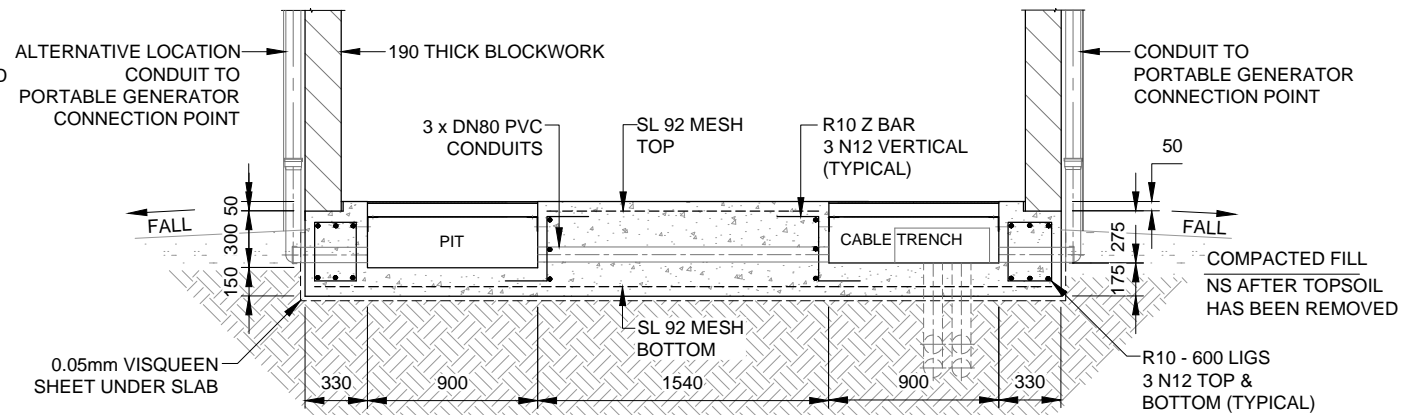
■ DENOTES 1 x N12 BAR IN GROUTED CORE.  
 CORE FILL ALL CORNER BLOCKS AND  
 EDGES OF DOORWAYS. FOR WALLS  
 MAXIMUM SPACING BETWEEN VERTICAL  
 CORE FILLED BLOCKS TO BE 2.0m

**FOOTING SLAB PLAN**  
SCALE 1:40 (A3)

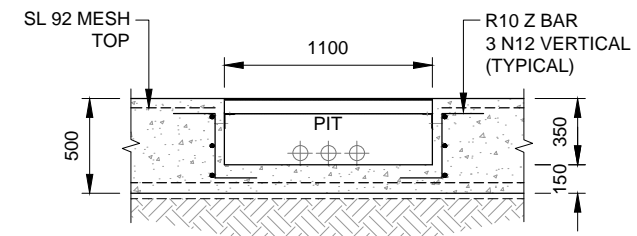
**NOTE:**  
 CABLE SERVICE PIT, EARTH PIT  
 AND CONDUIT LOCATION AND  
 ORIENTATION DEPENDENT UPON  
 SITE REQUIREMENTS



**SECTION A**  
SCALE 1:40 (A3)



**SECTION B**  
SCALE 1:40 (A3)



**SECTION C**  
SCALE 1:40 (A3)

ISSUE	AMENDMENT DETAILS	INITIALS	DATE
D	GENERATOR CONNECTION POINT ADDED	G.P.C.	07.2015
C	FOOTINGS AMENDED, TEXT AMENDED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
A	ORIGINAL ISSUE	G.P.C.	02.2010



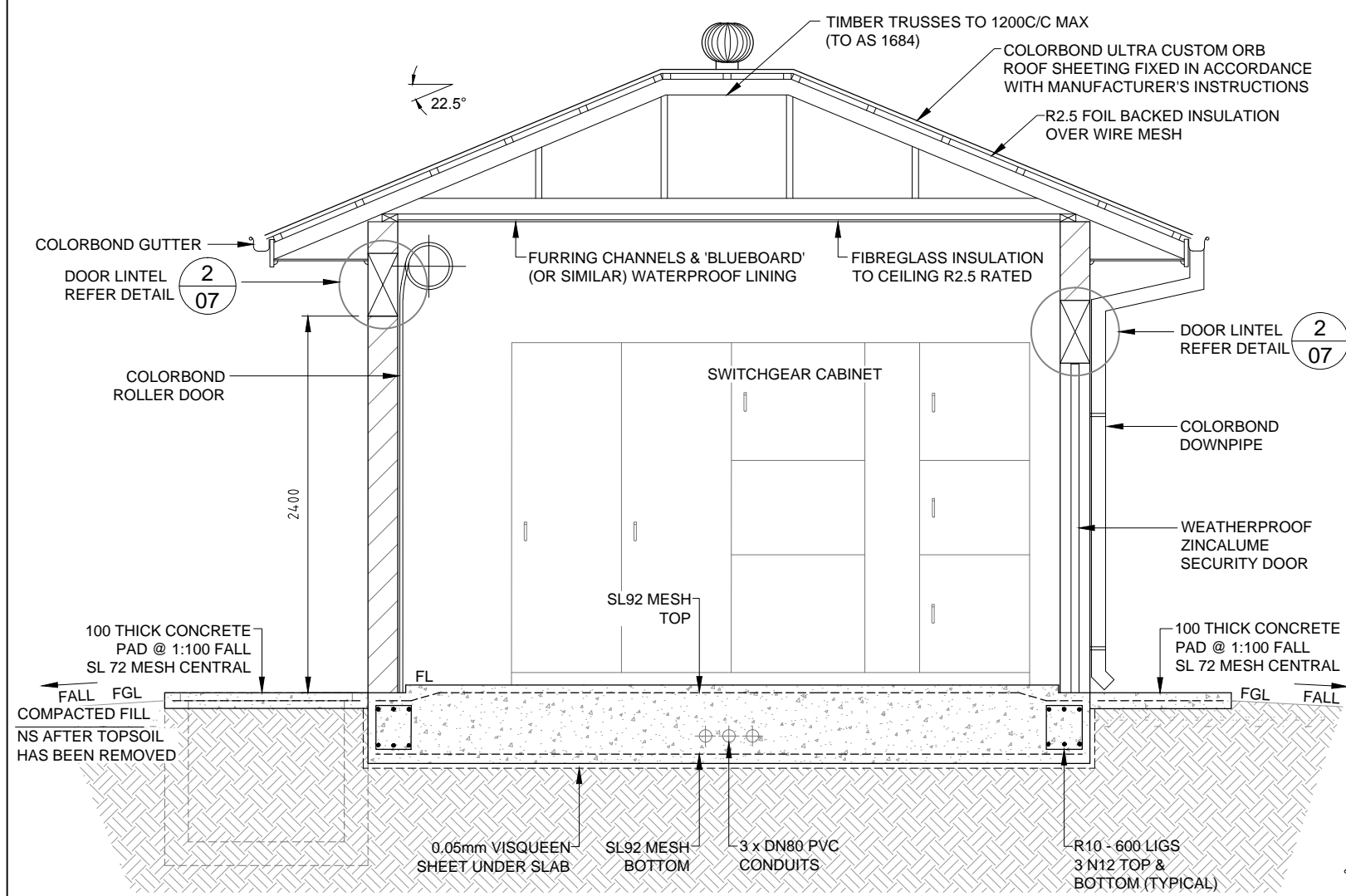
**DESIGN UNIT**  
 COUNCIL OFFICES  
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DESIGN ENGINEER	..... DATE 04.06.15
DESIGN MANAGER	..... DATE 15.06.15
DRAWN	ENGINEERING & OPERATIONS DESIGN UNIT
SCALE	1:40 (A3)

PROJECT:	<b>SEWERAGE WORKS STANDARDS</b>	DRAWING NUMBER:	<b>S.D. 273-05</b>
PLAN TITLE:	<b>CONTROL BUILDING - BLOCK CONSTRUCTION FOOTING DETAILS (SHEET 1 OF 2 SHEETS)</b>		<b>JULY 2015</b>

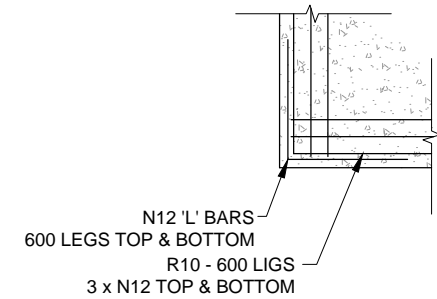
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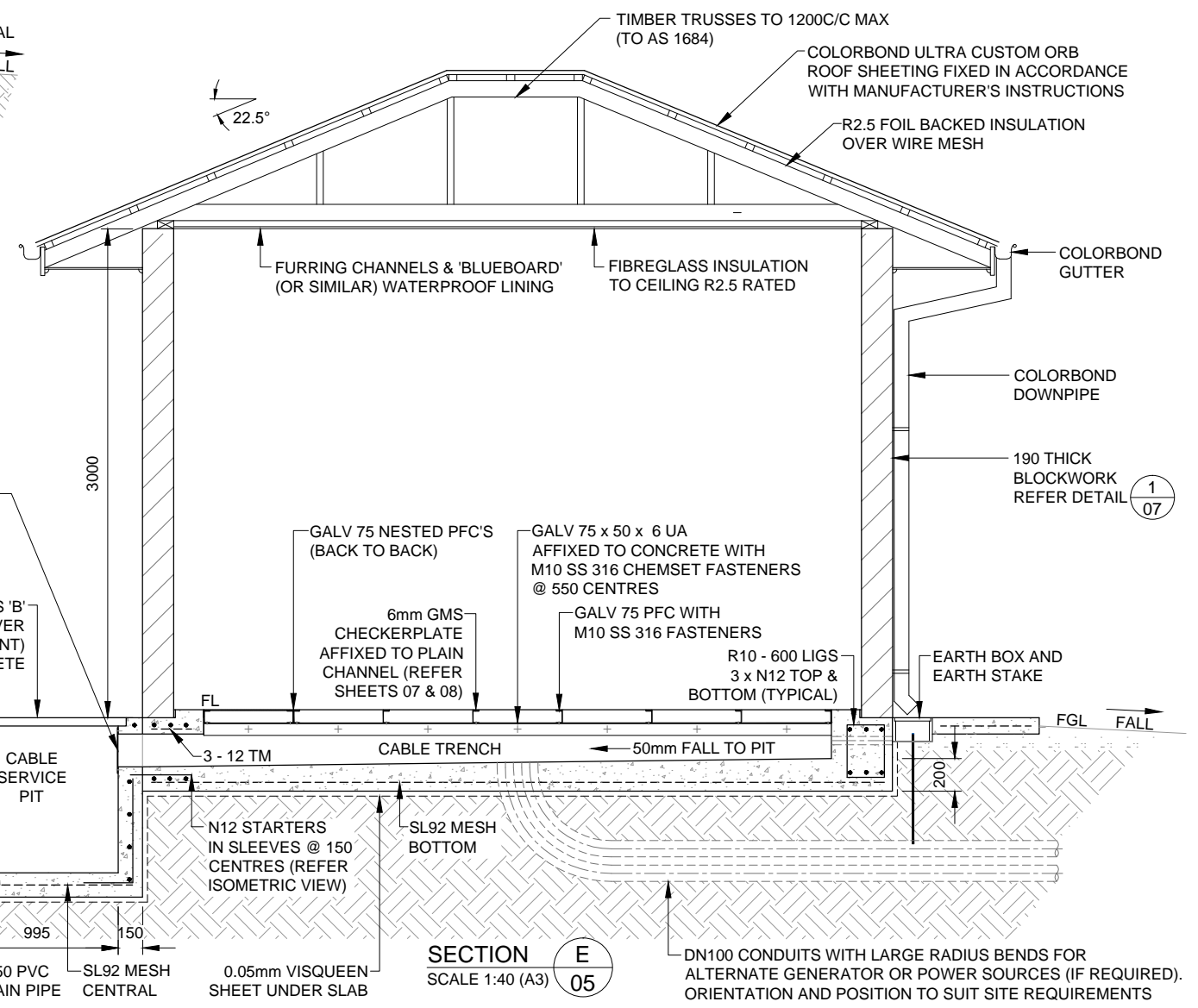


SECTION D  
SCALE 1:40 (A3)  
05

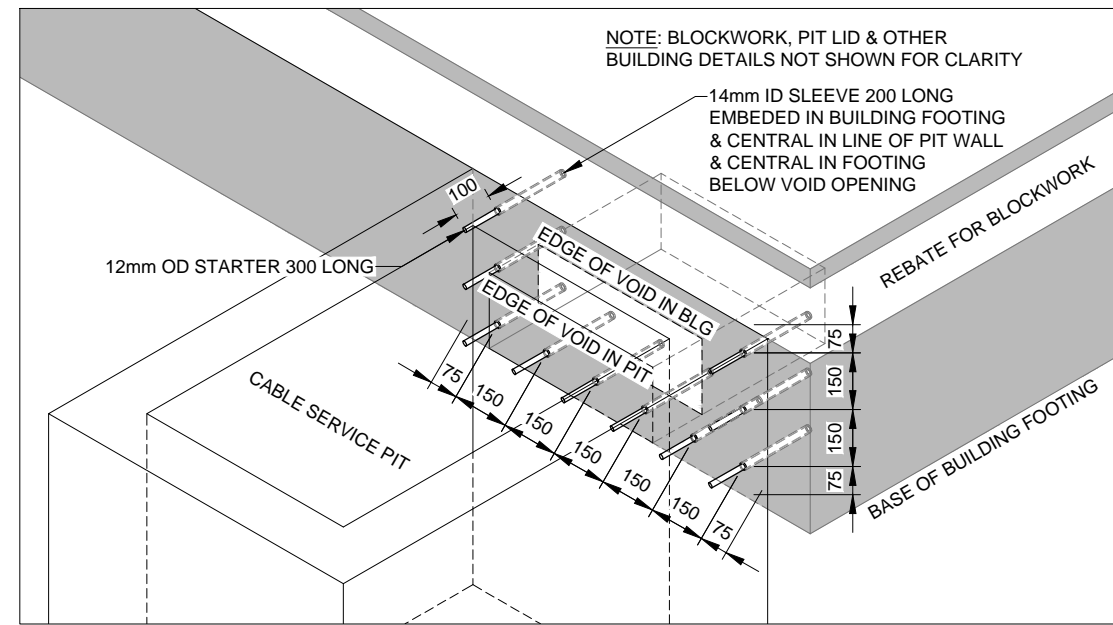
NOTE: THE SIZE OF THE CABLE SERVICE PIT, GLAND PLATE & CABLE TRENCH TO BE EVALUATED FOR SUITABILITY IF USING PUMPS LARGER THAN 80KW OR IF MORE THAN TWO PUMPS ARE USED. IF UNSUITABLE THEN RE-DESIGN OF THESE FEATURES WILL BE REQUIRED.



REINFORCING DETAIL  
PLAN OF STRIP FOOTING  
CORNER  
SCALE 1:40 (A3)



SECTION E  
SCALE 1:40 (A3)  
05



ISOMETRIC VIEW - CABLE SERVICE PIT  
STARTER BAR LAYOUT  
SCALE 20 (A3)

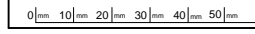
ISSUE	AMENDMENT DETAILS	INITIALS	DATE
D	GENERATOR CONNECTION POINT ADDED	G.P.C.	07.2015
C	FOOTINGS AMENDED, TEXT AMENDED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
A	ORIGINAL ISSUE	G.P.C.	02.2010



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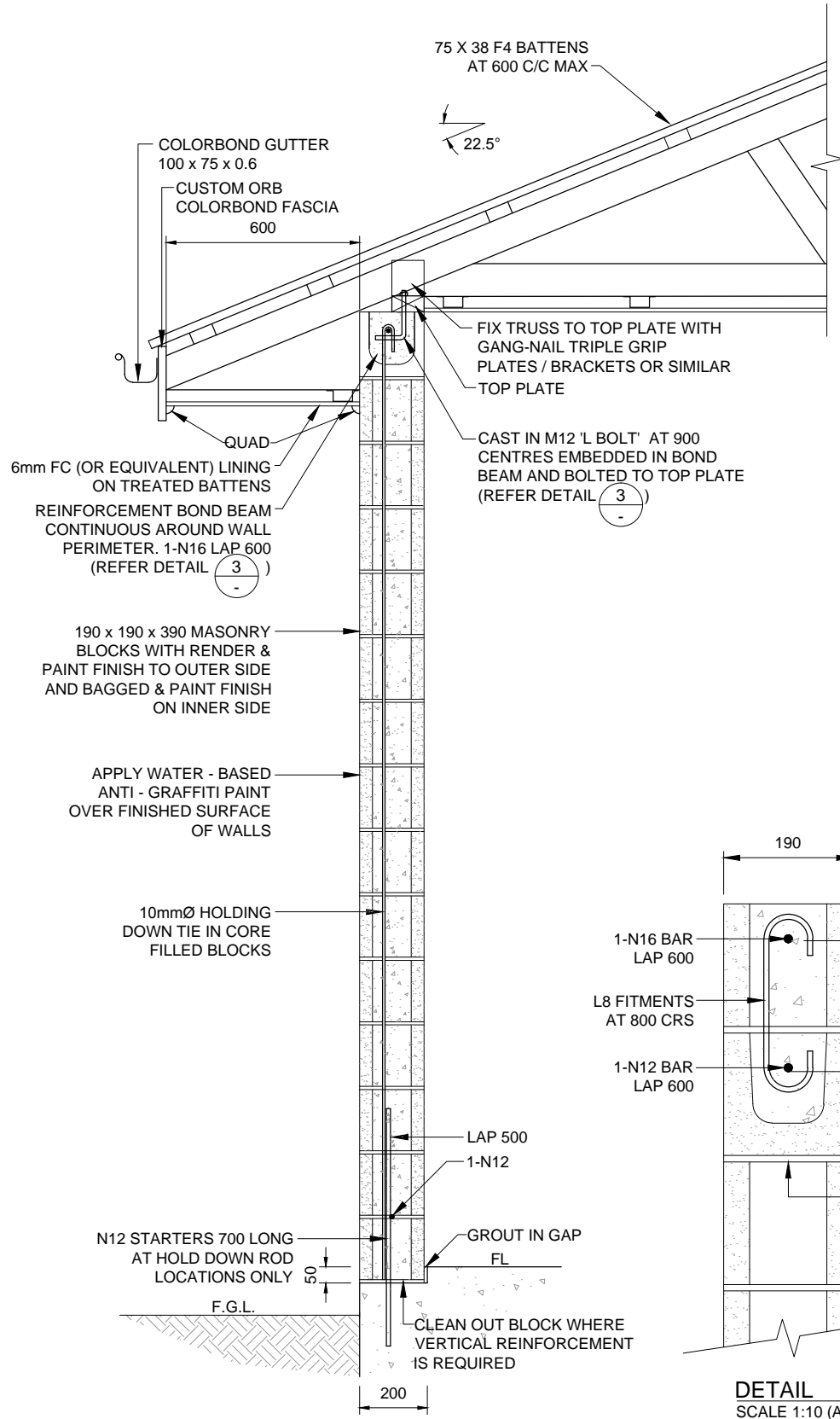
DESIGN ENGINEER	DATE 04.06.15
DESIGN MANAGER	DATE 15.06.15
DRAWN	ENGINEERING & OPERATIONS DESIGN UNIT
SCALE	AS SHOWN

PROJECT:	SEWERAGE WORKS STANDARDS	DRAWING NUMBER:	S.D. 273-06
PLAN TITLE:	CONTROL BUILDING - BLOCK CONSTRUCTION FOOTING DETAILS (SHEET 2 OF 2 SHEETS)		JULY 2015

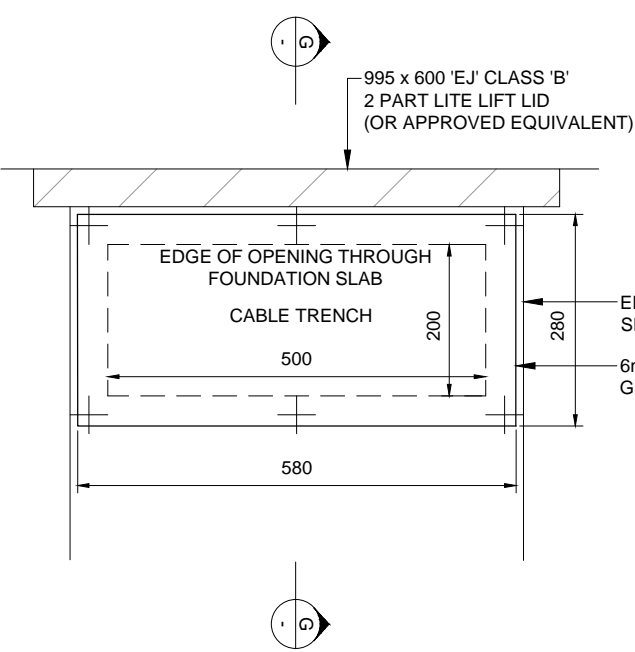


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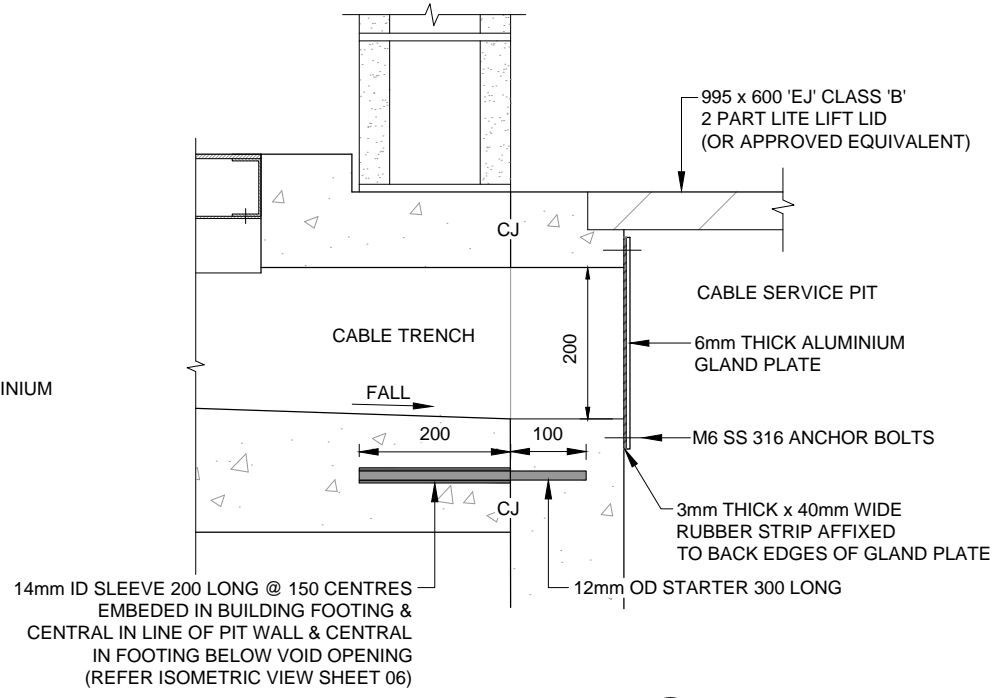
NOTE: THE SIZE OF THE CABLE SERVICE PIT, GLAND PLATE & CABLE TRENCH TO BE EVALUATED FOR SUITABILITY IF USING PUMPS LARGER THAN 80KW OR IF MORE THAN TWO PUMPS ARE USED. IF UNSUITABLE THEN RE-DESIGN OF THESE FEATURES WILL BE REQUIRED.



DETAIL 1  
 SCALE 1:20 (A3)  
 REINFORCED WALL

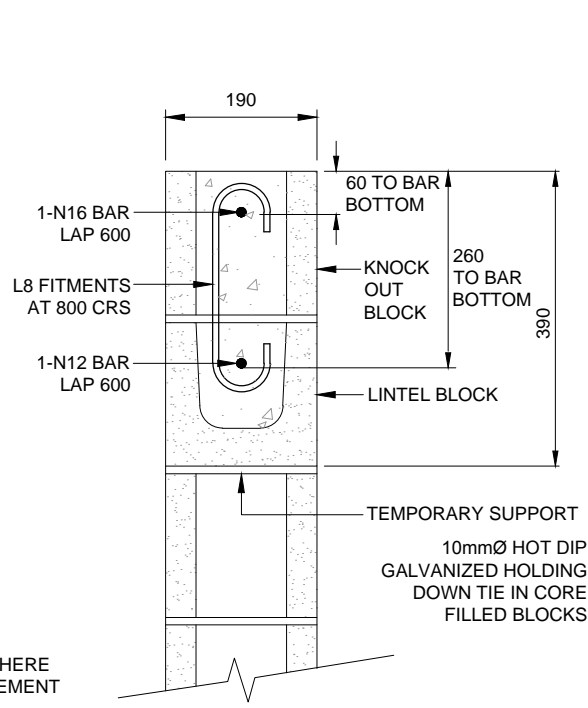


ELEVATION  
 SCALE 1:10 (A3)

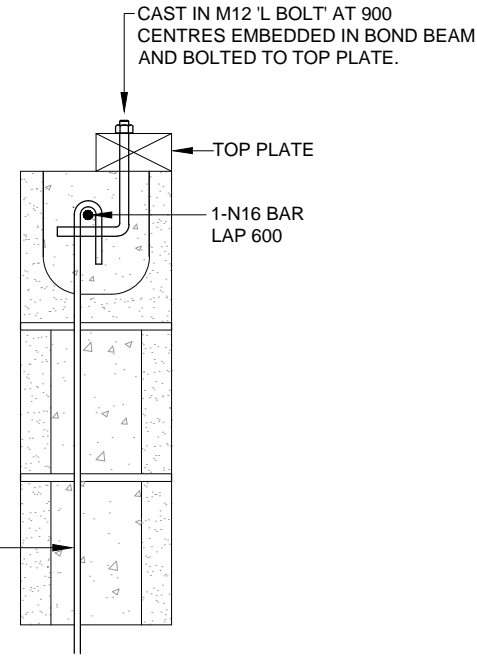


SECTION G  
 SCALE 1:10 (A3)

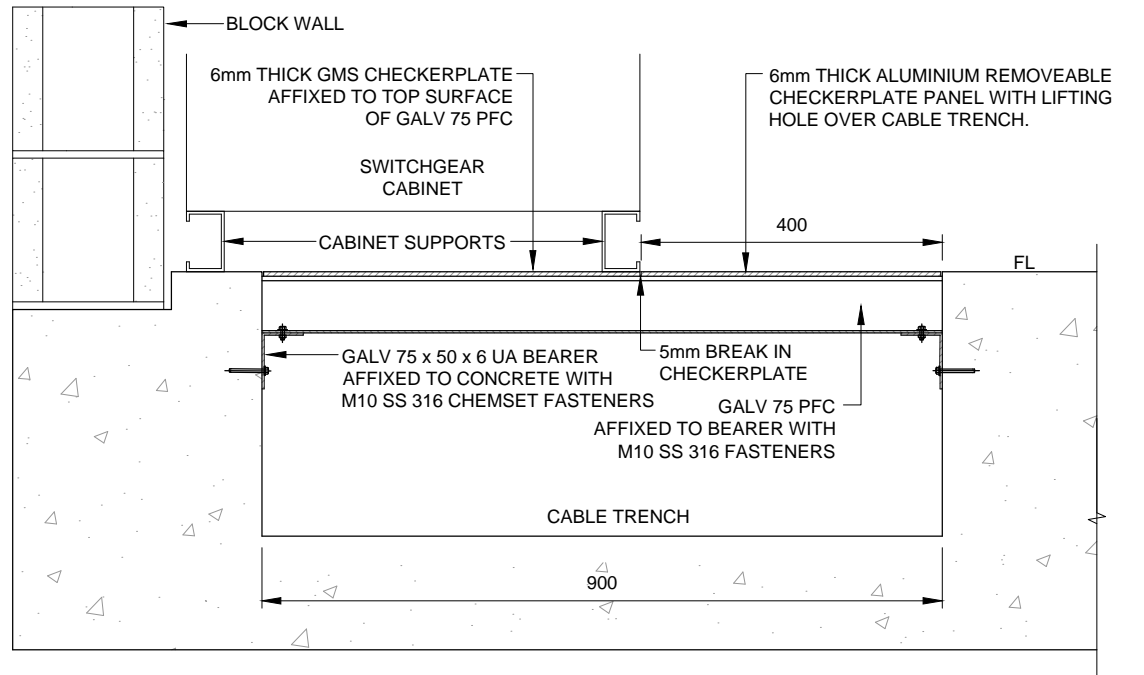
CABLE GLAND PLATE DETAIL



DETAIL 2  
 SCALE 1:10 (A3)  
 DOOR LINTEL



DETAIL 3  
 SCALE 1:10 (A3)  
 BOND BEAM



SECTION F  
 SCALE 1:10 (A3)  
 08

FLOOR CHECKERPLATE SUPPORT DETAILS

NOTE: REFER SHEET 08 FOR FURTHER DETAILS OF CHECKERPLATE SUPPORTS AND PANELS

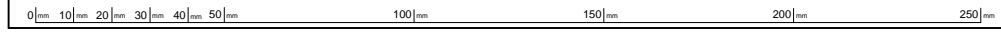
D	GENERATOR CONNECTION POINT ADDED	G.P.C.	07.2015
C	FOOTINGS AMENDED, TEXT AMENDED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
A	ORIGINAL ISSUE	G.P.C.	02.2010
ISSUE	AMENDMENT DETAILS	INITIALS	DATE



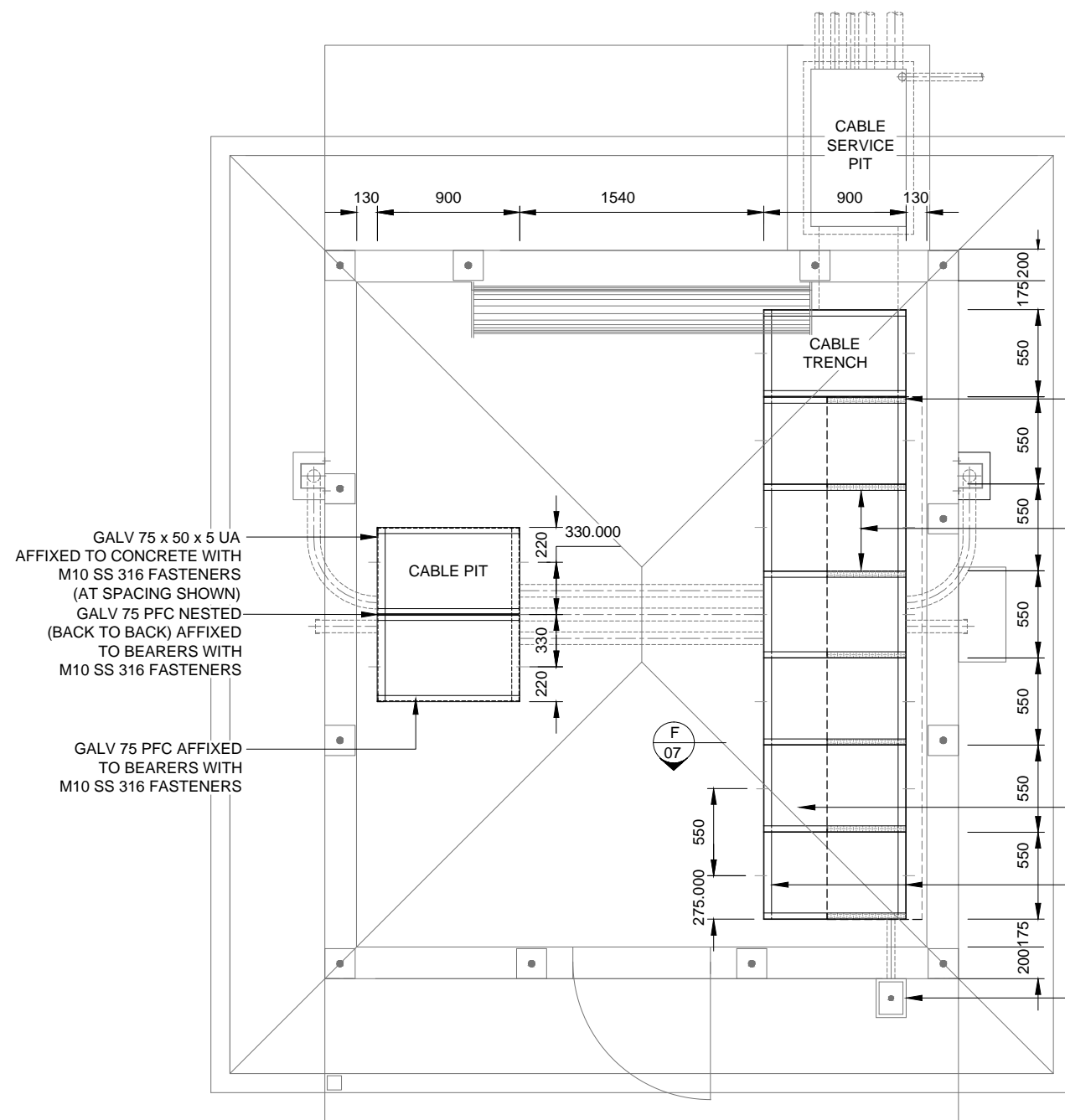
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DESIGN ENGINEER	..... DATE 04.06.15
DESIGN MANAGER	..... DATE 15.06.15
DRAWN	ENGINEERING & OPERATIONS DESIGN UNIT
SCALE	AS SHOWN

PROJECT:	SEWERAGE WORKS STANDARDS	DRAWING NUMBER:	S.D. 273-07
PLAN TITLE:	CONTROL BUILDING - BLOCK CONSTRUCTION BUILDING DETAILS		JULY 2015



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GALV 75 x 50 x 5 UA AFFIXED TO CONCRETE WITH M10 SS 316 FASTENERS (AT SPACING SHOWN)  
 GALV 75 PFC NESTED (BACK TO BACK) AFFIXED TO BEARERS WITH M10 SS 316 FASTENERS

GALV 75 PFC AFFIXED TO BEARERS WITH M10 SS 316 FASTENERS

6mm THICK GMS CHECKERPLATE STRIP AFFIXED TO ONE SIDE OF TOP OF NESTED PFC (BACK TO BACK)

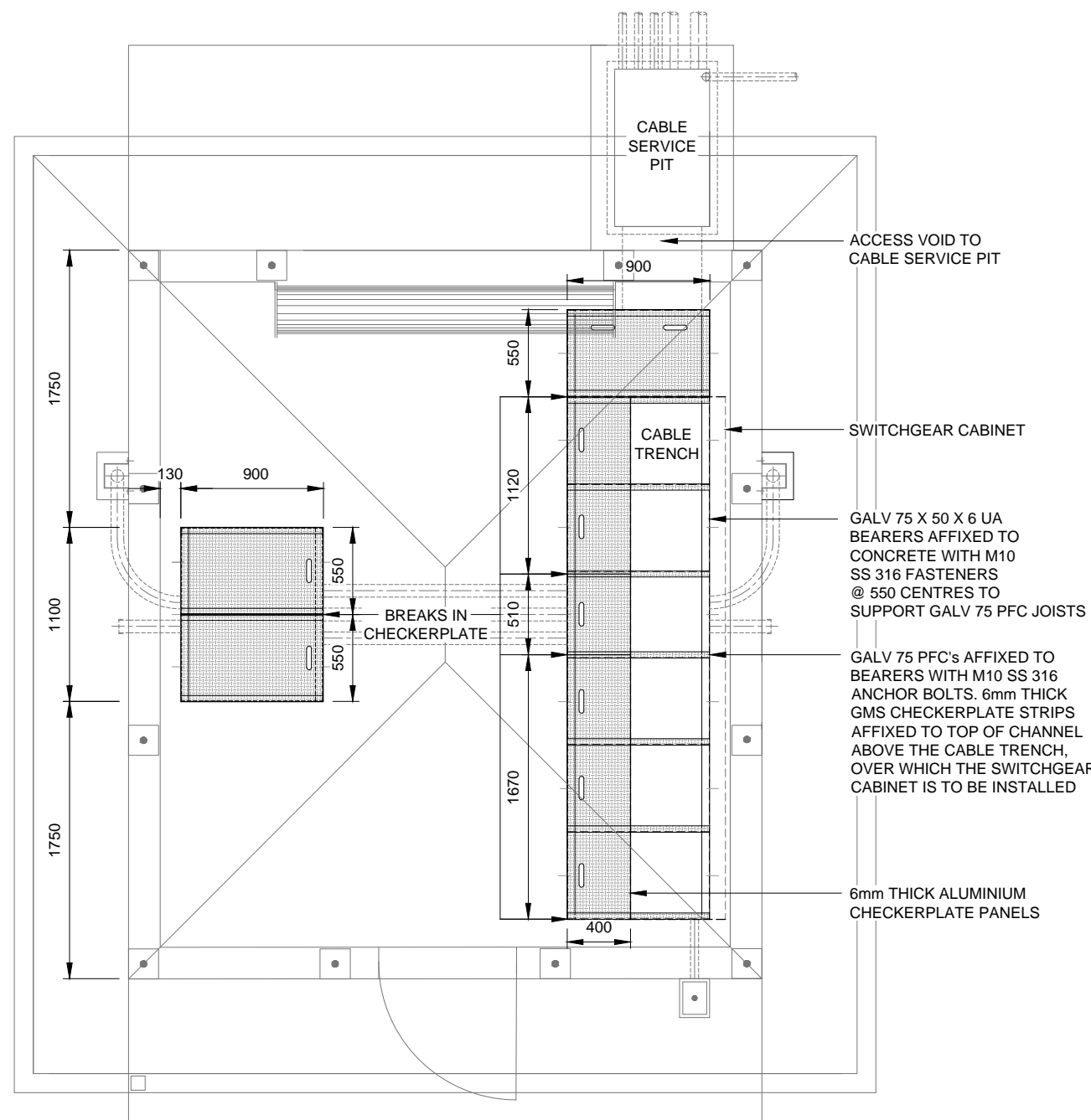
GALV 75 PFC's AFFIXED WITH M10 SS 316 FASTENERS TO BEARERS. 6mm GMS CHECKERPLATE STRIP AFFIXED TO TOP OF CHANNEL TO ENSURE THAT THE TOP OF THE CHECKERPLATE & THE FLOOR ARE AT THE SAME LEVEL

F 07

SPACE PROVIDED FOR REMOVABLE SECTIONS OF CHECKERPLATE TO ALLOW ACCESS TO CABLE TRENCH  
 GALV 75 X 50 X 6 UA AFFIXED TO CONCRETE WITH M10 SS 316 FASTENERS @ 550 CENTRES

EARTH PIT & EARTH ROD

**PLAN**  
**CHECKERPLATE SUPPORT DETAIL**  
 SCALE 1:40 (A3)



ACCESS VOID TO CABLE SERVICE PIT

SWITCHGEAR CABINET

GALV 75 X 50 X 6 UA BEARERS AFFIXED TO CONCRETE WITH M10 SS 316 FASTENERS @ 550 CENTRES TO SUPPORT GALV 75 PFC JOISTS

GALV 75 PFC's AFFIXED TO BEARERS WITH M10 SS 316 ANCHOR BOLTS. 6mm THICK GMS CHECKERPLATE STRIPS AFFIXED TO TOP OF CHANNEL ABOVE THE CABLE TRENCH, OVER WHICH THE SWITCHGEAR CABINET IS TO BE INSTALLED

6mm THICK ALUMINIUM CHECKERPLATE PANELS

**PLAN**  
**CHECKERPLATE PANELS DETAIL**  
 SCALE 1:40 (A3)

D	GENERATOR CONNECTION POINT ADDED	G.P.C.	07.2015
C	TEXT AMENDMED & PLAN FORM UPDATED	G.P.C.	06.2015
B	GENERATOR & POWER CONDUITS AMENDED & CABLE PIT UPGRADED	G.P.C.	08.2010
A	ORIGINAL ISSUE	G.P.C.	02.2010
ISSUE	AMENDMENT DETAILS	INITIALS	DATE



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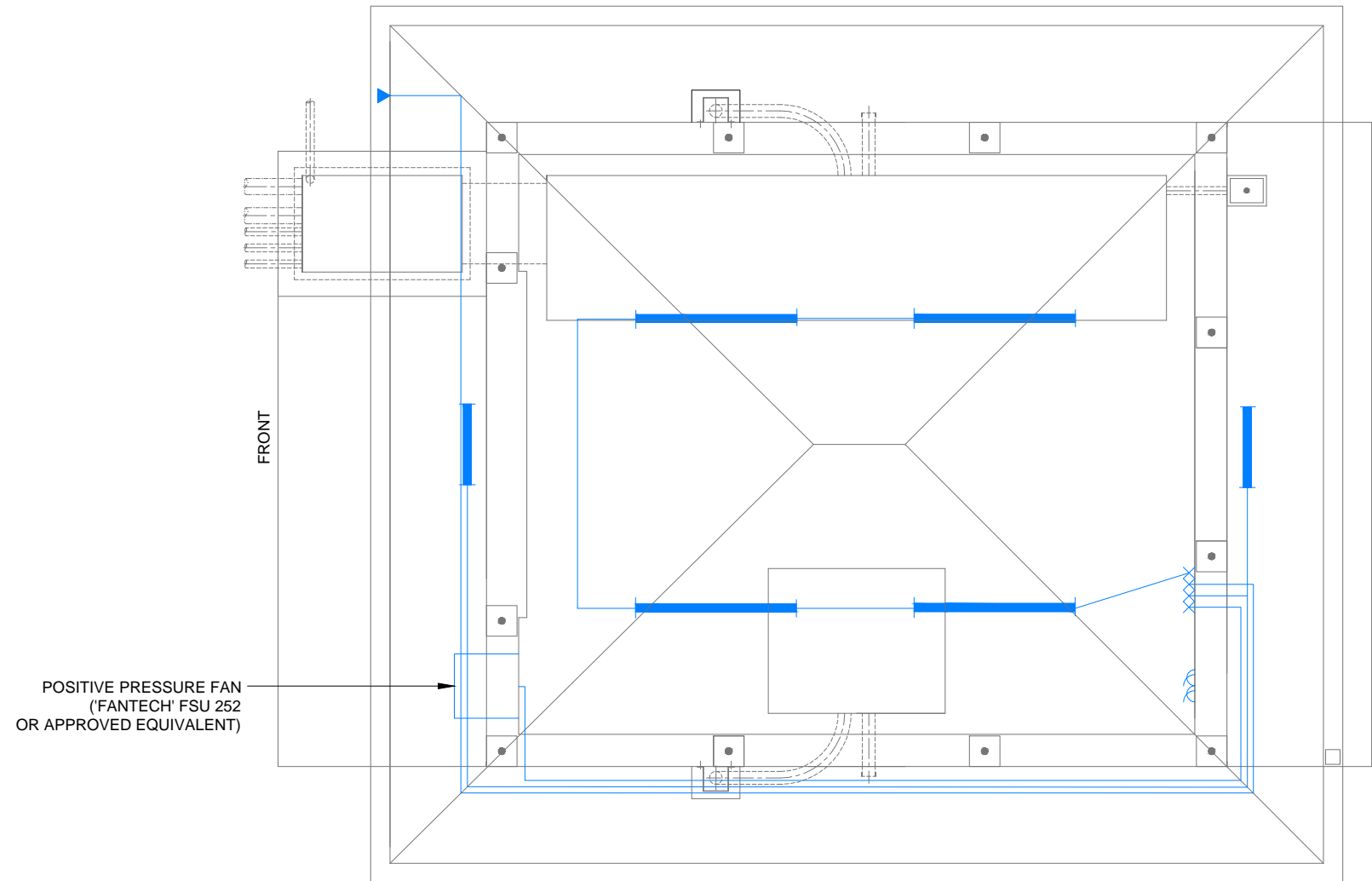
DESIGN ENGINEER	<i>[Signature]</i> DATE 04.06.15
DESIGN MANAGER	<i>[Signature]</i> DATE 15.06.15
DRAWN	ENGINEERING & OPERATIONS DESIGN UNIT
SCALE	1:40 (A3)

PROJECT:	<b>SEWERAGE WORKS STANDARDS</b>	DRAWING NUMBER:	<b>S.D. 273-08</b>
PLAN TITLE:	<b>CONTROL BUILDING - BLOCK CONSTRUCTION CHECKERPLATE DETAILS</b>		<b>JULY 2015</b>






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**POWER AND LIGHTING LAYOUT**  
SCALE 1:40 (A3)

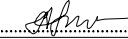

-  DOUBLE GPO
-  LIGHT SWITCH
-  18W VANDALITE
-  2 x 36W DIFFUSED FLORESCENT
-  150W FLOOD LIGHT

D	GENERATOR CONNECTION POINT ADDED	G.P.C.	07.2015
C	TEXT AMENDMED & PLAN FORM UPDATED	G.P.C.	06.2015
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A	ORIGINAL ISSUE	G.P.C.	02.2010
ISSUE	AMENDMENT DETAILS	INITIALS	DATE



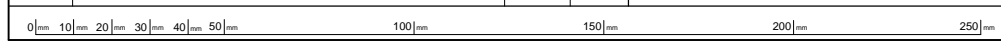
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DESIGN ENGINEER	 DATE 04.06.15
DESIGN MANAGER	 DATE 15.06.15
DRAWN	ENGINEERING & OPERATIONS DESIGN UNIT
SCALE	AS SHOWN

PROJECT:	<b>SEWERAGE WORKS STANDARDS</b>
PLAN TITLE:	<b>CONTROL BUILDING - BLOCK CONSTRUCTION ELECTRICAL LAYOUT</b>

DRAWING NUMBER:	<b>S.D. 273-09</b>
	<b>JULY 2015</b>



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