GENERAL NOTES FOR REINFORCED CONCRETE AND FOUNDATION WORKS

1. ALL WORKS SHALL COMPLY WITH GENERAL SPECIFICATION FOR BUILDING 2012 AND ITS LATEST CORRIGENDA. ALL RC WORKS SHALL BE TO SECTION 6 OF THE SPECIFICATION.

2. ALL STRUCTURAL DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECT'S/BSE'S DRAWINGS. INFORM THE SO OF ANY DISCREPANCIES WHICH MAY BE FOUND AMONGST THESE DRAWINGS.

3. ALL LEVELS SHOWN ARE IN METRES AND OTHER DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

4. IN LIEU OF THE TYPES OF BEAM STIRRUPS AND COLUMN BINDERS SHOWN ON THE R.C. DRAWINGS, THE CONTRACTOR MAY PROPOSE FOR SO'S APPROVAL ALTERNATIVE TYPES OF BEAM STIRRUPS AND COLUMN BINDERS.

5. NOTWITHSTANDING INDEX 3 OF THE GS, THE CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE SHALL BE THE CODE OF PRACTICE FOR STRUCTURAL USE OF CONCRETE 2013 AND ITS LATEST AMENDMENT (COP 2013).

6. DESIGN BEARING PRESSURE OF FOUNDATIONS SHALL BE 50 KPa. ALL LEVELS AND SIZES OF FOUNDATIONS SHOWN ARE TENTATIVE; THEY MAY BE ADJUSTED TO SUIT ACTUAL SITE CONDITIONS.

7. SUBSOIL UNDERNEATH ALL FOUNDATIONS SHALL BE INSPECTED BY THE PROJECT STRUCTURAL ENGINEER BEFORE CASTING OF BLINDING LAYERS.

8. NO REINFORCEMENT SHALL BE CUT OR BENT FOR FOUNDATION WORKS BEFORE CASTING OF BLINDING LAYERS.

9. ALLOW FOR THE FOLLOWING PROVISIONAL QUANTITIES OF COMPACTION TESTS IN ACCORDANCE WITH G.S.CLAUSE 3.21:

   (a)GEO GEOSPEC 3 (OPTIMUM MOISTURE CONTENT AND MAXIMUM DRY DENSITY) 3 NOS.

   (b)GEO GEOSPEC 3 (RELATIVE COMPACTION) 30 NOS.

10. CONCRETE MIXES FOR STRUCTURAL ELEMENTS SHALL BE AS FOLLOWS:-

GRADES	ELEMENTS
(a) GRADE 35/20	GENERAL RC WORK AND PAVING SLABS
(b) GRADE 20/20	PLAIN CONCRETE FILL
(c) GRADE 10/20	BLINDING LAYER

   FOR WATER TANKS WHICH ARE DESIGNED AS LIQUID RETAINING STRUCTURES, THE CONCRETE SHALL COMPLY WITH GS CLAUSE 6.42.2.

11. IN THE DESIGN MIXES OF CONCRETE, THE CEMENTITIOUS CONTENT SHALL NOT BE LESS THAN 300 kg/m³.

12. NOTWITHSTANDING GS CLAUSE 6.25, NOMINAL CONCRETE COVER TO REINFORCEMENT, INCLUDING LINKS AND STIRRUPS, SHALL BE AS FOLLOWS:-

	GENERAL	60min. FRR
SLABS	- 30mm	30mm
WALLS (EXTERNAL FACE)	- 50mm	-
WALLS (INTERNAL FACE)	- 35mm	35mm
BEAMS	- 30mm	30mm
COLUMNS	- 35mm	35mm
WATER TANKS	- 40mm	-
WORKS BELOW GROUND	- 50mm	-

   OR COVER TO MAIN BARS NOT LESS THAN THE DIAMETER OF MAIN BARS, WHICHEVER IS THE GREATER.

13. NOTWITHSTANDING GS CLAUSE 6.14, STEEL REINFORCEMENT SHALL BE PLAIN STEEL REINFORCING BARS (DENOTED BY R) OR GRADE 500B RIBBED STEEL REINFORCING BARS (DENOTED BY T) TO CONSTRUCTION STANDARD CS2:2012 (CS2:2012)

14. NOTWITHSTANDING GS CLAUSE 6.15, THE TEST CERTIFICATES FOR EACH BATCH OF STEEL REINFORCING BARS DELIVERED TO SITE SHALL BE IN ACCORDANCE WITH SECTION 4 OF CS2:2012

15. NOTWITHSTANDING GS CLAUSE 6.17 (v), DETERMINATION OF MASS PER METRE, TENSILE TEST, REBEND TEST, CHEMICAL ANALYSIS AND TEST ON BOND PROPERTY BASED ON SURFACE GEOMETRY SHALL BE CARRIED OUT ON TEST SPECIMENS FROM EACH BATCH OF STEEL REINFORCING BARS DELIVERED TO SITE IN ACCORDANCE WITH CS2:2012. FOR TEST ON BOND PROPERTY BASED ON SURFACE GEOMETRY, THERE IS A GRACE PERIOD UNTIL 31 DECEMBER 2016 AND THE TEST NEED NOT BE UNDERTAKEN FOR STEEL REINFORCING BARS DELIVERED TO SITE ON OR BEFORE 31 DECEMBER 2016. THE CONTRACTOR SHALL ALLOW IN HIS PROGRAMME OF WORKS SUFFICIENT TIME FOR THE TESTING ON STEEL REINFORCING BARS TO BE CARRIED OUT BY THE PUBLIC WORKS LABORATORIES,INCLUDING 14 WORKING DAYS FOR THE CHEMICAL COMPOSITION TEST.

16. NOTWITHSTANDING GS CLAUSE 6.33 AND 6.34, AGGREGATES FOR CONCRETE SHALL BE CLEAN, HARD AND DURABLE CRUSHED ROCK TO CONSTRUCTION STANDARD CS3 (CS3). SUB-SECTION 4.2.1 OF CS3 ON LOS ANGELES VALUE IS NOT REQUIRED FOR AGGREGATES UNLESS OTHERWISE SPECIFIED IN THE CONTRACT.

17. TABLE 6.7 OF THE GS SHALL BE REPLACED BY:

   PERCENTAGE BY MASS OF FINE AGGREGATE TO TOTAL AGGREGATE FOR STANDARD MIX CONCRETE

GRADE STRENGTH (MPa)	GRADING OF THE AGGREGATE	NOMINAL MAXIMUM AGGREGATE SIZE (mm)	40	20	10
10	C, M OR F	PERCENTAGE BY MASS OF FINE AGGREGATE TO TOTAL AGGREGATE (%)	30-45	35-50	-
20,25 or 30	C		30-40	35-45	45-55
	M		25-35	30-40	40-50
	F		25-30	25-35	35-45

   NOTE: GRADING OF C, M AND F REFER TO THOSE GIVEN IN TABLE 3.2 OF CS3

18. ALLOW FOR SUFFICIENT STEEL CHAIRS TO SUPPORT TOP REINFORCEMENT IN SLABS, STAIR FLIGHTS AND RAFTS EXCEEDING 150mm THICK AND U-BARS TO KEEP VERTICAL WALL REINFORCEMENT IN ITS CORRECT ALIGNMENT.

19. HOLES AND POCKETS IN STRUCTURAL ELEMENTS SHALL NOT BE ALLOWED UNLESS AGREED BY THE PSE.

20. DESIGN, CONSTRUCT AND DISMANTLE FALSEWORK TO THE RC STRUCTURAL WORK IN ACCORDANCE WITH BS 5975:2008+A1:2011.

21. WATER TANKS AND LIFT PIT SHALL BE OF WATERTIGHT CONSTRUCTION IN ACCORDANCE WITH GS CLAUSE 6.64.

22. FOR GROUND FLOOR SLAB, SEE STANDARD STRUCTURAL DETAIL DRAWING NO. SD/019 TO SD/021.

23. FOR REINFORCED CONCRETE PAVING IN EXTERNAL DRIVEWAY AND CAR PARKING AREAS NOT TO BE HANDED OVER TO HIGHWAYS DEPARTMENT, SEE STANDARD STRUCTURAL DETAILS DRAWING NO. SD/022 TO SD/026. SUBSOIL UNDERNEATH THE PAVING SLAB SHALL BE INSPECTED BY THE PROJECT STRUCTURAL ENGINEER.

24. ALLOW FOR 12 NUMBERS OF 100 DIAMETER CORE SAMPLES TO BE TAKEN FROM THE FINISHED CONCRETE WORK FOR THE COMPRESSIVE STRENGTH TEST IN ACCORDANCE WITH CS1.

25. FOR DETAILS OF REINFORCEMENT IN PARTITION WALL/FLOWER BED, SEE ARCHITECTURAL THE STANDARD DRAWING.

26. NON STRUCTURAL CONCRETE WALLS ARE NOT SHOWN ON STRUCTURAL FRAMING PLANS. REFER TO ARCHITECTURAL DRAWING FOR LOCATIONS.

27. NOTWITHSTANDING GS CLAUSE 3.01 (vi), GRADE 200 RECYCLED ROCKFILL SHALL BE USED FOR HARDCORE LAYER FOR THIS PROJECT. THE THICKNESS OF HARDCORE LAYER SHALL NOT BE LESS THAN 200mm. THE PARTICULAR SPECIFICATION FOR USE OF GRADE 200 RECYCLED ROCKFILL FOR HARDCORE LAYER SHALL APPLY.

28. CONSTRUCTION LOAD
   THE ATTENTION OF THE CONTRACTOR IS DRAWN TO THE LIMIT OF 10KPa OF CONSTRUCTION LOAD, INCLUDING DEAD AND IMPOSED LOADS, WITHIN 15m FROM THE COPELINE OF THE EXISTING SEAWALL AS SHOWN ON THE LOCATION PLAN.

GENERAL NOTES FOR STRUCTURAL STEELWORK

1. ALL WORKS SHALL COMPLY WITH GENERAL SPECIFICATION FOR BUILDING 2012. ALL STRUCTURAL STEELWORK SHALL BE TO GS SECTION 15.

2. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH THE RELEVANT ARCHITECT'S DRAWINGS. INFORM THE SO OF ANY DISCREPANCIES WHICH MAY BE FOUND AMONGST THESE DRAWINGS.

3. ALL LEVEL SHOWN ARE IN METRES AND OTHER DIMENSIONS SHOWN ARE IN MILLIMETRES UNLESS OTHERWISE STATED.

4. ALL STRUCTURAL STEEL SHALL BE PRODUCED FROM A MANUFACTURER WITH AN ACCEPTABLE QUALITY ASSURANCE SYSTEM. EXCEPT FOR HOLLOW SECTIONS, ALL STRUCTURAL STEEL SHALL BE HOT-ROLLED STRUCTURAL STEEL COMPLYING WITH BS EN 10025, AND SHALL BE GRADE S355JR UNLESS SPECIFIED OTHERWISE. HOLLOW SECTIONS SHALL BE HOT-FINISHED HOLLOW SECTIONS COMPLYING WITH BS EN 10210-1 AND SHALL BE GRADE S355J0H UNLESS SPECIFIED OTHERWISE.

5. NOTWITHSTANDING CLAUSE 15.17 OF THE GS, FOR HOT-FINISHED SQUARE OR RECTANGULAR HOLLOW SECTIONS, ONE SEGMENT SHALL BE SELECTED AT RANDOM ON SITE BY THE SO FROM EVERY 40 TONNES OR PART THEREOF OF EACH HOLLOW SECTION OF SAME THICKNESS FROM THE SAME CAST FOR TESTING. PROVIDE TWO TEST SPECIMENS TAKEN AT THE SAME END OF EACH OF THE CHOSEN SEGMENT WITH ONE TEST SPECIMEN TAKEN FROM THE FLAT REGION AND THE OTHER TEST SPECIMEN TAKEN FROM THE CORNER REGIONS, BUT REMOTE FROM THE WELD IN WELDED SECTIONS IN ACCORDANCE WITH BS EN 10210-1. PREPARE THE TEST SPECIMENS TO BS EN 10002-1 AS DIRECTED AND APPROPRIATELY MARK AND DELIVER THEM TO THE PUBLIC WORKS LABORATORIES (PWL), AS DIRECTED BY THE SO FOR TENSILE TESTING. THE TENSILE TEST RESULTS FROM BOTH THE FLAT AND CORNER REGIONS SHALL CONFORM TO THE RELEVANT REQUIREMENTS OF TABLE A.3 OR TABLE B.3 OF BS EN 10210-1.

6. SHOULD THE CONTRACTOR BE UNABLE TO OBTAIN THE SPECIFIED STEEL SECTIONS, THEY SHALL SUBMIT ALTERNATIVE SECTIONS OF AT LEAST EQUAL STRENGTH AND PROPERTIES TO THE SO FOR APPROVAL. WHERE JOINT DETAILS HAVE TO BE MODIFIED AS A RESULT, JOINT DETAILS AND SHOP DRAWINGS ALSO HAVE TO BE SUBMITTED TO THE SO FOR APPROVAL BEFORE WORK IS PUT IN HAND. ALL ADDITIONAL COSTS ARISING THERE FROM SHALL BE BORNE BY THE CONTRACTOR.

7. ALL BOLTS SHALL BE GRADE 8.8 TO BS 4190, AND NUTS SHALL BE GRADE 10 TO BS 4190. UNLESS SPECIFIED OTHERWISE, ALL BOLTS SHALL BE 16mm DIAMETER. RATE OF SAMPLING OF TEST SPECIMENS FOR BOLTS AND ASSOCIATED NUTS SHALL FOLLOW GS CLAUSE 15.20. UNLESS OTHERWISE SPECIFIED, TEST SPECIMENS FOR BOLTS SHALL BE SUBJECTED TO TESTS TO BS EN ISO 898-1 TO DETERMINE THEIR TENSILE STRENGTH AND FOR NUTS SHALL BE SUBJECTED TO TESTS IN ANNEX A OF BS 4190.

8. DRILL ANCHOR BOLTS SHALL BE HILTI HSA OR EQUIVALENT APPROVED. THE MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES SHALL BE STRICTLY ADHERED TO.

   ALL DRILL ANCHOR BOLTS FOR EXTERNAL ENVIRONMENT SHALL BE IN GRADE A4 STAINLESS STEEL TO BS EN ISO 3506. ELECTROPLATED ANCHORS AND HOT-DIP GALVANIZED ANCHORS ARE NOT ALLOWED.

9. GROUT AROUND FOUNDATION BOLTS AND UNDER COLUMN BASE PLATES SHALL BE FLUID CEMENT MORTAR TO GS CLAUSE 15.15 OR AN APPROVED PROPRIETARY NON-SHRINK POLYMER MODIFIED CEMENTITIOUS OR RESIN BASED GROUT. THE 28 DAYS CHARACTERISTIC STRENGTH OF GROUT SHALL NOT BE LESS THAN 40MPa.

10. ALL WELDING SHALL BE 6mm FILLET WELDS IN ACCORDANCE WITH BS EN 1011-1 TOGETHER WITH OTHER CLAUSES CONTAINED IN THE GS, UNLESS OTHERWISE STATED.

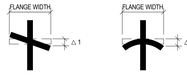
11. ALL STRUCTURAL STEELWORK INCLUDING BOLTS, WASHERS, NUTS AND WELDED CONNECTIONS SHALL BE HOT DIP GALVANIZED TO BS EN ISO 1461.

    SMALL AREAS OF GALVANIZED COATING DAMAGED BY WELDING, CUTTING OR ROUGH TREATMENT OR ERECTION SHALL BE MADE GOOD BY THE USE OF AT LEAST TWO COATS OF ZINC RICH PAINT TO BS 4652 TO CLAUSE 15.63 OR BLAST CLEANING TO NOT INFERIOR TO SWEDISH STANDARD SIS 055900 SA 2.5 AND FOLLOWED BY 2-PACKED EPOXY BASED ZINC RICH PRIMER TO BS 4652.

    PAINTING TO GALVANIZED STRUCTURAL STEEL SHALL BE AS TABLE 15.7 TYPE G OF THE GS. SUBMIT PAINT MANUFACTURER'S DATA SHEET FOR APPROVAL BEFORE USE.

12. PROVIDE 1 HOUR FIRE RESISTANCE RATING (FRR) PROTECTION TO STRUCTURAL STEEL (EXCEPT THOSE AT ROOF) BY SPRAYED MINERAL COATING TO BS 8202: PT. 1/ INTUMESCENT COATING SYSTEM TO BS 8202: PT. 2 / PROPRIETARY FIRE PROTECTION BOARD IN ACCORDANCE WITH GS CLAUSES 15.66-72 TO THE EXPOSED SURFACES OF THE FOLLOWING STRUCTURAL ELEMENTS/LOCATION: STRENGTHENING COLUMNS AND BEAMS, AND SB1 AT 1/F. FOR DETAILS OF THE PROTECTION SYSTEM, REFER TO ARCHITECT'S DRAWINGS.

13. (a) IN THE FABRICATION OF THE BUILT-UP SECTIONS, CARE SHALL BE TAKEN TO CONTROL THE DISTORTION CAUSED BY WELDING. BOTH THE MAXIMUM OUT-OF-SQUARENESS Δ1 AND THE MAXIMUM OUT-OF-FLATNESS Δ2 OF THE PLATE AS SHOWN IN THE FOLLOWING DIAGRAMS SHALL BE ONE HUNDREDTH OF THE WIDTH OF THE PLATE OR 3mm WHICHEVER IS THE GREATER.



    (b) PRIOR TO THE FABRICATION, THE CONTRACTOR SHALL SUBMIT FOR THE APPROVAL BY THE SO, A METHOD STATEMENT AND PRECAUTIONARY MEASURES OF HOW THE BUILT-UP SECTIONS ARE TO BE FABRICATED WITHIN THE ALLOWABLE TOLERENCES.

14. THE ATTENTION OF THE CONTRACTOR IS DRAWN TO GS CL.15.34 ON THE REQUIREMENT TO SUBMIT A METHOD OF ERECTION FOR APPROVAL OF SO BEFORE WORK COMMENCES ON SITE. SUCH METHOD OF ERECTION SHALL INCLUDE TYPE OF PLANT AND EQUIPMENT TO BE USED AND IF NECESSARY DRAWINGS AND CALCULATIONS OF ANY TEMPORARY WORKS.

GENERAL NOTES FOR DEMOLITION WORK

1. DEMOLITION WORK SHALL COMPLY WITH

   A) SECTION 2 OF THE GENERAL SPECIFICATION FOR BUILDINGS 2012;

   B) BUILDING (DEMOLITION WORKS) REGULATIONS;

   C) CODE OF PRACTICE FOR DEMOLITION OF BUILDINGS 2004 ISSUED BY BUILDINGS DEPARTMENT;

   D) PRACTICE NOTES FOR AP AND RSE NOS. APP-21 AND APP-23 BY BUILDINGS DEPARTMENT;

   E) PRACTICE NOTES FOR REGISTERED CONTRACTORS NOS. 4 & 6 ISSUED BY BUILDINGS DEPARTMENT;

   F) AIR POLLUTION CONTROL (CONSTRUCTION DUST) REGULATIONS;

   G) NOISE CONTROL ORDINANCE;

   H) SAFETY GUIDELINES FOR DEMOLITION OF BUILDING STRUCTURES ISSUED BY LABOUR DEPARTMENT.

2. SCOPE OF DEMOLITION WORK IS HIGHLIGHTED ON DRAWINGS No. SE/B282/FP002-FP003. ANY DEMOLITION OF NON-STRUCTURAL ELEMENTS SHALL REFER TO RELEVANT ARCHITECT'S DRAWINGS. INFORM THE SO OF ANY DISCREPANCIES WHICH MAY BE FOUND AMONGST THESE DRAWINGS.

3. ALL DIMENSIONS SHOWN FOR EXISTING STRUCTURES ARE INDICATIVE ONLY. EXACT DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK ON SITE.

4. AT LEAST THREE WEEKS PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK, THE CONTRACTOR SHALL SUBMIT A METHOD STATEMENT PREPARED AND SIGNED BY A REGISTERED STRUCTURAL ENGINEER (THE RSE) IN COMPLIANCE WITH THE BUILDINGS ORDINANCE FOR THE APPROVAL OF THE SO. THE METHOD STATEMENT OF THE DEMOLITION WORK SHALL INCLUDE THE FOLLOWING DETAILS:

   A) THE PROPOSED SEQUENCE OF CARRYING OUT THE DEMOLITION WORK INCLUDING HOARDING AND PROPOSED PRECAUTIONARY MEASURES FOR ADJACENT STRUCTURES DURING DEMOLITION.

   B) THE PROPOSED METHODS OF DEMOLITION, INCLUDING DETAILS OF THE EQUIPMENT/PLANTS USED.

   C) THE PROPOSED METHODS FOR HANDLING AND DISPOSAL OF DEMOLISHED MATERIALS.

   D) PROPOSED ARRANGEMENT FOR PROPER SITE SUPERVISION BY AN EXPERIENCED SITE AGENT/FOREMAN AND PERIODIC SITE INSPECTION BY THE RSE IN CHARGE. PROVIDE FULL DETAILS, NAMES, QUALIFICATIONS AND EXPERIENCE OF SUPERVISORY AND OPERATIONAL STAFF.

5. CARE MUST BE TAKEN TO AVOID DAMAGE TO ADJACENT STRUCTURES. ANY DAMAGED PARTS ARE TO BE REPAIRED AND/OR REPLACED AT THE CONTRACTOR'S COST. DEBRIS SHALL BE REMOVED IMMEDIATELY TO PREVENT ACCUMULATION.

6. OVERBREAK INTO EXISTING CONCRETE STRUCTURES IF REQUIRED IS TO BE 25mm MAXIMUM AND SHALL BE MADE GOOD WITH APPROVED REPAIR MORTAR. ALL EXPOSED REINFORCEMENT BARS ARE TO BE CLEANED BEFORE BEING COVERED UP BY THE REPAIR MORTAR/RE-CASTING.

7. UNLESS OTHERWISE SPECIFIED, CONSTRUCTION JOINT BETWEEN OLD & NEW CONCRETE SHALL BE PREPARED IN ACCORDANCE WITH CLAUSE 6.51 OF THE GENERAL SPECIFICATION. THE EXISTING REINFORCEMENT SHALL ONLY BE CUT STRICTLY IN ACCORDANCE WITH DETAILS SHOWN ON THE DRAWINGS OR OTHERWISE INSTRUCTED BY THE SO.

8. BEFORE COMMENCEMENT OF DEMOLITION OF ANY PORTION OF THE EXISTING STRUCTURE, THE CONTRACTOR IS REQUIRED TO PROVIDE TEMPORARY WORKS TO SUPPORT THE AREA CONCERNED. DESIGN AND DETAILS OF TEMPORARY WORKS SHALL BE SUBMITTED FOR THE SO'S APPROVAL. VERTICAL SUPPORTS SHALL BE ADEQUATELY SECURED, BRACED AND LATERALLY RESTRAINTED IN AT LEAST 2 DIRECTIONS TO PREVENT LATERAL MOVEMENT OF THE PROPS. PROPPING SHALL NOT BE REMOVED UNTIL THE NEWLY CONSTRUCTED STRUCTURES HAVE ATTAINED THE REQUIRED STRENGTH. THE TEMPORARY WORKS DESIGN SHALL BE CHECKED AND CERTIFIED BY THE RSE IN ACCORDANCE WITH GS CLAUSE 2.04.

9. SETTLEMENT MONITORING SYSTEM
   INSTALL, MAINTAIN AND MONITOR 3 NO. OF BUILDING SETTLEMENT MARKERS AT LOCATIONS TO BE DETERMINED BY THE SO ON SITE. EMPLOY AN APPROVED INDEPENDENT REGISTERED PROFESSIONAL SURVEY TO CARRY OUT SURVEYS OF THE SETTLEMENT MARKERS ONCE A WEEK DURING THE DEMOLITION WORK AND MONTHLY SURVEYS OF THE SETTLEMENT MARKERS DURING THE CONTRACT PERIOD AND THE MAINTENANCE PERIOD. SUBMIT 3 COPIES OF THE SURVEY RESULTS TO THE SO WITHIN 3 DAYS OF THE SURVEY.

GENERAL NOTES FOR THREADED REBAR

1. THREADED REINFORCING BAR SHALL BE PLAIN STEEL REINFORCING BARS (DENOTED BY R) OR GRADE 500B RIBBED STEEL REINFORCING BARS (DENOTED BY T) TO CS2:2012 AND HOT DIP GALVANISED UNLESS SPECIFIED OTHERWISE.

2. ASSEMBLED THREADED REINFORCING BAR WITH NUT SHALL BE SUBJECTED TO THE BREAKING LOAD TEST CARRIED OUT BY PUBLIC WORKS LABORATORY AND THE BREAKING LOAD SHALL BE GREATER THAN 120kN FOR T25 THREADED REBAR. RATE OF SAMPLING SHALL BE SAME AS THAT OF BOLTS OF THE SAME DIAMETER IN GS TABLE 15.4.

3. SHOULD THE TEST RESULT OF A TEST SPECIMEN FROM A BATCH OF ASSEMBLED THREADED REINFORCING BARS WITH NUTS FAIL TO COMPLY WITH THE ABOVE REQUIREMENT, TWO FURTHER TEST SPECIMENS MAY BE TAKEN RESPECTIVELY FROM THE SAME BATCH FOR RE-TEST. PROVIDED THE RESULTS OF THESE FURTHER TESTS BOTH COMPLY WITH THE ABOVE REQUIREMENT, THE BATCH REPRESENTED BY THE SPECIMENS SHALL BE DEEMED TO BE SATISFACTORY. IF THE RESULT OF EITHER OF THESE ADDITIONAL TEST SPECIMENS DOES NOT COMPLY WITH THE ABOVE REQUIREMENT, THE BATCH REPRESENTED BY THE SPECIMENS SHALL BE DEEMED TO BE FAILED AND THE BATCH SHOULD BE REMOVED FROM THE SITE.

GENERAL NOTES FOR CONCRETE REPAIR WORKS

1. ALLOW FOR THE FOLLOWING PROVISIONAL QUANTITY OF CONCRETE REPAIR WORKS FOR SLABS, BEAMS, WALLS OR COLUMNS:

   25-50 mm DEEP 10m²
   50-75 mm DEEP 5m²
   EXCEEDING 75mm 5m²

2. ALL SPALLED CONCRETE, DAMP PATCHES, RUST STAINS OR OTHER DEFECTS FOUND ON THE EXISTING CONCRETE ELEMENTS SHALL BE REPAIRED IN ACCORDANCE WITH THE PARTICULAR SPECIFICATION FOR REPAIR OF CONCRETE (PATCH REPAIR) AND THE FOLLOWING REPAIR OPTIONS. EXACT LOCATIONS SHALL BE DETERMINED ON SITE BY THE CONTRACTOR AND AGREED BY THE SO PRIOR TO THE COMMENCEMENT OF CONCRETE REPAIR WORKS.

P.S. CLAUSE REFERENCE WORKS	OPTION
3.3 BREAKING OUT AND PREPARATION OF THE CONCRETE SUBSTRATE	C
3.4 PREPARATION OF REINFORCEMENT	C
3.6 PRIME COAT FOR REINFORCEMENT	A
3.7 BOND COAT FOR CONCRETE SUBSTRATE AND REINFORCEMENT	A

3. ALL CRACKS IN THE EXISTING CONCRETE ELEMENTS SHALL BE REPAIRED IN ACCORDANCE WITH PARTICULAR SPECIFICATION FOR CONCRETE REPAIR BY CHEMICAL INJECTION. EXACT LOCATIONS SHALL BE DETERMINED ON SITE AND AGREED BY THE SO. ALLOW FOR AS PROVISIONAL QUANTITY 5m LENGTH OF CRACK REPAIR WORKS.

GENERAL NOTES FOR PRECAST RC STRUCTURES

1. ALL PRECAST CONCRETE UNITS SHALL BE PRODUCED ON SITE UNLESS TO OTHERWISE APPROVED BY SO.

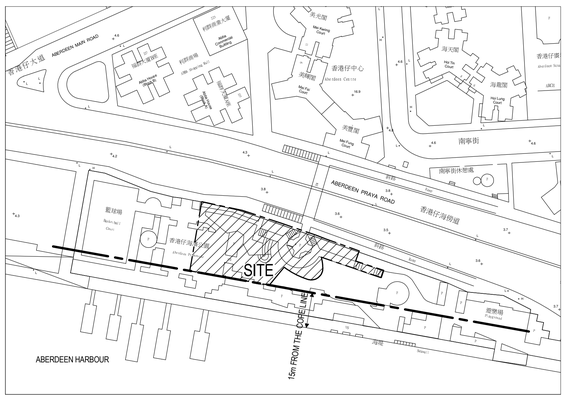
2. ALL PRECAST CONCRETE WORKS SHALL COMPLY WITH SECTION 6 OF GS.

3. DO NOT LIFT OR DEMOULD PRECAST UNIT UNTIL THE CONCRETE HAS BEEN CAST FOR MINIMUM 7 DAYS.

4. ALL CONSTRUCTION JOINT SURFACES OF PRECAST CONCRETE UNIT SHALL BE PREPARED TO THE SURFACE TYPE "BRUSHED, SCREEDED OR ROUGH-TAMPED" AS DEFINED IN TABLE 2.10 OF CODE OF PRACTICE FOR PRECAST CONSTRUCTION 2003 UNLESS OTHERWISE STATED.

5. PRIOR TO THE CASTING OF NON-SHRINK GROUT FOR MONOLITHIC JOINT, REMOVE ALL LAITANCE, LOOSE MATERIAL, GREASE, DIRT ETC.

6. PROVIDE MINIMUM 4 NOS. OF LIFTING HOOKS FOR EACH PRECAST SLAB UNIT. THE CONTRACTOR SHALL PROPOSE THE DETAIL AND LOCATION OF THE LIFTING HOOKS TO THE SO FOR APPROVAL.



LOCATION PLAN
(1 : 1000)

NOTES:

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

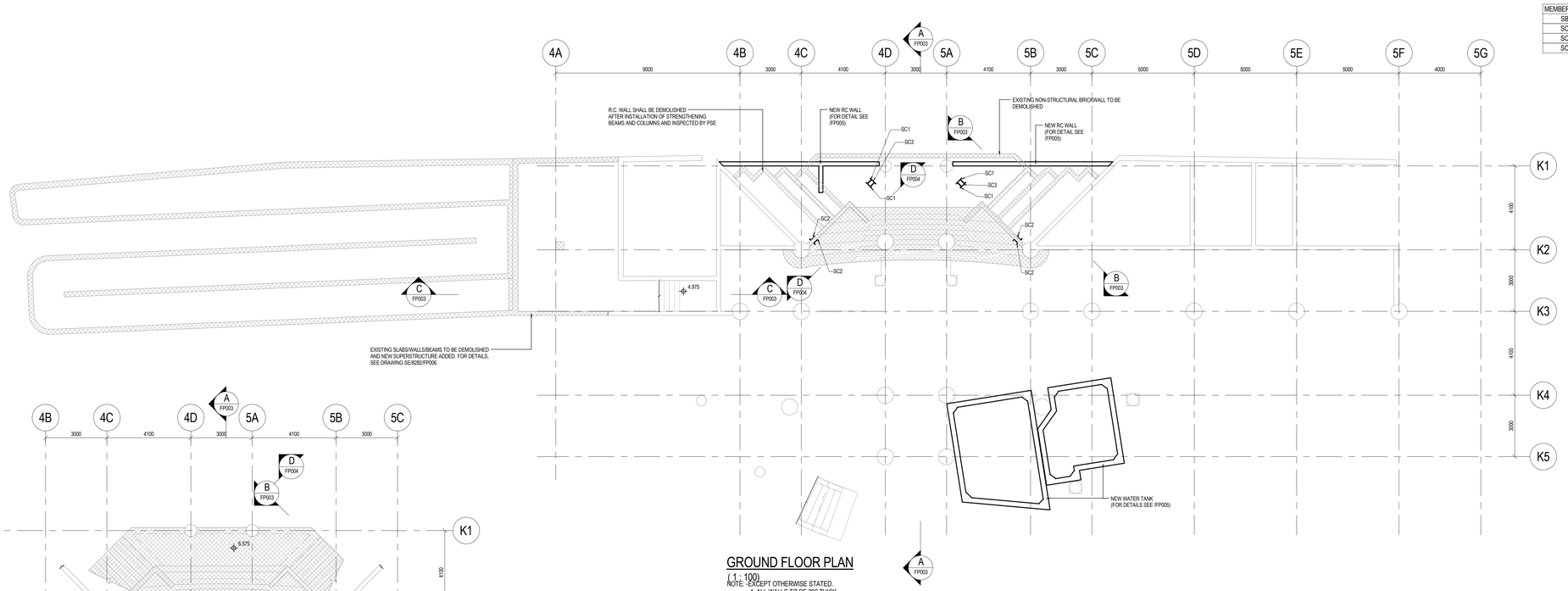
drawing no.

scale 1 : 1000

Office

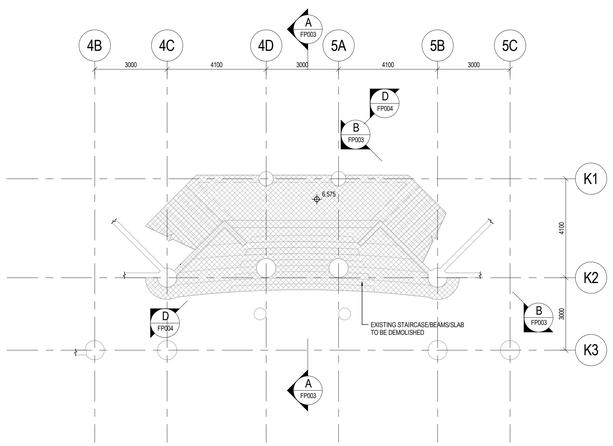
B1 1000 x 707

MEMBER MARK	MEMBER SIZE
SB2	300x90x41 kg/m CHANNEL
SC1	300x90x41 kg/m CHANNEL
SC2	260x90x35 kg/m CHANNEL
SC3	300x200x9mm RHS

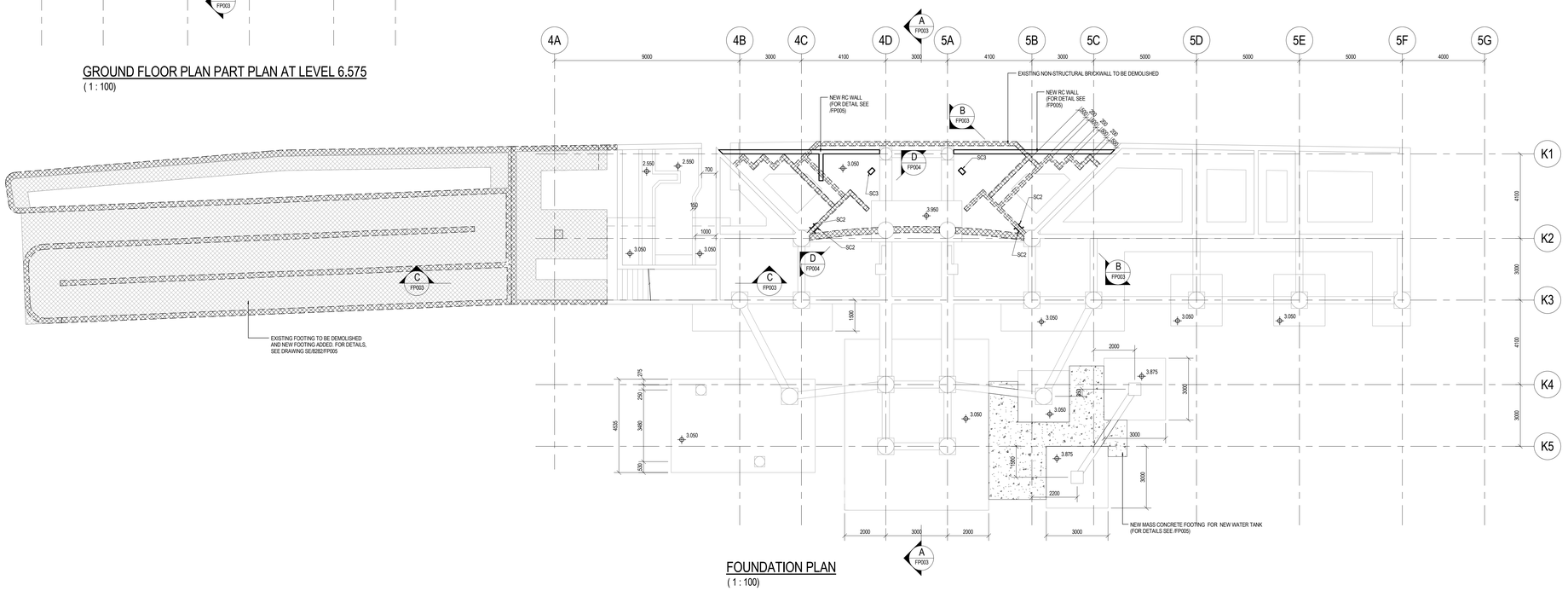


GROUND FLOOR PLAN
(1 : 100)

NOTE: -EXCEPT OTHERWISE STATED.
1. ALL WALLS TO BE 200 THICK.
2. ALL SLABS TO BE 150 THICK.



GROUND FLOOR PLAN PART PLAN AT LEVEL 6.575
(1 : 100)



FOUNDATION PLAN
(1 : 100)

NOTE: -EXCEPT OTHERWISE STATED.
1. ALL WALLS TO BE 200 THICK.
2. ALL FOOTINGS TO BE 350 THICK.

NOTES:

1. FOR GENERAL NOTES, SEE DRAWING NO. SE/B282/FP001.
2. ▨ DENOTES EXISTING R.C. STRUCTURE TO BE DEMOLISHED.
3. ' * ' DENOTES DIMENSIONS TO BE VERIFIED ON SITE.

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no. 063 RG

contract

drawing title

drawing no.

scale 1 : 100

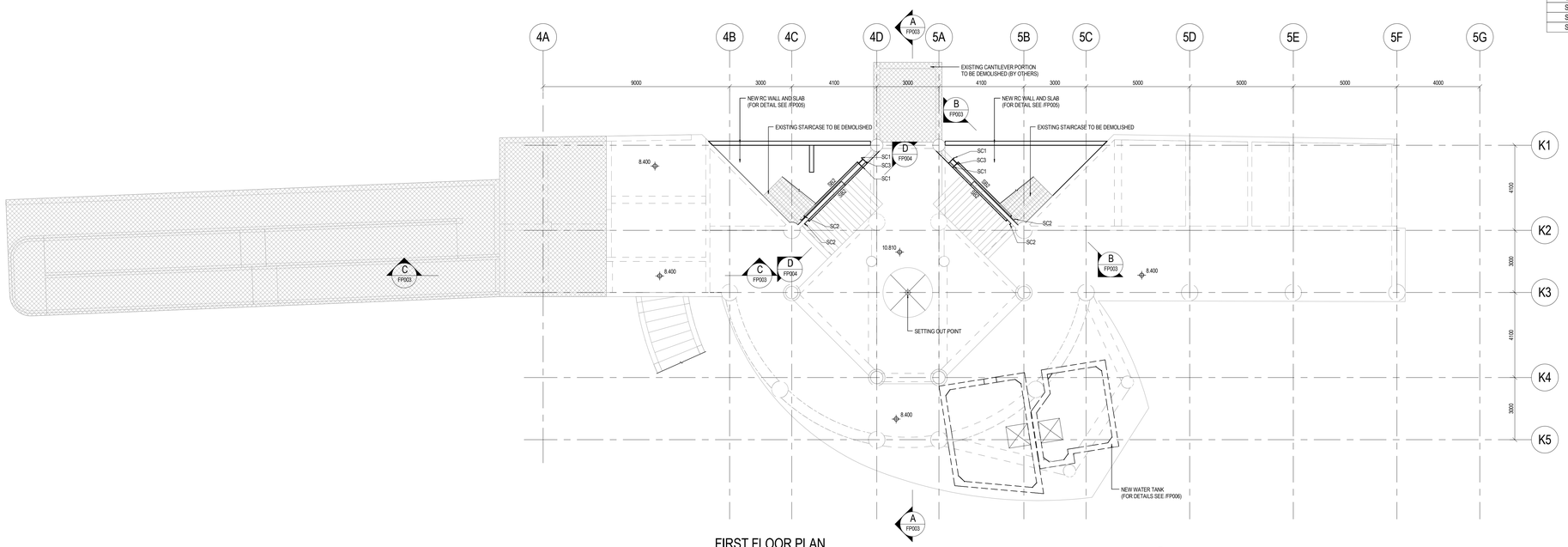
Office

100 50 0 50 100

0 1 2 3 4 5 m
1 : 100 SCALE BAR

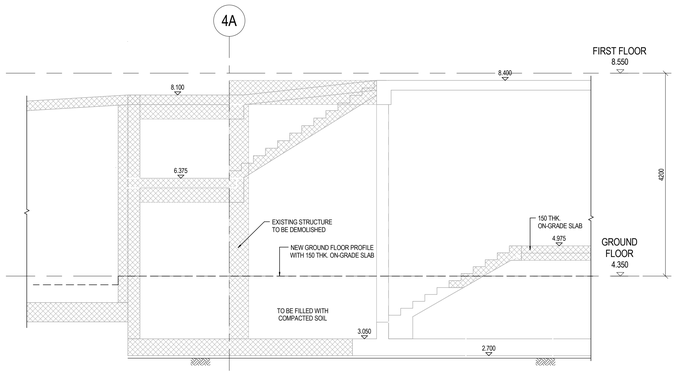
B1 1000 x 707

MEMBER MARK	MEMBER SIZE
SB2	300x90x41 kg/m CHANNEL
SC1	300x90x41 kg/m CHANNEL
SC2	260x90x35 kg/m CHANNEL
SC3	300x200x9mm RHS

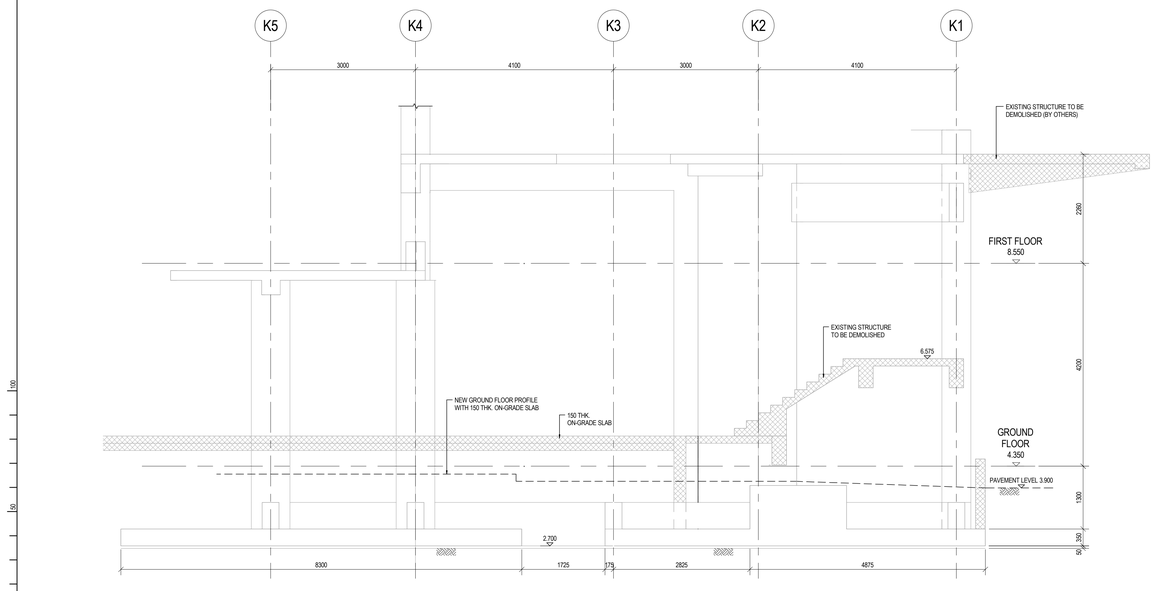


FIRST FLOOR PLAN
(1 : 100)

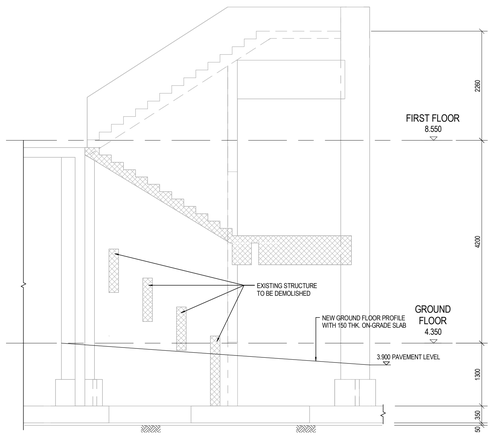
NOTE:- EXCEPT OTHERWISE STATED.
1. ALL WALLS TO BE 200 THICK.
2. ALL SLABS TO BE 150 THICK.



SEC. C - C
(1 : 50)



SEC. A - A
(1 : 50)



SEC. B - B
(1 : 50)

NOTES:

1. FOR GENERAL NOTES, SEE DRAWING NO. SE/8282/FP001.
2. ▨ DENOTES EXISTING R.C. STRUCTURE TO BE DEMOLISHED.
3. ' * ' DENOTES DIMENSIONS TO BE VERIFIED ON SITE.

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

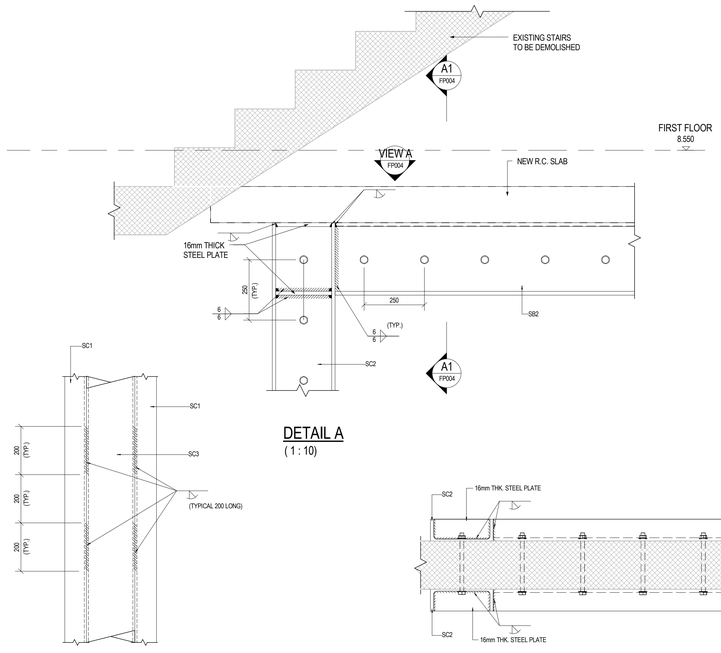
drawing no.

scale
1 : 100

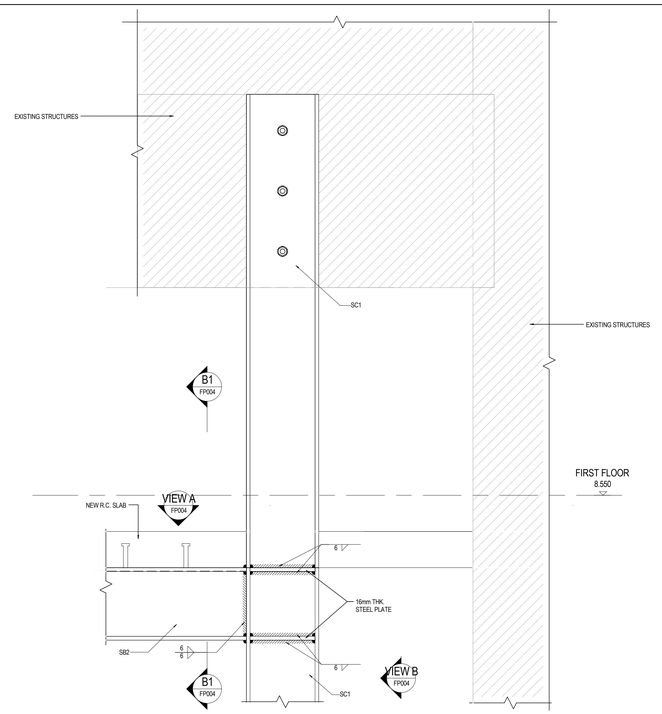
Office

0 1 2 3 4 5 m
1 : 100 SCALE BAR

B1 1000 x 707

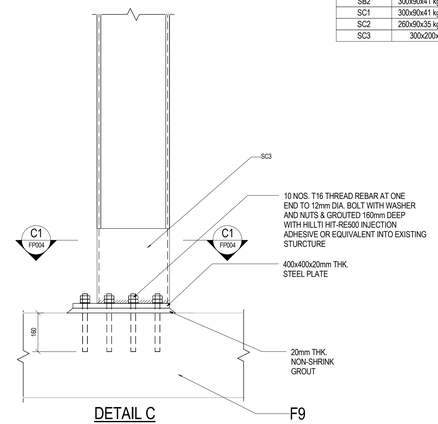


DETAIL A
(1 : 10)

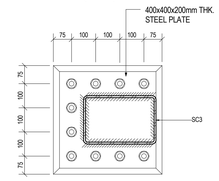


DETAIL B
(1 : 10)

MEMBER MARK	MEMBER SIZE
SB2	300x90x41 kg/m CHANNEL
SC1	300x90x41 kg/m CHANNEL
SC2	260x90x35 kg/m CHANNEL
SC3	300x200x9mm RHS

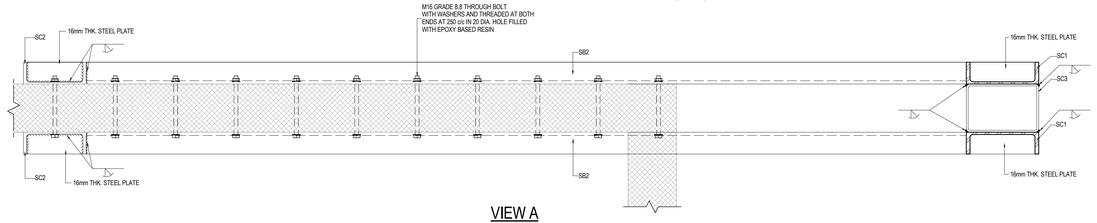


DETAIL C
(1 : 10)

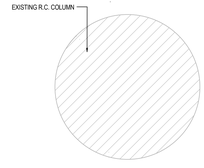


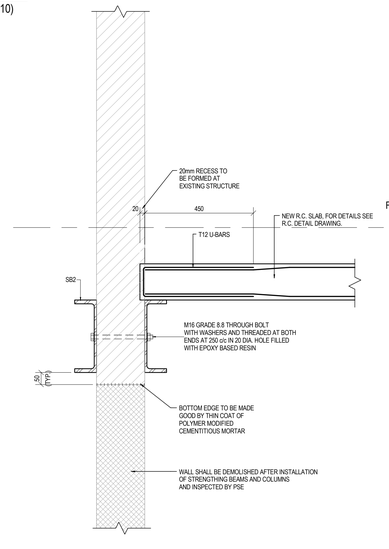
SEC. C1 - C1
(1 : 10)

VIEW B
(1 : 10)

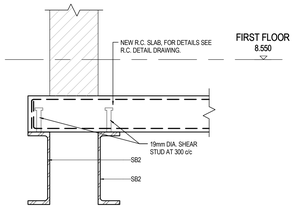


VIEW A
(1 : 10)

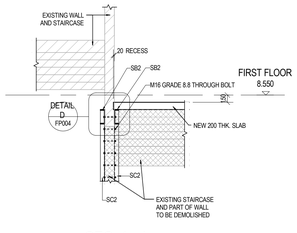




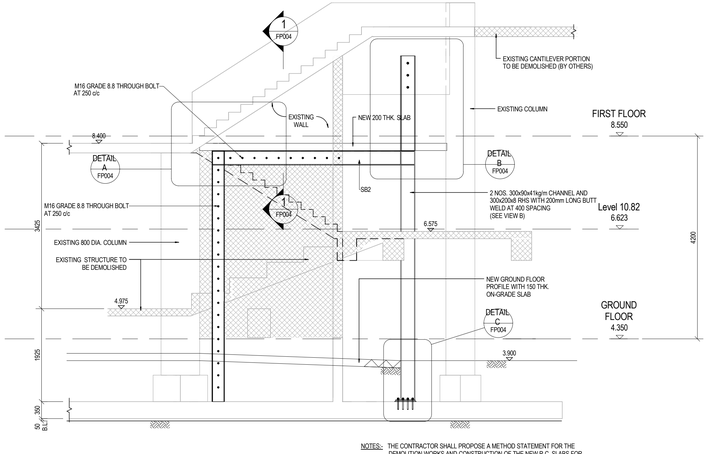
SEC. A1 - A1 (DETAIL D)
(1 : 10)



SEC. B1 - B1
(1 : 10)



SEC. 1 - 1
(1 : 50)



SEC. D - D
(1 : 50)

NOTES:-
THE CONTRACTOR SHALL PROPOSE A METHOD STATEMENT FOR THE DEMOLITION WORKS AND CONSTRUCTION OF THE NEW R.C. SLABS FOR THE APPROVAL OF THE SO (AT LEAST 3 WEEKS PRIOR TO THE COMMENCEMENT OF THE DEMOLITION WORKS), AND SUCH METHOD STATEMENT SHALL FOLLOW THE FOLLOWING SEQUENCES:
STEP 1: DEMOLISH THE STAIRCASE SLABS AND LANDING.
STEP 2: CONSTRUCT THE STEEL PORTAL FRAME.
STEP 3: CONSTRUCT THE NEW R.C. SLAB.
STEP 4: DEMOLISH THE R.C. WALL BY SAW CUTTING.

NOTES:
1. FOR GENERAL NOTES, SEE DRAWING NO. SE/8282/FP001.
2. ▨ DENOTES EXISTING R.C. STRUCTURE.
3. ▩ DENOTES EXISTING R.C. STRUCTURE TO BE DEMOLISHED.
4. ' * ' DENOTES DIMENSIONS TO BE VERIFIED ON SITE.

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no. 063 RG

contract

drawing title

drawing no.

scale 1 : 100

Office

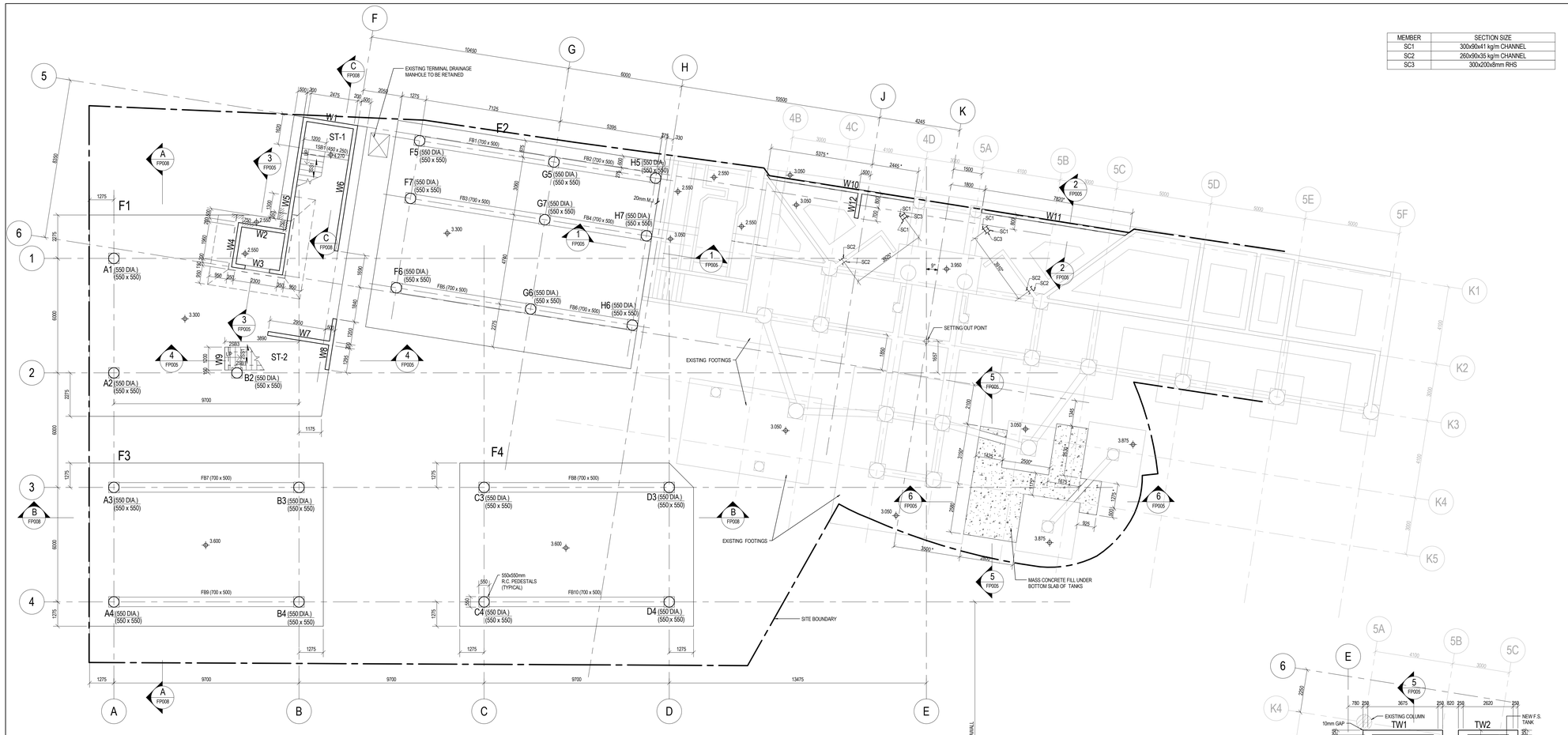
0 1 2 3 4 5 m
1 : 100 SCALE BAR

B1 1000 x 707

MEMBER	SECTION SIZE
SC1	300x90x41 kg/m CHANNEL
SC2	260x90x35 kg/m CHANNEL
SC3	300x200x8mm RHS

NOTES:

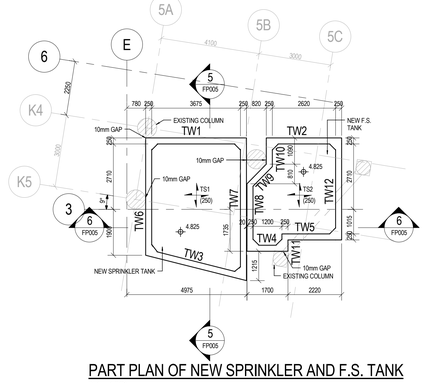
1. FOR GENERAL NOTES, SEE DRG. NO. SE/8282/FP001.
2. * PS * DENOTES PRECAST R.C. SLAB.
3. * * DENOTES DIMENSIONS TO BE VERIFIED ON SITE.
4. DENOTES EXISTING R.C. STRUCTURE.



FOUNDATION PLAN

(1 : 100)

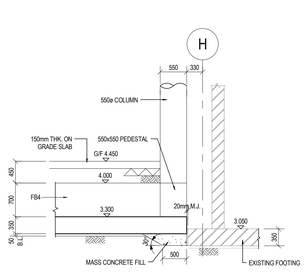
UNLESS OTHERWISE STATED.
1. ALL NEW FOOTINGS TO BE 350mm THICK.
2. ALL NEW R.C. WALLS TO BE 200mm THICK.
3. ⏚ DENOTES THE TOP LEVEL OF THE FOOTINGS



PART PLAN OF NEW SPRINKLER AND F.S. TANK

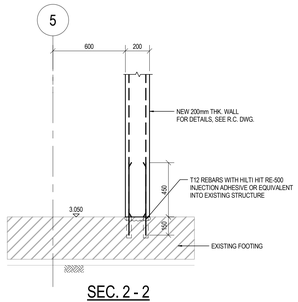
(1 : 100)

UNLESS OTHERWISE STATED.
1. ALL NEW R.C. WALLS TO BE 250mm THICK.



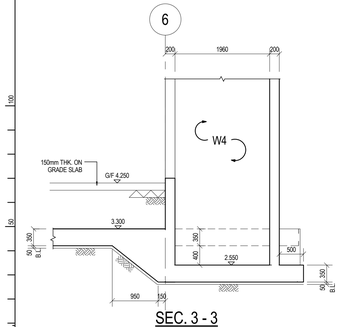
SEC. 1 - 1

(1 : 50)



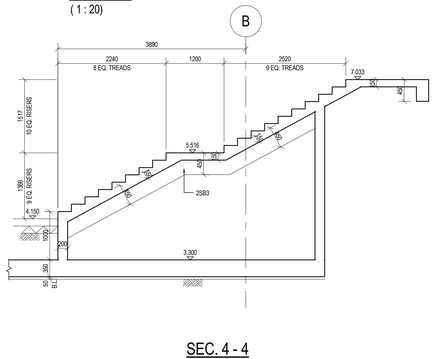
SEC. 2 - 2

(1 : 20)



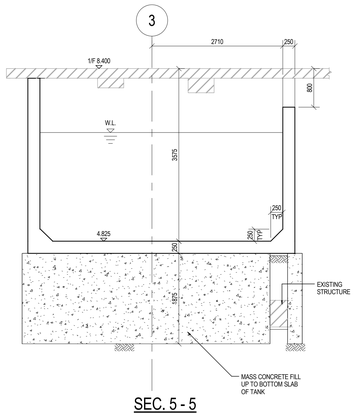
SEC. 3 - 3

(1 : 50)



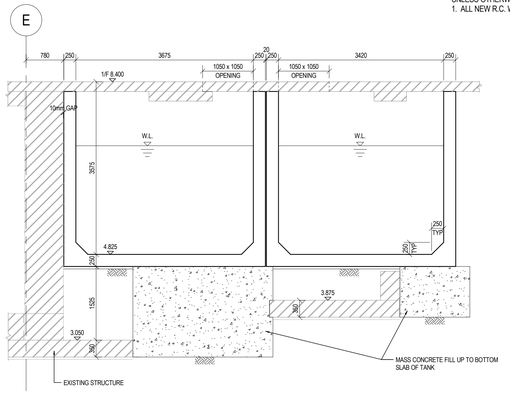
SEC. 4 - 4

(1 : 50)



SEC. 5 - 5

(1 : 50)



SEC. 6 - 6

(1 : 50)

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

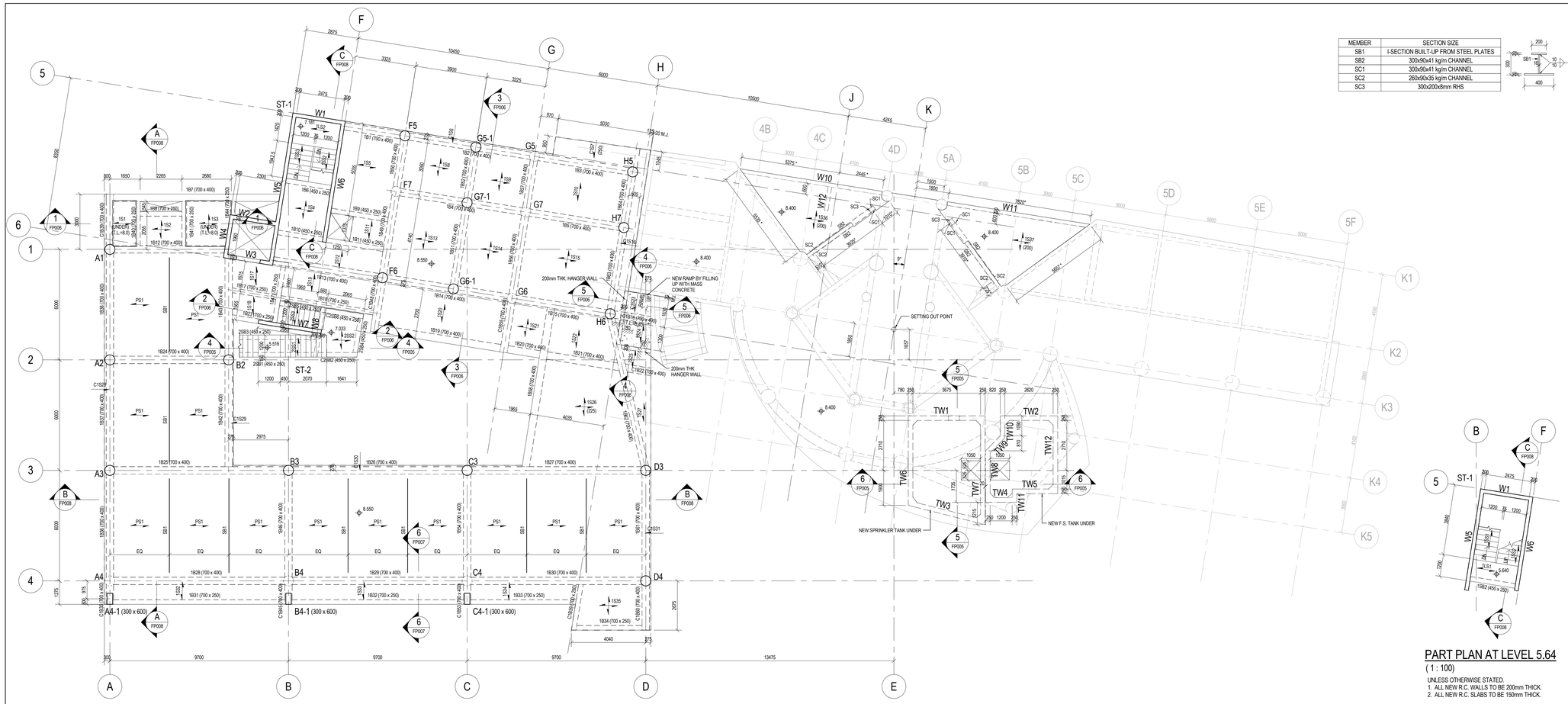
drawing no.

scale 1 : 100

Office

0 1 2 3 4 5 m
1 : 100 SCALE BAR

B1 1000 x 707

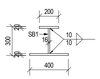


FIRST FLOOR PLAN

(1 : 100)

UNLESS OTHERWISE STATED.
1. ALL NEW R.C. WALLS TO BE 200mm THICK.
2. ALL TANK WALL TW1~TW12 TO BE 250mm THICK
3. ALL NEW R.C. COLUMNS TO BE 550mm DIA.
4. ALL NEW R.C. SLABS TO BE 150mm THICK.
5. PROPS TO BEAMS SHALL ONLY BE REMOVED 28 DAYS AFTER THEIR CASTING.

MEMBER	SECTION SIZE
SB1	I-SECTION BUILT-UP FROM STEEL PLATES
SB2	300x90x41 kg/m CHANNEL
SC1	300x90x41 kg/m CHANNEL
SC2	260x90x35 kg/m CHANNEL
SC3	300x200x8mm RHS



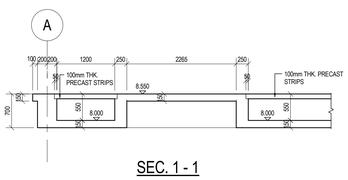
NOTES:

1. FOR GENERAL NOTES, SEE DRG. NO. SE/8282/FP001.
2. " PS " DENOTES PRECAST R.C. SLAB.
3. " * " DENOTES DIMENSIONS TO BE VERIFIED ON SITE.
4. DENOTES EXISTING R.C. STRUCTURE.

PART PLAN AT LEVEL 5.64

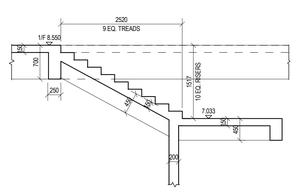
(1 : 100)

UNLESS OTHERWISE STATED.
1. ALL NEW R.C. WALLS TO BE 200mm THICK.
2. ALL NEW R.C. SLABS TO BE 150mm THICK.



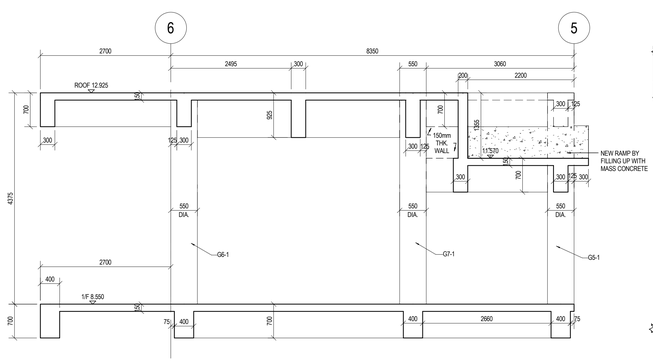
SEC. 1 - 1

(1 : 50)



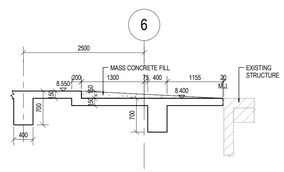
SEC. 2 - 2

(1 : 50)



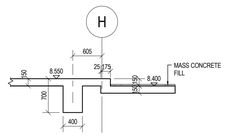
SEC. 3 - 3

(1 : 50)



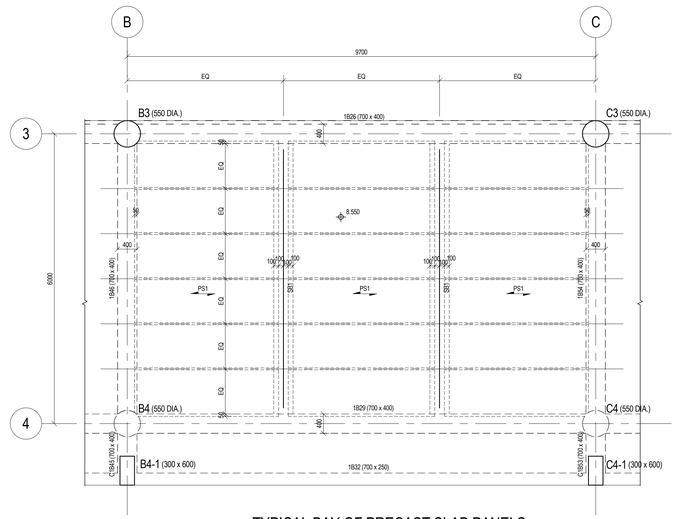
SEC. 4 - 4

(1 : 50)



SEC. 5 - 5

(1 : 50)



TYPICAL BAY OF PRECAST SLAB PANELS

(1 : 50)

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

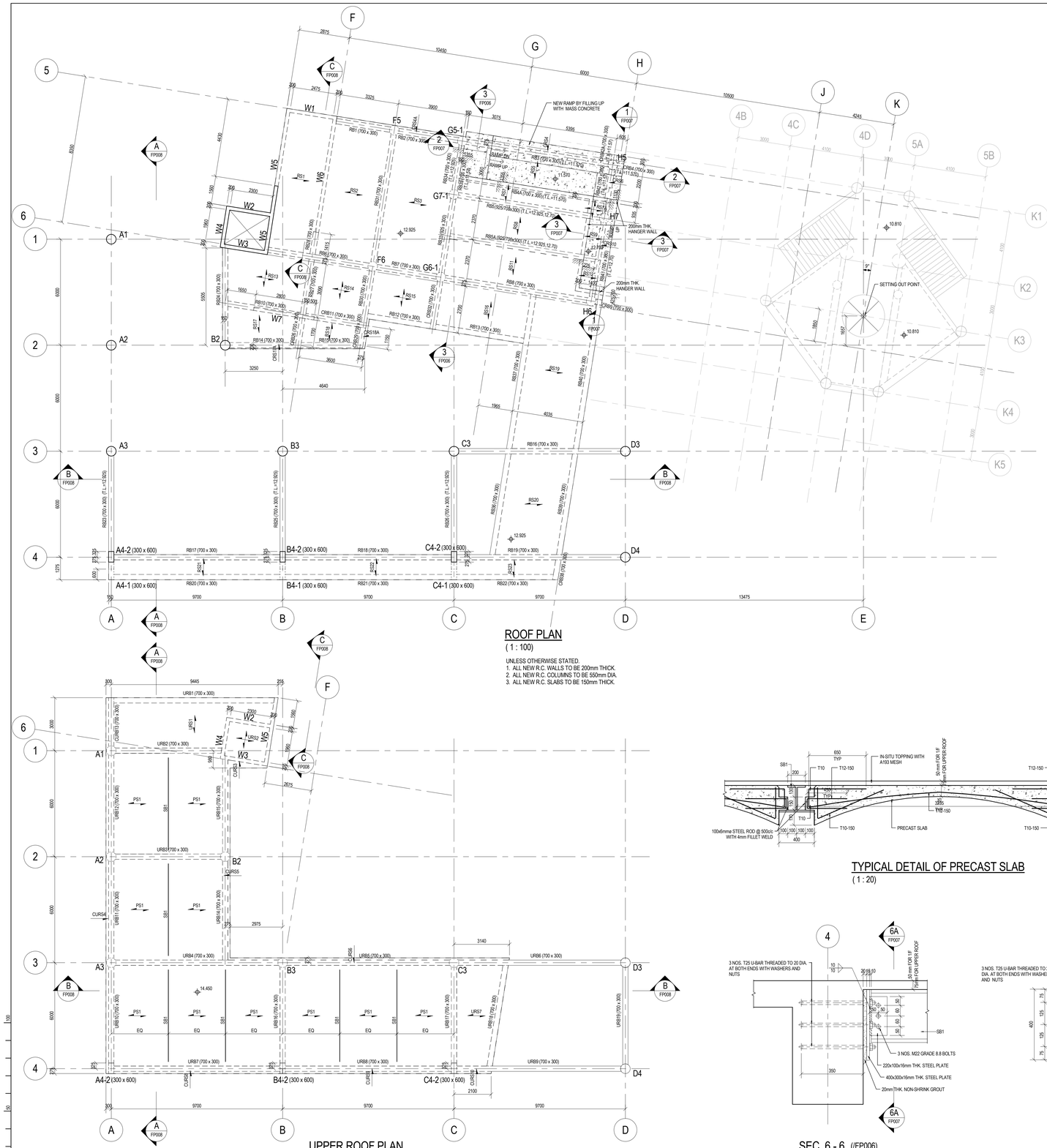
drawing no.

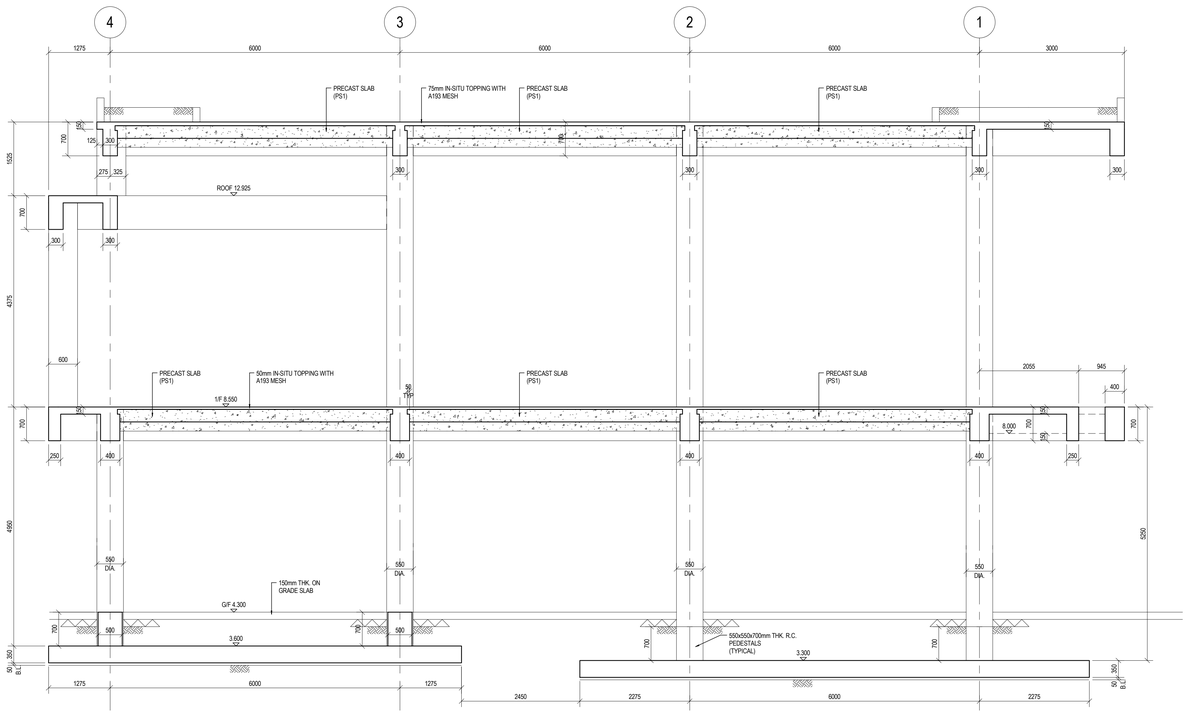
scale 1 : 100

Office

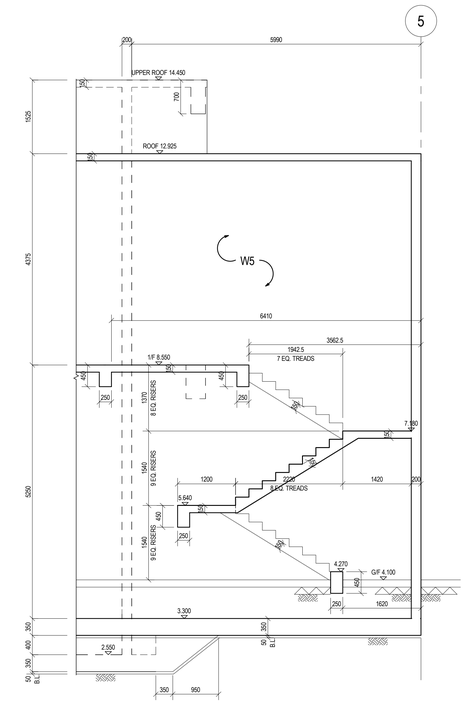
0 1 2 3 4 5 m
1 : 100 SCALE BAR

B1 1000 x 707

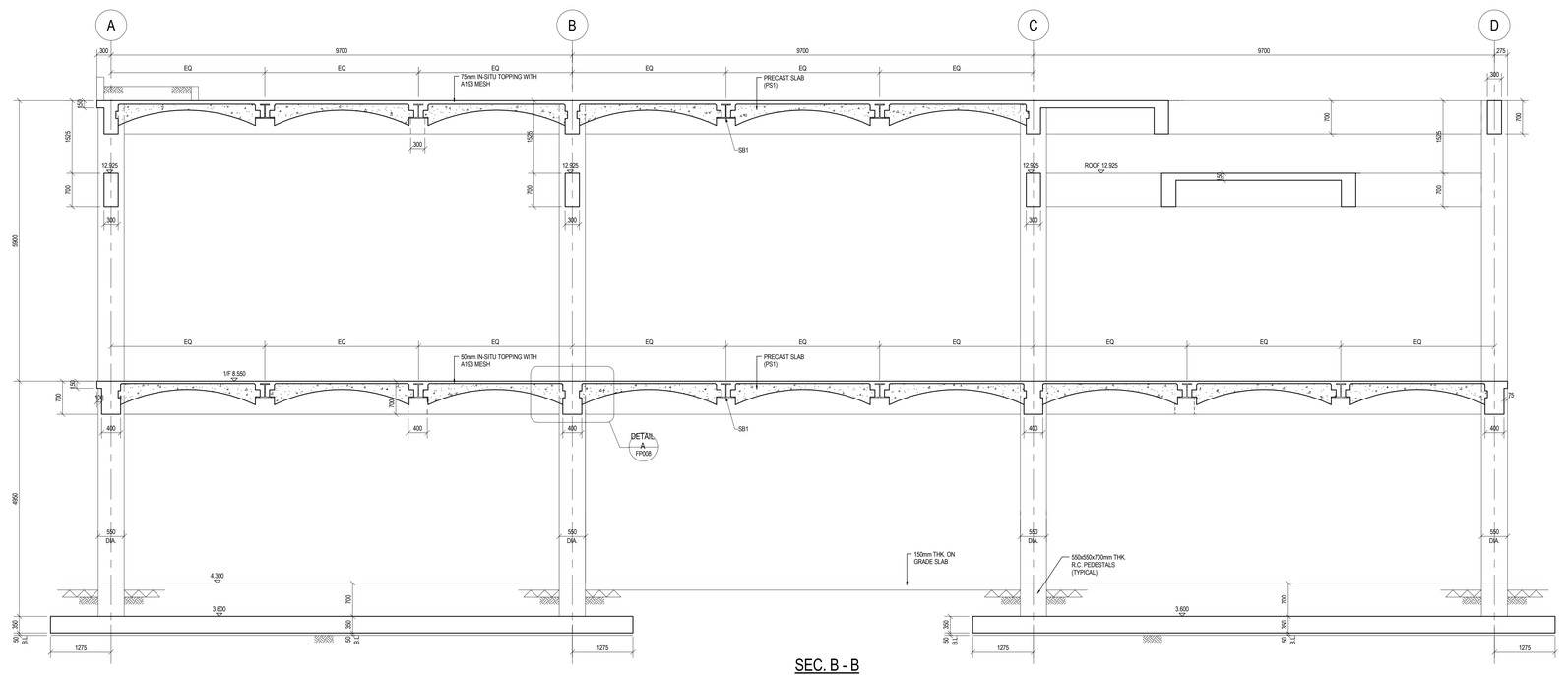

F
G
H
J
K
4B
4C
4D
5A
5B
K1
K2
K3
K4
K5
5
6
1
2
3
4
A1
A2
A3
B2
B3
C3
D3
D4
A
B
C
D
E
W1
W2
W3
W4
W5
W6
W7
F5
F6
G5-1
G6-1
G7-1
H5
H6
H7
NEW RAMP BY FILLING UP WITH MASS CONCRETE
200mm THK. HANGER WALL
SETTING OUT POINT.
A4-2 (300 x 600)
B4-2 (300 x 600)
C4-2 (300 x 600)
A4-1 (300 x 600)
B4-1 (300 x 600)
C4-1 (300 x 600)
RB1 (700 x 300)
RB2 (700 x 300)
RB3 (700 x 300)
RB4 (700 x 300)
RB5 (700 x 300)
RB6 (700 x 300)
RB7 (700 x 300)
RB8 (700 x 300)
RB9 (700 x 300)
RB10 (700 x 300)



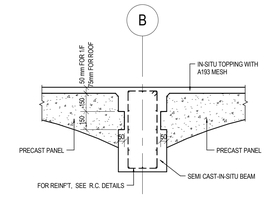
SEC. A - A
(1 : 50)



SEC. C - C
(1 : 50)



SEC. B - B
(1 : 50)



DETAIL A
(1 : 20)
(SHOWING TYPICAL DETAILS BETWEEN PRECAST PANEL AND R.C. BEAM

NOTES:

1. FOR GENERAL NOTES, SEE DRG. NO. SE/8282/FP001.
2. " PS " DENOTES PRECAST R.C. SLAB.
3. " * " DENOTES DIMENSIONS TO BE VERIFIED ON SITE.
4. DENOTES EXISTING R.C. STRUCTURE.

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

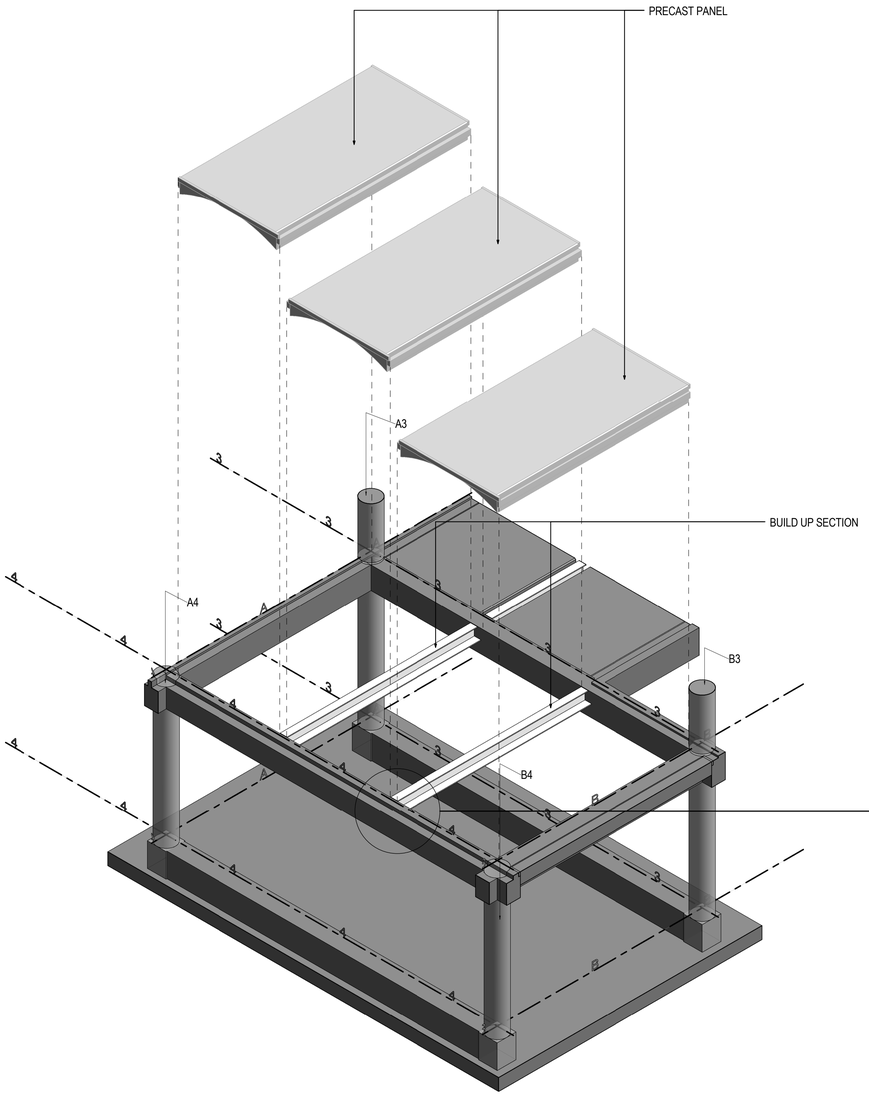
drawing no.

scale
1 : 100

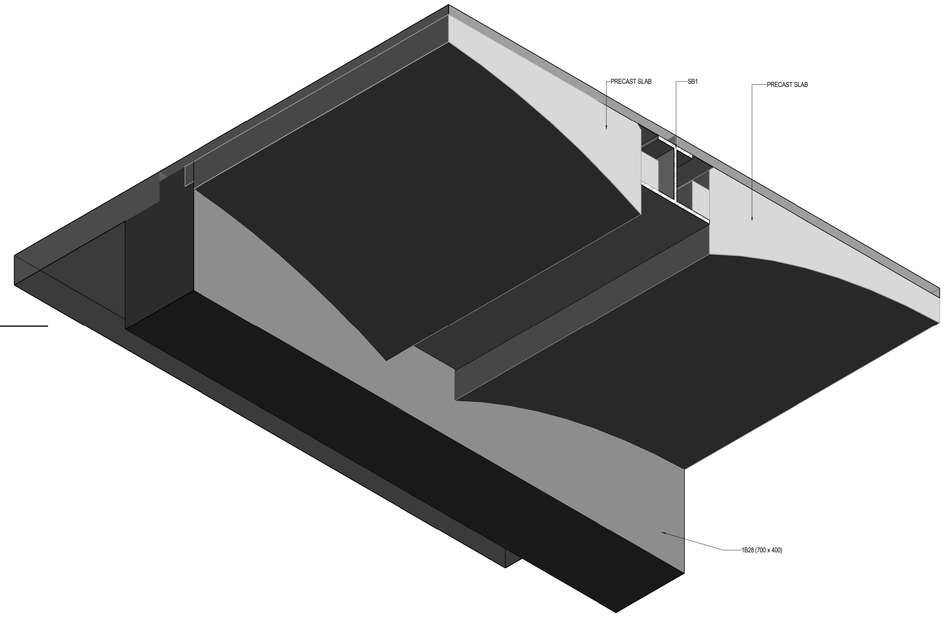
Office

0 500 1000 1500 2000 2500 mm
1 : 50 SCALE BAR

B1 1000 x 707



PRECAST SLAB
(1 : 50)



PRECAST SLAB
(1 : 10)

NOTES:

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed
date

contract no.

file no.

project no.

contract

drawing title

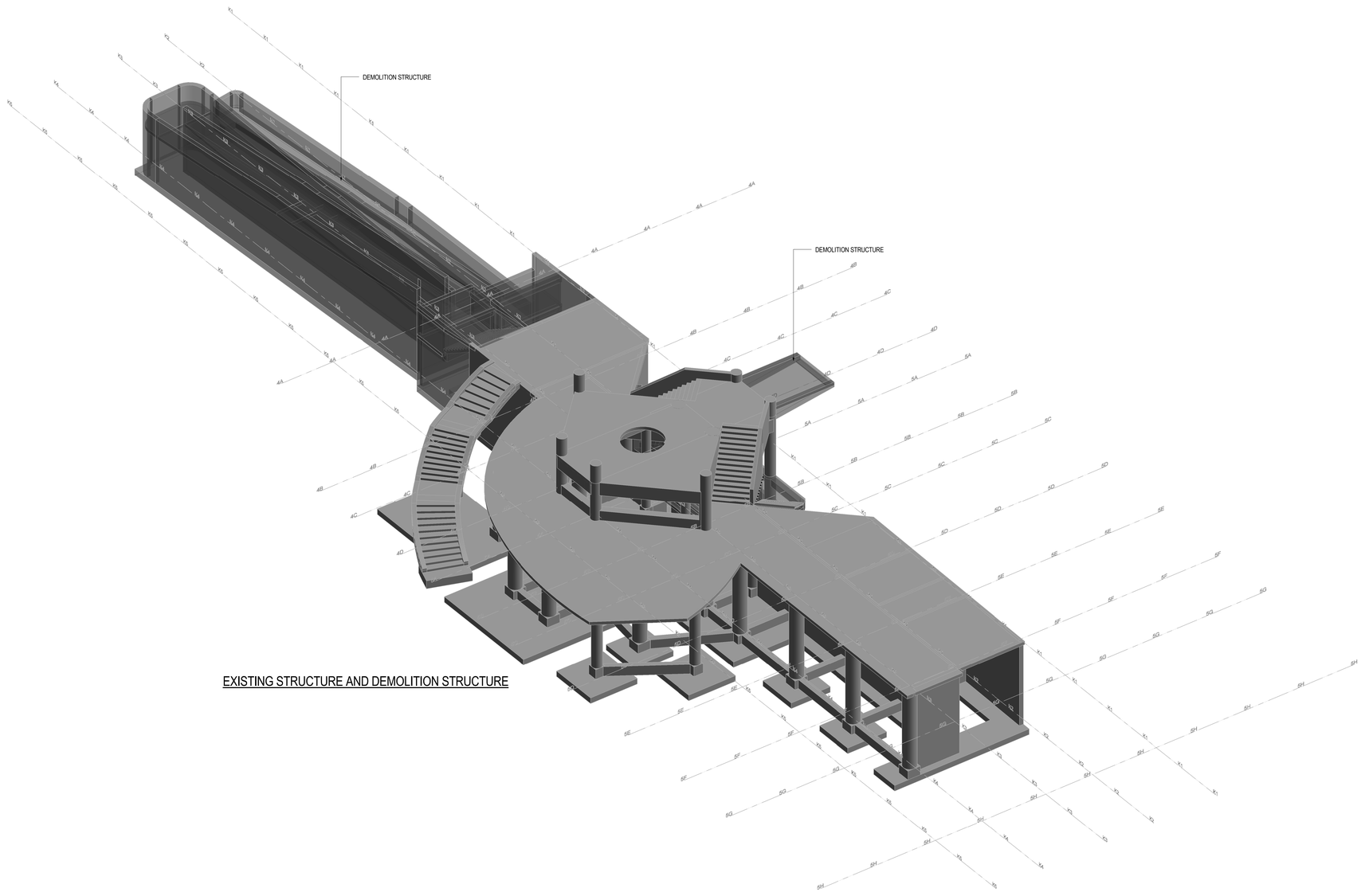
drawing no.

scale
1 : 100

Office

100 50 0 50 100

B1 1000 x 707



EXISTING STRUCTURE AND DEMOLITION STRUCTURE

NOTES:

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

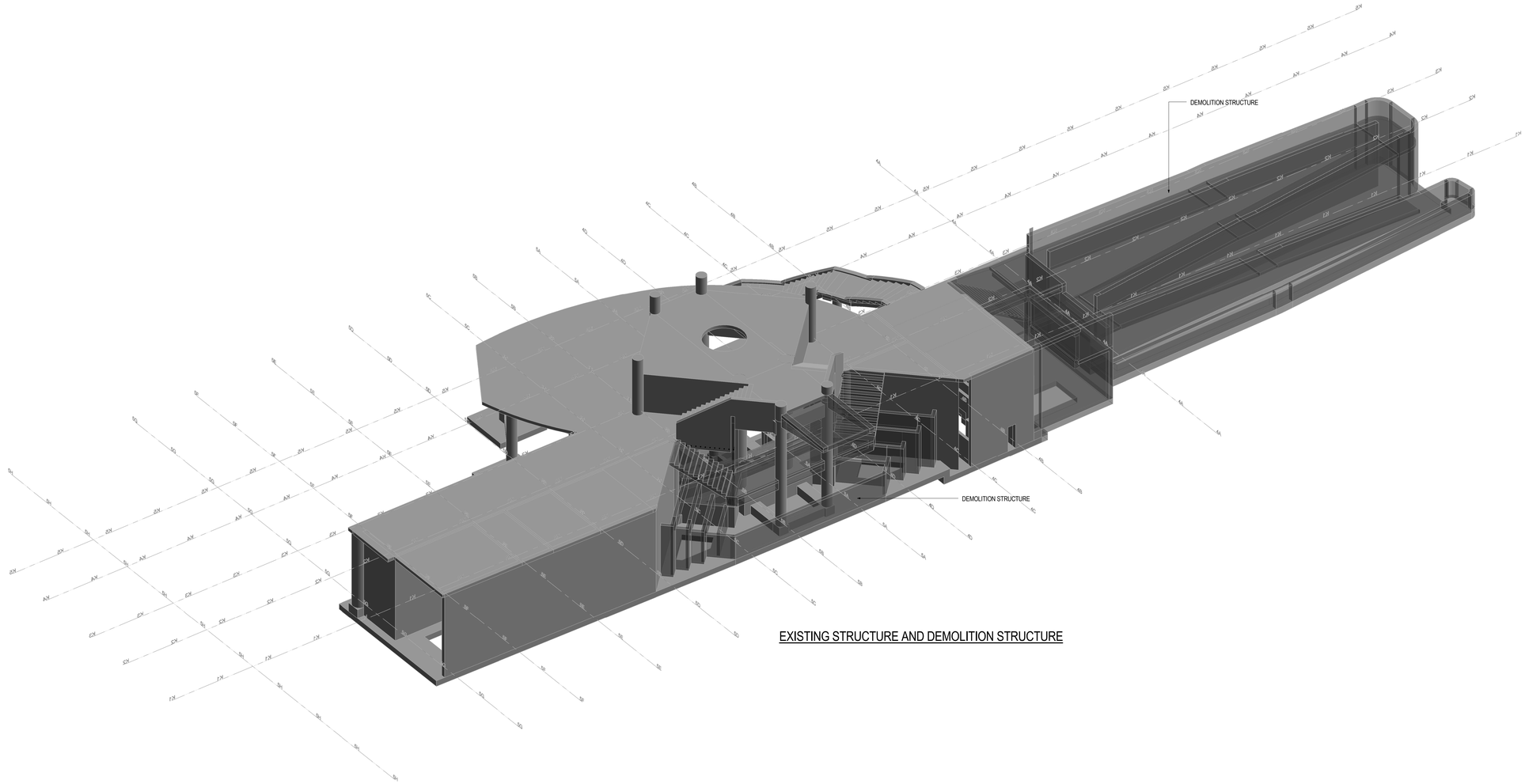
drawing no.

scale
1 : 100

Office

0 50 100

B1 1000 x 707



EXISTING STRUCTURE AND DEMOLITION STRUCTURE

NOTES:

no.	date	description	initial

REVISION

	name	date
designed		
drawn		
checked		

approved

Chief Structural Engineer .....

Senior Structural Engineer .....

Project Engineer ..... signed ..... date

contract no.

file no.

project no.

contract

drawing title

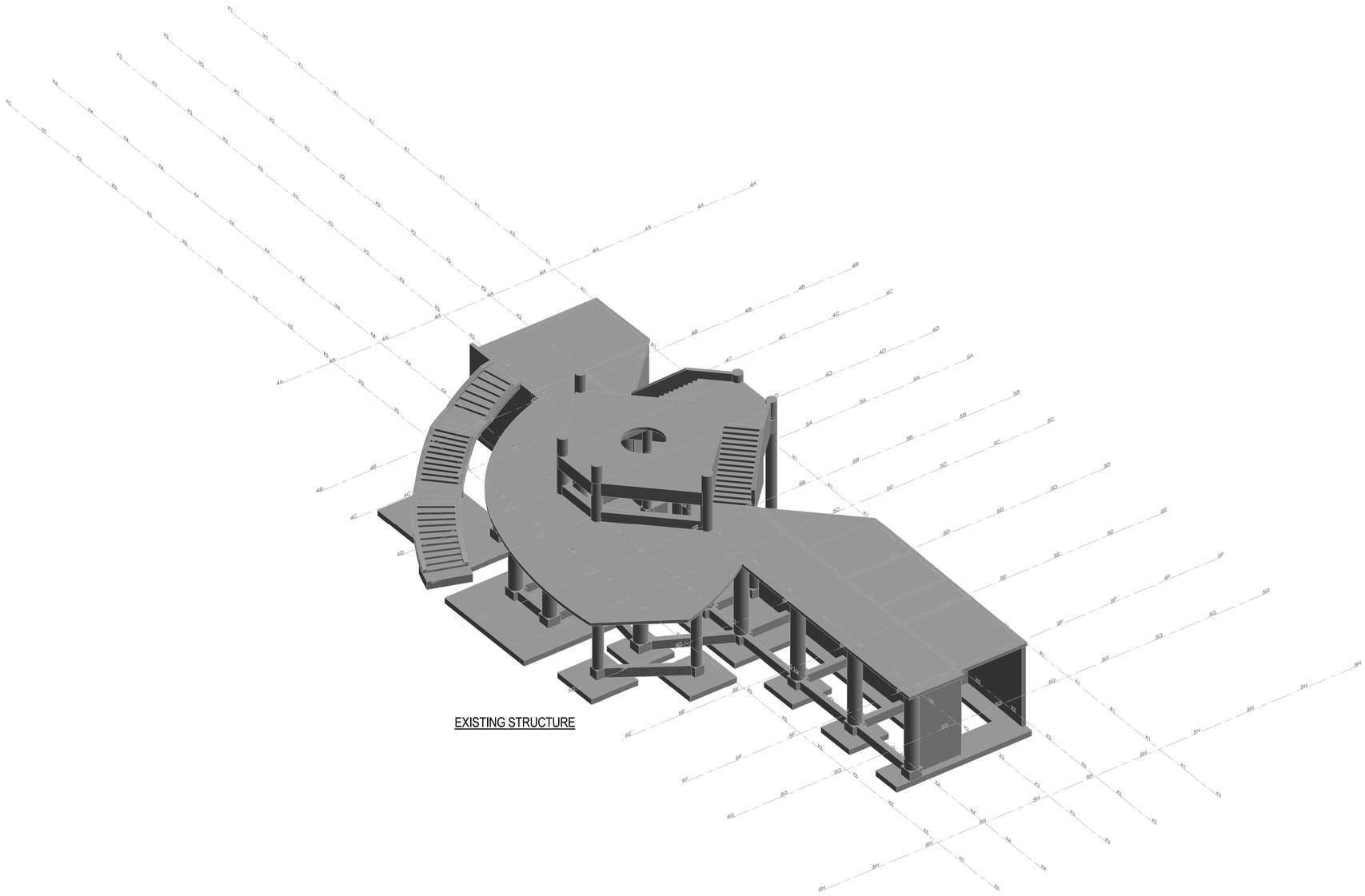
drawing no.

scale

1 : 100

Office

B1 1000 x 707



EXISTING STRUCTURE

NOTES:

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed
date

contract no.

file no.

project no.

contract

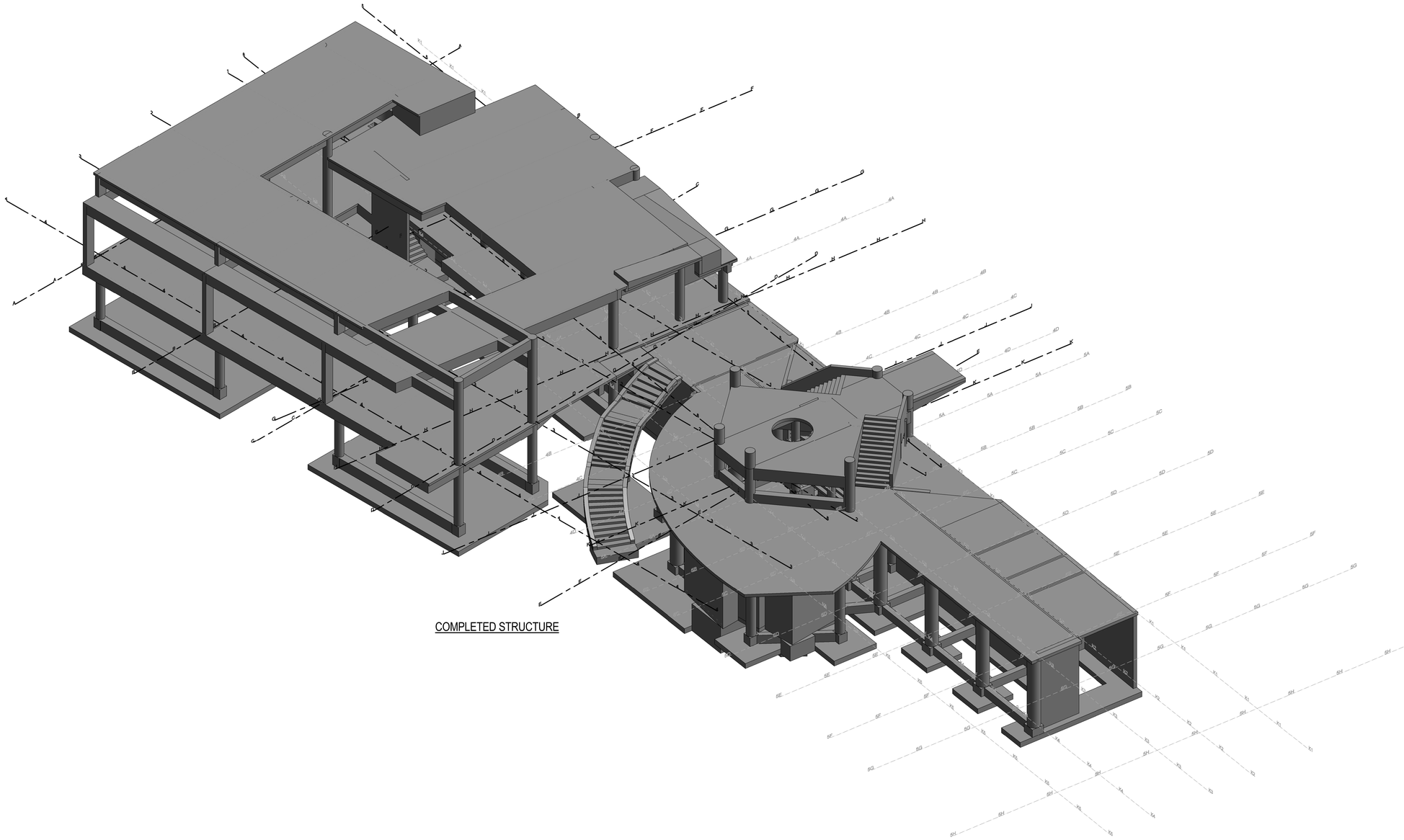
drawing title

drawing no.

scale
1 : 100

Office

B1 1000 x 707



COMPLETED STRUCTURE

NOTES:

no.	date	description	initial

REVISION

	name	date
designed		
drawn		
checked		

approved

Chief Structural Engineer

Senior Structural Engineer

Project Engineer

signed date

contract no.

file no.

project no.

contract

drawing title

drawing no.

scale

1 : 100

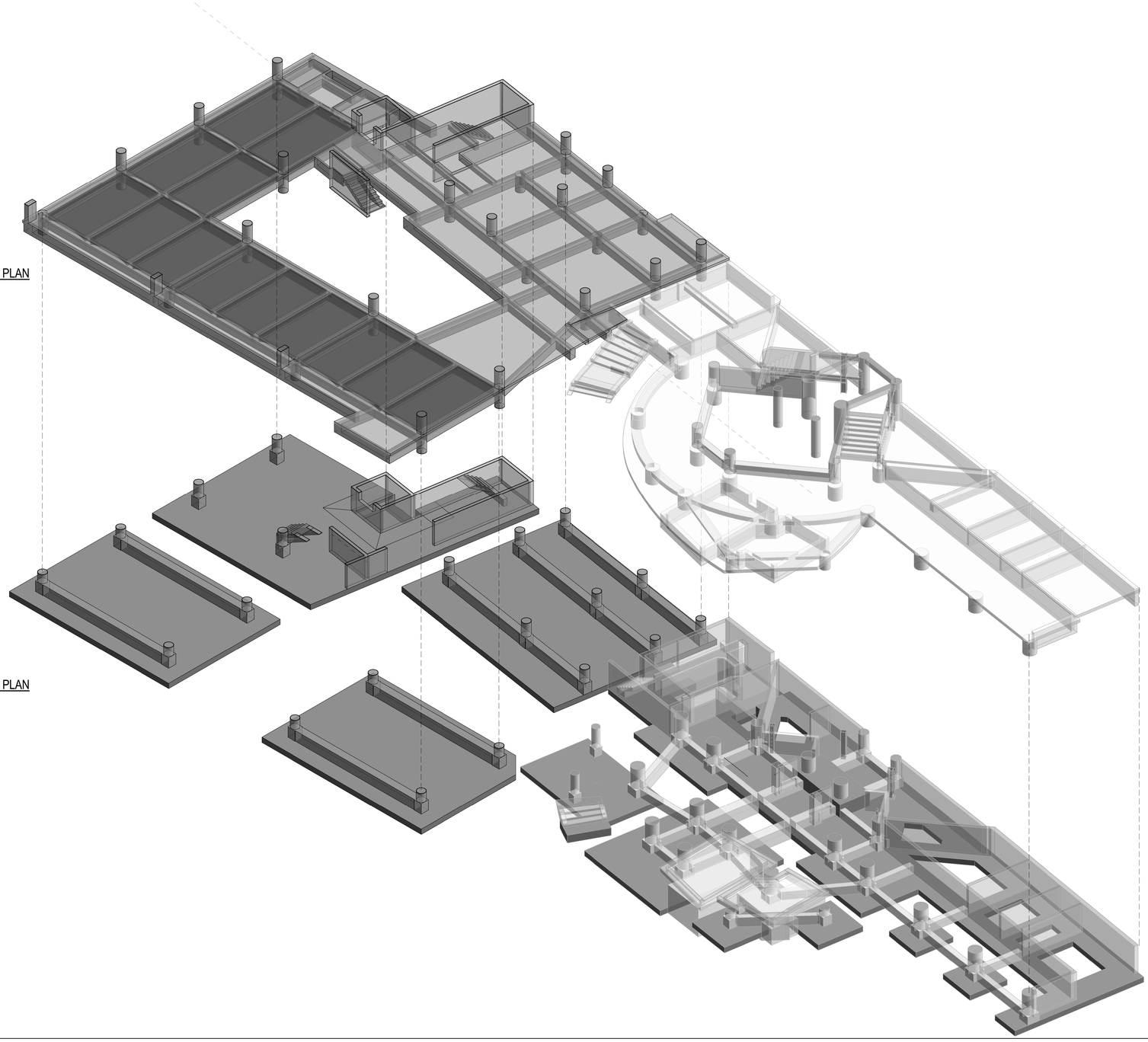
Office

0 50 100

B1 1000 x 707

COLOUR REF.	STRUCTURAL MEMBER
	COLUMN, WALL / EXISTING COLUMN, WALL
	BEAM / EXISTING BEAM
	FOOTING, SLAB / EXISTING FOOTING, SLAB
	PRECAST SLAB
	STAIRCASE

FIRST FLOOR PLAN



FOUNDATION PLAN

NOTES:

no.	date	description	initial
REVISION			

	name	date
designed		
drawn		
checked		

approved
Chief Structural Engineer
Senior Structural Engineer
Project Engineer
signed date

contract no.

file no.

project no.

contract

drawing title

drawing no.

scale
1 : 100

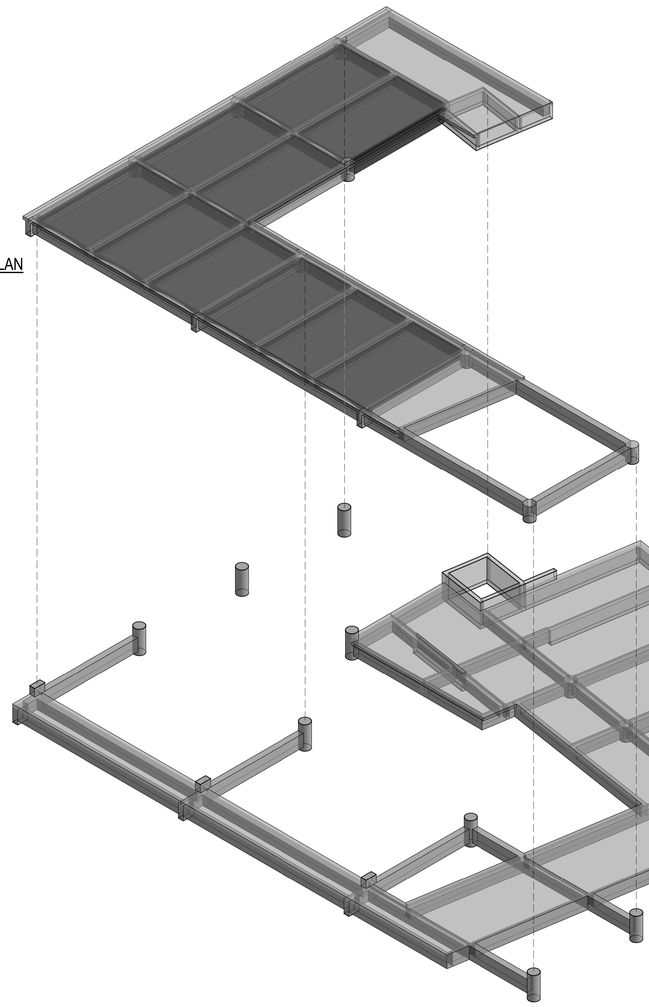
Office

0 50 100

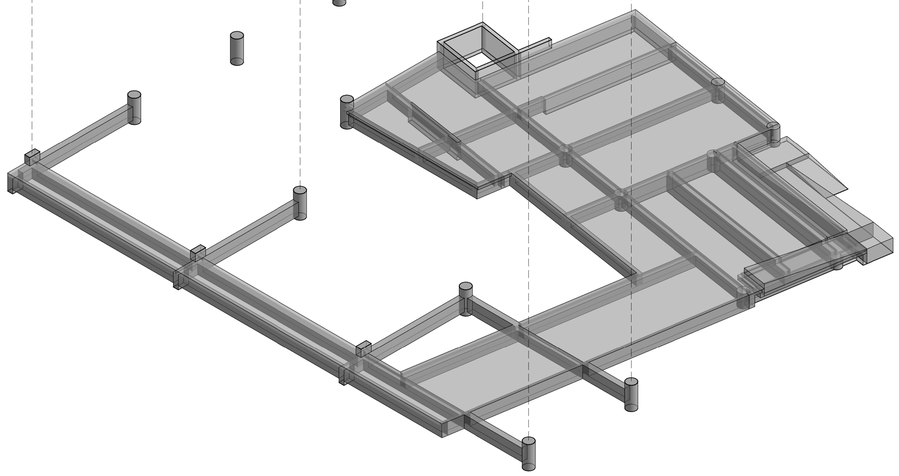
B1 1000 x 707

COLOUR REF.	STRUCTURAL MEMBER
	COLUMN, WALL / EXISTING COLUMN, WALL
	BEAM / EXISTING BEAM
	FOOTING, SLAB / EXISTING FOOTING, SLAB
	PRECAST SLAB
	STAIRCASE

UPPER ROOF PLAN



ROOF PLAN



NOTES:

no.	date	description	initial
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drawn		
checked		

approved

Chief Structural Engineer .....

Senior Structural Engineer .....

Project Engineer .....

signed date

contract no.

file no.

project no.

contract

drawing title

drawing no.

scale

1 : 100

Office

B1 1000 x 707