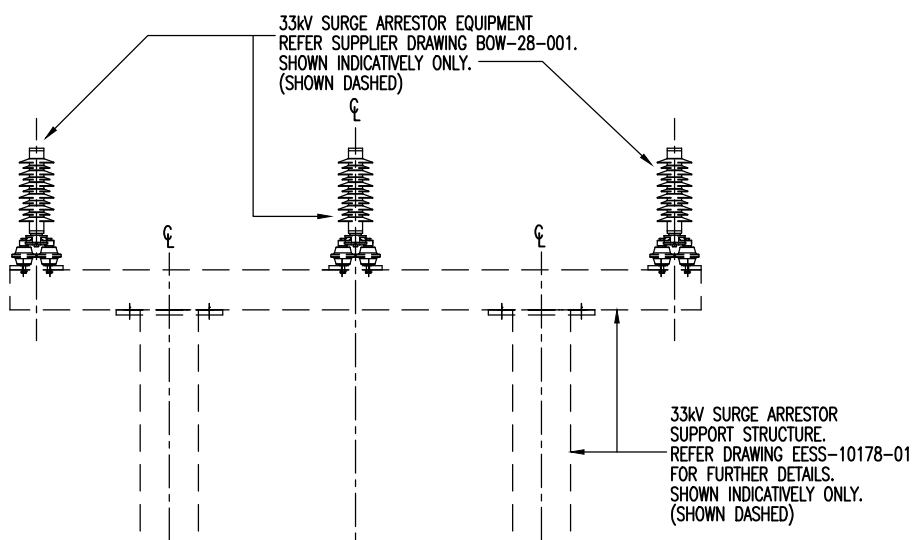


**FOOTING.**  
**PLAN VIEW.** SCALE 1:20



**CONSTRUCTION NOTES.**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SPECIFIC SUBSTATION SITE GENERAL ARRANGEMENT DRAWING.
2. READ DRAWING IN CONJUNCTION WITH SPECIFIC CIVIL WORKS SPECIFICATION, STANDARD SPECIFICATION FOR CONCRETE AND STANDARD SPECIFICATION FOR EXCAVATION.
3. FOOTINGS TO BE FOUND IN SOUND MATERIAL WITH MINIMUM SAFE BEARING CAPACITY = 100kPa

**CONDUITS.** (IF REQUIRED)

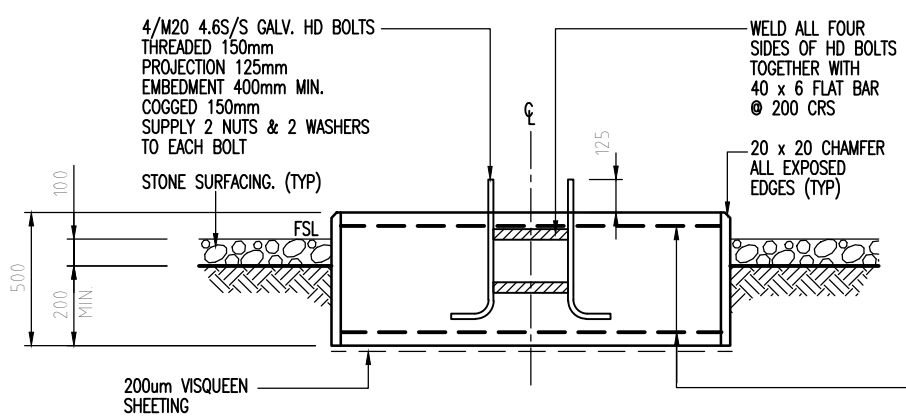
1. ALL CONDUITS TO BE (CLASS H.D.) ORANGE PVC ELECTRICAL IN ACCORDANCE WITH AS2053.
2. UNLESS OTHERWISE SPECIFIED ALL CONDUITS TO BE FITTED WITH ONE (1) 8mm DIAMETER SYNTHETIC DRAW ROPE.
3. ALL CONDUITS TO BE SEALED/FITTED WITH CAPS BEFORE CONCRETE POUR.
4. ALL CONDUITS TO HAVE 50mm MIN. PROJECTION ABOVE FSL OF CONCRETE.
5. ALL RADIUS BENDS CENTRELINE RADIUS TO BE 500mm MIN.
6. CONDUIT TO BE LOCATED AS DETERMINED ON FOOTING LAYOUT DRAWING
7. CONDUITS MAY BE INSTALLED ON OPPOSITE SIDE OF FOOTING IF SITE LAYOUT REQUIRES IT.

**CONCRETE.**

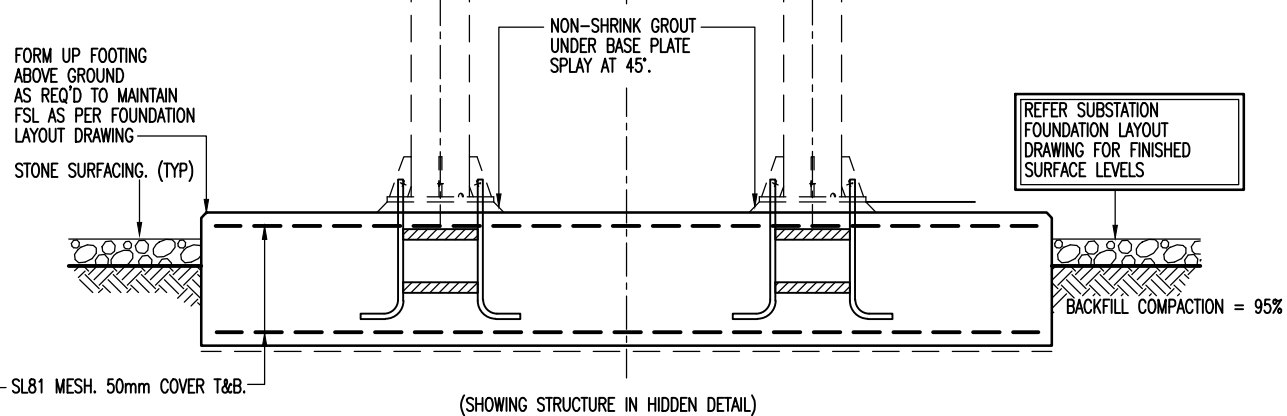
1. SUPPLY & LAY CONCRETE IN ACCORDANCE WITH AS 3600.
2. SUPPLY & LAY VAPOUR BARRIER IN ACCORDANCE WITH AS 2870 TO CONTINUOUSLY UNDERLAY THE FOOTING.
3. FOOTINGS TO BE CAST WITHOUT CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
4. CONCRETE STRENGTH TO N32 MIN.
5. CHAMFER ALL EXPOSED EDGES 20 x 20mm.
6. CONCRETE FORMWORK IN ACCORDANCE WITH AS 3610, EXPOSED CONCRETE SURFACES TO BE CLASS 3, TRUE & FREE OF BLEMISHES & IMPERFECTIONS.
7. EXPOSED CONCRETE SURFACES TO BE CURED IN ACCORDANCE WITH AS 3600.
8. SUPPLY & LAY REINFORCEMENT IN ACCORDANCE WITH AS 3600.
9. MAINTAIN 50mm CONCRETE COVER TO REINFORCEMENT.
10. MAINTAIN 50mm CONCRETE COVER TO REINFORCEMENT AT PROJECTION OF CONDUIT ABOVE FSL OF CONCRETE.
11. MESH SUPPORTED BY 12mm 'Z' OR 'C' SHAPED LIGS/CHAIRS.
12. PROVIDE LIGHT BROOM FINISH TO FOOTINGS.

**H.D BOLTS.**

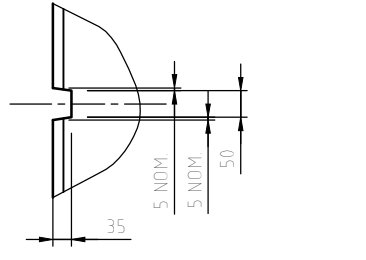
1. HOT DIP GALVANISE ALL BOLTS TO AS 1214 AND BOLT CAGES TO AS 4680. ASSEMBLE AFTER GALVANISING.
2. BOLT PROJECTION ABOVE FSL OF CONCRETE TO BE 125mm.
3. BOLT THREADS TO BE COVERED WITH AN APPROVED TAPE BEFORE PLACEMENT OF CONCRETE. TAPE TO BE REMOVED & NUTS FITTED AFTER CURING.



**SECTION A**  
SCALE: 1:20



**SECTION B**  
SCALE: 1:20



**PLAN VIEW.**  
**DETAIL '1'.** SCALE 1:10  
**NOTE:**  
EARTHING RECESS FULL HEIGHT OF FOOTING.

<b>DESIGN WIND LOADS</b>	
IN ACCORDANCE WITH: AS1170 & BCA	
CYCLONIC REGION: REGION C	
TERRAIN CATEGORY: CATEGORY 2	
SHIELDING MULTIPLIER: Ms 1.0	
TOPOGRAPHICAL MULTIPLIER: Mt 1.0	
IMPORTANCE LEVEL: LEVEL 4	

THIS DRAWING HAS BEEN DESIGNED FOR 'TYCO' EQUIPMENT & FOR 'S & M' SITE CLASSIFICATIONS IN ACCORDANCE WITH AS2870.

ORIGINAL ISSUE  
DRN: RLAWRENCE  
DATE: FEB 2012  
0A

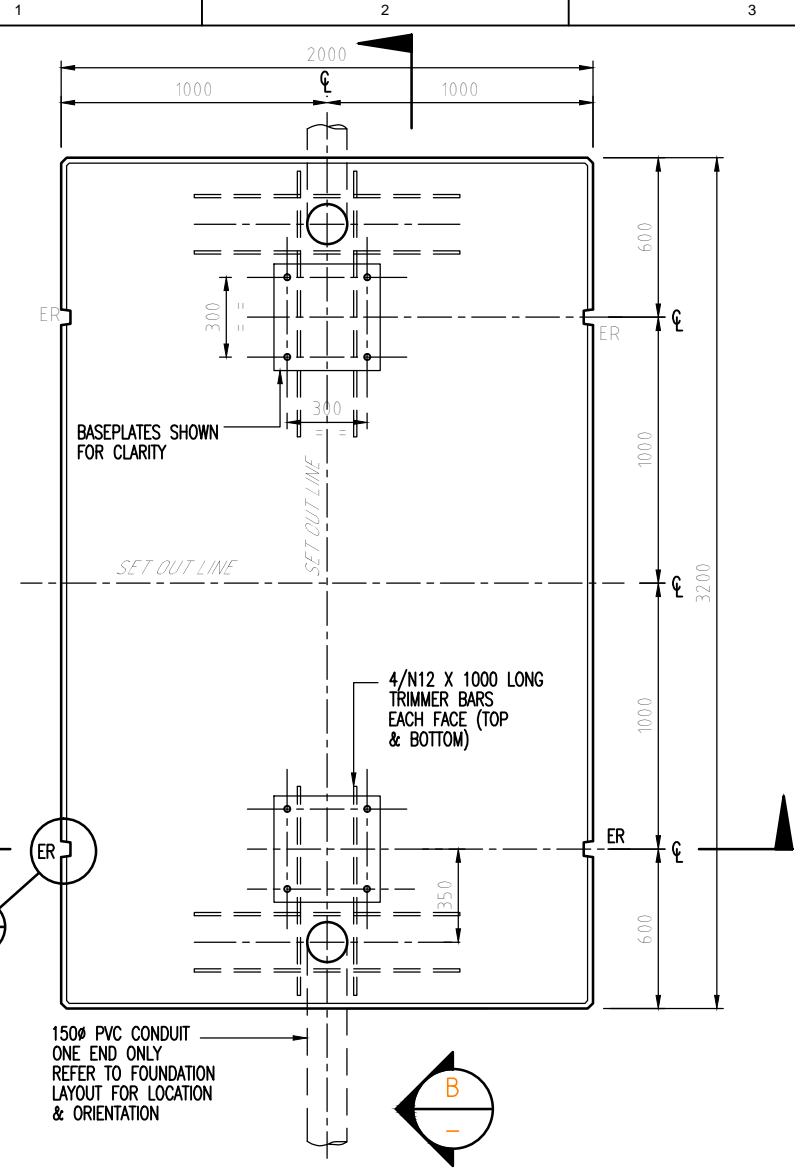
REFERENCE DRAWINGS		REVISION CONTROL	
EES-10178-01 - 33kV SURGE ARRESTOR SUPPORT STRUCTURE.	Drawn R. LAWRENCE	Date 16/01/2012	
BOW-28-001 - 33kV SURGE ARRESTOR EQUIPMENT.	Checked G LAWSON	Date 26/07/2012	
	Approved K ELKINS	Date 27/07/2012	
	Bus. Req. Approved	Date	

**ERGO ENERGY CORPORATION LTD** AIN 50 087 048 082

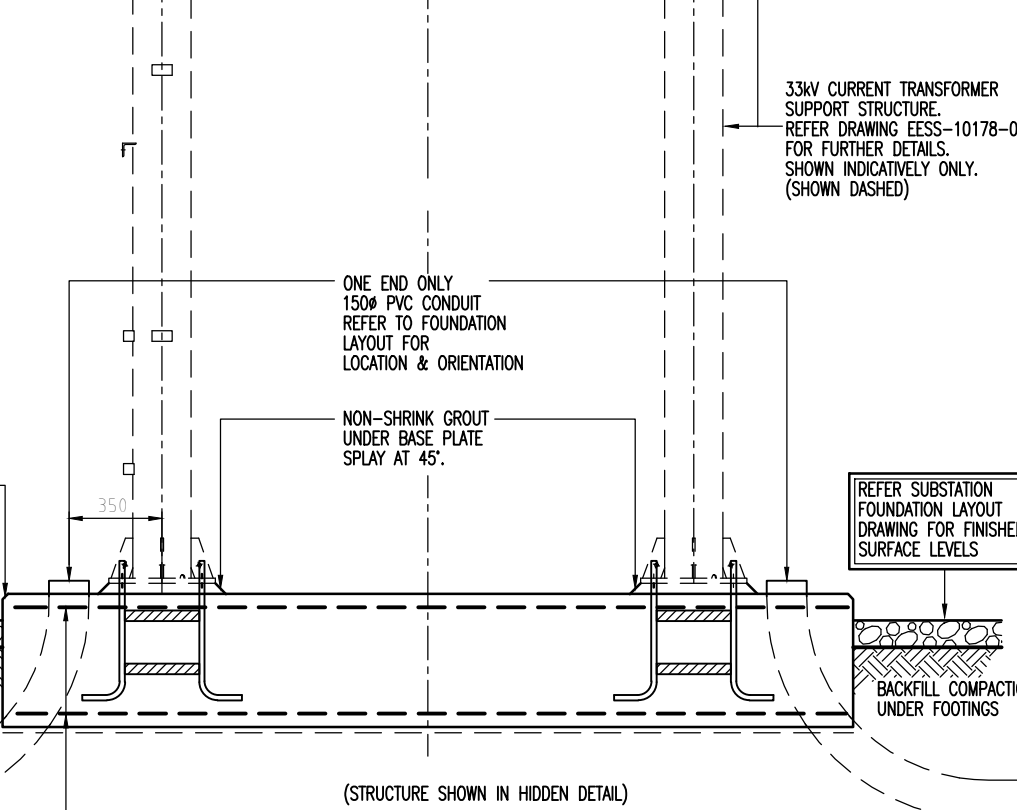
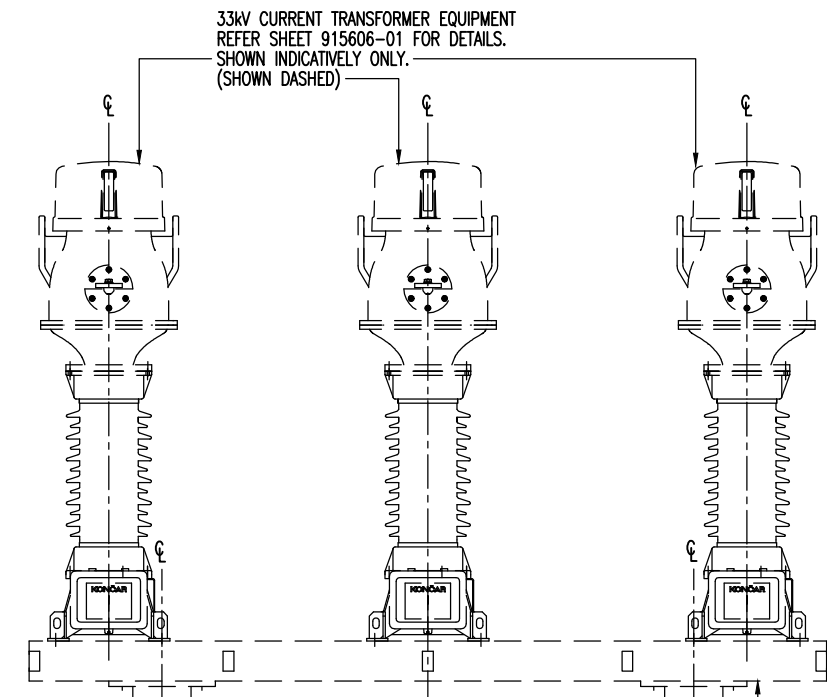
**ERGO ENERGY SUBSTATION STANDARD CIVIL WORKS - FOOTINGS**

**33kV SURGE ARRESTOR SUPPORT PLANS, SECTIONS AND DETAILS**

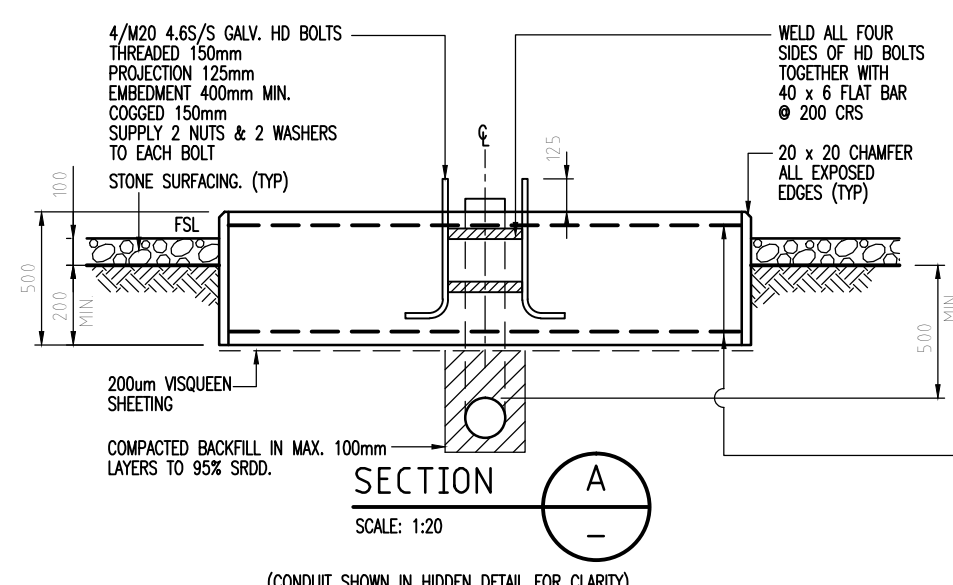
Drawing Status	F - AS BUILT
Project Number	
Contract / Quote No.	
<b>EES-10177-01</b>	Revision 0A
Scale AS SHOWN	Next Sheet



**FOOTING.**  
**PLAN VIEW.** SCALE 1:20



**SECTION B**  
SCALE: 1:20



**SECTION A**  
SCALE: 1:20

(CONDUIT SHOWN IN HIDDEN DETAIL FOR CLARITY)

**CONSTRUCTION NOTES.**

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SPECIFIC SUBSTATION SITE GENERAL ARRANGEMENT DRAWING.
2. READ DRAWING IN CONJUNCTION WITH SPECIFIC CIVIL WORKS SPECIFICATION, STANDARD SPECIFICATION FOR CONCRETE AND STANDARD SPECIFICATION FOR EXCAVATION.
3. FOOTINGS TO BE FOUND IN SOUND MATERIAL WITH MINIMUM SAFE BEARING CAPACITY = 100kPa

**CONDUITS.** (IF REQUIRED)

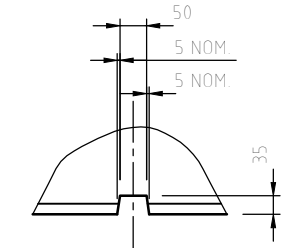
1. ALL CONDUITS TO BE (CLASS H.D.) ORANGE PVC ELECTRICAL IN ACCORDANCE WITH AS2053.
2. UNLESS OTHERWISE SPECIFIED ALL CONDUITS TO BE FITTED WITH ONE (1) 8mm DIAMETER SYNTHETIC DRAW ROPE.
3. ALL CONDUITS TO BE SEALED/FITTED WITH CAPS BEFORE CONCRETE POUR.
4. ALL CONDUITS TO HAVE 50mm MIN. PROJECTION ABOVE FSL OF CONCRETE.
5. ALL RADIUS BENDS CENTRELINE RADIUS TO BE 500mm MIN.
6. CONDUIT TO BE LOCATED AS DETERMINED ON FOOTING LAYOUT DRAWING
7. CONDUITS MAY BE INSTALLED ON OPPOSITE SIDE OF FOOTING IF SITE LAYOUT REQUIRES IT.

**CONCRETE.**

1. SUPPLY & LAY CONCRETE IN ACCORDANCE WITH AS 3600.
2. SUPPLY & LAY VAPOUR BARRIER IN ACCORDANCE WITH AS 2870 TO CONTINUOUSLY UNDERLAY THE FOOTING.
3. FOOTINGS TO BE CAST WITHOUT CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
4. CONCRETE STRENGTH TO N32 MIN.
5. CHAMFER ALL EXPOSED EDGES 20 x 20mm.
6. CONCRETE FORMWORK IN ACCORDANCE WITH AS 3610, EXPOSED CONCRETE SURFACES TO BE CLASS 3, TRUE & FREE OF BLEMISHES & IMPERFECTIONS.
7. EXPOSED CONCRETE SURFACES TO BE CURED IN ACCORDANCE WITH AS 3600.
8. SUPPLY & LAY REINFORCEMENT IN ACCORDANCE WITH AS 3600.
9. MAINTAIN 50mm CONCRETE COVER TO REINFORCEMENT.
10. MAINTAIN 50mm CONCRETE COVER TO REINFORCEMENT AT PROJECTION OF CONDUIT ABOVE FSL OF CONCRETE.
11. MESH SUPPORTED BY 12mm 'z' OR 'c' SHAPED LIGS/CHAIRS.
12. PROVIDE LIGHT BROOM FINISH TO FOOTINGS.

**H.D BOLTS.**

1. HOT DIP GALVANISE ALL BOLTS TO AS 1214 AND BOLT CAGES TO AS 4680. ASSEMBLE AFTER GALVANISING.
2. BOLT PROJECTION ABOVE FSL OF CONCRETE TO BE 125mm.
3. BOLT THREADS TO BE COVERED WITH AN APPROVED TAPE BEFORE PLACEMENT OF CONCRETE. TAPE TO BE REMOVED & NUTS FITTED AFTER CURING.



**PLAN VIEW.**  
**DETAIL '1'.** SCALE 1:10

**NOTE:**  
EARTHING RECESS FULL HEIGHT OF FOOTING.

DESIGN WIND LOADS	
IN ACCORDANCE WITH:	AS1170 & BCA
TERRAIN CATEGORY:	REGION C
SHIELDING MULTIPLIER:	2
TOPOGRAPHICAL MULTIPLIER:	Ms 1.0
IMPORTANCE LEVEL:	Mt 1.0 LEVEL 4

THIS DRAWING HAS BEEN DESIGNED FOR 'KONCAR' EQUIPMENT & FOR S & M SITE CLASSIFICATIONS IN ACCORDANCE WITH AS2870.

ORIGINAL ISSUE  
DRN: R.LAWRENCE  
DATE: FEB 2012  
0A

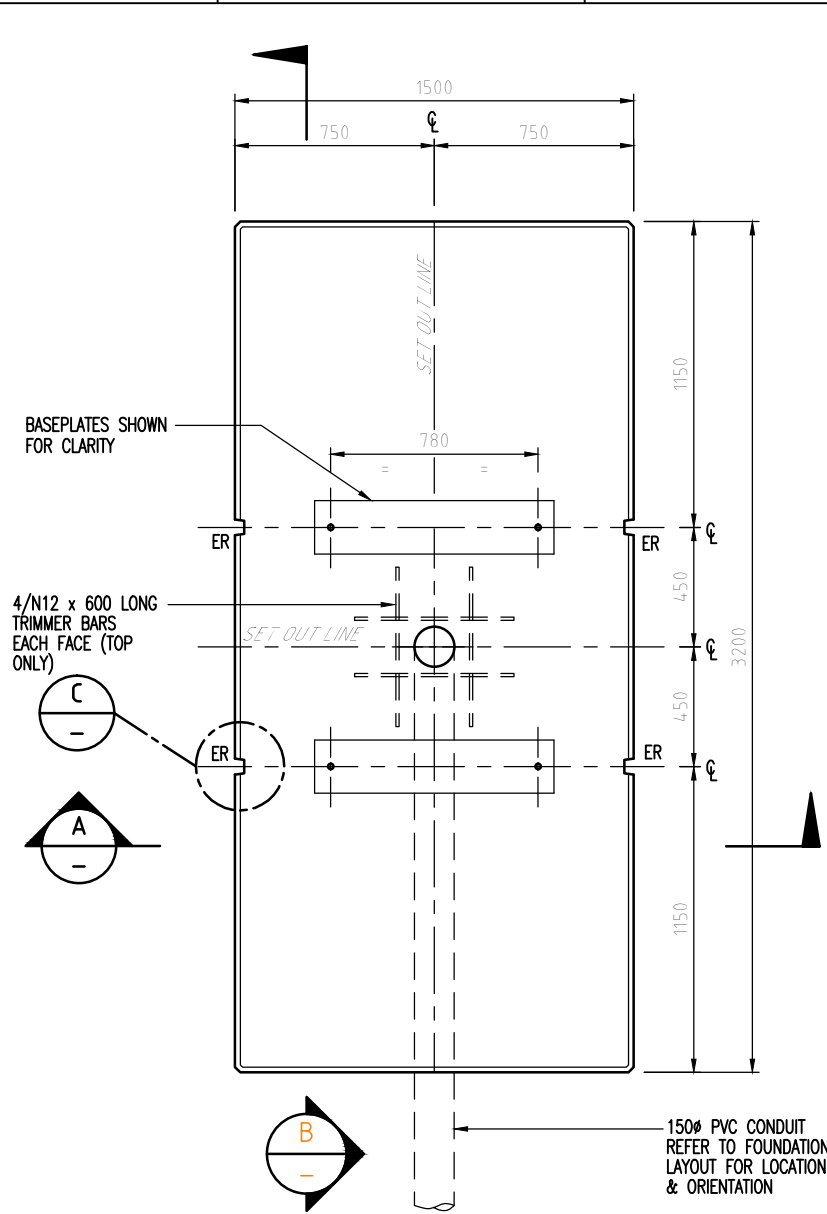
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EES-10178-02	- 33kV CURRENT TRANSFORMER SUPPORT STEELWORK.	Drawn	R. LAWRENCE 18/07/2012
915606-01	- 33kV CURRENT TRANSFORMER EQUIPMENT.	Checked	G LAWSON 26/07/2012
		Approved	K ELKINS 27/07/2012
		Bus. Req. Approved	

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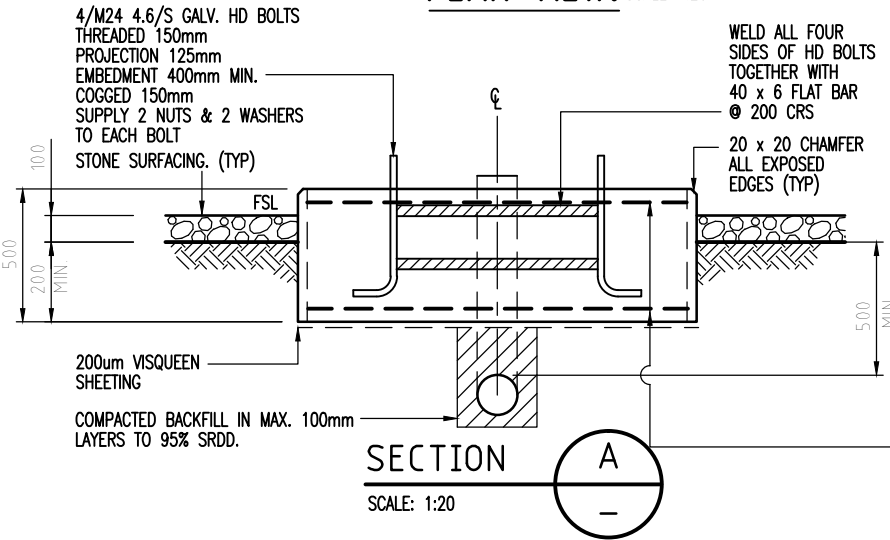
**ERGON ENERGY SUBSTATION STANDARD CIVIL WORKS - FOOTINGS**

**33kV CURRENT TRANSFORMER SUPPORT PLANS, SECTIONS AND DETAILS**

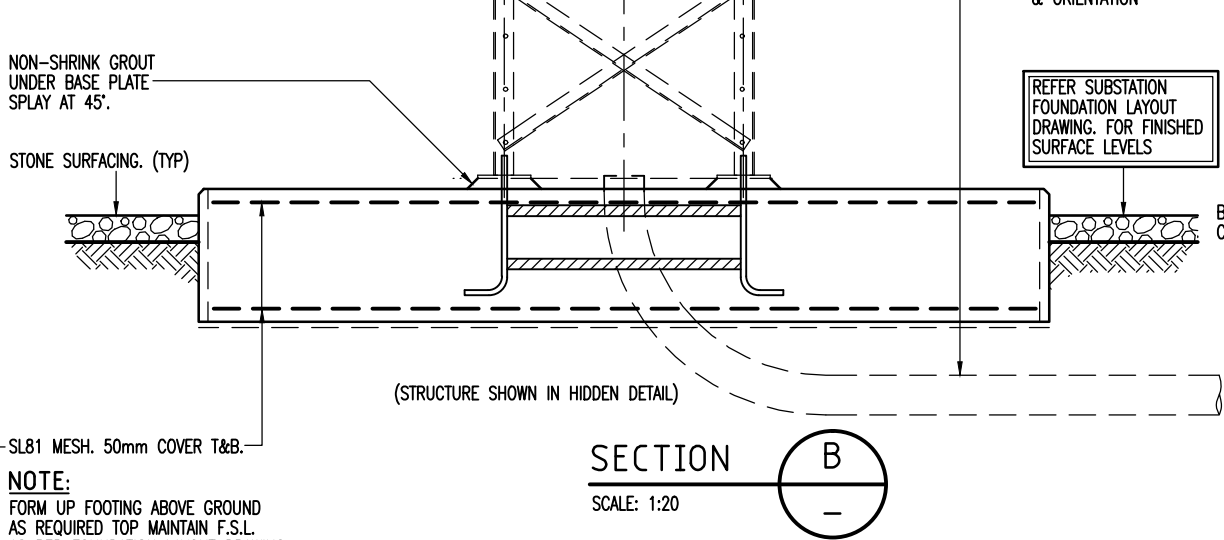
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Contract / Quote No.	
<b>EES-10177-02</b>	Revision 0A
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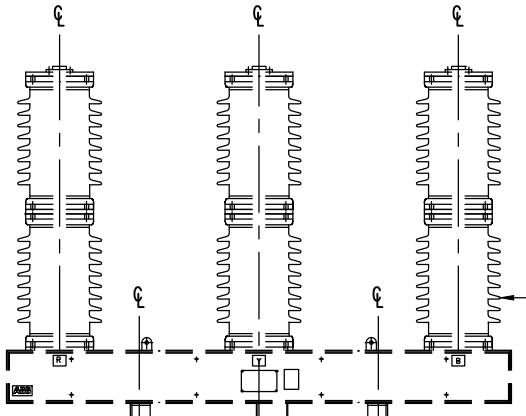
**FOOTING.  
PLAN VIEW.** SCALE 1:20



**SECTION A**  
SCALE: 1:20

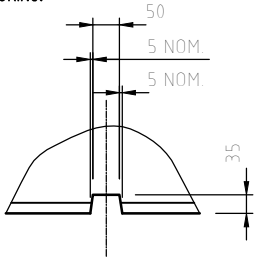


**SECTION B**  
SCALE: 1:20



NOTE:  
REFER DRAWING NO: 1021013-01  
FOR 33kV CIRCUIT BREAKER  
STRUCTURE AND EQUIPMENT  
DETAILS.  
(SHOWN DASHED)

150# PVC CONDUIT  
REFER TO FOUNDATION  
LAYOUT FOR LOCATION  
& ORIENTATION



**PLAN VIEW.  
DETAIL '1'.** SCALE 1:10  
NOTE:  
EARTHING RECESS FULL HEIGHT OF FOOTING.

**CONSTRUCTION NOTES.**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SPECIFIC SUBSTATION SITE GENERAL ARRANGEMENT DRAWING.
- READ DRAWING IN CONJUNCTION WITH SPECIFIC CIVIL WORKS SPECIFICATION, STANDARD SPECIFICATION FOR CONCRETE AND STANDARD SPECIFICATION FOR EXCAVATION.
- FOOTINGS TO BE FOUND IN SOUND MATERIAL WITH MINIMUM SAFE BEARING CAPACITY = 100kPa

**CONDUITS. (IF REQUIRED)**

- ALL CONDUITS TO BE (CLASS H.D.) ORANGE PVC ELECTRICAL IN ACCORDANCE WITH AS2053.
- UNLESS OTHERWISE SPECIFIED ALL CONDUITS TO BE FITTED WITH ONE (1) 8mm DIAMETER SYNTHETIC DRAW ROPE.
- ALL CONDUITS TO BE SEALED/FITTED WITH CAPS BEFORE CONCRETE POUR.
- ALL CONDUITS TO HAVE 50mm MIN. PROJECTION ABOVE FSL OF CONCRETE.
- ALL RADIUS BENDS CENTRELINE RADIUS TO BE 500mm MIN.
- CONDUIT TO BE LOCATED AS DETERMINED ON FOOTING LAYOUT DRAWING
- CONDUITS MAY BE INSTALLED ON OPPOSITE SIDE OF FOOTING IF SITE LAYOUT REQUIRES IT.

**CONCRETE.**

- SUPPLY & LAY CONCRETE IN ACCORDANCE WITH AS 3600.
- SUPPLY & LAY VAPOUR BARRIER IN ACCORDANCE WITH AS 2870 TO CONTINUOUSLY UNDERLAY THE FOOTING.
- FOOTINGS TO BE CAST WITHOUT CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
- CONCRETE STRENGTH TO N32 MIN.
- CHAMFER ALL EXPOSED EDGES 20 x 20mm.
- CONCRETE FORMWORK IN ACCORDANCE WITH AS 3610, EXPOSED CONCRETE SURFACES TO BE CLASS 3, TRUE & FREE OF BLEMISHES & IMPERFECTIONS.
- EXPOSED CONCRETE SURFACES TO BE CURED IN ACCORDANCE WITH AS 3600.
- SUPPLY & LAY REINFORCEMENT IN ACCORDANCE WITH AS 3600.
- MAINTAIN 50mm CONCRETE COVER TO REINFORCEMENT.
- MAINTAIN 50mm CONCRETE COVER TO REINFORCEMENT AT PROJECTION OF CONDUIT ABOVE FSL OF CONCRETE.
- MESH SUPPORTED BY 12mm 'Z' OR 'C' SHAPED LIGS/CHAIRS.
- PROVIDE LIGHT BROOM FINISH TO FOOTINGS.

**H.D BOLTS.**

- HOT DIP GALVANISE ALL BOLTS TO AS 1214 AND BOLT CAGES TO AS 4680. ASSEMBLE AFTER GALVANISING.
- BOLT PROJECTION ABOVE FSL OF CONCRETE TO BE 125mm.
- BOLT THREADS TO BE COVERED WITH AN APPROVED TAPE BEFORE PLACEMENT OF CONCRETE. TAPE TO BE REMOVED & NUTS FITTED AFTER CURING.

**DESIGN WIND LOADS**

IN ACCORDANCE WITH: AS1170 & BCA  
CYCLONIC REGION: REGION C  
TERRAIN CATEGORY: CATEGORY 2  
SHIELDING MULTIPLIER: Ms 1.0  
TOPOGRAPHICAL MULTIPLIER: Mt 1.0  
IMPORTANCE LEVEL: LEVEL 4

THIS DRAWING HAS BEEN DESIGNED FOR 'ABB' EQUIPMENT/SUPPORT FRAMES & FOR S & M SITE CLASSIFICATIONS IN ACCORDANCE WITH AS2870.

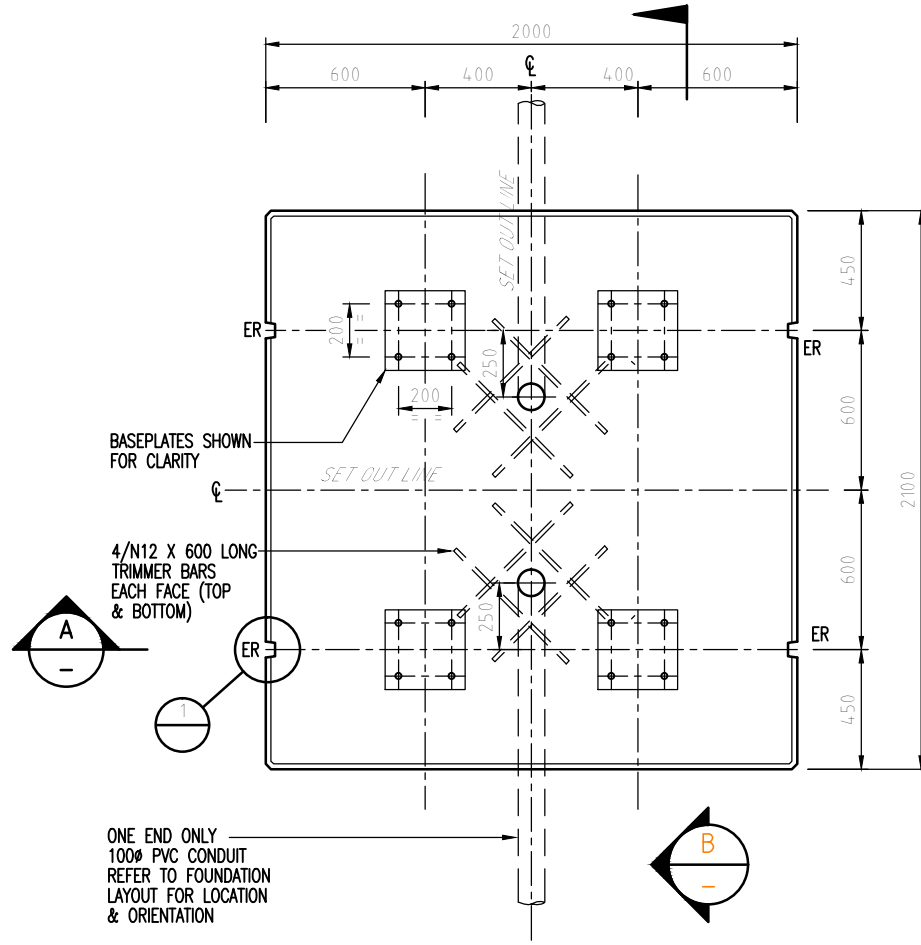
ORIGINAL ISSUE  
DRN: RLAWRENCE  
DATE: FEB 2012  
0A

REFERENCE DRAWINGS		REVISION CONTROL	
1021013-01 - ABB VBF CIRCUIT BREAKER.		Drawn R. LAWRENCE Date 18/07/2012	Checked G. LAWSON Date 26/07/2012
		Approved K. ELKINS Date 27/07/2012	Bus. Req. Approved Date

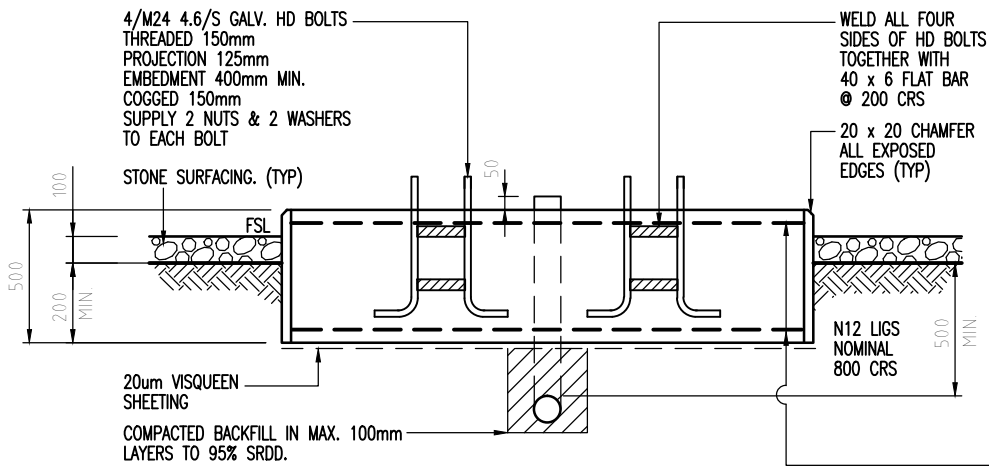
**ERSON ENERGY CORPORATION LTD**  
ABN 50 087 046 062

**ERSON ENERGY SUBSTATION STANDARD  
CIVIL WORKS - FOOTINGS  
33kV CIRCUIT BREAKER SUPPORT  
PLANS, SECTIONS AND DETAILS**

Drawing Status F - AS BUILT	Project Number	Contract / Quote No.	Revision 0A
<b>EES-10177-03</b>		Scale AS SHOWN	Next Sheet

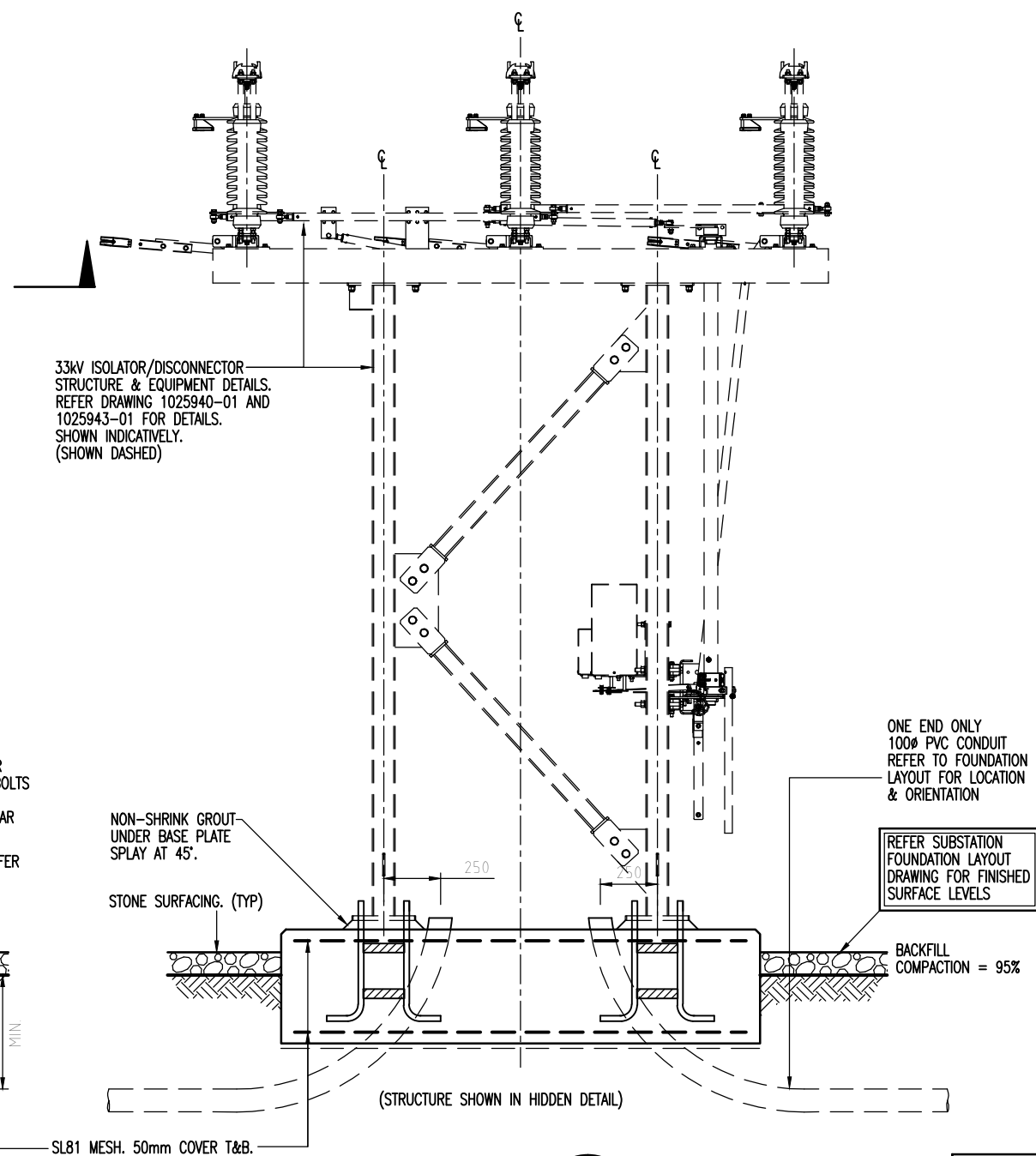


**FOOTING.  
PLAN VIEW.** SCALE 1:20



**SECTION A**  
SCALE: 1:20

**NOTE:**  
FORM UP FOOTING ABOVE GROUND AS REQ'D TO MAINTAIN FSL AS PER FOUNDATION LAYOUT DRAWING



**SECTION B**  
SCALE: 1:20

**CONSTRUCTION NOTES.**

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH SPECIFIC SUBSTATION SITE GENERAL ARRANGEMENT DRAWING.
- READ DRAWING IN CONJUNCTION WITH SPECIFIC CIVIL WORKS SPECIFICATION, STANDARD SPECIFICATION FOR CONCRETE AND STANDARD SPECIFICATION FOR EXCAVATION.
- FOOTINGS TO BE FOUND IN SOUND MATERIAL WITH MINIMUM SAFE BEARING CAPACITY = 100kPa

**CONDUITS. (IF REQUIRED)**

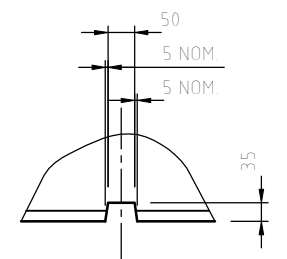
- ALL CONDUITS TO BE (CLASS H.D.) ORANGE PVC ELECTRICAL IN ACCORDANCE WITH AS2053.
- UNLESS OTHERWISE SPECIFIED ALL CONDUITS TO BE FITTED WITH ONE (1) 8mm DIAMETER SYNTHETIC DRAW ROPE.
- ALL CONDUITS TO BE SEALED/FITTED WITH CAPS BEFORE CONCRETE POUR.
- ALL CONDUITS TO HAVE 50mm MIN. PROJECTION ABOVE FSL OF CONCRETE.
- ALL RADIUS BENDS CENTRELINE RADIUS TO BE 500mm MIN.
- CONDUIT TO BE LOCATED AS DETERMINED ON FOOTING LAYOUT DRAWING
- CONDUITS MAY BE INSTALLED ON OPPOSITE SIDE OF FOOTING IF SITE LAYOUT REQUIRES IT.

**CONCRETE.**

- SUPPLY & LAY CONCRETE IN ACCORDANCE WITH AS 3600.
- SUPPLY & LAY VAPOUR BARRIER IN ACCORDANCE WITH AS 2870 TO CONTINUOUSLY UNDERLAY THE FOOTING.
- FOOTINGS TO BE CAST WITHOUT CONSTRUCTION JOINTS UNLESS OTHERWISE INDICATED.
- CONCRETE STRENGTH TO N32 MIN.
- CHAMFER ALL EXPOSED EDGES 20 x 20mm.
- CONCRETE FORMWORK IN ACCORDANCE WITH AS 3610, EXPOSED CONCRETE SURFACES TO BE CLASS 3, TRUE & FREE OF BLEMISHES & IMPERFECTIONS.
- EXPOSED CONCRETE SURFACES TO BE CURED IN ACCORDANCE WITH AS 3600.
- SUPPLY & LAY REINFORCEMENT IN ACCORDANCE WITH AS 3600.
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- MESH SUPPORTED BY 12mm 'Z' OR 'C' SHAPED LIGS/CHAIRS.
- PROVIDE LIGHT BROOM FINISH TO FOOTINGS.

**H.D BOLTS.**

- HOT DIP GALVANISE ALL BOLTS TO AS 1214 AND BOLT CAGES TO AS 4680. ASSEMBLE AFTER GALVANISING.
- BOLT PROJECTION ABOVE FSL OF CONCRETE TO BE 125mm.
- BOLT THREADS TO BE COVERED WITH AN APPROVED TAPE BEFORE PLACEMENT OF CONCRETE. TAPE TO BE REMOVED & NUTS FITTED AFTER CURING.



**PLAN VIEW.  
DETAIL '1'.** SCALE 1:10

**NOTE:**  
EARTHING RECESS FULL HEIGHT OF FOOTING.

DESIGN WIND LOADS	
IN ACCORDANCE WITH:	AS1170 & BCA
CYCLONIC REGION:	REGION C
TERRAIN CATEGORY:	CATEGORY 2
SHIELDING MULTIPLIER:	Ms 1.0
TOPOGRAPHICAL MULTIPLIER:	Mt 1.0
IMPORTANCE LEVEL:	LEVEL 4

THIS DRAWING HAS BEEN DESIGNED FOR 'AK POWER SOLUTIONS' EQUIPMENT/SUPPORT FRAMES & FOR S & M. SITE CLASSIFICATIONS IN ACCORDANCE WITH AS2870.

ORIGINAL ISSUE DRN: RLAWRENCE DATE: FEB 2012 <b>0A</b>	REFERENCE DRAWINGS	REVISION CONTROL	<p><b>ERGO ENERGY CORPORATION LTD</b> ABN 50 087 046 082</p> <p><b>ERGO ENERGY SUBSTATION STANDARD CIVIL WORKS - FOOTINGS</b> 33kV ISOLATOR/EARTH SWITCH SUPPORT PLANS, SECTIONS AND DETAILS</p>	Drawing Status	F - AS BUILT	
	1025940-01 - AKPS 36kV 1250A 25kA/3SEC ISOLATOR, LOW STRUCTURE, NIL E/S. 1025943-01 - AKPS 36kV 1250A 25kA/3SEC ISOLATOR, LOW STRUCTURE, RHS E/S.	Drawn R. LAWRENCE 18/07/2012 Checked G. LAWSON 26/07/2012 Approved K. ELKINS 27/07/2012 Bus. Req. Approved _____		Project Number Contract / Quote No.		
			<p><b>EES-10177-04</b></p> Scale AS SHOWN		Revision 0A	