

GENERAL

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS' DRAWINGS AND SPECIFICATIONS AND WITH SUCH OTHER WRITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ALL DISCREPANCIES SHALL BE REFERRED TO THE ARCHITECT FOR DECISION BEFORE PROCEEDING WITH THE WORK.
- G2. ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION IS COMMENCED. THE ENGINEERS' DRAWINGS SHALL NOT BE SCALED.
- G3. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION AND ENSURING NO PART SHALL BE OVER STRESSED UNDER CONSTRUCTION ACTIVITIES. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.
- G4. WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE RELEVANT CURRENT SAA CODES INCLUDING ALL AMENDMENTS, AND THE LOCAL STATUTORY AUTHORITIES, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- G5. THE APPROVAL OF A SUBSTITUTION SHALL BE SOUGHT FROM THE ENGINEER.
- G6. ALL DIMENSIONS ARE IN MILLIMETRES UNO. ALL LEVELS ARE EXPRESSED IN METRES.
- G7. U.N.O. THE STRUCTURAL WORK SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING:
LIVE LOADS & ADDITIONAL DEAD LOADS: (TO ASNZS 1170.1)

AREA SUBJECT TO LOADING	LIVE LOAD		ADD. DEAD LOAD
	UNIFORM	POINT	
RESIDENTIAL AREAS	2.0 kPa	1.8 kN	0.50 kPa
OFFICE / CLASSROOM AREAS	3.0 kPa	2.7 kN	0.50 kPa
BALCONIES / STAIRS	4.0 kPa	1.8 kN	1.00 kPa
STORAGE AREAS	2.4 kPa/m	7.0 kN	0.50 kPa
ROOF AREAS	0.25 kPa	1.4 kN	0.15 kPa
PLANTER AREAS	0.5 kPa	1.4 kN	6.00 kPa
GYMNASIA / RETAIL	5.0 kPa	3.6 kN	0.50 kPa
LIGHT TRAFFIC (GVM<2.5)	2.5 kPa	13.0 kN	0.25 kPa

WIND LOADS: (TO ASNZS 1170.2) - REGION: A2, TERRAIN CATEGORY: 3
WIND VELOCITY - V_{w37} & V_{w45} m/s

EARTHQUAKE LOADS: (TO AS 1170.4)
EARTHQUAKE ZONE = a = 0.08, S=1.0, I = 1.0

- G8. FOR EARTHWORKS AND FOUNDING CONDITIONS REFER TO SITE SPECIFIC GEOTECHNICAL REPORT. ANY DISCREPANCIES BETWEEN THE GEOTECHNICAL REPORT AND THE FOLLOWING NOTES SHALL BE REFERRED TO THE ENGINEER FOR A DECISION BEFORE PROCEEDING WITH THE WORK.

BULK EARTHWORKS

- BE1. THE SITE SHALL BE STRIPPED A MINIMUM DEPTH OF 50 mm UNDER PAVEMENTS AND BUILDINGS. ALL EXISTING FILL, ORGANIC MATERIAL, REFUSE AND ROOTS SHALL BE REMOVED.
- BE2. AFTER APPROVAL, THE EXCAVATED SUB GRADE LEVEL SHALL BE PROOF ROLLED FOR A MINIMUM OF SIX (6) PASSES USING A VIBRATING ROLLER. MINIMUM DEADWEIGHT TEN TONNES. SOFT, WET AND UNSUITABLE SPOTS SHALL BE REMOVED AND REPLACED BY APPROVED SITE MATERIAL AS DIRECTED BY THE SUPERINTENDENT. THE SUB GRADE SHALL BE COMPACTED TO NOT LESS THAN 100% STANDARD DRY DENSITY RATIO WITHIN $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289 5.1.1 AND 5.4.1.
- BE3. WHERE FILL IS REQUIRED TO ACHIEVE ROAD PAVEMENT SUB GRADE LEVEL, IT SHALL BE APPROVED RIPPED SANDSTONE, HAVING A MAXIMUM PARTICLE SIZE OF 75 mm UNLESS DIRECTED OTHERWISE. IT SHALL BE PLACED IN 150 mm LOOSE LAYERS AND COMPACTED TO NOT LESS THAN 100% STANDARD DRY DENSITY RATIO WITHIN $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289 5.1.1 AND 5.4.1.
- BE4. ALL BATTERS SHALL BE 1 IN 4 MAXIMUM UNO.

SUB GRADE PREPARATION

- FOR SLABS ON GROUND AND RAFT SLABS.

- E1. THE SITE SHALL BE EXCAVATED TO LEVELS SHOWN ON RELEVANT DRAWINGS.
- E2. THE SITE SHALL BE STRIPPED TO A MINIMUM DEPTH OF 50 mm TO EXPOSE RESIDUAL MATERIAL PRIOR TO THE FILL OPERATION. ALL EXISTING FILL, ORGANIC MATTER, REFUSE AND ROOTS SHALL BE REMOVED, EXCEPT IF APPROVED ENGINEERED FILL IS PRESENT.
- E3. PROOF ROLL THE EXCAVATED AREA BEFORE FILLING. AREAS OF LOCAL SOFTENING REVEALED DURING EXCAVATION OR STRIPPING SHALL BE COMPACTED TO 100% STANDARD DRY DENSITY RATIO TO AS1289 5.1.1.
- E4. CLAY MATERIAL FREE OF ORGANIC MATERIAL FROM CUT AREAS MAY BE USED AS ENGINEERING FILL PROVIDED THAT IT HAS BEEN TESTED. ALL IMPORTED SELECTED FILL SHALL BE TESTED AND APPROVED BY THE ENGINEER.
- E5. ALL FILL SHALL BE COMPACTED TO NOT LESS THAN 98% STANDARD DRY DENSITY RATIO WITHIN $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289 5.1.1 AND 5.4.1.
- E6. ALL SELECT ROAD BASE AND HARD-CORE FILLING SHOWN UNDER SLABS ON DRAWINGS SHALL BE COMPACTED TO NOT LESS THAN 98% MODIFIED DRY DENSITY RATIO WITHIN $\pm 2\%$ OF THE OPTIMUM MOISTURE CONTENT IN ACCORDANCE WITH AS1289 5.1.1 AND 5.4.1.
- E7. ALL FILLING SHALL BE CONDUCTED UNDER THE SUPERVISION OF THE PROJECT GEOTECHNICAL ENGINEER, WHO SHALL SUPPLY CERTIFICATES OF COMPACTION FOR THE SITE.
- F1. STRIP AND PAD FOOTINGS HAVE BEEN DESIGNED FOR AN SAFE BEARING VALUE OF 150 kPa U.N.O.. FOR BORED PIER BEARING VALUES REFER TO NOTES ON FOOTING PLAN.
- F2. FOUNDATION MATERIAL SHALL BE INSPECTED AND APPROVED IN WRITING BY A GEOTECHNICAL ENGINEER FOR THE ABOVE SAFE BEARING PRESSURE BEFORE PLACING CONCRETE.
- F3. FOR FOUNDING CONDITIONS REFER TO GEOTECHNICAL INVESTIGATION REPORT AS NOTED ON FOOTING PLAN
- F4. U.N.O. SLABS ON GROUND HAVE BEEN DESIGNED FOR MIN. CBR 5 IN ACCORDANCE WITH CEMENT & CONCRETE ASSOCIATION, CONCRETE INDUSTRIAL FLOOR & PAVEMENT DESIGN.
- F5. SUB GRADE SHALL BE INSPECTED AND APPROVED IN WRITING BY A GEOTECHNICAL ENGINEER FOR THE ABOVE CBR.

FOOTINGS

REINFORCED CONCRETE

- C1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 CURRENT EDITION WITH AMENDMENTS, EXCEPT WHERE VARIED BY THE CONTRACT DOCUMENTS.
- C2. CONCRETE COMPONENTS AND QUALITY SHALL BE AS FOLLOWS U.N.O.:

ELEMENT	SLUMP mm	MAX. SIZE AGG. mm	CEMENT TYPE	f'c AT 28 DAYS - MPa	ADMIXTURE
FOOTINGS	80	20	A	25	-
PIERS & CAPS	80	20	A	32	-
SLABS ON GROUND	80	20	A	25	-
SUSPENDED SLABS	80	20	A	32	-
WALLS & COLUMNS	80	20	A	32	-

- C3. MINIMUM CLEAR CONCRETE COVER TO REINFORCEMENT INCLUDING TIES AND STIRRUPS SHALL BE AS FOLLOWS UNO.

EXPOSURE CLASSIFICATION	MINIMUM COVER (mm)				
	CONCRETE STRENGTH (f'c)				
	20 MPa	25 MPa	32 MPa	40 MPa	>50 MPa
A1	20	20	20	20	20
A2	(50)	30	25	20	20
B1	-	(60)	40	30	25
B2	-	-	(65)	45	35
C	-	-	-	(70)	50

FOR BRACKETED FIGURES REFER TO AS 3600 CURRENT EDITION TABLE 4.10.3.2

- C4. MINIMUM COVER FOR FIRE RESISTANCE LEVEL (FRL) SHALL BE AS FOLLOWS:

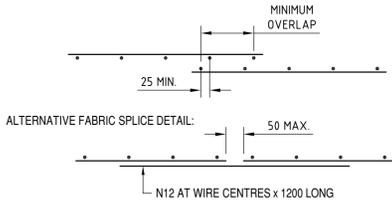
FRL	MINIMUM ELEMENT WIDTH OR THICKNESS / MIN COVER (mm)			
	BEAM	SLAB	COLUMN	WALL
60	125 / 30	80 / 20	200 / 20	80 / 20
90	150 / 45	100 / 25	250 / 35	100 / 35
120	200 / 55	120 / 30	300 / 45	120 / 40
180	240 / 70	150 / 45	400 / 60	150 / 45
240	270 / 80	170 / 55	450 / 70	170 / 50

NOTE : 1. REFER TO AS 3600 CURRENT EDITION FOR REDUCED COVERS IF GREATER ELEMENT THICKNESSES ARE ADOPTED FOR BEAMS & COLUMNS.
2. COVER IS MEASURED TO THE MAIN REINFORCEMENT

- C5. COVER TO REINFORCEMENT SHALL BE OBTAINED BY THE USE OF APPROVED BAR CHAIRS. ALL CHAIRS SHALL BE SPACED AT 1000 CTS MAXIMUM.
- C6. ALL CONCRETE SHALL BE MECHANICALLY VIBRATED. VIBRATORS SHALL NOT BE USED TO SPREAD CONCRETE.
- C7. SIZES OF CONCRETE ELEMENTS DO NOT INCLUDE THICKNESS OF APPLIED FINISHES.
- C8. NO HOLES OR CHASES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT THE PRIOR APPROVAL OF THE ENGINEER.
- C9. CONSTRUCTION JOINTS WHERE NOT SHOWN SHALL BE LOCATED TO APPROVAL OF THE ENGINEER. ALL CONSTRUCTION JOINTS SHALL BE SCABBLED OVER THE WHOLE FACE AND ANY UNSOUND MATERIAL REMOVED.
- C10. REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY; IT IS NOT NECESSARILY SHOWN IN TRUE PROJECTION.
- C11. SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS APPROVED BY THE ENGINEER. WHERE THE LAP LENGTH IS NOT SHOWN IT SHALL BE SUFFICIENT TO DEVELOP THE FULL STRENGTH OF THE REINFORCEMENT AS SPECIFIED IN AS3600. COGS AND HOOKS SHALL BE STANDARD UNLESS SHOWN OTHERWISE.
- C12. WELDING OF REINFORCEMENT WILL NOT BE PERMITTED UNLESS SHOWN ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
- C13. PIPES OR CONDUITS SHALL NOT BE PLACED WITHIN THE CONCRETE COVER TO REINFORCEMENT WITHOUT THE APPROVAL OF THE ENGINEER.
- C14. REINFORCEMENT SYMBOLS:
N - DENOTES DEFORMED GRADE 500 NORMAL DUCTILITY REINFORCING BARS TO ASNZS 4671.
R - DENOTES PLAIN ROUND GRADE 250 NORMAL DUCTILITY REINFORCING BARS TO ASNZS 4671.
SL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO ASNZS 4671.
RL - DENOTES DEFORMED GRADE 500 LOW DUCTILITY REINFORCING MESH TO ASNZS 4671.
L-TM - DENOTES DEFORMED GRADE 500 LOW DUCTILITY TRENCH MESH TO ASNZS 4671.

- C15. ALL REINFORCING FABRIC SHALL COMPLY WITH AS1303 AND AS1304 AND SHALL BE SUPPLIED IN FLAT SHEETS.

- C16. SPLICES IN FABRIC: THE OUTERMOST TRANSVERSE WIRES SHALL BE OVERLAPPED BY AT LEAST THE SPACING OF THESE TRANSVERSE WIRES PLUS 25 mm.



- C17. EXPOSED CORNERS SHALL BE 20 mm CHAMFERED UNO.
- C18. ALL REINFORCEMENT SHALL BE INSPECTED BY THE SUPERINTENDENT OR ENGINEER PRIOR TO PLACING CONCRETE.
- C19. ALL SLAB CONCRETE TO BE CURED IN AN APPROVED MANNER FOR A MINIMUM OF 7 DAYS.
- C20. ALL FORMWORK AND PROPS FOR SLABS AND BEAMS SHALL BE REMOVED BEFORE CONSTRUCTION OF ANY MASONRY WALLS OR PARTITIONS ON THE FLOOR.
- C21. ALL ABBREVIATIONS ARE IN ACCORDANCE WITH AS1100.
- C22. EACH FLOOR SHALL BE FULLY PROPPED TO THE FLOOR BELOW IN ACCORDANCE WITH AS3610 (FORMWORK CODE).
- C23. THE FLOOR BELOW SHALL BE BACKPROPPED THROUGH A MINIMUM OF TWO STOREYS BELOW. THIS RESULTS IN A MINIMUM OF THREE STOREYS PROPPED AT ALL TIMES.
- C24. PROPS MAY BE REMOVED AFTER 28 DAYS OF CURING OR AFTER 14 DAYS IF THE CONCRETE HAS REACHED ITS CHARACTERISTIC STRENGTH (AS PROVED BY CYLINDER TEST RESULTS).

STRUCTURAL STEELWORK

- S1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS4100.
- S2. QUALIFICATION OF WELDING PROCEDURES AND PERSONNEL SHALL CONFORM TO SECTION 4 OF AS1554.1. NON DESTRUCTIVE TESTING OF WELDS SHALL INCLUDE 100% VISUAL INSPECTIONS IN ACCORDANCE WITH AS1554.1.
- S3. ALL WELDS SHALL BE 6 mm CONTINUOUS FILLET TYPE SP UNO. BUTT WELDS WHERE INDICATED ON THE DRAWINGS SHALL BE COMPLETE PENETRATION WELDS AS DEFINED IN AS1554.1.
- S4. BOLT DESIGNATION:
4.6/S - COMMERCIAL BOLTS OF GRADE 4.6 TO AS1111 TIGHTENED TO A SNUG TIGHT FIT.
8.8/S - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 TIGHTENED TO A SNUG TIGHT FIT.
8.8/TB - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS1511 AS A BEARING JOINT.
8.8/TF - HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS1511 AS A FRICTION JOINT WITH FACING SURFACES LEFT UNCOATED.

UNLESS NOTED OTHERWISE ALL BOLTS SHALL BE M20 GRADE 8.8/S AND NO STEEL TO STEEL CONNECTIONS SHALL HAVE LESS THAN 2 COMMERCIAL BOLTS 4.6/S.

- S5. HIGH STRENGTH TB AND TF BOLTS SHALL BE INSTALLED USING APPROVED LOAD INDICATING WASHERS.
- S6. GUSSET PLATES SHALL BE 10 mm THICK, UNO.
- S7. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AS IS NECESSARY TO STABILISE THE STRUCTURE DURING ERECTION.
- S8. THE CONTRACTOR SHALL PROVIDE ALL CLEATS AND DRILL ALL HOLES NECESSARY FOR FIXING STEEL TO STEEL AND TIMBER TO STEEL WHETHER OR NOT DETAILED IN THE DRAWINGS.
- S9. CONCRETE ENCASED STEELWORK SHALL BE WRAPPED WITH SL41 FABRIC AND SHALL HAVE 30 mm COVER UNO ON THE DRAWINGS.
- S10. STEELWORK NOT CONCRETE ENCASED, SHALL HAVE THE FOLLOWING SURFACE TREATMENT IN ACCORDANCE WITH THE SPECIFICATION UNO:

ELEMENT	SURFACE CLEANING	PRIMING
ALL STEELWORK BUILT-IN TO BRICKWORK AND EXTERNAL STEELWORK	TO AS1650	HOT-DIPPED GALVANISED
ALL INTERNAL STEELWORK	HAND/POWER TOOL TO CLASS 1 OF AS1627	ALKYD PRIMER ZINC PHOSPHATE

- S11. WHERE SEALED TUBE MEMBERS ARE TO BE HOT DIPPED GALVANISED, THE FABRICATOR SHALL PROVIDE ALL DRILL HOLES AS NECESSARY.
- S12. PURLIN & GIRT DESIGN HAS BEEN BASED ON MBPMA NOMINAL SIZE CEE AND ZED LIPPED PURLINS/GIRTS. ALL PURLIN/GIRT PROFILES SHALL BE IN ACCORDANCE WITH THE MBPMA SPECIFICATIONS. CLEAT CONNECTIONS SHALL BE IN ACCORDANCE WITH AISC STANDARDISED CONNECTIONS U.N.O. BOLTING AND BRIDGING TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- S13. THE CONTRACTOR SHALL PREPARE AND SUBMIT TWO (2) COPIES OF ALL WORKSHOP DRAWINGS FOR APPROVAL. FABRICATION SHALL NOT COMMENCE UNTIL APPROVAL HAS BEEN OBTAINED.
- S14. ALL TRANSPORT AND ERECTION DAMAGE, SITE WELDS ETC. SHALL BE REINSTATED TO AN EQUIVALENT FINISH TO ADJACENT STEELWORK.

MASONRY

- M1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 3700.
- M2. THE CHARACTERISTIC COMPRESSIVE STRENGTH OF MASONRY (f_{uc}) = 24 MPa
- M3. THE DURABILITY REQUIREMENTS OF MASONRY SHALL BE AS FOLLOWS:

DURABILITY REQUIREMENTS			
MORTAR	SALT ATTACK RESISTANCE GRADE	BUILT IN COMPONENT	MIN. COVER TO REINFORCEMENT & TENDONS IN GROUTED CAVITIES
M2	Protected	R1 (Galv'd 300 gm ² each side)	5
M3	General Purpose	R3 (Galv'd 470 gm ² each side)	15
M4	Exposure	R4 (Stainless)	30

- M4. ALL MASONRY WALLS SUPPORTING SLABS AND BEAMS SHALL HAVE A PPE-GREASED TWO LAYER GALVANISED STEEL SLIP JOINT BETWEEN CONCRETE AND MASONRY.
- M5. ALL MASONRY WALLS SUPPORTING OR SUPPORTED BY CONCRETE FLOORS SHALL BE PROVIDED WITH VERTICAL JOINTS TO MATCH ANY CONTROL JOINTS IN THE CONCRETE.
- M6. NON LOAD BEARING WALLS SHALL BE SEPARATED FROM CONCRETE ABOVE BY 20 mm THICK CLOSED CELL POLYETHYLENE STRIP.
- M7. MASONRY SHALL BE ARTICULATED IN ACCORDANCE WITH TECHNICAL NOTE 61 FROM THE CEMENT AND CONCRETE ASSOCIATION OF AUSTRALIA. VERTICAL CONTROL JOINTS SHALL NOT EXCEED 5 METRES MAXIMUM CENTRES. AND 4 METRES MAXIMUM FROM CORNERS IN MASONRY WALLS, AND BETWEEN NEW & EXISTING BRICKWORK.
- M8. MASONRY RETAINING WALLS ARE TO BE BACKFILLED WITH EITHER OF THE FOLLOWING MATERIAL:
- COARSE GRAINED SOIL WITH LOW SILT CONTENT
- RESIDUAL SOIL CONTAINING STONES
- FINE SILTY SAND
- GRANULAR MATERIALS WITH LOW CLAY CONTENT
- M9. UNLESS OTHER SUPPORT IS SPECIFIED, BUILD IN DURABILITY GRADE R4 LINTELS TO SUPPORT BRICKWORK OVER OPENINGS, ONE TO EACH LEAF OF WALL, AND CONFORMING TO THE FOLLOWING TABLE:

SPAN	LINTEL SIZE	MIN END BEARING
UP TO 900	75 x 6.0 EA	100
OVER 900 - 1800	100 x 100 x 6 (EA)	150
OVER 1800 - 3000	150 x 100 x 10 (UA)	150
MAXIMUM HEIGHT OF BRICKWORK OVER LINTEL = 1000		
ALL EXTERNAL LINTELS TO BE HOT DIPPED GALVANISED		

PRECAST CONCRETE

- PC1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600 AND THE SPECIFICATION.
- PC2. CONCRETE GRADE SHALL BE 40 MPa MINIMUM. CONCRETE STRENGTH AT REMOVAL FROM MOULDS SHALL BE 20 MPa (MIN.)
- PC3. CONCRETE MIX, SIZE AND COLOUR OF AGGREGATE, METHOD OF CURING AND FINISH SHALL BE APPROVED BY ENGINEER.
- PC4. DIMENSIONS SHOWN ARE FINAL STRUCTURAL SIZES AND ADDITIONAL CONCRETE MUST BE PROVIDED TO ALLOW FOR LOSS OF STRUCTURAL THICKNESS DUE TO THE USE OF RETARDING AGENTS AND SURFACE TREATMENT.
- PC5. PANEL STRUCTURAL THICKNESS SHALL BE AS NOTED.
- PC6. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS, REBATES, DRIPS, SEALS, BAFFLES, ETC..
- PC7. ALL METAL WORK AND CAST-IN FIXINGS SHALL BE HOT DIP GALVANISED IN ACCORDANCE WITH AS1650 UNO. TOP SURFACE LIFTING FERRULES LEFT FINALLY EXPOSED SHALL BE STAINLESS STEEL. PROJECTING REINFORCEMENT SHALL BE COATED WITH A CEMENT SLURRY WHICH MUST BE REMOVED PRIOR TO BUILDING
- PC8. ALL CAST-IN FERRULES SHOWN ON THE DRAWINGS ARE TO REMAIN SEALED UNTIL THE ERECTION OF THE PANEL. THEY ARE NOT TO BE USED FOR LIFTING PURPOSES.
- PC9. INTERFACES OF THE PRECAST UNITS THAT ARE TO HAVE INSITU CONCRETE CAST AGAINST THEM SHALL BE THOROUGHLY ROUGHENED AN AMPLITUDE OF 5 mm.
- PC10. NO INSERTS SHALL BE 'SHOT' (FIRED) OR DRILLED INTO THE UNITS WITHOUT APPROVAL BY THE ENGINEER.
- PC11. CLEAR CONCRETE COVER TO REINFORCEMENT SHALL BE AS INDICATED ON THE DRAWINGS. TOLERANCES SHALL BE AS FOLLOWS :
OUTSIDE FACE: +5 mm -0 mm
INSIDE FACE: +5 mm -0 mm
- PC12. FABRIC IN PANELS SHALL BE OF ONE SHEET - NO LAPPING IS PERMITTED UNLESS SHOWN ON STRUCTURAL DRAWINGS.
- PC13. PENETRATIONS FOR SERVICES SHALL BE NEAT FORMED HOLES. HOLE BORING THROUGH PANELS WILL NOT BE PERMITTED.
- PC14. TEMPORARY STEEL PACKERS TO BE USED FOR LEVELING UNDER CORBELS AS SHOWN ON DRAWINGS MAY BE LEFT PERMANENTLY PROVIDED THEY HAVE A MINIMUM OF 50 mm GROUT COVER AND ENSURE BEARING PRESSURE LESS THAN 7 MPa. STEEL PACKERS SHALL NOT BE USED BETWEEN UNIT JOINTS.
- PC15. PRECAST CONCRETE PANELS SHALL NOT BE ERECTED UNTIL ALL THE PROPS HAVE BEEN REMOVED FROM SUSPENDED SLABS BELOW.
- PC16. TWO (2) COPIES OF SHOP DRAWINGS (OR PDF ELECTRONIC COPY) SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE FABRICATION COMMENCES. SHOP DRAWINGS SHALL SHOW ALL CAST-IN INSERTS & REINFORCEMENT.
- PC17. THE CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE ENGINEER FULL DETAILS AND COMPUTATIONS BY A CHARTERED ENGINEER EXPERIENCED IN THIS TYPE OF WORK. THESE SHALL COVER THE HANDLING PROCEDURE OF THE UNITS THROUGHOUT ALL STAGES INCLUDING STRIPPING, LIFTING, STACKING, TRANSPORTING AND ERECTION. CONCRETE STRESSES THROUGHOUT HANDLING SHALL NOT CAUSE CRACKING. COMPUTATIONS AND DETAILS SHALL INCLUDE LOCATION AND SIZE OF INSERTS AND TEST PROVING ANCHORAGE CAPACITY OF LIFTING FERRULES.

HOLLOWCORE FLOOR PLANKS & WALL PANELS

- HC1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS3600, AS1315 AS2758.1 AND AS1478.
- HC2. CONCRETE GRADE SHALL BE 40 MPa MINIMUM, CONFORMING TO AS3600. CONCRETE STRENGTH AT REMOVAL FROM BED SHALL BE: 25 MPa (MIN.)
- HC3. PRESTRESSING STEEL SHALL BE STRESS RELIEVED LOW RELAXATION STRAND COMPLYING WITH AS1311.
- HC4. FLOOR PLANK TOPPING CONCRETE SHALL BE 32 MPa MINIMUM, OR AS SHOWN ON THE DRAWINGS. IF TOPPING CONCRETE IS USED TO GROUT THE PLANK KEYWAYS, THE MAXIMUM AGGREGATE SIZE SHALL BE 10 mm.
- HC5. PLANK AND TOPPING THICKNESS SHALL BE AS NOTED ON PLANS AND SECTIONS.
- HC6. THE HOLLOWCORE SHALL BE SUPPLIED IN ACCORDANCE WITH THE FOLLOWING TOLERANCES:
LENGTH = +10, -10 mm
WIDTH = +3, -3 mm
THICKNESS = +3, -3 mm
END SQUARENESS = +6, -6 mm
WIND = 10 mm PER 3000 mm
FERRULE LOCATION = +20, -20 mm
STRAND LOCATION = +3, -3 mm
DIFFERENTIAL CAMBER = 2 mm / m (15 mm MAX.)
- HC7. STORAGE, TRANSPORT & ERECTION ONLY AT THE NOMINATED LIFTING POINTS.
- HC8. THE HOLLOWCORE PLANKS SHALL BE INSTALLED BY THE MANUFACTURER OR A COMPETENT ERECTION CONTRACTOR. SET BEARING STRIPS WHERE REQUIRED & PROVIDE TEMPORARY SHORING & BRACING AS NECESSARY TO MAINTAIN THE STRUCTURE IN A STABLE CONDITION.
- HC9. ALIGN & GROUT ALL KEYWAYS WITH A 3:1 SAND CEMENT GROUT OR AN APPROVED TOPPING CONCRETE, SO THAT ALL KEYWAYS ARE PROPERLY FILLED.
- HC10. PENETRATIONS & CHASES IN THE PLANKS & PANELS SHALL BE APPROVED BY THE MANUFACTURER & STRUCTURAL ENGINEER.
- HC11. THE MANUFACTURER SHALL PROVIDE ACCESS FOR INSPECTION OF WORK IN PROGRESS. IF MATERIAL OR WORKMANSHIP IS CONSIDERED DEFECTIVE, THE MANUFACTURER SHALL CARRY OUT ADDITIONAL TESTS AND/OR RECTIFY THE PLANKS TO THE APPROVAL OF THE STRUCTURAL ENGINEER.
- HC12. TWO (2) COPIES OF SHOP DRAWINGS SHALL BE SUPPLIED TO THE STRUCTURAL ENGINEER FOR APPROVAL, PRIOR TO MANUFACTURE OF THE PLANKS & PANELS.

WATERPROOFING REQUIREMENTS

- W1. TO ACHIEVE WATERPROOF PROPERTIES XYPEX CONCENTRATE SHALL BE MIXED WITH CONCRETE IN STRICT ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. XYPEX IS TO BE USED IN THE FOLLOWING AREAS:
(a) CONCRETE ROOF
(b) CONCRETE BALCONIES
(c) EXPOSED COLUMNS
(d) LIFT PIT AND LIFT WALL TO GROUND LEVEL
GENERALLY WATERPROOFING TO BE IN ACCORDING TO ARCHITECTS AND CLIENT'S REQUIREMENTS. SEEK SPECIALIST ADVICE.

PRELIMINARY DRAWING
NOT TO BE USED FOR CONSTRUCTION PURPOSES

REVISION	DATE	AMENDMENT DESCRIPTION
P1	04.05.09	ISSUED FOR PRELIMINARY INFORMATION

COPYRIGHT
ECLIPSE Consulting Engineers Pty Ltd is the owner of the copyright subsisting in these drawings, plans, designs and specifications. They must not be used, reproduced or copied in whole or in part without prior written consent of ECLIPSE Consulting Engineers Pty Ltd

ECLIPSE CONSULTING ENGINEERS

ECLIPSE Consulting Engineers Pty Ltd
304/12 Century Circuit
Northwest Central
BANKSPRING HILLS NSW 2153
Phone : (02) 9894 8500
Fax : (02) 8850 0212
info@eclipse-consulting.com.au
www.eclipse-consulting.com.au

ILLAWARRA INTERNATIONAL SPECIALIST & SURGICENTRE

Avondale Rd, Huntley
La Vie Developments

General Notes

DESIGN	DRAWN	DATE	PROJECT No.
SWH	GOH	APR 2009	5752
CHECKED	APPROVED	SCALE	DRG No.
			SK00 - P1