

Construction Compliance

DATE 21/01/2022

TO Richard Crookes Constructions Pty Ltd

ATTENTION PCA

PROJECT Upgrade to Chatswood Public School – Stage 3

RE Stage 3 – Building V – Car Park Sports Court

I, Bryan King

of SCP Consulting Pty Ltd

at Level 2, 507 Kent Street, Sydney NSW 2000

Hereby certify that:

- 1 I am a practicing structural engineer certified under NER.
- 2 I am the holder of documentary evidence from Engineers Australia to that effect.
- I am currently practicing as a Structural Engineer with SCP Consulting Pty Ltd, of which I am a Director.
- I have carried out, or have caused to have carried out, periodic inspections of the structural work during the construction. SCP Consulting did not act in a supervisory capacity and could only observe the status of the work at the time of the inspection.
- In accordance with DA Condition D10a, I am satisfied that the structural works inspected for the above project have been constructed in accordance with the intent of the structural engineering drawings and written engineering instructions issued up to the time of the inspections.





In accordance with DA Condition D10b, the drawings listed have been checked with those listed on the final Design Certificate. The structural engineering drawings referred to in this certificate are:

DRAWING #	TITLE	REVISION
PS-STR-V-DW-0000	TITLE SHEET	2
PS-STR-V-DW-0010	LOADING PLANS	2
PS-STR-A-DW-0301	FOOTING PLAN	3
PS-STR-V-DW-0305	FOOTING DETAILS SHEET 1	4
PS-STR-V-DW-0306	FOOTING DETAILS SHEET 2	3
PS-STR-V-DW-0307	FOOTING DETAILS SHEET 3	3
PS-STR-V-DW-0308	FOOTING DETAILS SHEET 4	3
PS-STR-V-DW-0309	FOOTING DETAILS SHEET 5	1
PS-STR-V-DW-0401	COLUMN SCHEDULE SHEET 1	2
PS-STR-V-DW-0901	LOWER GROUND GENERAL ARRANGEMENT PLAN	6
PS-STR-V-DW-0905	SLAB ON GROUND DETAILS SHEET 1	4
PS-STR-V-DW-0910	OSD TANK PLANS	3
PS-STR-V-DW-0920	GROUND FLOOR GENERAL ARRANGEMENT PLAN	5
PS-STR-V-DW-0925	GROUND FLOOR DETAILS SHEET 1	2

- 7 In providing this Certificate, I have relied upon the following documentation supplied to me regarding the construction:
 - Copies of our Engineering Inspection Reports signed off by RCC that any rectification work noted in the reports has been completed.
 - Concrete mix designs by Holcim dated 10/03/21.
 - Documents indicating the 28-day compression strengths achieved by test cylinders taken from the concrete supplied noting concrete strength matches or exceeds requirements noted on the drawings.
- 8 This certificate excludes the following elements which have been designed, constructed and certified by others:
 - All piles, pile caps and OSD Shoring by ACE Civil Pty Ltd.
 - Horizontal post tensioned floor slab by Quantum, designed in accordance with SCP design information as provided on the SCP drawings and design specifications DB1 and DB2.
 - Perimeter Steel frame with tension mesh by Halina Engineers/GK BLUE
 - Waterproofing and performance of all membranes.
 - Drainage in general.
- 9 This certificate does not relieve any other party of its responsibilities, liabilities or contractual obligations.



Yours faithfully SCP Consulting Pty Ltd

Bryan King BEng (Struct), MIEAust CPEng NER APEC Eng IntPE(Aus)

Director

CARPARK / SPORTS COURT

STRUCTURAL DRAWING LIST

DRAWING TITLE

Series 00 - General
PS-STR-V-DW-0000
TITLE SHEET
PS-STR-V-DW-0010
LOADING PLANS
Series 03 - Footings
PS-STR-V-DW-0301
PS-STR-V-DW-0305
FOOTING DETAILS SHEET 1
PS-STR-V-DW-0306
FOOTING DETAILS SHEET 2
PS-STR-V-DW-0307
FOOTING DETAILS SHEET 3
PS-STR-V-DW-0308
PS-STR-V-DW-0309
Series 04 - Columns
PS-STR-V-DW-0401
COLUMN SCHEDULE SHEET 1

DRAWING No.

PS-STR-V-DW-0901 LOWER GROUND GENERAL ARRANGEMENT PLAN
PS-STR-V-DW-0905 SLAB ON GROUND DETAILS SHEET 1

PS-STR-V-DW-0910 OSD TANK PLANS

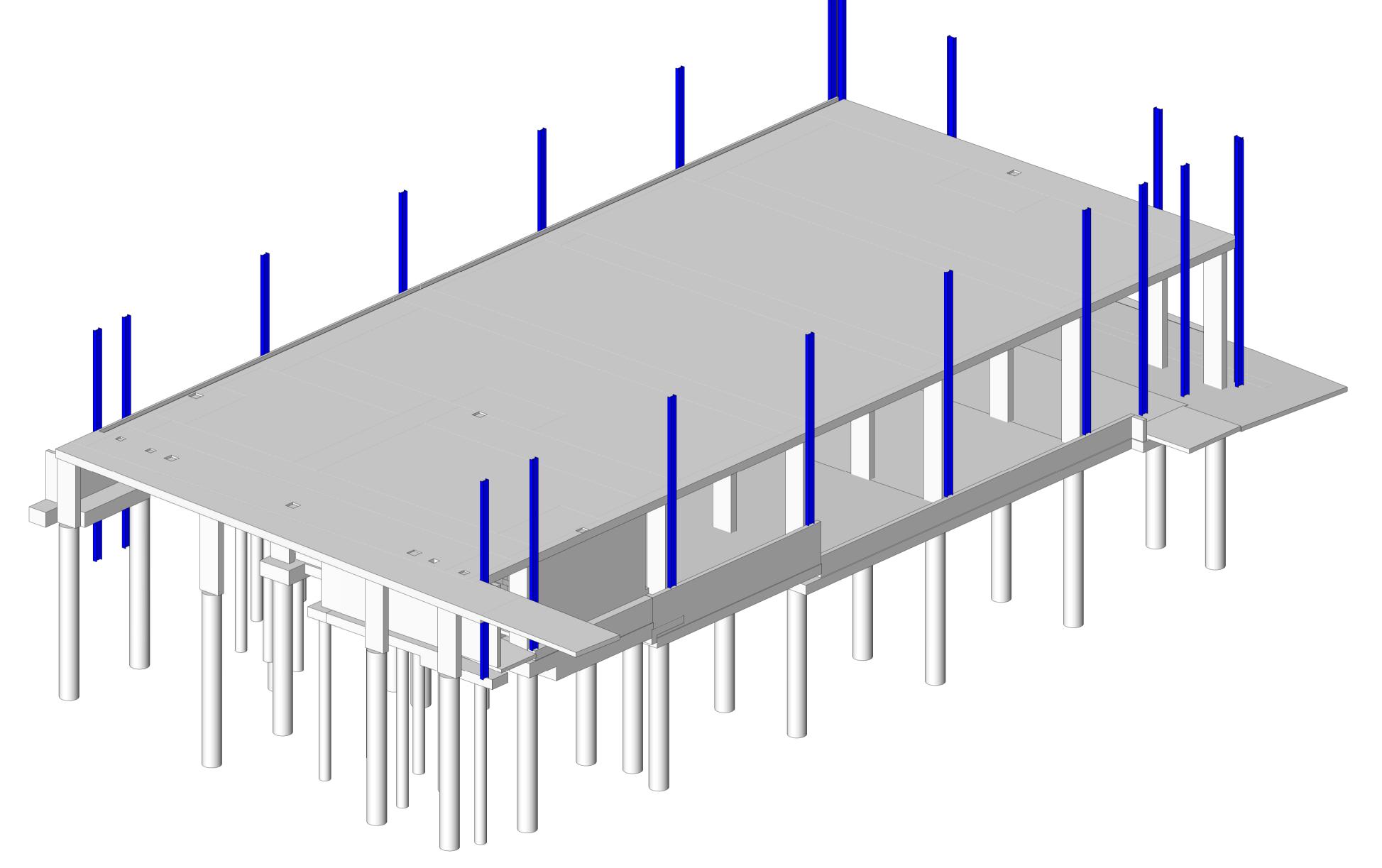
PS-STR-V-DW-0920 GROUND FLOOR GENERAL ARRANGEMENT PLAN PS-STR-V-DW-0925 GROUND FLOOR DETAILS SHEET 1

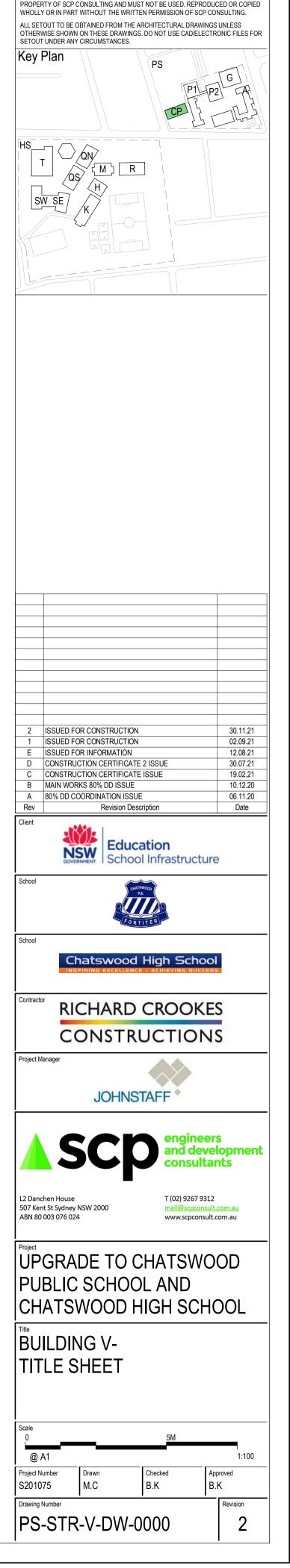
SITE WIDE STRUCTURAL DRAWING LIST DRAWING No. DRAWING TITLE

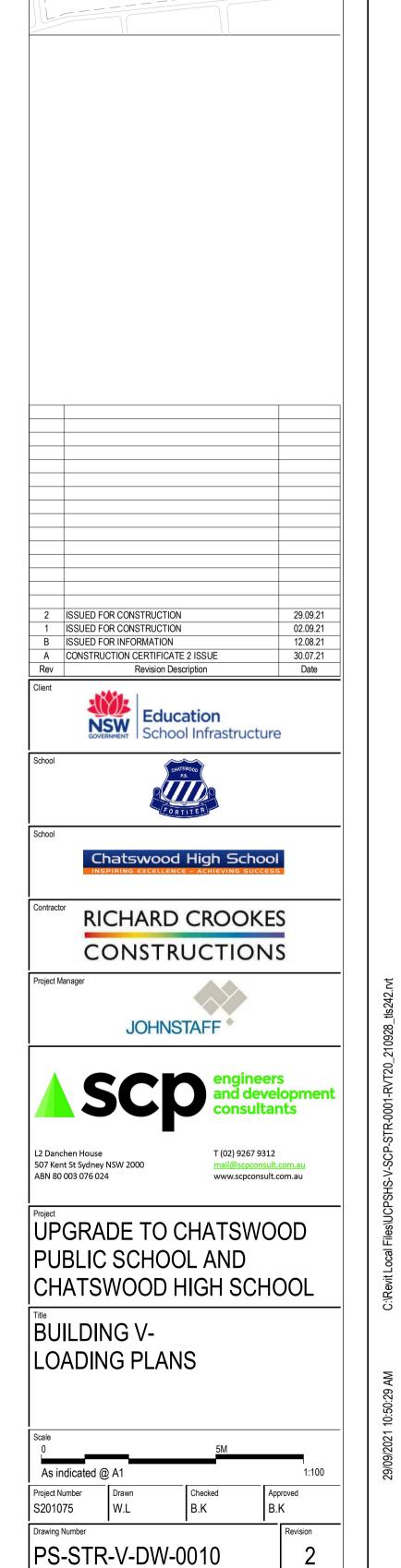
MASONRY WALL DETAILS SHEET 2

Series 00 - General X-STR-W-DW-0001 **GENERAL NOTES SHEET 1 GENERAL NOTES SHEET 2** X-STR-W-DW-0002 Series 04 - Columns X-STR-W-DW-0450 **COLUMN DETAILS SHEET 1** X-STR-W-DW-0451 **COLUMN DETAILS SHEET 2** Series 05 - Walls (Reinforced) X-STR-W-DW-0550 TYPICAL WALL DETAILS SHEET X-STR-W-DW-0552 TYPICAL WALL DETAILS SHEET 3 X-STR-W-DW-0555 DINCEL WALL DETAILS Series 07 - Walls (Masonry) X-STR-W-DW-0701 MASONRY WALL DETAILS SHEET 1

X-STR-W-DW-0702

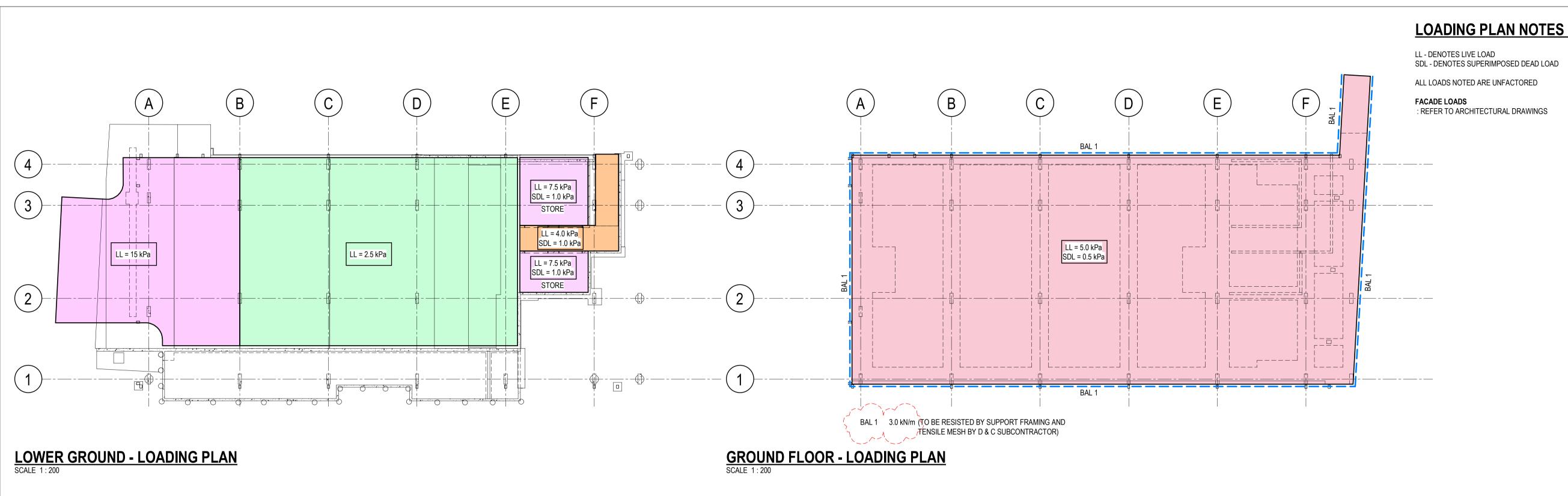




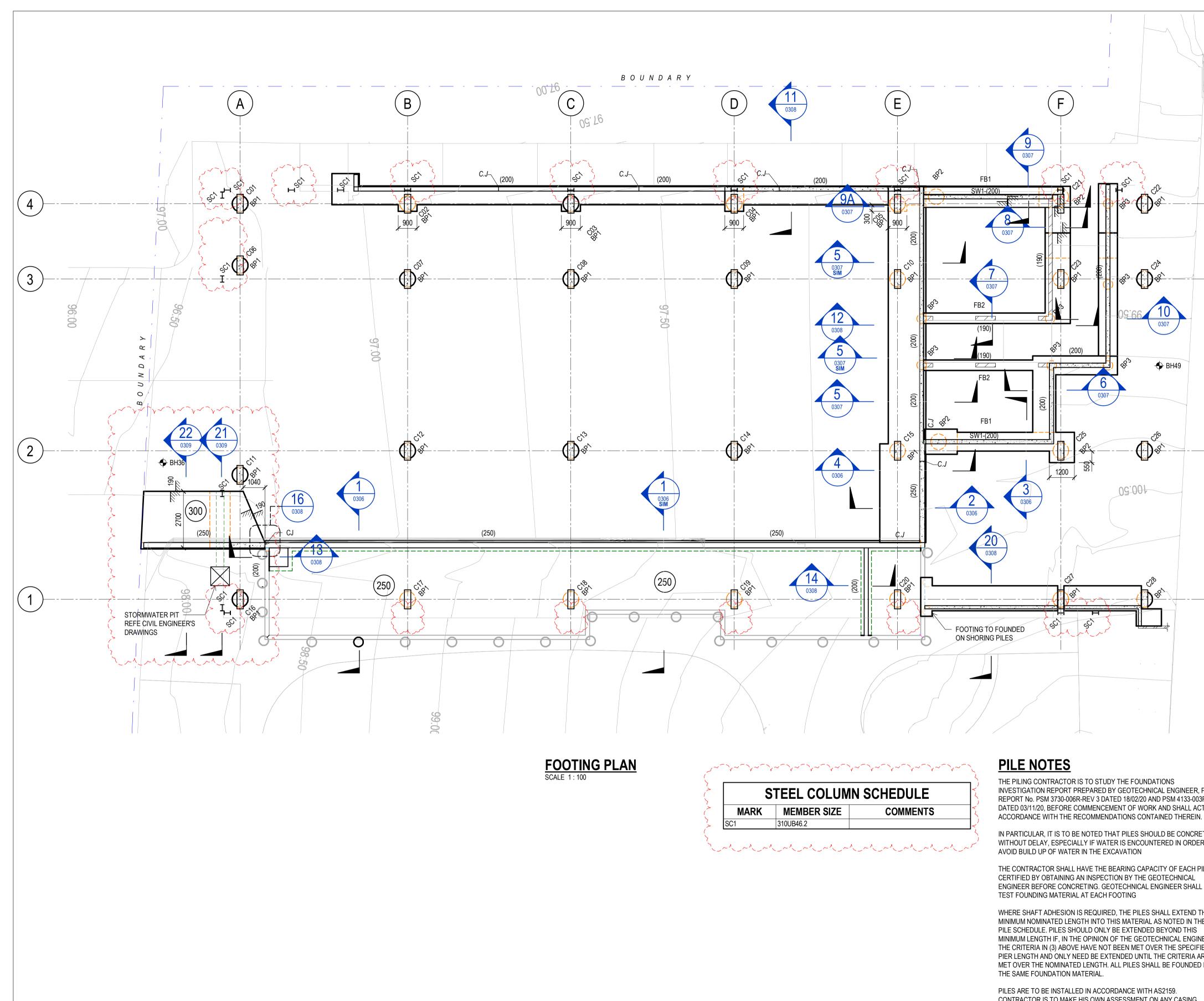


THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING.

ALL SETOUT TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS UNLESS OTHERWISE SHOWN ON THESE DRAWINGS. DO NOT USE CAD/ELECTRONIC FILES FOR SETOUT UNDER ANY CIRCUMSTANCES.



W.L



PILE CONCRETE REQUIREMENTS

PILES TO HAVE CONCRETE PLACED BY TREMIE METHOD IN WET HOLES AND HOPPER PLACEMENT IN DRY HOLES, WITH A MAX 3m FALL HEIGHT.

TREMIE CONCRETE WORKABILITY TO BE MEASURED BY THE L BOX TEST. TEST RESULTS SHALL BE 5 TO 7 SECONDS.

HOPPER PLACEMENT SHALL ENSURE CONCRETE DOES NOT IMPACT REINFORCMENT CAGES UPON PLACEMENT. CONCRETE TO HAVE A 230mm SLUMP (SUPERPLASTICIZED) - VERIFY ALL L BOX/SLUMP PROPERTIES PRIOR TO PLACEMENT.

THE PILING CONTRACTOR IS TO STUDY THE FOUNDATIONS INVESTIGATION REPORT PREPARED BY GEOTECHNICAL ENGINEER, PSM. REPORT No. PSM 3730-006R-REV 3 DATED 18/02/20 AND PSM 4133-003R DATED 03/11/20. BEFORE COMMENCEMENT OF WORK AND SHALL ACT IN

IN PARTICULAR, IT IS TO BE NOTED THAT PILES SHOULD BE CONCRETED WITHOUT DELAY, ESPECIALLY IF WATER IS ENCOUNTERED IN ORDER TO

THE CONTRACTOR SHALL HAVE THE BEARING CAPACITY OF EACH PILE CERTIFIED BY OBTAINING AN INSPECTION BY THE GEOTECHNICAL ENGINEER BEFORE CONCRETING. GEOTECHNICAL ENGINEER SHALL

WHERE SHAFT ADHESION IS REQUIRED, THE PILES SHALL EXTEND THE MINIMUM NOMINATED LENGTH INTO THIS MATERIAL AS NOTED IN THE PILE SCHEDULE. PILES SHOULD ONLY BE EXTENDED BEYOND THIS MINIMUM LENGTH IF, IN THE OPINION OF THE GEOTECHNICAL ENGINEER, THE CRITERIA IN (3) ABOVE HAVE NOT BEEN MET OVER THE SPECIFIED PIER LENGTH AND ONLY NEED BE EXTENDED UNTIL THE CRITERIA ARE MET OVER THE NOMINATED LENGTH. ALL PILES SHALL BE FOUNDED IN

CONTRACTOR IS TO MAKE HIS OWN ASSESSMENT ON ANY CASING REQUIREMENTS. SHAFT ADHESION SHALL NOT BE RELIED UPON FOR THE SOIL UNITS (INCLUDING FILL AND RESIDUAL UNITS) ENCOUNTERED ON SITE BASED ON FOUNDATION INVESTIGATION REPORT.

PILES ARE TO BE VERTICAL, MAXIMUM OUT-OF-VERTICAL ALLOWED IS LENGTH/50 (2 PER CENT). POSITIONAL DEVIATION OF TOP OF PILE SHALL NOT EXCEED +/-75mm.

MEASURES SHALL BE TAKEN WITH THE PLACING OF CONCRETE IN THE PILE TO ENSURE THAT THE CONCRETE IS PLACED WITHOUT SEGREGATION OCCURRING. CONCRETE SHALL NOT BE CHUTED IN FROM THE TOP OF THE PILE WITHOUT TAKING PRECAUTIONS TO REDUCE THE FALL OF CONCRETE. IF ANY WATER IS FOUND IN THE PILE HOLES, THE HOLE SHALL BE PUMPED DRY BEFORE CONCRETING.

THE CONTRACTOR SHALL SUBMIT ALL GEOTECHNICAL REPORTS / INSTRUCTIONS TO SCP CONSULTING FOR REVIEW

FOOTING NOTES

THE CONTRACTOR IS TO ENGAGE A GEOTECHNICAL ENGINEER TO INSPECT AND APPROVE ALL BEARING CAPACITIES USING A DYNAMIC PENETROMETER FOR SOILS AND SPOON TESTING FOR ROCK PRIOR TO PLACEMENT OF CONCRETE.

REFER TO SCHEDULES FOR MINIMUM BEARING CAPACITIES FOR DIFFERENT FOOTING TYPES

PAD FOOTING EXCAVATIONS TO BE BLINDED WITH 50mm F'c = 15 MPa (MIN) CONCRETE IMMEDIATELY AFTER GEOTECHNICAL INSPECTION AND PRIOR TO BEING EXPOSED TO INCLEMENT WEATHER.

WHERE IN THE OPINION OF THE GEOTECHNICAL ENGINEER THE REQUIRED MINIMUM BEARING CAPACITY IS NOT PRESENT AT THE NOMINATED FOOTING DEPTH, EXCAVATE TO A LEVEL TO ACHIEVE THE MINIMUM BEARING CAPACITY & EITHER DEEPEN THE FOOTING OR USE A 15MPa BLINDING LAYER TO BUILD UP FROM THIS LEVEL TO THE NOMINATED **FOOTING DEPTH**

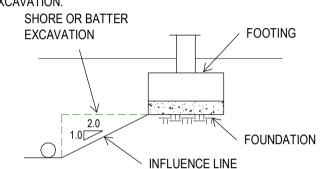
TOP OF PAD FOOTINGS AND PILES TO BE 300mm min. BELOW SLAB LEVEL OR EXTERNAL LEVEL. TYPICAL U.N.O. LOWER TOP OF PAD FOOTINGS AND PILES AS REQUIRED WHERE DOWNPIPES EXIT BASE OF COLUMN.

IF CONCRETE IS NOT PLACED IMMEDIATELY AFTER EXCAVATION OF FOOTINGS THEN PROVIDE 50mm THICK BLINDING LAYER OF CONCRETE TO THE BASE OF THE EXCAVATED FOOTING

BACKFILL & COMPACT BOTH SIDES OF ALL FOOTING BEAMS SIMULTANEOUSLY MAXIMUM PERMITTED DIFFERENCE IN HEIGHT EACH SIDE OF FOOTING BEAM = 300mm. BACKFILL PADS WITH fc = 15MPa OR 98% SDD COMPACTED MATERIAL

ALL LIFT PITS, BASES AND THE REAR FACE OF ALL RETAINING WALLS TO HAVE AN APPLIED WATERPROOF MEMBRANE TO ARCHITECT'S DETAILS

EXCAVATION NEAR FOOTINGS SHALL NOT EXTEND BELOW FOUNDATION LEVEL WITHOUT APPROVAL FROM SCP CONSULTING. FOOTINGS ADJACENT TO SERVICES OR BATTERS ETC. TO BE EXTENDED DOWN SUCH THAT THE INFLUENCE LINE OF THE FOOTING IS CLEAR OF THE ADJACENT SERVICE EXCAVATION.



SERVICES TRENCHES NOTE

PLACE BEDDING MATERIAL, SERVICES, BACKFILLING ON FIRM GROUND FREE OF SURFACE WATER

BACKFILL TRENCHES AS SOON AS POSSIBLE AFTER SERVICE PIPE IS LAID AND BEDDED

MATERIAL TO BE WELL GRADED, INORGANIC, NON-PERISHABLE MATERIAL. MAXIMUM SIZE 75mm. PLASTICITY INDEX <50%

PLACE BACKFILL IN LAYERS <150mm THICK, COMPACTED TO DENSITY

DESIGN & CONSTRUCT PILE NOTES

THE LOADS NOMINATED HAVE BEEN PROVIDED FOR DESIGN IN ACCORDANCE WITH THE PARAMETERS SPECIFIED IN THE GEOTECHNICAL ENGINEERS REPORT, REPORT No. PSM 3730-006R-REV 3 DATED 18/02/20 AND PSM

PILES SHALL BE FOUNDED AND SOCKETED A MINIMUM OF 500 mm INTO

CLASS III KPa ROCK AS PER THE GEOTECHNICAL REPORT

ECCENTRICITY FROM +/-75mm INSTALLATION TOLERANCE

THE PILING CONTRACTOR SHALL DESIGN, CONSTRUCT & CERTIFY THE PILING SYSTEM. THEY SHALL CERTIFY THAT THE DESIGN & CONSTRUCTION MEETS THE DESIGN LOADS SHOWN ON THESE DRAWINGS & COMPLIES WITH AS2159 -PILING CODE

HORIZONTAL SHEAR TO BE APPLIED AT THE TOP OF ALL PILES. WHICH UNLESS NOTED OTHERWISE TO BE 2.5% MIN OF THE NOMINATED PILE LOAD. ALL PILES TO BE DESIGNED FOR ADDITIONAL MOMENTS DUE TO

AN AS BUILT SURVEY IS TO BE CARRIED OUT PRIOR TO THE INSTALLATION OF COLUMNS AND ANY OUT OF POSITION PILES SHALL BE ASSESSED AND RECTIFICATION CARRIED OUT WHERE NECESSARY

PILING CONTRACTOR TO SUBMIT GEOTECHNICAL AND STRENGTH CALCULATIONS FOR REVIEW BY SCP CONSULTING AND PROJECT GEOTECHNICAL ENGINEER PRIOR TO COMMENCEMENT ON SITE.

MAXIMUM DIFFERENTIAL PILE SETTLEMENT UNDER LONG TERM LOAD TO BE LIMITED TO LESS THAN 5mm.

MAXIMUM TOTAL PILE SETTLEMENT UNDER LONG TERM LOAD TO BE LIMITED TO LESS THAN 1% OF THE PILE DIAMETER.

PILE LOADS

4133-003R DATED 03/11/20

THE LOADS NOMINATED HAVE BEEN PROVIDED FOR DESIGN IN ACCORDANCE WITH PSM GEOTHECHNICAL REPORTS AND SITE SPECIFIC PARAMETERS AS WELL AS REFERENCE TO P.J.N. PELLS ET AL PAPER.

SHORT TERM SERVICE LOADS INCLUDES EARTHQUAKE AND WIND ACTIONS. LONG TERM SERVICE LOAD IS BASED ON DEAD LOAD AND LIVE

HORIZONTAL SHEAR TO BE APPLIED AT TOP OF ALL PILES, WHICH UNLESS NOTED OTHERWISE TO BE 2.5% MIN OF THE NOMINATED PILE LOAD ALL PILES TO BE DESIGNED FOR ADDITIONAL MOMENTS DUE TO ECCENTRICITY FROM THE +/-75mm INSTALLATION TOLERANCE

LEGEND

- DENOTES PILE

- DENOTES PILE CAP - DENOTES PAD FOOTING - DENOTES STRIP FOOTING

FB - DENOTES FOOTING BEAM RW - DENOTES RETAINING WALL

EJ - DENOTES VERTICAL EXP. JOINT IN RET. WALL REFER TO PS-STR-CP-DW-03xx SERIES FOR DETAILS AND SCHEDULES U.N.O

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING. ALL SETOUT TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS UNLESS OTHERWISE SHOWN ON THESE DRAWINGS. DO NOT USE CAD/ELECTRONIC FILES FOR

















T (02) 9267 9312

www.scpconsult.com.au

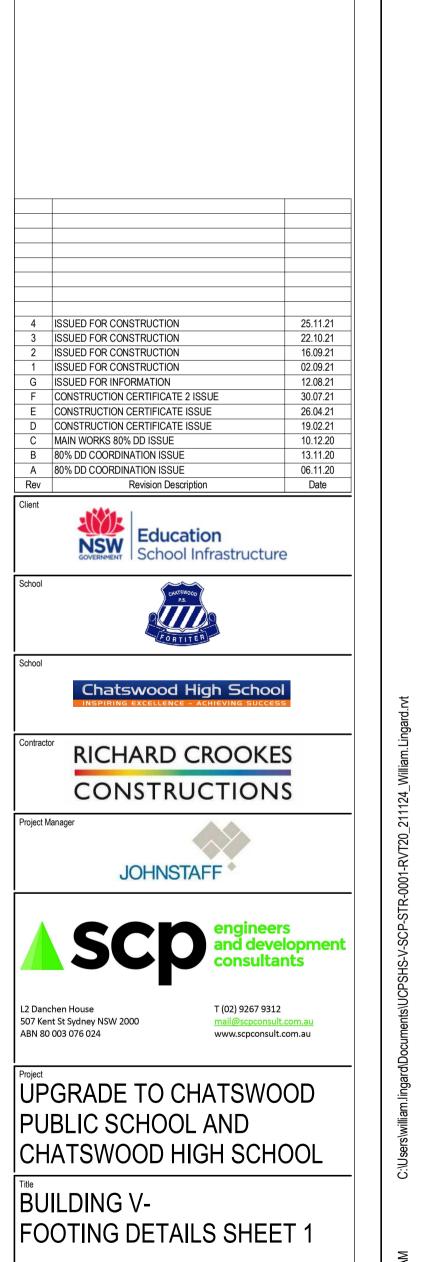
507 Kent St Sydney NSW 2000 ABN 80 003 076 024

UPGRADE TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

BUILDING V-FOOTING PLAN

PS-STR-V-DW-0301

As indicated @ A1 roject Number S201075



As indicated @ A1

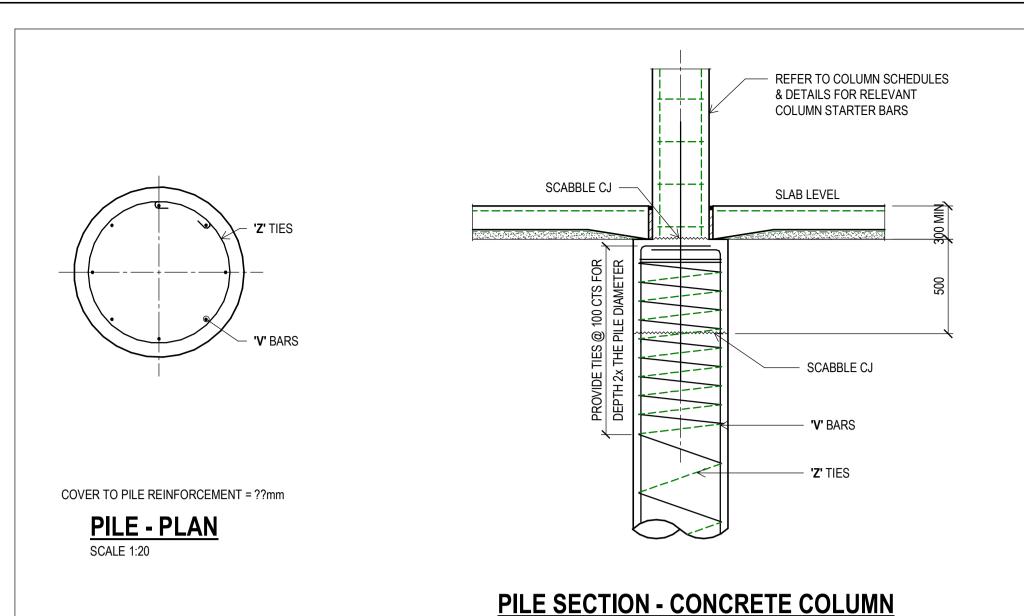
PS-STR-V-DW-0305

S201075

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED. REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING.

Key Plan

ALL SETOUT TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS UNLESS OTHERWISE SHOWN ON THESE DRAWINGS. DO NOT USE CAD/ELECTRONIC FILES FOR



SCALE 1:20

PILE SCHEDULE - DENOTED 'BP' ON PLAN

VERTICAL HORIZONTAL

LOAD

(ULTIMATE)

85

375

COMMENTS

COLUMN PILE 750 DIA MIN

450 DIA

MINIMUM 1.5 x 'D

METHOD 'C'

LOAD

(ULTIMATE)

(kN)

1100

C = 1100 | T = 550 |

TYPICAL FOOTING STEP DETAILS

SOCKET

DEPTH

BEARING

MATERIAL

500 MIN

500 MIN

WORKING

LOAD (kN)

800

ALLOWABLE | ALLOWABLE | INTO END

SHAFT

ADHESION

C = 200 | T = 100

CONCRETE.

STRENGTH

- ALL PILES TO BE A MINIMUM LENGTH OF 4 x PILE DIAMETER

METHOD 'A'

T-JUNCTION DETAIL

BP1

BP2

- (C) DENOTES COMPRESSION LOADS

- ALLOW 7.0m AVERAGE DEPTH

- ALL PILES TO D&C DETAILS

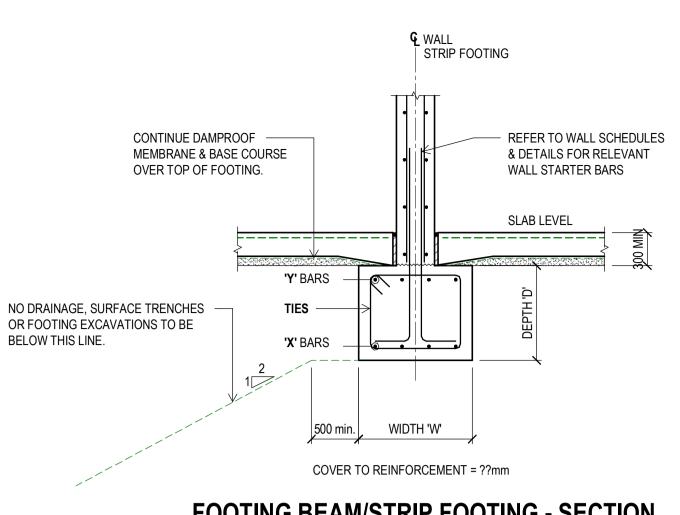
END

BEARING

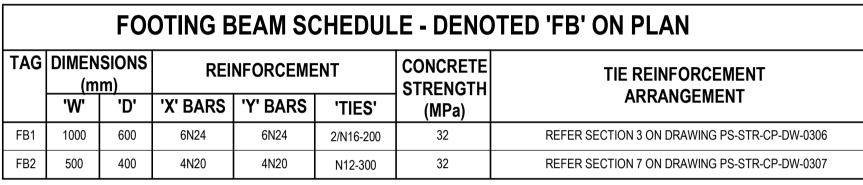
2000

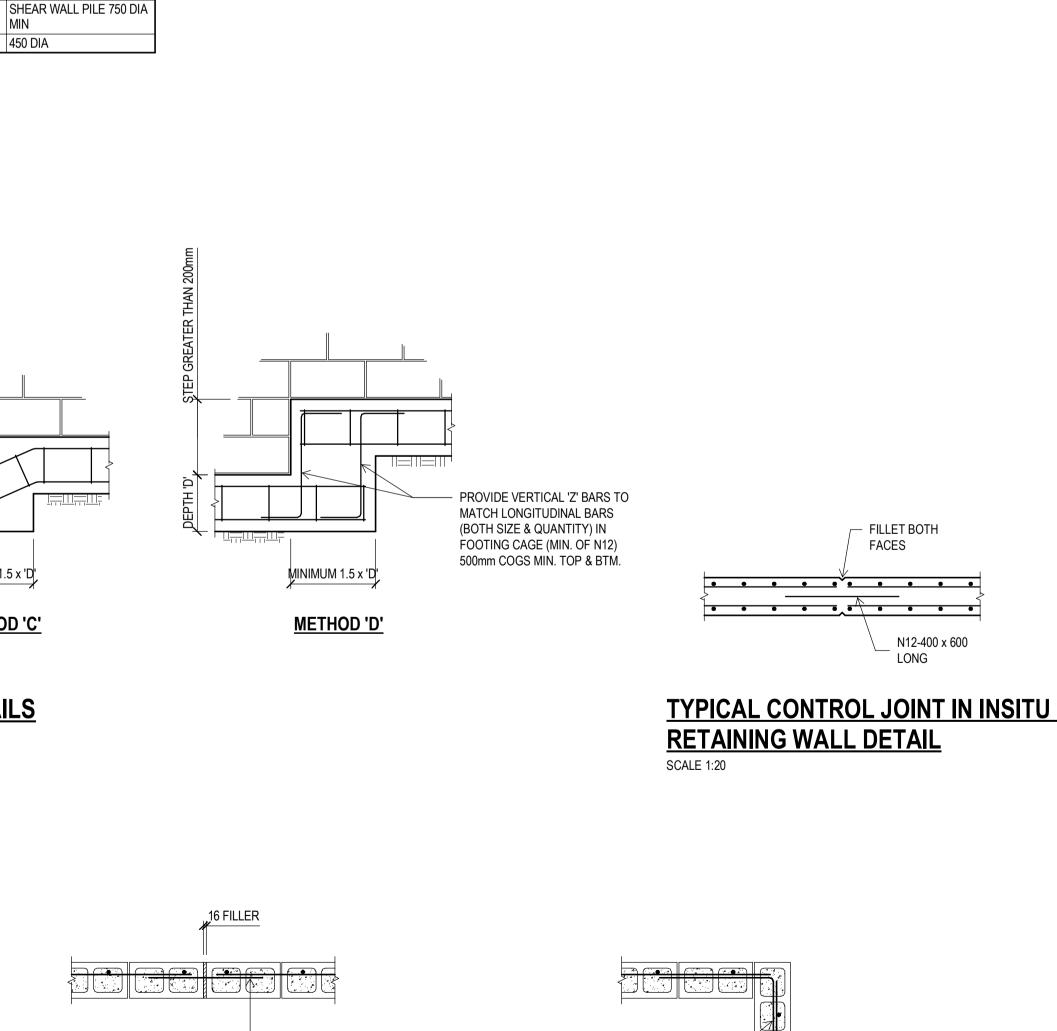
- MINIMUM PILE DIAMETER TO BE 750 FOR BLADE COLUMNS TO AVOID PILE CAPS.

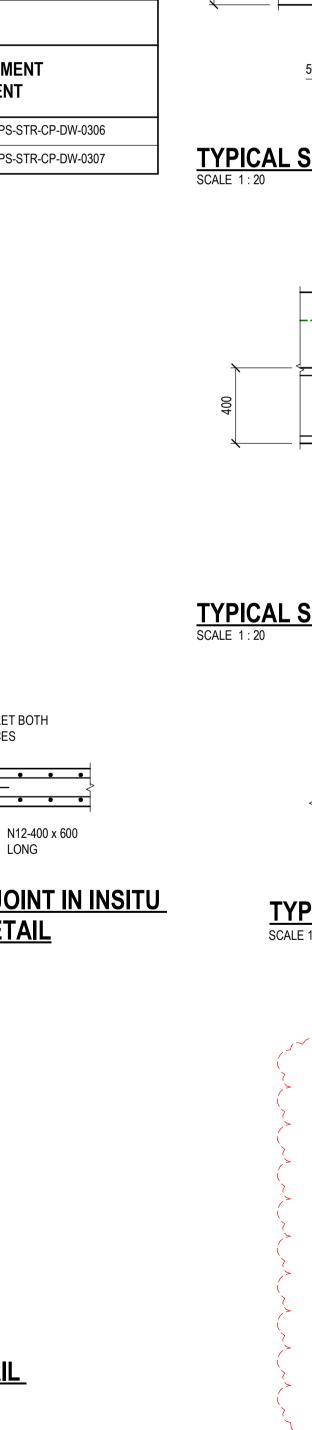
- (T) DENOTES TENSION LOADS - PROVIDE TENSION REINFORCEMENT TO BASE OF PILE.

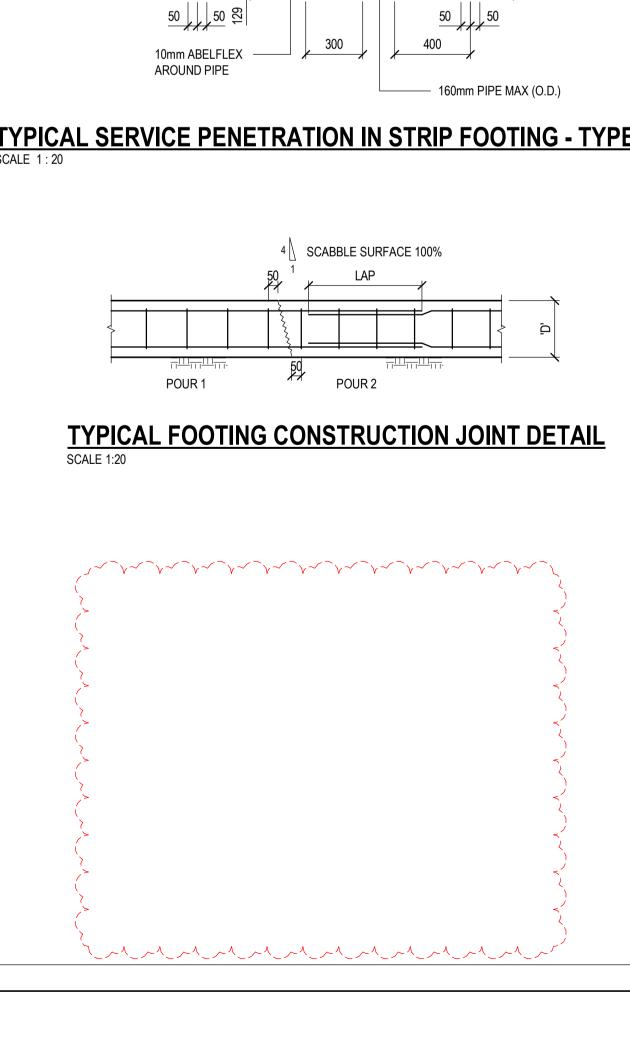


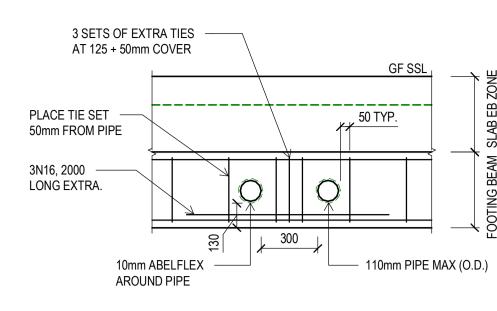
FOOTING BEAM/STRIP FOOTING - SECTION



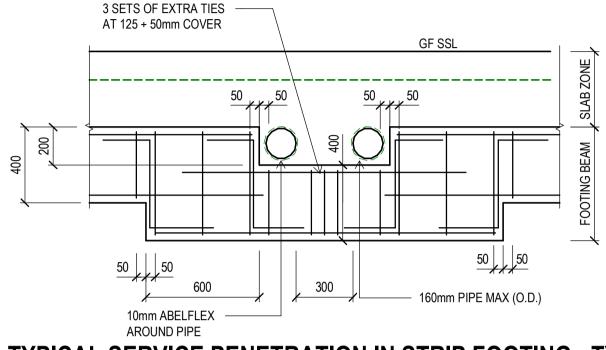




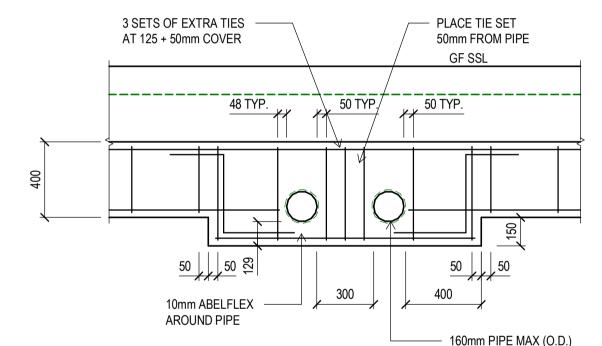




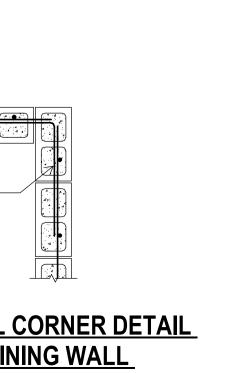




TYPICAL SERVICE PENETRATION IN STRIP FOOTING - TYPE 2

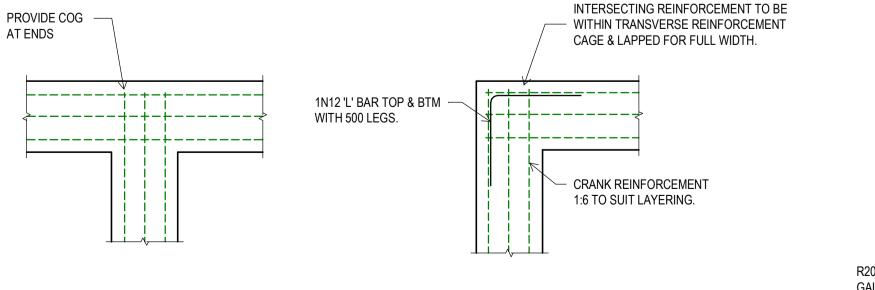


TYPICAL SERVICE PENETRATION IN STRIP FOOTING - TYPE 3



- FILLET BOTH FACES

LONG

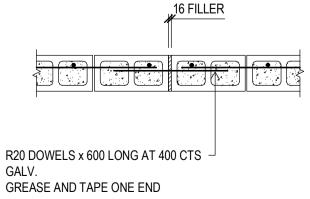


CORNER DETAIL

MINIMUM 1.5x'D'

METHOD 'B'

TYPICAL FOOTING JUNCTION DETAILS

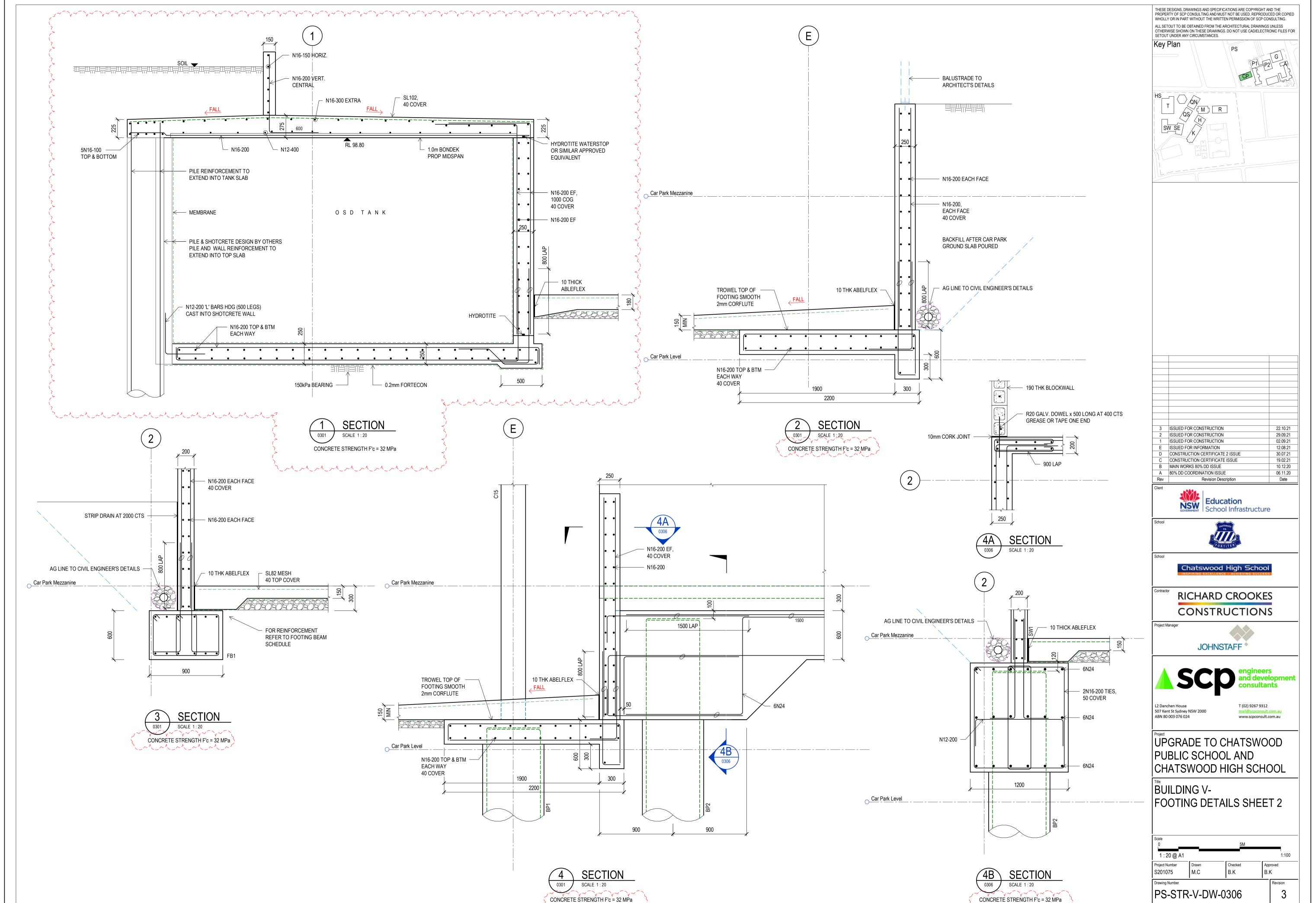


TYPICAL CONTROL JOINT DETAIL IN RETAINING WALL



N16-400 "L" BARS

600 LEGS

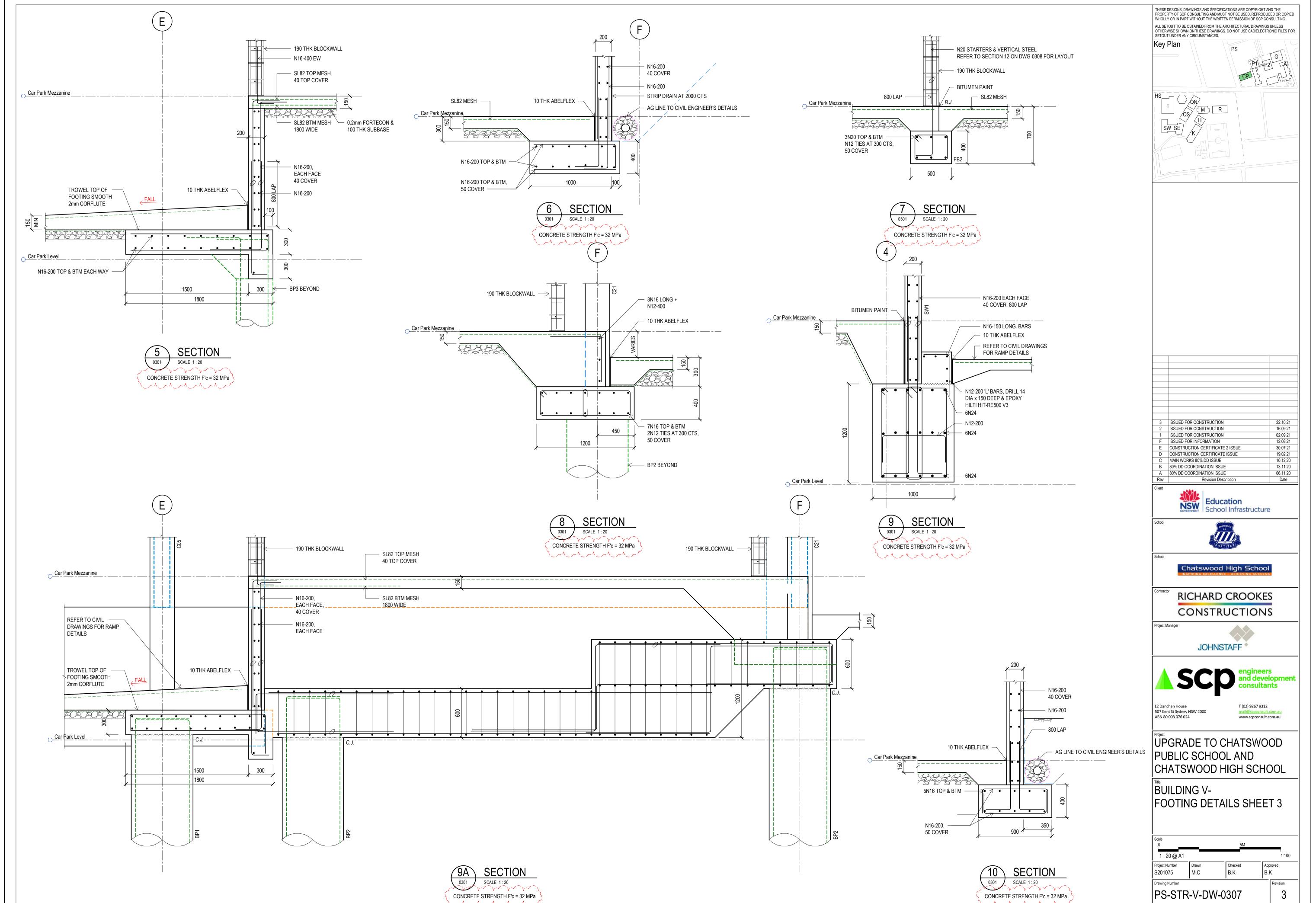


~~_~_~_~_~_~_~

C:\Users\william.lingard\Documents\UCPSHS-V-SCP-STR-0001-RVT20_211020_Wil

22/10/2021 7:15:28 PM

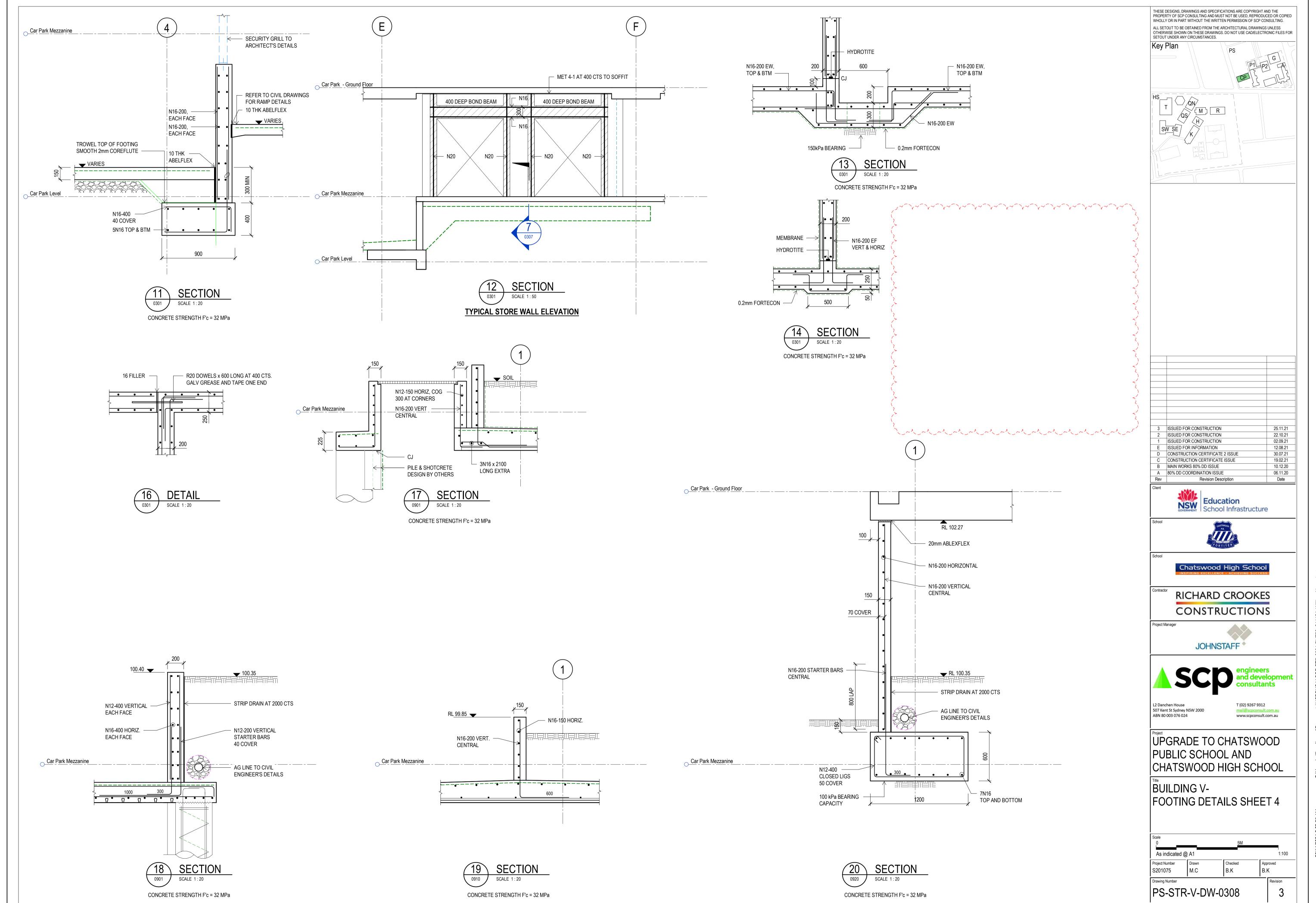
M.C



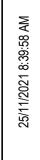
PM C:\Users\william.lingard\Documents\UCPSHS-V-SCP-STR-0001-R\

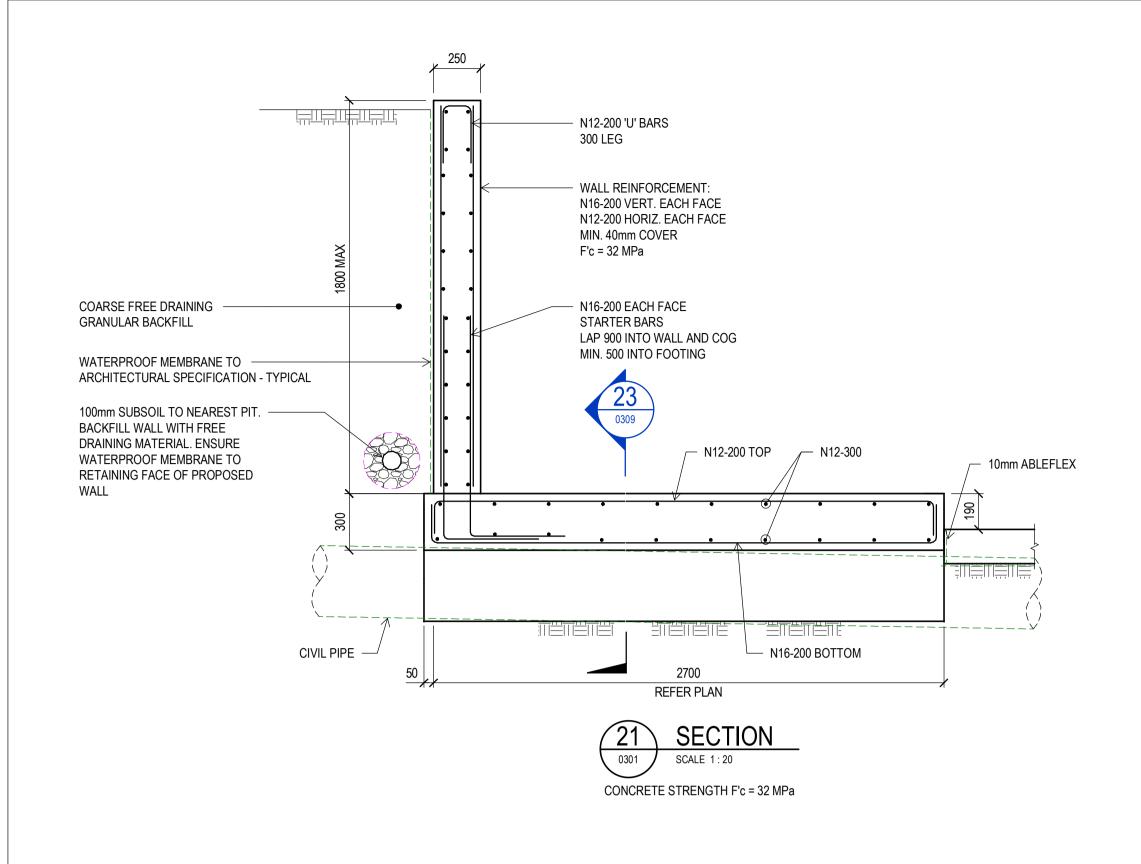
22/10/2021 7:15:35 PM

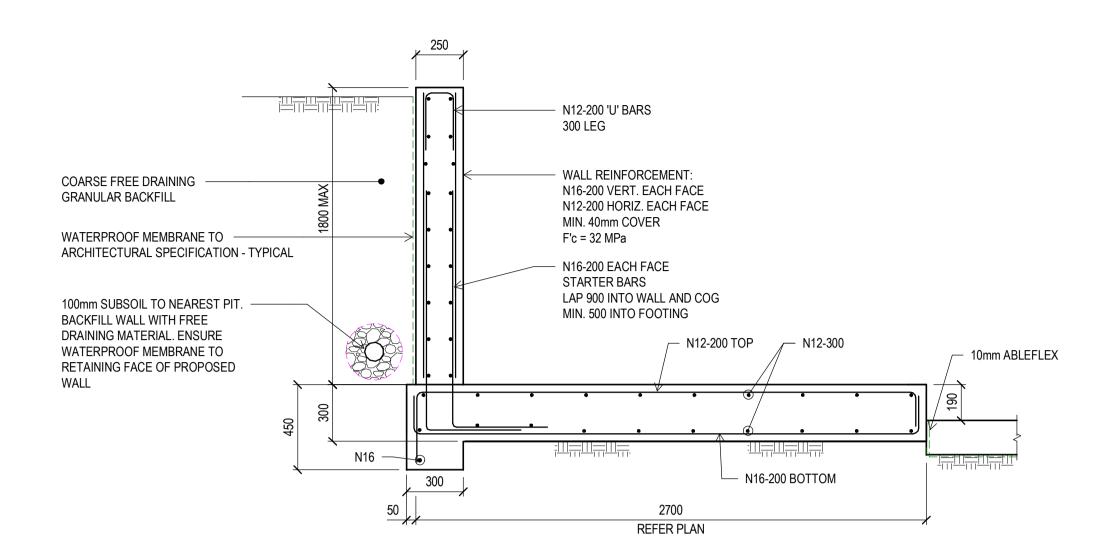
A.C



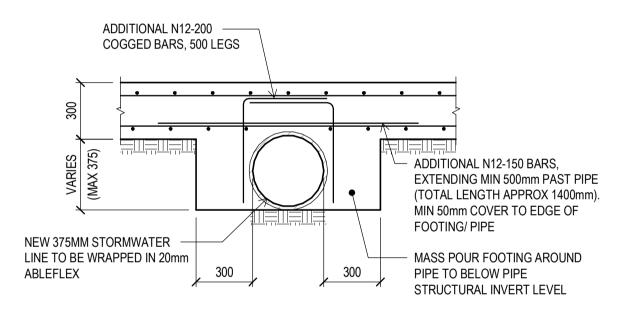
M.C



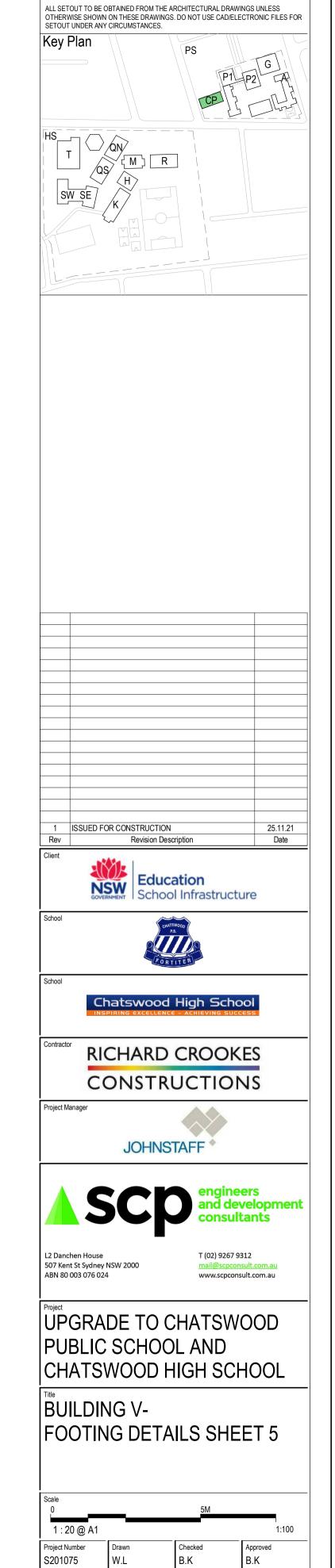










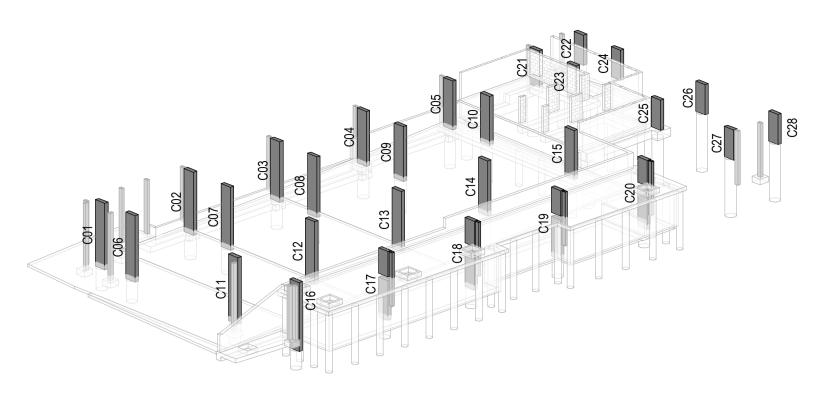


PS-STR-V-DW-0309

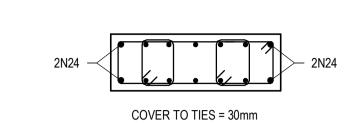
THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING.

COLUMN SCHEDULE - LOWER GROUND							
MARK	COLUMN SIZE	COLUMN TYPE	CONCRETE GRADE (MPa)	COMMENTS			
C01	300 x 900	4N24 + 10N20	3N10-250	A	40		
C02	300 x 900	4N24 + 10N20	3N10-250	A	40		
C03	300 x 900	4N24 + 10N20	3N10-250	A	40		
C04	300 x 900	4N24 + 10N20	3N10-250	Α	40		
C05	300 x 900	4N24 + 10N20	3N10-250	A	40		
C06	300 x 900	4N24 + 10N20	3N10-250	A	40		
C07	300 x 900	4N24 + 10N20	3N10-250	A	40		
C08	300 x 900	4N24 + 10N20	3N10-250	A	40		
C09	300 x 900	4N24 + 10N20	3N10-250	A	40		
C10	300 x 900	4N24 + 10N20	3N10-250	A	40		
C11	300 x 900	4N24 + 10N20	3N10-250	A	40		
C12	300 x 900	4N24 + 10N20	3N10-250	A	40		
C13	300 x 900	4N24 + 10N20	3N10-250	Α	40		
C14	300 x 900	4N24 + 10N20	3N10-250	A	40		
C15	300 x 900	4N24 + 10N20	3N10-250	A	40		
C16	300 x 900	4N24 + 10N20	3N10-250	A	40		
C17	300 x 900	4N24 + 10N20	3N10-250	A	40		
C18	300 x 900	4N24 + 10N20	3N10-250	A	40		
C19	300 x 900	4N24 + 10N20	3N10-250	Α	40		
C20	300 x 900	4N24 + 10N20	3N10-250	A	40		

	COLUMN SCHEDULE - MEZZANINE								
MARK	COLUMN SIZE	COLUMN REINFORCEMENT	COLUMN TIES	COLUMN TYPE	CONCRETE GRADE (MPa)	COMMEN.			
C21	300 x 900	4N24 + 10N20	3N10-250	A	40				
C22	300 x 900	4N24 + 10N20	3N10-250	A	40				
C23	300 x 900	4N24 + 10N20	3N10-250	A	40				
C24	300 x 900	4N24 + 10N20	3N10-250	А	40				
C25	300 x 900	4N24 + 10N20	3N10-250	Α	40				
C26	300 x 900	4N24 + 10N20	3N10-250	A	40				
C27	300 x 900	4N24 + 10N20	3N10-250	А	40				
C28	300 x 900	4N24 + 10N20	3N10-250	А	40				



COLUMN 3D VIEW



COLUMN TYPE DETAIL

TYPE 'A'

GENERAL NOTES:

REFER TO DRAWING **X-STR-W-DW-0001 & X-STR-W-DW-0002** FOR GENERAL NOTES.

REFER TO DRAWING X-STR-W-DW-0450 & X-STR-W-DW-0451 FOR COLUMN DETAILS.

CHAMFERS NOT SHOWN. PROVIDE CHAMFERS UNLESS SHOWN OTHERWISE ON ARCHITECT'S DRAWINGS.

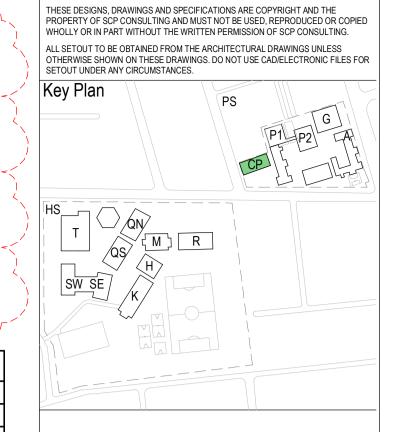
NO MID-HEIGHT SPLICING OF VERTICAL STEEL PERMITTED.

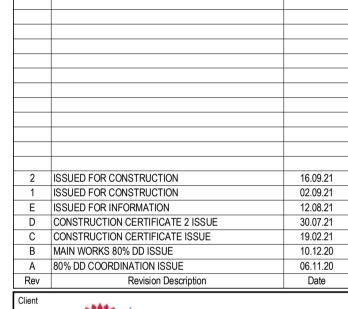
FRL = 90/-/-

PAINT CONCRETE FACE OF COLUMNS WITH BITUMEN PAINT WITHIN TANK AND WHERE BACKFILLED WITH SOIL.

7		_~-^\		^_	^	\\\ [_]	
	LAP SCHEDULE - COLUMNS						
	BAR		CONCRE	TE STRENG	STH F'c =		
	DIAMETER	32 MPa	40 MPa	50 MPa	65 MPa	80 MPa	
	N12	400	400	350	350	350	
	N16	650	600	500	500	500	
	N20	900	800	700	650	650	
	N24	1150	1050	950	850	850	
	N28	1450	1300	1150	1050	1050	
	N32	1750	1600	1400	1250	1250	
	N36	2100	1900	1700	1500	1500	

COG SCHEDULE							
BAR	COG						
N10	165						
N12	170						
N16	205						
N20	245						
N24	295						
N28	345						
N32	395						
N36	440						
N40	490						









Chatswood High School







www.scpconsult.com.au

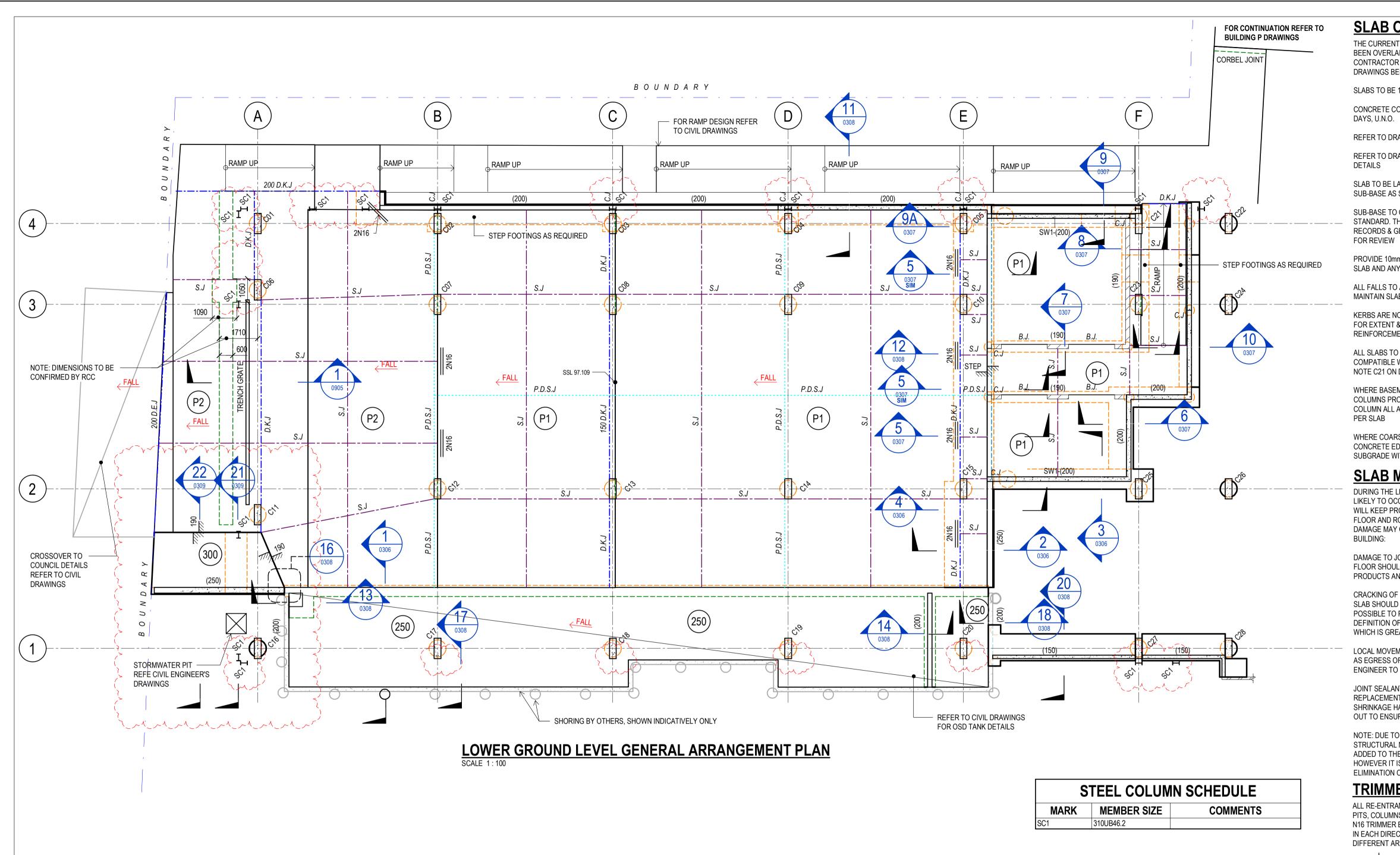


L2 Danchen House 507 Kent St Sydney NSW 2000 ABN 80 003 076 024

UPGRADE TO CHATSWOOD
PUBLIC SCHOOL AND
CHATSWOOD HIGH SCHOOL

BUILDING V-COLUMN SCHEDULE SHEET 1

ale 0		5M		
As indicated	@ A1			1:100
oject Number 201075	Drawn M.C	Checked B.K	Approv B.K	ved
awing Number		<u> </u>		Revision
S-ST	R-V-DV	V-0401		2



SLAB ON GROUND NOTES

THE CURRENT ARCHITECTURAL & SURVEY DRAWINGS HAVE BEEN OVERLAID TO PRODUCE THIS DRAWING. THE CONTRACTOR SHALL REFER TO THE LATEST ARCHITECTURAL DRAWINGS BEFORE CONSTRUCTION IS TO COMMENCE

SLABS TO BE 150mm THICK, U.N.O.

CONCRETE COMPRESSIVE STRENGTH TO BE 32 MPa AT 28 DAYS, U.N.O.

REFER TO DRAWING X-STR-W-DW-0001 FOR CONCRETE SPEC'N

REFER TO DRAWING PS-STR-CP-DW-0905 FOR SLAB ON GROUND DETAILS

SLAB TO BE LAID ON A 0.2mm PLASTIC VAPOUR BARRIER OVER SUB-BASE AS SPECIFIED.

SUB-BASE TO COMPRISE DGB20 COMPACTED TO 100% STANDARD. THE CONTRACTOR SHALL SUBMIT ALL COMPACTION RECORDS & GEOTECHNICAL REPORTS / INSTRUCTIONS TO SCP

PROVIDE 10mm 'ABELFLEX' AS REQUIRED BETWEEN CONCRETE SLAB AND ANY VERTICAL ELEMENT FOR FULL DEPTH OF SLAB.

ALL FALLS TO ARCHITECT'S DETAILS MAINTAIN SLAB THICKNESS AT LOW POINTS

KERBS ARE NOT SHOWN, REFER TO ARCHITECT'S DRAWINGS FOR EXTENT & LOCATION. REFER TO X-STR-W-DW-0905 FOR REINFORCEMENT DETAILS

ALL SLABS TO BE CURED WITH AN APPLIED CURING COMPOUND COMPATIBLE WITH APPLIED FINISHES IN ACCORDANCE WITH NOTE C21 ON DRAWING X-STR-W-DW-0001

WHERE BASEMENT SLAB IS POURED BEFORE CONCRETE COLUMNS PROVIDE BLOCKOUT IN SLAB 300mm LARGER THAN COLUMN ALL AROUND, INFILL BLOCKOUT WITH CONCRETE AS

WHERE COARSE GRAVEL SUB-BASE IS USED, ENSURE CONCRETE EDGE TICKENINGS ARE POURED ONTO THE SUBGRADE WITH 0.2mm PLASTIC MEMBRANE.

SLAB MAINTENANCE

DURING THE LIFE OF A BUILDING, DAMAGE IN VARIOUS FORMS IS LIKELY TO OCCUR TO THE CONCRETE SLAB. GOOD HOUSEKEEPING WILL KEEP PROBLEMS TO A MINIMUM AND EXTEND THE LIFE OF THE FLOOR AND ROAD SLABS. THE FOLLOWING LIKELY AREAS OF DAMAGE MAY OR MAY NOT OCCUR DURING THE LIFE OF THE BUILDING:

DAMAGE TO JOINTS, SUCH AS FRETTING OR BREAKING AWAY AT FLOOR SHOULD BE REPAIRED USING EPOXY CONCRETE REPAIR PRODUCTS AND THE JOINTING MATERIAL MADE GOOD

CRACKING OF SLABS WHICH MAY OCCUR OVER THE LIFE OF THE SLAB SHOULD BE REPAIRED BY EPOXY GROUTING AS SOON AS POSSIBLE TO PREVENT LOCAL FRETTING AND BREAKING AWAY. THE DEFINITION OF A CRACK WHICH MAY BECOME DETRIMENTAL IS ONE WHICH IS GREATER THAN 0.3mm

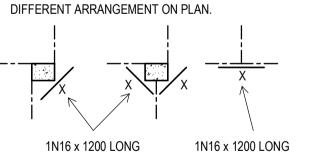
LOCAL MOVEMENT OF SLABS CAUSED BY EXTERNAL SOURCES SUCH AS EGRESS OF WATER SHOULD BE REFERRED TO THE STRUCTURAL ENGINEER TO DETERMINE THE BEST POSSIBLE REPAIR.

JOINT SEALANTS WILL GENERALLY BREAK DOWN AND NEED REPLACEMENT AFTER 12 MONTHS WHEN MOST OF THE SLAB SHRINKAGE HAS TAKEN PLACE. RESEALING NEEDS TO BE CARRIED OUT TO ENSURE ONGOING SUPPORT TO SLAB EDGES

NOTE: DUE TO THE NATURE OF CONCRETE, CRACKING OF A NON-STRUCTURAL NATURE MAY OCCUR. REINFORCEMENT HAS BEEN ADDED TO THE SLABS TO MITIGATE THE EXTENT OF CRACKING, HOWEVER IT IS NOT POSSIBLE TO GUARANTEE COMPLETE ELIMINATION OF SLAB CRACKING.

TRIMMER BARS

ALL RE-ENTRANT CORNERS AT PENETRATIONS FOR SUMPS, PITS, COLUMNS, DOOR THRESHOLDS AND THE LIKE, TO HAVE N16 TRIMMER BARS PLACED AT 45 DEGREES TO CORNER OR IN EACH DIRECTION AT CORNERS UNLESS NOTED IN A



1N16 x 1200 LONG PLACED AT 45° TO STRUCTURE.

TRIMMER BARS TO BE TIED TO U/S OF SLAB MESH.

JOINT SEALANT SPECIFICATION

PLACED ON CENTRE

OF INCOMING JOINT.

FOR SLABS CARRYING EQUIPMENT WITH SPECIFIC JOINT REQUIREMENTS REFER TO EQUIPMENT MANUFACTURERS FOR JOINT SEALANT SPECIFICATIONS PROVIDE EPOXY SEALANTS

IN OTHER CASES PROVIDE DOW CORNING 888 SILICONE SEALANT OVER A BACKING ROD INSTALLED IN ACCORDANCE WITH MANUFACTURERS INSTRUCTIONS

SLAB FLATNESS

NATSPEC FLATNESS = CLASS B (U.N.O.) MAXIMUM DEVIATION FROM A 3m STRAIGHT EDGE = 6mm ACI117 FLOOR SURFACE CLASSIFICATION = FLAT FF = 35

SLAB JOINT LEGEND

DENOTES BUTT JOINT

DENOTES DOWEL KEY JOINT
DENOTES SAW CUT JOINT
DENOTES PLATE DOWEL SAWN JOINT

FL = 25

THESE DESIGNS, DRAWINGS AND SPECIFICATIONS ARE COPYRIGHT AND THE

WHOLLY OR IN PART WITHOUT THE WRITTEN PERMISSION OF SCP CONSULTING.

SETOUT UNDER ANY CIRCUMSTANCES.

∣Key Plan

PROPERTY OF SCP CONSULTING AND MUST NOT BE USED, REPRODUCED OR COPIED

ALL SETOUT TO BE OBTAINED FROM THE ARCHITECTURAL DRAWINGS UNLESS OTHERWISE SHOWN ON THESE DRAWINGS. DO NOT USE CAD/ELECTRONIC FILES FOR

ISSUED FOR CONSTRUCTION	25.11.21
ISSUED FOR CONSTRUCTION	18.11.21
ISSUED FOR CONSTRUCTION	05.11.21
ISSUED FOR CONSTRUCTION	22.10.21
ISSUED FOR CONSTRUCTION	28.09.21
ISSUED FOR CONSTRUCTION	02.09.21
ISSUED FOR INFORMATION	12.08.21
CONSTRUCTION CERTIFICATE 2 ISSUE	30.07.21
CONSTRUCTION CERTIFICATE ISSUE	19.02.21
MAIN WORKS 80% DD ISSUE	10.12.20
80% DD COORDINATION ISSUE	13.11.20
80% DD COORDINATION ISSUE	06.11.20
Revision Description	Date
	ISSUED FOR CONSTRUCTION ISSUED FOR INFORMATION CONSTRUCTION CERTIFICATE 2 ISSUE CONSTRUCTION CERTIFICATE ISSUE MAIN WORKS 80% DD ISSUE 80% DD COORDINATION ISSUE





Chatswood High School

RICHARD CROOKES CONSTRUCTIONS





T (02) 9267 9312

www.scpconsult.com.au

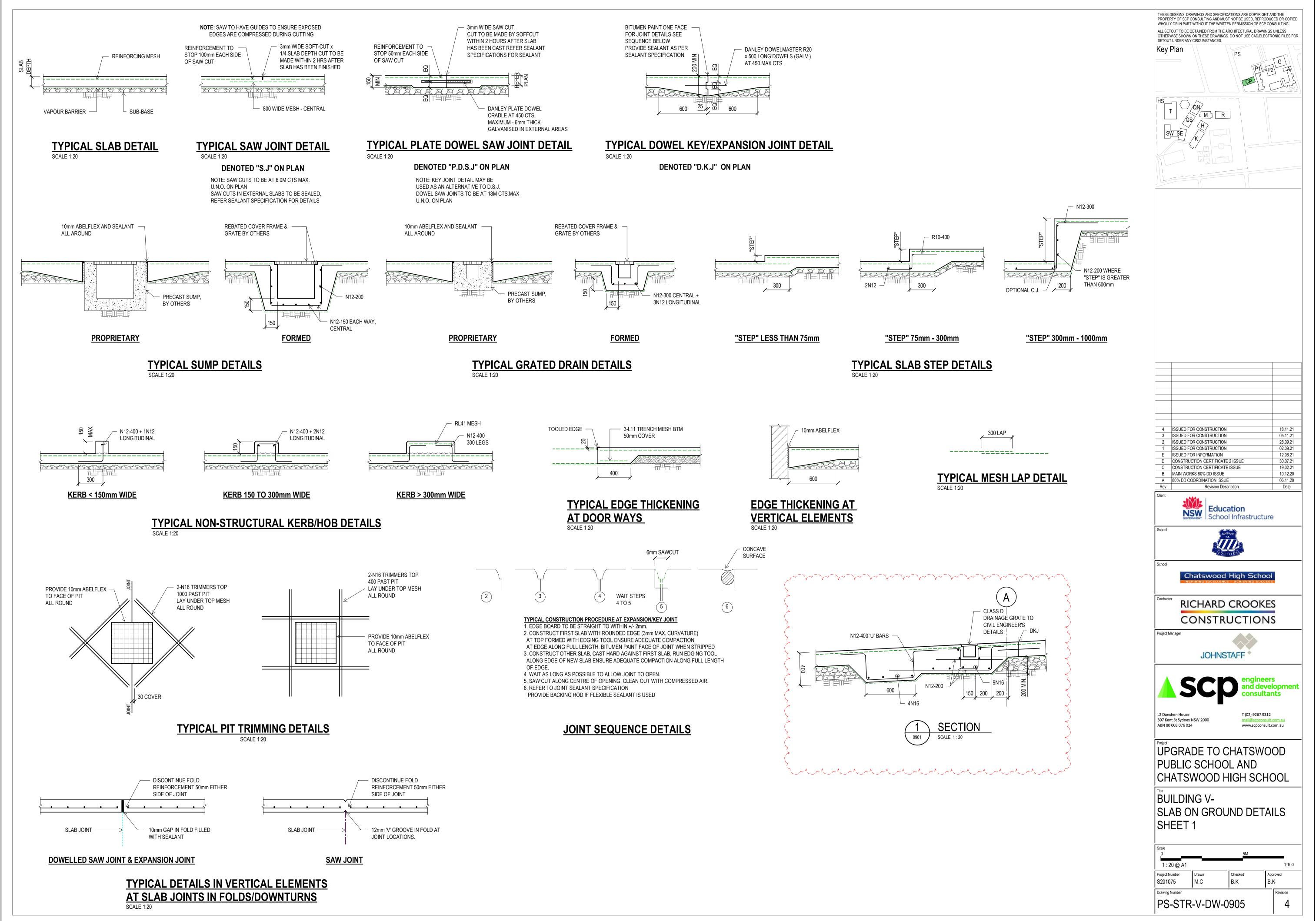
7 Kent St Sydney NSW 2000 ABN 80 003 076 024

UPGRADE TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

BUILDING V-LOWER GROUND GENERAL ARRANGEMENT PLAN

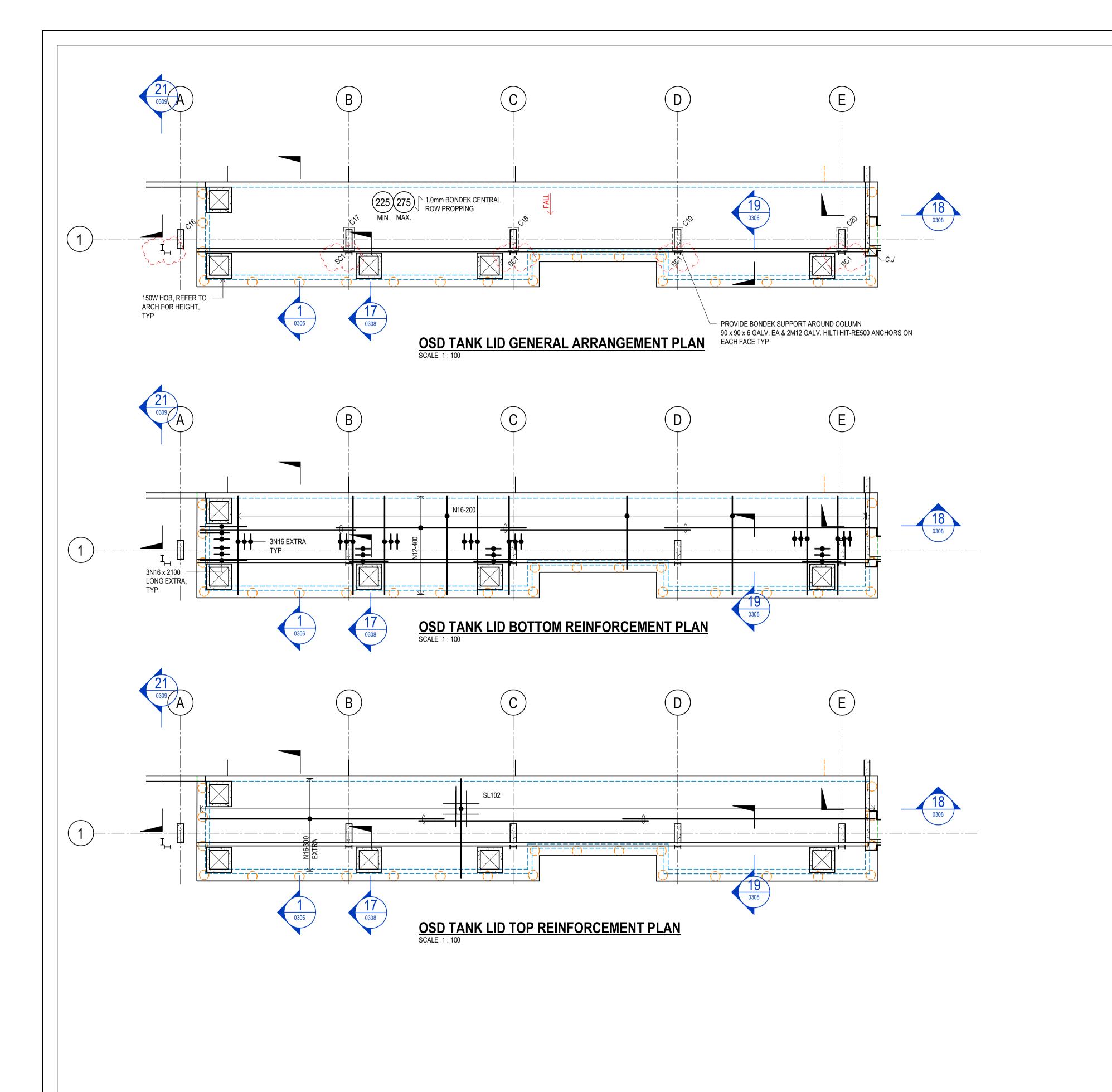
Scale 0		5M	
As indicated (D A1		1:100
Project Number S201075	Drawn M.C	Checked B.K	Approved B.K
Orawing Number			Revision
PS-STR	6		

SLAB ON GROUND SCHEDULE							
THICKNESS CONCRETE REINFORCEMENT REINFORCEMENT TAG (mm) STRENGTH (MPa) TOP U.N.O. COVER SUB BASE							
P1	150	32	SL82 MESH	40	100 DGB 20 UNDER 0.2mm FORTECON		
P2	180	32	SL92 MESH	40	150 THK DGB20 UNDER 0.2mm FORTECON		









GENERAL NOTES

CONCRETE STRENGTH F'c = 32 MPa

CONCRETE SPECIFICATION : REFER TO DRAWING X-STR-W-DW-0001

MAXIMUM 56 DAY DRYING SHRINKAGE : 600 ± 50 MICROSTAN

SLABS TO BE CURED WITH A CURING COMPOUND COMPATIBLE WITH APPLIED FINISHES (TO BE SUBMITTED FOR APPROVAL). ALTERNATIVELY SLABS MAY BE MEMBRANE CURED FOR 7

ALL HOBS, RECESSES & FALLS ARE TO ARCHITECT'S DETAILS SLAB THICKNESSES SHOWN ARE MINIMUMS PROVIDE ADDITIONAL THICKNESS TO CREATE INTEGRAL

PROVIDE PLASTIC CHAIRS TO ALL REINFORCEMENT AND POST TENSIONING.

MAINTAIN COVER TO DRIP GROOVES. ALL DRIP GROOVES TO ARCHITECT'S DETAILS.

REINFORCEMENT NOTES

ALL REINFORCEMENT SUPPLIED SHALL BE ACRS CERTIFIED. AN ACRS CERTIFICATE SHALL BE SUBMITTED TO SCP CONSULTING FOR VERIFICATION

MINIMUM CLEAR COVER TO REINFORCEMENT;

: 40mm BOTTOM (INTERNAL) : 40mm BOTTOM (EXTERNAL)

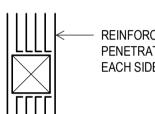
: 40mm SIDES (INTERNAL)

: 40mm SIDES (EXTERNAL)

: 40mm TOP (INTERNAL) : 40mm TOP (EXTERNAL)

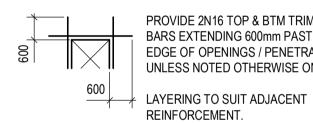
REFER TO SECTIONS FOR ANY ADDITIONAL REINFORCEMENT THAT MAY NOT BE SHOWN ON PLANS

BARS AT PENETRATIONS



REINFORCEMENT THAT RUNS INTO A PENETRATION IS TO BE TERMINATED EACH SIDE OF PENETRATION & COGGED

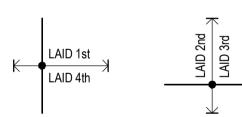
TRIMMER DETAIL



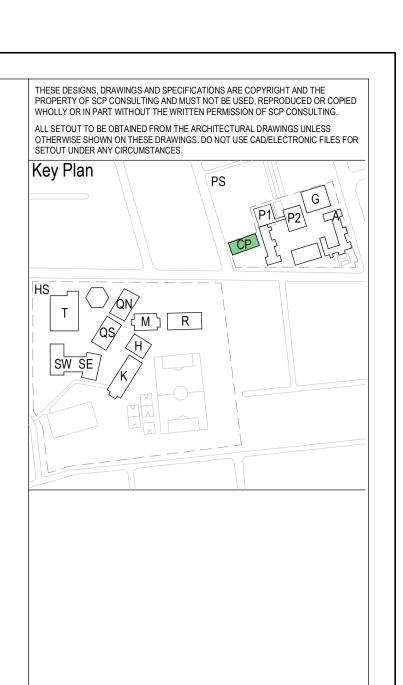
PROVIDE 2N16 TOP & BTM TRIMMER BARS EXTENDING 600mm PAST EACH EDGE OF OPENINGS / PENETRATIONS, UNLESS NOTED OTHERWISE ON PLAN.

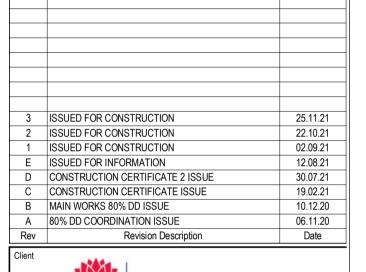
LAYERING SEQUENCE

UNLESS NOTED OTHERWISE ON PLAN



LAP SCHEDULE - SLABS (LESS THAN 300 THICK)							
BAR		CONCRE	TE STRENC	STH F'c =			
DIAMETER	32 MPa	40 MPa	50 MPa	65 MPa	80 MPa		
N12	500	450	400	350	350		
N16	700	650	600	500	500		
N20	950	850	800	700	700		
N24	1250	1100	1000	900	900		
N28	1550	1350	1250	1100	1100		
N32	1850	1650	1500	1300	1300		
N36	2200	1950	1750	1550	1550		









Chatswood High School

RICHARD CROOKES CONSTRUCTIONS





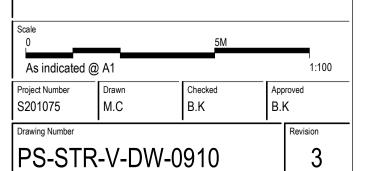
T (02) 9267 9312

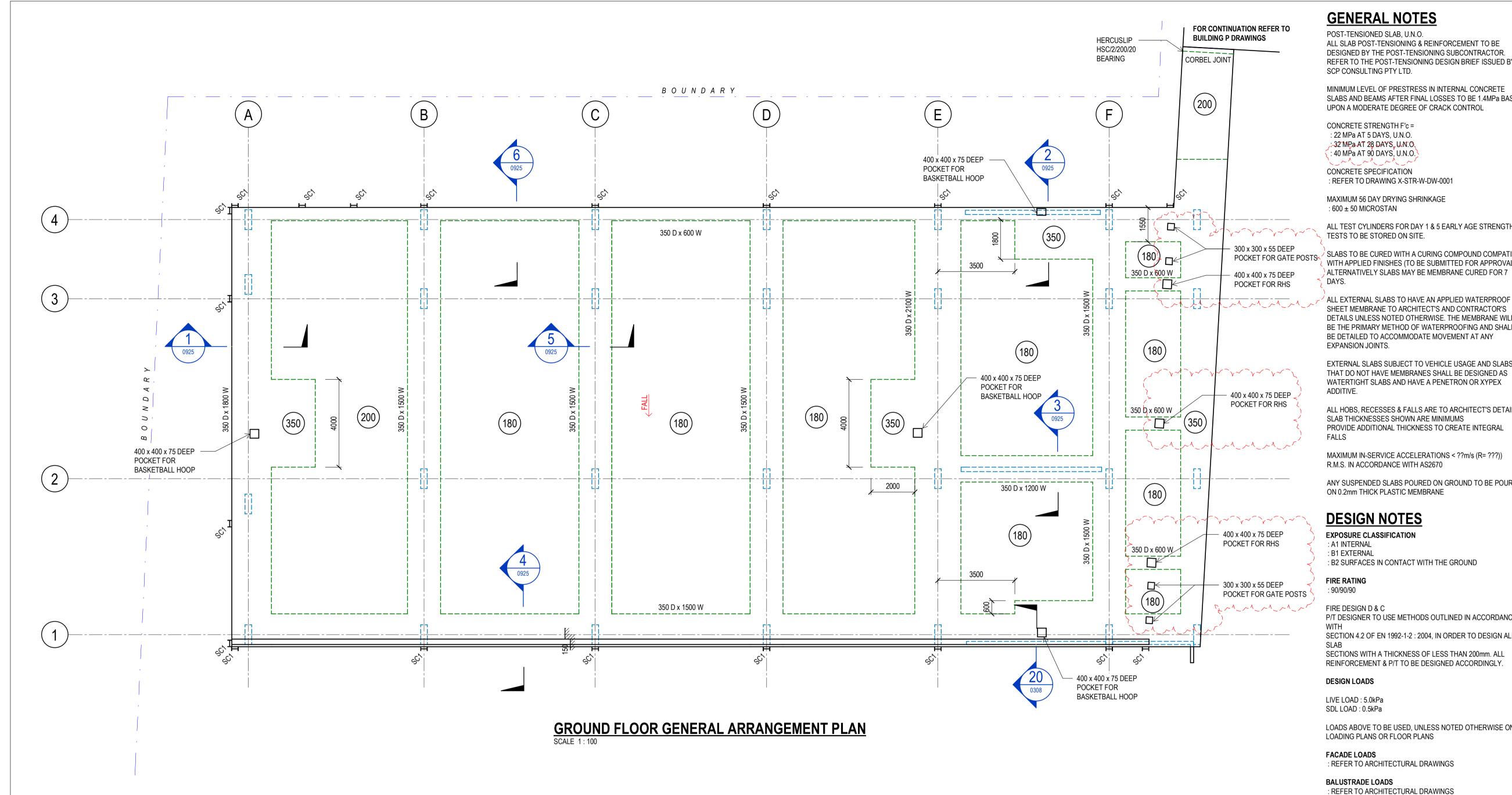
www.scpconsult.com.au

507 Kent St Sydney NSW 2000

UPGRADE TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

BUILDING V-OSD TANK PLANS





GENERAL NOTES

POST-TENSIONED SLAB, U.N.O. ALL SLAB POST-TENSIONING & REINFORCEMENT TO BE DESIGNED BY THE POST-TENSIONING SUBCONTRACTOR. REFER TO THE POST-TENSIONING DESIGN BRIEF ISSUED BY SCP CONSULTING PTY LTD.

MINIMUM LEVEL OF PRESTRESS IN INTERNAL CONCRETE SLABS AND BEAMS AFTER FINAL LOSSES TO BE 1.4MPa BASED UPON A MODERATE DEGREE OF CRACK CONTROL

CONCRETE STRENGTH F'c = : 22 MPa AT 5 DAYS, U.N.O.

: 40 MPa AT 90 DAYS, U.N.O. CONCRETE SPECIFICATION

: REFER TO DRAWING X-STR-W-DW-0001

ALL TEST CYLINDERS FOR DAY 1 & 5 EARLY AGE STRENGTH

SLABS TO BE CURED WITH A CURING COMPOUND COMPATIBLE WITH APPLIED FINISHES (TO BE SUBMITTED FOR APPROVAL).

ALL EXTERNAL SLABS TO HAVE AN APPLIED WATERPROOF SHEET MEMBRANE TO ARCHITECT'S AND CONTRACTOR'S DETAILS UNLESS NOTED OTHERWISE. THE MEMBRANE WILL BE THE PRIMARY METHOD OF WATERPROOFING AND SHALL BE DETAILED TO ACCOMMODATE MOVEMENT AT ANY

EXTERNAL SLABS SUBJECT TO VEHICLE USAGE AND SLABS THAT DO NOT HAVE MEMBRANES SHALL BE DESIGNED AS WATERTIGHT SLABS AND HAVE A PENETRON OR XYPEX

ALL HOBS, RECESSES & FALLS ARE TO ARCHITECT'S DETAILS SLAB THICKNESSES SHOWN ARE MINIMUMS PROVIDE ADDITIONAL THICKNESS TO CREATE INTEGRAL

MAXIMUM IN-SERVICE ACCELERATIONS < ??m/s (R= ???)) R.M.S. IN ACCORDANCE WITH AS2670

ANY SUSPENDED SLABS POURED ON GROUND TO BE POURED ON 0.2mm THICK PLASTIC MEMBRANE

DESIGN NOTES

EXPOSURE CLASSIFICATION : A1 INTERNAL

: B1 EXTERNAL : B2 SURFACES IN CONTACT WITH THE GROUND

FIRE RATING

FIRE DESIGN D & C

P/T DESIGNER TO USE METHODS OUTLINED IN ACCORDANCE

SECTION 4.2 OF EN 1992-1-2: 2004, IN ORDER TO DESIGN ALL SECTIONS WITH A THICKNESS OF LESS THAN 200mm. ALL

DESIGN LOADS

LIVE LOAD : 5.0kPa

LOADS ABOVE TO BE USED, UNLESS NOTED OTHERWISE ON

LOADING PLANS OR FLOOR PLANS

FACADE LOADS : REFER TO ARCHITECTURAL DRAWINGS

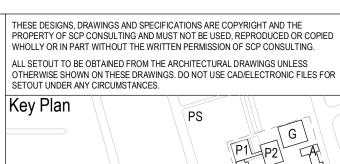
BALUSTRADE LOADS : REFER TO ARCHITECTURAL DRAWINGS

SERVICEABILITY : TOTAL LONG TERM SLAB DEFLECTION - SPAN / 250 OR 25mm (SPAN / 125 OR 25mm AT CANTILEVERS) : INCREMENTAL SLAB DEFLECTION - SPAN / 500 (10mm AT CANTILEVERS)

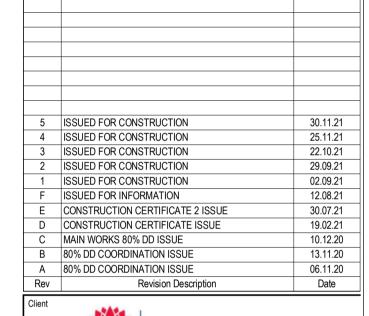
: RELATIVE DEFLECTION BETWEEN FLOORS AT FACADE LOCATIONS < ± 15mm

PROVIDE PLASTIC CHAIRS TO ALL REINFORCEMENT AND POST TENSIONING.

MAINTAIN COVER TO DRIP GROOVES. ALL DRIP GROOVES TO ARCHITECT'S DETAILS.





















UPGRADE TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

BUILDING V-GROUND FLOOR GENERAL ARRANGEMENT PLAN

