#### Rehabilitation of Electricity Power Distribution Network in three areas in the Gaza strip (GS)









**Bill of Quantity : Package1 - Lot 1 - Supply of steel Components** 

Item	Description	Unit	Quantity	Unit Rate (US\$)	Total Cost (US\$)	
	The Contract entails supply of the listed below items (22 kV Distribution Line & 0.4 kV Low Voltage Steel Components					
	All Materials must Adhere to technical specifications and drawings as per the international standards subject to engineer's approval.					
	All items will be approved through submittal of material approval from substantiated by brochures, factory specifications and sample according to approved material supply schedule.					
A1.	Steel Poles :					
A1.1	Hot Galvanized Lattice Steel Pole 70/80 , 12m long, (According to the Steel General Specifications and Attached Drawing No. K2102)	No.	27			
A1.2	Hot Galvanized Lattice Steel Pole 80/90 , 12m long, (According to the Steel General Specifications and Attached Drawing No. K2103)	No.	3			
A1.3	Hot Galvanized Lattice Steel Pole 90/110 , 12m long, (According to the Steel General Specifications and Attached Drawing No. K2141)	o the Steel General Specifications and Attached Drawing No. No. 3				
A1.4	Hot Galvanized Channel Steel Pole U14, 12m long, (According to the Steel General Specifications and Attached Drawing No. K253)	No.	15			
A1.5	Hot Galvanized L.V Channel Steel Pole U14, 9m long, (According to the Steel General Specifications and Attached Drawing No. K254_14)	No.	48			
	Total of Steel Poles	Carı	ried to the ma	ain summary		
A2.	Wooden Poles :					
A2.1	Impregnated Wooden Pole 8.5 m Long Top Diameter 150-180 mm , (According to the Wooden Poles General Specifications and Attached Drawing No. WP_85)	No.	50			
	Total of Wooden Poles	Carı	ried to the ma	ain summary		
A3.	Steel Bases					
A3.1	Hot Galvanized Steel Base for Lattice Steel Pole 70/80 , 2.25m long , (According to the Steel General Specifications and Attached Drawing No. K110)	No.	27			
A3.2	Hot Galvanized Steel Base for Lattice Steel Pole 80/90 , 2.25m long , (According to the Steel General Specifications and Attached Drawing No. K109)	No.	3			
A3.3	Hot Galvanized Steel Base for Lattice Steel Pole 90/110 , 2.25m long , (According to the Steel General Specifications and Attached Drawing No. K2152)	No.	3			
A3.4	Hot Galvanized Steel Base for Channel Steel Pole U14, 2.15m long Complete, (According to the Steel General Specifications and Attached Drawing No. K258_6)		15			
	Total of Steel Bases	Carı	ried to the ma	ain summary		
A4.	Steel Arms					
A4.1	Hot Galvanized Lattice Steel Pole Tension Central Arm K2 , (According to the Steel General Specifications and Attached Drawing No. K2)	No.	1			
A4.2	Hot Galvanized Lattice Steel Pole Tension Central Arm K9 Single , (According to the Steel General Specifications and Attached Drawing No. K9_S)  Hot Galvanized Lattice Steel Pole Tension Side Arm K61,	No.	1			
			•	•	i	

Item	Description	Unit	Quantity	Unit Rate (US\$)	Total Cost (US\$)
A4.4	Hot Galvanized Lattice Steel Pole Tension Side Arm K63, (According to the Steel General Specifications and Attached Drawing No. K63)	No.	3		
A4.5	Hot Galvanized Lattice Steel Pole Tension Side Arm K64 ,(According to the Steel General Specifications and Attached Drawing No. K64)	No.	1		
A4.6	Hot Galvanized Lattice Steel Pole Tension Side Arm K12801 , (According to the Steel General Specifications and Attached Drawing No. K12801)	No.	3		
A4.7	Hot Galvanized Lattice Steel Pole Suspension Side Arm K7972 , (According to the Steel General Specifications and Attached Drawing No. K7972)	No.	2		
A4.8	Hot Galvanized Lattice Steel Pole Suspension Side Arm K10601C , (According to the Steel General Specifications and Attached Drawing No. K10601C)	No.	4		
A4.9	Hot Galvanized Lattice Pole Suspension Side Arm , K11404C , (According to the Steel General Specifications and Attached Drawing No. K11404C)	No.	1		
A4.10	Hot Galvanized Channel Steel Pole Side Arm K10045C, (According to the Steel General Specifications and Attached Drawing No. K10045)	No.	5		
A4.11	Hot Galvanized Channel Steel Pole Suspension Side Arm K10155C, (According to the Steel General Specifications and Attached Drawing No. K10155)	No.	4		
A4.12	Hot Galvanized Channel Steel Pole Suspension Side Arm K10354C, (According to the Steel General Specifications and Attached Drawing No. K10354)	No.	4		
A4.13	Hot Galvanized Channel Steel Pole Suspension Side Arm K14521C, (According to the Steel General Specifications and Attached Drawing No. K14521)	No.	2		
A4.14	Hot Galvanized M.V Switch Side Arm K1555, (According to the Steel General Specifications and Attached Drawing No. K1555)	No.	7		
A4.15	Hot Galvanized M.V Switch Side Arm K1558, (According to the Steel General Specifications and Attached Drawing No. K1558)	No.	28		
A4.16	Hot Dip Galvanized M.V Switch Central Vertical Arm , K1562, (According to the Steel General Specifications and Attached Drawing No. K1562)	No.	2		
A4.17	Hot Dip Galvanized Auxiliary Steel Arm for Earth Line, K18, (According to the Steel General Specifications and Attached Drawing No. K18)	No.	11		
A4.18	Hot Galvanized Auxiliary Steel Arm K12171/1 , (According to the Steel General Specifications and Attached Drawing No. K12171/1)	No.	1		
A4.19	Hot Galvanized Auxiliary Steel Arm K12171/2, (According to the Steel General Specifications and Attached Drawing No. K12171/2)	No.	1		
A4.20	Hot Galvanized Auxiliary Steel Arm K160/1 , (According to the Steel General Specifications and Attached Drawing No. K160/1)	No.	3		
A4.21	Hot Galvanized Auxiliary Steel Arm K160/3A, (According to the Steel General Specifications and Attached Drawing No. K160/3A)	No.	6		
A4.22	Hot Galvanized Auxiliary Steel Arm K160/3B, (According to the Steel General Specifications and Attached Drawing No. K160/3B)	No.	71		
A4.23	Hot Galvanized Auxiliary Steel Arm K166/1, (According to the Steel General Specifications and Attached Drawing No. K166)	No.	14		
A4.24	Hot Galvanized Auxiliary Steel Arm K167, (According to the Steel General Specifications and Attached Drawing No. K167)	No.	2		
A4.25	Hot Galvanized Auxiliary Steel Arm K1743 , (According to the Steel General Specifications and Attached Drawing No. K1743)	No.	16		
A4.26	Hot Dip Galvanized Transformer Arm , K183 , (According to the Steel General Specifications and Attached Drawing No. K183)	No	30		
A4.27	Hot Dip Galvanized Transformer Clamp , K188, (According to the Steel General Specifications and Attached Drawing No. K188_d1)	No	120		
A4.28	Hot Dip Galvanized Auxiliary Transformer Steel Angles , K183/1 , (According to the Steel General Specifications and Attached Drawing No. K183/1)	Set	6		

Item	Description	Unit	Quantity	Unit Rate (US\$)	Total Cost (US\$)		
A4.29	Hot Galvanized L.V Steel Pole Arm, K202 Single, (According to the Steel General Specifications and Attached Drawing No. K202_S)	No.	12				
A4.30	Hot Galvanized L.V Steel Pole Arm 100 cm Long (Single), (According to the Steel General Specifications and Attached Drawing No. K271-100)	No.	2				
A4.31	Hot Dip Galvanized Protection Arm , K81 , (According to the Steel General Specifications and Attached Drawing No. K81)  No. 126						
A4.32	Hot Dip Galvanized Protection Arm , K82_A with 3m Mustache , (According to the Steel General Specifications and Attached Drawing No. K82_A)	No.	12				
A4.33	Hot Galvanized Anti-Climbing Steel Arm K113/8 for L.S.P., (According to the Steel General Specifications and Attached Drawing No. K113/8)	Set	33				
A4.34	Hot Galvanized Anti-Climbing Steel Arm K78/2 for C.S.P , (According to the Steel General Specifications and Attached Drawing No. K78/2)	Set	15				
	Total of Steel Arms	Carı	ried to the ma	ain summary			
A5.	Steel Bolts						
A5.1	Hot Dip Galvanized V - Shaped Angle Clamp 3/8", 32*56 mm2 Including Hot dip Galvanized 3/8" Two Nuts, Two Round Washer and Two Spring Washer, (According to Steel General Specifications and Drawing No. X1)	No.	30				
A5.2	Hot Dip Galvanized V - Shaped Angle Clamp 5/8", 157*122 mm2 Including Hot dip Galvanized 5/8" two Nuts, two Round Washers, two Square Washers and two Spring Washers, (According to Steel General Specifications and Drawing No. N2)						
A5.3	Hot Dip Galvanized U6 Clamp , 1/2" Including Hot dip Galvanized 1/2" Two Nuts, Two Round Washer and Two Spring Washer , (According to Steel General Specifications and Drawing No. B19)	No 10					
A5.4	Hot Dip Galvanized U8 Clamp , 1/2" Including Hot dip Galvanized 1/2" Two Nuts, Two Round Washer and Two Spring Washer , (According to Steel General Specifications and Drawing No. B20)	Two Spring No. 30					
A5.5	Hot Galvanized Steel Bolt 7/8", 4.5 cm Long, including Hot dip Galvanized 7/8" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	650				
A5.6	Hot Galvanized Steel Bolt 7/8", 5 cm Long, including Hot dip Galvanized 7/8" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	260				
A5.7	Hot Galvanized Steel Bolt 7/8", 6 cm Long, including Hot dip Galvanized 7/8" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	30				
A5.8	Hot Galvanized Steel Bolt 3/4", 4 cm Long, including Hot dip Galvanized 3/4" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	600				
A5.9	Hot Galvanized Steel Bolt 3/4", 5 cm Long, including Hot dip Galvanized 3/4" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	70				
A5.10	Hot Galvanized Steel Bolt 5/8", 4 cm Long, including Hot dip Galvanized 5/8" one Nut, one Round Washer, one Square Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	2,100				
A5.11	Hot Galvanized Steel Bolt 1/2", 3.5 cm Long, including Hot dip Galvanized 1/2" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	1,700				

Item	Description	Unit	Quantity	Unit Rate (US\$)	Total Cost (US\$)			
A5.12	Hot Galvanized Steel Bolt 1/2", 5 cm Long, including Hot dip Galvanized 1/2" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications)	30						
A5.13	Hot Galvanized Steel Bolt 1/2", 18 cm Long, including Hot dip Galvanized 1/2" one Nut, one Square Washer and one Spring Washer, (According to Steel General Specifications)	Pcs	35					
A5.14	Hot Galvanized V-Shaped Steel Bolt 1/2" x 14 cm Long, Including Hot dip Galvanized 1/2" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications and Drawing No. A2)	No.	No. 550					
A5.15	Hot Galvanized V-Shaped Steel Bolt 1/2" x 16 cm Long, Including Hot dip Galvanized 1/2" one Nut, one Round Washer and one Spring Washer, (According to Steel General Specifications and Drawing No. A3)	No.	70					
A5.16	Hot Galvanized V-Shaped Steel Bolt 1/2" x 18 cm Long, Including Hot dip Galvanized 1/2" one Nut, one Round Washer and one Spring Washer , (According to Steel General Specifications and Drawing No. A4)		20					
	Total of Steel BoltsCarried to the main summan							
A6.	Steel Accessories							
A6.1	Hot Dip Galvanized Steel Pole Thread Hook M16 Twisted ( 5/8") Including 5/8" Bolts , Nuts and Washers , (According to Steel General Specifications and Technical Guarantees No.TH_S16C)	No	250					
A6.2	Hot Dip Galvanized Steel Twisted Hook for Wooden Pole , (According to Steel General Specifications and Technical Guarantees No.TH_W20)	No	50					
A6.3	Hot Galvanized Steel Cable Guard to Protect the Cable 200x20x10 cm , (According to Steel General Specifications and Technical Guarantees No. SCG_200)	No	95					
A6.4	Hot Dip Galvanized Plate to Fixing M.V Cable Clamp on the Steel Arm , (According to Steel General Specifications and Drawing No.PMV_250)	No	No <b>140</b>					
	Total of Steel Accessories	Carı	ried to the ma	nin summary				

#### Supply the listed below items ( Steel Components)

(684)		Item	Description	Unit	Quantity	Unit Rate (US\$)	Total Cost (US\$)
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A1	Total of Steel Poles	
A2	Total of Wooden Poles	
A3	Total of Steel Bases	
A4	Total of Steel Arms	
A5	Total of Steel Bolts	
A6	Total of Steel Accessories	
	Transportation of goods to Gaza area ( GEDCO Warehouses)	
	Total Total EXCLUDING VAT (US\$)	

NET TOTAL SUM EXCLUDING VAT (in words ):
SIGNED AND SEALED :

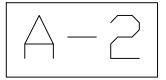
 ${\bf AUTHORIZED}:\\$ 

TITLE:

**SIGNATURE:** 

DATE:

	Transportation items:(Optional)	QTY	Total in US\$
1.1	Transportation of goods to Toulkarem area	job	
1.2	Transportation of goods from Toulkarem to Gaza.	job	

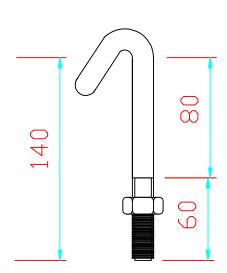


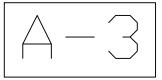
## -UNC-V-Bolt-

Using: For fixing Outdoor L.V switch box and Anti-climbing arm K113/8 on lattice steel poles

Description

1-UNC-V-Bolt 1/2"\*140mm. with nut, Spring wesher and Ring washer.



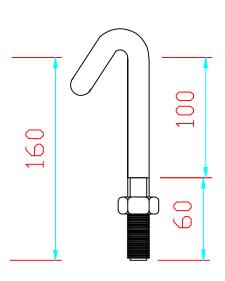


## -UNC-V-Bolt-

Using: For fixing Outdoor L.V switch box and Anti-climbing arm K113/8 on lattice steel poles

Description

1-UNC-V-Bolt 1/2"\*160mm. with nut, Spring wesher and Ring washer.



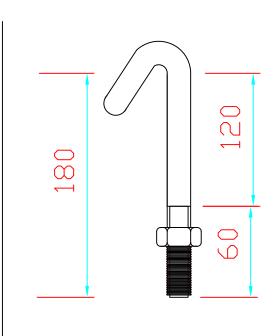
**A4** 

## -UNC-V-Bolt-

Using: For fixing Outdoor L.V switch box and Anti-climbing arm K113/8 on lattice steel poles

Description

1-UNC-V-Bolt 1/2"\*180mm. with nut, Spring wesher and Ring washer.



B19

### Channel Clamps

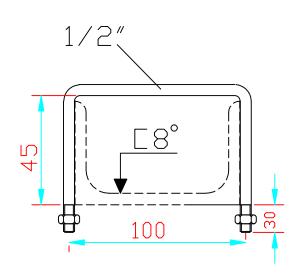
Using : For fixing earth Arm K82 on Lattics Steel Pole

Drawing № B19/1

\*\*U8 Clamp 1/2"

With nuts and washers.

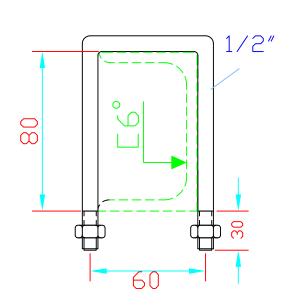
Hot Dip galvanized Steel.

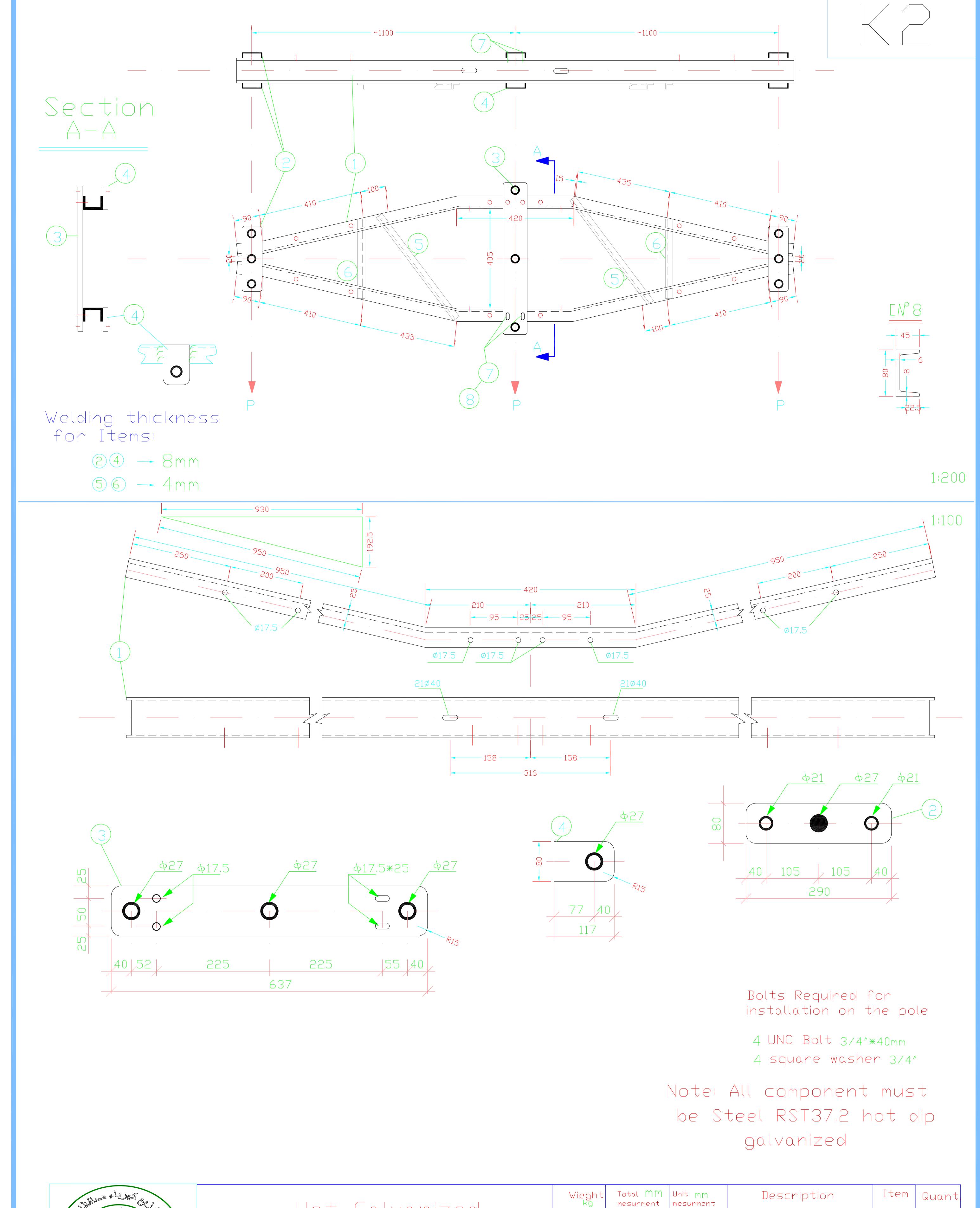


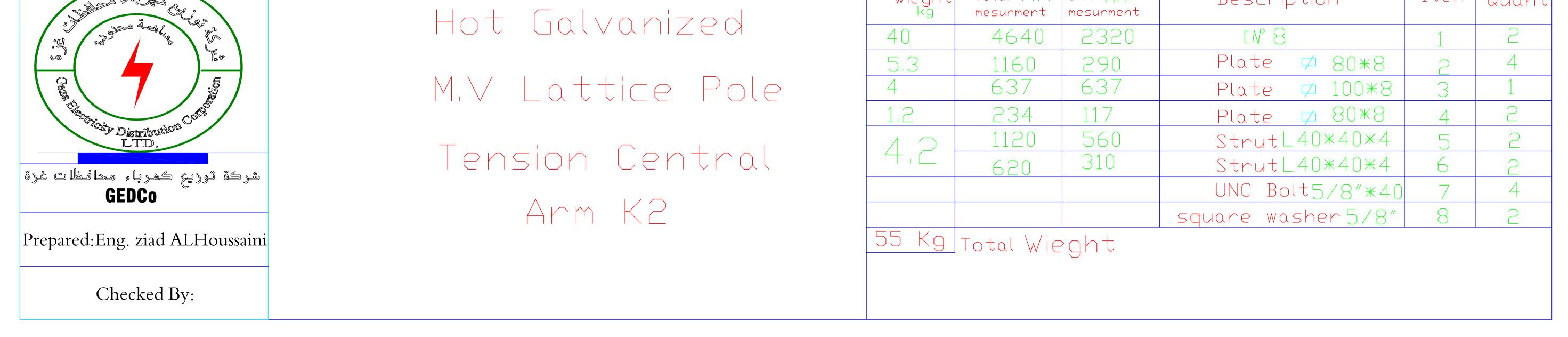
## Channel Clamps

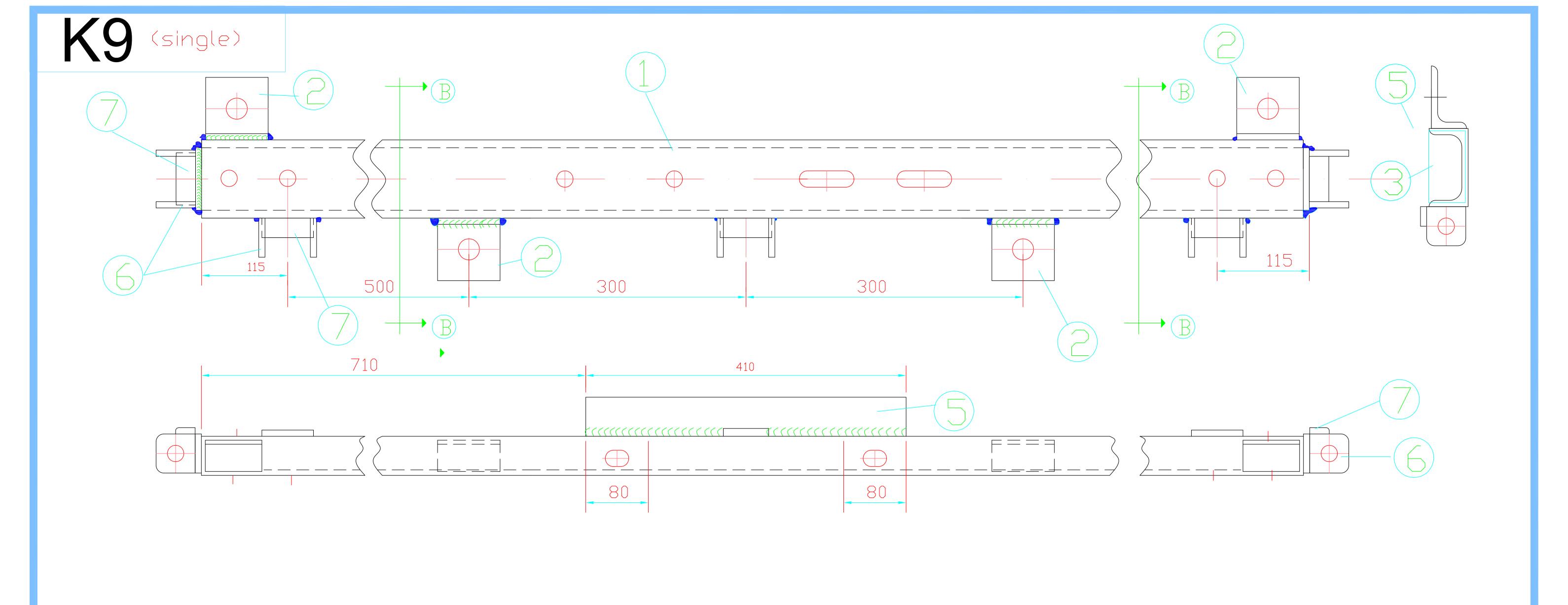
Using: For fixing earth Arm K82 on Lattics Steel Pole

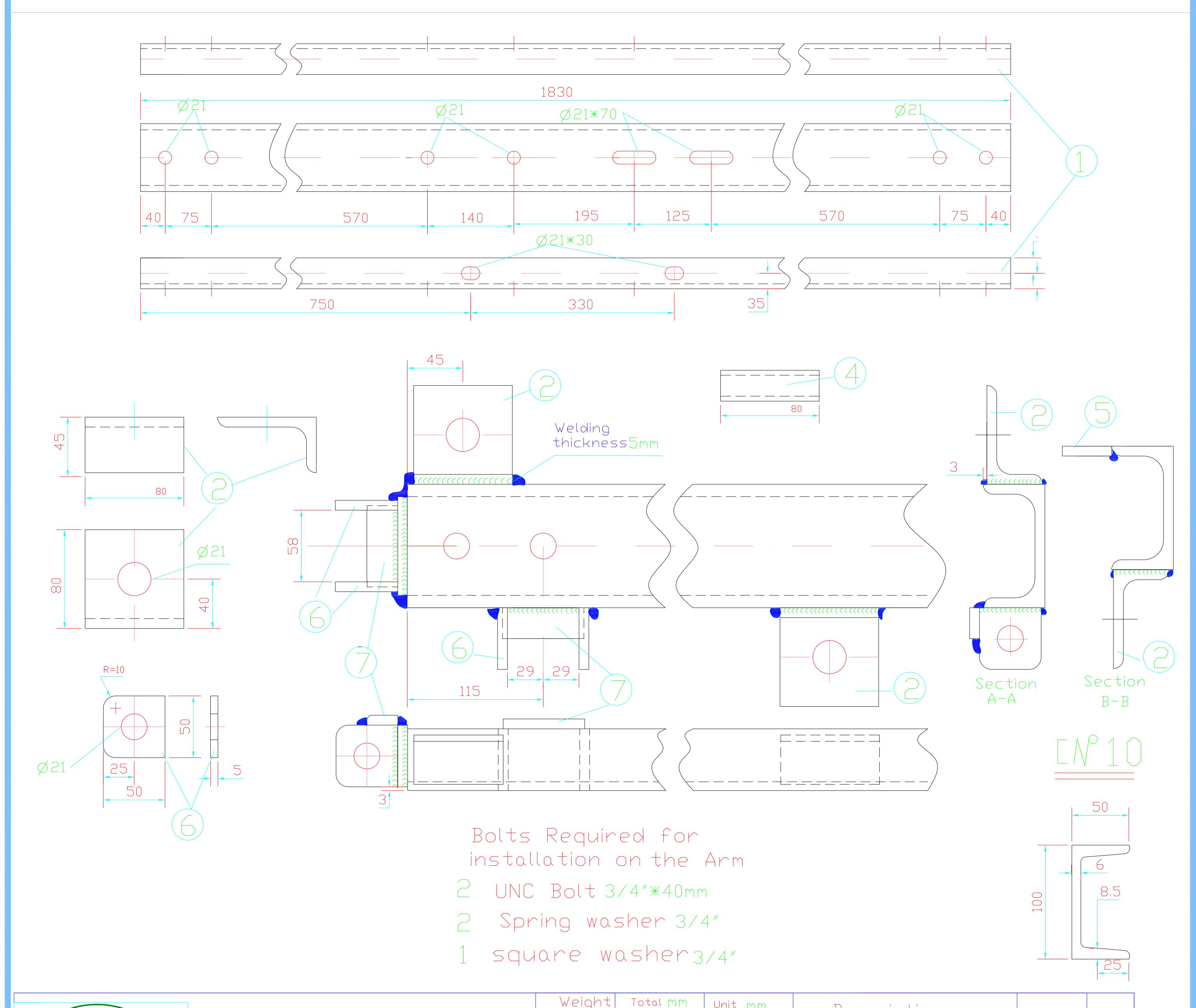
\* U6 Clamp 1/2" 
With nuts and washers.
Hot Dip galvanized Steel.

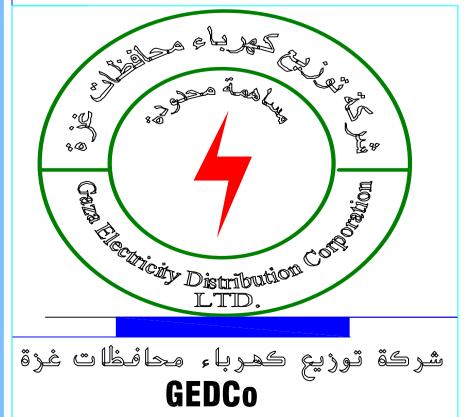










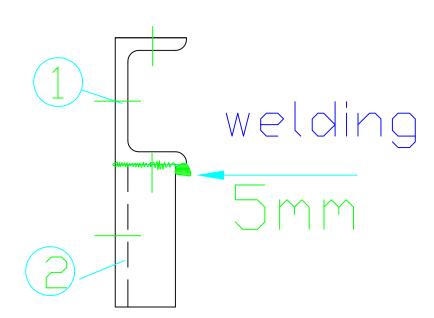


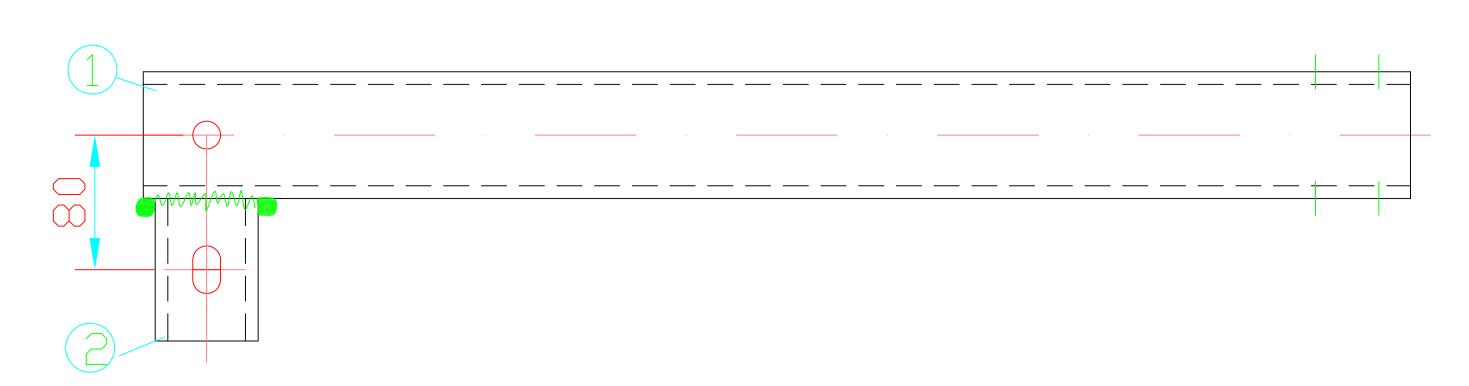
Hot Galvanized Lattice
Pole Tension Central Arm

K9 (single)

Prepared: Eng. ziad ALHoussaini
Note: All component must be
Checked By: Eng. Kamil Rabah
Steel 37.2 hot dip galvanized

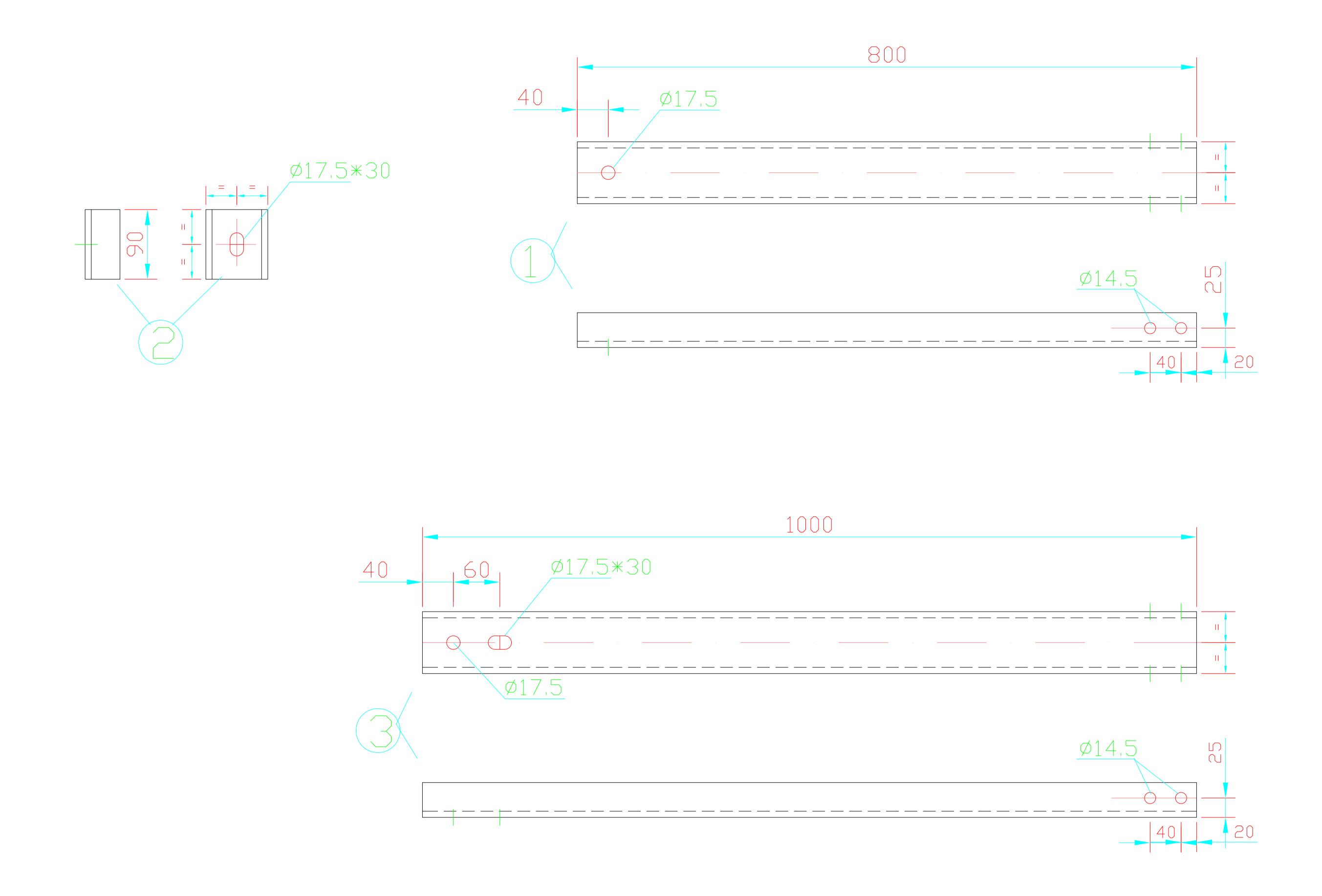
kg	mesurment	mesurment	Descri	ption	Quant.	Item
19.4	1830	1830		10	1	1
3.1	320	80	Base Insulat	orL80*80*8	4	2
0.6	180	90	Plate	<b></b>	2	3
0.2	160	80	Steel Pipe	3/4"	2	4
1	410	410	Plate	<u></u> 40*8	1	5
1.7	500	50	Plate	Ø50*6	10	6
0.2	310	62	Plate	Ø50*6	5	7
26 K	g Total W	eight				





From Inside: welding

From Dutside: Plug continuous and smooth welding



Note: All component must be RSt 37.2 hot dip galvanized

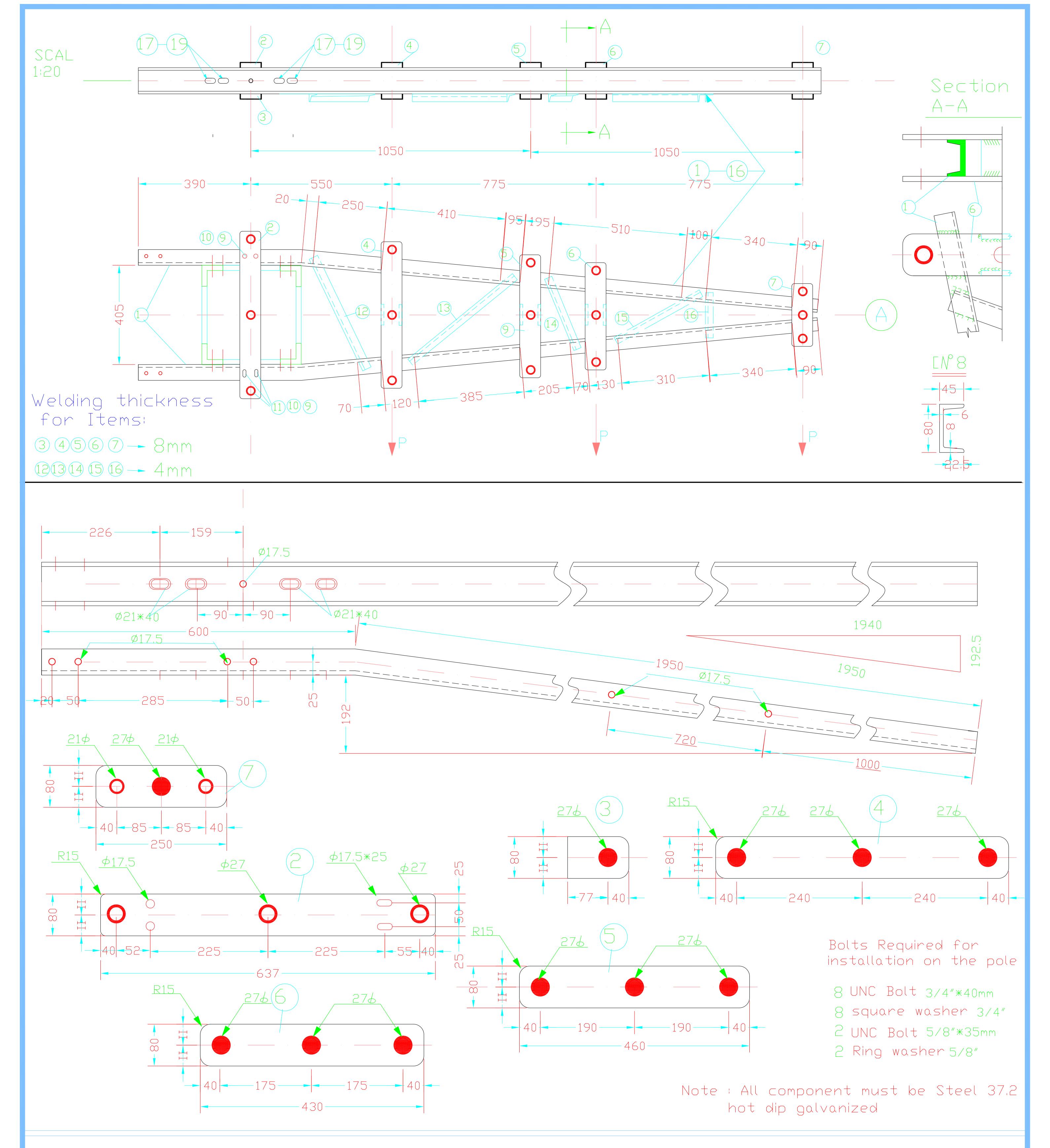


Hot Glavanized Auxillary

Steel Arm K18

For Earth Line

Weight K.g	Unit mm mesurment	Description	Item	Quant
5.7	800	CN 6.5	1	1
0.6	90	Trust CN 6,5	2	1
7.09	1000	CN 6.5	3	1
13 K				





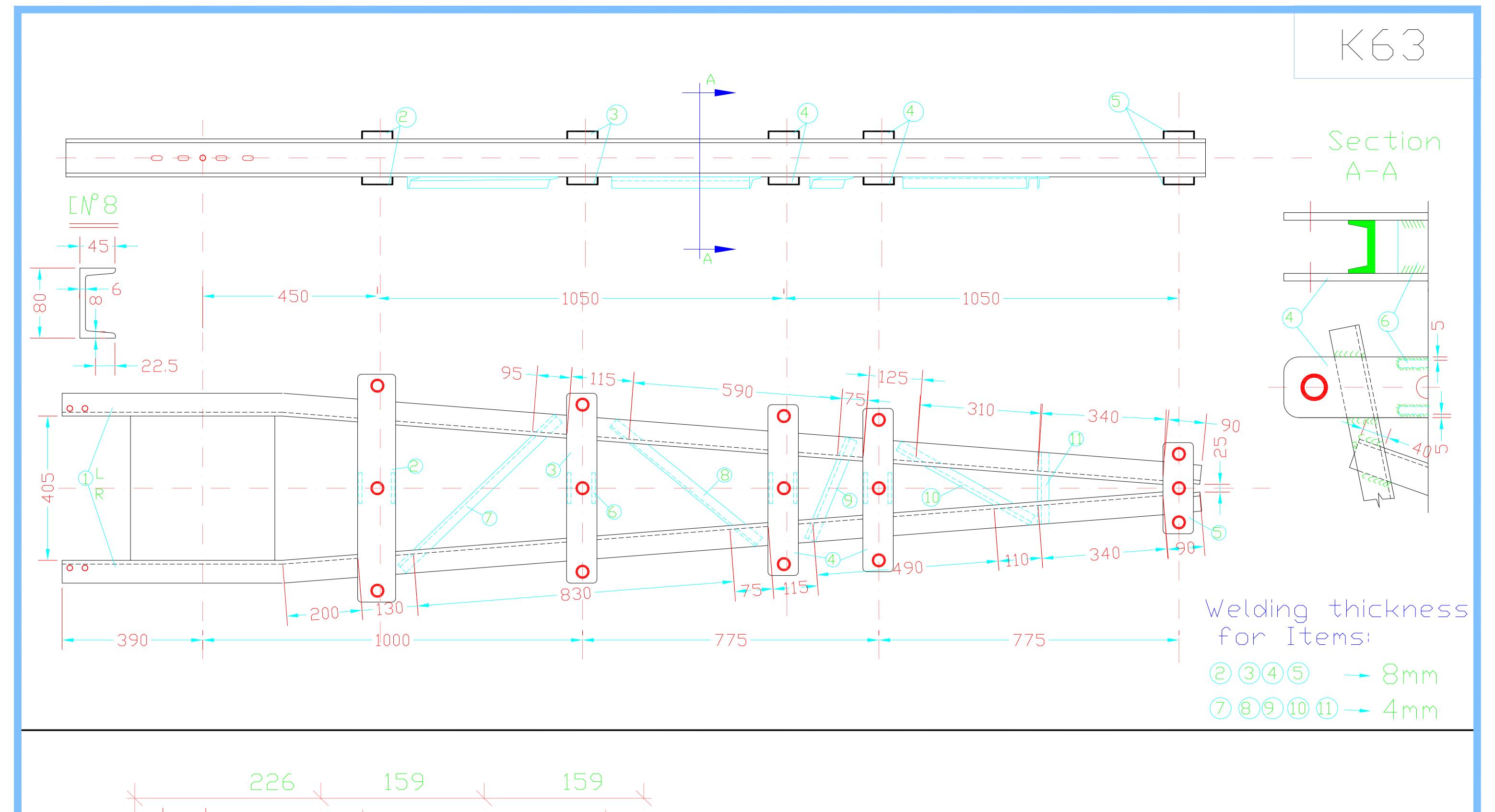
ë jë ë libë le , le , je , jë ë jë GEDCo

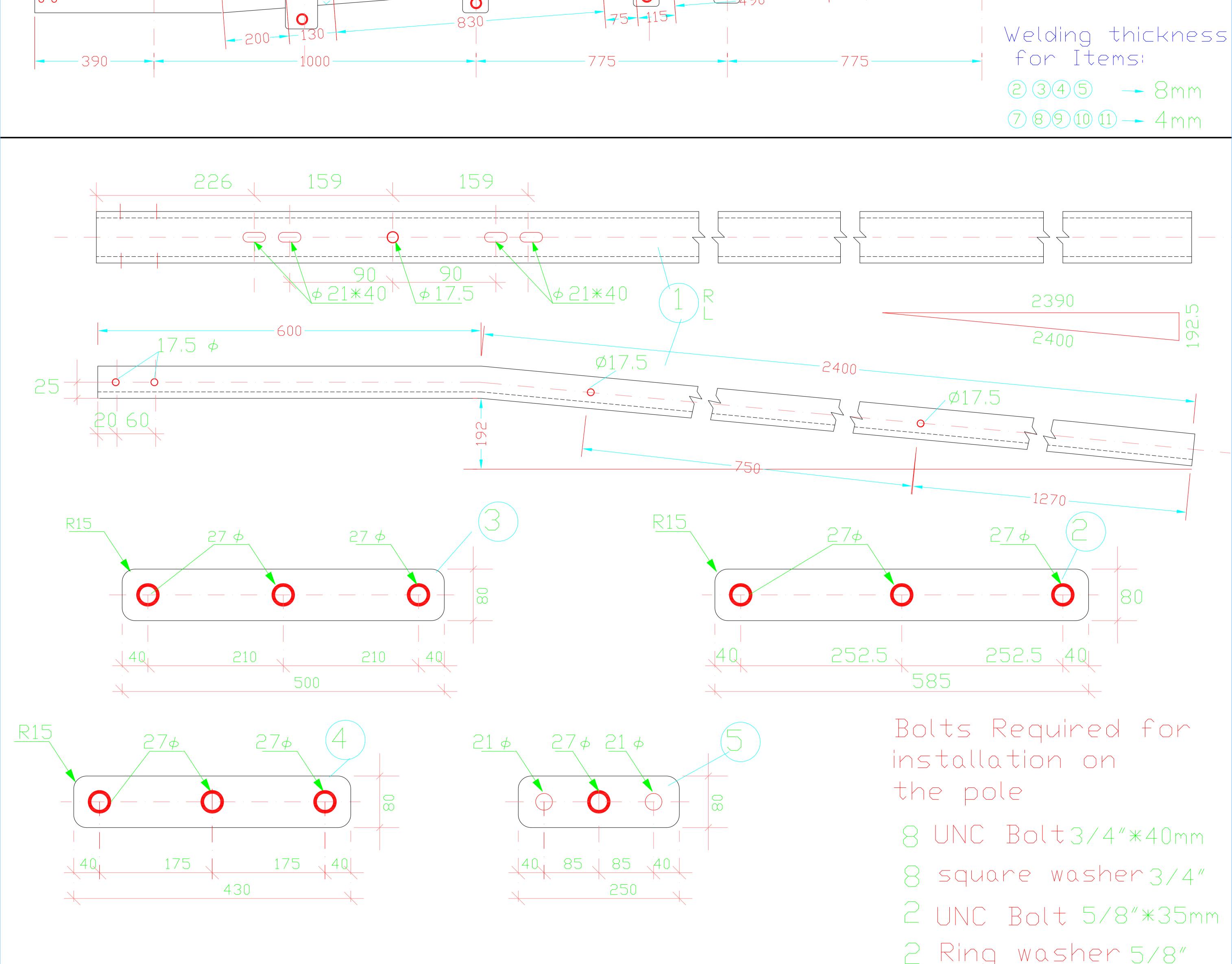
Prepared:Eng. ziad ALHoussaini

Hot Galvanized
Lattice Steel
Pole Side Arm K61

Wieght kg	Total MM mesurment	Unit mm mesurment	Description	Item	Quant,
44	5100	2550	LN 8	1	1R+1L
4	637	637	Plate # 100*8	2	1
	234	117	Plate $\neq$ 80*8	3	2
	1120	560	Plate $\neq$ 80*8	4	2
_	920	460	Plate $\neq$ 80*8	5	2
	860	430	Plate # 80*8	6	2
	500	250	Plate # 80*8	7	2
	600	100	Support Plate≠80*8	8	6
			UNC Bolt5/8"*40	9	4
			Spring washer 5/8"	10	4
			squarewasher5/8"	11	2
	320	320	L40*40*4	12	1
	520	520	L40*40*4	13	1
_	320	320	L40*40*4	14	1
	370	370	L40*40*4	15	1
7	180	180	L40*40*4	16	1

73.7 Kg Total Wieght





2 Ring washer 5/8"

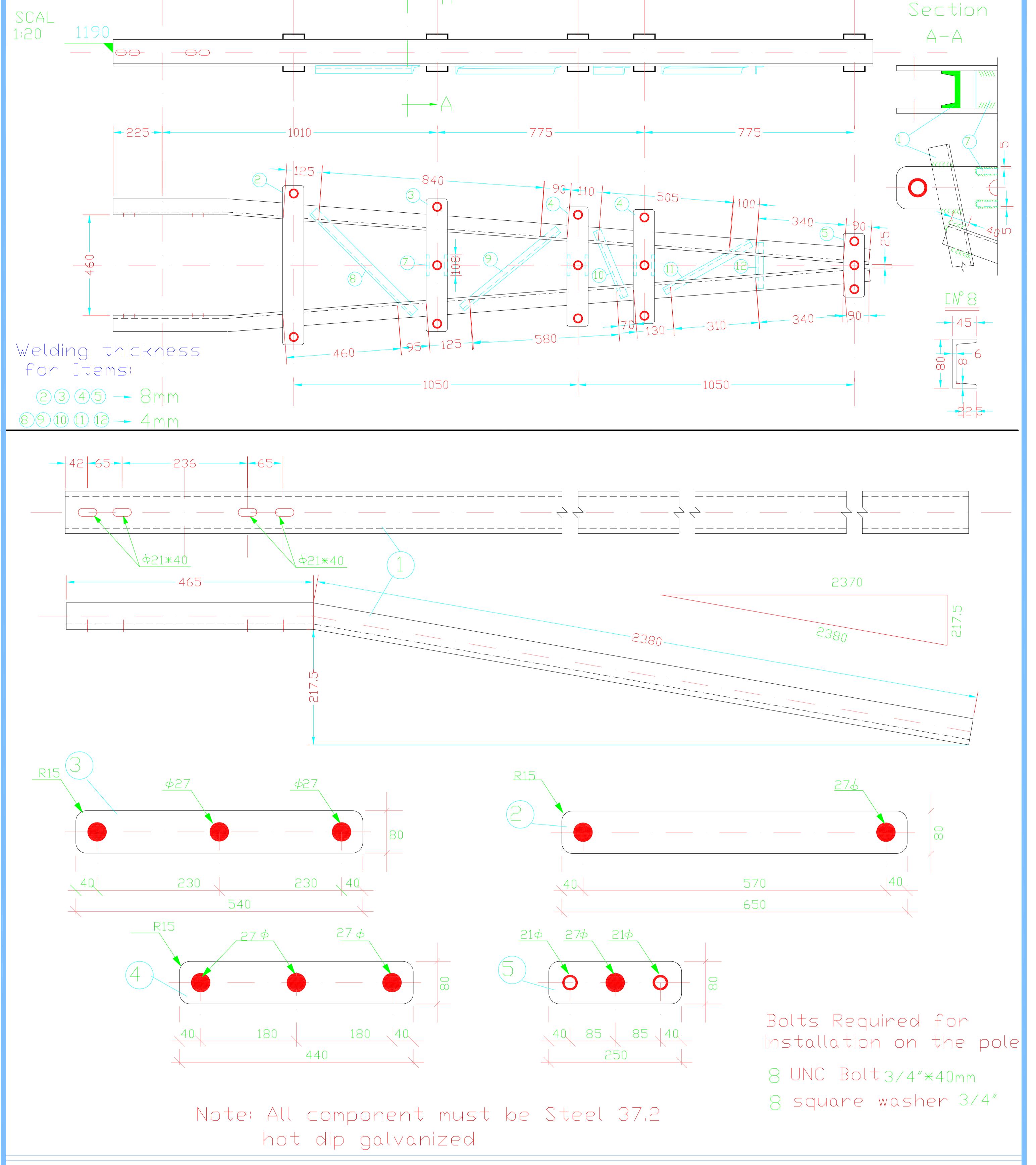


Prepared:Eng. ziad ALHoussaini

Hot Galvanized Lattice Pole Side Arm K63

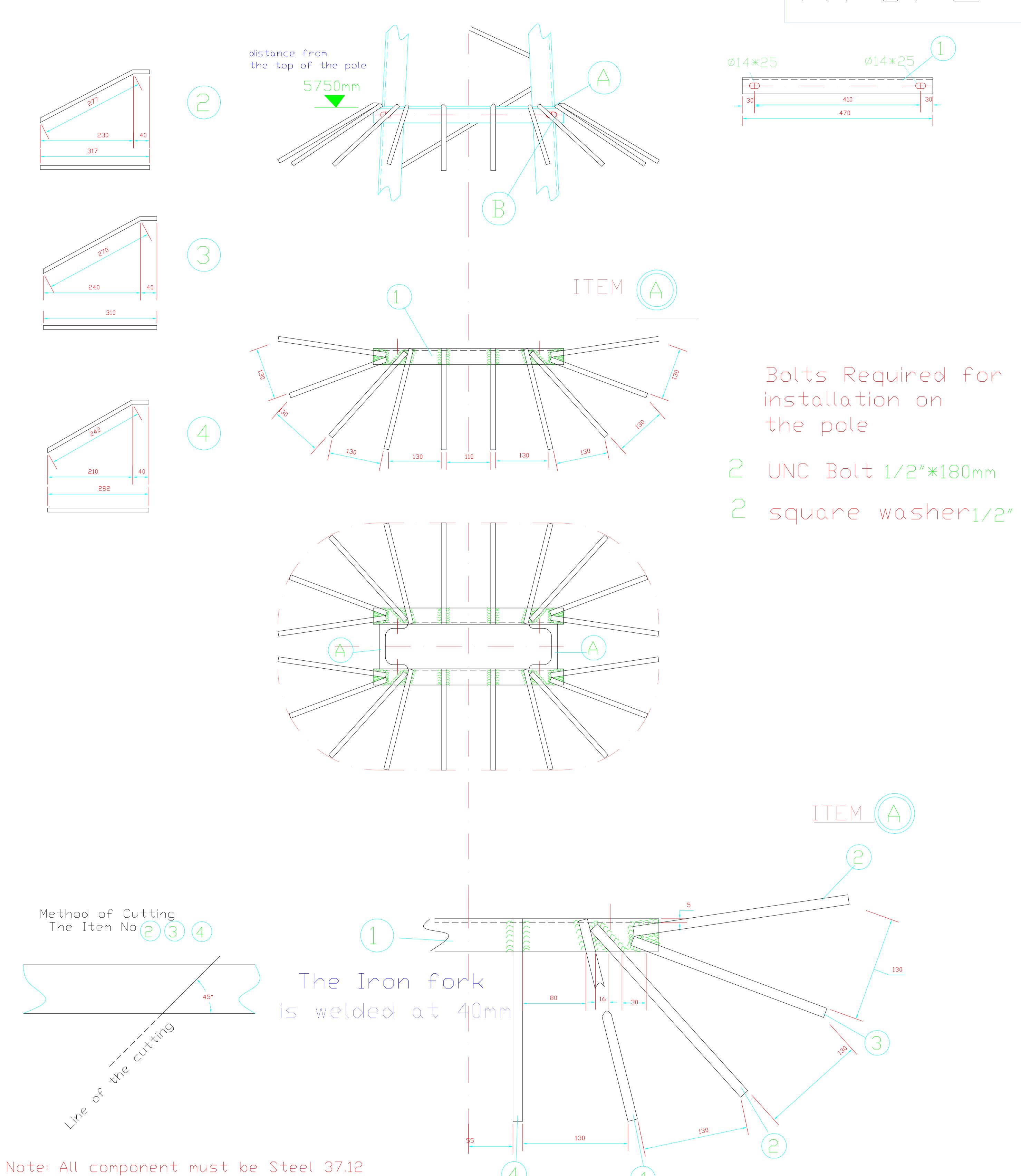
Note: All component must be Steel 37.2 hot dip galvanized

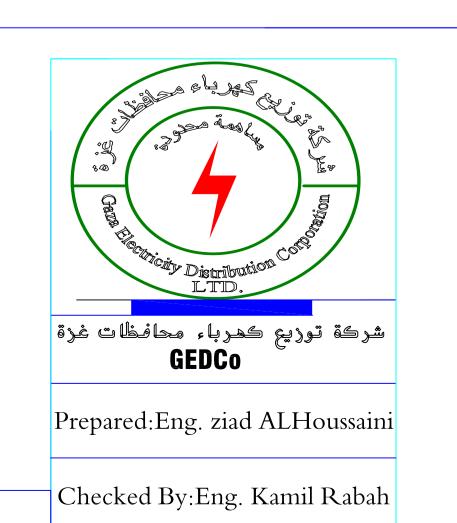
Wieght kg	Total MM mesurment	Unit mm mesurment	Description	Item	Quant.
51,8	6000	3000	LN 8	1 R	1R+1L
	1170	585	Plate ≠80*8	2	2
	1000	500	Plate ≠80*8	3	2
	1720	430	Plate $\neq 80 * 8$	4	4
	500	250	Plate #80*8	5	2
	800	100	Support Plate 780*8	6	8
		580	L40*40*4	7	1
		480	L40*40*4	8	1
		290	L40*40*4	9	1
		350	L40*40*4	10	1
		170	L40*40*4	11	1
82,3	<9 Total	Wieght			



K 6 4



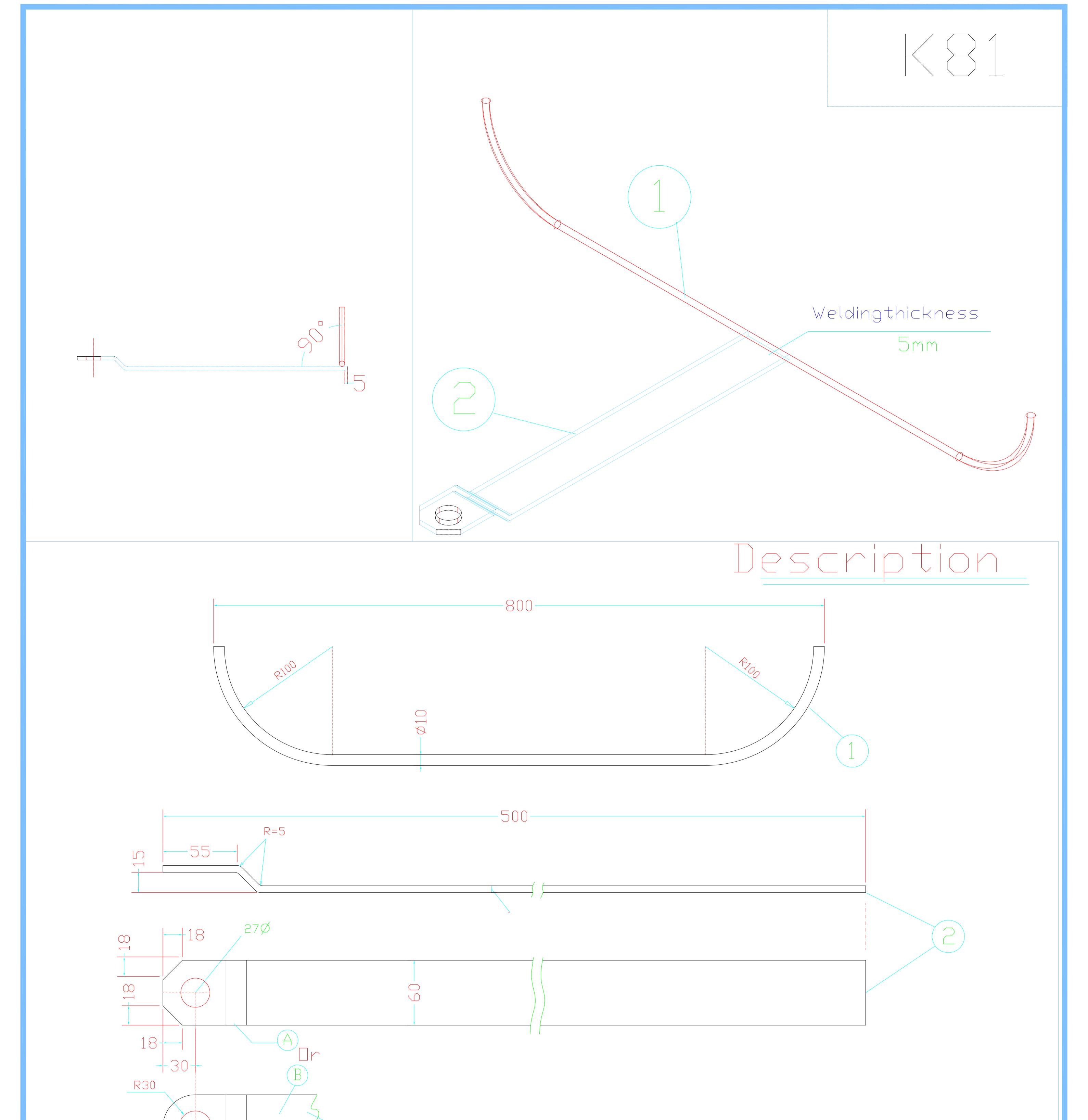




hot dip galvanized

Anti-Climbing Steel Arm K78/2

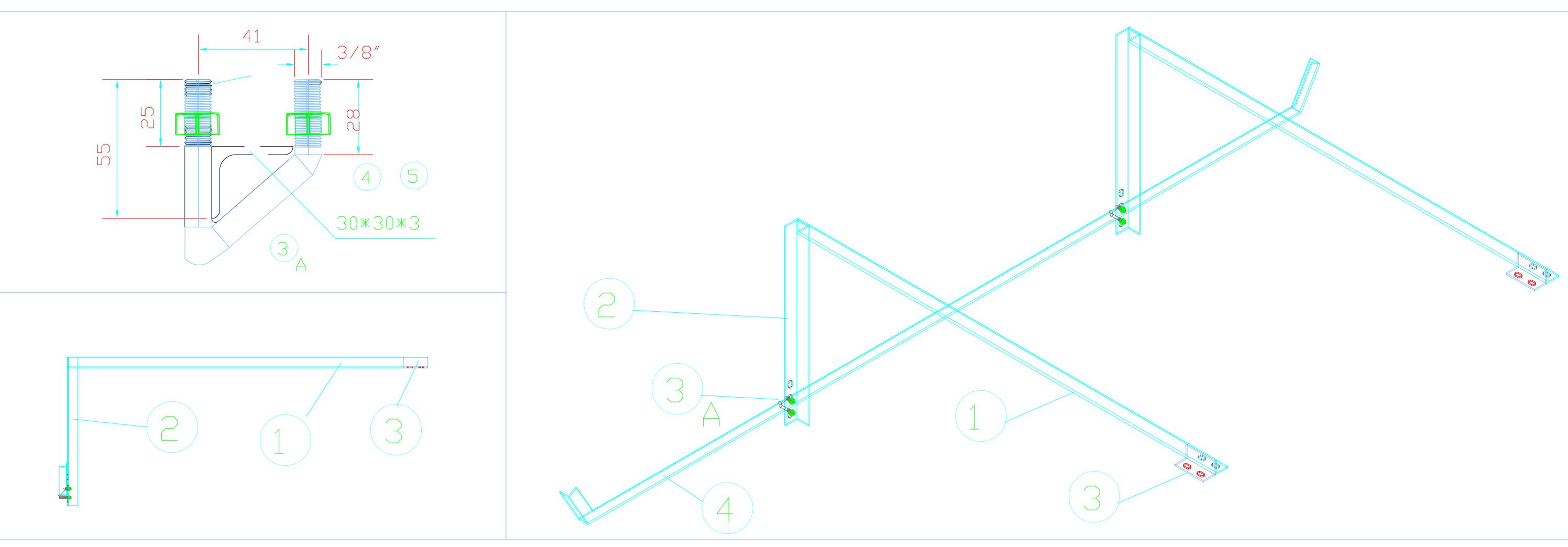
Weight Kg	Total MM mesurment	Unit mm mesurment	Description	Item	Quant
2.3	940	470	L40*40*4	1	2
2.2	2536	317	Ø12	2	8
1.1	1240	310	Ø12	3	4
2	2256	382	Ø12	4	8

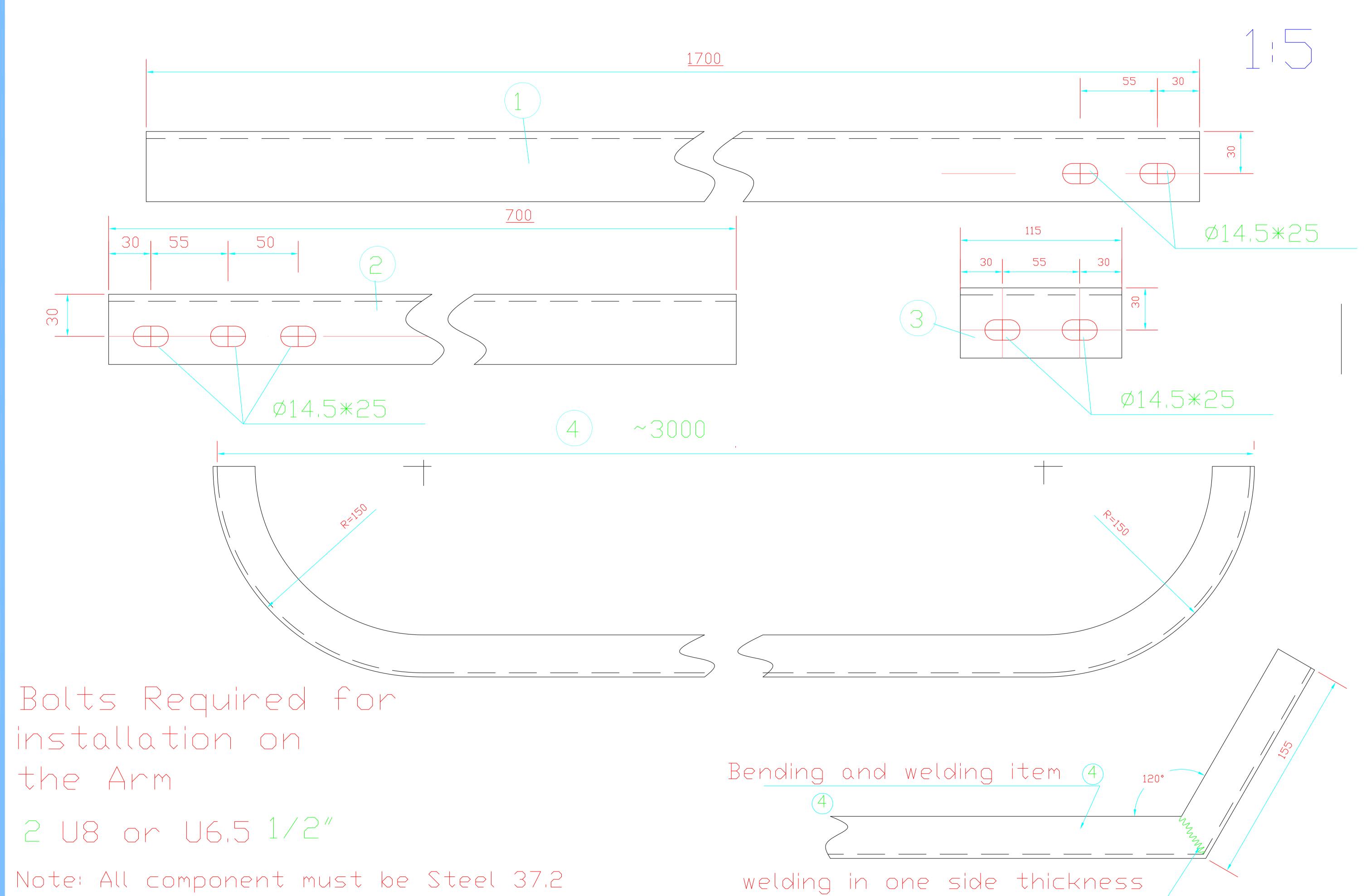


			Unit mm mesurment	Description	Item	Quan
		For one Phase	910	10 Ø	1	1
Distribution Comp.	Hot Galvnized		_ 510	Plate # 60*5	2	1
قَرِدُ عَلَىٰ مَحِرباء مَحَافَظُ تَّ عَرْبُ مُحَافَظُ تَّ عَرْبُ عَلَىٰ عَرْقُ <b>GEDC</b> o	Protection Arm K81					
Prepared:Eng. ziad ALHoussaini						

Note: All component must be Steel RST37.2

hot dip galvanized

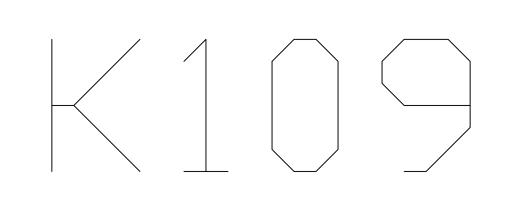


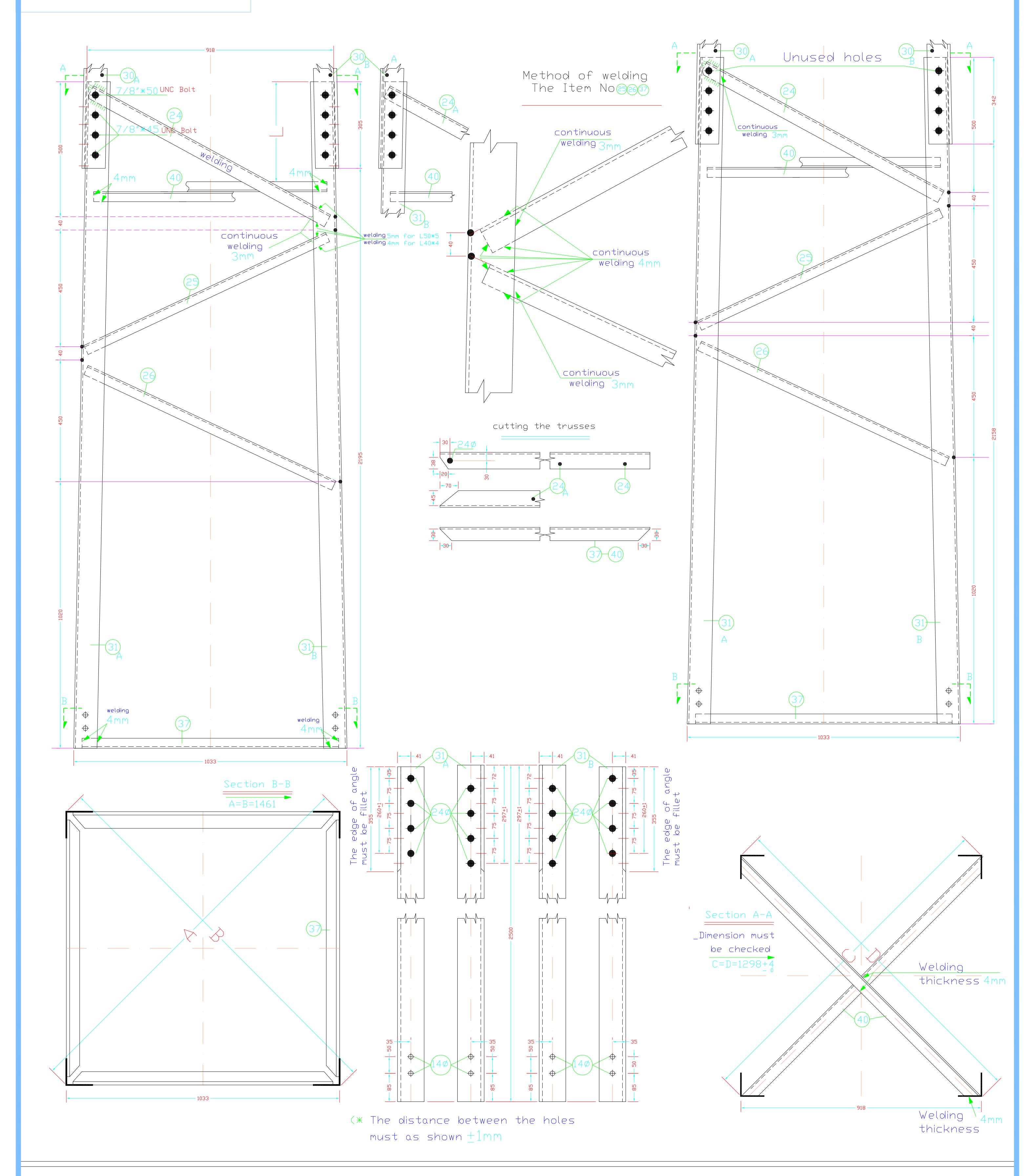


	The state of the s		Weight K.g	Total MM mesurment	Unit mm mesurment	Description	Item	Quant
		Hot Galvnized			3150	L30*30*3	4	1
	LTD.	Protection Arm		290	145	V-Shape angle Ø3/8"	3 <sub>A</sub>	2
	قَرُدُ تورْیع کمرباء محافظات غُرة GEDCo	K82/A			115	L50*50*5	3	2
			19	5030	700	L50*50*5	2	2
	Prepared:Eng. ziad ALHoussaini				1700	L50*50*5	1	2
499	Checked By:Eng. Kamil Rabah							

3mm

hot dip galvanized



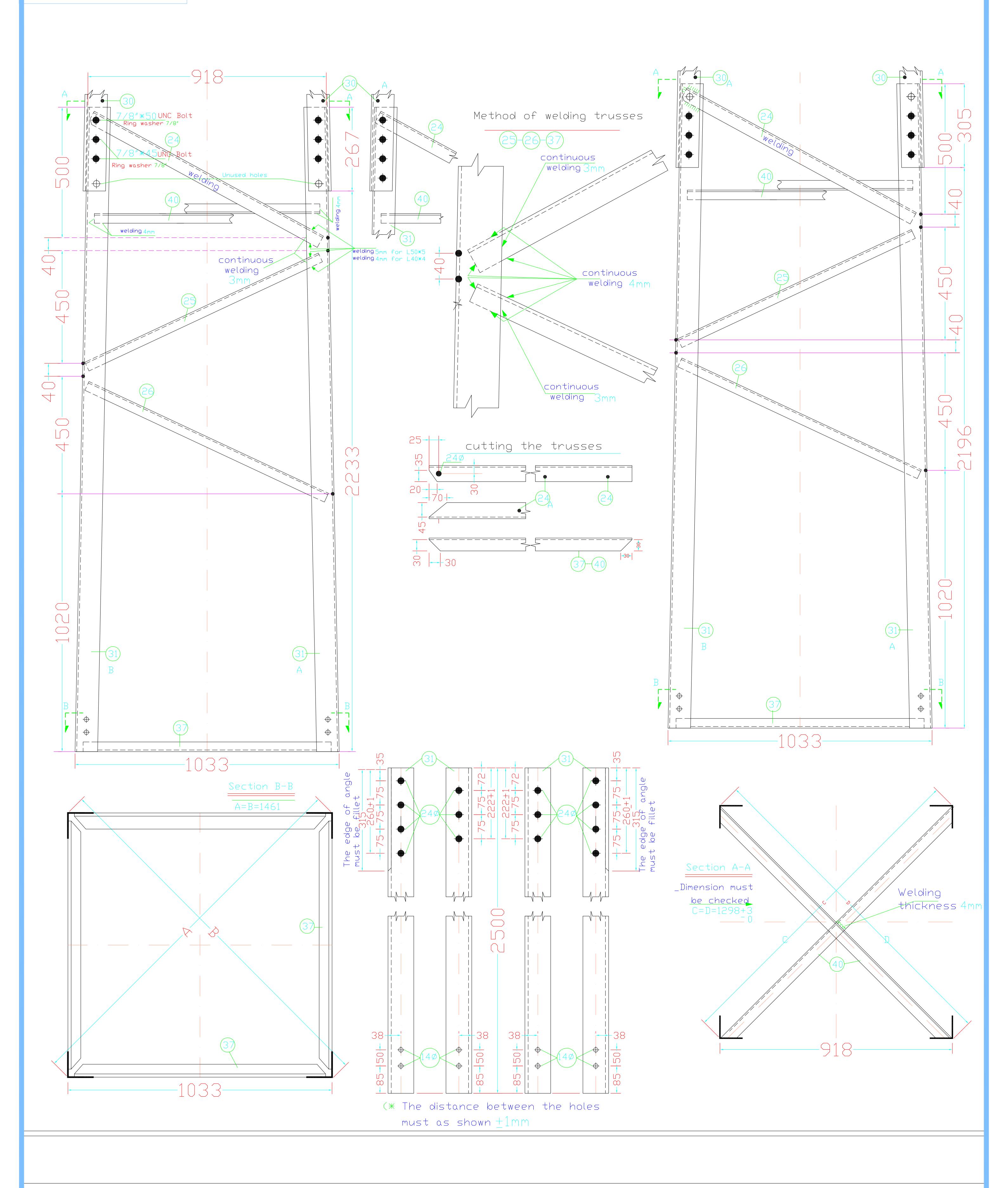




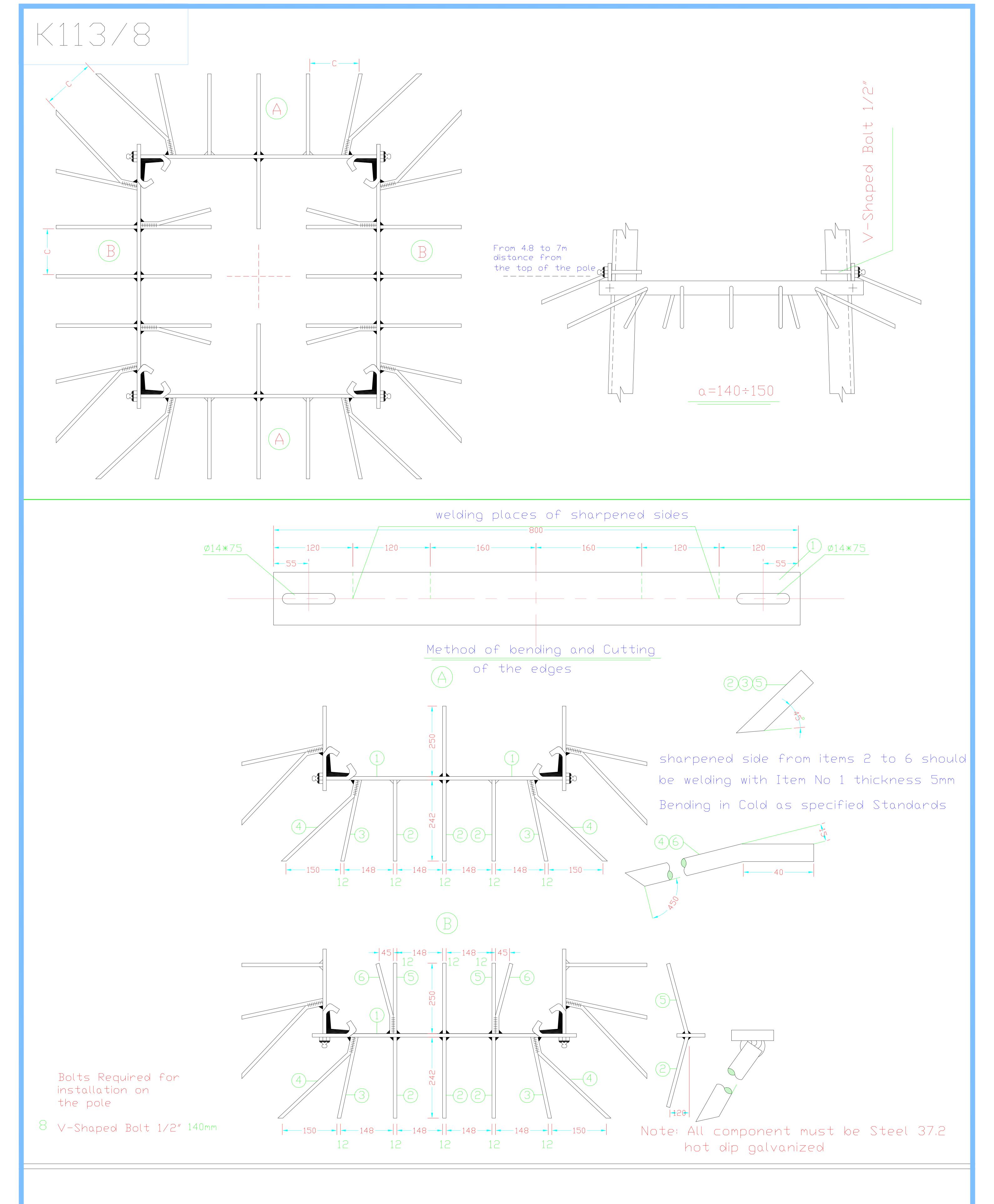
Steel Base 2,25m long
For Lattice Steel pole
80/90-12m

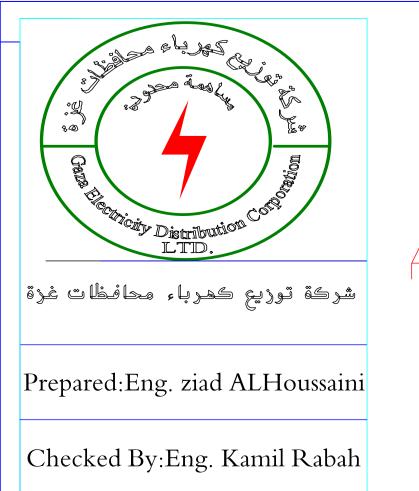
Note: All component must be RSt 37.2 hot dip galvanized

Weight	Total '''' mesurment	Unit mm mesurment	Description	Item	Quant.	
8.7	2570	1285	Truss L45*45*5	40	2	
9,5	3920	980	Truss <u>L40*40*4</u>	37	4	
122	10000	2500	L90*90*9	31AB	2+2	
9,8	4040	1010	Truss <u>L40</u> *40*4	26	4	
9,6	3960	990	Truss <u>L40</u> *40*4	25	4	
7.4	1970	985	Truss L50*50*5	24A	2	
7.5	2000	1000	Truss L50*50*5	24	2	
175kg Total Weight						



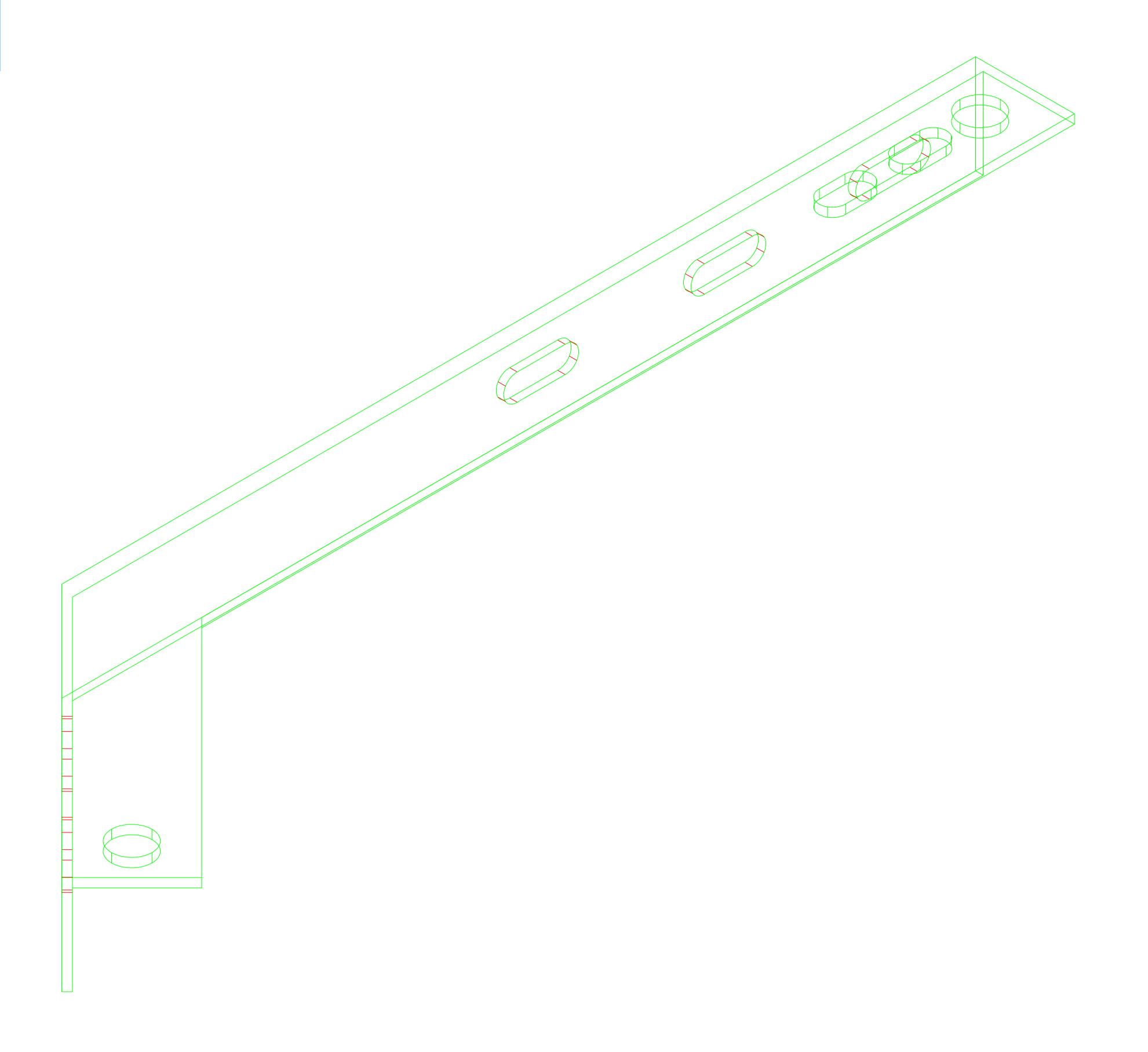


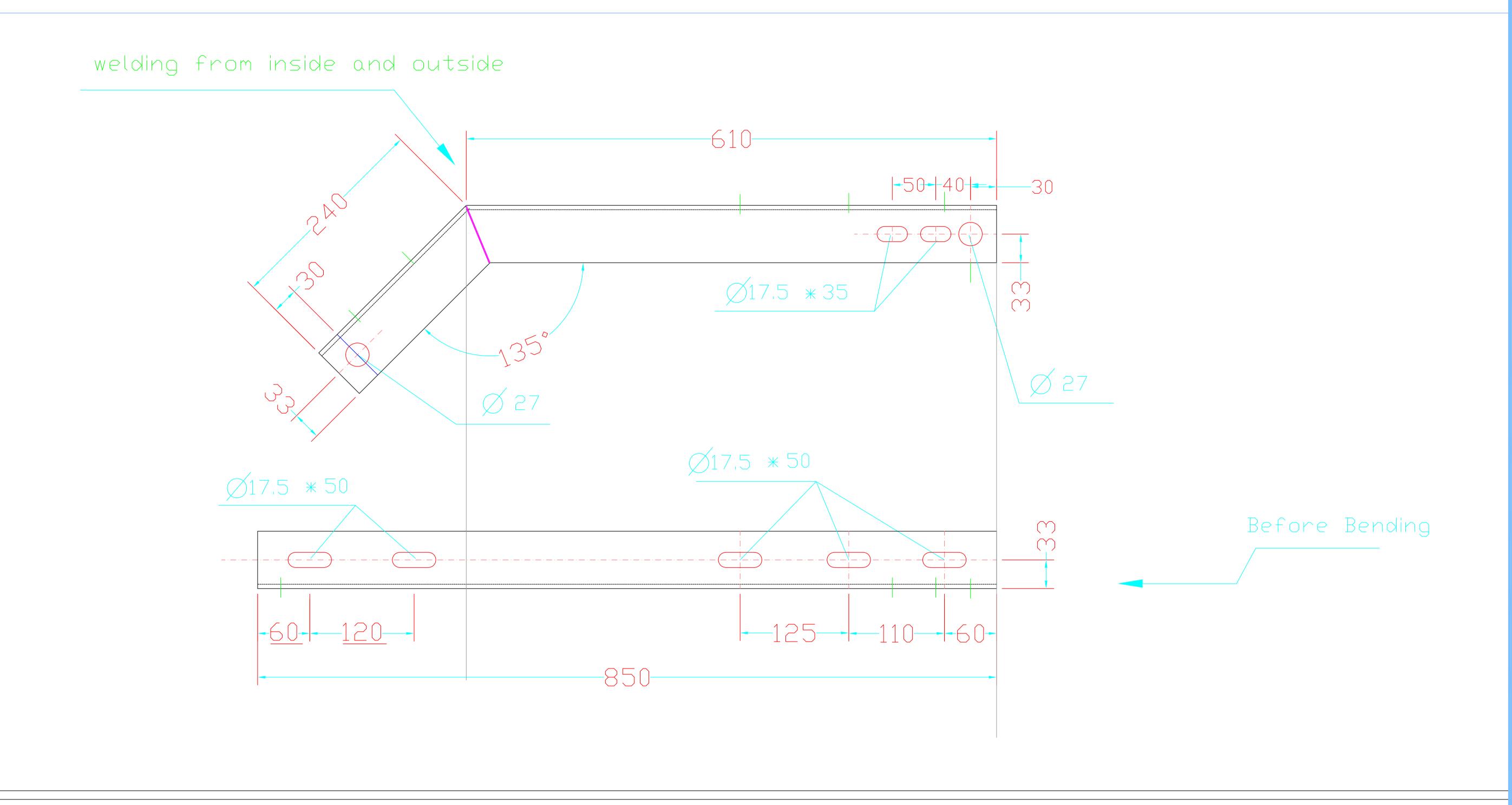


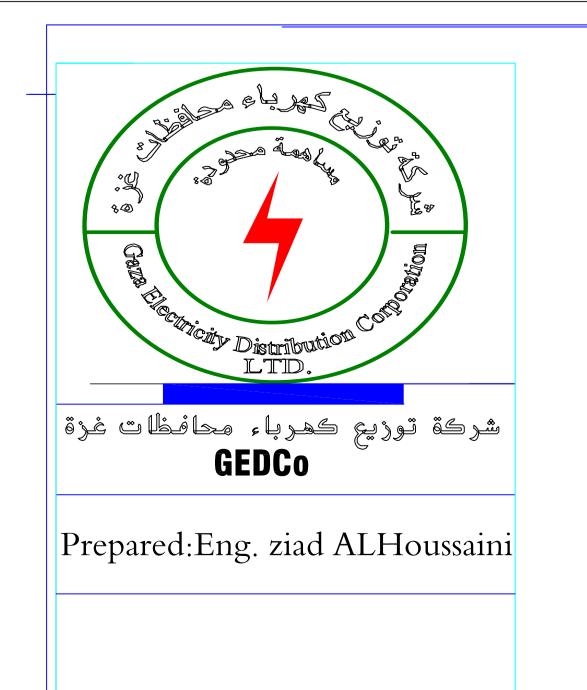


Anti- Climbing Steel Arm K113/8

Weight Kg	Total MM mesurment	Unit mm mesurment	Description	Item	Quant.
10	3200	800	Plate ≠50*6	1	4
2.9	3240	270	Ø 12	2	12
2.0	2240	280	Ø 12	3	8
2.4	2680	335	Ø 12	4	8
2.0	2240	280	Ø 12	5	8
1.0	1120	280	Ø 12	6	4
21kg					



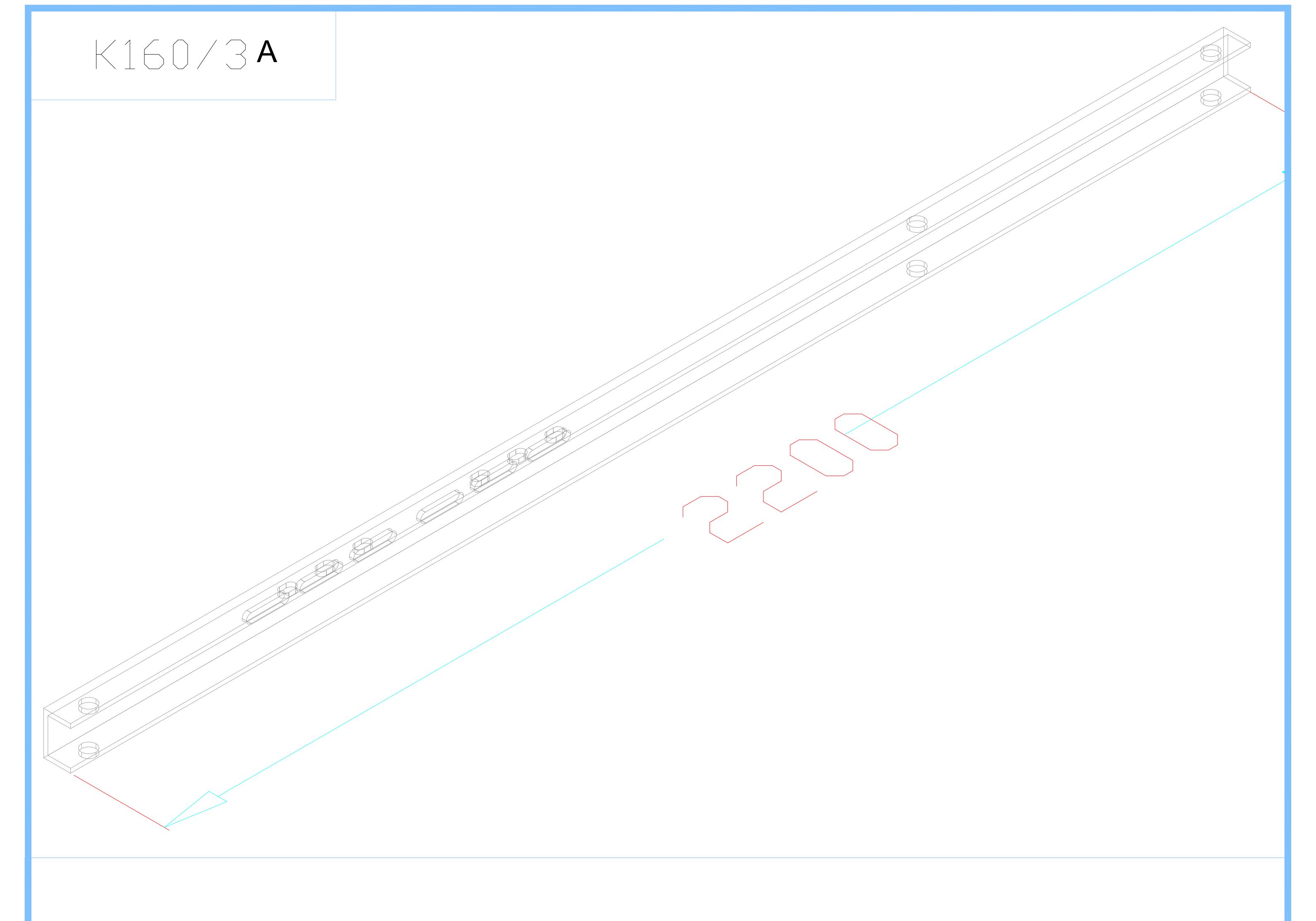


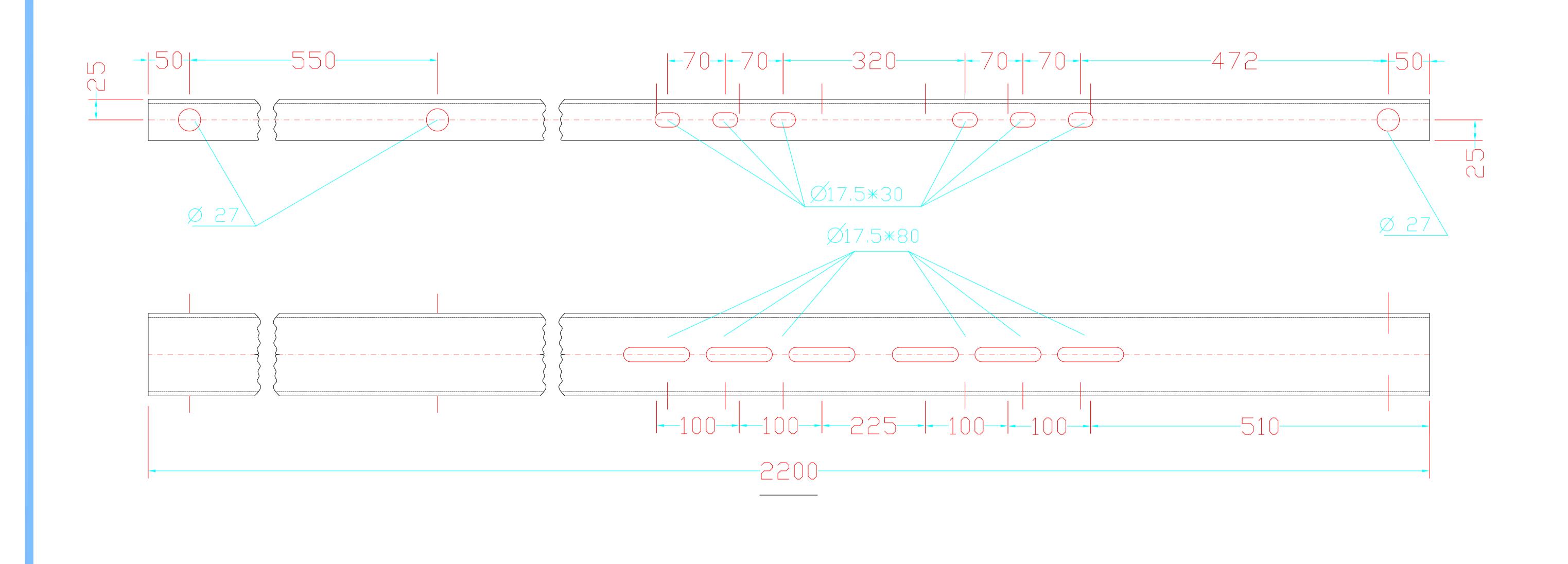


# Hot Galvanized Auxilliary Steel Arm K160/1

Weight Kg	Unit mm mesurment	Description	Quant.
4.6	850	L60*60*6	1

Note: All component must be Steel RST37.2 hot dip galvanized





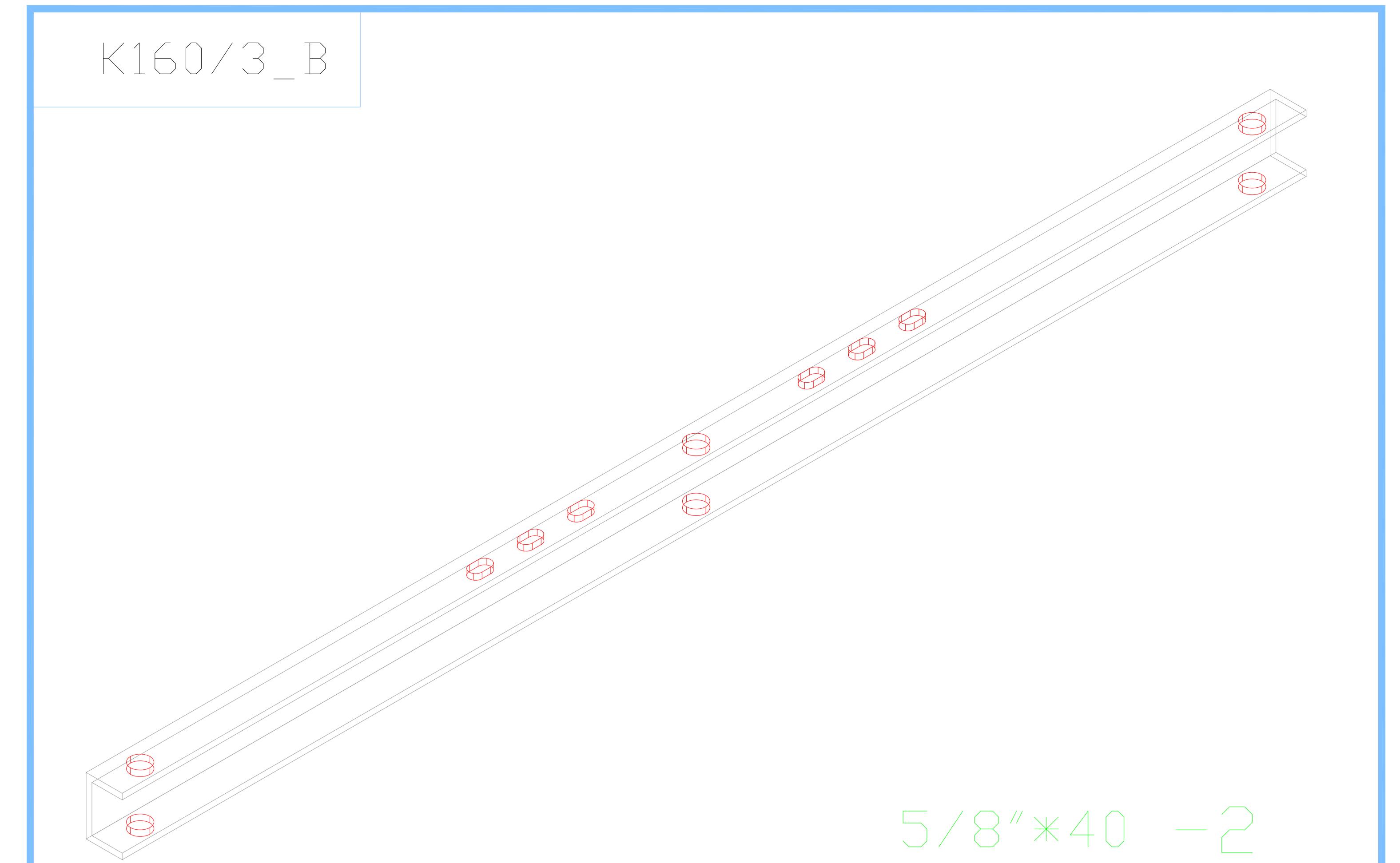


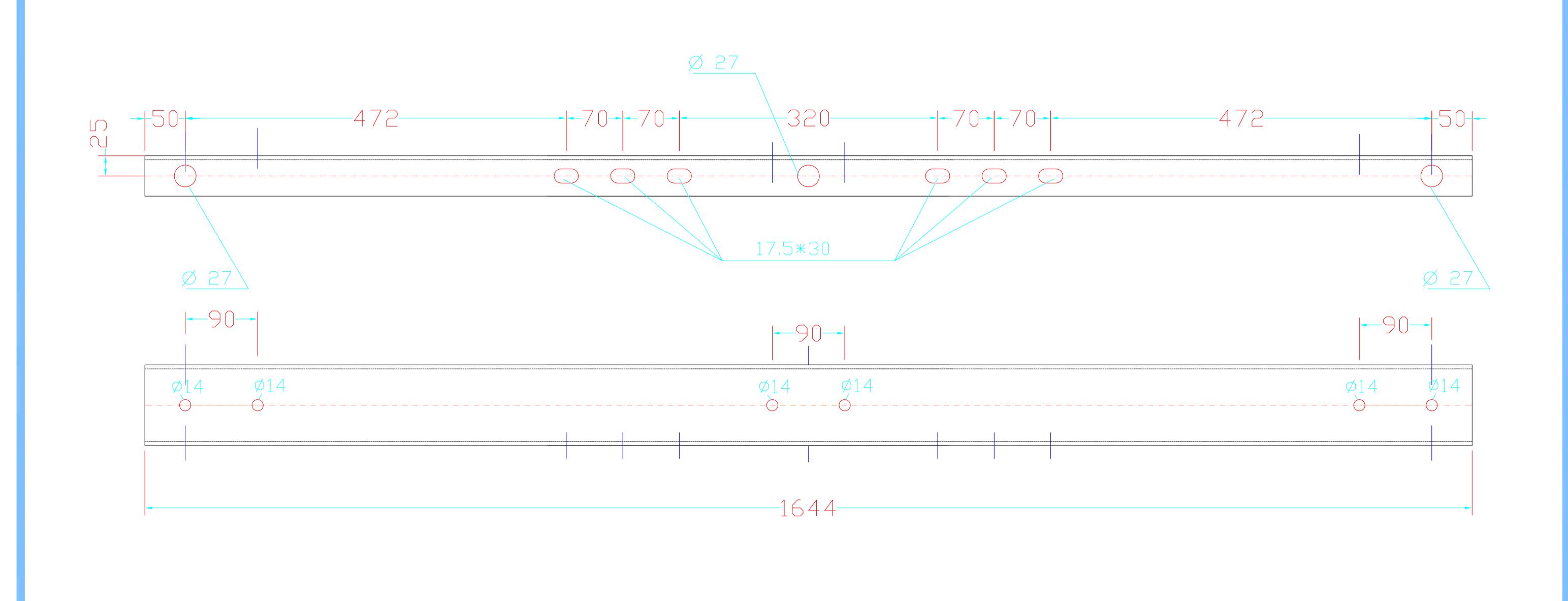
Hot Galvanized Auxilliary

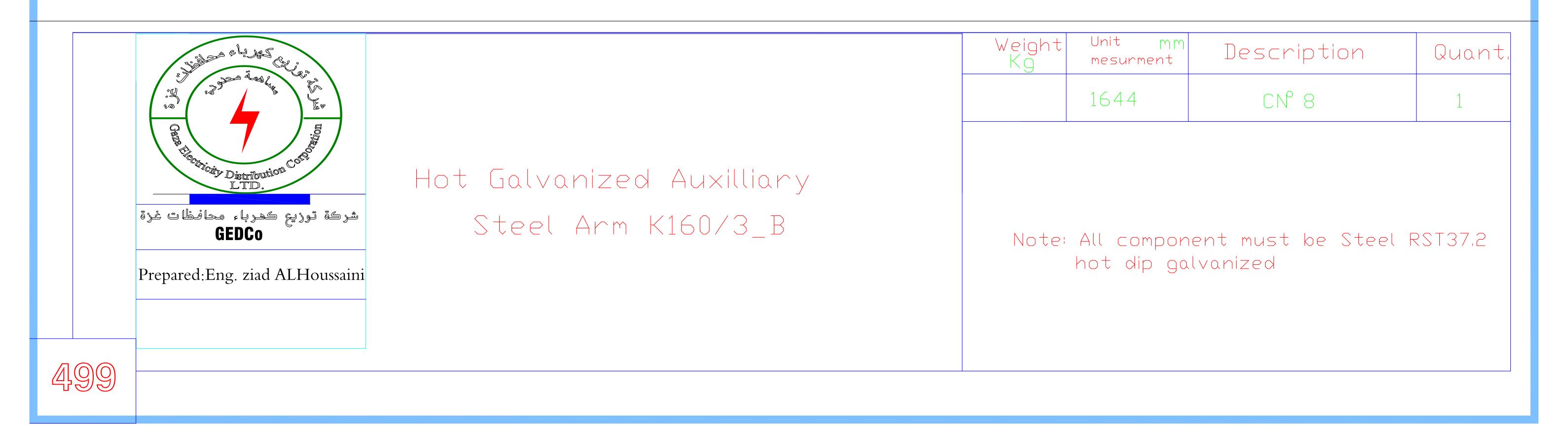
Steel Arm K160/3

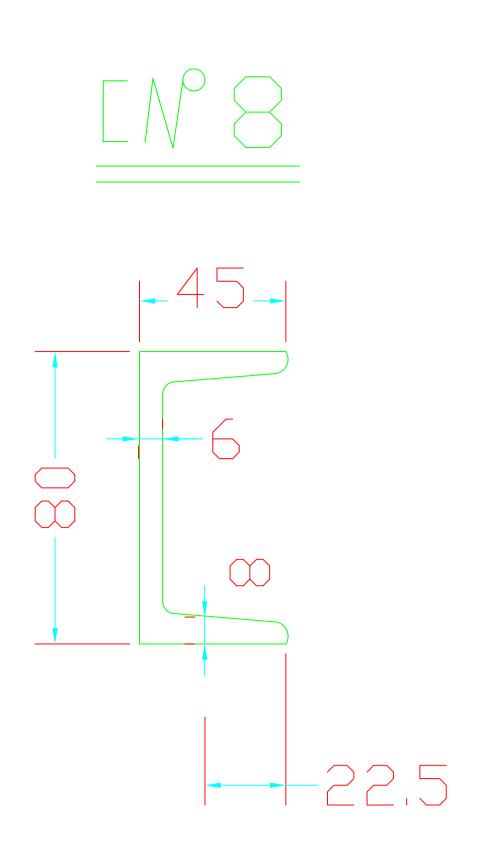
Weight Kg	Unit mm mesurment	Description	Quant.
19	2200	CNº 8	1

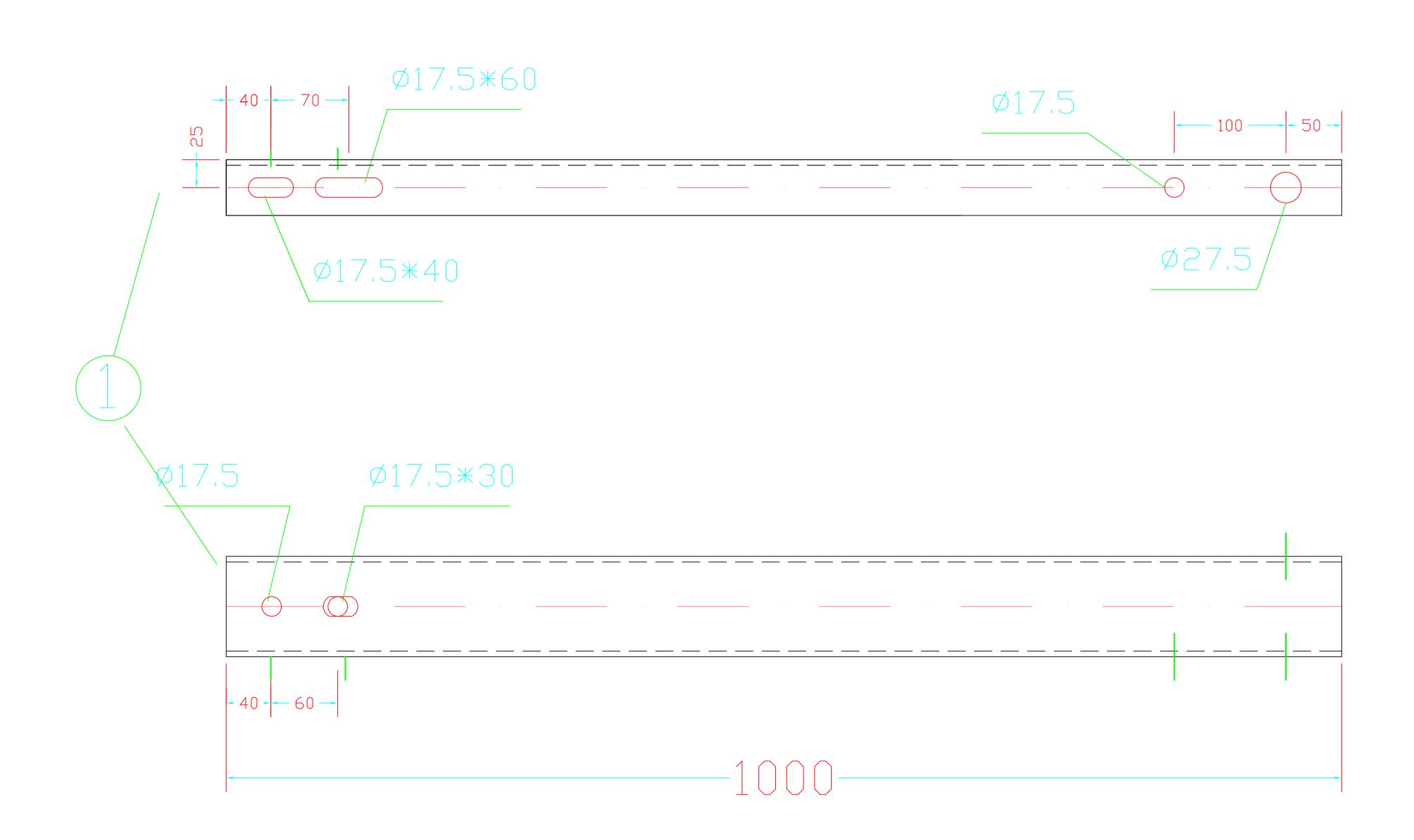
Note: All component must be Steel RST37.2 hot dip galvanized











Bolts Required for installation on the pole or Arm

2 UNC Bolt 5/8"\*40mm

2 square washer 5/8"

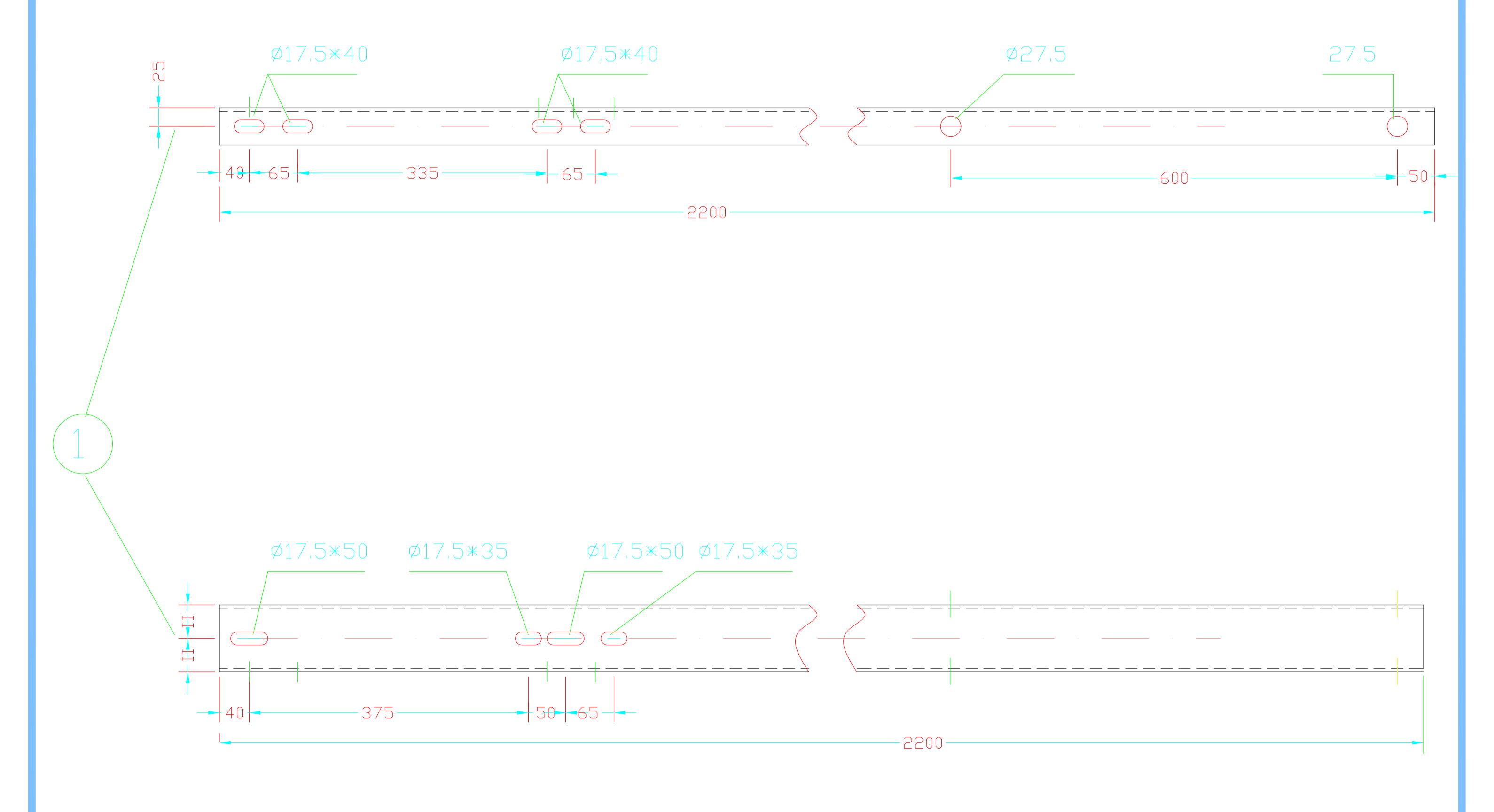
Note: All component must be Steel RST37.2 hot dip galvanized

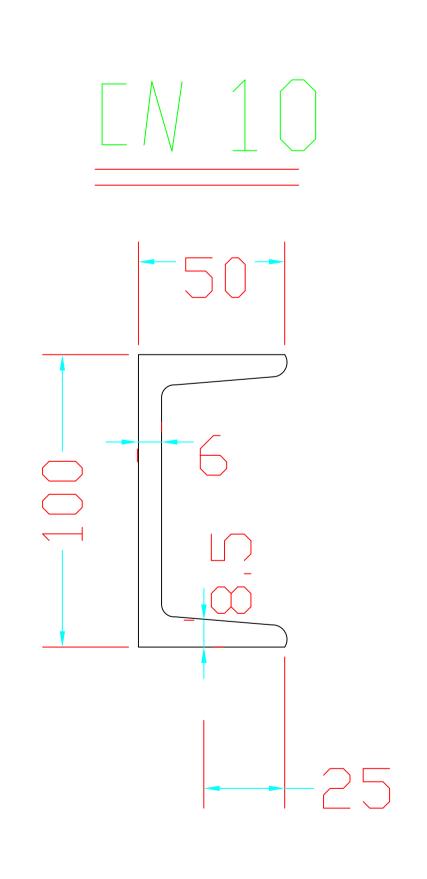


Weight Kg	Unit mm mesurment	Description	Quant.
8.6	1000	CN 8	1

Hot Galvanized Auxilliary

Steel Arm K166/1





Bolts Required for installation on the pole or Arm

2 UNC Bolt 5/8"\*40mm

2 square washer 5/8"

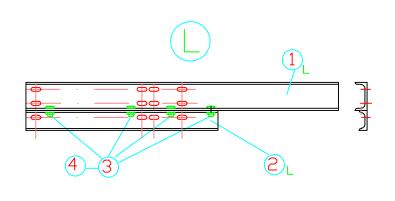
Note: All component must be Steel ST37.2 hot dip galvanized

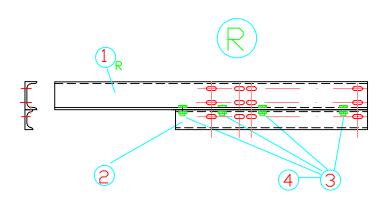
	Signification Confidential LTD.
<u> </u>	شرڪة توريع ڪھرباء محافظات <b>GEDC</b> o
Prej	oared:Eng. ziad ALHoussaini

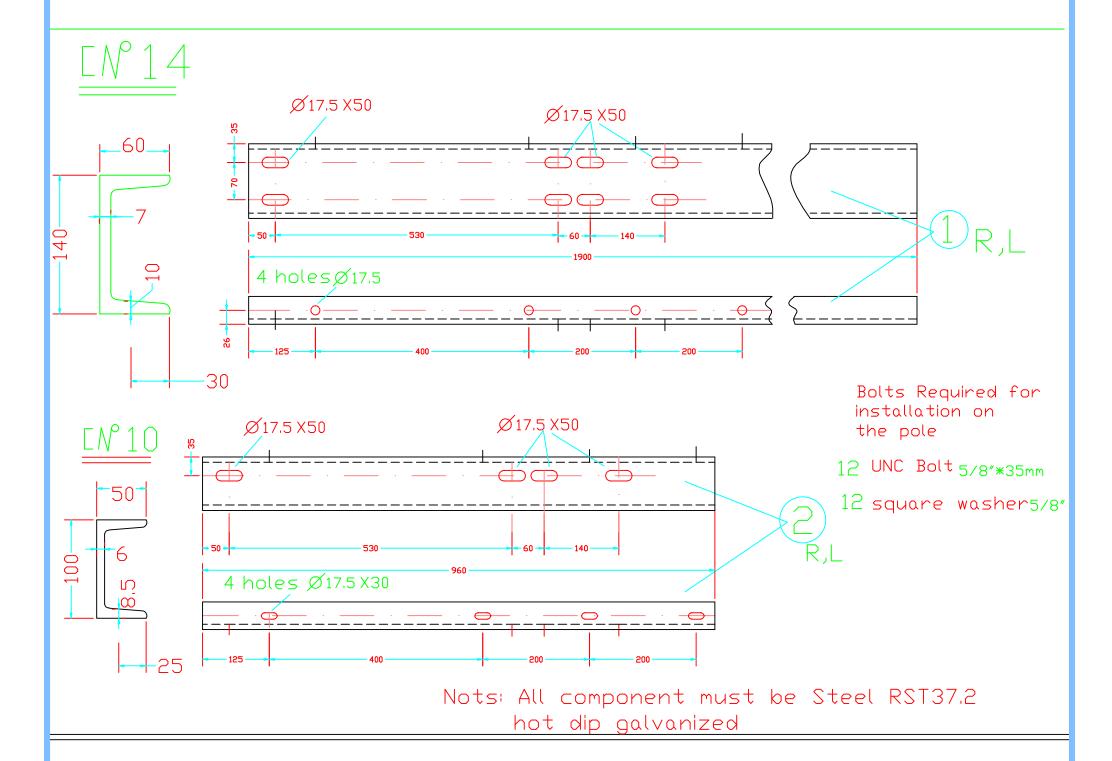
Weight Kg	Unit mm mesurment	Description	Quant.
23,3	2200	CN° 10	1

Hot Galvanized Auxilliary

Steel Arm K167









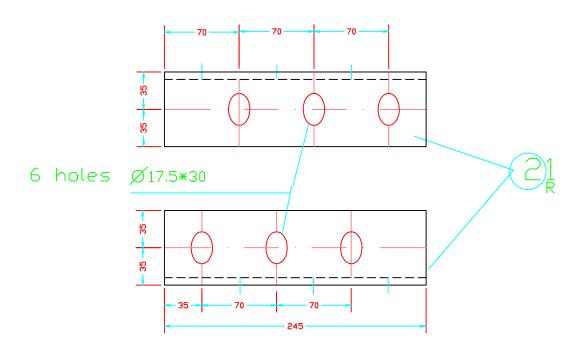
Prepared:Eng. ziad ALHoussaini

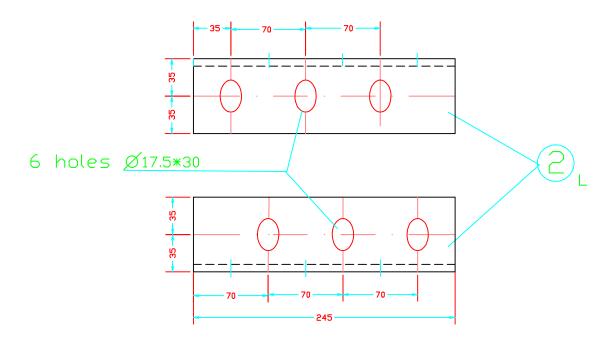
Checked By:Eng. Kamil Rabah

Transformer Arm K183

Weight K.g	Total MM mesurment	Unit mm mesurment	Description	Item	Quant
60.7	3800	1900	CN 14	1 <sup>R</sup> L	1+1
20.3	1920	960	CN 10	2 <u>R</u>	1+1
			UNC Bolt5/8″*45	3	8
			washer 5/8"	4	8

81 k.g Total Weight





Bolts Required for installation on the pole

12 UNC Bolt 5/8"\*35mm

12 square washer5/8"

Nots: All component must be Steel 37.2 hot dip galvanized

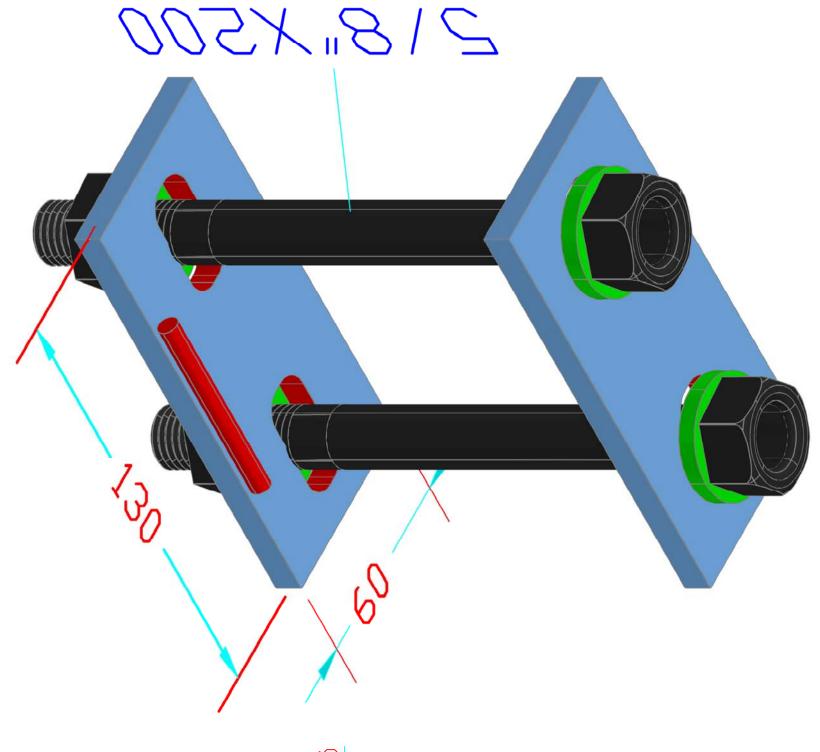


Checked By:Eng. Kamil Rabah

Auxiliary Transformer Steel Angles K183/1

ا تحوپا	ا پِا	ڒۅٳ

	Wieght kg	Total MM mesUrment	Unit mm mesurment	Description	Quant.	Item
) (	3.6	490	245	L70*70*7	2	2L
	3.6	490	245	L70*70*7	2	2R
	7.2	Total Weig	ht			



130

75

Ø17,5\*35

60

30

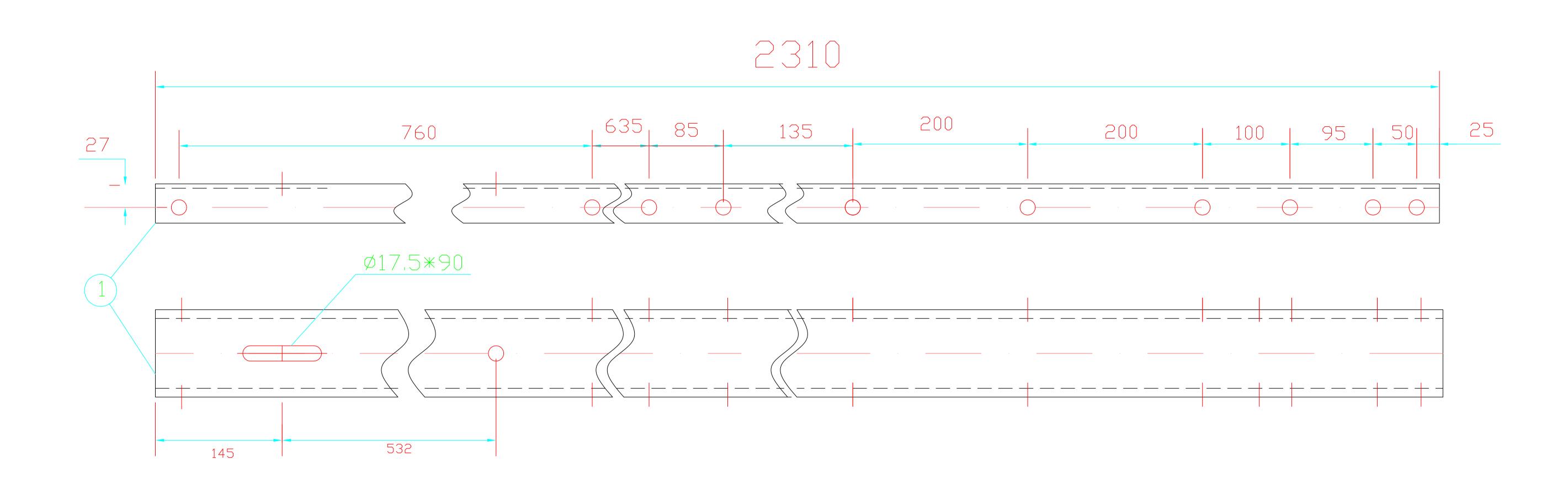
	120	260	Total MM Unit MM mesurment
200	60	130	Unit MM mesurment
UNC Bolt 5/8"	<b>Ø</b> 6	Plate   1260*8	Description
ω	Ŋ	Ľ	Item
N	Ŋ	Ŋ	Quan

Nots: All component must be Steel 37,2 hot dip galvanized

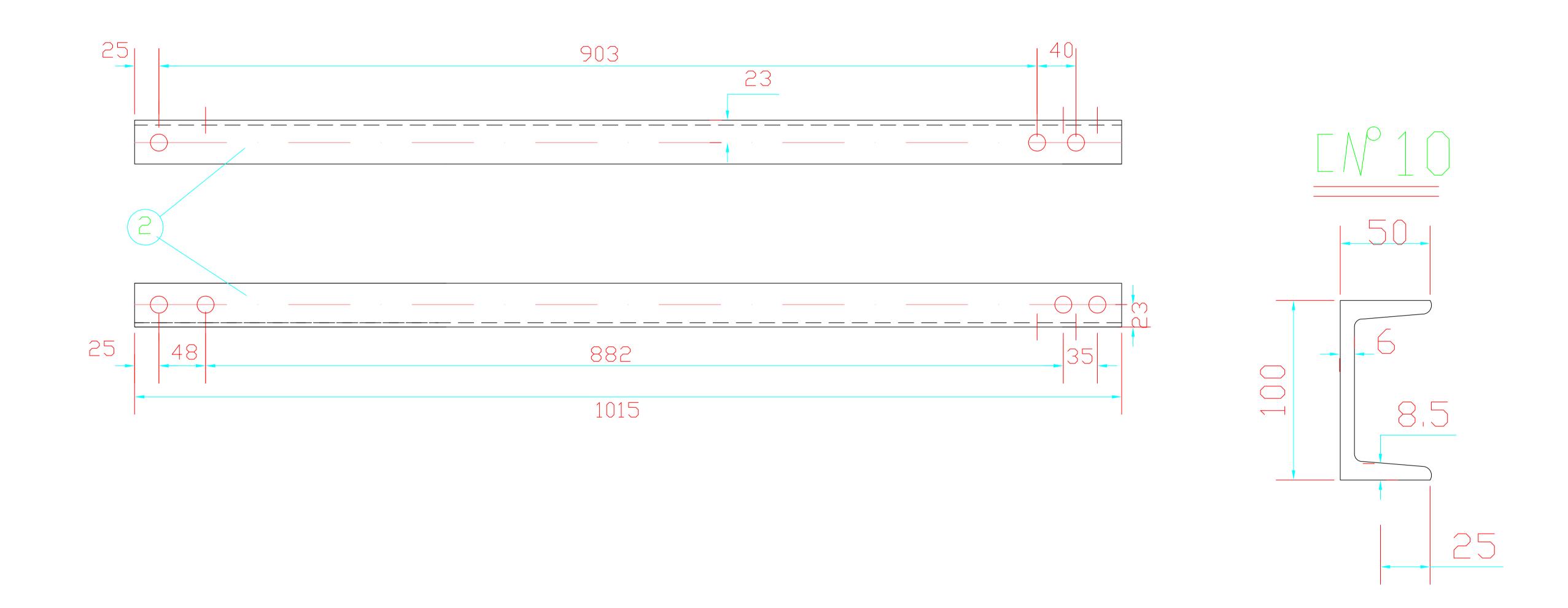


Checked By:Eng. Kamil Rabah

Transformer Clamp K188



All the holes is \$17.5



Bolts Required for installation on the pole

12 UNC Bolt 5/8"\*35mm
10 Ring washer 5/8" 2 square washer5/8"

Note: All component must be Steel 37.2 hot dip galvanized



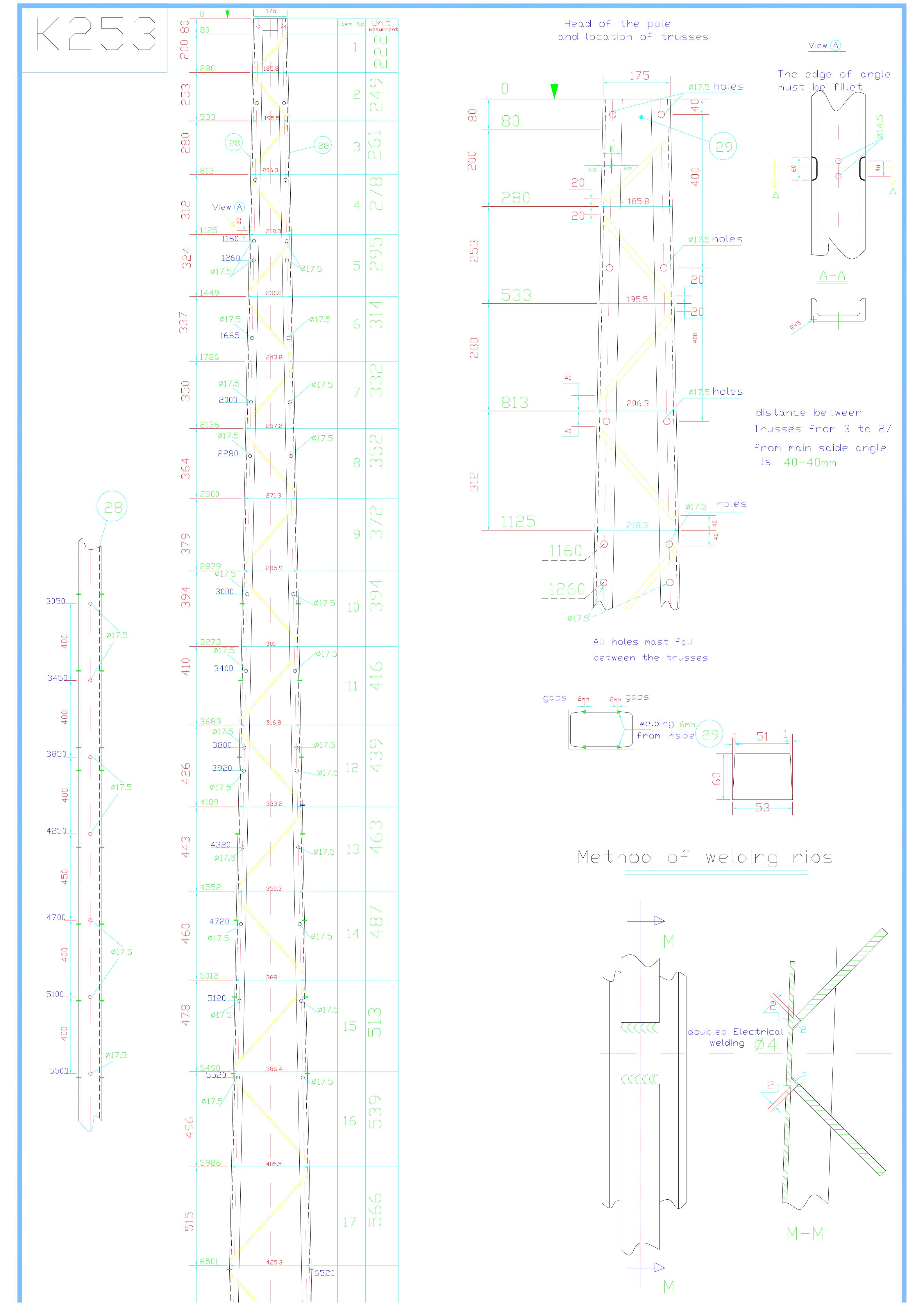
Prepared:Eng. ziad ALHoussaini

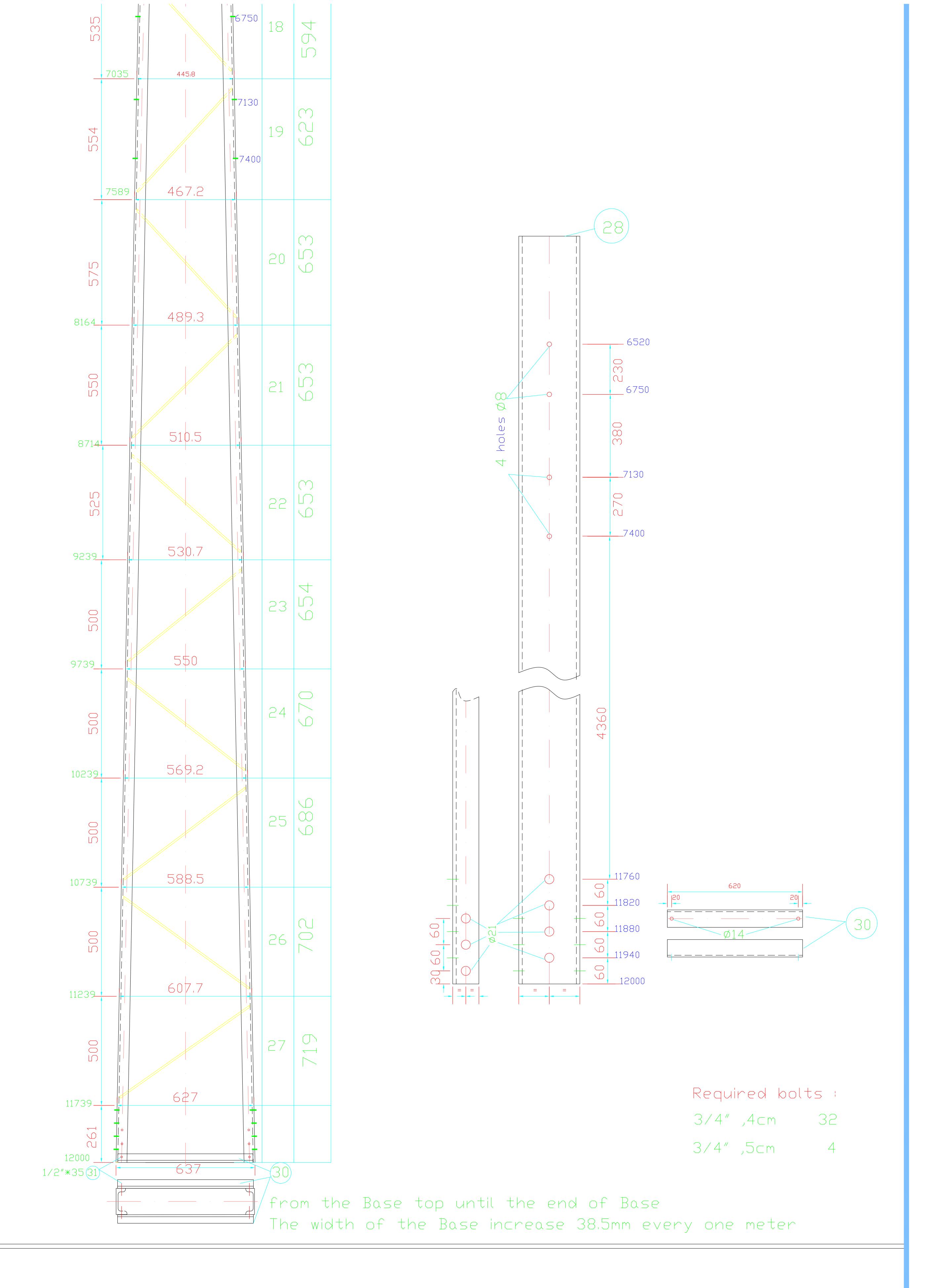
Checked By:Eng. Kamil Rabah

Hot Galvanized L.V Steel Pole

Arm, K202

	Weight Kig	Total MM mesurment	Unit mm mesurment	Description	Item	Quant
	48	4620	2310	CM 10	1	2
	13.6	4060	1015	StrutL45*45*5	2	4
> -						
	62k.c	Tot	al Weigh	<u></u>		





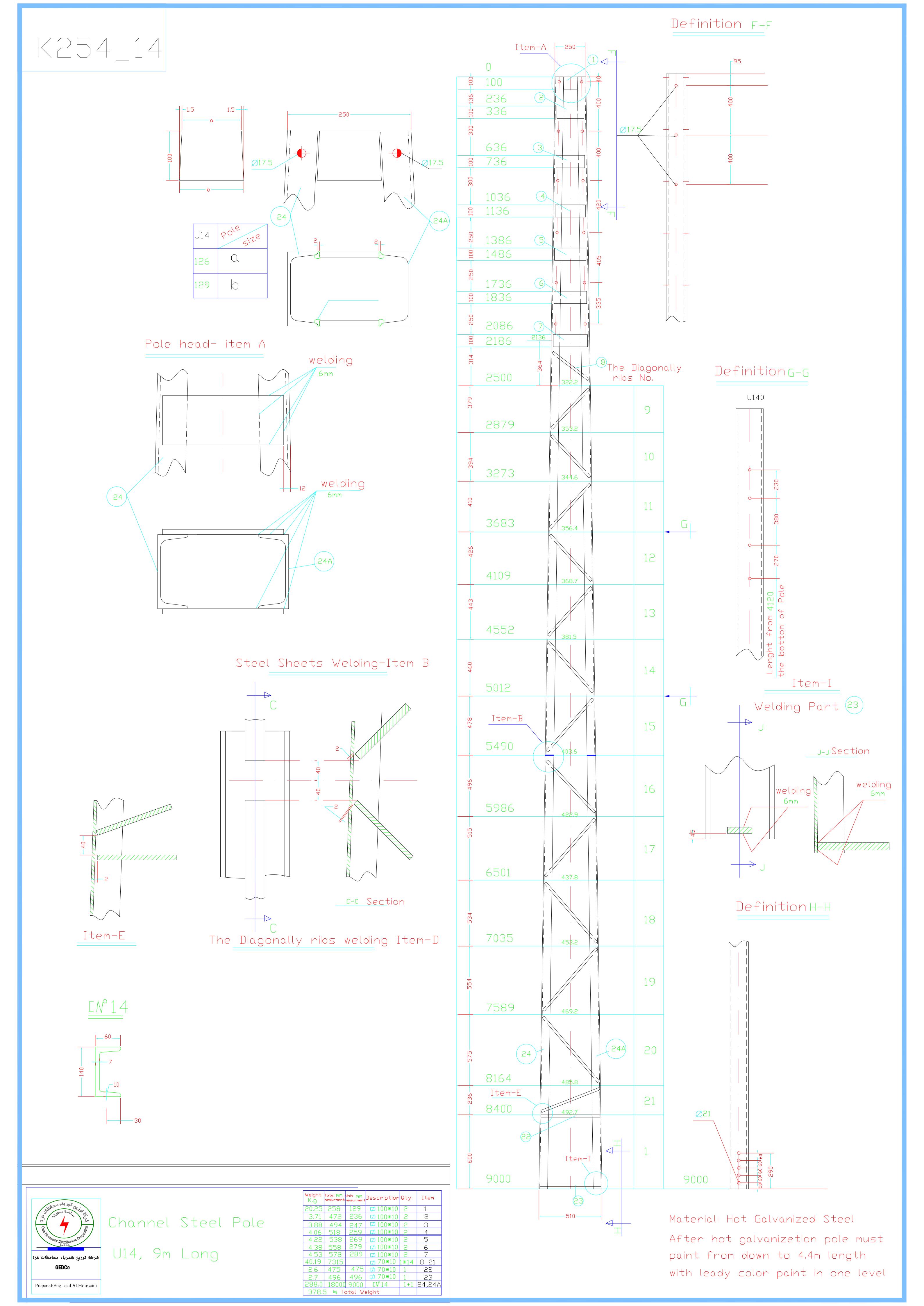


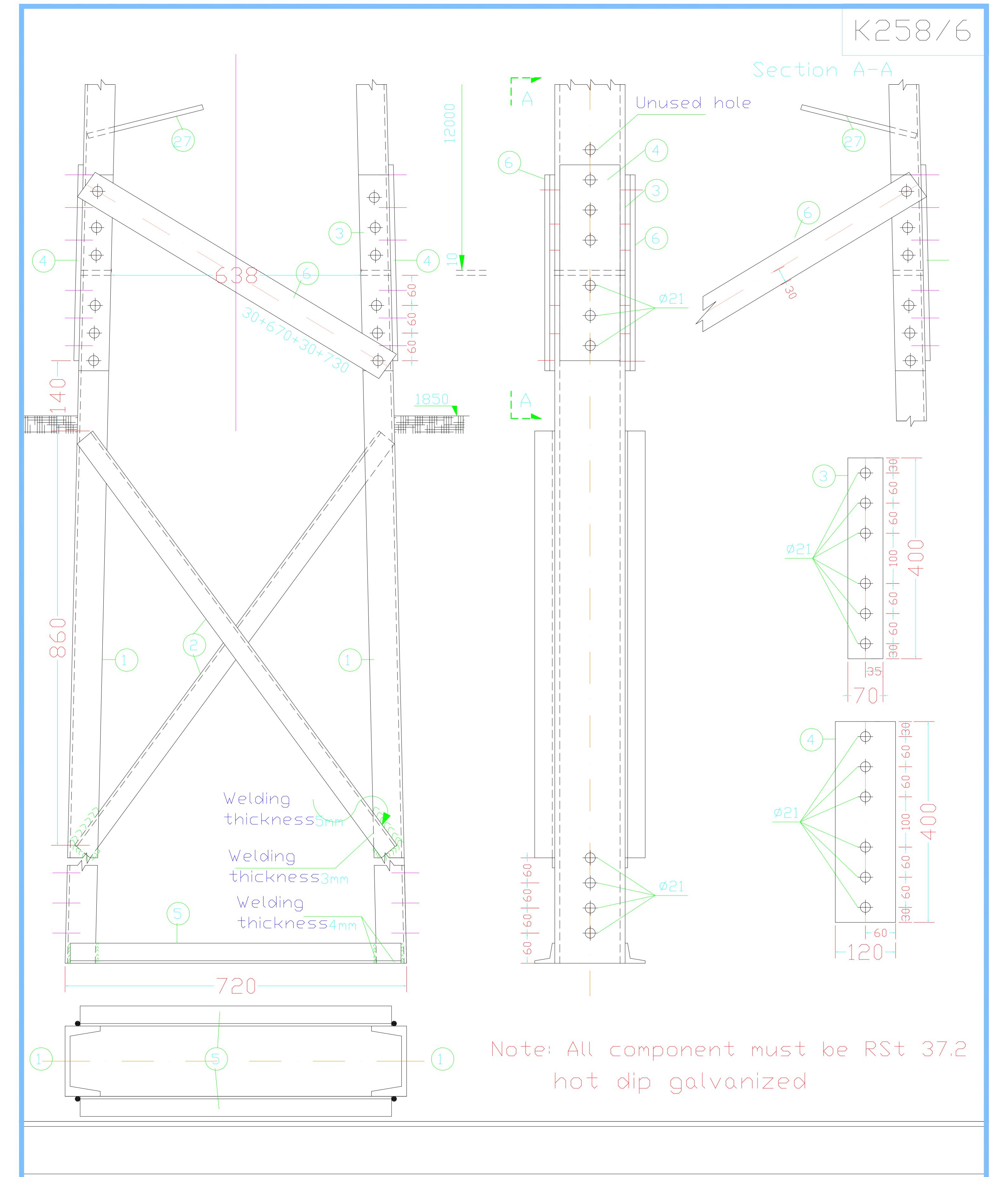
Checked By:Eng. Kamil Rabah

## M.V. Channel Steel Pole U14 long 12m

Prepared: Eng. ziad ALHoussaini Note: All component must be Steel 37.2 hot dip galvanized

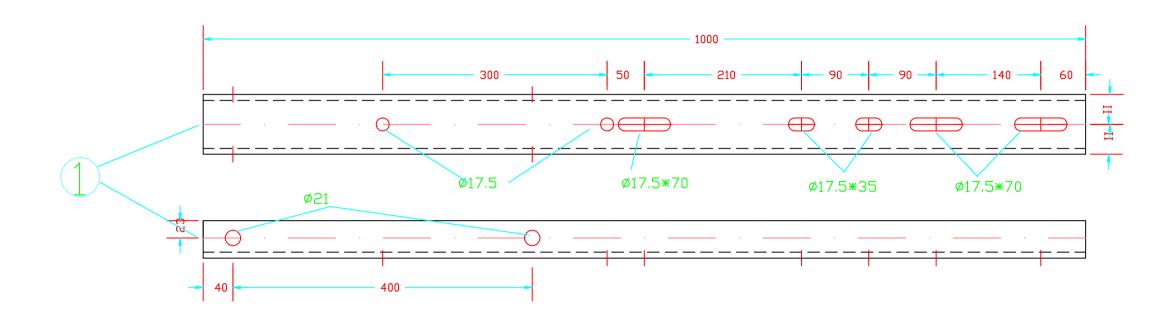
Wieght	mesurment Total mm	mesurment Unit MM	Description	Quant	Item
71.6	13124	L	Ø70*10	1*27	1-27
384.	2 24000	12000	U14	2	28
0.4	106	53	Ø60*8	2	29
3	1240	620	L40*40*4	2	30
		JNC Bolt	: 1/2"*35	4	31
	V	vasher	1/2"	4	32
Ring washer1/2"					33
460Kg	Total W	/ieght			

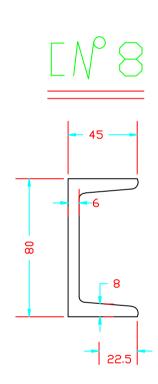






K271-100

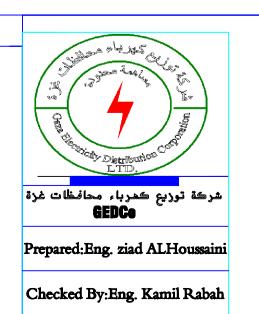




Bolts Required for installation on the pole

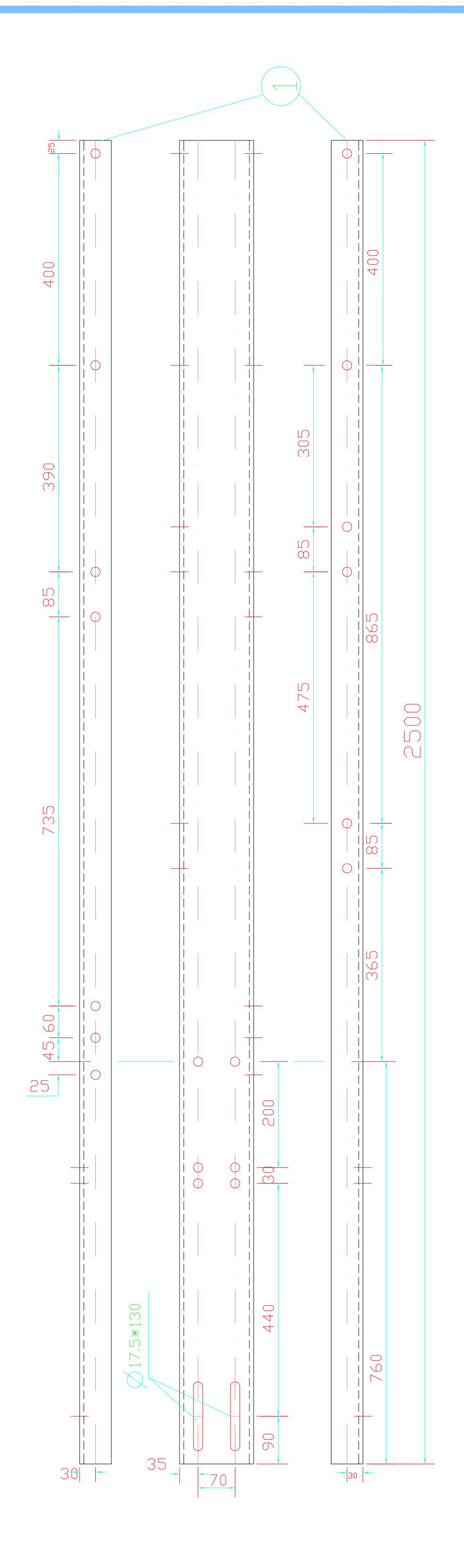
- 2 UNC Bolt 5/8"\*40mm
- 2 square washer 5/8"

Note: All component must be Steel 37.2 hot dip galvanized



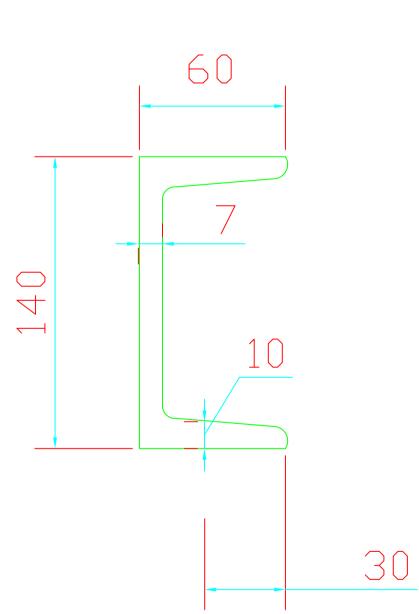
Hot Galvanized L.V Steel Pole Arm 100cm Long , Single

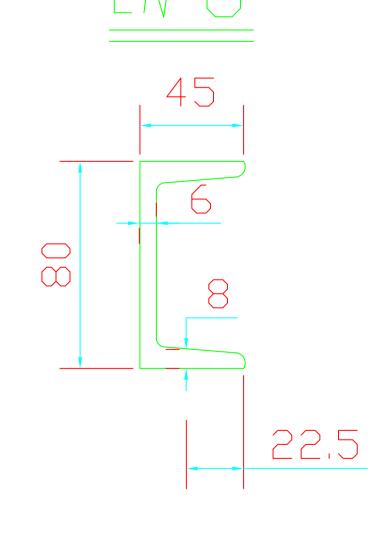
Weight Kig	Unit mm mesurment	Description	Quant.	
9	1000	CN 8	1	



Bolts Required for installation on the pole

- 8 UNC Bolt 5/8"\*40mm
- 8 square washer 5/8"
- 4 UNC Bolt 5/8"\*35mm
- 4 Ring washer 5/8"





Note: All component must be Steel RST37.2 hot dip galvanized

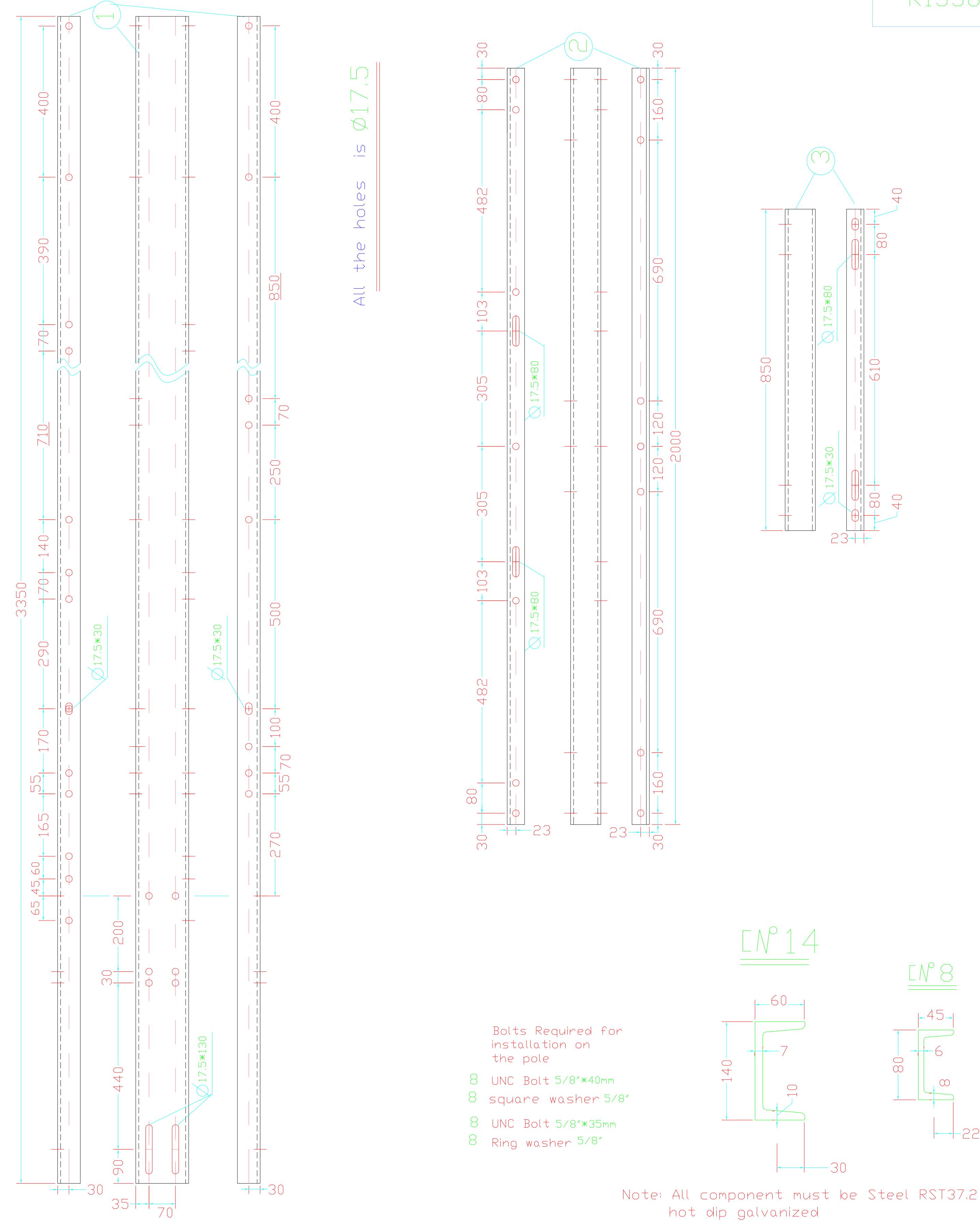


Hot Galvanized Transformer
Isolator Side Arm K1555

2.5m long

Weight K.g	Total MM mesurment	Unit mm mesurment	Description	Item	Quant.
80	5000	2500	CN 14	1	2
34.6	4000	2000	CN 8	2	2
114.6	Total Weight				

Prepared:Eng. ziad ALHoussaini

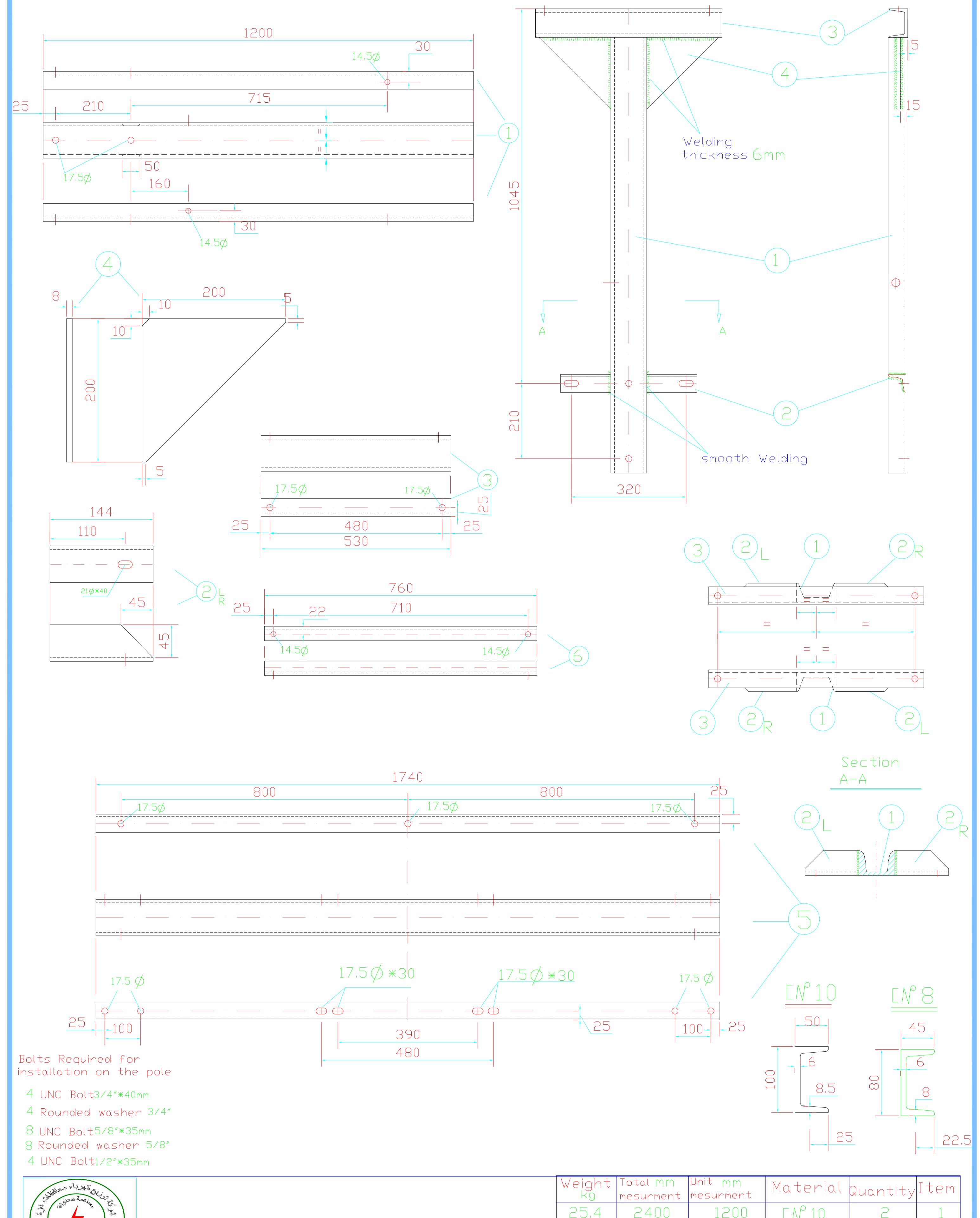




Hot Galvanized Transformer Isolator Side Arm K1558 3.35m long

K.g	mesurment	mesurment	Description	Item	Quant.
107.2	6700	3350	CN 14	1	2
34,5	4000	2000	CN 8	2	2
7,3	850	850	CN 8	3	1
149Kg	Total Weigh	t			

+22.5

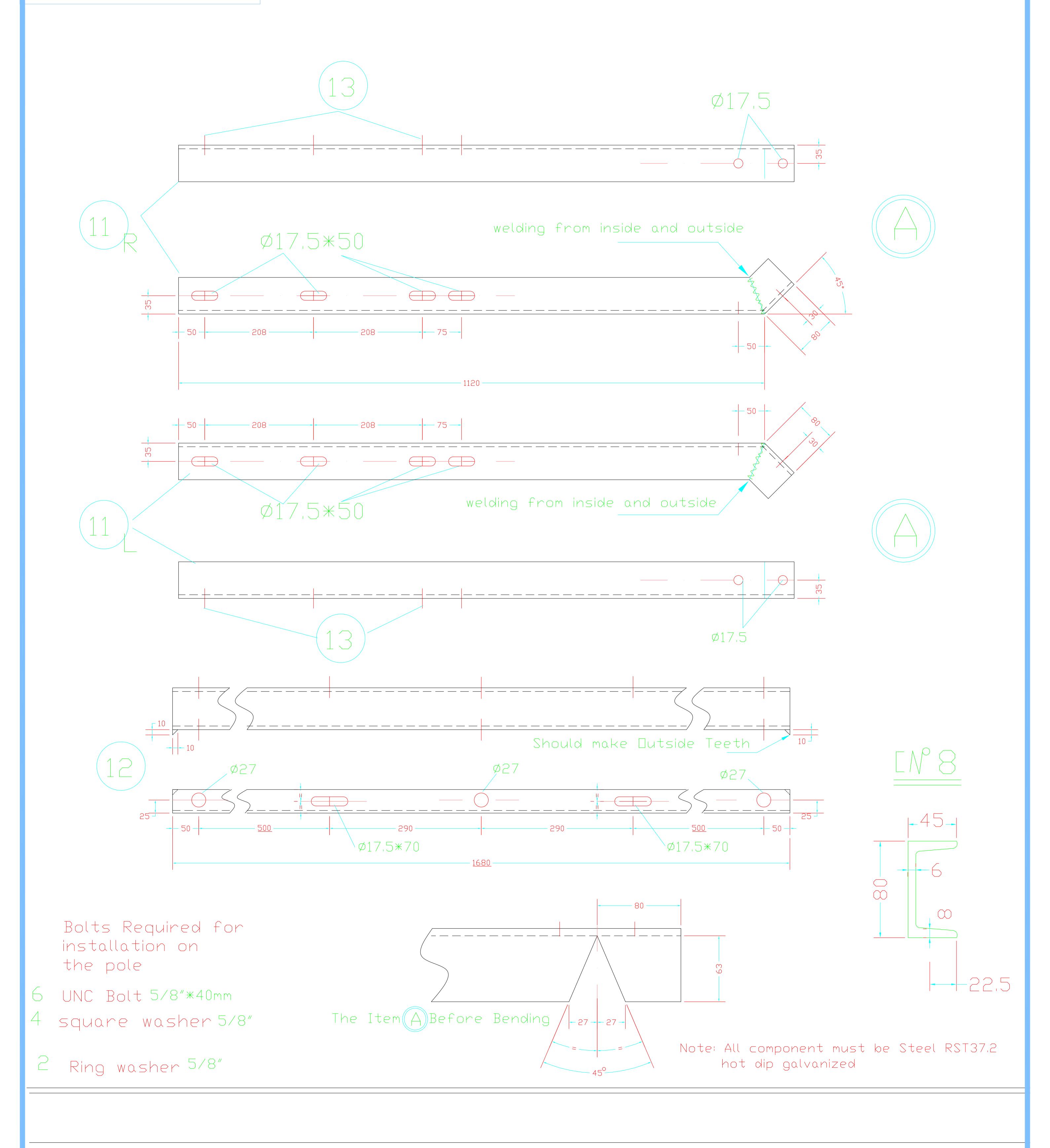




Hot Galvanized Line Isolator Central Arm K1562 Top

Note: All component must be Steel 37.2 hot dip galvanized

Kg	mesurment	mesurment		x orarror v y	
25.4	2400	1200	[ N° 10		1
2.2	576	144	L50*50*5	2R+2L	2 R
9.2	1060	530	[ \( \sqrt{0} \)	2	3
5.3	420		ф 200 <b>ж</b> 8	4	4
30.0	3480	1740	[ N° 8	2	5
3.2	1520	760	L40*40*4	2	6

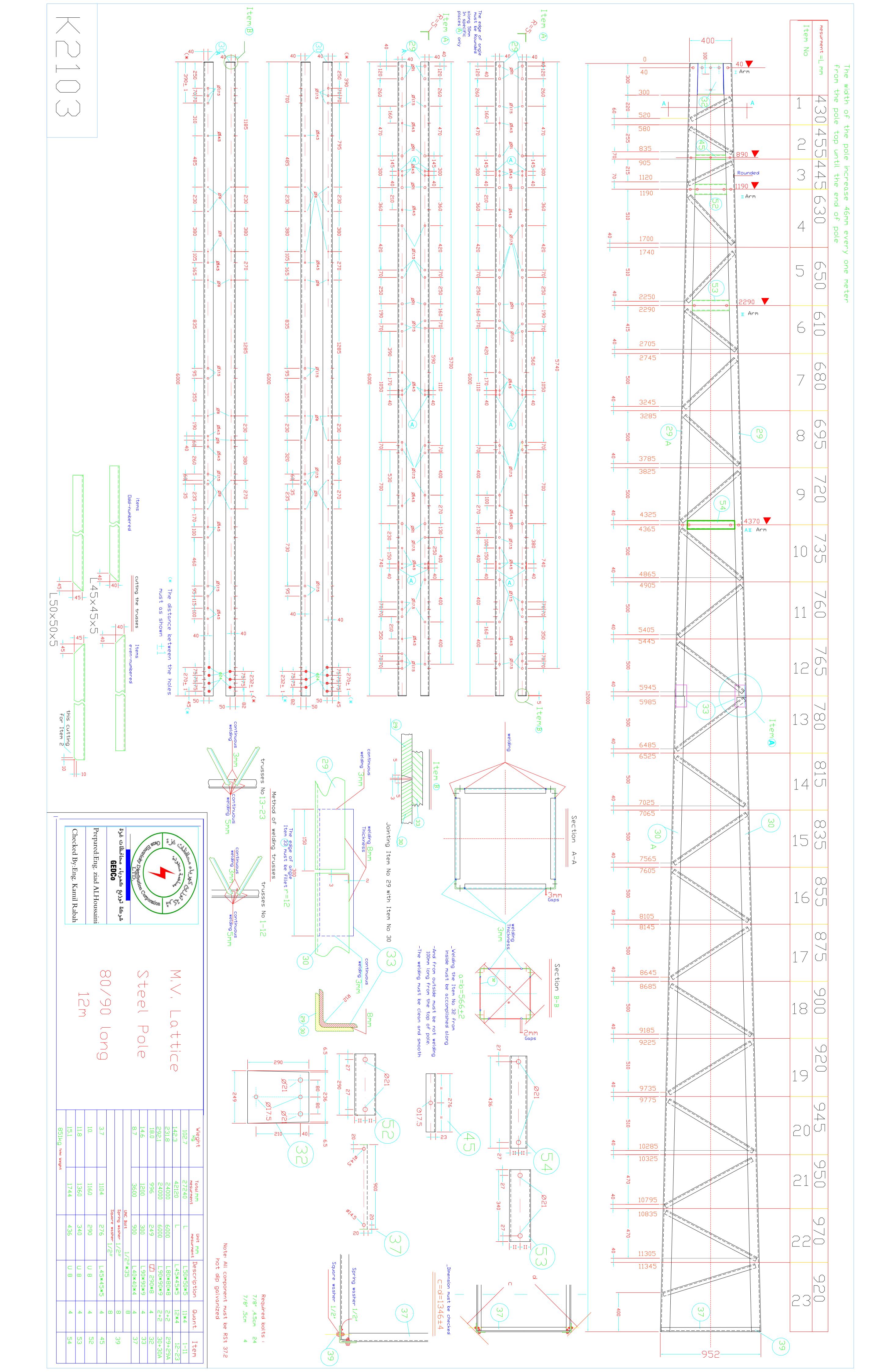


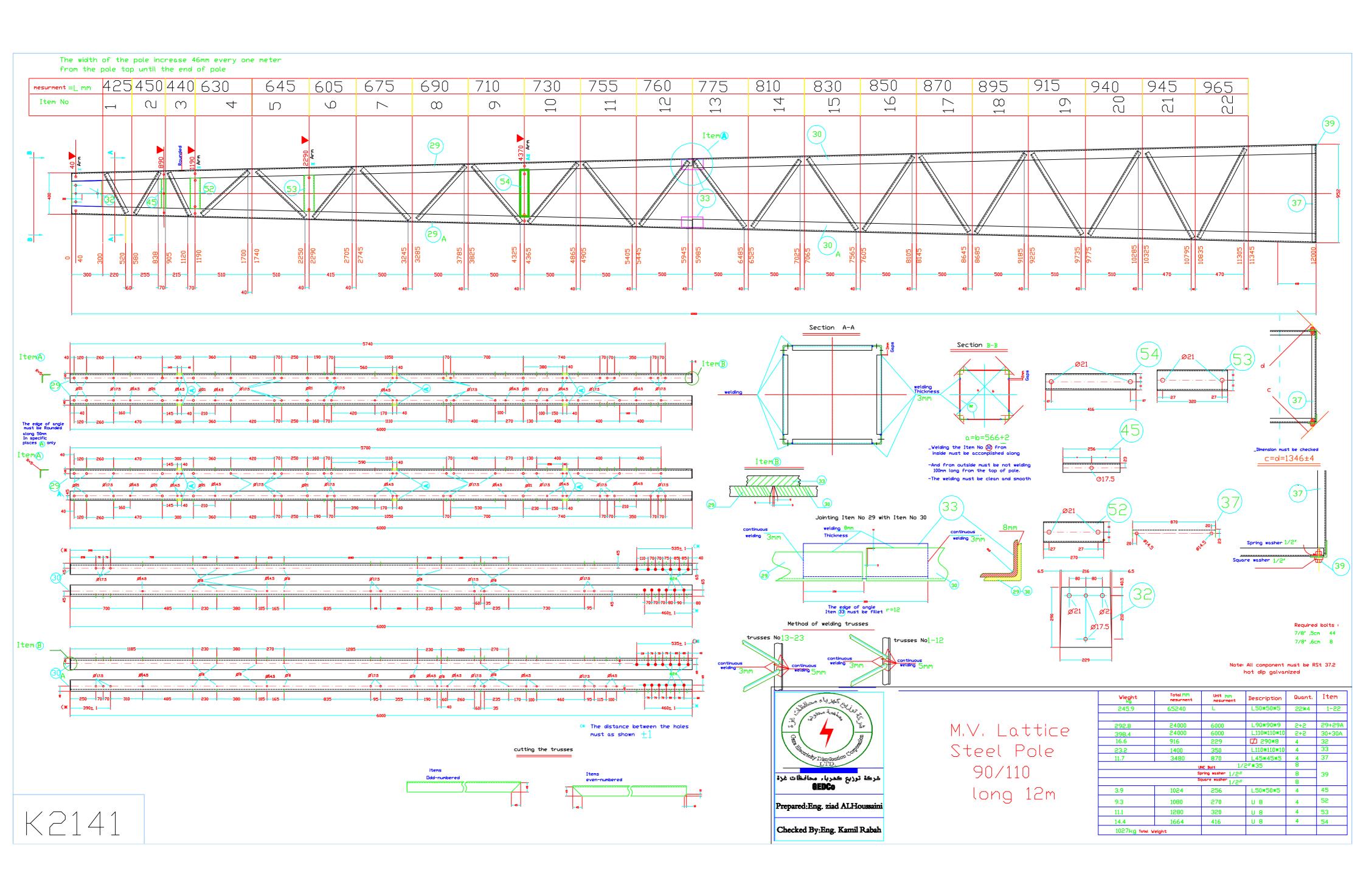
		Weight Kg	Total MM mesurment	Unit mm mesurment	Description	Item	Quant.
		17.7	2400	1200	L70*70*7	11 <sub>R</sub>	1R+1L
Distribution LTD.		14.5	Kg	1680	CN° 8	(12)	1
قَرَدُ تَورَيع كَرِباء مَافَظُات غَرْة <b>GEDC</b> o							
Prepared:Eng. ziad ALHoussaini	AUXILLONY				Y K1743		

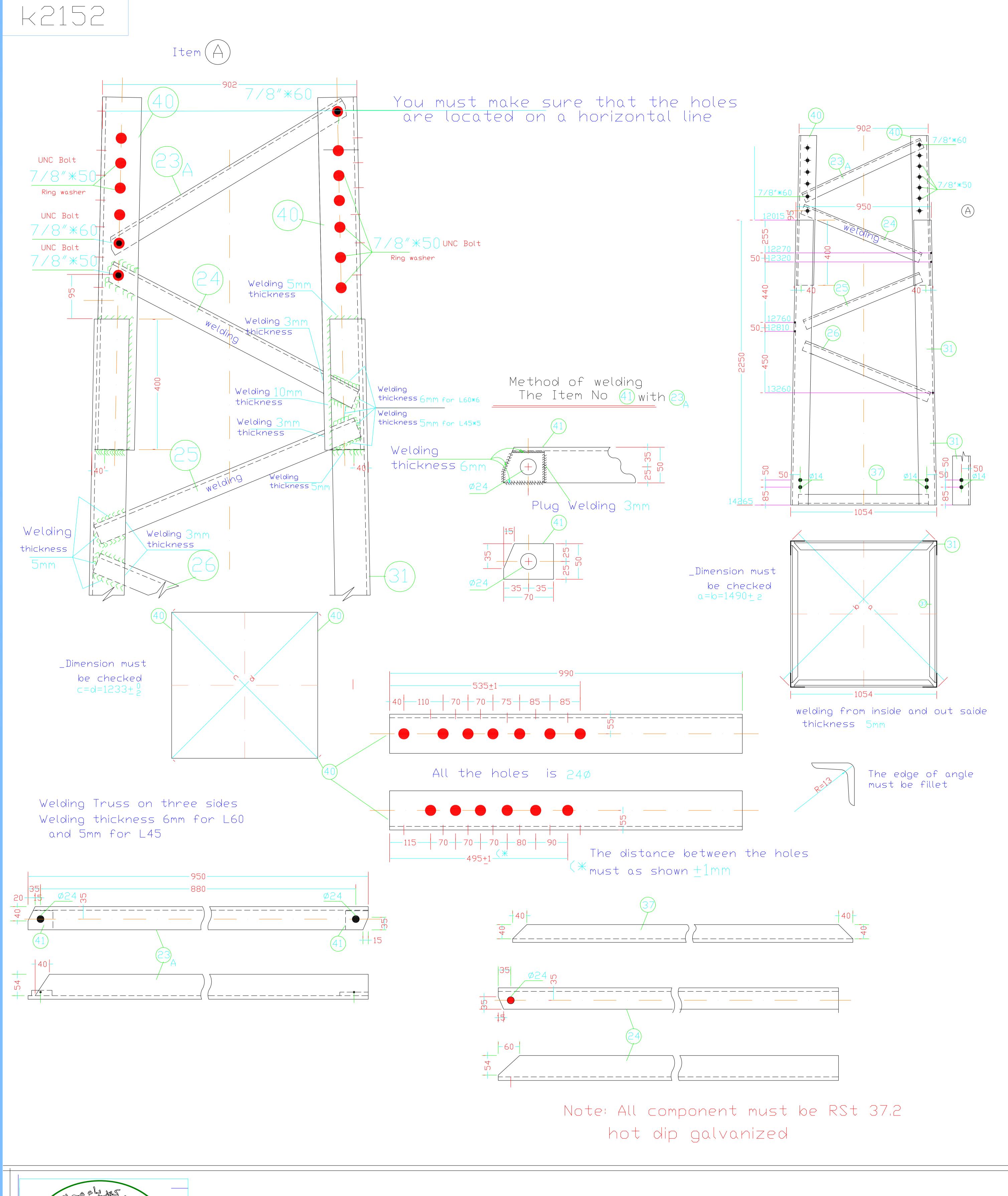
+ Z 0 700-485 <del>- Rou</del>nded 1190 -230-\_\_\_\_  $\rightarrow$ 1700 1740  $\leftarrow$ <u></u> О 2250 2290 **V**  $\bigcup_{i=1}^{n}$ 2290 ∭ Arm 6 2705  $\leftarrow$ 2745  $\nearrow \bigcirc$ 5 8 5 35  $\bigcup_{i=1}^{n}$ 355 3245 3285 230 4 629 →→<  $\rightarrow$ 320 3785 pole 3825  $\bigcap$  $\langle$ 4325 4365 AI Arm 730 3 4865 4905 5405 5445 5945 5985 tem ♠ -290-6485 6525 14 0 500-269 7025 7065  $\begin{pmatrix} 30 \end{pmatrix}$ 30 A 500-45 52 53 7565 7605 Prepared:Eng. ziad ALHoussaini Checked By:Eng. Kamil Rabah Section 8105 GEDCo No 29 8145 with Item A-A8645 8685 No 30 this cutting for Item 2 500 18 Gaps Gaps 9185 70/80 long 12m Steel 9225 Lattice 9735 Pole 9775 And from outside must be not welding 100mm long from the top of pole.
The welding must be clean and smooth 10285 Section No 13-23 Method a=b=566+2

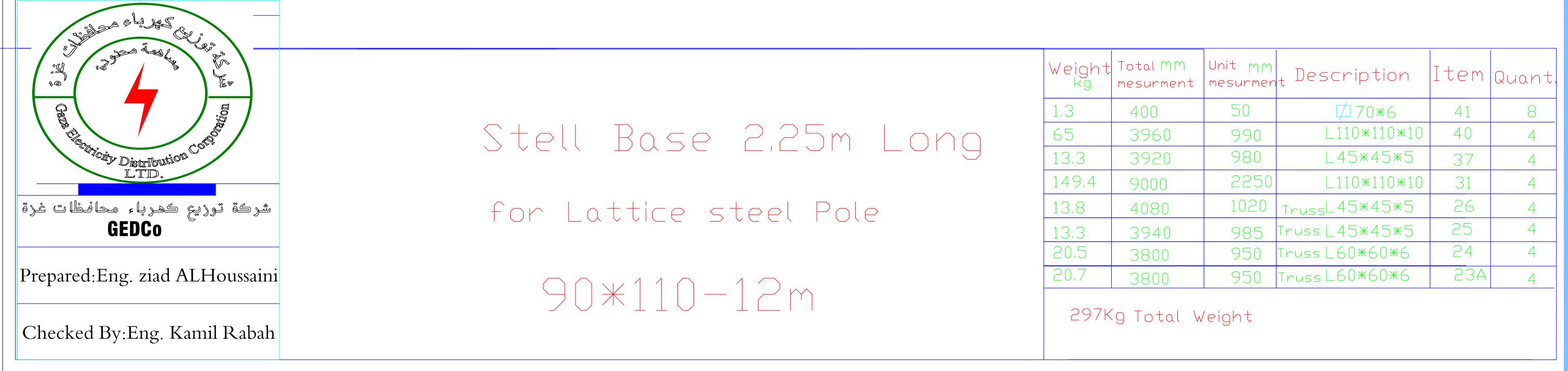
Item No 32 from

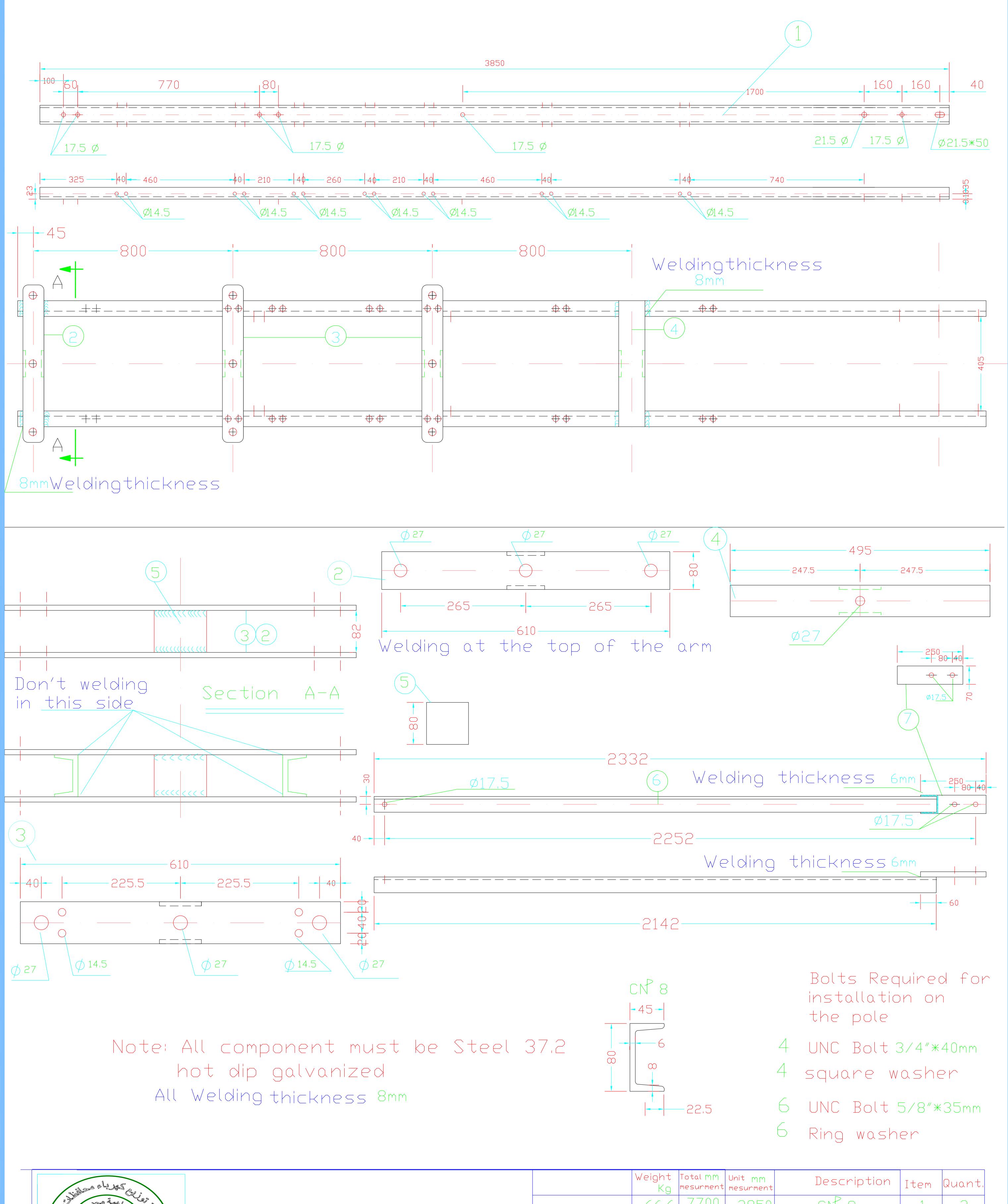
be accomplished along 470-B-B 10795 elding trusses 10835 (<del>L</del>) trusses No1-12 470-11305 11345 All component must be hot dip galvanized 370  $\left(3\right)$ 39 on must be checken C=0=1346+4RSt 27 1/2" 37.2

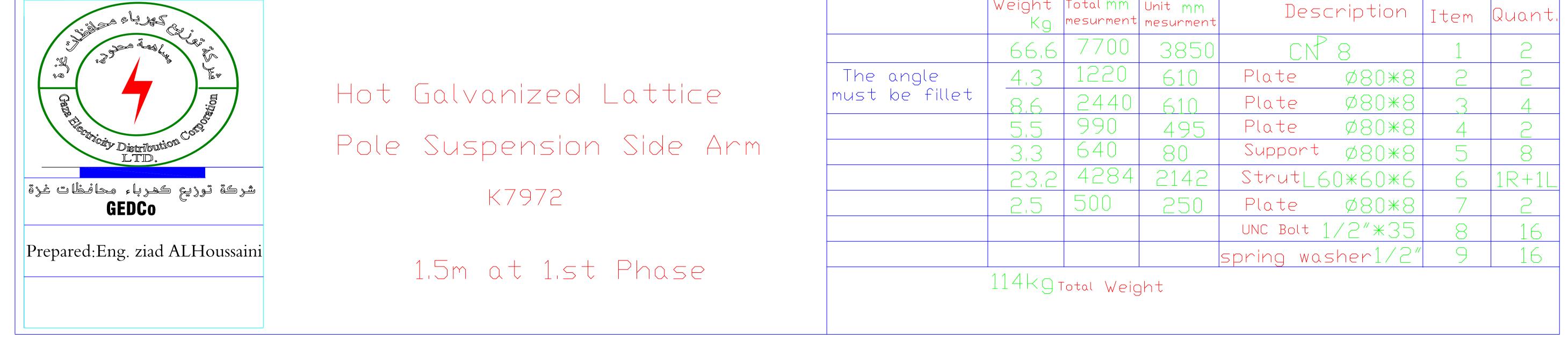


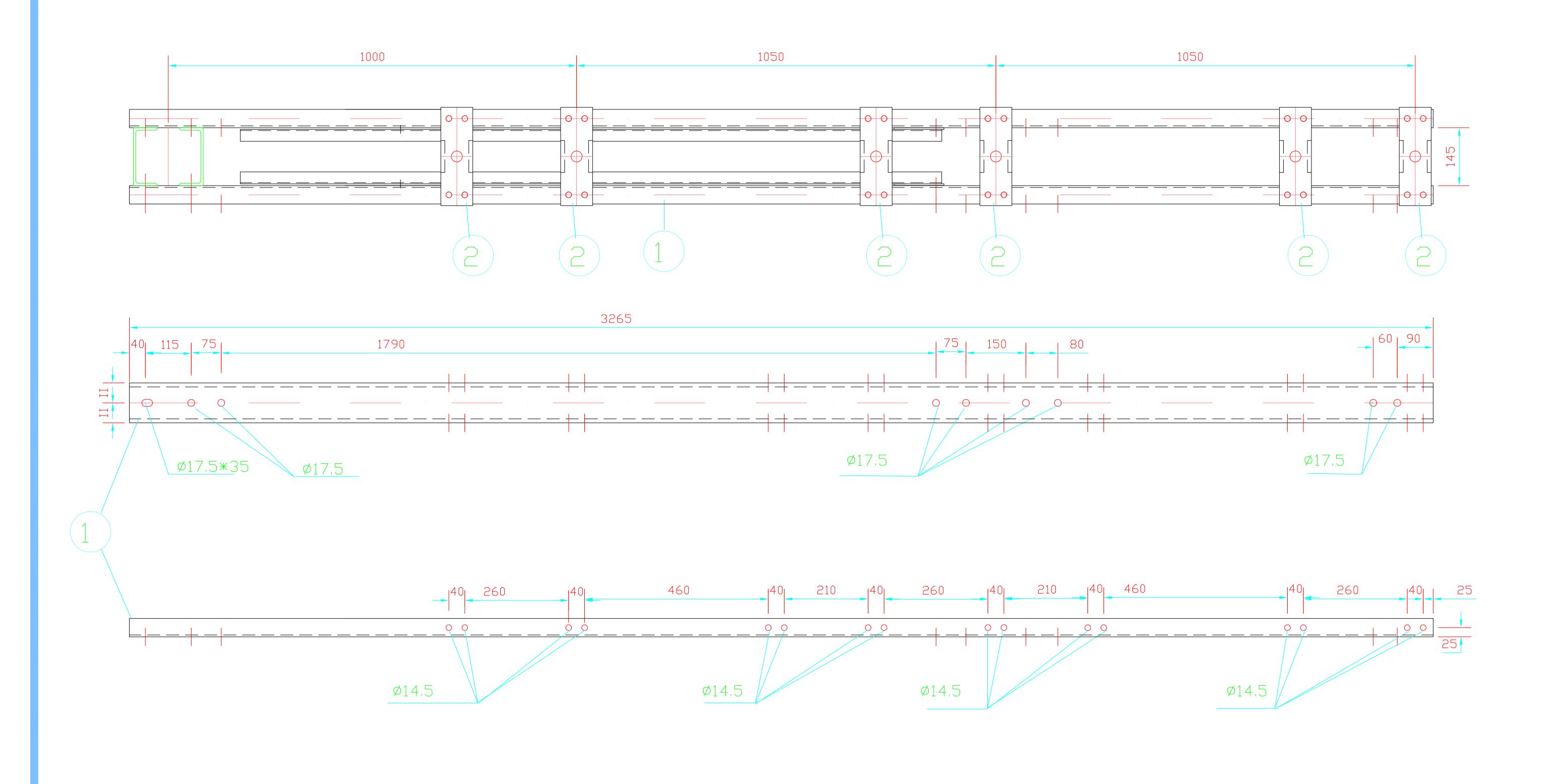


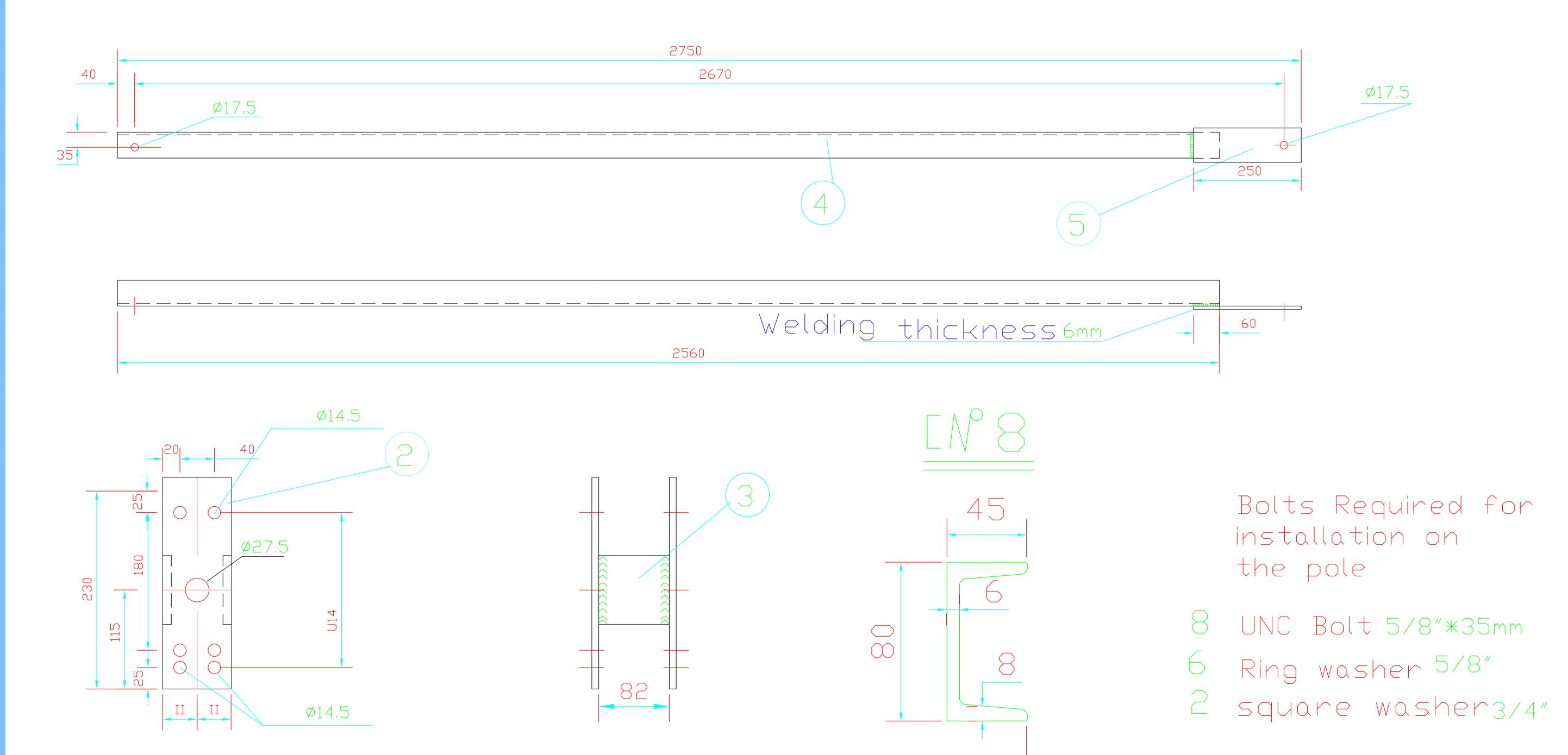












Note: All component must be Steel 37.2 hot dip galvanized All Welding thickness 8mm



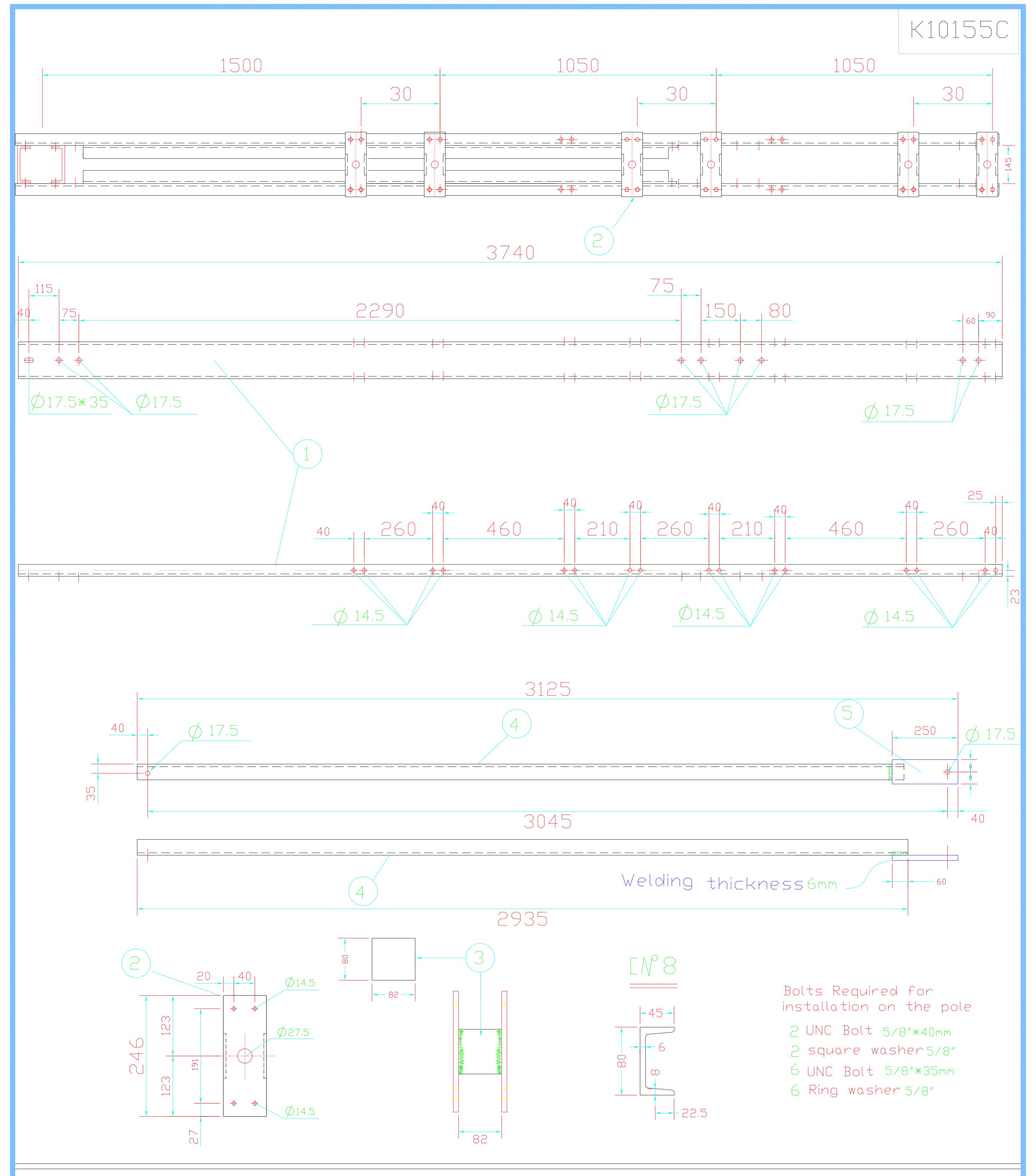
Hot Galvanized C.S.P Suspension Side Arm K10045C

1m at 1.st Phase

	' ' '	Unit mm mesurment	Description	Item	Quant.
56.4	6530	3265	[	1	2
13.8	2760	230	Plate Ø80*8	2	12
4.8	960	80	Support Ø80*8	3	12
27,8	5120	2560	StrutL60*60*6	4	1R+1L
2.5	500	250	Plate Ø80*8	5	2
			UNC Bolt 1/2"*30	6	48
			Spring washer 1/2	7	48

105.3 Kg Total Weight

22.5





قَهُ تُورْیِع کَیراء مَالُك عَنْ قَلَّ GEDCo

Hot Galvanized

C.S.P Suspension

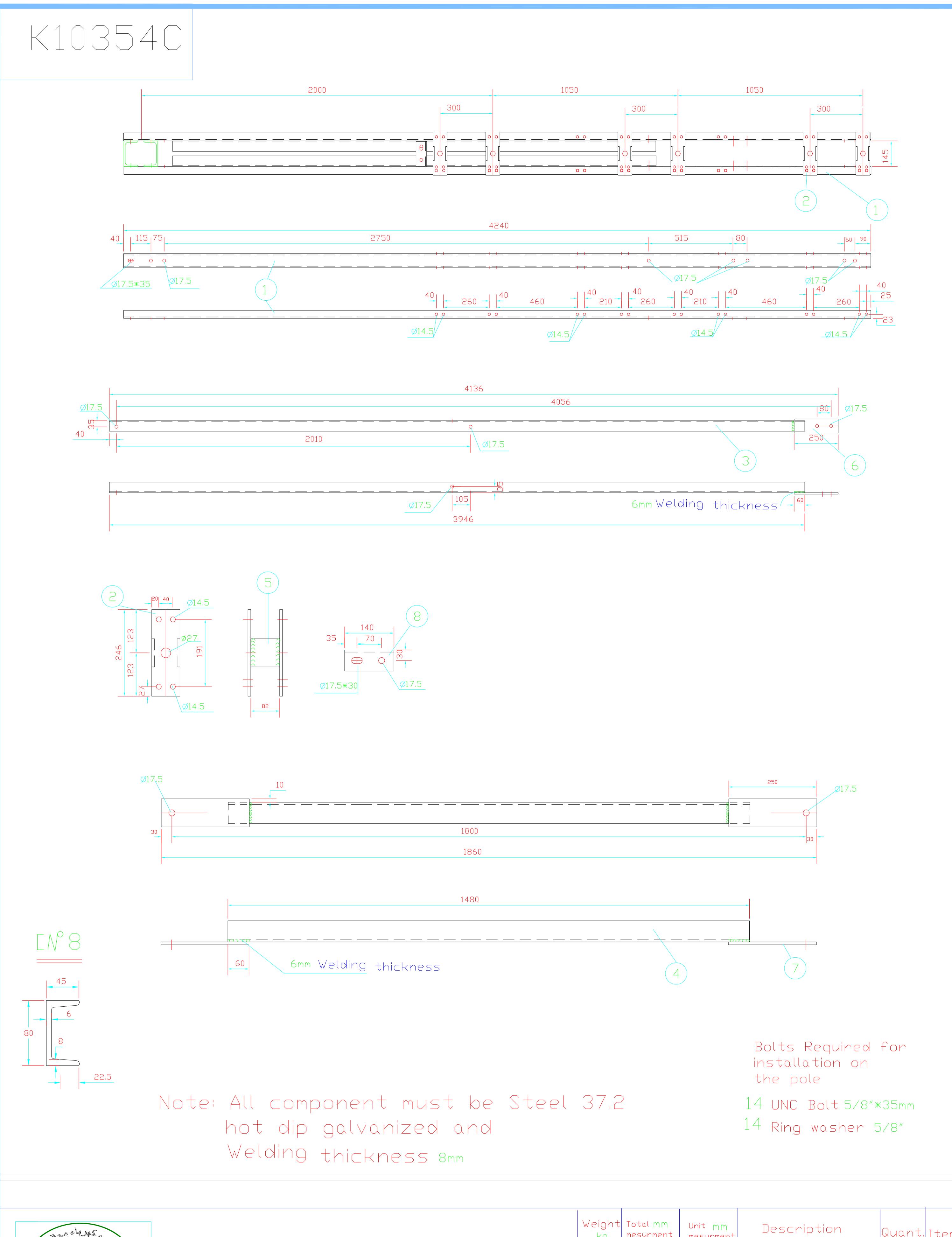
Side Arm K10155C

1.5m 1.st Phase

Weight kg	Total MM mesurment	Unit MM mesurment	Description		Quant.	Item
64,6	7480	3740		[N <sub>8</sub>	2	1
14.7	2952	246	Plate	ф 80 <b>ж</b> 8	12	2
4.8	960	80	Support	ф 80ж8	12	3
31,9	5870	2935	Strut	L60*60*6	1L+1R	4
2.5	500	250	Plate	ф 80ж8	2	5
			UNC Bolt	1/2"*30	48	6
			Ring wash	ner1/2"	48	7
118,5Kc	Total Wei	ght				

Prepared:Eng. ziad ALHoussaini

Note: All component must be Steel 37.2 hot dip galvanized All Welding thickness 8mm





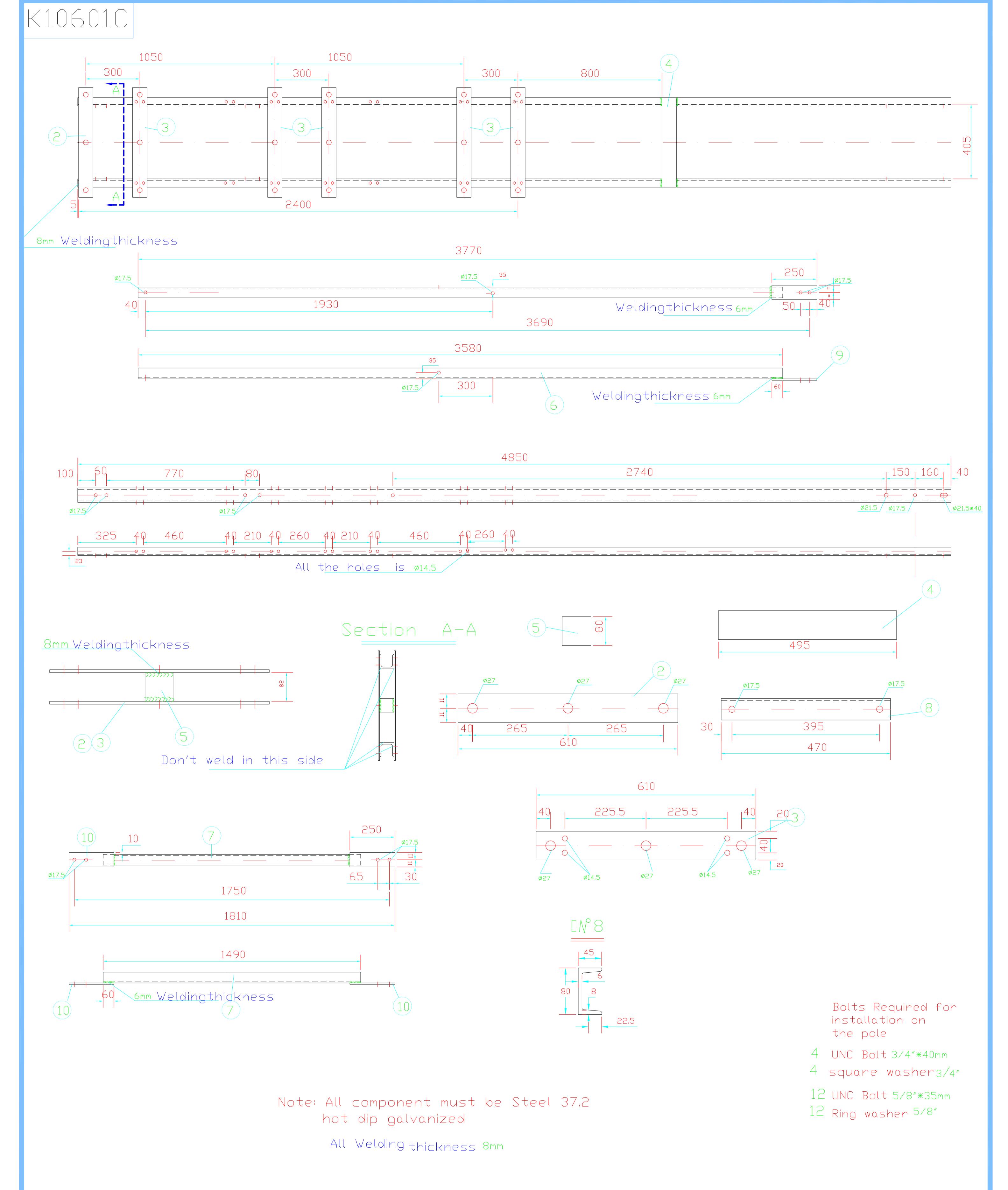
Hot Galvanized C.S.P

Suspension Side Arm

K10354C

2m at 1.st Phase

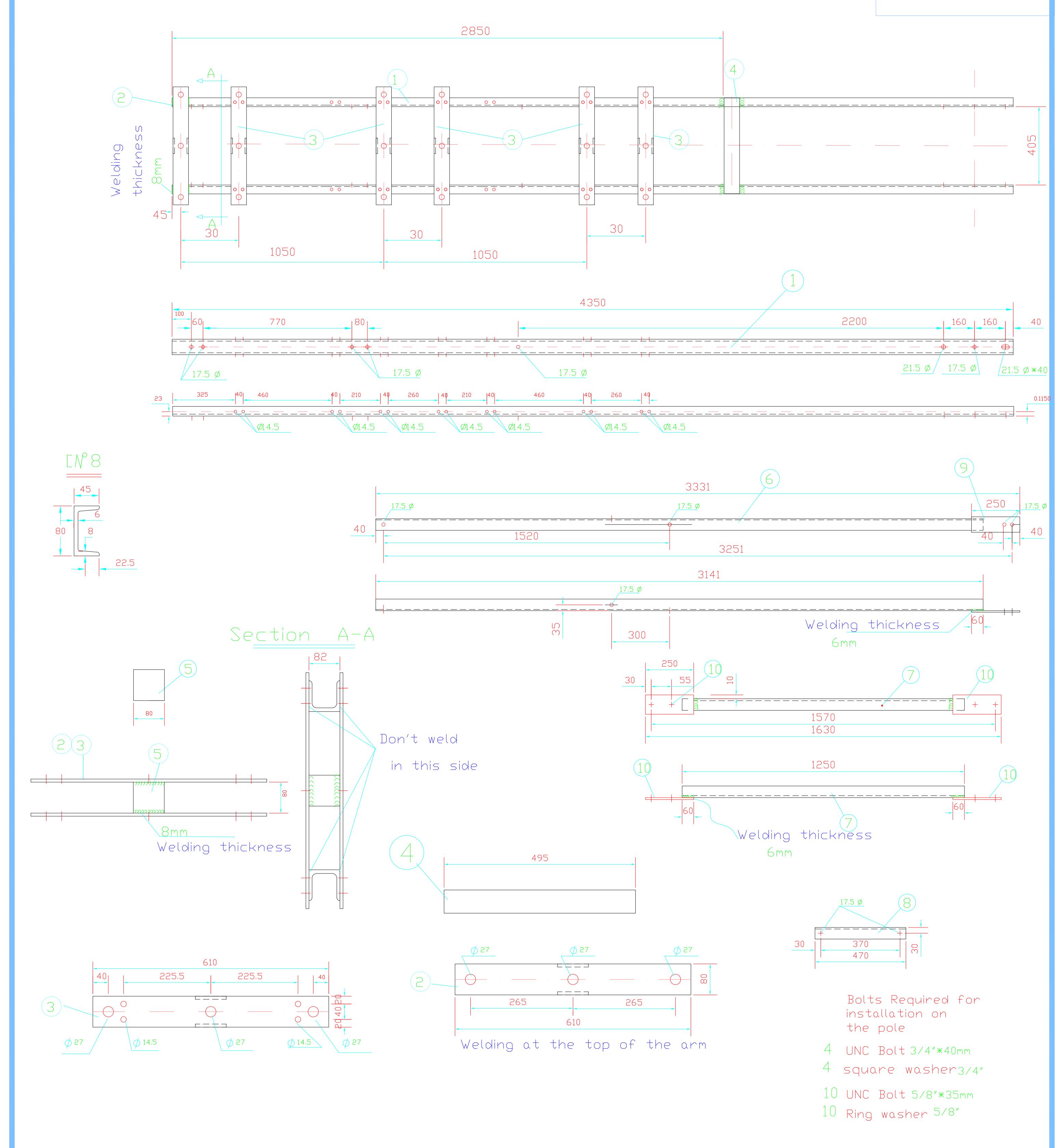
kg	mesurment	mesurment	Description	Quant.	Item
73,3	8480	4240	[N 8	2	1
14.7	2952	246	Plate # 80*8	12	2
42.8	7892	3946	Strut L60*60*6	1R+1L	3
15.9	2960	1480	Strut L60*60*6	1R+1L	4
4.8	960	80	Reinforcing Plate 280*	8 12	5
2,5	500	250	Plate Ø80*8	2	6
5	1000	250	Plate \$ 80*8	4	7
0,8	140	140	Strut L60*60*6	1	8
			UNC Bolt 1/2″*35	48	9
159	,8 Total We	eight	Spring washer 1/2"	48	10





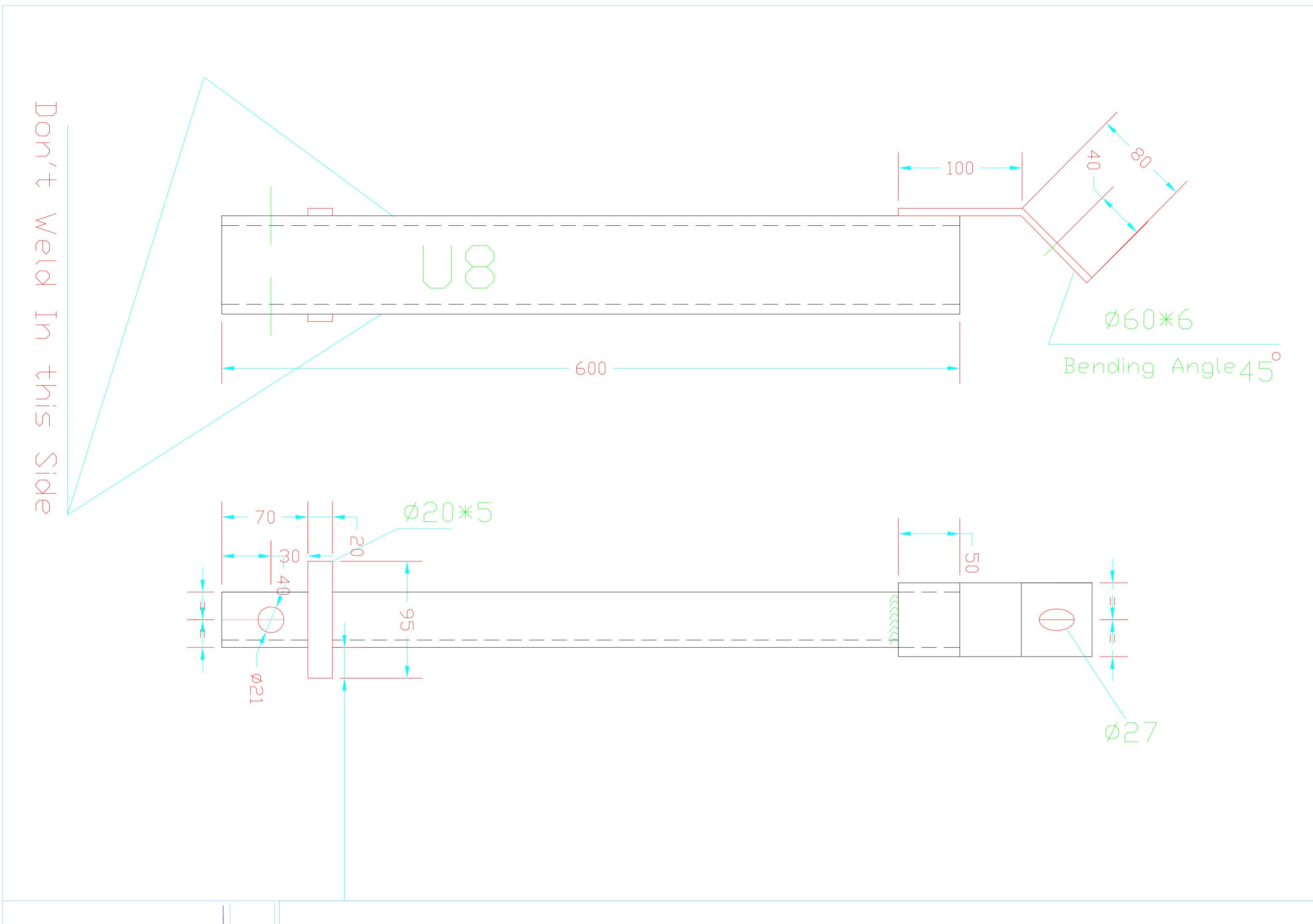
Hot Galvanized Lattice
Pole Suspension Side Arm
K10601C

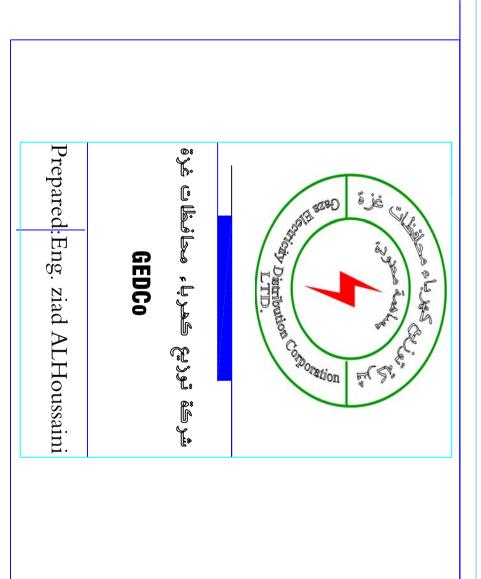
	Weight Kig	Total MM mesurment	Unit mm mesurment			Item	Quant
	83,8	9700	4850		CN 8	1	2
The angle	4.3	1220	610	Plate	<del> </del>	2	2
must be fillet	21.5	6100	610	Plate	<b>≠</b> 80*8	3	10
	5.5	990	495	Plate	<del> </del>	4	2
	4.94	960	80	Support	<del> </del>	5	12
	38,8	7160	3580	Strut	_60*6*5	6	1R+1L
	16,2	2980	1490	Strut L	_60*6*5	7	2
	2,5	470	470	Strut L	_60*6*5	8	1
	2,5	500	250	Plate	<b>≠</b> 80 <b>*</b> 8	9	2
	5	1000	250	Plate	<b>≠</b> 80*8	10	4
				UNC Bolt	1/2″*30	11	40
	185 Kg	Total Weig	ght	spring was	hen/2"	12	40



Note: All component must be Steel 37.2 hot dip galvanized



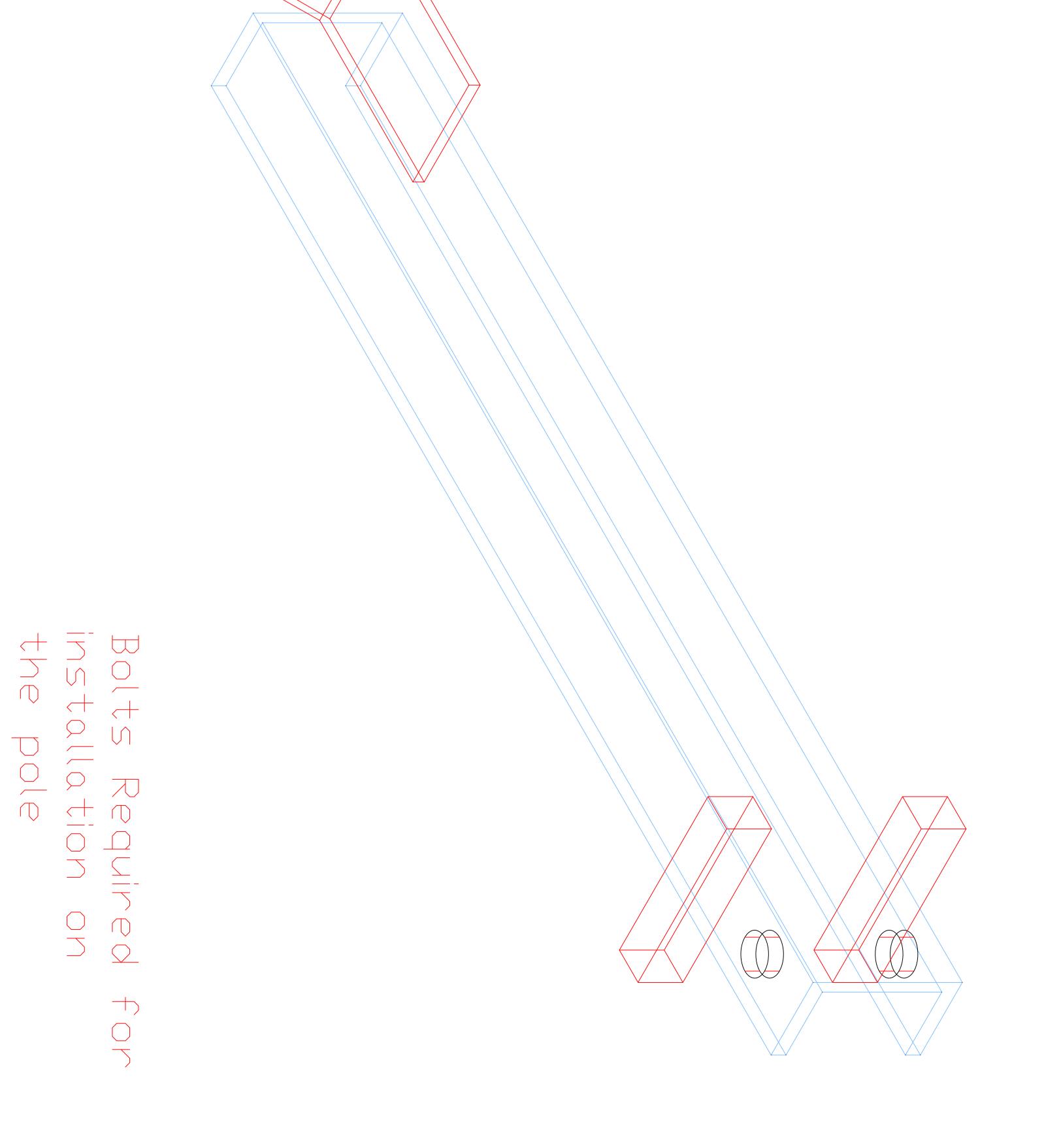


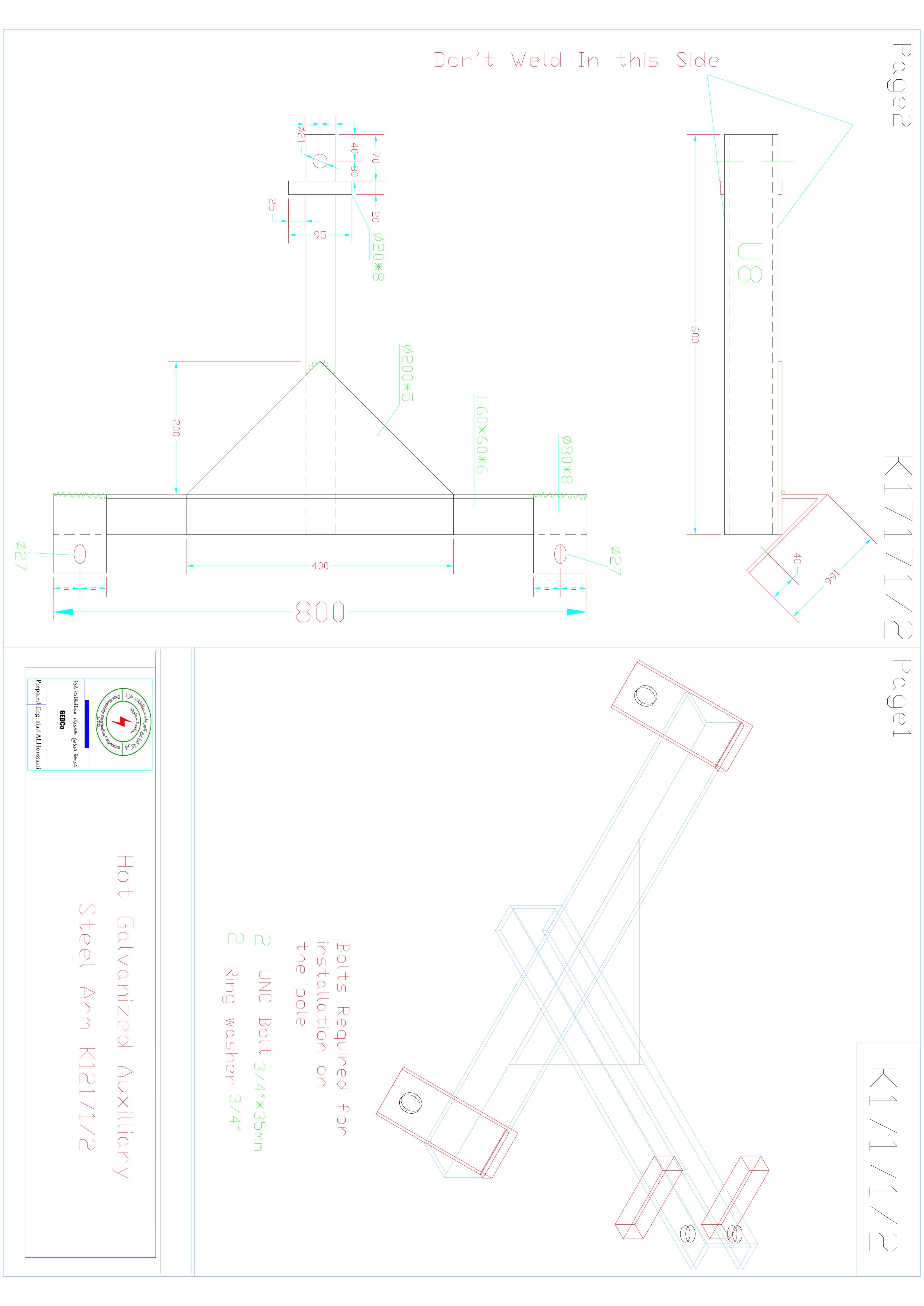


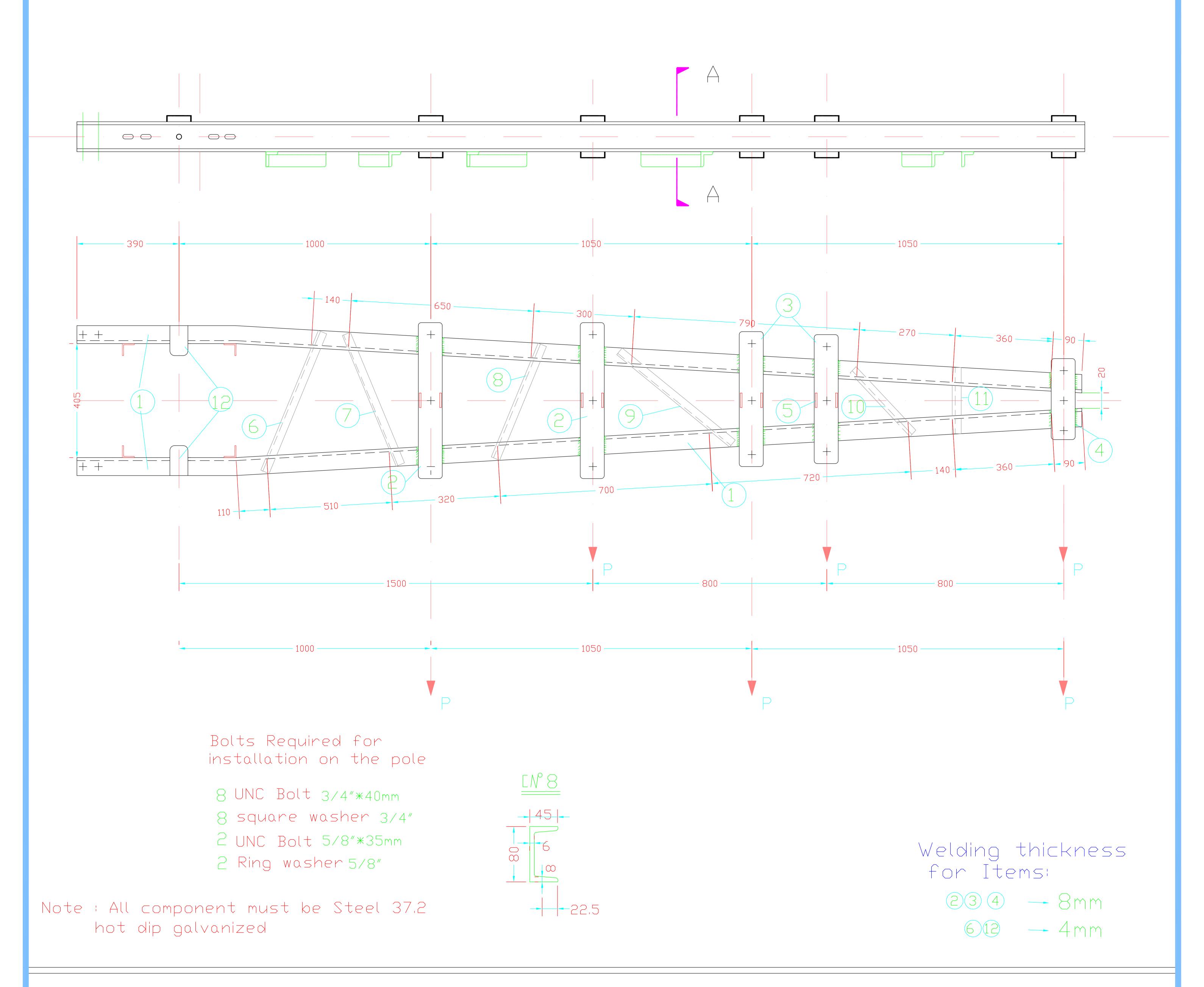
Ot Galvanized Auxilliany

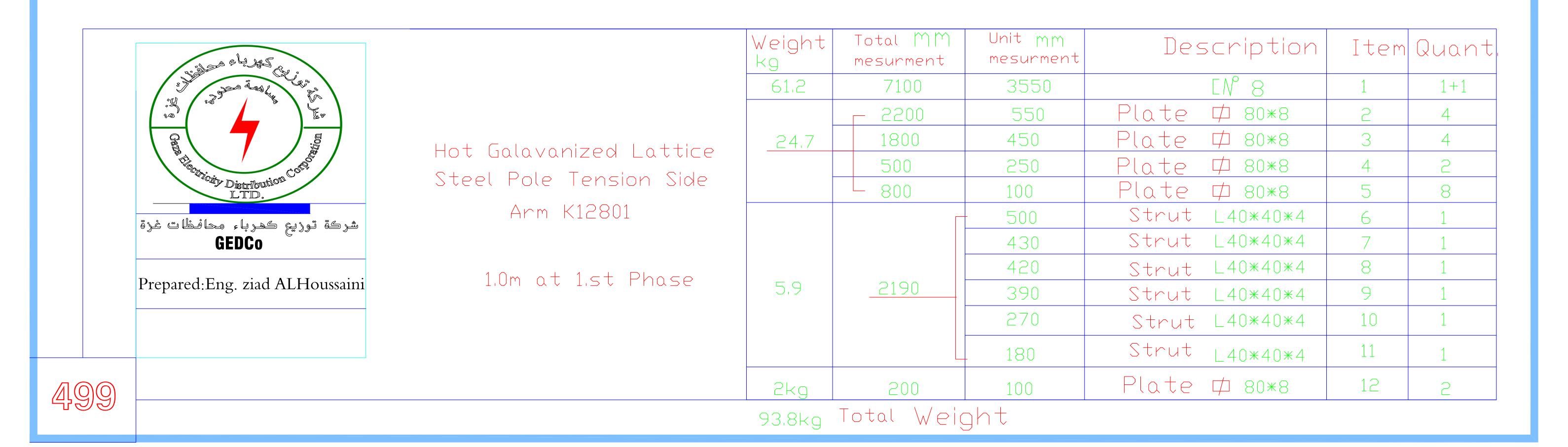
Ring washer 3/4"

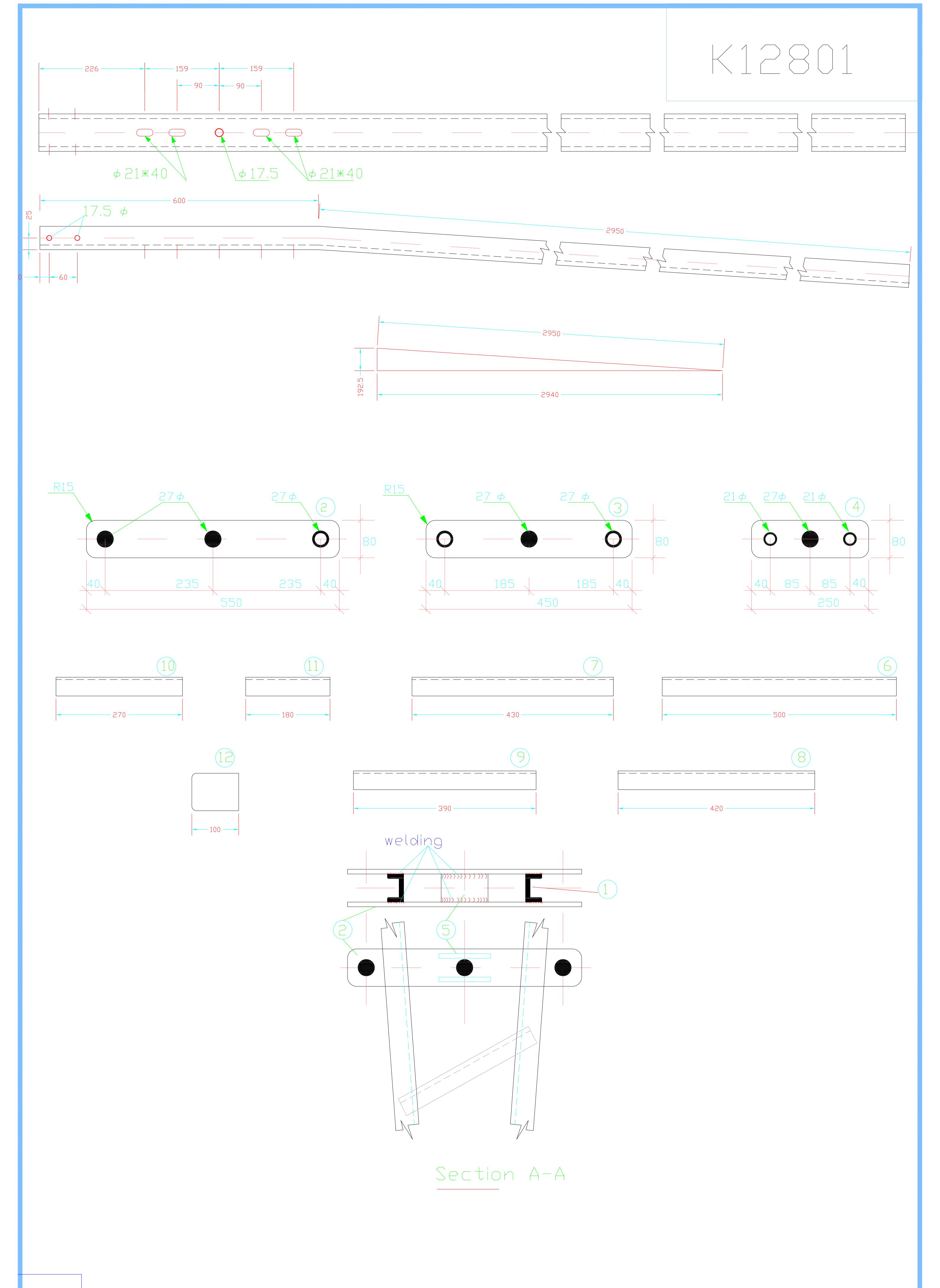
UNC Bolt 3/4"\*35mm

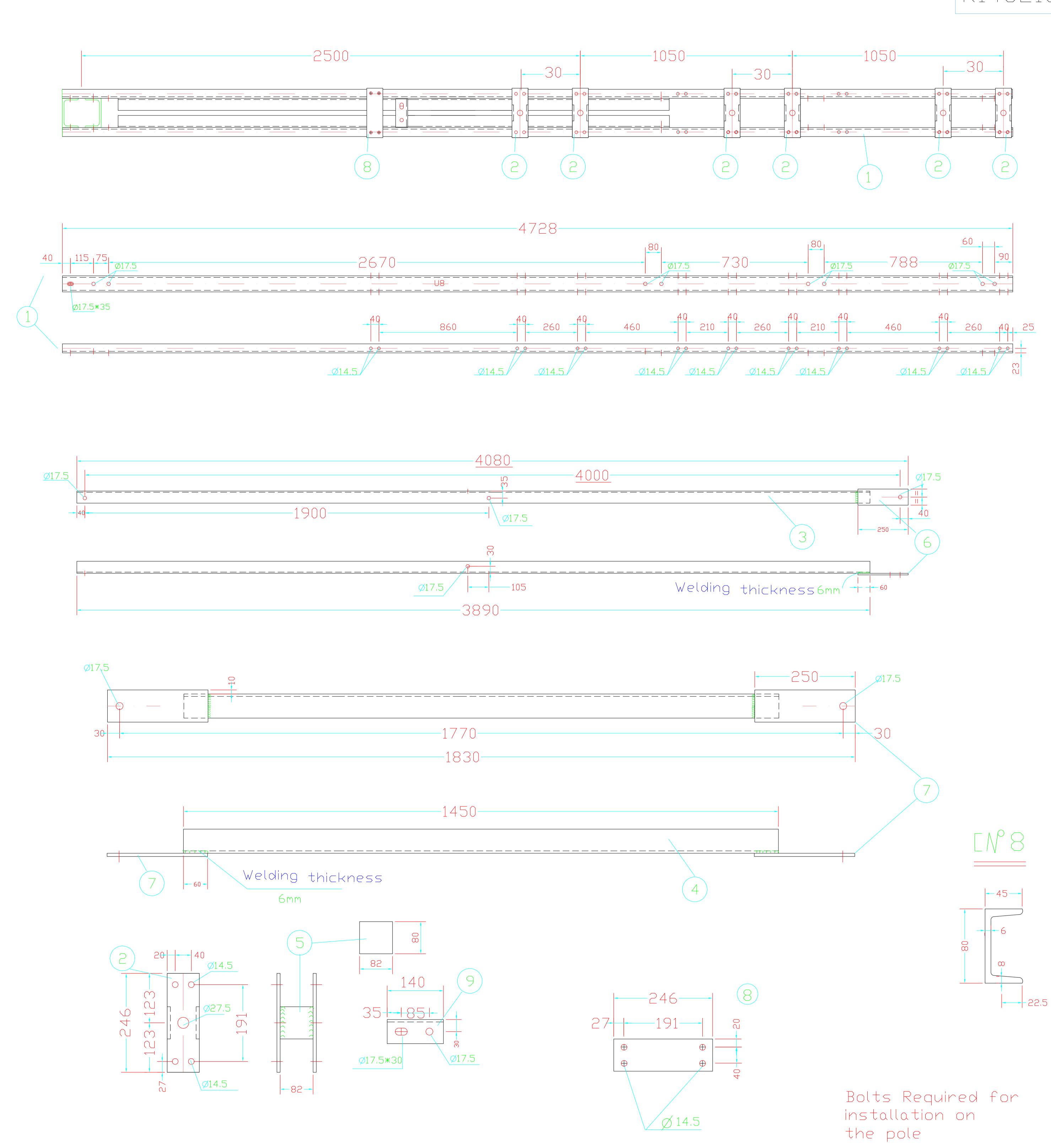






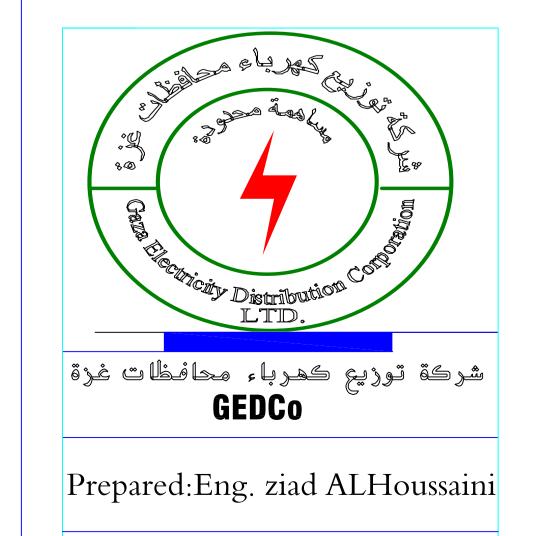






Note: All component must be Steel 37.2 hot dip galvanized

14 UNC Bolt 5/8"\*35mm
14 Ring washer 5/8"
56 UNC Bolt 1/2"\*35mm
56 Ring washer 1/2"



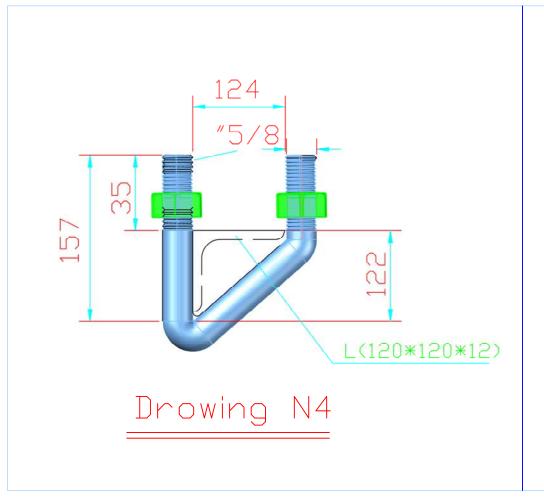
Hot Galavanized

C.S.P Suspension

Side Arm K14521C

2.5m 1.st Phase

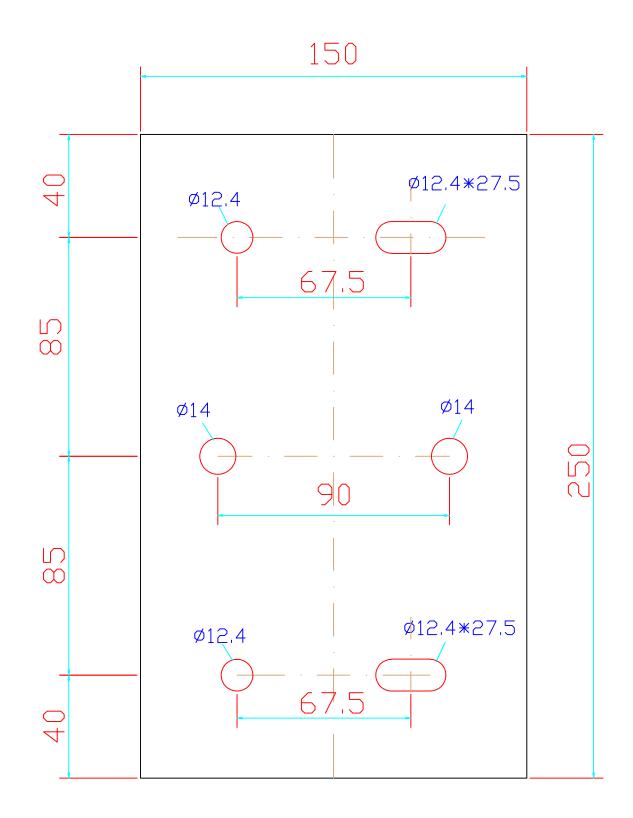
Weight kg	Total MM mesurment	Unit mm mesurment	Description	Quant.	Item
81.7	9456	4728	[ N° 8	2	1
14.6	8856	246	Plate Ø 80*8	12	2
42.2	7780	3890	Strut L60*60*6	1R+1L	3
15.7	2900	1450	Strut L60*60*6	1R+1L	4
5	960	80	Support #80*8	12	5
2,5	500	250	Plate Ø 80*8	2	6
5.0	1000	250	Plate / 80*8	4	7
2,5	492	246	Reinforcing Plate 280*8	2	8
0.8	140	140	Strut L60*60*6	1	9
170kg	Total We	ight			



V-Shaoed angle clamp 5/8" L120\*120\*12

according to Drowing N3

PMV\_250 Plate for M.V Cable



Bolts Required for installation on the Arm

2 UNC Bolt 1/2"\*35mm



Unit mm mesurment	Des	cription	Item	Quant.
250	Plate	<b></b>	1	1

# Plate for M.V Cable

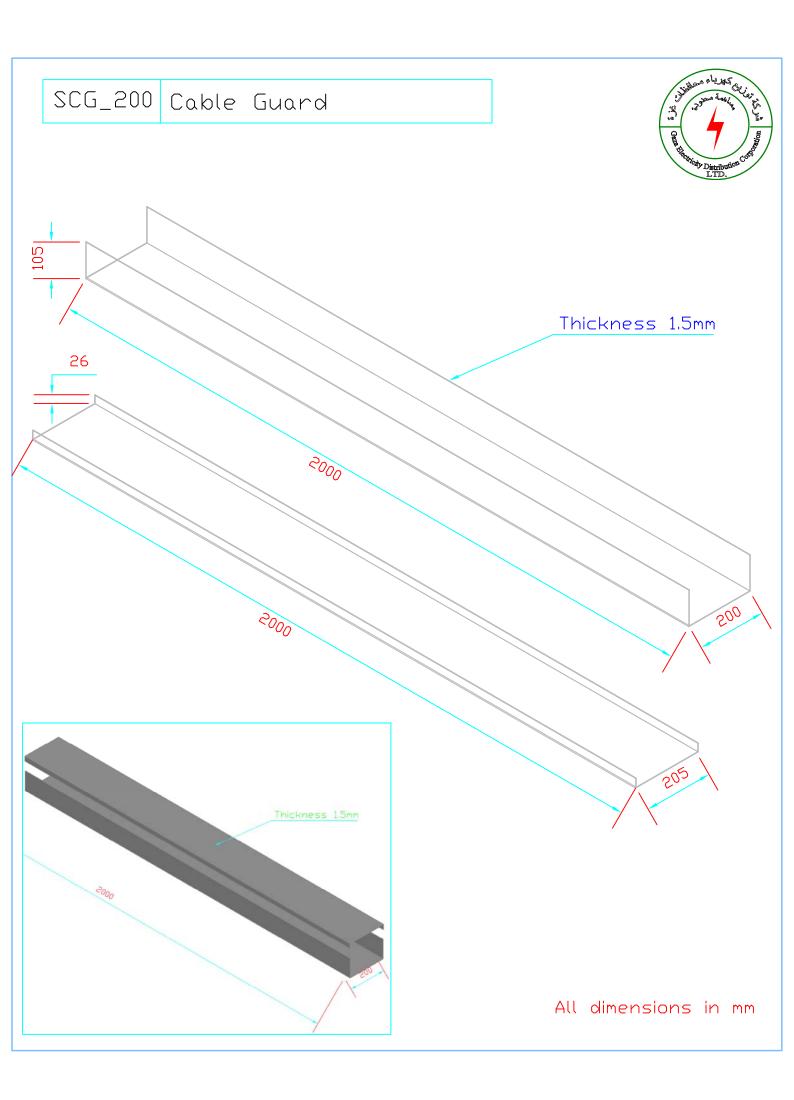
Nots: All component must be Steel 37.2 hot dip galvanized

## Technical Guarantees No. SCG\_200

#### **Hot Galvanized Steel Cable Guard**

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Description		Cable Guard			
4	Material		Hot Dip Galvanized			
5	Steel Guard with Steel Cover		Required			
6	Steel Guard and Steel Cover Length	mm	2000			
7	Steel Guard Width	mm	200			
8	Steel Cover Width	mm	203			
9	Steel Guard Edge Hight	mm	105			
10	Cover Edge Hight	mm	26			
11	Steel Guard and Steel Cover Thickness	mm	1.5			
12	Attached Drawing		Drawing No. SCG_200			

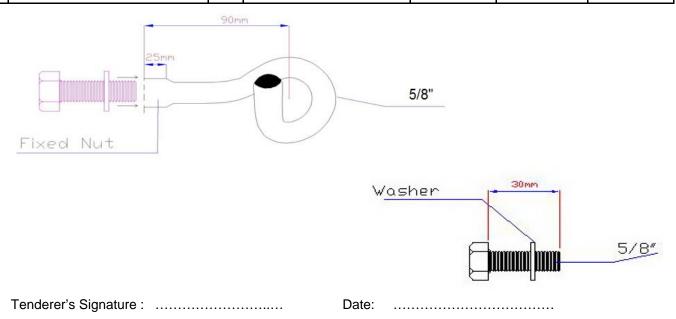
Tenderer's Signature :	 Date:	



### Technical Guarantees No. TH\_S16C

## ABC Tension & Suspension Hot Galvanized Steel Pole Thread Hook M16 Twisted ( 5/8") with Steel Bolt 5/8"

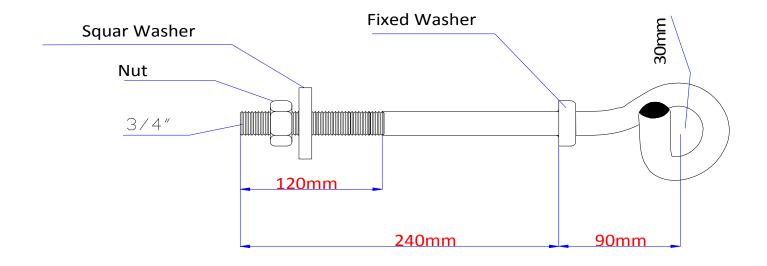
No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards					
4	Material		Hot Galvanized Steel			
5	Construction		Hook with Fixed Nut and Suitable Fully Serrated Hot Galvanized Steel Bolt			
6	Hook Total Length	mm	120			
7	Hook Diameter	inch	5/8" (16mm)			
8	Steel Bolt Length		3 cm			
9	Steel Bolt Diameter		5/8"			
10	Failing Load	KN	20			
11	Accessories		Washer for Steel Bolt			
12	Dimensions	_	As Drawing			



### Technical Guarantees No. TH\_W20

# ABC Tension & Suspension Twisted Hook For Wooden Pole through Bolt Pigtail Type M20X240 With Nut 3/4"

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	Reference Standards					
4	Material		Hot Galvanized Steel			
5	Construction		Nut and Washer and Fixed Washer			
6	Total Length	mm	345			
7	Hook Diameter	inch	3/4" (20mm)			
8	Nut Failing Load	KN	24			
9	Dimensions		As Drawing			



Fenderer's Signature:	Date:	
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### **Technical Guarantees No. WP\_85**

### Impregnated Wooden Pole 8.5 m Long Top Diameter 150-180 mm

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
1	Name of Manufacturer					
2	Country of Origin					
3	General Standards		BS144 , BS913 , BS1990:Part1, BS4072			
4	Height	m	8.5			
5	Upper diameter (MinMax.)	mm	150-180			
6	Min. Diameter at 1.5m from butt	mm	215			
7	Species of timber		Pine			
8	Full Botanical Name		Pinus Sylvestris			
9	Pole Shape		With a smooth surface, Straight ,Generally Round , Free from Sweeps and Crooks, Top of the Pole shall be cut at an angle not less than 30°			
10	For Unstayed Poles : Ultimate Breaking Load at 0.6 m from top of pole	KN	8.2			
11	Where Stay are Used : Average ultimate fibre stress	KN	77.8			
	Poles Impregnated with Creosote By Rueping Process	Yes/No	shall be filled by manufacturer			
12	If Yes :					
12	Creosote Detained in Wood	kg/m3	115 (min)			
	Preserved Life Cycle of Wood	year	shall be filled by manufacturer			

### **Technical Guarantees No. WP\_85**

### Impregnated Wooden Pole 8.5 m Long Top Diameter 150-180 mm

No	Description	Unit	Requirements	Offered Data	Notes, Remarks , Ref to Documentation	Evaluation Committee Comments
	Poles Impregnated with Mixed Preparatus	Yes/No	shall be filled by manufacturer			
	If Yes :					
13	Chemical Formula of Preparatus		shall be filled by manufacturer			
10	Net Dry Salt Amount in Pole	kg/m3				
	Preserved Life Cycle of Wood	year	shall be filled by manufacturer			
	Relevant Reports and References					
14	Test Certificate		Required			
15	Marking with aluminium Plate		Required			
16	Wooden Poles Marking Drawing		Drawing No. WP_85			

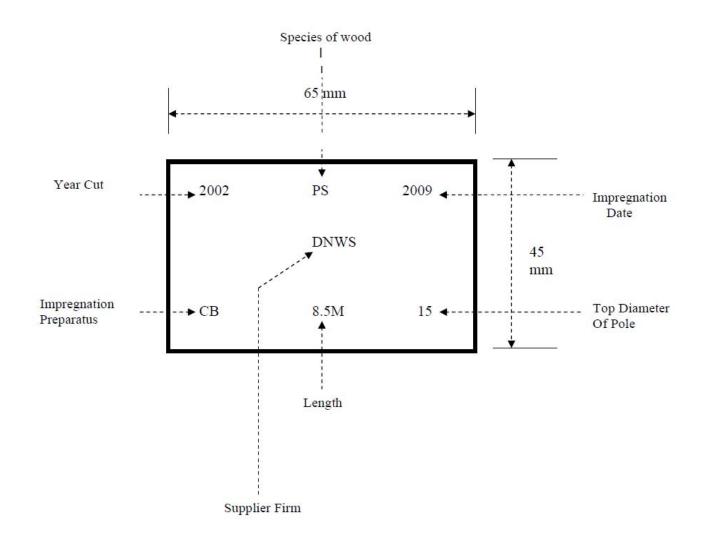
Tenderer's Signature :	Data:	
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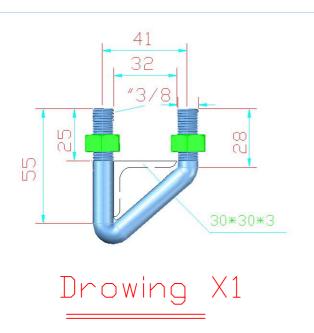
#### THE MARKING OF THE WOOD POLES

The wood poles shall be marked firmly by Aluminium labels, which will contain the following information:

- Type of the tree
- Length (m)
- Top diameter (cm)
- Impregnation material
- Impregnation year
- The Abbreviation of the Firm

Such marked Aluminium plackets shall be nailed at 4 meter high measured from the base of the Pole.





V-Shaped angle clamp 3/8" L30\*30\*3

according to Drowing N1

For K82

