### GENERAL NOTES

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL ARCHITECTURAL AND OTHER CONSULTANTS DRAWINGS. THE SPECIFICATIONS AND WITH SUCH OTHER WHITTEN INSTRUCTIONS AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT.
- ANY DISCREPANCY ON THE DRAWINGS OR BETWEEN THE DRAWINGS AND/OR THE SPECIFICATION AND/OR THE SPECIFIED AUSTRALIA STANDARD SHALL BE REFERRED TO THE ENGINEER AND A WRITTEN INSTRUCTION RECEIVED PRIOR TO PROCEEDING THE ENGINEER AND A WHITTEN INSTRUCTION RECEIVED PRIOR TO PROCE WITH THE WORK, DURING TENDERING THE TENDER SHALL ASSUME THE LARGER/GREATER CRITERIA IN TERMS OF COST IN THE ABSENCE OF OTHER INSTRUCTIONS.
- 3 ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT S.A.A. CODES, INCLUDING ALL AMENDMENTS, AND THE BY-LAWS AND ORDINANCES OF THE RELEVANT BUILDING AUTHORITY, EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION.
- ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED ALL LEVELS ARE EXPRESSED IN METRES ALL DIMENSIONS RELEVANT TO SETTING OUT AND OFF-SITE WORK SHALL BE VERIFIED ON SITE BY THE CONTRACTOR BEFORE CONSTRUCTION AND FABRICATION ARE COMMENCED THE ENGINEERS DRAWINGS ARE NOT TO BE SCALED NO RESPONSIBILITY WILL BE TAKEN BY THE ENGINEER FOR DIMENSIONS OBTAINED BY SCALING THE DRAWINGS.
- 5. SUBSTITUTIONS MUST BE APPROVED BY THE ENGINEER AND BE INCLUDED IN ANY TENDER
- DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING THE STRUCTURE IN A STABLE CONDITION, ENSURING NO PART SHALL BE OVER-STRESSED DURING CONSTRUCTION ACTIVITIES.
- THE STRUCTURAL DRAWINGS DO NOT SHOW ALL DETAILS OF FIXTURES, INSERTS, SLEEVES, OPENINGS, ETC REQUIRED BY THE VARIOUS TRADES ALL SUCH DETAILS, INCLUDING OPENINGS FOR CONSTRUCTION PURPOSES MUST BE APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH CONSTRUCTION.
- 8 THE STRUCTURE SHOWN ON THESE DRAWINGS HAS BEEN DESIGNED FOR THE FOLLOWING DESIGN LOADS:

NON TRAFFICABLE ROOFS IN ACCORDANCE WITH AS1170.1 SECTION 4.8.1 (0.25kPa MIN.)

9 THE WIND CLASSIFICATION OF THE SITE IS N2 AS PER AS4059

### FOUNDATION NOTES

- ALL FOOTINGS AND GROUND BEAMS SHALL BE FOUNDED ON NATURAL GROUND OF A MINIMUM UNIFORM S.B.V. OF 150kPa, OTHERWISE PROVIDE PIERS AS PER NOTE 2.
- PIERS WHERE REQUIRED SHALL BE 400¢ ON FIRM NATURAL (LAY AND 300¢ FOR ROCK BEARING THE SPACING OF PIERS WHERE REQUIRED SHALL BE AS FOLLOWS. SINGLE STOREY BRICK VENEER. 2 pm CTS. DOUBLE STOREY BRICK VENEER. 15m CTS.
- IF ROCK IS ENCOUNTERED IN THE EXCAVATION, ALL FOOTINGS MUST BE FOUNDED ON OR PIERED TO THAT STRATA
- SLAB SHOULD BE PLACED ON COMPACTED NATURAL GROUND/FILL WITH MINIMUM 98/MAXIMUM DRY DENSITY(MDD) AND THE BUILDER IS REQUIRED TO KEEP TEST RECORDS
- 5 LOCATION OF ANY UNDERGROUND SERVICES SHOULD BE DETERMINED BY THE CLIENT FOR THE ENGINEER PRIOR TO DESIGN OF THE FOOTINGS AND ANY NECESSARY MODIFICATION SHOULD BE OBSTANCE PRIOR TO CONSTRUCTION OF THE FOOTINGS. THESE MODIFICATIONS MAY INCUR FEES PAYABLE TO THE ENGINEER.
- NOTE THIS DESIGN DOES NOT COVER ANY SLOPE STABILITY MATTERS IF THE SITE HAS ANY SLOPES THE CLIENT SHOULD GET A QUALIFIED GEOTECHNICAL ENGINEER TO VERIFY IT'S STABILITY PRIOR TO CONSTRUCTION AND ANY RECOMMENDATIONS PETIAINNG TO THE BUILDING SHOULD BE BROUGHT TO THE ENGINEERS NOTICE PRIOR TO CONSTRUCTION.
- 7. NO PART OF THE FOOTING INCLUDING GROUND BEAMS, PIERS, BACKHOE PIERS SHOULD BE FOUNDED ON: BLOOSE NATURAL MATERIALS WITH ALLOWABLE BEARING CAPACITY OF LESS THAN 100HP2
- THAN 100-Pa

  0) LANDSLIP

  c) IMME SUBSIDENCE AND COLLAPSING SOILS

  d) SOILS SUBJECT TO EROSION

  e) PRACTIVE SITES WITH ABNORMAL MOISTURE CONTENTS CAUSED BY EVENTS ON

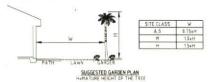
  SITE AND INCLUDING THE SURROUNDINGS AREAS SUCH AS RECENT REMOVAL OF

  BUILDING FROM SITE, CHANGE IN DRAINAGE OF THE SITE CAUSED BY REMOVAL/

  ADDITION OF DRAINS, LEAKING DRAINAGE OF THE SITE CAUSED BY REMOVAL/

  ADDITION OF DRAINS, LEAKING DRAINAGE OF THE SITE AUSED BY REMOVAL/

  MAINTENANCE, REMOVAL OF LARGE TREES, TREES HEAR THE FOUNDATION.
- 8 THE MINIMUM DISTANCE OF THE TREES (BOTH ON SITE AND ON THE ADJOINING PROPERTY) FROM THE FOUNDATION SHOULD BE AS SHOWN BELOW
- FILL UNDER THE SLAB SHOULD BE FREE FROM ORGANIC MATERIAL, REACTIVE CLAYS LARGE BOULDERS FILLS SHOULD BE NON REACTIVE CRUSHED ROCK OR EQUIVALENT COMPACTED TO MINIMUM 98% MAXIMUM DRY DENSITY IN LAYERS OF 30MM DEPTH
- 10 POOTINGS NEAR POOLS/RETAINING WALLS SHOULD BE TAKEN BELOW THE ZONE OF INFLUENCE ON THESE STRUCTURE AND PIERS SHOULD BE USED IF NECESSARY IF IN DOUBTS CONTACT THE REMINER FOR PURTHER ADVICE.



# SITE CLASSIFICATION

- IN ACCORDANCE WITH AS2870-2011, S.A.A. CODE FOR RESIDENTIAL SLABS AND FOOTINGS; THE SITE CLASSIFICATION IS "H"
- 2. THE SITE WAS CLASSIFIED BY LOCAL KNOWLEDGE
- 3. THE OWNERS ATTENTION IS DRAWN TO APPENDIX B OF AS 2870 PERFORMANCE REQUIREMENTS AND FOUNDATION MAINTENANCE
- 4. THE SOIL TYPE AND SITE CONDITIONS SHOULD BE INSPECTED AT FOOTING EXCAVATION STAGE BY THE ENGINEER TO CONFIRM THE SOIL CLASSIFICATION
- 5 THE ENGINEER WILL NOT BE HELD RESPONSIBLE FOR ANY DETRIMENTAL EFFECTS OR COSTS THAT MAY OCCUR DUE TO THE OWNER OR THE BUILDER FAILING TO PASS ON INFORMATION THAT IS IN THEIR POSSESSION AND IS RELEVANT TO THE FOUNDATION DESIGN OR SITE CLASSIFICATION

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- ALL MATERIALS, WORKMANSHIP AND TESTING SHALL COMPLY WITH AS 1379, AS 3600 & AS 3610.
- WATER MUST NOT BE ADDED TO THE PREMIXED CONCRETE AT SITE AND NO ADDITIVES OR ADMIXTURES TO BE USED WITHOUT OBTAINING PRIOR APPROVAL IN WRITING FROM THE SUPERINTENDENT.

ELEMENT	SLUMP	MAX. AGG. SIZE	CEMENT	GRADE IN MP
FOOTINGS AND SLAB ON GROUND	80	20mm	GP	25
SUSPENDED SLABS	80	20mm	GP	32

- SIZE OF ELEMENTS IS EXCLUSIVE OF APPLIED FINISHES. BEAM DEPTHS INCLUDE SLAB THICKNESS ARE THE FIRST DIMENSION SPECIFIED FOLLOWED BY WIDTH.
- SLABS TO BE CONTINUOUSLY MOIST CURED FOR 7 DAYS MAINTAINING DAMPNESS AT ALL TIMES WITH PLASTIC FILM AND WET SAND, OR CONTINUOUS IMMERSION. PVA & RESIN BASED CURING COMPOUNDS SHALL NOT BE USED.

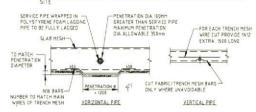
### CONCRETE NOTES

- MECHANICALLY VIBRATE ALL CONCRETE TO GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION OF THE CONCRETE.
- ALL JOINTS SHALL BE PROPERLY FORMED AND USED WHERE SHOWN OR SPECIFICALLY APPROVED BY THE SUPERINTENDENT.
- 8. AT FOOTING INTERSECTIONS REINFORCEMENT SHALL EXTEND 40 BAR DIAMETERS INTO TRANSVERSE FOOTING.
- NO HOLES, CHASES OR EMBEDMENT OF PIPES OTHER THAN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS OR SLABS WITHOUT PRIDE APPROVAL OF THE SUPERINTENDENT. STEPS IN FOOTINGS SHALL BE CONSTRUCTED TO DETAILS.
- DIMENSIONAL TOLERANCES OF AS 3600 MODIFIED BY AS 3610 SHALL APPLY UNLESS OTHERWISE NOTED SLAB SURFACE FLATNESS TOLERANCE SHALL BE 5mm MAXIMUM DEVIATION FROM A 3m STRAIGHT FOOF
- 12 WHERE SLABS AND BEAMS ARE TO SUPPORT BRICKWORK OR OTHER NON FLEXIBLE FORMS OF CONSTRUCTION, FORMWORK AND PROPS FOR THESE MEMBERS MIST NOT BE REMOVED PRIOR TO CONSTRUCTION OF BRICKWORK ETC. NO LOADS SHALL BE PLACED ON CANTILEVERED MEMBERS UNTIL REMOVAL OF TEMPORARY SUPPORTS.
- DESIGN, ERECTION AND REMOVAL OF FORMWORK AND TEMPORARY SUPPORTS SHALL BE THE RESPONSIBILITY OF THE BUILDER
- 14. THE FACES OF ALL CONCRETE OF WHICH NEW CONCRETE IS TO BE POURED SHALL BE THOROUGHLY SCABBLED AND CLEANED OF ANY DELETERIOUS MATERIAL

# PLUMBING NOTES

### PLUMING REQUIREMENTS

- A CLOSED-CELL POLYETHYLENE LAGGING SHALL BE USED AROUND ALL STORM WATER & SEWER PPE PENETRATIONS THROUGH ALL SLAB BEAMS & FOOTINGS THE LAGGING SHALL BE HIM 20 THEK ON CLASS HISTES AND 10 THICK ON CLASS HISTES ALLOWING EQUIVALENT MOVEMENTS MAY BE USED AS AN ALTERNATIVE. LAGGING IS NOT REQUIRED AROUND VERTICAL PENETRATIONS THROUGH SLAB PANELS.
- B. PROVIDE FLEXIBLE JOINTS TO ALL PIPES AT EXTERNAL WALLS IN CLASS H SITE



SERVICE PENETRATION DETAIL NOTE PENETRATIONS OF EDGE BEAMS & FOOTINGS SHOULD BE AVOIDED WHERE POSSIBLE

### REINFORCEMENT NOTES

1. LAP MESH AT LEAST ONE WHOLE UNCUT WIRE PANEL AS SHOWN

	-	· · · · · · · ·		
TRENCH MESH		REINFORCING MESH		

- 2. PROVIDE 50mm MINIMUM COVER TO TRENCH MESH, U.N.O.
- 3. PROVIDE 20mm MINIMUM COVER TO REINFORCING MESH, U.N.O.
- 4 ALL TRENCH MESH IS TO BE FULLY LAPPED AT SPLICES AND INTERSECTIONS
- 5 CONCRETE COVER TO REINFORCEMENT (REFER TO TABLE 4 10 3 2 OF AS3600) UNLESS OTHERWISE SHOWN IN TABLE
- 5. PROVIDE 40mm MINIMUM COVER TO ALL REINFORCEMENT, U.N.O.
- 7. LAPPING OF BARS AT SPLICES SHALL BE AS PER BELOW

BAR SIZE	SPLICE LENGTH
N1Z	400
N16	600
N20	800
N24	1000

- B REINFORCEMENT IS REPRESENTED DIAGRAMMATICALLY AND NOT NECESSARILY SHOWN IN TRUE PROJECTION
- SPLICES IN REINFORCEMENT SHALL BE MADE ONLY IN THE POSITIONS SHOWN OR AS OTHERWISE APPROVED BY THE SUPERINTENDENT
- WELDING OF REINFORCEMENT SHALL NOT BE PERMITTED WITHOUT THE APPROVAL OF THE SUPERINTENDENT
- REINFORCEMENT SYMBOLS -N DEFORMED BARS TO AS/NZS 4671, GRADE 500MPa R STRUCTURAL, GRADE PLAIN ROUND BAR TO AS/NZS 4671, GRADE ZZVITPA SL/RL – HARD DRAWN STEEL WIRE REINFORCING MESH TO AS/NZS 4671, GRADE 500MPA
- 12 ALL REINFORCEMENT MUST BE ADEQUATELY PLACED IN THE POSITIONS SHOWN TIED AND SUPPORTED BY THE APPROPRIATE BAR CHAIRS IN ORDER TO MAINTAIN SPECIFIED COVERS

# RAFT SLAB NOTES

- 2 ALL CONCRETE AND WORKMANSHIP TO BE IN ACCORDANCE WITH AS 3600 AND ASSOCIATED AUSTRALIAN STANDARDS
- REFER TO CONCRETE NOTES AND REINFORCEMENT NOTES FOR CONCRETE GRADES AND REINFORCEMENT LAPPING
- 4. CONCRETE IN SLAB TO BE MECHANICALLY VIBRATED DURING PLACING
- 5. CURE CONCRETE BY KEEPING CONSTANTLY DAMP FOR AT LEAST 5 DAYS AFTER PLACING
- REINFORCEMENT TO BE SUPPORTED ON BAR CHAIRS SPACED AT EVERY 5TH WIRE IN BOTH DIRECTIONS

### RAFT SLAB NOTES

- 7 GRADE FINISHED GROUND SURFACE TO DIVERT WATER AWAY FROM SLAB ON ALL SIDES AND TO PREVENT PONDING
- INSTALL TERMITE PROTECTION SYSTEM IN ACCORDANCE WITH AS:3660.1-1995.
   FOR LOCATION AND TYPES OF WALLS OVER SLAB BEAMS, REFER TO APPLIEFCTURAL.
- THE MINIMUM TOP MESH REINFORCEMENT SHALL BE 5L72 UNLESS THE AREA OF SLAB IS TO BE TILED IN THE PERIOD LESS THAN 3 MONTHS AFTER POURING, THEN IT SHALL BE MINIMUM SLOP.

### PRECAST CONCRETE

- ALL MATERIALS, WORKMANSHIP AND TESTING SHALL COMPLY WITH AS 1379, AS 3600 & AS 3610.
- PRECAST ELEMENTS SHALL COMPLY WITH THE APPLICABLE PARTS OF THE CONCRETE NOTES FOUND ON THIS SHEET. THIS INCLUDES COVERS, PLACEMENT VIBRATION ETC FOR THE POURING STAGE OF THE ELEMENTS.
- 3. REFER TO TABLE FOR REQUIRED CONCRETE GRADE

ELEMENT	SLUMP	MAX. AGG. SIZE	CEMENT	GRADE IN MP a
WALLS	80	20mm	A	32
FOOTINGS	80	20mm	Α.	25
PIERS	100	20mm	A	20

- THE THICKNESS OF MATERIALS DOES NOT INCLUDE APPLIED FINISHES.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ENSURE THE STABILITY OF THE WALLS FROM THE ERECTION STAGE TO THE FINAL CONNECTION OF THE WALLS TO THE LATERALLY SUPPORTING ELEMENTS.
- PLEASE REFER TO "VCA CRANE SAFETY BULLETIN #126" PUBLISHED ON THE 14TH MAY, 2012 FOR MORE DETAILS.
- 7. IT IS ALLOWABLE TO CREATE THE PRECAST ELEMENTS ON SITE PROVIDING THE CASTING BAY IS:
- LEVEL AND WITHOUT DEVIATIONS
   ON A SLOPE NOT GREATER THAN 1 IN 100
   THE PLASTIC MEMBRANE UNDER THE CASTING AREA IS FREE FROM DEFECT
   ANY SUSPENDED SLABS HAVE BEEN DESIGNED TO TAKE THE LOADING OF THE
  PRECAST LEMENAT TIPLEASE CONTACT THE DESIGNE MEMBREEF FOR GUIDANCE
   THE CONCRETE IS CAST TO THE REQUIREMENTS OF THE CONCRETE NOTES
- THE FIXING POINTS ON THE PRECAST ELEMENTS SHALL BE INSTALLED IN THE CASTING PROCESS AND SHALL BE AT THE HEIGHTS OR HEIGHT RATIOS SPECIFIED IN THE DRAWINGS OR IF NOT SPECIFIED AT 1/4 AND 3/4 HEIGHT RATIOS.

### BLOCKWORK NOTES

- ALL CONCRETE BLOCK WORK SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT EDITION OF AS 3700 (MASONRY CODE).
- WORKMANSHIP TO BE OF THE HIGHEST QUALITY AND ALL BLOCKWORK TO BE LAID TRUE AND PLUMB WITH FULLY BEDOED FACE SHELLS AND CROSS WEBS
- ALL CONCRETE BLOCK UNITS SHALL HAVE A CHARACTERISTIC COMPRESSIVE STRENGTH: f'm = 15MPa.
- 4. MORTAR FOR BLOCK WORK TO BE AS FOLLOWS:- NON-LOADBEARING WALLS BELOW AND ABOVE GROUND: 1 PART
   CEMENT, 1 PART LIME, 6 PARTS CLEAN SHARP SAND
   ADDES BUY AND A SHARP SAND DADBEARING WALLS BELOW AND ABOVE GROUND: 1 PART CEMENT 1/2 PART LIME, 41/2 PARTS CLEAN SHARP SAND.
- 5. CONTROL JOINTS SHALL BE WEATHER PROTECTED WHERE NECESSARY BY FLEXIBLE CAULKING. REFER TO PLAN FOR JOINTING LOCATIONS
- PARTICULAR ATTENTION SHALL BE PAID BY THE CONTRACTOR TO ENSURE THE STABILITY OF ALL BLOCK WALLS DURING CONSTRUCTION:
- WHERE BLOCK WORK SUPPORTS REINFORCED CONCRETE SLABS OR BEAMS THE TOP COURSE SHALL HAVE THE CORES FILLED WITH MORTAR AND LEVELLED SMOOTH PRIOR TO CONSTRUCTION OF SLABS OR BEAMS.
- ALL DETAILS OF CONNECTIONS TO SUPPORTING ELEMENTS, TIES, ETC, SHALL BE AS DETAILED OR CONFORM TO CODE REQUIREMENTS
- BLOCK WORK CORES WHERE REINFORCED SHALL BE FILLED WITH GROUT HAVING A CHARACTERISTIC COMPRESSIVE STRENGTH (F/c) OF ZOMPA WITH A SLUMP OF ZODIME FOR READY MIXED GROUT SUPPLIED AND CERTIFIED BY CONCRETE SUPPLIER (SITE MIXED GROUT IF APPROVED BY ENGINEER MAY BE BATCHED BY VOLUME 1 PART CEMENT, 1/10 PART LIME, 3 PARTS CLEAN SHARP SAND, 2 PARTS 10mm
- 10. CLEAN OUT OPENINGS TO BE PROVIDED AT THE BASE OF WALLS IN EACH CORE WHICE CONTAINS YEATICAL REINFORCEMENT. MORTAR PROTRUSIONS INSIDE THE CORES TO BE BROKEN OFF BY RODDING FROM THE TOP OF THE WALL AND REMODED THROUGH THE CLEAN OUT OPENINGS PRIOR TO FILLING THE CORES WITH CONCRETE.
- 11. REINFORCING STEEL
  'N' TO BE GRADE 500 DEFORMED BAR COMPLYING WITH AS4671, NUMBER FOLLOWING SYMBOL IS BAR DIAMETER IN MILLIMETRES

# STRUCTURAL BEAMS

- ALL STRUCTURAL BEAM WITH SPANS LESS THAN Z.5m UNLESS NOTED ON PLAN SHALL BE DESIGNED BY OTHERS TO APPROPRIATE STANDARDS AND/OR SPAN TABLEC.
- 2. ALL TIMBER BEAMS ARE DESIGNED TO AS1684.2 & AS1720.1. ALL STEEL BEAMS ARE DESIGNED TO AS4.100.
- 3. LOADINGS FOR BEAMS HAVE BEEN DERIVED FROM THE GUIDELINES OF AS1170.0 TO AS1170.4
- DESIGN OF BEAMS ARE DETERMINED FROM INFORMATION ON THE ARCHITECTURAL DRAWINGS AND THE ENDINEER SHALL BE INFORMED OF ANY CHANGES TO SPANS, LOADING CONDITIONS AND/OR MATERIALS.
- 5 DIMENSIONS FOR SPANS OF BEAMS ARE ACCURATE TO WITHIN 100mm

ELEMENT	LOADING	DEFLECTION
BEARERS & JOISTS	G + 4(Q	L/360
FLOOR BEAMS	G + 40	L/500
ROOF BEAMS	0+40	L/300
FLOOR AND/OR ROOF WITH BRITTLE CLADDINGS	0 + 40	L/750
BRITTLE CLADBUNGS CALLY	-	1.73888

IF ADDITIONAL LIMITS ARE REQUIRED DUE TO OTHER FACTORS, PLEASE INFORM THE ENGINEER.

- BEAMS SHOWN REPRESENT THE MOST EFFICIENT SOLUTION. HOWEVER, THEY ARE NOT THE ONLY OPTION AND IF A CHANGE IN BEAM TYPE, INCREASE IN SIZE OR CHANGE IN MATERIALS IS REQUIRED PLEASE CONSULT WITH THE ENGINEER.
- 8. ALL LINTELS SHALL BEAR ON MIN 2/90x45-F7 STUDS IN WALL FRAME U.N.O.
- 9 ALL LINTELS AND ROOF BEAMS ARE TO BE SECURELY TIED DOWN TO RESIST UPLIFT IN ACCORDANCE WITH AS1684 FOR THE NOTED WIND CLASSIFICATION IN THESE NOTES.
- 10 IT IS THE BUILDER'S RESPONSIBILITY TO ENSURE THAT ALL STRUCTURAL BEAMS ARE ADEQUATELY BRACED AND PROPPED UNTIL ALL CONNECTIONS ARE INSTALLED

- 1. ALL MATERIALS, WORKMANSHIP, FABRICATION AND ERECTION SHALL COMPLY WITH THE REQUIREMENTS OF:
  AS 163 STEEL HOLLOW SECTIONS FOR GENERAL STRUCTURAL PURPOSES
  AS 3679 1.8
  AS 3679 2. STRUCTURAL STEEL AND WELDED SECTIONS
  AS 450 STRUCTURAL STEEL WELDING CODE
  AND THE SPECIFICATION
- UNLESS SHOWN OTHERWISE, ALL STEEL SHALL BE IN ACCORDANCE WITH AS3679 GRADE 300. ALL STEEL HOLLOW SECTIONS SHALL BE GRADE 350 IN ACCORDANCE WITH AS3163. ALL PRESSED METAL PURLINS AND GIRTS SHALL BE GRADE 450 STEEL IN ACCORDANCE WITH AS3538
- 3. UNLESS SHOWN OTHERWISS ON THE DRAWINGS, ALL CONNECTIONS SHALL BE IN ACCORDANCE WITH THE FOLLOWING MINIMUM REQUIREMENTS.

  (i) ALL WELDS SHALL BE 86 amm CONTINUOUS FILLET WELDS ALL ROUND.

  (ii) ALL BOLTS SHALL BE 70 8 8/S, WITH A MINIMUM OF 2 BOLTS PER CONNECTION, PURLIN BOLTS TO BE MIZ 8 8/S WITH A MINIMUM OF 2 BOLTS PER PURLIN END.

  (iii) ALL GUSSET AND CLEAT PLATES SHALL BE 10mm THICK.

  (iv) ALL CAP PLATES SHALL BE 12mm THICK.
- BOLT DESIGNATION 4.6/S REFERS TO COMMERCIAL BOLTS OF STRENGTH GRADE 4.6 TO AS1111 TIGHTENED TO A SNUG TIGHT CONDITION; 8.8/S REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 TIGHTENED TO A SNUG TIGHT CONDITION; 8.8/TE REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT; 8.8/TE REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A BEARING JOINT; 8.8/TE REFERS TO HIGH STRENGTH STRUCTURAL BOLTS OF GRADE 8.8 TO AS1252 FULLY TENSIONED TO AS4100 AS A FRICTION JOINT.
- HIGH STRENGTH BOLTED JOINTS SHALL BE IN ACCORDANCE WITH AS4108. THE SPECIFED BOLT TENSION SHALL BE OBTAINED BY USE OF THE "PART TURN" METHOD OF TIGHTENING.
- UNLESS SPECIFIED OTHERWISE ALL BOLTS, NUTS AND WASHERS SHALL BE HOT DIP GALVANIZED
- ALL WELDS SHALL BE SP (SPECIAL PURPOSE) IN ACCORDANCE WITH AS1554. ALL BUTT WELDS SHALL BE FULL STRENGTH COMPLETE PENETRATION WELDS. ALL ELECTRODES SHALL BE CLASS EA8.
- B ALL STEELWORK BELOW GROUND OR FINISHED SURFACE LEVEL IS TO BE ENCASED IN 75mm MIN. CONCRETE ALL ROUND ALL STEELWORK, EXCEPT THAT WHICH IS TO BE CONTRETE ENCASED. HERE SPRAYED OR CONTACT SURFACES OF FRICTION TYPE JOINTS, SHALL BE SURFACE (LEANED AND PAINTED IN ACCORDANCE WITH THE SPECIFICATION.)
- STEELWORK THAT IS CONCRETE ENCASED, FIRE SPRAYED OR FACING SURFACES OF FRICTION TYPE JOINTS SHALL BE LEFT UNPAINTED.
- THE FABRICATION AND ERECTION OF THE STRUCTURAL STEELWORK SHALL BE SUPERVISED BY QUALIFIED PERSONNEL EXPERIENCED IN SUCH SUPERVISION TO ENSURE THAT ALL REQUIREMENTS OF THE DESIGN ARE MET DETAILS OF ERECTION SEQUENCE SHALL BE SUBMITTED TO THE DESIGN MEMINEER FOR REVIEW PRICE TO COMMENCEENT OF ERECTION THE APPROVED ERECTION SEQUENCE SHALL NOT BE VARIED DURING THE ERECTION PROCESS WITHOUT THE APPROVAL OF THE DESIGN ARE MEMILED.
- 12. COLUMNS AND MULLIONS SHALL HAVE THEIR BASE PLATES FULLY GROUTED IN ACCORDANCE WITH THE SPECIFICATIONS AFTER PLUMBING AND LEVELING ON NEOPREME PACKERS.
- 13. CAMBERS ALL RAFTERS AND BEAMS OVER 6000mm IN LENGTH SHALL BE CAMBERED SIMP FOR EVERY 2000mm OF LENGTH UNLESS NOTED OTHERWISE ON THE DRAWINGS. 14 FOUR SETS OF STEELWORK SHOP DETAIL DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF ANY FABRICATION THE APPROVAL SHALL, NOT COVER IC A YOUT AND MEMBER DIMENSIONS.

- PROPRIETARY SYSTEMS ALL PROPRIETARY SYSTEMS AND PRODUCTS SHALL BE INSTALLED AND USED AS PER THE REQUIREMENTS OF THE MANUFACTURER AND/OR SUPPLIER UNLESS OTHERWISE SPECIFIED ON THESE DRAWINGS
- 2 IT IS THE BUILDERS RESPONSIBILITY TO ENSURE COMPLIANCE WITH REQUIREMENTS
- WHERE AN ALTERNATIVE PROPRIETARY SYSTEM OF PRODUCT IS FAVOURED BY THE BUILDER. THE BUILDER SHALL PROVIDE THE ENGINEER WITH ALL RELEVANT INFORMATION FOR THE ENGINEERS APPROVAL TO CHANGE THE SYSTEM

- ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS 1720, AND AS 1684
- 2 ALL TIMBER TO BE SEASONED OR KILN ORIED WITH A MAXIMUM EQUILIBRIUM MOISTURE CONTENT OF 15%
- 3. ALL TIMBER SHALL BE A MINIMUM F5 GRADE (OR EQUIVALENT) UNLESS NOTED DITHERWISE
- ALL TIMBER CONNECTIONS TO BE IN ACCORDANCE WITH AS 1684, UNLESS NOTED
  OTHERWISE, ALL PROPRIETARY CONNECTORS ARE TO BE INSTALLED IN ACCORDANCE
  WITH MANUFACTURERS DETAILS.
- ALL BOLTING IS TO BE CARRIED OUT IN ACCORDANCE WITH A S 1720 1 TIMBER STRUCTURES CODE. ALL BOLTS, WASHERS, NAIL PLATES, CONNECTORS, ETC ARE TO BE FULLY GALVANIZED.
- FASTEN TIMBER FRAMING TO STEEL BEAMS AND COLUMNS USING 35mm THICK TIMBER NAILING PLATES FIXED WITH M10 BOLTS AT 1000mm SPACING. BEAMS AND COLUMNS MUST BE SECURELY BUILT INTO THE FRAMING AND BEAMS MUST BE STABILIZED AT EVERY SUPPORT POINT.

### SITE PREPARATION NOTES

WHERE FILLING IS USED TO SUPPORT SLAB PANELS AND INTERNAL SLAB BEAMS THE FILLING SHALL CONSIST OF ONE OF THE FOLLOWING:-

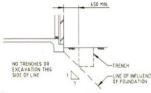
MATERIAL TO BE COMPACTED IN LAYERS BY REPEATED ROLLING BY A ROLLER ROLLED FILL SHALL NOT EXCEED 500mm COMPACTED IN LAYERS NOT MORE THAN 300mm THICK FOR SAND MATERIAL; OR 300mm COMPACTED IN LAYERS NOT MORE THAN 150mm THICK FOR CLAY MATERIAL

MATERIAL TO BE COMPACTED IN ACCORDANCE WITH EITHER ONE OF THE FOLLOWING CLAUSES -

- A. SAND FILL UP TO 800mm DEEP, WELL COMPACTED IN NOT MORE THAN 300mm LAYERS BY A VIBRATING PLATE OR VIBRATING ROLLER
- B. CLAY FILL UP TO 400mm DEEP, WELL COMPACTED IN NOT MORE THAN 150mm LAYERS BY A MECHANICAL SHEPPSFOOT ROLLER: CLAY FILL SHOULD BE AT OPTIMUM MOISTURE CONTENT DURING COMPACTION.

WHERE IT IS ANTICIPATED THAT THESE REQUIREMENTS CANNOT BE MET, THE ENGINEER SHOULD BE CONTACTED.

# DETAIL - INFLUENCE OF EXCAVATIONS



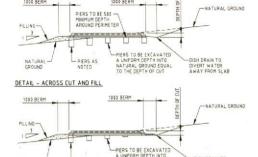
NOTE.

HE SERVICE TRENCHES ARE FOUND TO PENETRATE THE LINE OF INFLUENCE, THE FOOTINGS MUST BE UNDERPINNED.

### FILLING NOTES

- PREPARE AREA TO BE FILLED BY REMOVING ALL VEGETATION, RUBBISH, LOOSE FILL FTC AND STRIP ALL TOPSOIL
- PROOF ROLL THE PREPARED AREA WITH A VIBRATING STEEL ROLLER OF EFFECTIVE WEIGHT OF 6 TONNES
- BUILD UP TO REQUIRED LEVELS IN SELECT GRAVELLY SANDY FILL HAVING NOT MORE THAN 30% CLAY SPREAD IN LAYERS NOT EXCEEDING 200mm AND COMPACT TO 98% STANDARD DRY DENSITY AT 1-7 2 0% OF TIMM MOST URE CONTENT
- 4 FILLING IS TO BE INSPECTED AND CERTIFIED BY AN APPROVED GEOTECHNICAL CONSULTANT

# CUT AND FILL





# DRAWING LIST

- TITLE SHEET & CONSTRUCTION NOTES
- AMENITIES SLAB PLAN & DETAILS AMENITIES ROOF FRAMING PLAN & SCHEDULES S2 S3
  - AMENITIES ROOF FRAMING DETAILS & SECTIONS LANDSCAPE STRUCTURES SHEET 1
- LANDSCAPE STRUCTURES SHEET 2 - LANDSCAPE STRUCTURES SHEET 3
- BASKETBALL/NETBALL COURT PAVEMENT PLAN S9 - AMENITIES TEMPORARY BRACING ELEVATIONS & DETAILS

15590

ORG No.

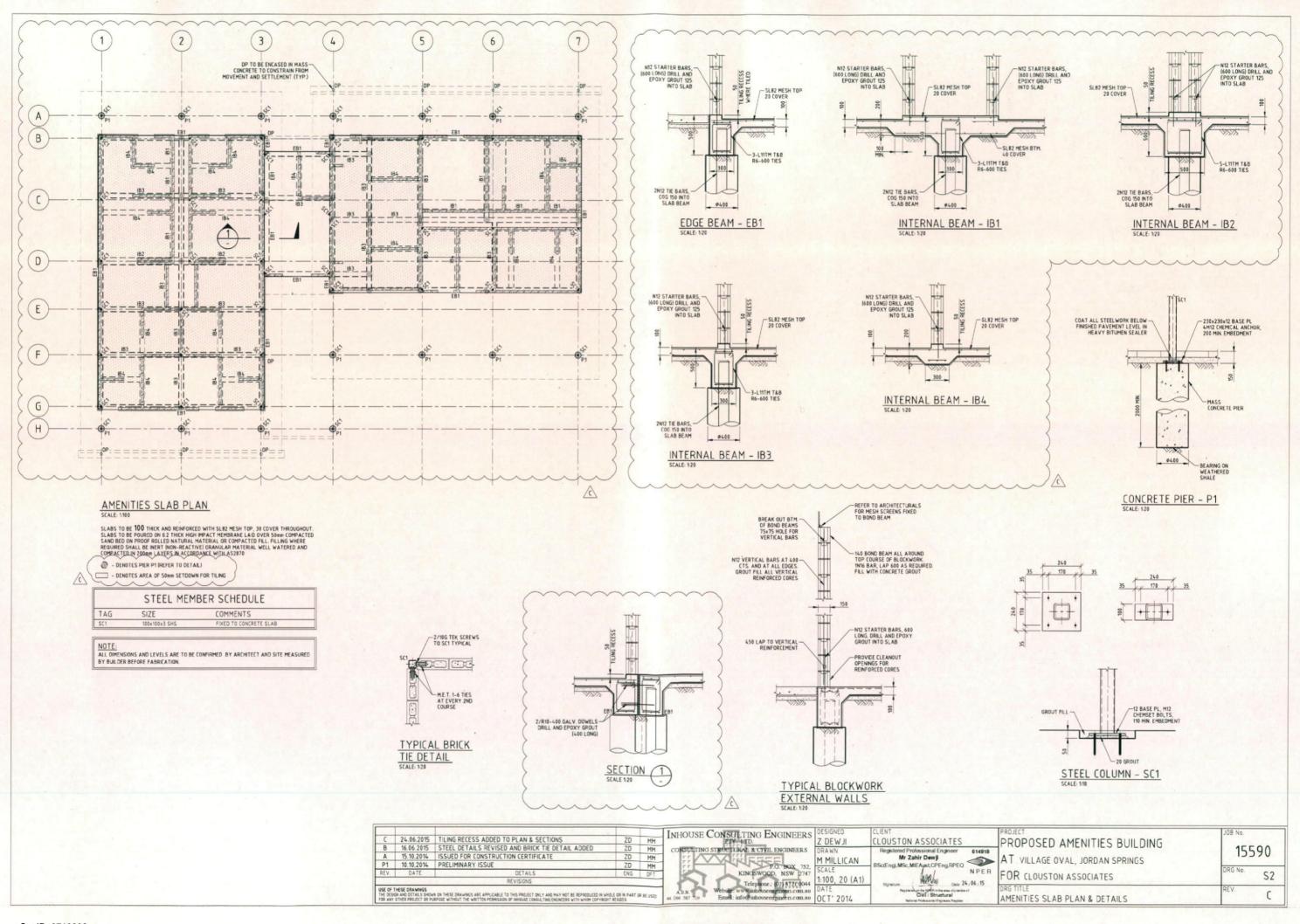
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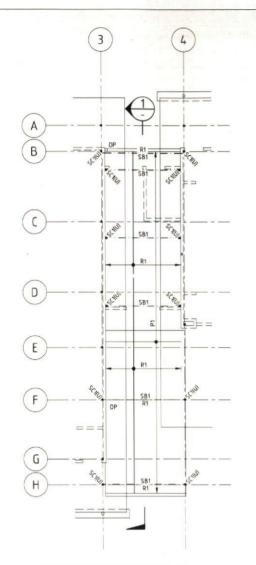
В

INHOUSE CONSULTING ENGINEERS Z DEWJI LOUSTON ASSOCIATES PROPOSED AMENITIES BUILDING CONSULTING STRUCTURAL & CIVIL ENGINEERS Mr Zahir Dewji cicieng),Msc,Micaysi,CPEng,RPEQ AT VILLAGE OVAL, JORDAN SPRINGS B 16.06.2015 DRAWING LIST REVISED P.O. BOX KINGSWOOD, NSW M MILLICAN A 15.10.2014 ISSUED FOR CONSTRUCTION CERTIFICATE NPER FOR CLOUSTON ASSOCIATES Alena Telephone: (02) 4721 0044 Website: www.inhouseengineers.com.au Email: info@inhouseengineers.com.au USE OF THESE DRAWNESS
THE DESIGN AND DETAILS SHOWN ON THESE DRAWNINGS ARE APPLICABLE TO THIS PROJECT DIKLY AND MAY NOT BE REPRODUCED IN WHOLE OR IN PART OR BE USED YOU MAY COME PROJECT OR MURPOSE WITHOUT THE WRITTEN PREMISSION OF IMPROVE CONSULTING CHOMECRES WITH WHOLE CONTROLL RESIDES. Civil / Structural TITLE SHEET & CONSTRUCTION NOTES

# STRUCTURAL BEAMS

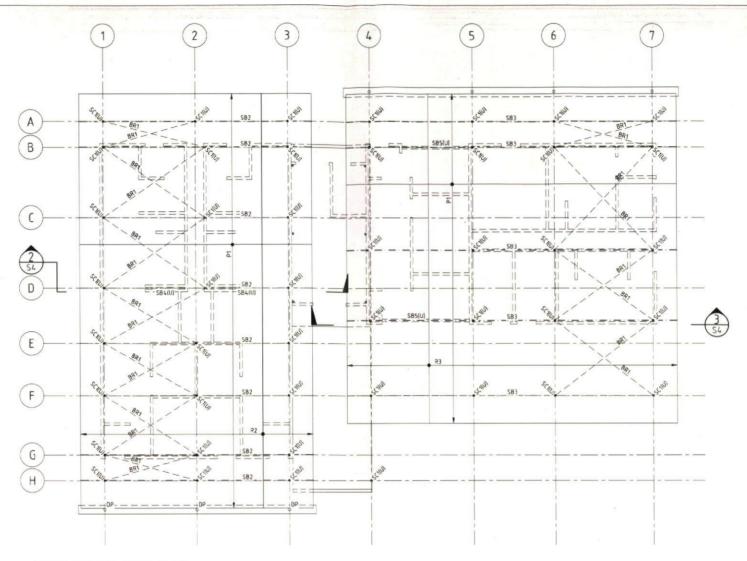
### STRUCTURAL STEELWORK NOTES





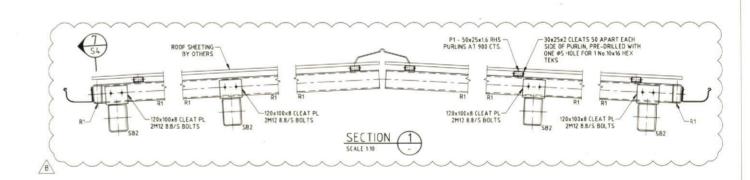
# LOWER ROOF FRAMING PLAN

15.0 10.0 1 01.15	
150x100x4 RHS	FIXED TO STEEL COLUMNS - SC1
100x50x3 RHS	AT 900 CTS:
50×25×1 6 RHS PURLINS	AT 900 CTS
ONS AND LEVELS ARE TO BE CON	FIRMED BY ARCHITECT AND SITE MEASURE
	50x25x16 RHS PURLINS R TO ARCHITECTS DRAWINGS FOR

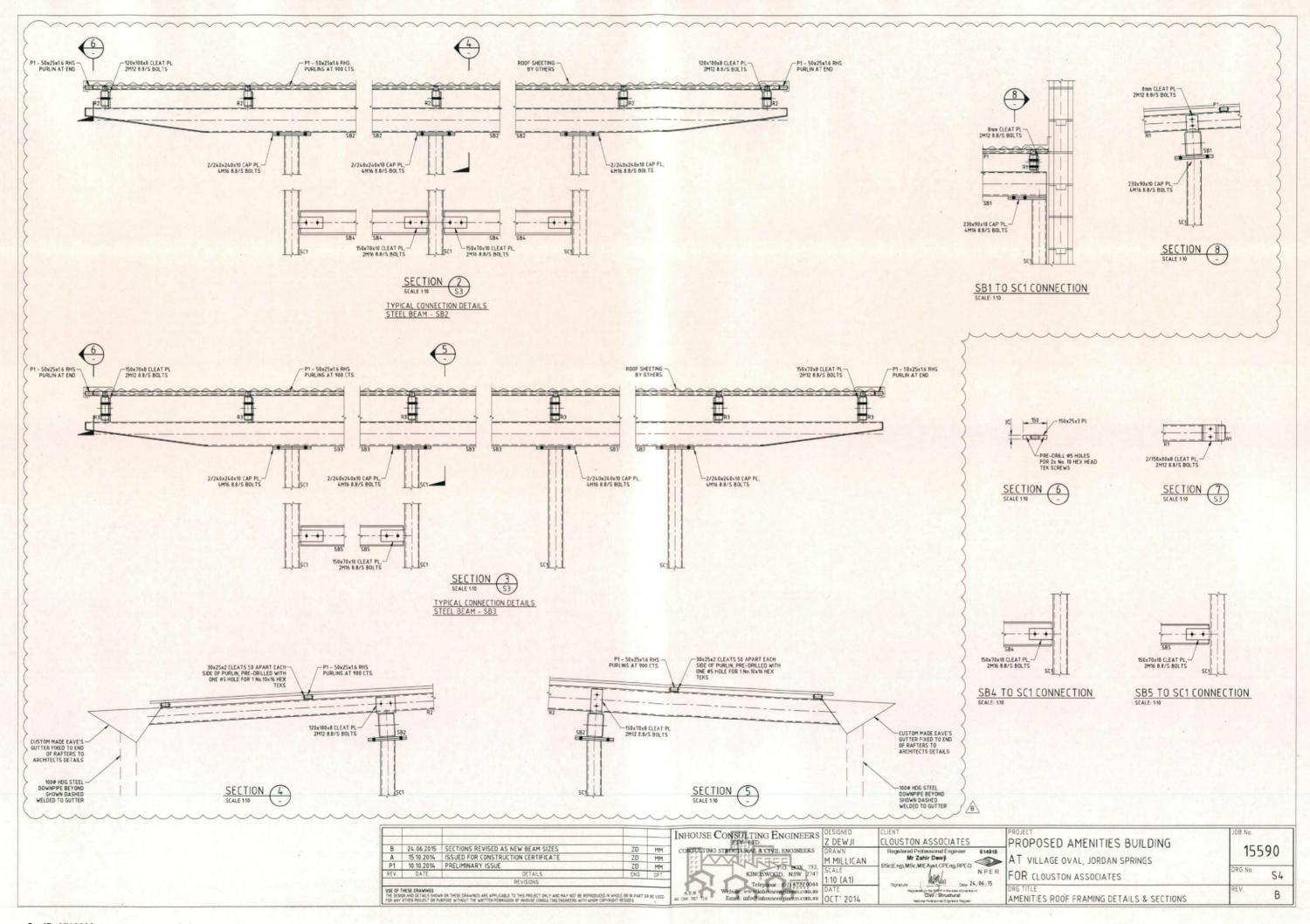


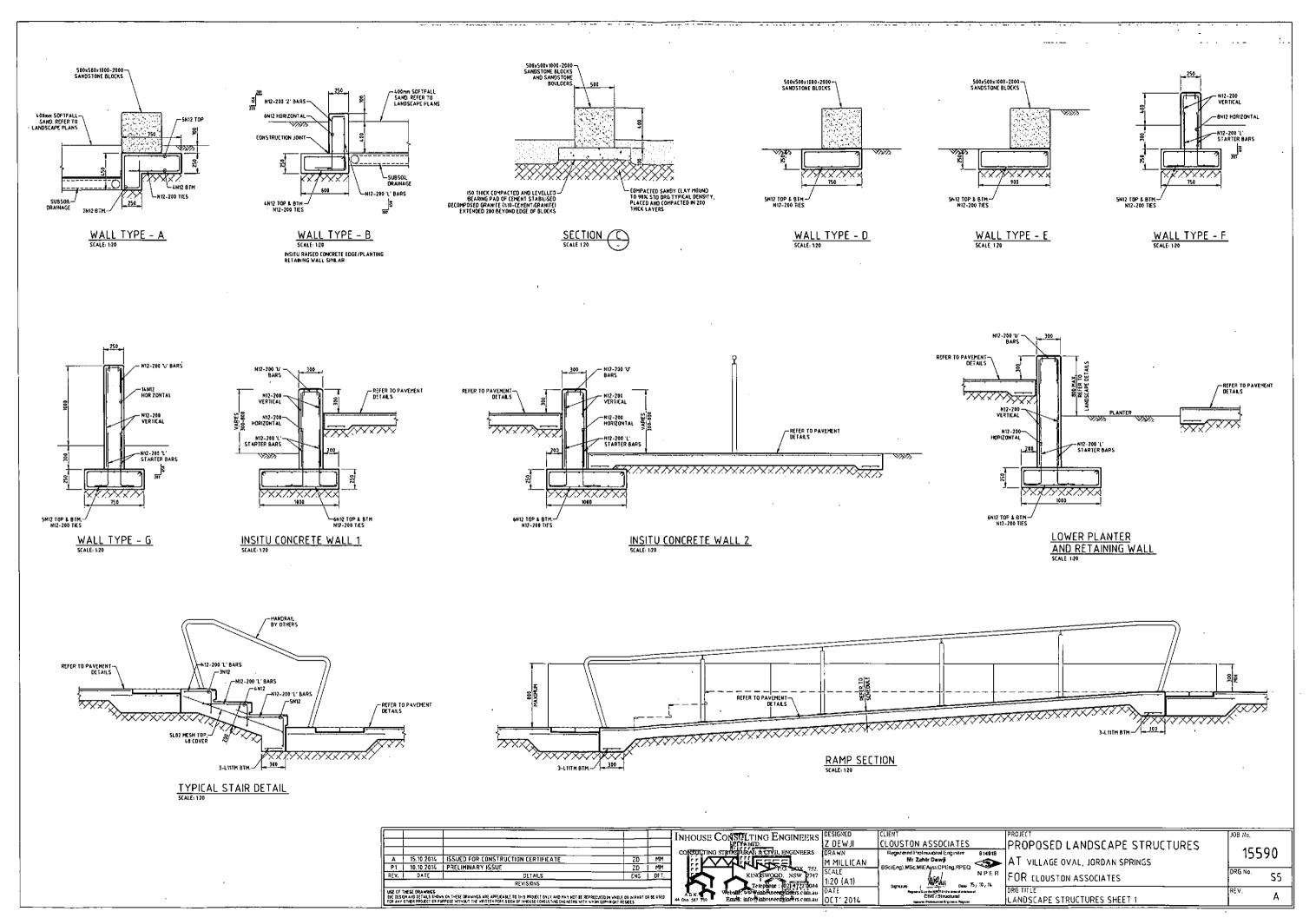
# UPPER ROOF FRAMING PLAN

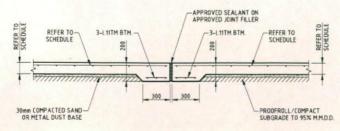
AG	SIZE	COMMENTS
82	150x100x4 RHS	
83	150×100×4 RHS	
84	150 PFC	TO SUPPORT SLIDING PANEL
885	125 PFC	TO SUPPORT ROLLER SHUTTER
72	100×50×3 RHS	AT 900 CTS.
23	150×50×3 RHS	AT 900 CTS
21	50x25x16 RHS PURLINS	AT 900 CTS
3R1	30mm×0.8mm	STEEL STRAP BRACING
NOTE : REF	ER TO ARCHITECTS DRAWINGS FOR	R ROOF PITCHES
NOTE:		

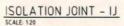


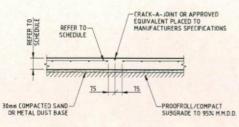
					INHOUSE CONSULTING ENGINEERS	Z DEWJI	CLIENT CLOUSTON ASSOCIATES	PROPOSED AMENITIES BUILDING	JOB No.	
В	24.06.2015	STEEL BEAMS SB1, SB2 & SB3 SIZE REVISED	ZD	MM	CONSULTING STRUCTURAL & CIVIL ENGINEERS	DRAWN	Registered Professional Engineer 614918	THOI GOED MILEMINES DOIEDING	151	590
Α	15.10.2014	ISSUED FOR CONSTRUCTION CERTIFICATE	ZD	MM	TO A SEE COOK	M MILLICAN	Mr Zahir Dewji	AT VILLAGE OVAL, JORDAN SPRINGS	10.	,,,
P1	10.10.2014	PRELIMINARY ISSUE	ZD	MM	P.O. BOX 752.	CCALE	BSc(Eng),MSc,MIEAust,CPEng,RPEQ	AT TIEEAGE OTAE, SONDAN STRINGS	DRG No.	
REV.	DATE	DETAILS	ENG	DFT.	KINGSWOOD, NSW 2747	1 100 / A 1)	NPER NPER	FOR CLOUSTON ASSOCIATES	DAG NO.	S3
		REVISIONS			Telephone : (02) 472E 0044	1:100 (A1)	Signature MAPAILLI Date 24,06,15		DEV	
THE DESIG	HESE DRAWINGS	IN ON THESE DRAWINGS ARE APPLICABLE TO THIS PROJECT ONLY AND MAY NOT BE REPRODUCTIONS WITHOUT THE WAITTEN PERMISSION OF INHOUSE CONSULTING PROMETED WITH WAITE	CED IN WHOLE OR IN PART OR	R BE USED	ABN. Website: www.inhouseengineers.com.au 44 066 587 719 Email: info@inhouseengineers.com.au	OCT' 2014	Registered on the NJER in the area of practice of CIVII / Structural	AMENITIES ROOF FRAMING PLANS & SCHEDULES	REV.	В



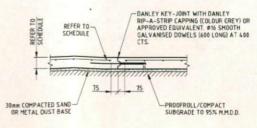




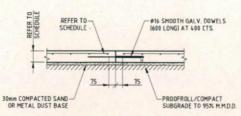




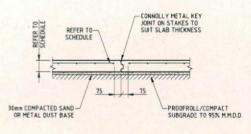
CONTRACTION JOINT - CJ SCALE: 120



DOWELLED KEY JOINT - DKJ SCALE: 120

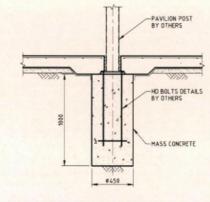


DOWELLED JOINT - DJ SCALE: 120

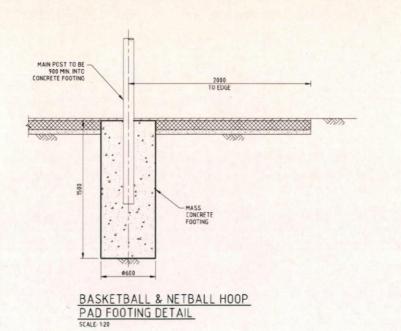


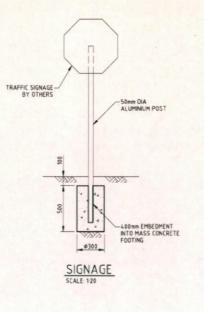
KEY JOINT - KJ

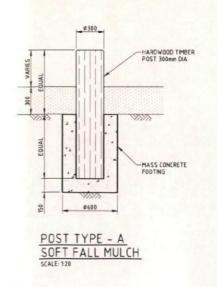
			CONCRET	E PAVEMENT	SCHEDULE			
PAVEMENT TYPE	PAVEMENT THICKNESS	PAVEMENT SUBGRADE	REINFORCEMENT	JOINT TYPE CONTRACTION JOINT	JOINT TYPE KEY JOINT	JOINT TYPE DOWELLED KEY JOINT	JOINT TYPE DOWELLED JOINT	JOINT TYPE ISOLATION JOINT
PEDESTRIAN ONLY 1500mm WIDTH	100	SOMM THICK SCREEDED METAL DUST OR SMM RECYCLED CONCRETE	SL72 MESH TOP, 30 COVER	SPACED AT NO MORE THAN 1.2 x WIDTH OF SLAB	SPACED AT NO MORE THAN 4 x WIDTH OF SLAB	SPACED AT NO MORE THAN 8 x WIDTH OF SLAB	NOT APPLICABLE	PROVIDE THIS JOINT WHEREVER PAVEMENT SLAB WILL BE
NETBALL AND BASKETBALL COURTS	125	SOMM THICK SCREEDED METAL DUST OR SMM RECYCLED CONCRETE	SL82 MESH TOP, 30 COVER	NOT APPLICABLE	NOT APPLICABLE	REFER DRAWING 15590-S8 FOR JOINT LOCATIONS	REFER DRAWING 15590-S8 FOR JOINT LOCATIONS	BUTTING UP AGAINST KERBS, WALLS, PITS ETC. ON LONG LENGTHS OF
SHARED CYCLE AND PEDESTRIAN 2000mm WIDTH	125	SOMM THICK SCREEDED METAL DUST OR SMM RECYCLED CONCRETE	SL82 MESH TOP, 30 COVER	SPACED AT NO MORE THAN 1.2 x WIDTH OF SLAB	SPACED AT NO MORE THAN 4 x WIDTH OF SLAB	SPACED AT NO MORE THAN 8 x WIDTH OF SLAB	NOT APPLICABLE	PAVEMENTS, PROVIDE THIS JOINT AT NO MORE THAN 16x WIDTH OF SLAB.
SHARED CYCLE, MAINTENANCE VEHICLES AND PEDESTRAINS 2500mm WIDTH (UNLESS NOTED OTHERWISE)	150	150 COMPACTED CRUSHED SANDSTONE	SL92 MESH TOP, 30 COVER	NOT SUITABLE	SPACED AT NO MORE THAN 1.5 x WIDTH OF SLAB	SPACED AT NO MORE THAN 3 x WIDTH OF SLAB	NOT APPLICABLE	PROVIDE ISOLATION JOINT WHEREVER TWO MORE PATHS MEET AT CORNERS

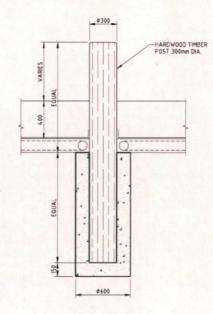


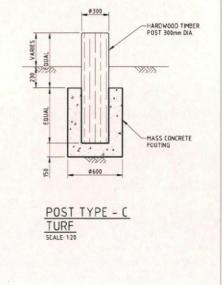
PAVILION FOOTING DETAIL
SCALE: 120





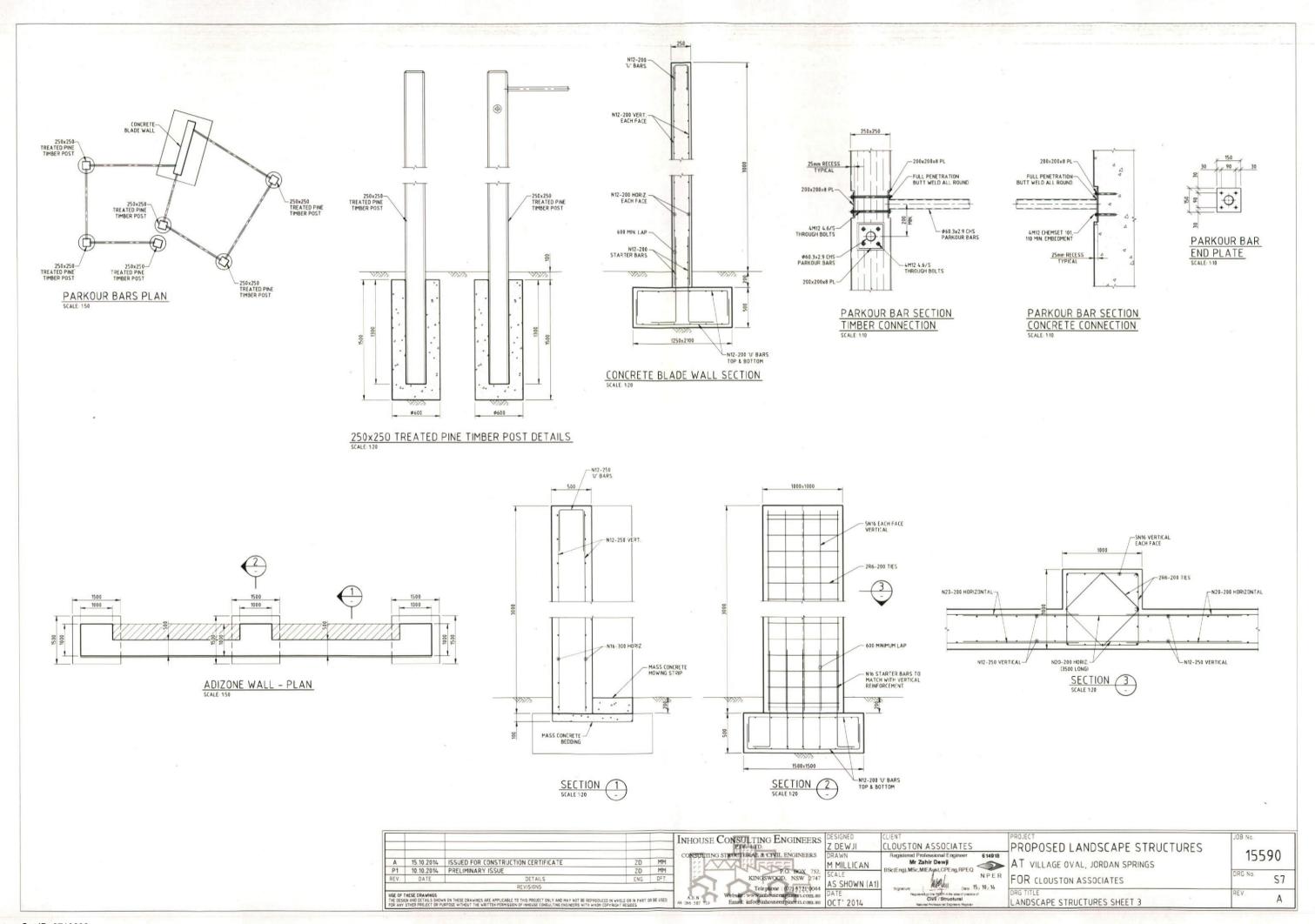


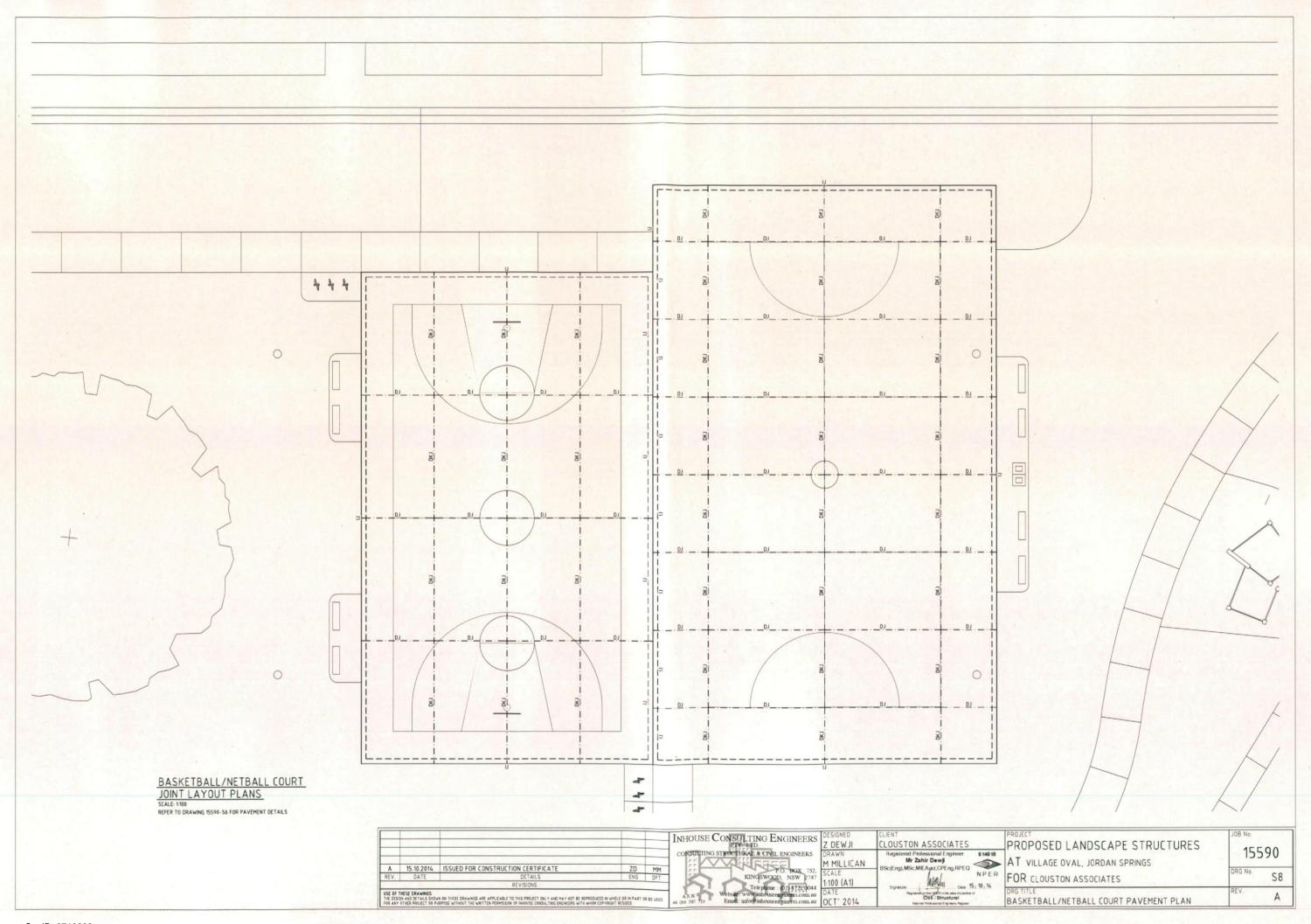


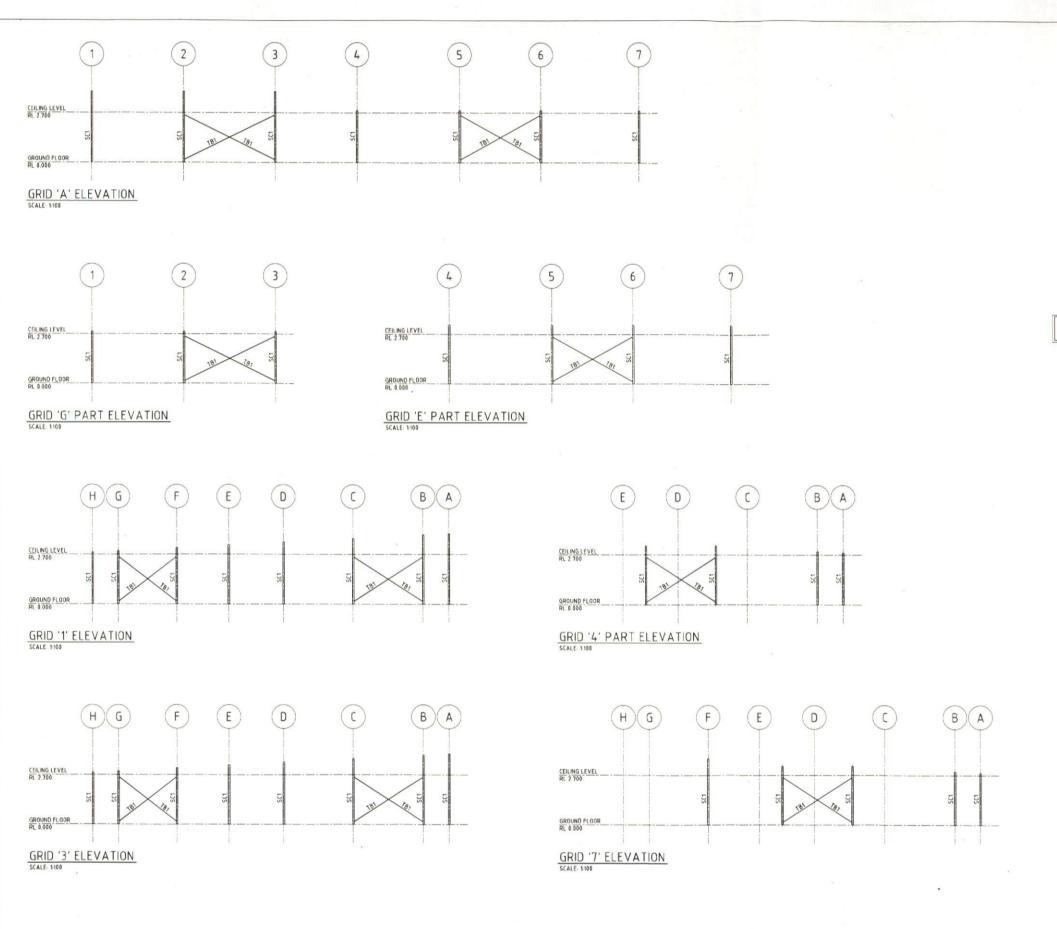


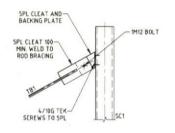
POST TYPE - B SANDPIT SCALE: 120

					INHOUSE CONSULTING ENGINEERS Z DEWJ	CLOUSTON ASSOCIATES	PROPOSED LANDSCAPE STRUCTURES	JOB No.
A P1		ISSUED FOR CONSTRUCTION CERTIFICATE PRELIMINARY ISSUE	ZO ZO	MM MM	CONSULTING STRUCTURAL & CIVIL ENGINEERS DRAWN M MILLI	N Registered Professional Engineer 614918 Mr Zahir Dewji BSc(Eng), MSc, MIEAust, CPEng, RPEO	AT VILLAGE OVAL, JORDAN SPRINGS	12270
REV.	DATE	DETAILS REVISIONS	ENG	DFT.	F.O. BOX 752, KINGSWOOD, NSW 2747 1:20 (A1	MAGAL. NPER	FOR CLOUSTON ASSOCIATES	DRG No. S
USE OF THE DES FOR ANY	THESE DRAWINGS IGN AND DETAILS SHOW OTHER PROJECT OR PU	IN ON THESE DRAWINGS ARE APPLICABLE TO THIS PROJECT ONLY AND MAY NOT BE REPRODUCED IN IRPOSE WITHOUT THE WRITTEN PERMISSION OF INHOUSE CONSULTING ENGINEERS WITH WHOM COPYR	WHOLE OR IN PART	OR BE USED	Telephone: (02) 4721-0044 Websue: www.inhouseengineers.com.au Email: info@inhouseengineers.com.au  Email: info@inhouseengineers.com.au	Signature PRECIDIA Deate 15 / 10 / 14 Pegrae-bigothe high high one area of precise of CIVII / Structural National Professional Engineers Register	DRG TITLE LANDSCAPE STRUCTURES SHEET 2	REV.









TEMPORARY BRACING - TB1
TYPICAL DETAIL
SCALE: 110

TEMPORARY BRACING TO BE REMOVED AFTER INSTALLATION OF PERMANENT BRACING WALLS



ROD CROSS BRACING DETAIL
SCALE: 1:10

STEEL MEMBER SCHEDULE							
TAG	SIZE	COMMENTS					
SC1	2H2 Ex001x001	FIXED TO CONCRETE SLAB					
TB1	Ø10 MILD STEEL ROD	WITH TURNBUCKLE, REFER TO DETAILS					

NOTE:
ALL DIMENSIONS AND LEVELS ARE TO BE CONFIRMED BY ARCHITECT AND SITE MEASURED BY BUILDER BEFORE FABRICATION.

					INHOUSE CONSULTING ENGINEERS	DESIGNED Z DEWJI	CLIENT CLOUSTON ASSOCIATES	PROJECT PROPOSED AMENITIES BUILDING	JOB No.	
		9			CONSULTING STRUCTURAL & CIVIL ENGINEERS	DRAWN M MILLICAN	Registered Professional Engineer 614918	AT VILLAGE OVAL, JORDAN SPRINGS	155	90
REV.	DATE	DETAILS REVISIONS	ENG	DFT.	P.O. BOX 752, KINGSWOOD, NSW 2747 Telephope : 0021 472F 0044	SCALE 1:100, 10 (A1)	Dac(Eng), Mac, MICAysi, OF Eng, NF EQ	FOR CLOUSTON ASSOCIATES	DRG No.	S
THE DESIG	HESE DRAWINGS IN AND DETAILS SHOW! THER PROJECT OR PU	N ON THESE DRAWINGS ARE APPLICABLE TO THIS PROJECT ONLY AND MAY NOT BE REPRODUCED IN WARDS. WITHOUT THE WRITTEN PERMISSION OF INHOUSE CONSULTING ENGINEERS WITH WHOM COPYRIG	OLE OR IN PART O	R BE USED	AB N Website: www.inhouseengineers.com.au	JUNE 2015	Registe in Sign the NSER in the area of practice of	DRG TITLE AMENITIES TEMPORARY BRACING ELEVATIONS & DETAILS	REV.	_