

VERIFIER: JOSEPH BONICA
JOB MANAGER: ROBERT STEVENS
DESIGNED: JAYDEN THOMPSON
DRAWN: JAYDEN THOMPSON

GENERAL:

- G1. THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH SPECIFICATIONS AND OTHER CONSULTANTS DRAWINGS.
- G2. ALL DISCREPANCIES SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- G3. DO NOT SCALE DRAWINGS.
- G4. ALL WORKMANSHIP, TESTING, MATERIALS AND SUPERVISION ARE TO BE IN ACCORDANCE WITH THESE SPECIFICATIONS, THE OCCUPATIONAL HEALTH AND SAFETY ACT 1983 ENFORCED BY THE WORKCOVER AUTHORITY AND CURRENT RELEVANT AUSTRALIAN STANDARDS.
- G5. PROPRIETARY ITEMS SPECIFIED SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER’S WRITTEN RECOMMENDATIONS. DO NOT VARY SPECIFIED PROPRIETARY PRODUCTS WITHOUT WRITTEN APPROVAL FROM THE ENGINEER.
- G6. UNLESS OTHERWISE SPECIFIED FOR SPECIFIC INSTANCES IN THE DESIGN DRAWINGS, THE ARRANGEMENT, DESIGN AND INSTALLATION OF TEMPORARY WORKS REMAINS THE RESPONSIBILITY OF THE CONTRACTOR. (THE CONSULTING ENGINEER HAS DESIGNED THE PERMANENT STRUCTURE).
- G7. TEMPORARY BRACING AND SUPPORT OF STRUCTURE IS THE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE MAINTAINED DURING ALL STAGES OF CONSTRUCTION.
- G8. THE STRUCTURAL COMPONENTS DETAILED ON THESE DRAWINGS HAVE BEEN DESIGNED IN ACCORDANCE WITH SAA CODES. REFER TO INDIVIDUAL SITE DRAWINGS FOR WIND LOADING DESIGN CRITERIA.
- G9. ALL SHADE STRUCTURES CONSTRUCTED FROM THE NORTHROP DESIGNS REQUIRE SITE SPECIFIC CERTIFICATIONS.

FOUNDATIONS:

- F1. UNLESS NOTED OTHERWISE, THE FOUNDATIONS HAVE BEEN DESIGNED ON THE BASIS OF 300mm MAXIMUM OF TOP SOIL UNDERLAIN BY STIFF CLAY WITH AN ALLOWABLE BEARING PRESSURE OF 100 kPa.
- F2. A RISE OF 1m AND A RUN OF 1.5m SHALL NOT BE EXCEEDED FOR THE LINE OF SLOPE BETWEEN ADJACENT FOOTINGS OR EXCAVATIONS.
- F3. FOOTINGS SHALL BE LOCATED CENTRALLY UNDER POSTS UNLESS NOTED OTHERWISE.
- F4. ENSURE THAT THE STABILITY OF ADJACENT BUILDINGS IS MAINTAINED DURING ALL STAGES OF CONSTRUCTION. FOOTING EXCAVATIONS MUST BE FREE OF LOOSE EARTH, TREE ROOTS, MUD OR DEBRIS IMMEDIATELY BEFORE POURING CONCRETE.
- F5. IN THE EVENT THAT UNUSUAL SOIL CONDITIONS ARE FOUND THE ENGINEER IS TO BE CONTACTED.

CONCRETE:

- C1. CARRY OUT ALL CONCRETE WORK IN ACCORDANCE WITH AS3600 AND NATSPEC CONCRETE STANDARDS.
- C2. CONCRETE SHALL OBTAIN A COMPRESSIVE STRENGTH OF 20 MPa AFTER 28 DAYS.
-MAXIMUM AGGREGATE SIZE = 20mm U.N.O.
-SLUMP = 80mm
- C3. HOLD DOWN BOLTS SHALL BE HOT DIPPED GALVANISED.
- C4. U.N.O., CLEAR CONCRETE COVERS SHALL BE:

ENVIRONMENT	COVER
- MEMBERS IN DIRECT CONTACT WITH THE GROUND	50mm
- MEMBERS SEPARATED FROM GROUND BY MEMBRANE	30mm
- MEMBERS IN EXTERIOR ENVIRONMENTS	40mm
- C5. REINFORCEMENT SYMBOLS:
S = STRUCTURAL GRADE PLAIN ROUND BAR TO AS1302 (250MPa)0MP
N = HOT ROLLED DEFORMED BAR TO AS/NZS 4671 (500MPa)
SL = LOW DUCTILITY SQUARE MESH (500 MPa)
RL = LOW DUCTILITY RECTANGULAR MESH (500 MPa)
L = LOW DUCTILITY TRENCH MESH (500 MPa)
THE NUMBER FOLLOWING THE SYMBOL IS THE NOMINAL BAR DIAMETER IN MILLIMETERS CLASS L REINFORCEMENT SHALL NOT BE USED U.N.O.
- C6. MINIMUM CONCRETE COVER TO STEEL POSTS IN FOOTINGS TO BE 100mm.
- C7. ALLOW CONCRETE TO REACH 10 MPa (10 DAYS FOR 20 MPa CONCRETE) BEFORE INSTALLING FABRIC.

CHEMICAL ANCHORS:


- CA1. UNLESS NOTED OTHERWISE, CHEMSETS SPECIFIED IN THESE DRAWINGS REFER TO RAMSET CHEMSET INJECTION 502 OR 801 (GALVANISED).
- CA2. ALTERNATIVE CHEMICAL ANCHORS MAY BE SUBSTITUTED WITH PRIOR PERMISSION FROM NORTHROP CONSULTING ENGINEERS.
- CA3. MINIMUM EDGE DISTANCE AND SPACING SETOUT OF THE ANCHORS ARE SPECIFIED ON THESE DRAWINGS. IF THE INSTALLED DISTANCES ARE LESS THAN THAT SPECIFIED NOTIFY THE STRUCTURAL ENGINEER FOR INSTRUCTION.
- CA4. CHEMICAL ANCHORS ARE TO BE STRICTLY INSTALLED TO MANUFACTURERS INSTALLATION PROCEDURE.
- CA5. DIAMETER OF HOLES TO MANUFACTURERS SPECIFICATION FOR NOMINATED BOLT/BAR DIAMETER.
- CA6. CLEAN AND DEGREASE BOLTS/BARS BY MEANS OF WIRE BRUSH AND COMPRESSED AIR PRIOR TO INSTALLATION
- CA7. ENSURE CHEMICAL IS ALLOWED TO FULLY CURE IN ACCORDANCE WITH MANUFACTURE’S DETAILS PRIOR TO LOADING BOLTS/BARS.

STEELWORK:



- S1. FABRICATE AND ERECT STRUCTURAL STEELWORK IN ACCORDANCE WITH AS4100.
- S2. PROVIDE HOLES, CLEATS AND FIXING FOR TIMBER FRAMING, FINISHES, ETC. SHOWN ON ARCHITECTURAL DRAWINGS.
- S3. ALL BOLTS, SCREWS, HOLD DOWN BOLTS, MASONRY ANCHORS SHALL BE HOT DIP GALVANISED TO AS1214.
- S4. MINIMUM YIELD STRESS:
- HOT ROLLED SECTIONS = 300MPa
- SQUARE HOLLOW SECTIONS = 350MPa
- RECTANGULAR HOLLOW SECTIONS = 350MPa
- CIRCULAR HOLLOW SECTION = 350MPa
- S5. BOLT SYMBOLS:
- 4.6/S – SNUG FIT
- 8.8/S – SNUG FIT
- 8.8/TF – FULLY TENSIONED FRICTION TYPE (USE LOAD INDICATOR WASHERS)
- 8.8/TB – FULLY TENSIONED BEARING TYPE (USE LOAD INDICATOR WASHERS)
- S6. HIGH STRENGTH BOLTS (8.8) ARE NOT TO BE WELDED.
- S7. UNLESS NOTED OTHERWISE, USE:
- 10MM GUSSET, FIN AND END PLATES.
- M16 8.8/S BOLTS.
- 6mm CONTINUOUS FILLET WELDS MADE WITH E4818 MILD STEEL ELECTRODES.
- ALL WELDS SP CATEGORY

SHADE CLOTH FABRIC:

- FA1. FABRIC PATTERNING IS THE RESPONSIBILITY OF THE CONTRACTOR. THE FINAL PATTERN IS TO BE DETERMINED ONCE ALL COLUMNS HAVE BEEN INSTALLED.
- FA2. DESIGN EDGE CURVATURE (SCOLLOP) IS BASED ON 10% OF INITIAL LENGTH BETWEEN COLUMNS.
- FA3. STITCHING TYPE AND STRENGTH IS THE RESPONSIBILITY OF THE CONTRACTOR.
- FA4. THE FABRIC SHALL BE HANDLED AND STORED IN A MANNER THAT WILL NOT DAMAGE THE FABRIC AND CAUSE A VISUAL OR STRUCTURAL DEFECT.
- FA5. THE SHADE CLOTH SHALL BE INSTALLED BY AN EXPERIENCED CONTRACTOR.
- FA6. THE SHADE CLOTH SHALL NOT BE NSTALLED WHEN WIND SPEED EXCEEDS 20 KILOMETERS PER HOUR.


JOSEPH BONICA
Northrop Consulting Engineers – Structural Engineer
BE (Civil) Hons MIEAust CPEng NER

CONSTRUCTION

REV	DESCRIPTION	ISSUED	VER'D	APP'D	DATE	<div><div>Sydney Level 11, 345 George Street, Sydney, N.S.W. 2000 Ph (02) 9241 4188 Email: sydney@northrop.com.au ABN 81 094 433 100</div></div> <div>CLIENT<div><div>SUN SHADE AUSTRALIA Aussie style awnings Tel: 9974 5019 Fax: 9974 4580 Website: www.sunshade.com.au Email: sales@sunshade.com.au</div></div></div>	PROJECT		DRAWING TITLE	JOB NUMBER	
A	CONSTRUCTION ISSUE	J.T	J.B	J.B	22.11.18		SUN SHADE AUSTRALIA #2206 - O'Connell Street Public School 3 Marist Place Parramatta, 2150			STRUCTURAL DRAWING SPECIFICATION NOTES	180018 - 2206
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									ALL SETOUT TO ARCHITECT'S DRAWINGS. DIMENSIONS TO BE VERIFIED WITH ARCHITECT AND BUILDER BEFORE COMMENCING SHOP DRAWINGS OR SITE WORK. NORTHROP ACCEPTS NO RESPONSIBILITY FOR THE USABILITY, COMPLETENESS OR SCALE OF DRAWINGS TRANSFERRED ELECTRONICALLY. DRAWINGS NOT TO BE USED FOR CONSTRUCTION UNLESS VERIFICATION SIGNATURE HAS BEEN ADDED. THE COPYRIGHT OF THIS DRAWING REMAINS WITH NORTHROP CONSULTING ENGINEERS PTY LTD	DRAWING SHEET SIZE = A3	