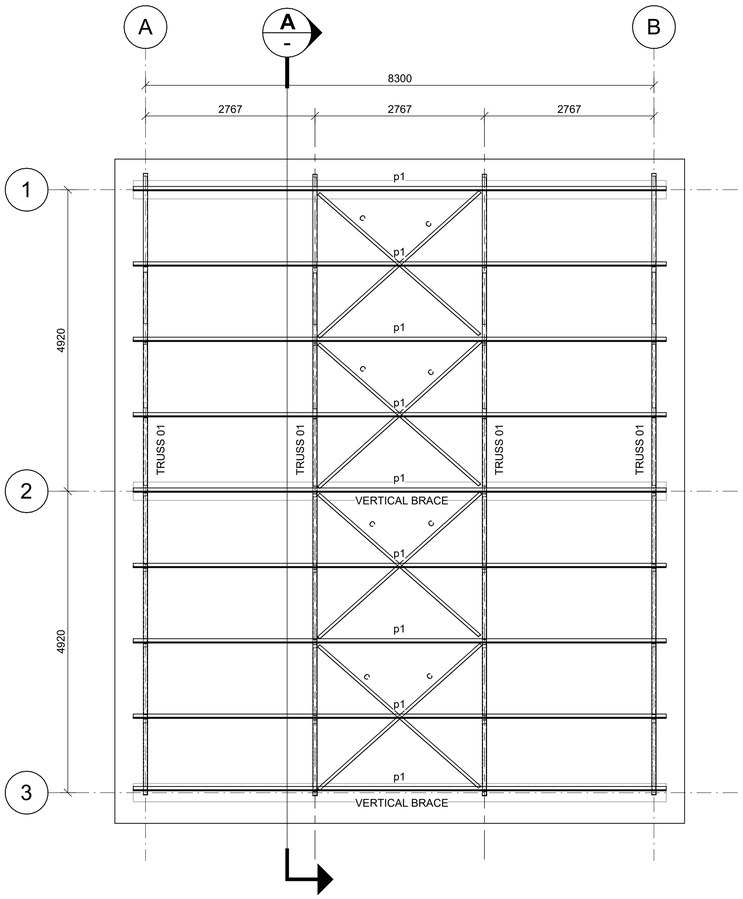
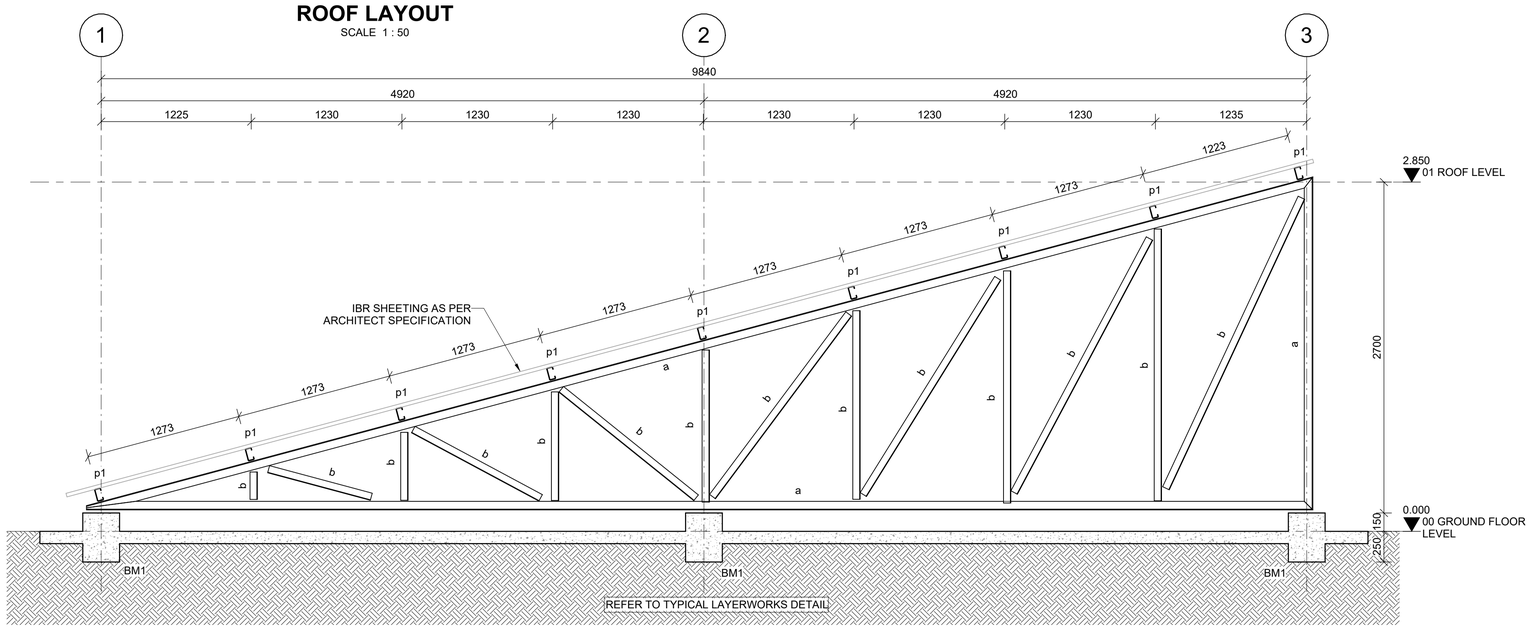


ROOF LAYOUT

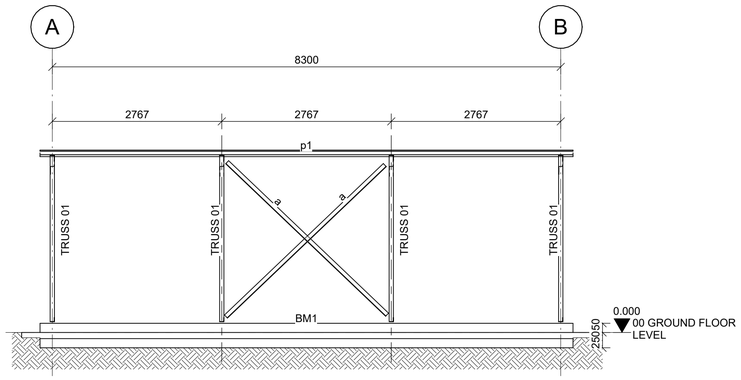
SCALE 1 : 50



TRUSS 01
NO. OFF: 4

SECTION A-A

SCALE 1 : 25

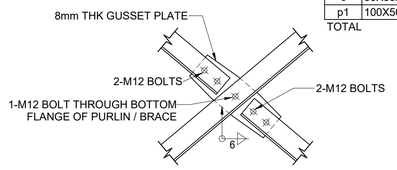


TYPICAL VERTICAL BRACE

SCALE 1:50

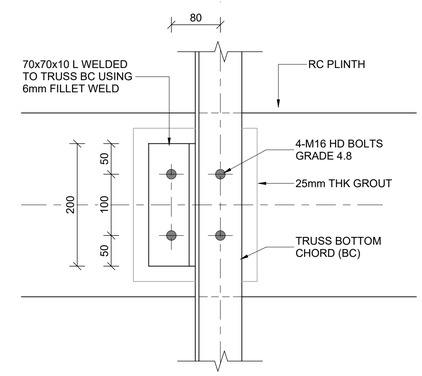
STEEL FRAMING

TYPE	DESCRIPTION	MASS (t)
a	70X70X6L	0.67
b	60X60X4L	0.31
c	50X50X4L	0.09
p1	100X50X20X2.5LC	0.34
TOTAL		1.41



TYPICAL BRACING CONNECTION - ANGLE IRON

SCALE 1 : 10



TYPICAL TRUSS TO CONCRETE CONNECTION

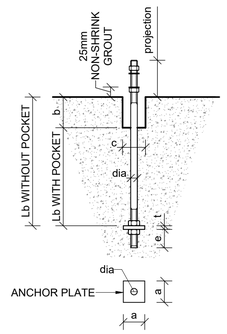
SCALE 1 : 5

NOTE:

TOTAL BOLT LENGTH = e + t + lb + b + projection

PROJECTION LENGTH = 150mm

ALL HD-BOLTS TO BE HOT DIP GALVANISED



HOLDING DOWN BOLTS WITH ANCHOR PLATES SCHEDULE

BOLT DIAMETER ON THREAD	GRADE 4.8 BOLTS. fu= 400 MPa					POCKET		THREAD	
	BOLT		ANCHOR PLATE						
	TENSILE STRENGTH Tr	BOND LENGTH lb	SIZE a	THICKNESS t	EXTEND e	DEPTH b	DIA c	TOP	BOT
(mm)	(kN)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
16	40	180	60	10	30	100	75	160	70
20	60	230	70	12	40	150	75	170	90
24	90	275	85	12	50	200	75	185	110
30	142	355	110	14	50	250	100	200	115

NOTE:
VALUES OF THIS TABLE ARE BASED ON GRADE 4.8 BOLTS. IF THESE ARE NOT COMMERCIALLY AVAILABLE THE CONTRACTOR MUST USE MILD STEEL REINFORCING (R) BARS. WITH AN ULTIMATE TENSILE STRENGTH OF 400MPa. DIAMETERS IN THE TABLE ARE TO BE USED TO DETERMINE THE EQUIVALENT BOLT DIAMETER ON THE TREAD.

HOLDING DOWN BOLT DETAIL GRADE 4.8

SCALE 1 : 10

GENERAL NOTES

STEEL NOTES:

GRADE/STRENGTH:
- ALL STRUCTURAL STEEL GRADE TO BE AS FOLLOWS:
  HOT-ROLLED SECTIONS AND PLATES - S355JR (GRADE 350WA)
  COLD-FORMED OPEN SECTIONS - 300WA
  COLD FORMED PURLINS: COMMERCIAL GRADE (fy ≥ 200MPa)
  BASE PLATES NOT EXCEEDING 40mm IN THICKNESS - 300 MPa YIELD STRESS
  ANGLES - S355JR (GRADE 350WA)
- COMMERCIAL GRADE STEEL SHALL BE USED.

WELDED CONNECTIONS:
- ALL WELDS TO BE 6mm CONTINUOUS FILLET WELDS UNLESS OTHERWISE INDICATED.
- WELDING SHALL HAVE A MINIMUM YIELD STRESS OF 460 MPa AND WELDING ELECTRODES SHALL BE E70XX UNLESS OTHERWISE INDICATED.
- ALL SLAG SHALL BE REMOVED FROM WELDED JOINTS TO EXPOSE THE STEELWORK.

SHOP DRAWINGS:
- ALL DIMENSIONS SHALL BE CHECKED ON SITE BEFORE PREPARATION OF SHOP DRAWINGS COMMENCE AND ANY DISCREPANCIES SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY.
- ONLY SIZES OF STRUCTURAL MEMBERS, CONNECTIONS AND SPLICES WILL BE CHECKED. DIMENSIONAL ACCURACY AND THE CORRECT FITTING OF MEMBERS SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

FINISHES:
- ALL STRUCTURAL STEEL (INCLUDING BOLTS; WASHERS; NUTS; HOLDING DOWN BOLTS WITH ANCHOR PLATES; ALL PLATES; COLUMNS AND BEAMS) SHALL BE HOT-DIPPED GALVANIZED.

DO NOT SCALE DRAWING

REFERENCE DRAWINGS

NUMBER	DRAWING DESCRIPTION

DATE	INITIAL	REV	REVISION DESCRIPTION
'26-02-12		AA	ISSUED FOR TENDER

OFFICES

MEBAN GROUP (Pty) Ltd

CLIENT

higher education & training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA

IKHALA
TECHNICAL AND VOCATIONAL EDUCATION & TRAINING COLLEGE

PROJECT

IKHALA TVET SOLAR FARM TRAINING FACILITY

DRAWING TITLE

IBR ROOF SHEETING STRUCTURE - STEEL LAYOUT AND SECTIONS

SCALE	As indicated	DRAWN	BH
DESIGNED	BH	CHECKED	NM
PLAN NUMBER		REV. NO.	SHEET SIZE
0106-ST-01-02		AA	A1