

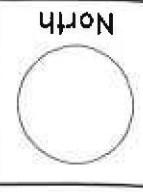
- NOTES:
1. REFER TO ENGINEERING PLANS APPROVED BY DEVELOPMENT CONSENT NO. 146/03 FOR DETAILS OF ACCESS ROAD.
 2. REFER TO LANDSCAPE PLANS FOR SURFACE FINISHES.
 3. STORMWATER DRAINAGE TO BE CONNECTED TO STORMWATER PIPELINE IN ACCESS ROAD.

Revision	Amendment or reason for issue	Issue date	Drawn by	Checked by	Designed & dsg. by	Verified by	Issue authorised
A	ISSUED FOR REVIEW	16.03.08	WAS	WAS	RPH	X	Not verified
B	ISSUED FOR QA	16.02.07	WAS	WAS	RPH	X	Not verified
C	ISSUED FOR INFORMATION	03.06.10	WAS	WAS	RPH	X	Not verified
D	ISSUED FOR INFORMATION	03.06.10	WAS	WAS	RPH	X	Not verified
E	ISSUED FOR CONSTRUCTION	16.03.11	WAS	WAS	RPH	X	Not verified

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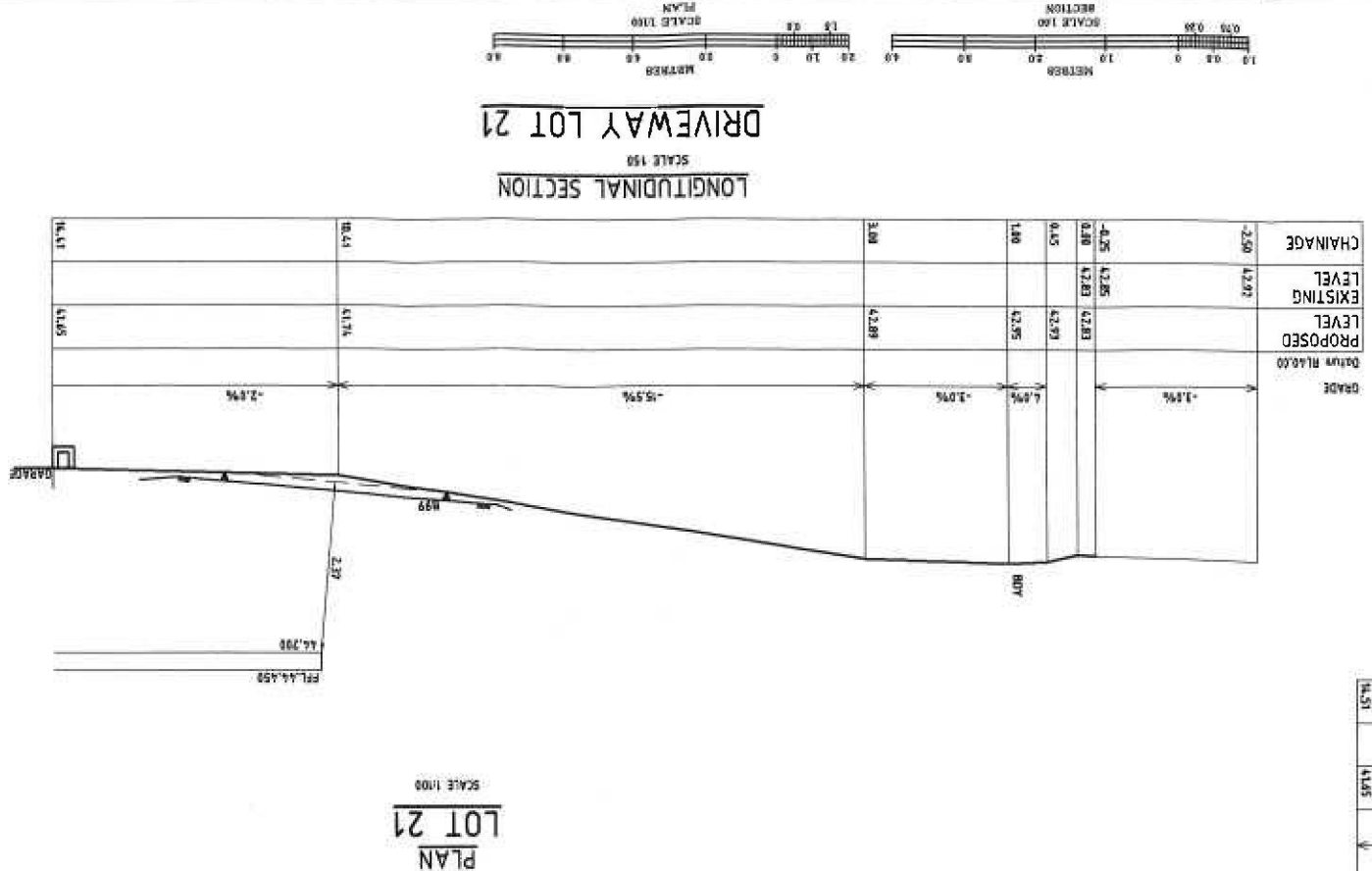
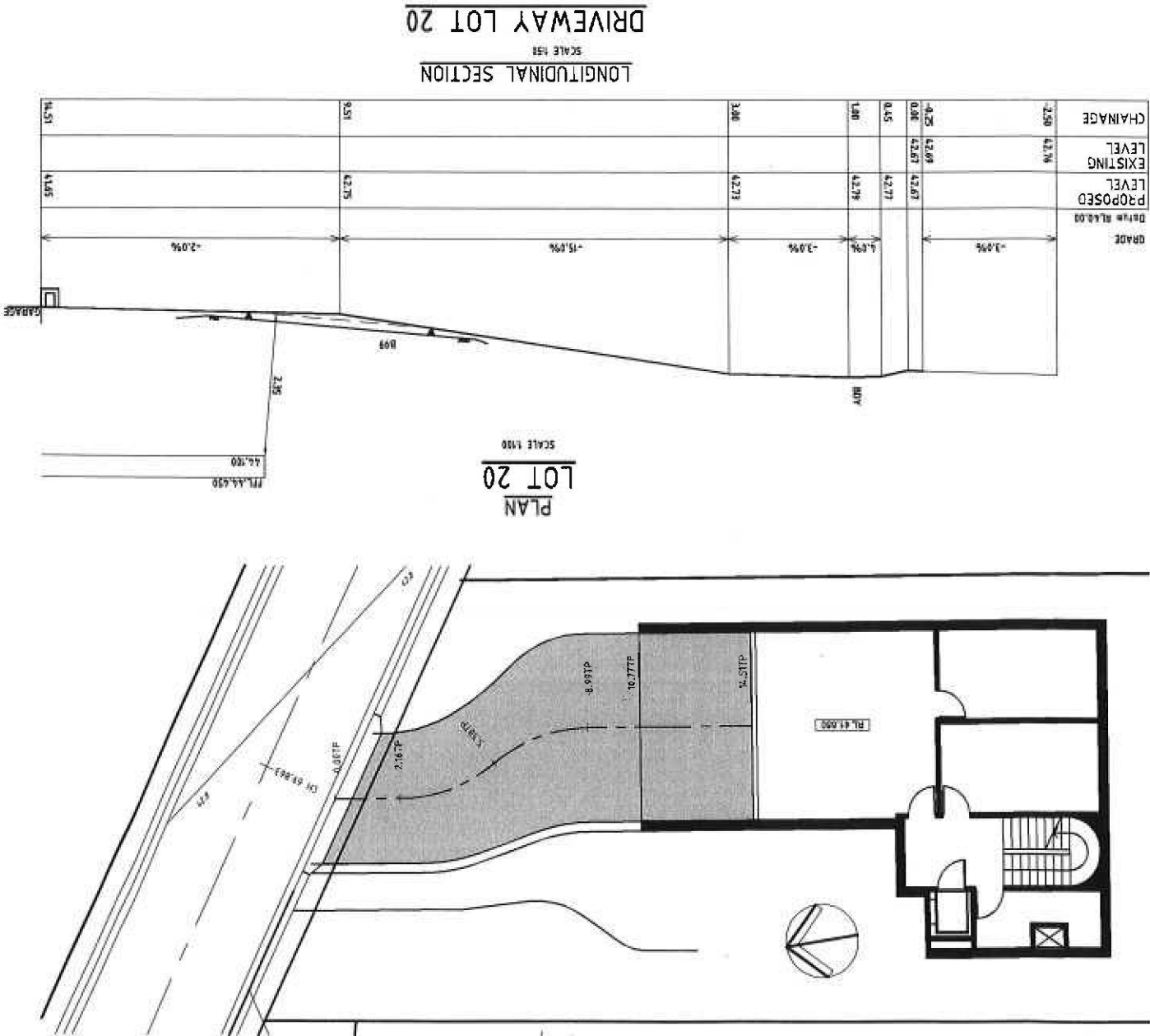
Breaches at:
St Leonards • Canberra • Peremulla • Wagga Wagga



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LEND LEASE DEVELOPMENT
Project / Project Manager
TONY CARO ARCHITECTURE
Drawing No. 02S259-DAC44

Client Project No.
Drawing Title
LOTS 20 & 21
DRIVEWAY PLAN AND LONG SECTION



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Winchmore 011
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Drawing No. 02S259-DAC43

ST. PATRICKS ESTATE MANLY
PRECINCTS 1 & 13 SITE 20-26

DRIVEWAY LOT 26



LOT 26



DRIVEWAY LOT 25



LOT 25



- NOTES:
1. REFER TO ENGINEERING PLANS APPROVED BY DEVELOPMENT CONSENT NO. 146/09 FOR DETAILS OF ACCESS ROAD.
 2. REFER TO LANDSCAPE PLANS FOR SURFACE FINISHES.
 3. STORMWATER DRAINAGE TO BE CONNECTED TO STORMWATER PIPELINE IN ACCESS ROAD.

Revision		Amendment or reason for issue	Issue date	Drawn by	Checked by	Designed & dsg.	Verified by	Issue authorised
A	ISSUED FOR REVIEW		15.03.05	HAS	HAS	RPH	X	
B	ISSUED FOR DA		16.02.07	HAS	HAS	RPH	X	
C	ISSUED FOR INFORMATION		03.06.10	HAS	HAS	RPH	X	
D	ISSUED FOR INFORMATION		03.06.10	HAS	HAS	RPH	X	
E	ISSUED FOR CONSTRUCTION		10.03.11	HAS	HAS	RPH	X	

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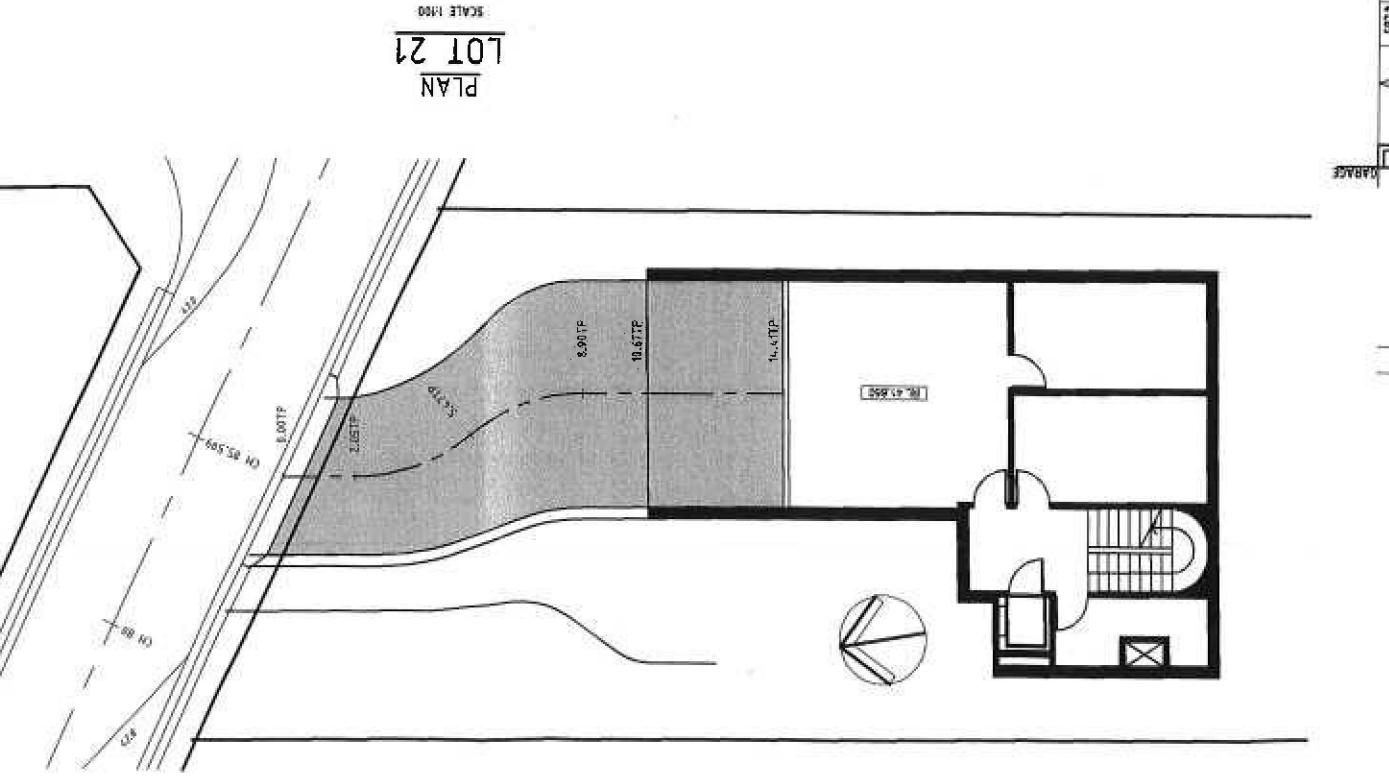
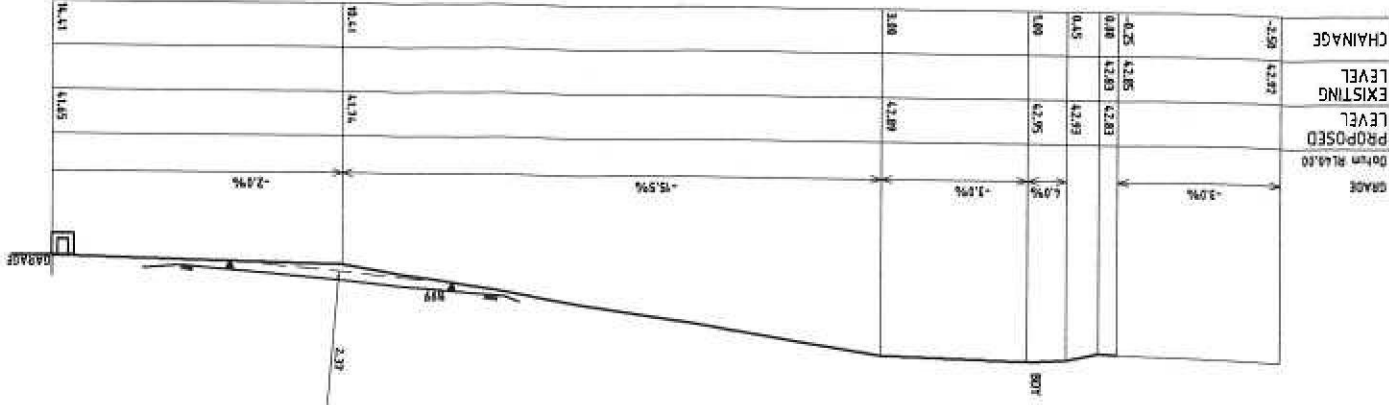
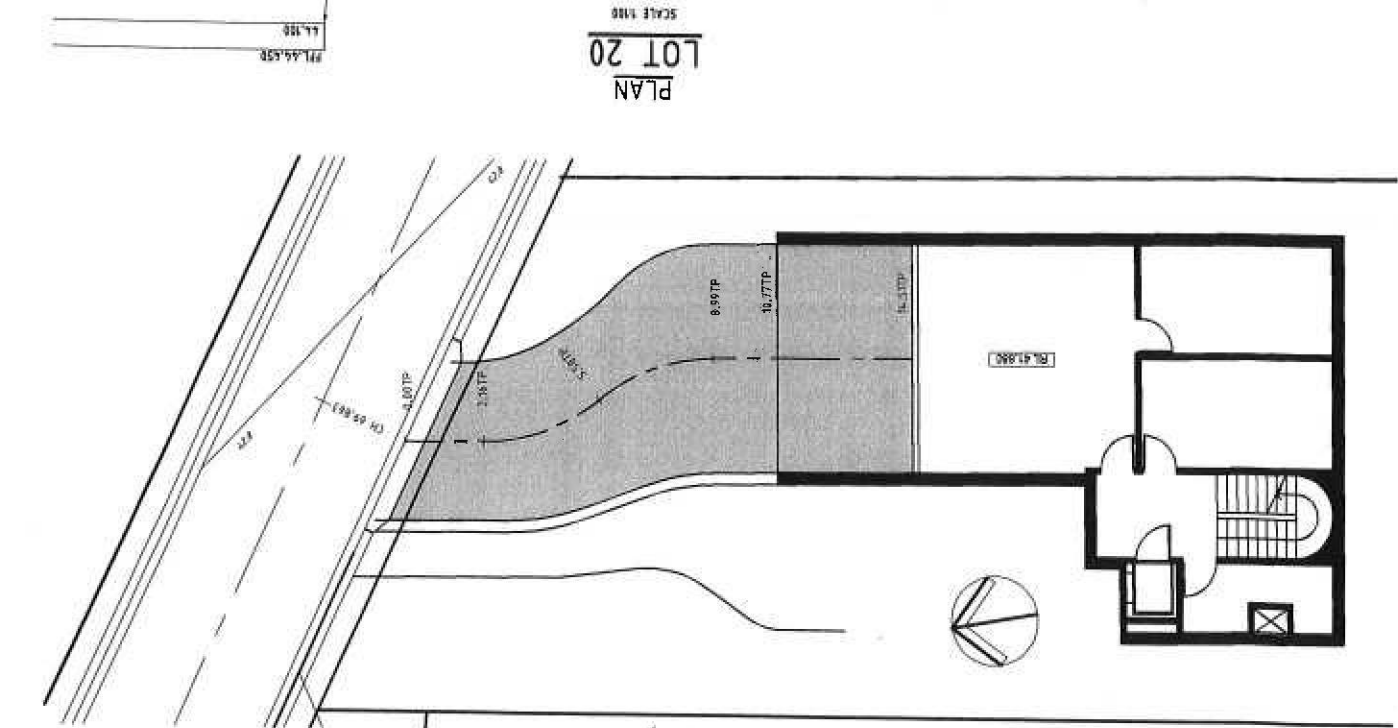
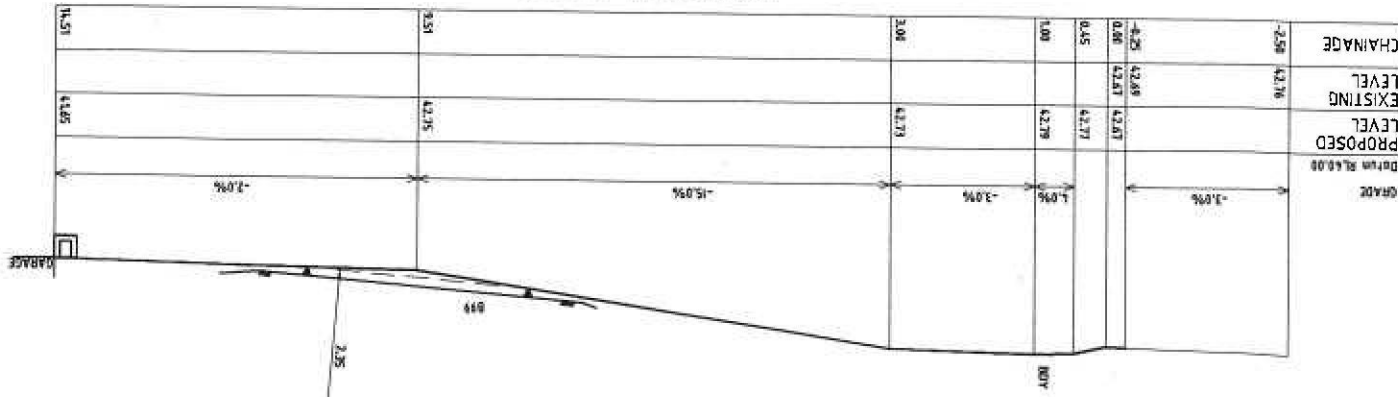
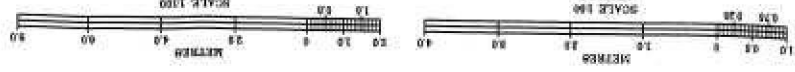
Working hours: 9.00am to 5.00pm, Monday to Friday.
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Drawn by: RPH
Checked by: HAS
Designed & dsg.: RPH
Verified by: X
Issue authorised: X

ST Leonards • Caberua • Peremulla • Wagga Wagga



Client: ST. PATRICKS ESTATE MANLY
Precincts 1 & 13 SITE 20-26
Project: DRIVEWAY PLAN AND LONG SECTION
Drawing Title: DRIVEWAY PLAN AND LONG SECTION
Drawing No.: AS SHOWN
Drawing No.: 02S259-DAC44
Drawing No.: 02S259-DAC44
Drawing No.: 02S259-DAC44



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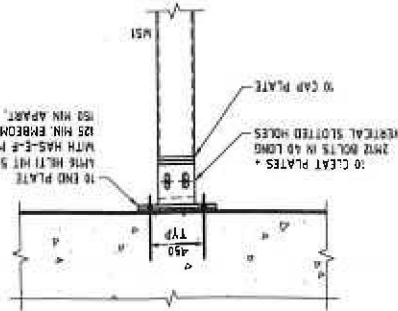
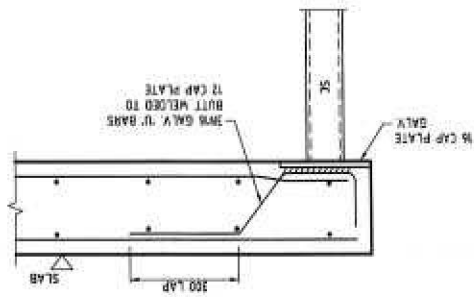
1500 2nd Avenue, Suite 200
San Francisco, CA 94102
415.774.1100

WMA
WATER MANAGEMENT ASSOCIATION

1000 1st Avenue, Suite 200
San Francisco, CA 94102
415.774.1100

This Plan/Specification forms part of the certification for

WS1 TOP DETAIL



SECTION
SCALE 1:20
250
200
10
SECTION TO PLAN
SECTION TO ELEVATION

Technical drawing of a section of a pipe. The drawing is oriented vertically with the pipe axis horizontal. Key features and dimensions include:

- Section Line:** A horizontal line across the top of the pipe, labeled "SECTION" and "SCALE 1/32".
- Labels:**
 - "SWIRL TOP & BTM" with arrows pointing to the top and bottom of the pipe section.
 - "R50.0" indicating a fillet radius at the top of the pipe.
 - "HIZ-200" and "V. 200S" with arrows pointing to the top and bottom of the pipe section.
- Dimensions:**
 - Overall width: 250
 - Inner width: 250
 - Outer width: 250
 - Top flange thickness: 75
 - Bottom flange thickness: 75
 - Top flange radius: R50.0
 - Bottom flange radius: R50.0
- View Indicators:**
 - A circle with "1" and a vertical line, indicating a view from the top.
 - A circle with "2" and a horizontal line, indicating a view from the bottom.

Rev	Amendment / Reason For Issue	Date	Drawn by	Checked by	Verified by	Authorised by	Issue
1	REISSUE FOR CONSTRUCTION	10.08.11	MSM	AM	K	K	SAW
2	ISSUE FOR CONSTRUCTION	10.03.11	AM	AM	K	K	SAW
3	ISSUE FOR CC & FIXED PRICE	29.05.10	RO	AM	K	K	SAW
4	ISSUE FOR INFORMATION	-	AG	AM	K	K	SAW

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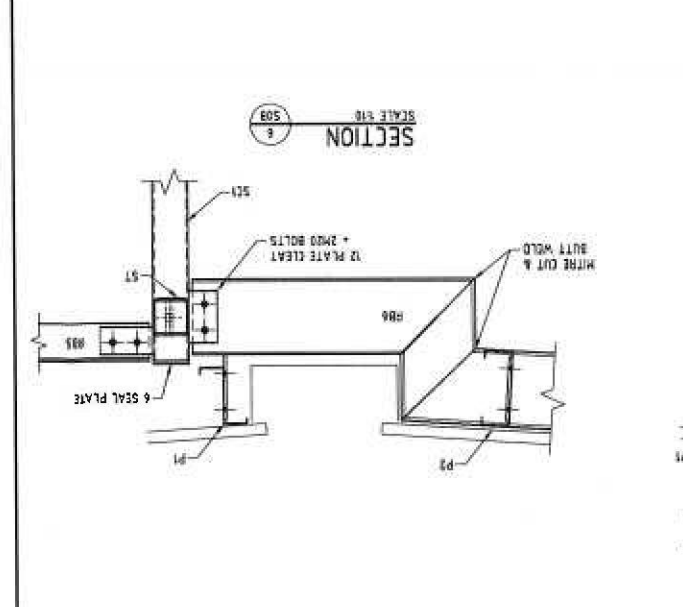
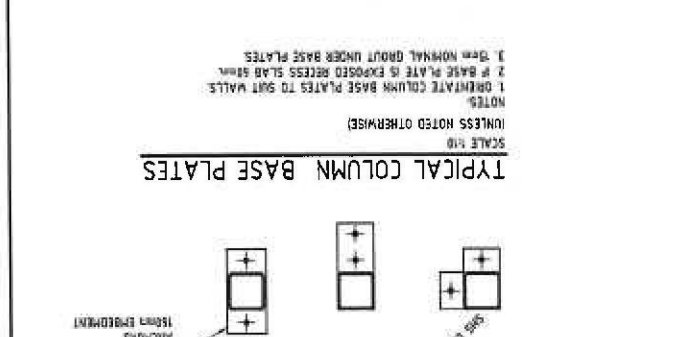
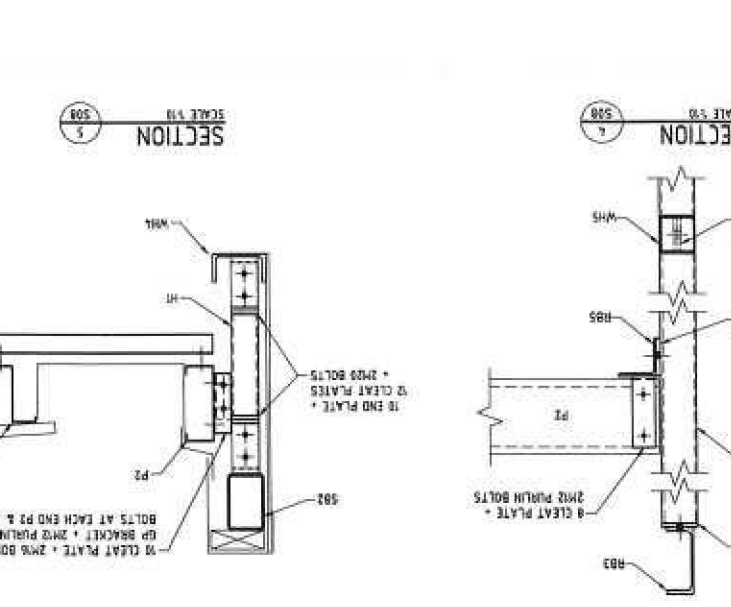
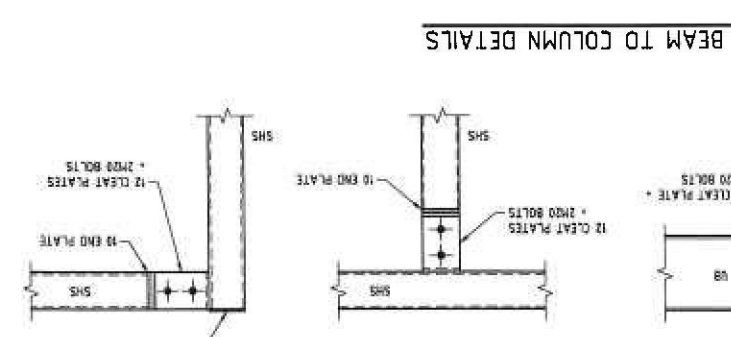
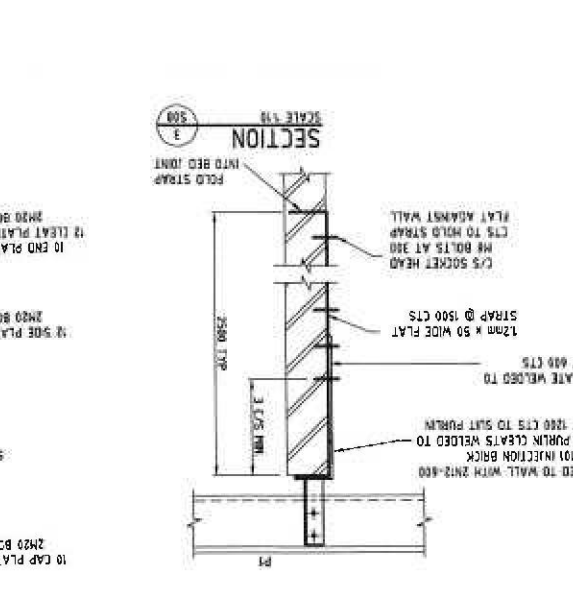
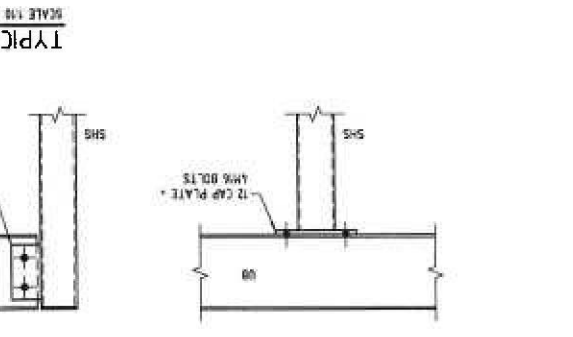
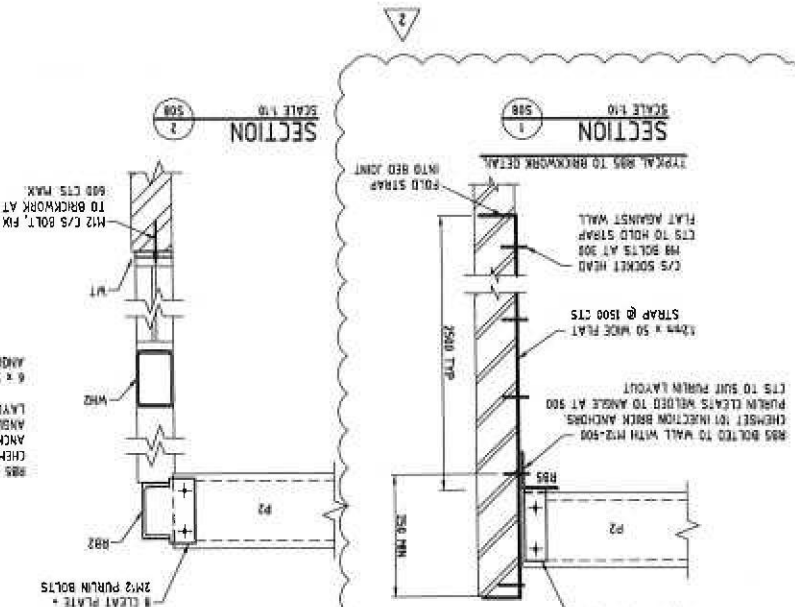
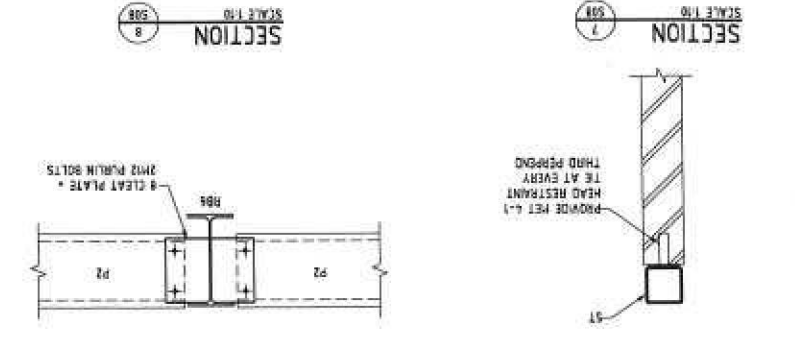
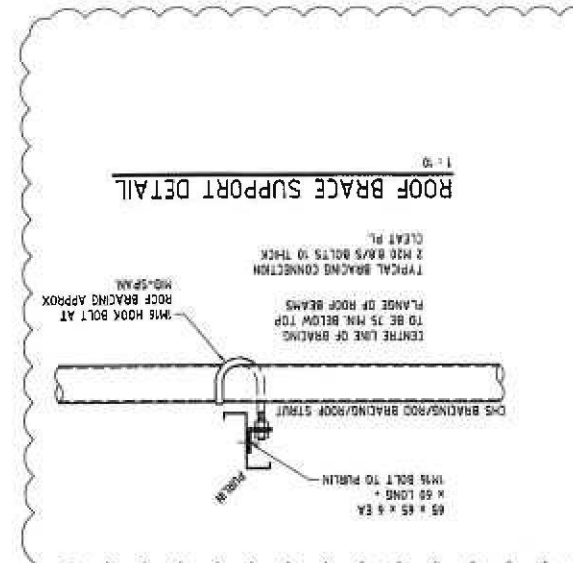
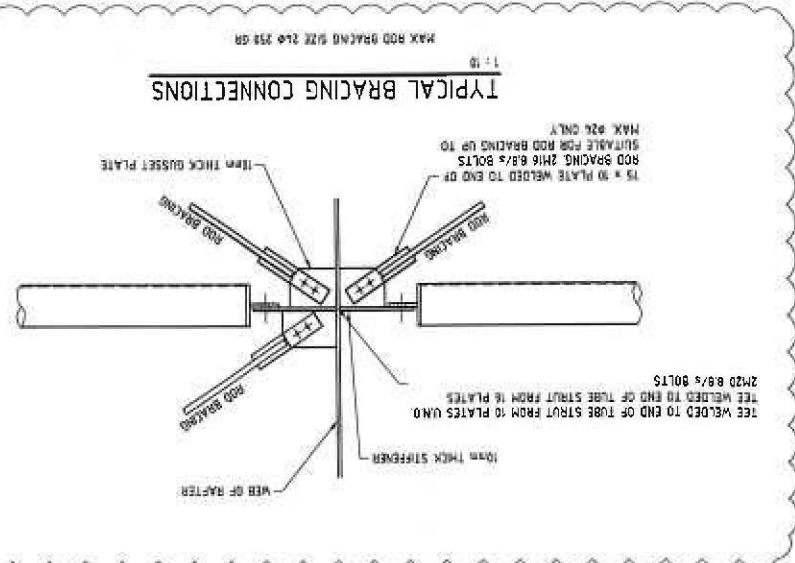
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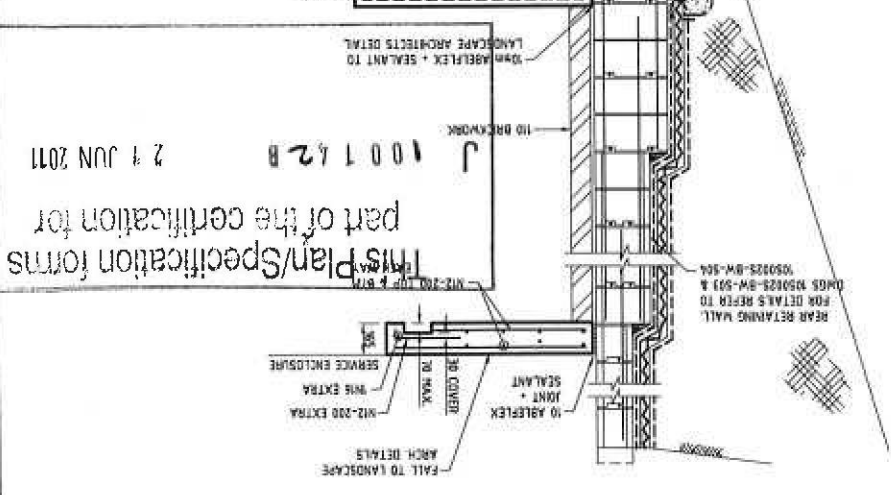
ST. PATRICKS ESTATE MANLY
PRECINCT 1 STAGE 4
ROOF SECTIONS AND DETAILS
SHEET 1
HOUSE 20

LEND LEASE
TONY CARO ARCHITECTS
105002-20-S40
Drawing No.
12 of 13
2



This Plan/Specification forms part of the certification for
J 1001628
21 JUN 2011

Drawing No 10S002-20-SS0	Scale 1/8" = 1'-0"	Sheet No 2
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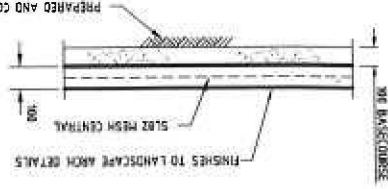


000162B 21 JUN 2011

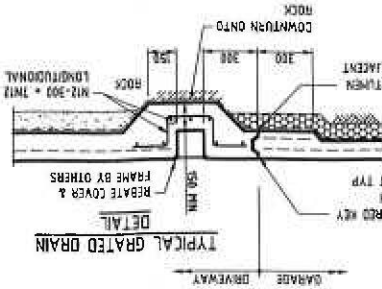
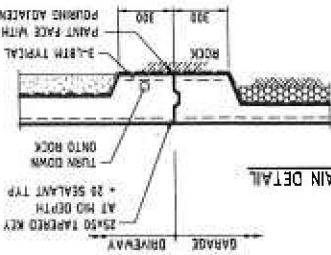
DRIVEWAY SUBGRADE PREPARATION

1. CLEAR SITE OF VEGETABLE MATTER AND DISCREPANCY MATERIALS
2. STRIP TOPSOIL AND STOCKPILE FOR REUSE
3. PROOF ROLL, REMOVE AND REPLACE SOFT AREAS WITH COMPACTED SUBBASE OR BASE MATERIAL
4. PLACE APPROVED NON ORGANIC FILL WITH A MAXIMUM PARTICLE SIZE OF 15mm AND COMPACT IN 200mm MAX. THICK LAYERS U.K.O.
5. COMPACTION IS TO BE CARRIED OUT BY ROLLING AT OPTIMUM MOISTURE DENSITY TO OBTAIN A DENSITY EQUIVALENT TO 95% OF MAXIMUM DRY DENSITY WHEN TESTED BY THE STANDARD COMPACTION TEST.
6. COMPACTION SHALL BE CARRIED OUT WITH A VIBRATING ROLLER WITH AT LEAST 10 TONNE STATIC WEIGHT.
7. TESTING OF THE SUBGRADE SHALL BE CARRIED OUT BY AN APPROVED M.A.I.L. REGISTERED LABORATORY.

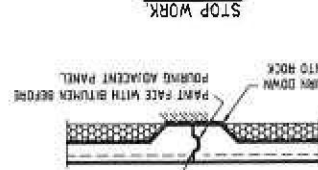
TYPICAL DRIVEWAY SLAB CONSTRUCTION



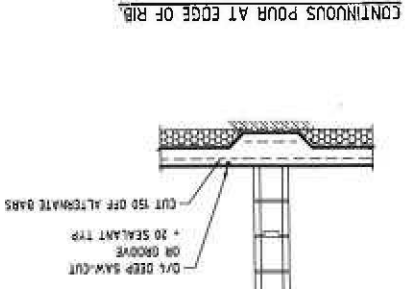
NO DRAIN DETAIL



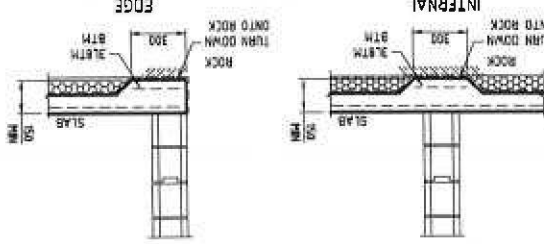
DRIVEWAY TO BUILDING KEY JOINT - K.J.



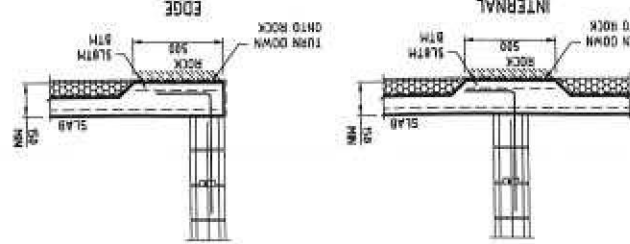
CONTROL JOINT DETAILS



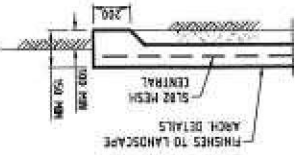
**TYPICAL SLAB THICKENING DETAILS
BLOCK WORK NOT CORE FILLED ST1**



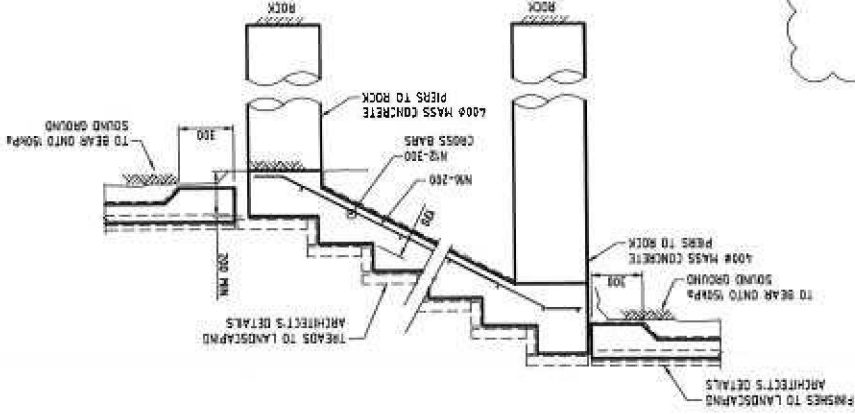
**TYPICAL SLAB THICKENING DETAILS
BLOCK WORK CORE FILLED & REINFORCED ST2**



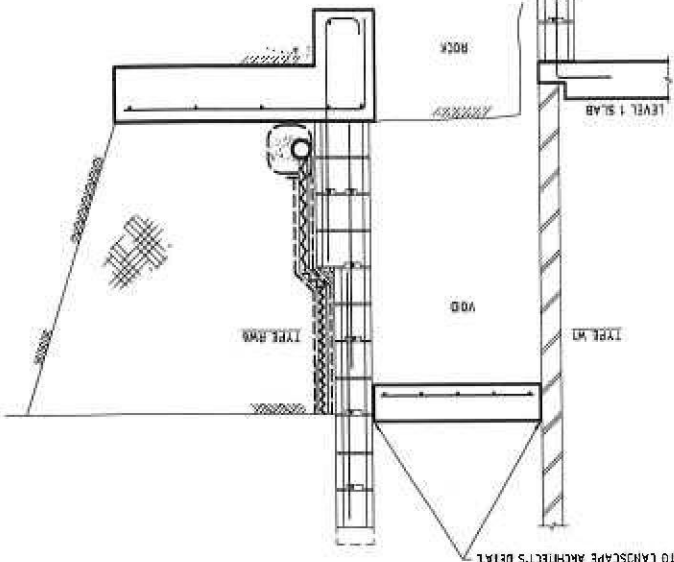
**TYPICAL DRIVEWAY SLAB
EDGE THICKENING**



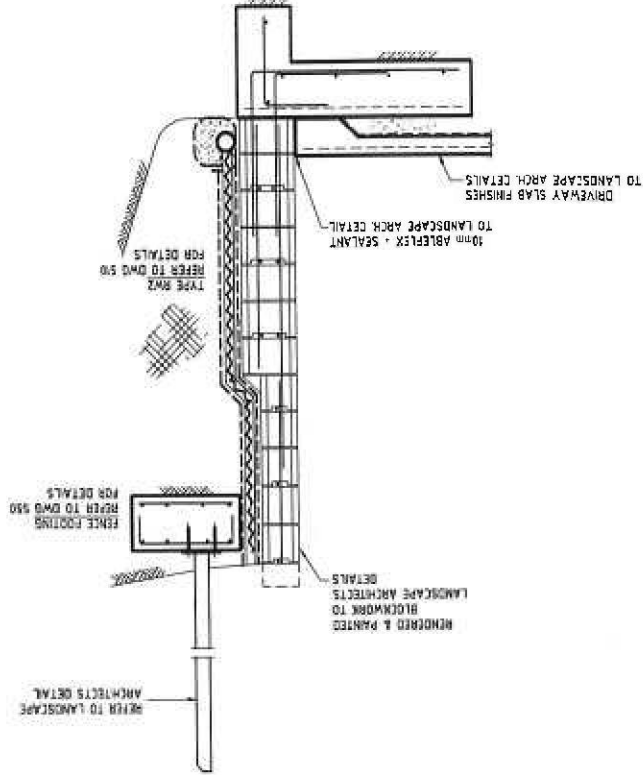
SECTION 3



SECTION 5



SECTION 2



This Plan/Specification forms part of the certification for
J 100142B
21 JUN 2011

Rev	Amendment / Reason For Issue	Date	Drawn By	Checked By	Verified By	Approved By
1	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
2	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
3	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
4	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
5	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
6	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
7	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
8	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
9	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW
10	REVISION FOR CONSTRUCTION	10/06/11	MSW	AW	AW	AW

Hughes Trueman

Consulting Engineers, Planners & Surveyors

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ST. PATRICKS ESTATE MANLY

PRECINCT 1 STAGE 4

GROUND FLOOR

SECTIONS AND DETAILS SHEET 1

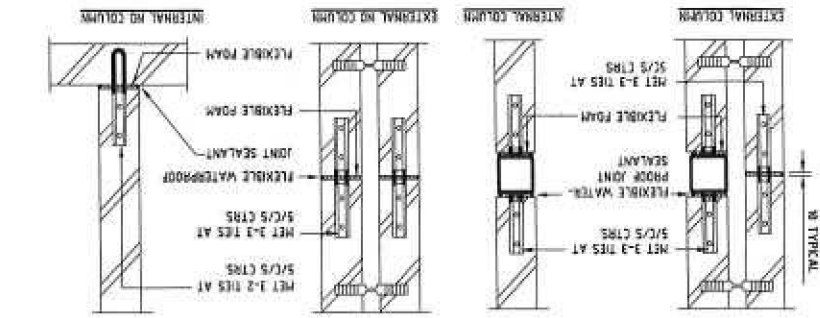
HOUSE 20

LEND LEASE

TONY CARO ARCHITECTS

10S002-20-S14

2



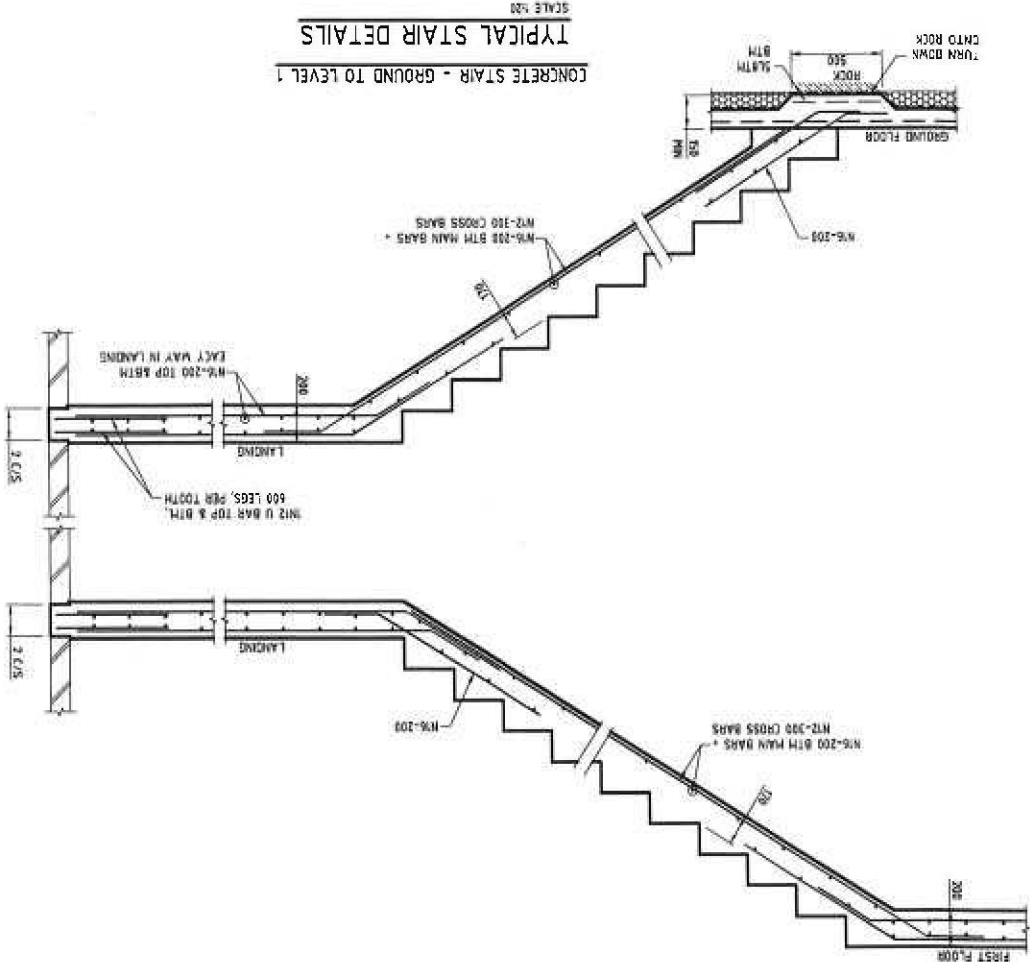
TYPICAL BRICK JOINT DETAILS

1. REFER TO ARCHITECT'S ELEVATIONS, NOTE 19 ON STRUCTURAL DRAWING SHEET 01 AND STEEPED FOOTING DETAILS TO DETERMINE JOINT LOCATIONS, FINAL LAYOUT TO BE CONFIRMED ON SITE. CRITICAL D.I. ARE ALSO INDICATED ON STRUCTURAL PLANS.

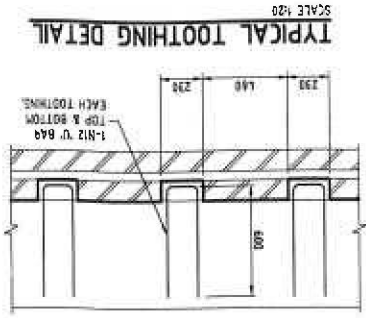
2. ALL JOINTS TO BE COMPLETED ON SITE. CRITICAL D.I. ARE ALSO INDICATED ON STRUCTURAL PLANS.

3. FOR CLAY BRICKS WITH POTENTIAL GROWTH OF 1mm PER METRE.

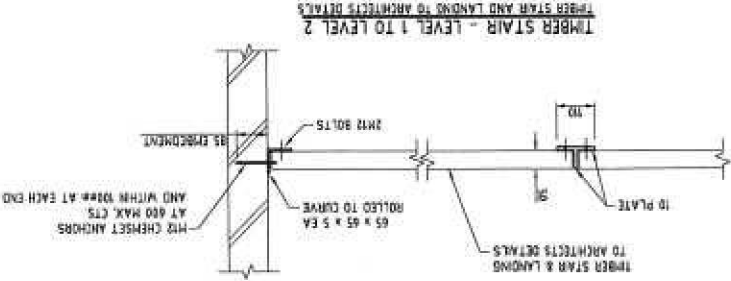
4. GAP WIDTH 15mm USING CORROSION RESISTANT FLEXIBLE FOAM OR EQUIVALENT.



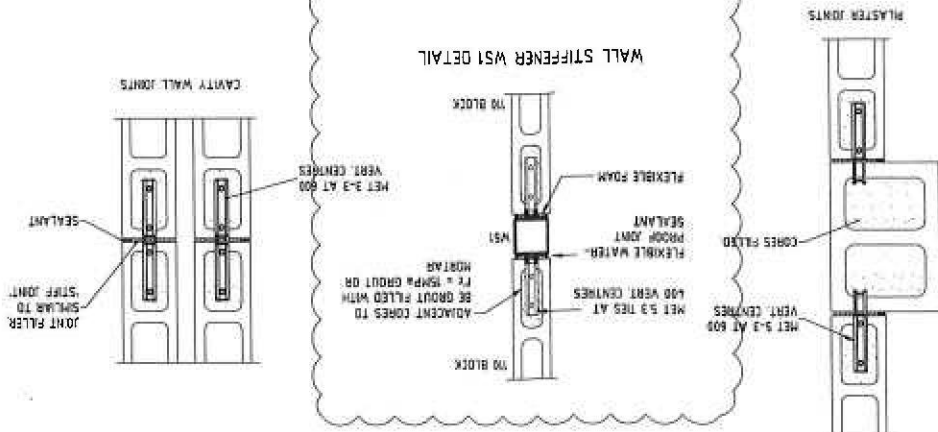
TYPICAL STAIR DETAILS



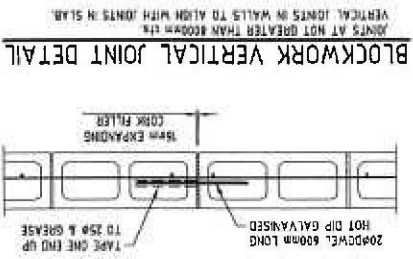
TYPICAL TOOTHING DETAIL



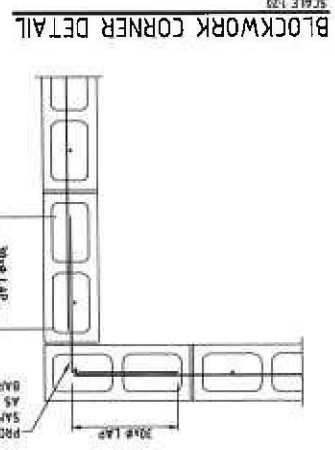
TIMBER STAIR - LEVEL 1 TO LEVEL 2



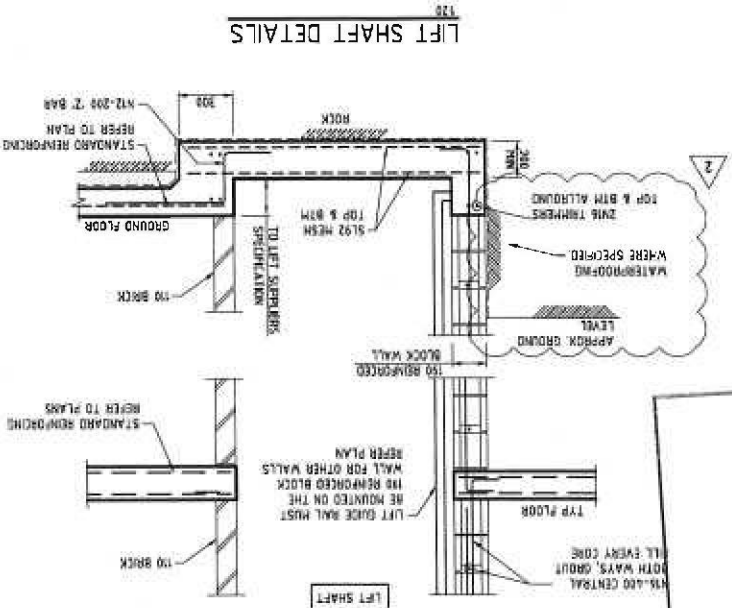
TYPICAL BLOCK JOINT DETAILS



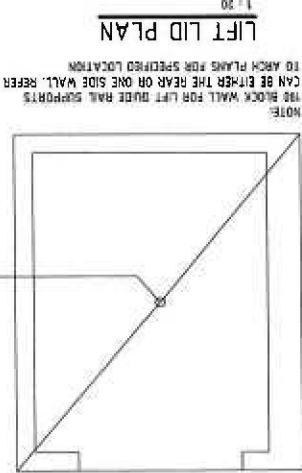
BLOCKWORK VERTICAL JOINT DETAIL



BLOCKWORK CORNER DETAIL



LIFT SHAFT DETAILS



LIFT LID PLAN

This Plan/Specification forms part of the certification for J 100142B
21 JUN 2011

DETAILS SCALE 1:20
0.5 0.25 0 0.25 0.5 1.0

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Rev	Amendment / Reason for Issue	Date	Drawn by	Checked by	Verified by	Authorised by
2	ISSUE FOR CONSTRUCTION	10.06.10	AW	AW	AW	AW
1	ISSUE FOR CONSTRUCTION	08.02.10	AW	AW	AW	AW
0	ISSUE FOR CC & FIXED PRICE	25.05.10	AW	AW	AW	AW
A	ISSUE FOR INFORMATION	15.01.10	AW	AW	AW	AW

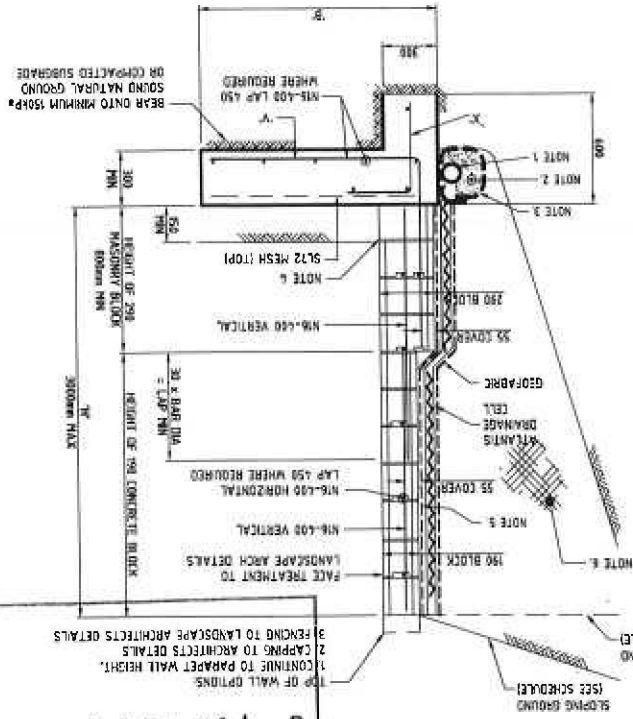
Hughes Trueman
Consulting Engineers, Planners & Surveyors
1st Floor, 100, St Leonards Road, 2011
Amen St, Weymouth, Dorset, DT9 8JH
Tel: 01305 381 500
Fax: 01305 381 501
Email: info@hughes-trueman.co.uk
www.hughes-trueman.co.uk

ACCA
Approved
Certification
Authority

ST. PATRICKS ESTATE MANLY
PRECINCT 1 STAGE 4
LIFT AND STAIR DETAILS
SHEET 1
HOUSE 20

10S002-20-S12
TONY CARO ARCHITECTS
LEND LEASE

2
8
13
10



RETAINING WALL - TYPE RW2

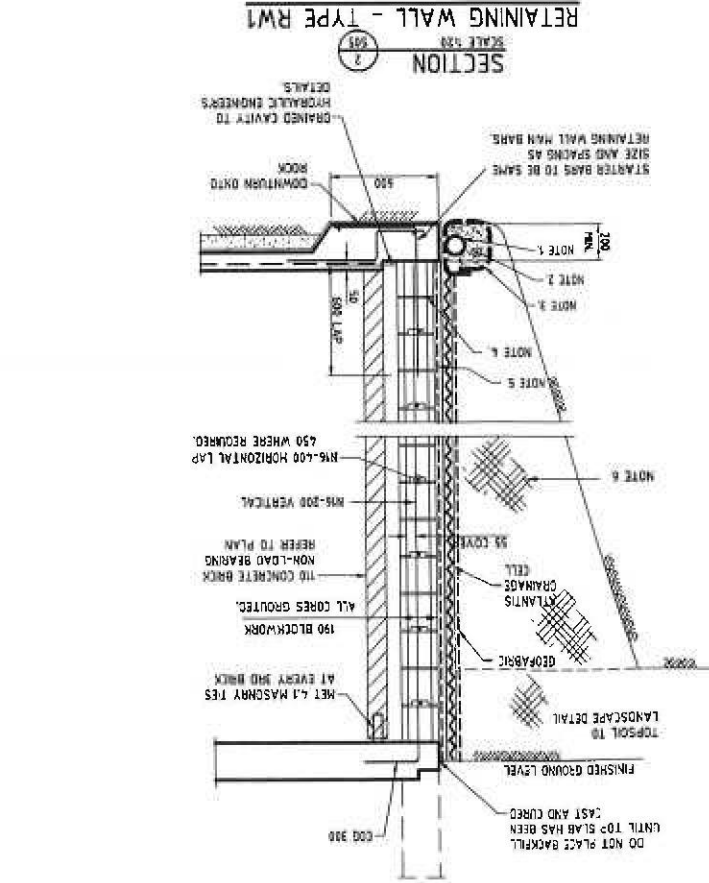
- RETAINING WALL NOTES
1. 100mm rigid slotted PVC sub-soil pipe with filter sock (min. 0.5% fall) to nearest available stormwater pit
 2. 100mm rigid slotted PVC sub-soil pipe with filter sock
 3. Geofabric surround to be 100mm A25 filter fabric or approved equal.
 4. Provide 'T' shaped clean-out block at base of retaining wall.
 5. Omit horizontal bar from top of this block.
 6. Take note of landscape architects specifications.
 7. Refer to standard blockwork notes.

RETAINING WALL SCHEDULE - TYPES RW2 & RW4

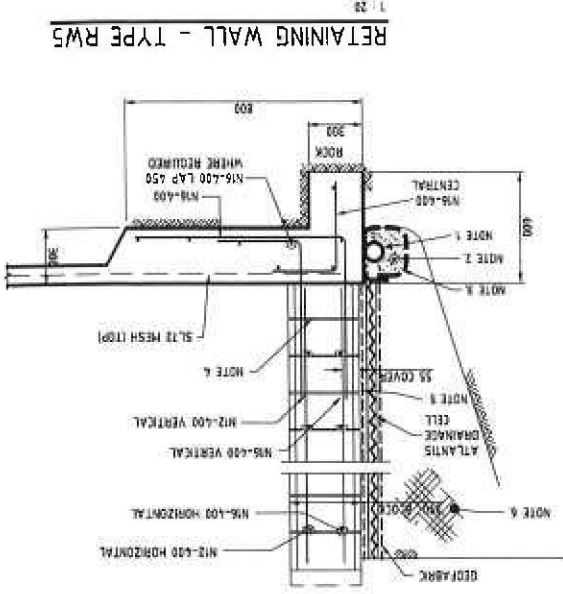
RETAINED HEIGHT OF 290 BLOCKS	BASE WIDTH 'B'	BACKFILL CONDITIONS AT TOP OF RETAINING WALL	LEVEL	SLOPE	1 IN 1	BAR TYPE	BAR TYPE	BAR TYPE	BAR TYPE	BAR TYPE	BAR TYPE
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600
2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000

RETAINING WALL SCHEDULE - TYPES RW6

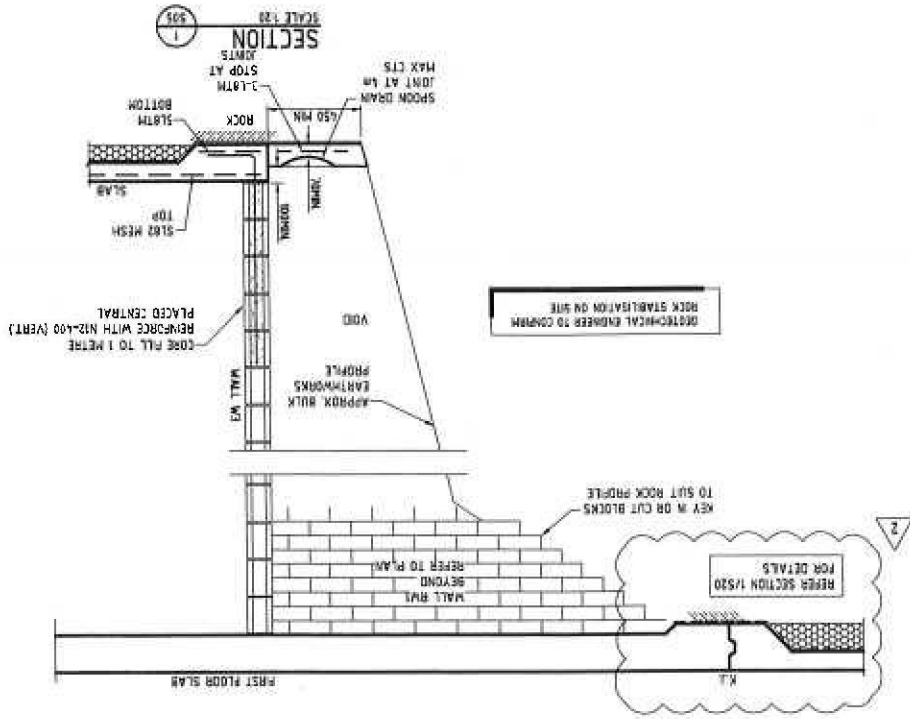
RETAINED HEIGHT OF 290 BLOCKS	BASE WIDTH 'B'	BACKFILL CONDITIONS AT TOP OF RETAINING WALL	LEVEL	SLOPE	1 IN 1	BAR TYPE	BAR TYPE	BAR TYPE	BAR TYPE	BAR TYPE	BAR TYPE
1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400	1400
1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800	1800
2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000	2000
2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400	2400
2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600
2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800	2800
3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000



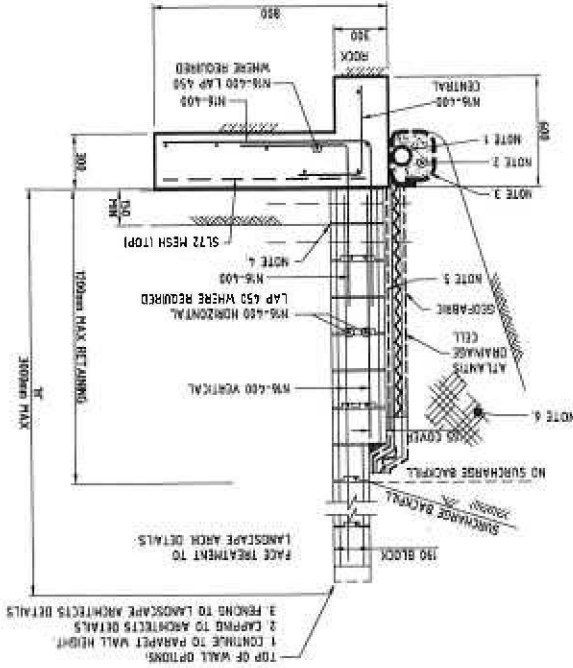
RETAINING WALL - TYPE RW1



RETAINING WALL - TYPE RW5



RETAINING WALL - TYPE RW6



SCALE 1:20
0.5 0.25 0 0.25 0.5 1.0
DETAILS

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Rev	Description / Reason For Issue	Date	Drawn By	Checked By	Verified By	Approved By
1	REISSUE FOR CONSTRUCTION	10.06.11	AW	AW	AW	AW
2	REISSUE FOR CONSTRUCTION	18.03.11	AW	AW	AW	AW
3	REISSUE FOR CC & PAVED PRICE	08.06.10	AW	AW	AW	AW
4	REISSUE FOR CC & PAVED PRICE	25.05.10	AW	AW	AW	AW
5	REISSUE FOR CC & PAVED PRICE	16.07.10	AW	AW	AW	AW

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ST. PATRICKS ESTATE MANLY
PRECINCT 1 STAGE 4
SHEET 1
HOUSE 20
LEND LEASE
TONY CARO ARCHITECTS

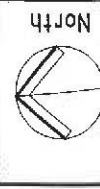
10S002-20-S10
7
13
2

Rev	Amendment / Reason for Issue	Date	Drawn by	Checked by	Verified by	Authorised by
1	ISSUE FOR CONSTRUCTION	18.03.11	AW	AW	X	AW
2	REISSUE FOR CONSTRUCTION	18.03.11	AW	AW	X	AW
3	ISSUE FOR CC & FIXED PRICE	25.03.10	AW	AW	X	AW
4	ISSUE FOR INFORMATION	-	AW	AW	X	AW

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ST. PATRICKS ESTATE MANLY	PRECINCT 1 STAGE 4	LEND LEASE	TONY CARO ARCHITECTS
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DATE	TIME	LOCATION	REMARKS
2-17-77			FIRST FLOOR PLAN GENERAL ARRANGEMENT HOUSE 20
2-18-77			105S002-20-S06

* PLATE SLABS ON A 300MM WATERPROOF MEMBRANE OVER AN 80MM THICK
 DRAINAGE LAYER OF 20MM SINGLE SIZE PORE DRAINING GRAVEL. FOR
 INTERNAL SLABS
 * SUBGRADE TO BE COMPACTED IN ACCORDANCE WITH SUBGRADE PREPARATION
 NOTES
 * FOR DRIVEWAY SLABS REFER TO DWG S14 FOR DETAILS.
 (C.I.) DENOTES CONTROL JOINT - REFER DETAILS
 (K.I.) DENOTES KEY JOINT - REFER DETAILS
 (D.J.) DENOTES DOWEL JOINT - REFER DETAILS

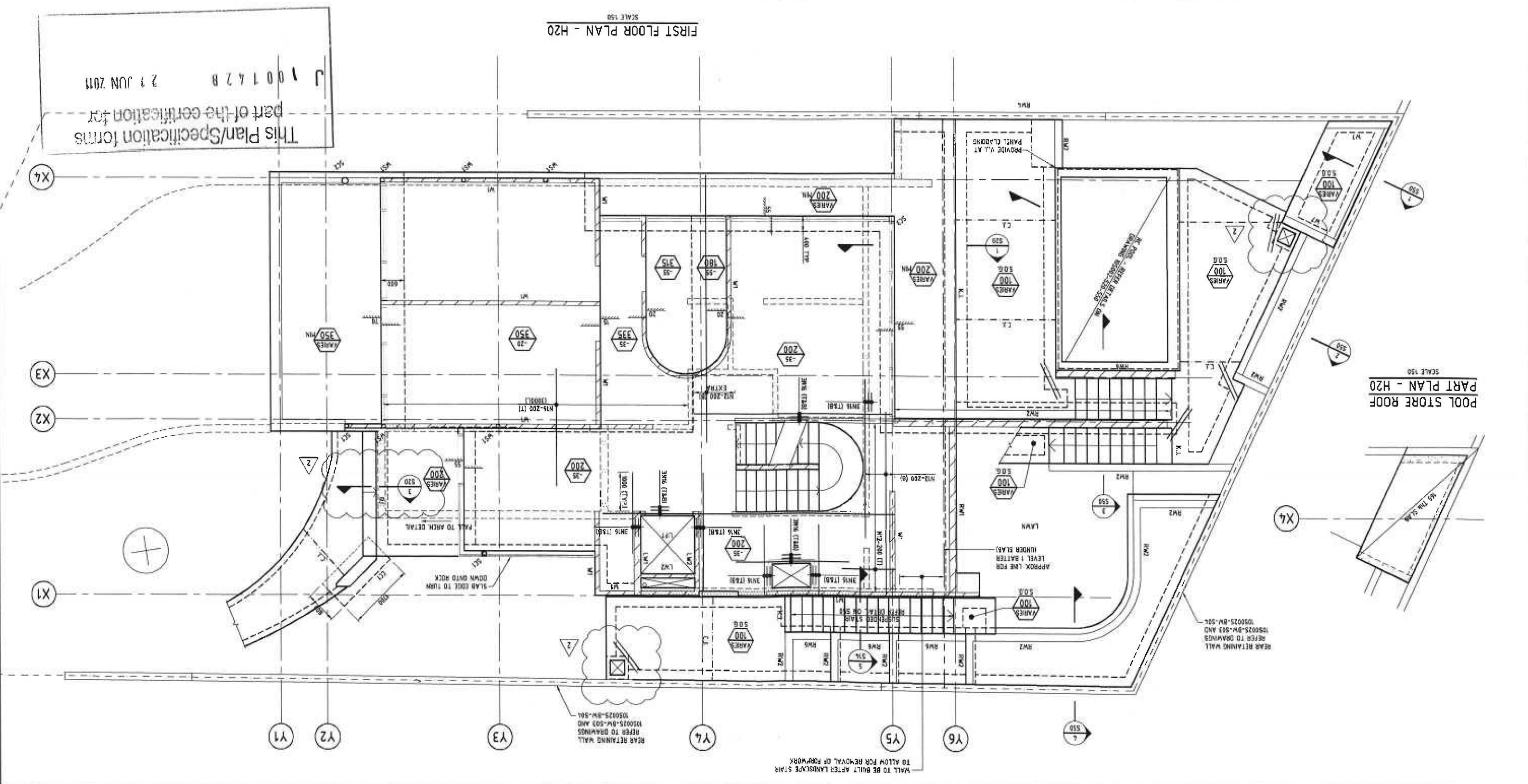
 2412 TOP, 1000 LONG DIMENSIONS

W7	190 COR: FILLED BLOCK, REINFORCED WITH NO.400 VERT. * DETAILS DWG 558
W6	LANDSCAPED WALL, REFER. TO LANDSCAPING
W5	190 COR: FILLED BLOCK, UNREINFORCED
W4	150 COR: FILLED BLOCK REINFORCED WITH NO.400 VERT.
W3	140 BLOCK COR: FILLED & REINFORCED TO IN HIGH RASTER SECTION
W2	140 COR: FILLED BLOCK, UNREINFORCED
W1	110 BRICKWORK
W2	110 BRICKWORK
W1	190 COR: FILLED BLOCK, REINFORCED WITH NO.400 VERT. *
W6	REFER TO RETAINING WALL DETAILS DWG 510

STEEEL COLUMNS	SC1	100 x 6.0 SHS
	SC2	150x150x6 SHS HOT DIP GALV
	SC3	125x125x5 SHS
WALL STIFFENERS	WS1	100x50x5 RHS AT 3500mm CTS MAX.
STAIR BEAMS	SB1	175mm OUT OF 10 PL.
	SB2	65 x 65 x 5 PL
LINTEL BEAM	LT	150x150 REINFORCED CONCRETE
60 x 110 ULTRALINTEL		ULTRALINTEL FOR 110 BRICKWORK INSOP.

FOOTINGS & WALLS MEMBER SCHEDULE

R.C. MEMBER SCHEDULE



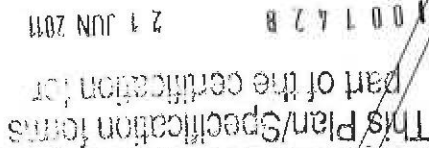
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St. Louis, MO
901-421-1111
Carpenter
NCEM

GROUND FLOOR PLAN
GENERAL ARRANGEMENT
HOUSE 20
10S002-20-S05

DETAILS DWG S38
190 CORE FALLO BLOCK REINFORCE WITH #16-400 HORIZ
W7
STONE RET. WALLS SW1 REFER DETAILS ON DWG S50

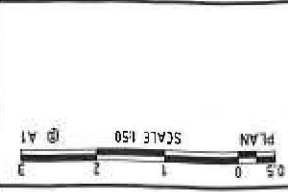


Rev	Description / Reason for Issue	Date	Drawn by	Checked by	Designed by	Verified by	Issued by
2	REISSUE FOR CONSTRUCTION	10.01.11	HEM	AW	AW	X	SAW
1	ISSUE FOR CONSTRUCTION	10.01.11	GM	AW	AW	X	SAW
B	ISSUE FOR CC & FIXED PRICE	25.05.10	MD	AW	AW	X	SAW
A	ISSUE FOR INFORMATION	16.04.10	LES	AW	AW	X	SAW

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ST. PATRICKS ESTATE MANLY
PRECINCT 1 STAGE 4
LEND LEASE
TONY CARO ARCHITECTS
105002-20-S08

Drawing Title: ROOF LAYOUT
Drawing No: HOUSE 20
Sheet: 6 of 13
Rev: 2

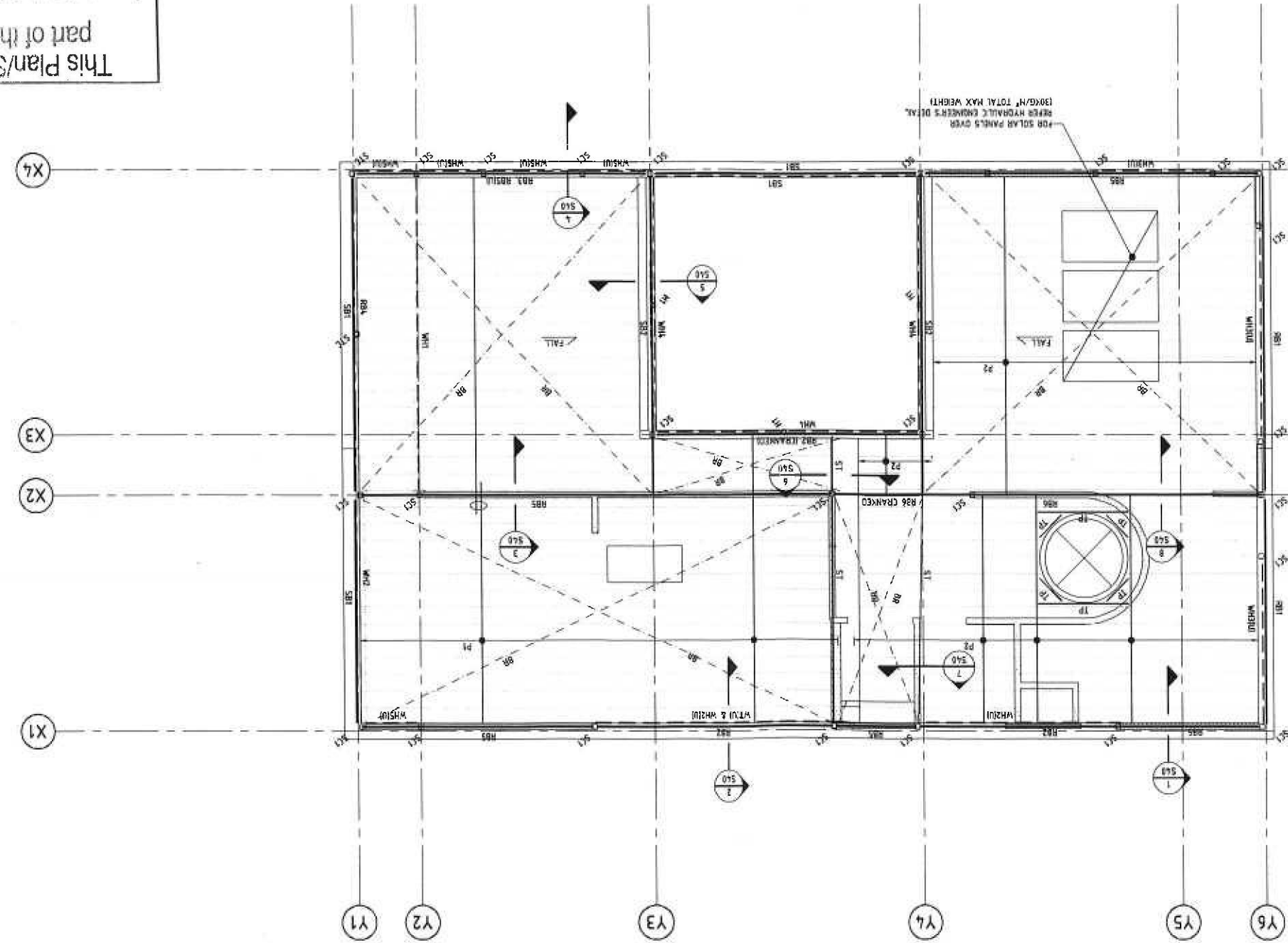
ROOF STEEL MEMBER SCHEDULE

STEEL COLUMNS	SC1	100 x 100 x 5.0 SHS
STEEL BEAMS	SB1	100x100x6.0 SHS
	SB2	150x100x6.0 RHS
ROOF BEAMS	RB1	150 PFC
	RB2	150 PFC
	RB3	150 PFC
	RB4	150x100x6.0 RHS
	RB5	100x100x6.0 CA BOLTED TO BRICKWORK AT 600 MAX CTS
	RB6	200UB22
STUB COLUMNS	STC	100x100x5.0 SHS
HANGER	HI	150x75x5.0 SHS

ROOF STEEL MEMBER SCHEDULE CONTD

STRUTS	ST	100x100x5.0 SHS
WINDOW HEADERS	WH1	150x100x6.0 RHS
	WH2	150x100x6.0 RHS
	WH3	100x100x6.0 SHS
	WH4	150 PFC
	WH5	100x100x5.0 SHS
ROOF BRACING	BR	#20 ROD - TURNBUCKLE HORIZONTAL BRACING
	BR1	HOOK BOLT TO ALTERNATE PURLINS
PURLINS	P1	S25015 AT 900 CTS LAP 900, 1 ROW OF
	P2	BRIDGING AT 900 CTS 1 ROW OF BRIDGING
	P3	AT MIDSPAN P-SPAN 2 SH
	P4	S25015 THINWALL PURLINS
WALL TOP	WT	150 x 75 PFC 275x150x5.0 SHS BOLT TO BRICKWORK AT 600 MAX CTS
	WT1	IF FOR EXPOSED WALL - 100 x 75 STAINLESS STEEL PL. GRADE 316

This Plan/Specification forms part of the certification for
J 100142B
21 JUN 2011



REINFORCEMENT QUALITY AND NOTATION

REINFORCEMENT NOTATION IS AS FOLLOWS:

NUMBER OF BARS IN GROUP, BAR GRADE, NOMINAL BAR SIZE IN MM, SPACING IN MM

E.G. 11 NO. 250, WHERE 116 DENOTES A DEFORMED RIBBED BAR, OF DIAMETER 250 MM, NORMAL DUCTILITY STEEL, WITH A NOMINAL 16mm NOTE: Y BARS MAY BE REPLACED WITH N BARS OF SAME SIZE, IF DEFORMED RIBBED BAR OF GRADE 500, NORMAL DUCTILITY STEEL

FOR EXAMPLE, 5/8" DENOTES A SQUARE MESH OF 5mm NOMINAL
DIMENSIONS (APPROXIMATELY RIBBED 5/8" AT 200mm CENTRES, OF GRADE
500MPa LOW DUCTILITY STEEL
NOTE: F MESH MAY BE REPLACED WITH RL OR SL MESH OF THE
SAME CONFIGURATION

MINIMUM COVER	SURFACES IN CONTACT WITH GROUND: * SLABS * FOOTINGS WITHOUT MEMBRANE WITH MEMBRANE
	SURFACES ABOVE GROUND - INTERIOR SURFACES ABOVE GROUND - EXPOSED
	50mm 30mm 20mm 45mm

MINIMUM COVER	SURFACES IN CONTACT WITH GROUND: * SLABS * FOOTINGS WITHOUT MEMBRANE WITH MEMBRANE
	SURFACES ABOVE GROUND - INTERIOR SURFACES ABOVE GROUND - EXPOSED
	50mm 30mm 20mm 45mm

THE MAIN BARS,
PIPS OR CONDUITS SHALL NOT BE PLACED WITHIN THE COVER TO
REINFORCEMENT.
COVER MAY NEED TO BE INCREASED TO SAT BARE RATING - SEE
DRAWINGS.
SUPPORT REINFORCEMENT ON WILD STEEL TIPPED CHAIRS.
PLASTIC CHAIRS OR CONCRETE CHAIRS AT NOT GREATER THAN 1
METER CENTERS BOTH WAYS.
IN EXPOSURE CONDITION 22 OR C (TO AS3600 USE ONLY PLASTIC
OR CONCRETE CHAIRS)
THE BARS AT ALTERNATE INTERSECTIONS.

NECESSARY IN TRUE PRODUCTION
BARS SHOWN ARE INDICATIVE ONLY AND LENGTHS MAY VARY
BEAM ELEVATIONS TAKEN PRECEDENCE OVER SECTIONS. SLAB PLANS
TAKE PRECEDENCE OVER SECTIONS. REFER TO SECTIONS FOR EXTRA
BARS THAT MAY BE REQUIRED.
REINFORCEMENT LAYERS
1. BOTTOM BOTTOM BARS LAY 1st 2nd 3rd 4th 5th 6th 7th 8th 9th 10th 11th 12th
12 DEMOTES TOP BARS LAY 1st
DISTRIBUTION REINFORCEMENT
USE 1/2" W/ 400. PLACES 400mm WHERE NECESSARY, AND LAP
400mm W/ MAIN BARS
REINFORCEMENT LAPPED SPACES
SPICES IN REINFORCEMENT SHALL BE MADE ONLY IN POSITIONS
APPROVED IN WRITING BY THE STRUCTURAL ENGINEER
LAPS SHALL BE IN ACCORDANCE WITH A543000 AND NOT LESS THAN
THE DEVELOPMENT LENGTH FOR EACH BAR.

LAP SPLICES IN SLAB AND BEAM REINFORCEMENT 5

Bar	Bar with bottom of beam	Bar with top of beam	Bar with bottom of beam
W10	300	400	500
W12	700		
W16			800

Length (ft) - see diagrams below

FULL STRENGTH LAPS FOR SLAB AND BEAM BARS

APPROVED IN WRITING BY THE STRUCTURAL ENGINEER

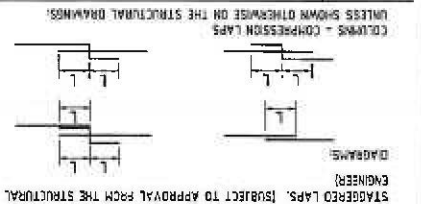
* UNLESS CALCULATED IN ACCORDANCE WITH A30800, OR

* UNLESS SHOWN OTHERWISE ON THE DRAWINGS, OR

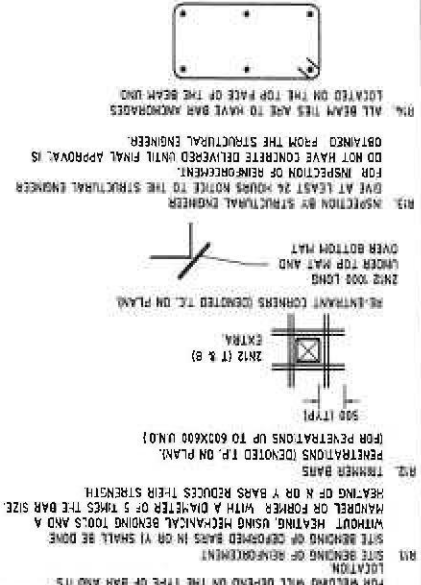
* WITH THE TABLE BELOW.

LAP SPLICES IN SLAB AND BEAM REINFORCEMENT SHALL COMPLY WITH THE FOLLOWING:

* UNLESS CALCULATED IN ACCORDANCE WITH A5500, AND APPROVED IN WRITING BY THE STRUCTURAL ENGINEER. FULL STRENGTH LAPPS FOR SLAB AND BEAM BARS	
Bar	Length (ftm) - see diagrams below
Dia	Bar with bend or lap Bar with hook or stirrups
N10	300
N12	400
N16	700
N20	1000
N24	1400
N28	1700



N28	1200
N24	1000
N20	800
N16	650
N12	500

[illegible]

SHIPMENT AND MAINTENANCE SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS EXCEPT WHEN VARYING BY THE CONTRACT DOCUMENTS.

	AS/NZS3679.1	Universal beams & columns, partial change charmes & large angles	AS/NZS3679.2	For mild plates, flats, floor plates	AS/NZS3679
Grade	Australian Standard	Type of steel			

[illegible]

WELDING
ALL WELDING SHALL COMPLY WITH ASME
WELDED JOINTS SHALL BE TO OTHER ASME, ASME, ASME
ASME AS APPROPRIATE
FILLER METAL SHALL BE 6061 T6 CONTINUOUS, CATEGORY OF USE
80% MAX ELONGATION OR EQUIVALENT, UNLESS NOTED OTHERWISE
BUT WELDS SHALL BE COMPLETE PENETRATION BUT WELDS
W/OUT WELDS AND NOT OTHERWISE SPECIFIED THEY ARE TO ACHIEVE
THE FULL STRENGTH OF THE MEMBER JOINED
WELD WELDING
THE EXTENT OF NON-DESTRUCTIVE WELD EXAMINATION SHALL BE AS

Type of weld and category	Examination Method	Extent (% of total length of weld type)
Flare bevel, G+SP	Visual inspection	100%
Butt welds, G	Visual inspection	100%
Butt welds, SP	Visual inspection	100%
	Radiographic or Ultrasonic inspection	10%

Column HD Bolt	Embedded in concrete	Log	Concrete edge distance minimum
M6 4.6/5	250	50	160
M10 4.6/5	300	75	200
M12 4.6/5	400	100	260

Column HD Bolt	Embedded in concrete	Log	Concrete edge distance minimum
M6 4.6/5	250	50	160
M10 4.6/5	300	75	200
M12 4.6/5	400	100	260

[illegible]

Connection		Bolt holes	Size of bolt	Bolt type	Washers - HD Galvalised to AS1216	Washers
S91 TYPICAL CONNECTIONS	Type	shall be round	Size of bolt	Bolt type	Washers - HD Galvalised to AS1216	Washers
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					6/8	6/8
					6/8	6/8
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6						

312 CONNECTIONS TO TOP OF CONCRETE WALL PANELS

[illegible]

Blank	Hole size	Washer - To completely cover slotted hole
Hex 3/8" x 5/8"	75 x 75 x 5mm plate washer	
5/32 SLOTTED HOLES FOR STEEL CONNECTIONS		
Type	Hole size	Washers
	Width	Length
Sheet slotted	2mm	Blank diameter
Washer	2mm	Washer width shall be 1/8" greater than blank diameter
Blank	2mm	Washer shall completely cover the blank slotted hole
		Provide washer under blank
		Blank and nut

ENCLAVING NOTES	CONNECTIONS	\$10.
CONNECTIONS SHALL BE SHOWN ON STRUCTURAL DRAWINGS AS TYPICAL. ONLY A DETAIL OF ONE SHALL BE PREPARED. DETAILS IN FAMILIAR/SHOPS OF DETAILS SHALL BE PREPARED. DETAILS IN ACCORDANCE WITH AASHTO AND THE AISC ARE REQUIRED. DESIGN OF STRUCTURAL CONNECTIONS AND STANDARDIZED STRUCTURAL CONNECTIONS. THESE DETAILS SHALL TAKE INTO ACCOUNT OF ARCHITECTURAL AND SERVICE REQUIREMENTS AND SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL. CONNECTIONS SHALL HAVE AT LEAST TWO BOLTS. THE ENGINEER WILL ADVISE DESIGN LOADS AS REQUIRED AND THE LIMITATIONS ARE ASSUMED. WITH THESE WORKS ARE TO BE ALLOWED FOR BY THE CONTRACTOR.	ALL PLATES AND STIFFENERS SHALL BE 3/8" THICK UNLESS NOTED OTHERWISE. * PURLIN DETAILS SHALL BE 3/8" THICK UNLESS NOTED OTHERWISE. * GIRT DETAILS SHALL BE 3/8" THICK UNLESS NOTED OTHERWISE.	\$11.
CO-ORDINATION	THE CONTRACTOR SHALL MAKE THE NECESSARY ALLOWANCES FOR	\$12.

ALL FLASHING AND WATERPROOFING ELEMENTS SHALL BE AS SPECIFIED IN ARCHITECTURAL DOCUMENTS.

534. DETAILLED ANCHORS
534.1 DETAILS
ANCHORS SHALL BE USED WHERE SHOWN ON THE
DRAWINGS, OR WHERE PERMITTED IN WRITING BY THE
ENGINEER, SUBJECT TO DETAILS OF PROPOSED ANCHORS, BEFORE
USE. IN WRITING, TO THE ENGINEER FOR REVIEW, INSTALL
ANCHORS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN
DIRECTIONS. TEST ANCHORS AS SPECIFIED IN 534.2
SPACING AND EOE DISTANCES SHALL BE AS SHOWN, OR, IN
ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS, AND
SHALL BE APPROPRIATE FOR THE LOAD ON THE ANCHOR.
WELDES SHALL BE PERMITTED OR ALLOWED BY THE
MANUFACTURER. THE FOLLOWING MINIMUMS SHALL BE USED
FOR AND CHEMICAL ANCHORS IN CONCRETE SPACING SHALL BE USED

524.1 DETAILS
DOTTED ANCHORS SHALL BE USED WHERE SHOWN ON THE
DRAWINGS, OR WHEN PERMITTED IN WRITING BY THE
ENGINEER, SUBMIT DETAILS OF PROPOSED ANCHORS BEFORE
IN WRITING TO THE ENGINEER FOR REVIEW. INSTALL
ANCHORS IN ACCORDANCE WITH THE FOLLOWING DIRECTIONS.
524.2 SPACING AND EOE DISTANCES SHALL BE AS SHOWN, OR IN
ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS, AND
UNLESS SHOWN OTHERWISE, OR ALLOWED BY THE MANUFACTURER
FOR ANCHORS THE FOLLOWING MINIMUMS SHALL BE USED
FOR DISTANCES.
524.3 FOR ATTACHMENT TO FLOWLINE MASONRY OR CONCRETE PAVING
USE MINIMUM EOE ON FLOWLINE

MATERIAL AND CONSTRUCTION

1. ALL TREES DESIGN, MATERIAL AND CONSTRUCTION TO COMPLY WITH ASTM202 AND ASTM202.

2. TREES FRAMING SHALL COMPLY WITH ASTM2.

3. SPOILFORD TO BE MINIMUM STRESS GRADE F7, UNLESS GRADE F8, UNLESS NOTED OTHERWISE. HARDWOOD TO BE MINIMUM GRADE F8.

4. TREES SHALL BE BRANDED IDENTIFIABLE AS TO STRESS GRADE OF TREES. MEMBERS ALL

5. EXTERNAL TREES SHALL BE EITHER HARDWOOD DURABILITY CLASS 1, OR CLASS 2 TO ASTM202 OR IMPROVED PINE GRADE F7, PRESERVE TREATED TO ASTM202 AND RE-GRADED PRIOR TO USE. SOILS/STAIN SHALL BE APPLIED TO ALL SURFACES. SUPPLY SUPPORTIVE DOCUMENTATION REGARDING PRESERVATION TREATMENT.

TERIALS PUT JOINTS IN THE PLAS

PO3. USE FLEXIBLE PLASTERBOARD ADHESIVE OR USE FININGS AS NECESSARY.

7. THESE SLABS HAVE BEEN DESIGNED IN ACCORDANCE WITH A5281

563 REMOVE ALL TOPSOIL, VEGETATIVE MATTERS AND OBJECTS IDENTIFY
APPROVED NON-DISPOSABLE FILL IN ACCORDANCE WITH ASBESTO
SG4. REMOVE PROTECTION SHALL BE INSTALLED IN ACCORDANCE WITH
LOCAL AUTHORITY REQUIREMENTS.
565 THE BUILDER SHALL COMPLETELY SEAL, BY GROUTING, ANY CRACKS
THAT MAY DEVELOP IN THE SLAB GREATER THAN 0.004 IN.
566 IN WHICH BROKE APPLIES AND PATCHES.
567 BOTTLE FLOOR COVERINGS, COMPLY WITH CLAUSE 5.37 OF ASBESTO
IN AREAS WHERE BOTTLE FLOOR COVERINGS ARE TO BE USED.

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1001428 21 JUN 2011



HughesTrueman
Consulting Engineers & Architects

ST. PATRICKS ESTA
PRECINCT 1 STAGE 4
LEND LEASE
TONY CARO ARCHITECTS

ST. PATRICKS ESTATE MANLY
PRECINCT 1 STAGE 4

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Rev	Issue	Date	Drawn by	Checked by	Designed by	Verified by	Authorised by
1	CONSTRUCTION ISSUE	18.03.11	AJ	QA	QA	QA	QA
2	CONSTRUCTION ISSUE	01.07.11	AJ	QA	QA	QA	QA
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8	CONSTRUCTION ISSUE	01.07.11	AJ	QA	QA	QA	QA
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