

CHAMPAGNAT CATHOLIC COLLEGE - BLOCK B

35 DONOVAN AVENUE MAROUBRA N.S.W. 2035

GENERAL

- These structural drawings shall be read in conjunction with all architectural and other consultant's drawings and specifications and with such other written instructions as may be issued during the course of the contract. Any discrepancy shall be referred to the Superintendent before proceeding with the work.
- All materials and workmanship shall be in accordance with the relevant current Standards Australia Codes and with the Building Code of Australia.
- All dimensions shown on these structural drawings shall be verified by the Contractor on site. These structural drawings shall not be scaled for dimensions.
- The method of construction and the maintenance of safety during construction is the responsibility of the Contractor. If any structural element presents difficulty in respect of constructability or safety, the matter shall be referred to the Structural Engineer for resolution before proceeding with the work.
- During construction the structure shall be maintained in a stable condition and no part shall be overstressed. The design, installation and maintenance of all temporary propping, bracing and shoring shall be provided by the Contractor to keep the works and excavations stable at all times. The cost of all such work shall be deemed to be included in the Contractor's tender.

CONCRETE

- All workmanship and materials shall be in accordance with AS 3600 current edition with amendments, except where varied by the contract documents.

Concrete Quality:

Class = Normal
Slump = 80mm
Maximum size of aggregate in structural concrete = 20mm
Cement Type = SL
Admixtures = nil, unless noted otherwise or approved in writing.

For concrete cast in contact with ground provide the following additional properties:

Minimum cement content = 370 kg/m³
Maximum water/cement ratio = 0.45

Concrete shall have a characteristic compressive strength at 28 days (f_c) as shown in the following table, unless noted otherwise on the drawings:-

ELEMENT	f _c MPa
Bored piers, Footing beams, Strip footings	32
Columns, Walls	40
Internal slabs and beams	32
External slabs and beams	32

- Project control testing shall be carried out in accordance with AS 3600.

- Clear concrete cover in mm to the reinforcement shall be as follows (unless noted otherwise on the drawings) :

Exposure Class-ification to AS 3600	Cast Against Formwork			Cast Against Ground	
	Interior	Exterior	Contact with Ground	Protected by Membrane	No membrane
A1	25			30	
A2		30	30		50
B1		40			
B2		45			

Exposure classification for exterior concrete - B1.

All reinforcement shall be firmly supported on mild steel plastic tipped chairs, plastic chairs or concrete chairs at not greater than 1 metre centres both ways. Bars shall be tied at alternate intersections. In exposure conditions greater than B1 use only plastic chairs.

CONCRETE (continued)

- Concrete sizes shown do not include thicknesses of applied finishes.
- Depths of beams are given first and include slab thicknesses.
- For chamfers, drip grooves, reglets, etc., refer to Architect's details, maintain cover to reinforcement at these details.
- No holes, chases or embedment of pipes other than those shown on the structural drawings shall be made in concrete members without the prior written approval of the Superintendent.
- Construction joints where not shown shall be located to the approval of the Superintendent.
- The finished concrete shall be a dense homogeneous mass, completely filling the formwork thoroughly embedding the reinforcement and free of stone pockets. All concrete including slabs on ground and footings shall be compacted with mechanical vibrators.
- Curing of all concrete is to be achieved by keeping surfaces continuously wet for a period of 7 days, and prevention of loss of moisture for a total of 14 days followed by a gradual drying out. Approved sprayed on curing compounds may be used where no floor finishes are proposed. Polythene sheeting or wet hessian may be used if protected from wind and traffic.
- Construction support propping is to be left in place where needed to avoid overstressing the structure due to construction loading. No masonry or partition walls are to be constructed on suspended levels until all propping is removed and the member has absorbed its dead load deflection.
- The Superintendent shall be given 48 hours notice for reinforcement inspection and concrete shall not be delivered until final approval obtained.
- Conduits, pipes etc., shall only be located in the middle one third of slab depth and spaced at not less than 3 diameters. Pipes or conduits shall not be placed within the cover to the reinforcement.
- Reinforcement symbols:

S

N

R

SL, RL, L

- Denotes Grade 230 S Hot Rolled Deformed Bars to AS 1302

- Denotes Grade 500 N Deformed Bars to AS 4671

- Denotes Grade 230 R Hot Rolled Plain Bars to AS 1302

- Denotes Grade 500 L Deformed Ribbed Welded Mesh to AS 4671

The figures following the symbol are the number of millimetres in the bar diameter. The figures following the mesh symbol SL, RL, L is the reference number for mesh to AS 4671.
- Reinforcement is represented diagrammatically and not necessarily in true projection.
- Splices in reinforcement shall be made only in positions shown or otherwise approved in writing by the Superintendent. Laps shall be in accordance with AS 3600 and not less than 1.25 times the development length for each bar.
- Fabric reinforcement shall have splices made so that the overlap, measured between the outermost transverse wires of each sheet of fabric, is not less than the spacing of those wires plus 50mm.
- Welding of reinforcement shall not be permitted unless shown on the structural drawings or approved by the Superintendent.
- Joggles to bars shall be 1 bar diameter over a length of 12 bar diameters.
- Bundled bars shall be tied together at 30 bar diameter centres with three wraps of tie wire.
- Where transverse tie bars are not shown provide N12 at 400mm distribution bars unless noted otherwise. Splice distribution bars 500mm where necessary and provide 500mm splice length with main bars unless noted otherwise.
- All dowels placed in joints in concrete slabs shall be placed within the following tolerances:

Level

Line

Position

+/- 1 degree

+/- 1 degree

+/- 5mm
- Sliding bearing strips supporting concrete slabs shall be composed of two layers of 0.4mm thick galvanised steel plate with an intermediate layer of grease (unless noted otherwise). The strips shall be the same width as the bearing surface.

PREPARATION FOR SLAB ON GROUND

- The preparation and compaction of the subgrade and basecourse shall be carried out in strict accordance with AS3798 unless noted otherwise.
- Clear the area to be occupied by the pavement and its adjuncts. Break up and remove slabs, foundations, paving, etc. found on the surface. Remove all topsoil and organic matter and grub out all roots and stumps. Remove all rubble remaining from excavations.
- The subgrade material (natural ground below the excavations) shall be exposed and proof rolled with or greater than 8 tonne roller in the presence of the Geotechnical Engineer and thoroughly compacted to a minimum thickness of 300mm to 98% of the standard maximum dry density of the material as determined by AS1289 5 1 1 (or 80% density index of the material as determined by AS1289 5 6 1). The contractor is to allow for locating buried services to ensure they are not damaged.
- Any soft, yielding, organic or other unsuitable material in the subgrade shall be removed for a depth of at least 300mm and holes so formed shall be filled with approved filling compacted in 150mm layers as specified below.
- Bring all filling on to the site unless it can be provided from spoil recovered from the site. Filling shall be sound clean stable material free of perishable material or any other material that will not form stable fill. The fill material shall be capable of consolidation so that it is firm and unyielding throughout its depth.
- Place filling in layers not exceeding 150mm thick when measured loose. Bring filling to optimum moisture content (+/- 2%) by watering and compact each layer thoroughly and uniformly with a vibrating roller where practicable. Hand tamp in areas not accessible to a vibrating roller.
- For the backfilling of localised excavations lightweight compaction equipment is to be used and filling placed in layers not exceeding 100mm thick when measured above.
- Compact each layer of filling to obtain a uniform density of not less than 98% of the standard maximum dry density of the material as determined by AS1289 5 1 1 (or 80% density index of the material as determined by AS 1289 5 6 1).
- The base-course layer (directly below the slab) shall consist of 100mm finished compacted thickness of crushed rock blinded with 25mm of sand.
- The base-course material shall be clean, tough, durable and free of any weathered or disintegrated stone, clay, organic matter or any other deleterious materials.
- The crushed rock shall be compacted with approved equipment to obtain a uniform density of not less than 100% of the standard maximum dry density of material as determined by AS1289.5.1.1.
- Finish the basecourse to the following tolerances:

- Variation from design level

- Variation from 3000mm straight edge
- All earthworks shall be carried out under Level 1 control as defined in AS3798.
- The Contractor shall allow for testing at the rate of one test per 200 square metres of surface area for each of the following finished surfaces, with a minimum of three tests for each compacted layer:

- Subgrade

- Basecourse (at surface of crushed rock)

- 5mm

- 5mm
- The Contractor shall allow for testing at the rate of one test per 30 cubic metres for the filling, with a minimum of three tests for each compacted layer.
- The location of all tests shall be to the approval of the Superintendent and the Geotechnical Consultant.
- The Contractor shall obtain approval from a registered N.A.T.A. testing authority documented test evidence proving that the compaction figures as required for the materials specified herein have been obtained. The cost of such work shall be deemed to be included in the Contractor's Tender.

SPECIFICATION FOR MODIFICATION OF PLAYGROUND

- Clear the area to be occupied by the pavement of all existing surface finishes.
- The basecourse layer for the playground pavement area shall be as noted on the drawings and consist of crushed rock in accordance with RTA QA Specification 3051 and RTA QA Specification R71. The material used for this course shall be a Class 1 DGB 20 in accordance with the aforementioned standards.
- The basecourse layers shall be placed and compacted in layers not exceeding 150mm when measured loose.
- The wearing surface course for the playground pavement area shall be as per the architects and manufacturers specification.
- The Contractor shall allow for testing at the rate of one test per 100 square metres of surface area for the basecourse, with a minimum of three tests for each compacted layer.
- The location of all tests shall be to the approval of the Superintendent.
- The Contractor shall obtain from a registered N.A.T.A. testing authority documented test evidence proving that the compaction figures as required for the materials specified herein have been obtained. The cost of such work shall be deemed to be included in the Contractors Tender. Test results for each stage (ie. subgrade, basecourse and fill where applicable) to be submitted to the Superintendent prior to proceeding to the next stage of the works.
- All earthworks shall be carried out in accordance with AS 3798, and under Level 1 control.
- The playground is intended as a pervious area and constituents in the basecourse layer preventing this shall be avoided, e.g. concrete crusher dust.

DEVELOPMENT APPLICATION

249/2020

Randwick City Council
4 June 2020
Records Received

DA ISSUE
NOT FOR CONSTRUCTION

DA1	DA SUBMISSION		20.02.20
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PROJECT

CHAMPAGNAT CATHOLIC COLLEGE
BLOCK B – MAROUBRA NSW

TITLE

CONSTRUCTION NOTES

SCALES as noted @A1 **DATE** FEB' 2020

DRAWN JSS **DESIGN** PG **VERIFIED** **APPROVED**

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DA1	191001	C.00